



Cover Crops 101

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When land managers want to improve and protect soil, their most precious natural resource, cover cropping and composting are the two practices most often used. Composting is a great way to increase organic matter while amending the soil with non-synthetic sources of fertilizer. Pollinator Partnership endorses composting, however since this practice doesn't directly improve pollinator health this article will focus on cover cropping.

Cover cropping involves planting combinations of grains, legumes, brassicas, and wildflowers grown to cover the soil. The cover crop is then terminated and incorporated into the soil to improve soil health. Increasing water infiltration, decreasing compaction, suppressing weeds, reducing erosion, increasing nitrogen, supporting microbe activity, controlling pests, and reducing dust are some of the agronomic benefits cover crops have. Cover crops can also significantly improve pollinator health if plant species that provide pollen and nectar during bloom are selected.

Modifying traditional cover crop mixes to include plant species bees can forage on is a popular practice being utilized on farms and orchards whether they grow insect pollinated crops or not. Managed pollinators, like honey bees, and unmanaged pollinators, like native solitary bees benefit from having access to abundant and diverse sources of nutrition in blooming cover crops. Producers who amend their land with bee forage cover crops are doing more than helping sustain local populations of pollinators. They are actually increasing the potential for those bees to pollinate crops and increase yield.

- Recent research conducted by the Almond Board of California and UC Davis showed almond orchards with cover crops had yields 100 - 225 pounds per acre higher than orchards with bare soil. ¹
- Cover crop species like brassicas, stimulate bee colonies to increase their populations throughout the growing season. More foraging bees collecting pollen and nectar results in more pollination of cash crops. ²

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- The vigor of individual bees is also improved when they are raised in resource abundant versus resource limited environments. Malnourished worker bees communicate less effectively which reduces their potential. ³
- The positive effect that cover cropping has on pollinators lasts beyond the lifespan of the cover crop. For example, colonies with access to diverse sources of nutrition during the growing season will have lower pathogen loads and higher rates of winter survivability. ⁴

Agricultural producers, beekeepers, and conservationists alike realize using cover crops to improve both soil and pollinator health is smart farming. Non-profit organizations like Project Apis m. have gone a step further and have developed programs like Seeds for Bees. This program awards free or discounted cover crop seeds to managers seeking to increase sustainability by improving both pollinator and soil health. Learn more by visiting <https://www.projectapism.org/seeds-for-bees.html> or contacting Stetcyn Maldonado at stetcyn@projectapism.org.

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