Partners for Sustainable Pollination

April 13, 2009

Financial Assistance Programs Division
Natural Resources Conservation Service
U.S. Department of Agriculture
1400 Independence Avenue, SW-Room 5237-S
Washington, DC 20250-2890

RE: Comments on Docket Number NRCS-IFR-08005
Environmental Quality Incentives Program (EQIP) Interim Final Rule

Partners for Sustainable Pollination (PFSP) is pleased to submit the following comments to the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service's (NRCS) request for public input on the interim final rule for the Environmental Quality Incentives Program (EQIP), Docket Number NRCS-IFR-08005.

PFSP is a 501(c)(3) nonprofit based in Santa Rosa, California. PFSP seeks to work collaboratively with beekeepers, scientists, growers, public agencies and other stakeholders to improve the health of honey bees with a concurrent objective of contributing to restoring native pollinator populations. More information about PFSP is available at http://pfspbees.org. In brief, PFSP recommends the following actions re EQIP:

1. **Clarify Practices Benefiting Honey Bees and Native Pollinators Eligible for EQIP.**
2. **Designate Honey Bees and Native Pollinators as Priority Resource Concern.**

PFSP also offers the following recommendations to NRCS beyond EQIP that also affect EQIP:

3. **Enhance Pollinator Conservation to Address Larger Scale Needs of Honey Bees.**
4. **Designate Coordinator to Advance Habitat Conservation for Honey Bees.**
5. **Establish Integrated Conservation Practice Standards and Tech Notes for Honey Bees and Native Pollinators.**

FARM BILL CONSERVATION FOR NATIVE AND MANAGED POLLINATORS

The 2008 farm bill has leveraged consensus surrounding the need to help pollinators by calling for conservation actions using the full range of USDA conservation programs to benefit pollinators—both native and managed honey bees:

> **Administrative Requirements for Conservation Programs**
> **''(h) ENCOURAGEMENT OF POLLINATOR HABITAT DEVELOPMENT AND PROTECTION.—In carrying out any conservation program administered by the Secretary, the Secretary may, as appropriate, encourage—**
> **''(1) the development of habitat for native and managed pollinators; and**
> **''(2) the use of conservation practices that benefit native and managed pollinators.**
> [*emphasis added*]

Additional insight about Congressional intent is provided by the following excerpt from the Statement of Managers: "The Managers see **conservation programs as an important tool for creating, restoring, and enhancing pollinator habitat quantity and quality**. The Managers expect the Secretary to encourage, within appropriate conservation programs, measures to benefit pollinators and their habitat, such as using plant species mixes in conservation plantings to provide pollinator food and shelter; establishing field borders, hedgerows, and shelterbelts to provide habitat in proximity to crops; establishing corridors that can expand and connect important pollinator habitat patches; and encouraging related pollinator-friendly production practices."

This action by Congress reflects the importance of pollinators to agriculture and healthy wildlife ecosystems, the serious threats to ag pollination services, and the tremendous opportunities to use existing conservation programs to help honey bees, other managed pollinators and native pollinators.

PFSP urges NRCS to take full advantage of this authority to help farmers and ranchers develop habitat and use conservation practices for both honey bees and other managed pollinators and for native pollinators through EQIP, supporting Conservation Practice Standards and Tech Notes, and other conservation programs. EQIP can provide essential cost-share assistance to help growers purchase appropriate seed mixes for bee pasture and other pollinator habitat and to help underwrite the costs of establishing and maintaining bee pasture and other pollinator habitat and bee-beneficial conservation practices.

HONEY BEES, BEEKEEPERS AND AG POLLINATION SERVICE AT RISK

It is well established that 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.

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 bees are succumbing in record numbers, 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 the bees 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.

PFSP RECOMMENTATIONS

Clarify That Growers Installing Habitat Improvements Benefiting Honey Bees and Native Pollinators Are Eligible for EQIP Cost-Share Assistance. Regulatory language and other explanations of EQIP eligibility criteria should be enhanced to make it clear that producers are eligible for cost-share assistance to help with costs of establishing bee pasture and other pollinator-beneficial habitat and conservation practices.

Designate Forage and Habitat Needs of Honey Bees and Native Ag Pollinators as a Priority Resource Concern for EQIP and Other NRCS Conservation Programs. PFSP urges NRCS to identify forage and habitat for ag pollinators—honey bees and native pollinators—as a national priority resource concern. Honey bees and many native bees together represent a major agricultural input, in particular for many specialty crops. Both honey bees and native pollinators are arguably at risk.

State NRCS offices where ag pollination services are important 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.

