

# California Almond Sustainability Program (CASP) Bee Friendly Farming Report



This confidential report was prepared for:

Name: Elaine Rominger

Business: 4R Farming, Inc.

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**Assessment Year: 2021**

Follow these steps to apply for Bee Friendly Farming certification through Pollinator Partnership.

Generate and save this PDF report from CASP.

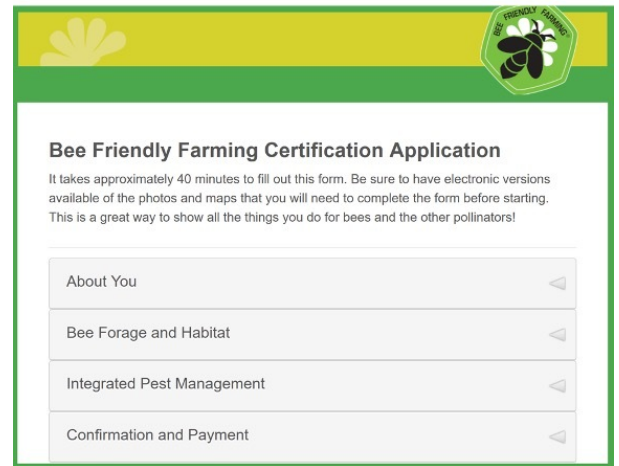
## Open the [BFF Application](#)

The online application is managed by Pollinator Partnership and requires completion of the following sections:

### About You

### Bee Forage and Habitat

### Confirmation and Payment



## About You

- Your Name, Farm Name, Email and Phone Number
- Choose **Almonds** for Primary Production
- Under Existing Certifications, choose **California Almond Sustainability Program**. Once selected, most questions in Bee Forage and Habitat and the entire Integration Pest Management section are skipped.

### Primary Production \*

Almonds ▼

### Existing Certifications

Certified California Sustainable Winegrowi ▼

Recent audit information from other qualifying certifications your farm holds can be submitted in place of the rest of this form. Qualifying certifications are listed in the dropdown box above. If you hold a certification that is not listed above, please contact isaac@pollinator.org for assistance.

### Existing Audit Files \*

Browse Files

## Bee Forage and Habitat

- Enter the Permanent and Total Habitat Acres
- Attach file that shows the farm map. If you use the CASP Map Center you can print to PDF from the [Maps Center](#)

### Farm Map \*

Browse Files

Upload a farm map file (PNG, PDF, shapefiles, KML/KMZ, etc.) that shows a clearly defined property line of the area being certified and draw and label each ecological infrastructure (temporary floral resources, permanent floral resources nesting habitat, water sources). Include acre counts for each delineated area.

## Confirmation and Payment

- Number of distinct properties (follow the onscreen directions)
- How you heard about BFF
- Confirmations
- Coupon code (CASPBFF2) or other payment information

Enter coupon

CASPBFF2

Apply

## Bee Friendly Farming Certification has five requirements:

1. Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.
2. Provide bloom of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.
3. If not inhibited by government mandated water restrictions, offer clean water for bees.
4. Provide habitat for nesting through features such as hedgerows, natural brush, buffer strips, or bare ground.
5. Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.

Full confidentiality is maintained for all information provided and generated this report. Individual assessment results have not been shared with other individuals or organizations.

Go to <https://www.pollinator.org/bff/bff-us> to find out more about Pollinator Partnership.

## Summary

Location	Acres	Eligibility Status	BFF 1	BFF 2	BFF 3	BFF 4	BFF 5
4R Field 11	50	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 13	20	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 15	120	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 17	45	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 18	27	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 19	30	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 20	30	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 23	40	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 25	10	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 26	14	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 28	40	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 29	14	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 35	75	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 36	60	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 38	40	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 40	20	Eligible	Yes	Yes	Yes	Yes	Yes

4R Field 43	75	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 53	20	Eligible	Yes	Yes	Yes	Yes	Yes
4R Field 63	9	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 14	120	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 41	45	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 42	20	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 44	40	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 45	85	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 46	100	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 47	40	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 48	80	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 49	62	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 55	48	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 58	65	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 59	65	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 60	40	Eligible	Yes	Yes	Yes	Yes	Yes
CLF Field 62	90	Eligible	Yes	Yes	Yes	Yes	Yes
RF Field 07	35	Eligible	Yes	Yes	Yes	Yes	Yes
RF Field 08	35	Eligible	Yes	Yes	Yes	Yes	Yes
RF Field 10	75	Eligible	Yes	Yes	Yes	Yes	Yes
RF Field 30	56	Eligible	Yes	Yes	Yes	Yes	Yes
RF Field 31	60	Eligible	Yes	Yes	Yes	Yes	Yes
RF Field 32	80	Eligible	Yes	Yes	Yes	Yes	Yes
RF Field 51	150	Eligible	Yes	Yes	Yes	Yes	Yes
<b>Sum of Eligible Acres</b>	<b>2130</b>						

