



## Partners for Sustainable Pollination

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CC: Keira Franz, National Association of Conservation Districts [keira-franz@nacdnet.org](mailto:keira-franz@nacdnet.org)

U.S. Department of Agriculture  
Natural Resources Conservation Service  
ATTN: Ms. Patty Lawrence  
14th and Independence Avenue, SW, Room 4237-S  
Washington, DC 20250

**RE: Comments on Soil and Water Resources Conservation Act—*Designate Habitat and BMPs for Managed and Native Pollinators as a Priority Natural Resource Concern on Private Lands***

Partners for Sustainable Pollination (PFSP) is pleased to respond to the Natural Resources Conservation Service (NRCS) request for comments (74 FR 25487, May 28, 2009) as part of the agency's development of an appraisal of the nation's natural resources and a national program/policy statement pursuant to the Soil and Water Resources Conservation Act of 1977.

In brief, PFSP's comments are directed to the **critical importance of managed and native pollinators to agriculture and healthy ecosystems and to the need to fully implement the new conservation authorities for managed and native pollinators in the 2008 farm bill on an expedited basis to help farmers and ranchers improve habitat on private lands for managed and native pollinators.**

NRCS asks for input in three areas, and PFSP will endeavor to respond to each as appropriate.

**NRCS Issue: *What is the most important natural resource concern on private lands today? In the next decade?***

PFSP is not qualified to judge what is the most important natural resource concern on private lands today, or in the next decade. However, PFSP does believe the wellbeing of managed and native ag pollinators has been neglected for too long and should be designated as a critical natural resource concern.

Bees and other animal pollinators are vital partners in agricultural production and in healthy wildlife ecosystems. About one of every three bites we eat is from crops pollinated by bees and other pollinators. Pollination of many specialty crops is almost totally reliant on the services provided by beekeepers and their managed honey bees. It is conservatively estimated that over \$15 billion in crops are pollinated by managed honey bees in the U.S., with an additional \$3 billion in crops pollinated by native bees.

Our nation's honey bees are seriously threatened by a complex of pest and disease challenges, including Colony Collapse Disorder (CCD). There are increasing indications that native pollinators are also at risk. Honey bee losses have been heavy, jeopardizing the continued viability of our commercial crop pollination industry and reliable and affordable pollination services to the U.S. agricultural community.

This threat goes beyond pollinators to include the beekeepers that manage honey bees and deliver essential pollination services to specialty crops that are vitally dependent on honey bees for pollination. Unfortunately, the commercial beekeeping businesses that provide essential crop services are struggling to remain viable, with a significant contributing factor being lack of suitable forage for their bees between pollination contracts.

Fortunately, it doesn't take new programs to take action. Under the new farm bill pollinator conservation provisions, existing conservation program authorities can be readily applied to establish habitat and forage for managed and native pollinators.

#### Habitat Forage Essential for Honey Bee Health and Viability of Beekeepers

While honey bees and native bees can be regarded as agricultural inputs akin to tractors and fertilizer, they are unique in that they are biological inputs that require maintenance and nutrition throughout the year. They can't just be put on the shelf until they are needed for the next pollination season.

There is a broad scientific consensus that natural forage and nutrition are essential to good bee health and to bees' ability to cope with pests, pathogens and other stressors. Improving natural forage for honey bees and native pollinators is a proven method of contributing to their health and sustainability.

Historically, beekeepers have had access to bee forage after their bees finish pollinating crops for the season. Unlike other sectors in agriculture, most beekeepers do not have control over the land they need to nourish and manage their bees. They are essentially "guests" of other landowners and are dependent on others to provide safe habitat and practices needed for bee pasture they need to keep their honey bees adequately nourished and healthy honey bees.

Over the decades, a number of forces including urbanization, changes in agricultural practices and pesticide use, and bans on honey bees at restoration projects on public lands have combined to decrease the acreage and sites available as safe bee pasture to beekeepers and their bees. The impact of the lack of availability of natural forage and resulting poor nutrition on the health of honey bees is well documented.