Designate Honey Bee Coordinator to Enhance NRCS Pollinator Conservation Efforts. Even prior to the enactment of the 2008 farm bill, an emerging body of work at NRCS has been in evidence in the form of growing efforts to improve habitat for native pollinators. That effort is continuing to progress. Through work led by NRCS wildlife biologists at the national and state level, in close collaboration with native pollinator advocates like Xerces, Tech Notes are being developed or upgraded to include recommended plantings, habitat and other practices to benefit native pollinators. Technical assistance providers are being made aware of native pollinator habitat needs and practices, and grower workshops are being held or planned in many states. NRCS has even leveraged its resources by reportedly working out a cooperative agreement to support these outreach efforts in which several Xerces positions are now joint NRCS-Xerces positions. PFSP applauds these efforts. Since the nutritional needs of honey bees and native pollinators are similar in many respects, plantings for native pollinators will also benefit honey bees. These efforts are sure to result in improved forage that will benefit honey bees.

It is understandable that the natural focus of wildlife biologists and native pollinator advocates would be on native pollinators. However, good efforts to help native pollinators alone are insufficient to address the forage and nutritional needs of honey bees. As explained in other sections of these comments, the nutritional needs of honey bees are different in several important respects and thus require some additional and larger scale forage and conservation practices.

Therefore, PFSP urges NRCS to extend the good model used to help native pollinators to honey bees by tasking a designated coordinator and advocate to work within NRCS and with honey bee stakeholders to advance bee pasture and other conservation practices that best meet the needs of honey bees. Leveraged opportunities to include experts on honey bee forage needs should be sought.

Beekeepers and other advocates for honey bees are admittedly for the most part new to the NRCS process and culture, and how to constructively and effectively engage in that process. PFSP and other stakeholder representatives for beekeepers and honey bees are working to learn how best to provide input into policies and programs at the national level, help include honey bee needs in the development of critical resources like Conservation Practice Standards and Tech Notes, participate in State Technical Committees and county committees, and engage in other actions needed to help NRCS help honey bees as managed pollinators.

Include Larger Scale Practices Needed for Honey Bees in Conservation Practice Standards, Tech Notes and Outreach Efforts. The nutritional requirements of honey bee colonies are significant. It is estimated that it takes one full comb cell of mixed pollens and another full cell of honey to rear one honey bee worker. Since honey bee colonies rear 1,000 to 2,000 replacement bees daily, it is estimated that a colony requires 50 pounds of mixed pollens for bee rearing alone each year. Another way to describe that demand is to state that on every day during the active, brood rearing season (spring, summer, fall), each colony needs to collect pollens and nectar from an acre equivalent of mixed blooming plants. Much of that need may of course be met through neighboring habitat.

Forage plants are particularly important to honey bees because they provide all the food essential for colony growth and maintenance. Nectar is used to dilute honey and liquefy the pasty stored pollen before consumption, because honey bees must drink all their food through a very small hole at the tip of their mouthparts. Besides being dehydrated and stored as honey for future consumption, nectar supplies sugars necessary for the production of beeswax from glands in worker bees' abdomens. Beeswax is used to build the combs on which the bees live and in which they rear their brood and store their food.

Honey bee colonies are much more dependent on late summer and fall blooming plants as they must over winter thousands of individuals and not just a single queen. Enough honey stores must be accumulated for sufficient honey bees to survive through the winter to the next blooming season. Therefore, special consideration must be given to encouraging plantings of late summer and fall plants to meet this critical need.

Thus, larger scale landscape plantings are needed to meet the nutritional needs of managed honey bee colonies. 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, it is more than likely sufficient resources will be available and enhanced for other pollinators given considerations for the carrying capacity of and planting choices implemented on the acreage involved.

Incorporate Practices Benefiting Honey Bees and Native Pollinators in Conservation Practice Standards. The 2008 farm bill specifically references "native and managed pollinators" in ensuring local needs are met when reviewing Conservation Practice Standards. These Standards constitute the core technical references that are used by NRCS as the basis for technical advice that is provided to ag producers and what practices are eligible for cost-share assistance and other incentives under EQIP and other programs.

PFSP urges NRCS to move forward on an expedited basis on updates and revisions to Conservation Practice Standards per the 2008 farm bill requirement to assure the "appropriateness and relevance of the standards to local habitat and conservation practices needs of native and managed pollinators."

Develop Comprehensive Tech Notes for Honey Bee Forage and Native Pollinator Habitat. PFSP urges NRCS to encourage each State NRCS office to draft a comprehensive, "one-stop" Tech Note for Pollinators, to give growers the range of information needed to enable them to make informed decisions about establishing forage and habitat other conservation practices to meet the needs of honey bees and native bees. In particular, growers need good information what to include in planting mixes that will provide good nutrition for honey bees.