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 11 (50 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

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Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 11 (50 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

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Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 11 (50 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

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Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 11 (50 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

Evaluation: **Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

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Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 11 (50 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes



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Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 11 (50 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

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**4R Field 11 (50 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

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Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 13 (20 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

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Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 13 (20 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

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Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 13 (20 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

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Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 13 (20 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 13 (20 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

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Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 13 (20 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 13 (20 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 15 (120 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 15 (120 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 15 (120 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 15 (120 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 15 (120 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 15 (120 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 15 (120 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 17 (45 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 17 (45 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 17 (45 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

### Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

#### Criteria 5a: Monitoring/Identification

**Evaluation: Yes**

If one or more of the CASP questions 22, 111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 17 (45 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 17 (45 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 17 (45 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 17 (45 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 18 (27 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 18 (27 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 18 (27 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 18 (27 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 18 (27 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

**Evaluation: Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 18 (27 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or Bacillus thuringiensis) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 18 (27 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 19 (30 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 19 (30 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 19 (30 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 19 (30 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 19 (30 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 19 (30 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 19 (30 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 20 (30 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 20 (30 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 20 (30 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 20 (30 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 20 (30 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 20 (30 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 20 (30 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 23 (40 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 23 (40 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 23 (40 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

### Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

#### Criteria 5a: Monitoring/Identification

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 23 (40 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 23 (40 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 23 (40 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 23 (40 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 25 (10 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 25 (10 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 25 (10 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 25 (10 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 25 (10 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 25 (10 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or Bacillus thuringiensis) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 25 (10 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 26 (14 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 26 (14 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 26 (14 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 26 (14 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 26 (14 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 26 (14 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or Bacillus thuringiensis) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 26 (14 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 28 (40 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 28 (40 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 28 (40 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

### Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

### Criteria 5a: Monitoring/Identification

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 28 (40 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 28 (40 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 28 (40 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 28 (40 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

**Elaine Rominger** 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 29 (14 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 29 (14 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 29 (14 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 29 (14 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 29 (14 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

**Evaluation: Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 29 (14 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 29 (14 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 35 (75 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 35 (75 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 35 (75 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 35 (75 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

Evaluation: Yes

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 35 (75 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 35 (75 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 35 (75 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 36 (60 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 36 (60 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 36 (60 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

**Elaine Rominger** 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 36 (60 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 36 (60 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 36 (60 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 36 (60 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 38 (40 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 38 (40 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 38 (40 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 38 (40 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

Evaluation: **Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 38 (40 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

**Evaluation: Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 38 (40 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 38 (40 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 40 (20 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 40 (20 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 40 (20 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 40 (20 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 40 (20 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 40 (20 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 40 (20 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 43 (75 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 43 (75 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 43 (75 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 43 (75 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

Evaluation: **Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 43 (75 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

**Evaluation: Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 43 (75 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 43 (75 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 53 (20 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 53 (20 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 53 (20 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 53 (20 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

Evaluation: **Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 53 (20 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

**Evaluation: Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 53 (20 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or Bacillus thuringiensis) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 53 (20 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 63 (9 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: 4R Farming, Inc.

4R Field 63 (9 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 63 (9 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 63 (9 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 63 (9 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 63 (9 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **4R Farming, Inc.**

**4R Field 63 (9 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 14 (120 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: County Line Farming Co., Inc.

CLF Field 14 (120 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 14 (120 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 14 (120 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 14 (120 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 14 (120 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 14 (120 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 41 (45 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: County Line Farming Co., Inc.

CLF Field 41 (45 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 41 (45 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 41 (45 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 41 (45 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 41 (45 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 41 (45 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 42 (20 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: County Line Farming Co., Inc.

CLF Field 42 (20 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 42 (20 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 42 (20 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 42 (20 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 42 (20 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 42 (20 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 44 (40 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: County Line Farming Co., Inc.

CLF Field 44 (40 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 44 (40 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 44 (40 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

Evaluation: **Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 44 (40 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 44 (40 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 44 (40 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 45 (85 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: County Line Farming Co., Inc.