Entomologists agree that bees require a mixing of pollens throughout the year to acquire the necessary proteins, lipids, vitamins, minerals and micronutrients required by bees to be at their healthiest—or another way to view it—their most resistant to pests and pathogens. Proper nutrition is also essential for the physiological development of bees to live their intended life span.

Pollens are the health food in honey bee colonies. They provide protein, lipids, vitamins, minerals, sterols, antioxidants and other nutrients required by the bees. No single pollen source can provide all the nutrients required in the diet of honey bees. This can become particularly important when colonies are used for pollinating commercial crops where cultivation and herbicides are used for "clean cultivation" or "removal of competing bloom." In order to have colonies populated with the most robust bees, best capable of dealing with diseases, parasites, and exposure to toxic chemicals, colonies need access to a good mix of quality pollens.

### Provide Larger Scale Local Habitat for Managed Honey Bees

California is a state where conservation action is especially critical in helping to reduce the serious deficit in natural forage for honey bees in California. A major forage deficit in California drives the importation of honey bees from other regions of the U.S., the importation of bee packages from Australia and the importation of contaminated pollen for honey bee feed supplements from sources like China to help meet California agriculture's pollination needs.

These interregional movements and imports if unabated represent continuing vectors for more diseases and pathogens that could devastate honey bees in California and elsewhere in the U.S. and the essential pollination services they provide to agriculture in California and across the nation.

Any increases in local forage and bee pasture can reduce the needs for imported hives, produce healthier and more sustainable local pollinator populations, and reduce the potential for pests and diseases brought in through imports that can devastate honey bees and other pollinators. Updating the conservation practice standards at the national and state levels is a critical step in helping farmers and ranchers increase habitat for managed and native pollinators.

### Honey Bees Need Larger Scale Bee Pasture

A typical commercial holding yard of a hundred or more colonies must forage over an area of over at least a dozen square miles! The nutritional requirements of honey bee colonies are significant. Each colony requires a forage area of anywhere from one to many acres, depending upon the plant resources and soil moisture. Between crop pollinations, a beekeeper must keep his or her bees in holding yards to provide them adequate nutrition to maintain their strength.

Honey bees are especially dependent upon late summer and fall blooming plants, as they prepare for winter. Honey bees survive the winter by feeding on honey and pollen stored during summer and fall. Therefore, special consideration must be given to encouraging plantings of late summer and fall plants to meet this critical need.

While smaller scale plantings for native bees are helpful, for growers who wish to integrate larger scale beneficial practices that benefit honey bees, a potentially useful frame of reference is 'Bee Pasture' categories as defined by Dr. Keith Delaplane (University of Georgia): *Single Year Productive, Multi-Year Productive, and Permanent Productive*. By planning for sufficient resources for honey bees, other pollinators will also benefit.

***NRCS Issue: How effective are current conservation program approaches (e.g., technical assistance, cost-share, easements, compliance, research, land retirement, locally led conservation) in addressing this resource concern?***

### Utilize New Farm Bill Pollinator Provisions to Help Managed and Native Honey Bees

Farm bill conservation programs managed by NRCS should be utilized to the maximum extent practicable to encourage habitat development and protection for managed honey bees, pursuant to new pollinator conservation provisions in the farm bill. The new provisions encourage use of all USDA conservation programs in developing habitat for native and managed pollinators, and conservation practices that benefit native and managed pollinators.

PFSP is pleased that NRCS Chief Dave White has commented publicly on several occasions that the agency is committed to utilizing the new authorities to help managed and native pollinators. The wellbeing of honey bees as managed pollinators is certainly critical to the future wellbeing agriculture.

PFSP urges NRCS to identify forage and habitat for ag pollinators—honey bees and native pollinators—as a national priority resource concern. State NRCS offices should be encouraged to make a similar determination, especially in states or regions where ag pollination services are important and where forage deficits are recognized as a limiting factor for healthy honey bees and native ag pollinators.

#### Update Conservation Practice Standards to Help Meet Needs of Managed and Native Pollinators

It would appear that current conservation practice standards have the flexibility to address managed and native pollinator resource needs. PFSP applauds the agency’s stated commitment to modifying selected practices to better clarify their relevance to managed and native pollinators. This work should proceed expeditiously, with emphasis placed on the larger scale needs of managed honey bees. PFSP recommends reviewing the full range of Conservation Practice Standards, identifying which practices can provide larger scale honey bee pasture requirements and incorporating such information into Technical Notes and other forms of technical assistance at the national and state levels.