PFSP supports the model of a single Tech Note in each State where ag pollinators are important that provides technical assistance providers and growers with a "one-stop" resource providing good information for both honey bees and native bees. PFSP is concerned that recent and ongoing efforts to produce Tech Notes for pollinators are focused almost exclusively on native pollinator habitat, with at best only passing reference to the conservation needs of honey bees. It is important to provide commensurate information and recommendations that are tailored to meet the special needs of managed honey bees. PFSP believes that the option of two separate Tech Notes—one for native pollinators and a second for honey bees—is inefficient at best. Growers are busy, and the majority of habitat recommendations are helpful to all pollinators. It would seem much more effective to incorporate good information how to include larger scale forage practices that will benefit honey bees.

Similarly, grower workshops should present the full menu for both honey bees and native pollinators. PFSP is currently involved in such collaborative workshops in California.

The process could be expedited through development of a "model template" Tech Note for pollinators at the national level to expedite the process. Each State Conservation office could then work with stakeholders to tailor to the template to fit needs specific to that State.

Consider Enhanced EQIP Payment Terms and Bonus Eligibility Points for Habitat for Honey Bees and Native Pollinators as Incentives to Growers to Meet Critical Needs. PFSP urges NRCS to offer innovative incentives to encourage growers to adopt practices that improve habitat development and protection for honey bees and native pollinators. This might be appropriate where honey bees and native pollinators are important providers of ag pollination services and/or are critical to addressing wildlife ecosystem challenges.

Encourage USDA Research on Natural Forage and Bee Pastures for Honey Bees. PFSP urges NRCS to collaborate with the USDA Agricultural Research Service (ARS) and the Cooperative State Research, Education, and Extension Service (CSREES) about additional research needed to improve the science about nutrition and forage needs and conservation practices that are best for improving honey bee health.

BEE PASTURE NEEDED AS FORAGE FOR HONEY BEES

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 are 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. The colony's survival is contingent on a sufficient adult population to retain viability coming out of winter. Currently there is no man-made supplement that can be substituted and provide for the complete dietary needs of healthy bees. Recent investigations conducted by Dr. Gloria DeGrandi-Hoffman at the USDA, ARS Carl Hayden Bee Research Center (Tucson, AZ) revealed that while supplements are of some use to adult bees they are not useful in raising brood (or new bees). Therefore, honey bees must have access to natural, pollen-producing plants in order to replenish colony populations.

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 on a relatively large scale.

During Congressional hearings in 2007 and 2008 held in response to the Colony Collapse Disorder (CCD) crisis, witnesses for the beekeeping industry referred to bee forage as a limiting factor for both the health of honey bees and the pollination industry. Zac Browning, President of the American Beekeeping Federation, identified the critical role Conservation Reserve Program (CRP) land contributes to play in providing valuable bee pasture and forage. It is estimated that 40% of colonies managed by commercial beekeepers are utilizing available CRP lands for forage. While CRP is managed by the Farm Services Administration (FSA), NRCS plays a critical and essential role through recommended plantings and management practices via the Conservation Practice Standards and by providing EQIP cost-share assistance to growers wanting to upgrade bee pasture and other habitat for pollinators.

CONCLUSION

Ag pollination services are critical to the future of many specialty crops in a number of key ag states and across the U.S. PFSP believes these ag pollination services are clearly at risk if we do not take decisive action to protect and sustain honey bees, beekeepers and native bees. 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 well being and their right to thrive. We continue to neglect this vital part of agriculture at our own peril.

This is a problem requiring attention and actions by implementing agencies such as USDA, NRCS to help protect and sustain this essential resource. NRCS can take great strides in tending to the needs of ag pollinators by upgrading EQIP and other conservation programs and the supporting Conservation Practice Standards, by making ag pollinators a resource priority concern and by providing cost-share assistance to growers who want to help honey bees and other ag pollinators.

PFSP looks forward to the active leadership of NRCS regarding efforts to upgrade EQIP, the Conservation Practices Standards and other conservation programs and technical assistance, in particular to meet the forage and nutritional needs of honey bees by improving bee pasture and other pollinator habitat, and access to adequate forage for the nation's hardworking and caring beekeepers and their honey bees. Agricultural producers and natural ecosystems who need their pollination services, and ultimately consumers of the nutritious food produced, will benefit.

PFSP stands ready to work with NRCS by making growers more aware of conservation practices that can help honey bees and native bees and how they can apply for assistance and incentives available through EQIP and other conservation programs.

Respectfully Submitted,

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