CLF Field 45 (85 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 45 (85 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 45 (85 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 45 (85 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 45 (85 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 45 (85 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 46 (100 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 46 (100 Acres Colusa County)** details part 2

Assessment Year: **2021** Status: **Eligible**

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 46 (100 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

### Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

#### Criteria 5a: Monitoring/Identification

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 46 (100 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 46 (100 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 46 (100 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 46 (100 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 47 (40 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: County Line Farming Co., Inc.

CLF Field 47 (40 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 47 (40 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 47 (40 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

Evaluation: **Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 47 (40 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

**Evaluation: Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 47 (40 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 47 (40 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 48 (80 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 48 (80 Acres Colusa County)** details part 2

Assessment Year: **2021** Status: **Eligible**

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 48 (80 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 48 (80 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 48 (80 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

**Evaluation: Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 48 (80 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 48 (80 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 49 (62 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: County Line Farming Co., Inc.

CLF Field 49 (62 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 49 (62 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 49 (62 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 49 (62 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 49 (62 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 49 (62 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 55 (48 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: County Line Farming Co., Inc.

CLF Field 55 (48 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 55 (48 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 55 (48 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

Evaluation: **Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 55 (48 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 55 (48 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 55 (48 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 58 (65 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: County Line Farming Co., Inc.

CLF Field 58 (65 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 58 (65 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 58 (65 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

Evaluation: **Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 58 (65 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 58 (65 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 58 (65 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 59 (65 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: County Line Farming Co., Inc.

CLF Field 59 (65 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 59 (65 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 59 (65 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 59 (65 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 59 (65 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 59 (65 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 60 (40 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: County Line Farming Co., Inc.

CLF Field 60 (40 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 60 (40 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 60 (40 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 60 (40 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 60 (40 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or Bacillus thuringiensis) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 60 (40 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 62 (90 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 62 (90 Acres Colusa County)** details part 2

Assessment Year: **2021** Status: **Eligible**

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 62 (90 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 62 (90 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 62 (90 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 62 (90 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **County Line Farming Co., Inc.**

**CLF Field 62 (90 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 07 (35 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: Rominger Farms

RF Field 07 (35 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 07 (35 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 07 (35 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

Evaluation: **Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 07 (35 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 07 (35 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 07 (35 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 08 (35 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 08 (35 Acres Colusa County)** details part 2

Assessment Year: **2021** Status: **Eligible**

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 08 (35 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 08 (35 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 08 (35 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 08 (35 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 08 (35 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

**Elaine Rominger** 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 10 (75 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 10 (75 Acres Colusa County)** details part 2

Assessment Year: **2021** Status: **Eligible**

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 10 (75 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 10 (75 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 10 (75 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 10 (75 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 10 (75 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

**Elaine Rominger** 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 30 (56 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 30 (56 Acres Colusa County)** details part 2

Assessment Year: **2021** Status: **Eligible**

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 30 (56 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 30 (56 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 30 (56 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 30 (56 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 30 (56 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

**Elaine Rominger** 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 31 (60 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: 4R Farming, Inc. Business Unit Name: Rominger Farms

RF Field 31 (60 Acres Colusa County) details part 2

Assessment Year: 2021 Status: Eligible

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 31 (60 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22, 111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 31 (60 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 31 (60 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 31 (60 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or Bacillus thuringiensis) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 31 (60 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

**Elaine Rominger** 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 32 (80 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 32 (80 Acres Colusa County)** details part 2

Assessment Year: **2021** Status: **Eligible**

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 32 (80 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22 ,111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 32 (80 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 32 (80 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 32 (80 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 32 (80 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 51 (150 Acres Colusa County)** details part 1

Assessment Year: **2021** Status: **Eligible**

**Criteria 1: Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.**

**Evaluation: Yes**

Question 51 on orchard cover crops or question 48 on adjacent vegetation/hedgerows must be 'Yes' to meet BFF 1 (3% forage requirement).

CASP Bee Health and Pollination Module Questions	Response
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes
46. Have natural habitat areas or set aside plantings with flowering plants and/or nesting habitat for managed and native pollinators been established or maintained in unfarmed areas on or within 2 miles of the orchard?	Yes
47. Has cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers) been planted in an adjacent, neighboring field within 2 miles of the orchard?	Yes
48. Was the combined acreage of hedgerows and other vegetation types, such as natural habitat areas, set aside plantings, and/or adjacent cover crops, equivalent to at least 3% of the orchard planted area?	Yes
49. Was a cover crop (pre-existing or planted ground cover) intentionally grown between orchard rows?	No
50. Was the ground cover purposely planted?	No
51. Was the cover crop recommended for providing forage to pollinators (e.g., mustards, clovers, vetch and/or wildflowers)?	No Answer

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 51 (150 Acres Colusa County)** details part 2

Assessment Year: **2021** Status: **Eligible**

**Criteria 2: Provide bloom Of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 2 (bloom requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

**Criteria 3: If not inhibited by government mandated water restrictions, offer clean water for bees.**

**Evaluation: Yes**

Question 09 on available water and question 26 (if applicable) must be 'Yes' to meet BFF 3 (clean water for bees).

