



# Bee Friendly Farming with CRP

## How CP42 and CP43 is Beneficial to Bees

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Pollinators are becoming increasingly important as the world continues to discuss food security and the ecological health of our planet.<sup>2</sup> By providing pollinators with habitat we ensure that they have enough nectar and pollen, but also protected area for nesting and overwintering. There are about 3,600 bee species in North America and approximately 70% nest underground.<sup>3</sup> This means that perennial grassland and prairie is essential habitat for bee survival. The prairies of North America are a source of several species that flower at distinct times throughout the season, providing continuous resources when bees are active. Generally, as agriculture has expanded, we are at a net loss for grassland and prairie. Only about 20% of North America’s grasslands remain untouched by agriculture or urban development.<sup>4</sup>



*An endangered rusty-patched bumble bee on a native prairie plant, Xerces Society*

### **Conservation Reserve Program**

The Conservation Reserve Program (CRP) was established in 1985 by President Ronald Reagan, and since then has amassed over 20 million acres of protected land.<sup>1</sup> This land conservation program is administered by the Farm Service Agency (FSA) and asks farmers to set aside “environmentally sensitive land,” taking it out of agricultural production, and planting species that can improve soil quality, reduce erosion, protect groundwater, and provide habitat for wildlife, including bees.<sup>1</sup> Within the CRP, there are several conservation practices (CP), with a subset that can help landowners protect bees.

### **CP42: Pollinator Habitat**

One of the many programs under the CRP is CP42, the Pollinator Habitat Initiative. This program specifies that the landowner create habitat designed for pollinators, such as bees, butterflies, flies, birds, bats, etc. To qualify for this program, at least 0.5 acres of land needs to be seeded in a pollinator prairie mix that contains a minimum of 9 native species. Additionally, these 9 species must include at least 3 blooming in each of the three periods of the growing seasons: April to May, June to July, and August to October.<sup>5</sup> It is especially important for resources to be available toward the end of the growing season when bees prepare to overwinter.





### CP43: Prairie Strips

Unlike the Pollinator Habitat Initiative, the main goal of the prairie strip practice, CP43, is to prevent soil erosion and improve water quality, with the secondary goal of providing habitat for pollinators or wildlife.<sup>6</sup> This program belongs under the “CLEAR” initiative, which stands for Clean Lakes, Estuaries, and Rivers.<sup>7</sup> This initiative seeks to reduce the movement of water containing fertilizer from crop fields. As these pollutants collect at the base of a watershed, they can produce eutrophication, creating what has been called a “dead zone,” caused by algal blooms that thrive from the nitrogen and phosphorus in the contaminated runoff.<sup>8</sup>



Example of a prairie strip in a field, from The STRIPS project at ISU<sup>9</sup>

A multi-disciplinary team at Iowa State University developed the prairie strip practice as a way of catching these nutrients before they leave a crop field by intercepting them within or at a field edge. The CP43 program implements prairie strips by requiring participants to establish strips between 30 and 120 foot in width and accounting for no more than 25% of the cropped acres per tract.<sup>9</sup> Though the CP43 program emphasizes the benefits of enhanced water quality and reduced soil erosion, the requirements are similar to those of CP42 due to the establishment of grasses and forbs planted within these strips. Therefore, prairie strips also provide habitat and forage for many wildlife species, including pollinators, like bees. Evaluation of CP43 placed in commercial fields using conventional agricultural practices has revealed that prairie strips have disproportional benefits: by converting only 10% of a crop-field to diverse, native perennial vegetation, farmers and landowners can reduce sediment movement off their field by 95% and total phosphorous and nitrogen lost through runoff by 90% and 85%, respectively. Prairie strips provide a win-win scenario for farmers and wildlife.<sup>9</sup>

### It's For the Bees

By adopting programs within the CRP such as CP42 or CP43, farmers and landowners can help conserve pollinators. These practices coincide with the goals for Bee Friendly Farming by both ensuring a future with pollinators and utilizing sustainable agricultural practices.

### References

1. USDA – Farm Service Agency. February 2022. “Conservation Reserve Program: Fact Sheet.” Accessed June 17, 2023.
2. Das, Arindam, Sayan Sau, Manas Kumar Pandit, Koushik Saha. A review on: Importance of pollinators in fruit and vegetable production and their collateral jeopardy from agro-chemicals. *J Entomol Zool Stud*, 2018; 6(4): 1586-1591.
3. The Bee Conservancy, “Ground Nesting Bees.” N.d., accessed June 19, 2023, <https://thebeeconservancy.org/ground-nesting-bees/>.
4. Ceballos G, Davidson A, List R, Pacheco J, Manzano-Fischer P, Santos-Barrera G, Cruzado J. Rapid decline of a grassland system and its ecological and conservation implications. *PLoS One*. 2010 Jan 6;5(1):e8562. doi: 10.1371/journal.pone.0008562.
5. USDA – Farm Service Agency. 2017. “Conservation Reserve Program: CP42 Pollinator Habitat.”
6. USDA – Farm Service Agency. 2017. “Conservation Reserve Program: CP43 Prairie Strips.”

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7. USDA - Farm Service Agency. 2019. "CRP CLEAR Initiative: Prairie Strip Practice (CP43)."
8. The Nature Conservancy. "Gulf of Mexico Dead Zone." Accessed June 19, 2023. <https://www.nature.org/en-us/about-us/where-we-work/priority-landscapes/gulf-of-mexico/stories-in-the-gulf-of-mexico/gulf-of-mexico-dead-zone/>.
9. Science-Based Trials of Rowcrops Integrated with Prairie Strips. "What Are Prairie Strips?" Accessed June 19, 2023. <https://www.nrem.iastate.edu/research/STRIPS/content/what-are-prairie-strips>.

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