#### Enhance Planting Mixes to Include Plants that Provide Optimal Forage for Honey Bees

PFSP urges that planting mixes be enhanced at the national and state levels by including plants suitable for each region that provide optimal forage for honey bees. There are several plant species, particularly clovers, that are being widely used on conservation land that provide optimal forage value and carrying capacity for honey bees, such as in the Conservation Reserve Program (CRP) , that are non-native and non-invasive. American Beekeeping Federation president Zac Browning testified at a congressional hearing in 2007 that beekeepers in aggregate place as much as 40 percent of their hives on CRP lands for high quality and safe natural forage (no pesticide use) when the hives are not being used to pollinate crops. PFSP urges that NRCS continue to include such species in recommended planting mixes where appropriate.

PFSP understands that at least one state NRCS office (Minnesota) has excluded all non-native species, allowing only native species, in updating plant lists for pollinators. This type of action is a giant step backward for managed pollinators and should be reversed, at least until proven native plantings of equivalent forage value and carrying capacity can be identified.

#### Designate Honey Bee Liaison at NRCS, Convene Honey Bee Working Group to Assist

PFSP recommends that NRCS further this objective by (1) designating a liaison at NRCS charged with working with beekeeping industry interests, and (2) establishing and convening a working group of beekeepers, qualified research and extension specialists and interested agricultural producers to help conduct the necessary review and revisions.

#### Educate Conservation Assistance Providers and Growers About Pollinator Habitat Approaches

Work to realize the full potential of USDA conservation assistance and incentive programs to help farmers and ranchers establish and maintain habitat for managed and native bees. Provide training to NRCS and NACD employees and other technical assistance to make them aware of the new farm bill authorities and the importance of habitat for managed and native bees, and how programs can be used to assist farmers and ranchers. Conduct outreach programs to help make farmers and ranchers aware of the importance of providing habitat for managed and native bees and technical resources and available assistance.

**NRCS Issue: *What other program approaches (e.g., environmental service markets, tax credits) are needed to solve important natural resource concerns?***

PFSP believes a “Bee Friendly Farmer” recognition program can help growers establish habitat and best practices for bees. NRCS programs and incentives could be leveraged by encouraging businesses and other stakeholders to ‘adopt’ Bee Friendly Farmers and provide assistance to help underwrite costs associated with planting and maintenance of habitat for managed and native bees, and by encouraging consumers and businesses to purchase local honey and food produced by Bee Friendly Farmers.

If tax credit, easements, and other economic incentives are used to preserve farmland, create wildlife habitat and other conservation objectives, value or credit could be given for establishing bee pasture for honey bees and habitat for pollinators in general.

For native pollinators, it may be possible to establish economic value for growers who establish pollinator habitat for the ecosystem services provided by native pollinators to other growers.

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In closing, ag pollination services are critical to the future of American agriculture. The health of honey bees can no longer be only a beekeeper problem. As humans, we want to use the bees to meet our needs, but do not take ownership for the responsibility for ensuring their wellbeing and their right to thrive. PFSP believes these services are clearly at risk if we do not take decisive action to protect and sustain honey bees, beekeepers and native pollinators.

PFSP is a volunteer-based nonprofit headquartered in Santa Rosa, California that is dedicated to improving the health of honey bees through a collaborative approach involving beekeepers, growers, scientists and land management agencies with a concurrent objective of contributing to restoring native pollinator populations.

PFSP stands ready to assist NRCS in identifying conservation programs and practices that can be applied to help address the larger scale needs of managed honey bees, and to support their use in implementing the suite of USDA conservation assistance and incentive programs to help increase habitat and best management practices for managed honey bees and native pollinators.

Respectfully Submitted,

Kathy Kellison, Executive Director  
Partners for Sustainable Pollination  
828 Beaver Street  
Santa Rosa, CA 95404  
(707) 321-4711  
[k.kellison@earthlink.net](mailto:k.kellison@earthlink.net)  
<http://pfspbees.org>