CASP Bee Health and Pollination Module Questions	Response
09. Was abundant potable water, free from contamination, provided for bees?	Yes
26. Were water sources for pollinator bees covered before or replaced after pesticide applications?	Not applicable

**Criteria 4: Provide habitat for nesting through features such as hedgerows, natural brush, or buffer strips.**

**Evaluation: Yes**

Question 44 on hedgerows or question 45 on adjacent vegetation must be 'Yes' to meet BFF 4 (habitat requirement).

CASP Bee Health and Pollination Module Questions	Response
44. Were hedgerows of flowering shrubs, such as coyote brush, maintained along at least some edges of the farm to provide alternative nutrition sources for managed and native pollinators and pest natural enemies?	Yes
45. Was vegetation maintained on or adjacent to the farm that provided pollen and nectar sources for pollinator bees before and/or after almond bloom (includes nutritional ground cover)?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 51 (150 Acres Colusa County)** details part 3

Assessment Year: **2021** Status: **Eligible**

**Criteria 5: Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.**

**Evaluation: Yes**

The Bee Friendly Farming IPM requirement is evaluated using 5 IPM areas and 34 unique CASP questions. Each area is evaluated separately and all IPM areas must be yes to meet BFF 5 (practice IPM; reduce or eliminate the use of chemicals).

**Criteria 5a: Monitoring/Identification**

**Evaluation: Yes**

If one or more of the CASP questions 22, 111, or 125 is answered as 'Yes,' then 5a, the IPM monitoring/identification requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
022. Were scouting data, university guidelines, and practical experience used to design and implement management strategies for insects, mites, and diseases?	Yes
111. To determine necessary fungicides, rates and timings, were disease symptoms monitored weekly prior to and during bloom, throughout spring, and until the weather was no longer conducive for disease development?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 51 (150 Acres Colusa County)** details part 4

Assessment Year: **2021** Status: **Eligible**

### Criteria 5b: Decision Making

**Evaluation: Yes**

If one or more of CASP questions 76.01, 76.03, 78.02, 80.02, 80.03, 84 or 127 is answered as 'Yes' then 5b, the IPM decision making requirement is met.

(If nothing was sprayed or required monitoring, demonstrated by responding 'No' to CASP questions 74, 77, 79, 83 and 125 then 5b could also be met.)

CASP Module Questions	Response
074. Was navel orangeworm (NOW) sprayed in the past year?	Yes
076.01. Spring spray timing for NOW was based on egg traps and degree-day calculations.	Yes
076.03. Hullsplit spray timing for NOW was based on egg traps and degree-day calculations.	Yes
077. Was San Jose Scale (SJS) sprayed in the past year?	No
078.02. Monitoring SJS using pheromone traps and degree-day calculations.	No Answer
079. Was Peach Twig Borer (PTB) sprayed in the past year (dormant, bloom or spring sprays)?	Yes
080.02. Shoot strike monitoring began in April to determine if the number of strikes reached a treatment threshold (generally four or more strikes per tree for mature orchards; threshold should be lower for second- and third-leaf orchards).	Yes
080.03. Monitoring PTB using pheromone traps and degree-day calculations.	No
083. Were mites sprayed in the past year?	Yes
084. Were miticides only applied after mite populations exceeded an established threshold of 25 percent of leaves infested (if there were no natural enemies), or 40 percent of leaves infested (if natural enemies were present)?	Yes
125. Were weeds monitored at least twice a year and was monitoring information used for management decisions? Preferably, monitoring would occur during the fall after harvest and first rains (for winter annuals and perennials) and during late spring (summer annuals and perennials).	Yes
127. Did monitoring records include growth stages (seedling or mature) and potential herbicide resistance issues?	Yes



## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 51 (150 Acres Colusa County)** details part 5

Assessment Year: **2021** Status: **Eligible**

### Criteria 5c: Prevention

Evaluation: **Yes**

If two or more questions listed are answered 'Yes' then 5c, the IPM prevention requirement is met. (If all questions are 'Not Applicable,' then 5c could also be met.)

CASP Module Questions	Response
064. To reduce outbreaks of NOW, were mummy nuts counted and removed, as needed, during the winter, so that less than two mummies per tree remained by February 1? (For the southern San Joaquin Valley and any almond orchard within 3 miles of pistachio orchards, this rate must be less than one mummy nut per tree).	No
065. By March 1, were all mummy nuts on the ground destroyed (e.g., by mowing or discing)?	Yes
068. Was a mating disruption program for navel orangeworm (NOW) used for this orchard?	No
070. To reduce outbreaks of mites, was dust reduced on orchard roadways (e.g., via dust suppressants, oiling, watering, mulching, vegetative cover and/or driving slowly)?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 51 (150 Acres Colusa County)** details part 6

Assessment Year: **2021** Status: **Eligible**

### Criteria 5d: Intervention

**Evaluation: Yes**

If five or more questions listed are answered 'Yes' then 5d, the IPM prevention requirement is met. (If all questions listed are 'Not Applicable' and question 95 is 'Yes' then 5d could also be met.)

CASP Module Questions	Response
033. To minimize drift from inversions and wind, were air blast and/or aerial applications made only when winds were between 2 and 8 mph?	Yes
049. Was spraying discontinued when winds blew in the direction of nearby waterways (e.g., creeks or irrigation canals) or other sensitive sites (e.g., residences, schools, pollinator and pest natural enemy habitat)?	Not applicable
050. When operating air blast sprayers next to open or sensitive sites (e.g., aquatic areas, residences, schools, pollinator and pest natural enemy habitat), were the two rows directly adjacent to these sites sprayed on the outer side only (i.e., to direct spray into the orchard)?	Yes
093. If effective alternatives existed, were broad-spectrum insecticides and acaricides (e.g., pyrethroids, organophosphates and carbamates), not used because of their potential negative effects on beneficial and non-target organisms?	Yes
095. Did the operation ensure that pesticides with label cautions "highly toxic to bees," "toxic to bees," "residual times," or "extended residual toxicity" were not used during bloom?	Yes
114. During bloom, were necessary fungicides (or <i>Bacillus thuringiensis</i> ) applied in the late afternoon or evening when bees and pollen were not present?	Yes
115. Were arrangements made with the beekeeper about which pesticides could be applied if daytime applications were necessary while hives were present, and, if an application(s) was necessary, was the beekeeper provided with 48-hour advance notice?	Yes
116. Was notification given to the person responsible for pesticide recommendations, as well as the applicator, which and when during the day, pesticides could be applied while hives were present?	Not applicable

## California Almond Sustainability Program (CASP) Bee Friendly Farming Report

Elaine Rominger 4rfarming@afes.com

Business Name: **4R Farming, Inc.** Business Unit Name: **Rominger Farms**

**RF Field 51 (150 Acres Colusa County)** details part 7

Assessment Year: **2021** Status: **Eligible**

### Criteria 5e: IPM Evaluation

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5e, the IPM evaluation requirement is met.

CASP Module Questions	Response
019. Was the orchard monitored by a licensed PCA for insects, mites, diseases and pest natural enemies (i.e., beneficials) at least once every two weeks during the growing season? (Diseases should be monitored weekly during bloom and spring.)	Yes
020. Were written or electronic scouting reports kept by or provided to the farm owner or staff to inform decision making?	Yes
021. Was a year-end review of pest levels and trends completed to improve future decision-making?	Yes
023. Were scouting efforts continued after the use of each pest control tactic to verify efficacy and/or resistance issues?	Yes
073. At harvest, did farm staff or a PCA sample and analyze the nuts for types of nut rejects to determine the pest(s) causing the damage, the efficacy of the year's pest management program, and the plan for the next year?	Yes

### Criteria 5f: Resistance Management

**Evaluation: Yes**

If one or more questions listed are answered 'Yes' then 5f, the IPM resistance management requirement is met. (If all questions are 'Not Applicable,' then 5f could also be met.)

CASP Module Questions	Response
096. In addition to following required practices on product labels, were mode-of-action group numbers for insecticides and acaricides (on labels or in UC Pest Management Guidelines) recorded and used to guide pesticide rotation/resistance decisions?	Yes
113. In addition to required practices on product labels, was the most recent fungicide efficacy and resistance management information reviewed (e.g., UC Fungicide Efficacy and Treatment Timing tables) to guide active ingredient rotation/resistance management decisions?	Yes
130. Was an integrated weed management strategy developed (e.g., involving multiple control tactics, and rotation of herbicides with different modes of action) that considered monitoring results, past treatments, herbicide resistance, regulations and physical characteristics of the orchard, and surrounding sensitive areas?	Yes