



Partners for Sustainable Pollination

March 5, 2010

US Environmental Protection Agency
Regulatory Public Docket (Mail Code 7502P)
Docket EPA-HQ-OPP-2009-0628
Office of Pesticide Programs
1200 Pennsylvania Ave., NW
Washington DC 20460-0001

Re: PFSP Comments on Pollinator Issues Related to EPA Draft Guidance for Pesticide Registrants on Pesticide Drift Labeling (EPA-HQ-OPP-2009-0628)

Partners for Sustainable Pollination (PFSP) is pleased to comment on the U.S. Environmental Protection Agency's (EPA) "*Draft Guidance for Pesticide Registrants on Pesticide Drift Labeling*" (EPA-HQ-OPP-2009-0628) published in the Federal Register on November 4, 2009 (74 FR 57166).

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.

In brief, PFSP's comments are directed to the critical importance of honey bees and native pollinators to agriculture and healthy ecosystems, and to the need to ensure that spray drift guidelines and related efforts are updated to become sufficiently protective of honey bees and native pollinators.

Research conducted to date on pesticide residues found in pollen and honey bees raises serious concerns about pesticides and their impacts on honey bees and native pollinators that should serve as the basis for increased regulatory oversight of pesticides, including spray drift.

For example, a research team led by Maryann Frazier at Penn State University found the following in testing of honey bees and hives that had succumbed to Colony Collapse Disorder (CCD):¹

- Pesticide residues were found in every bee tested;
- There were 70 different pesticides found in bees and pollen;
- Pollen samples averaged 6 different pesticide detects; and
- One pollen sample had 31 different pesticides.

¹ Source: Frazier et al, "What Have Pesticides Got to Do With It?", *American Bee Journal*, June 2008, pp. 521-3.

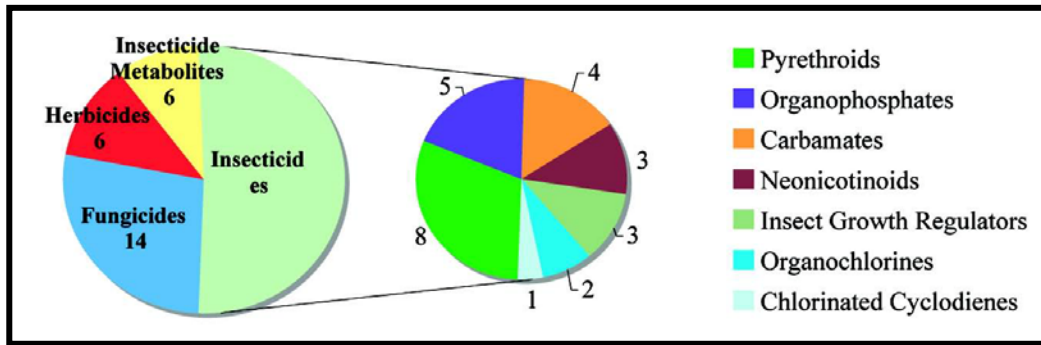


Figure 1. Pesticide class and types of compounds detected in 108 pollen samples

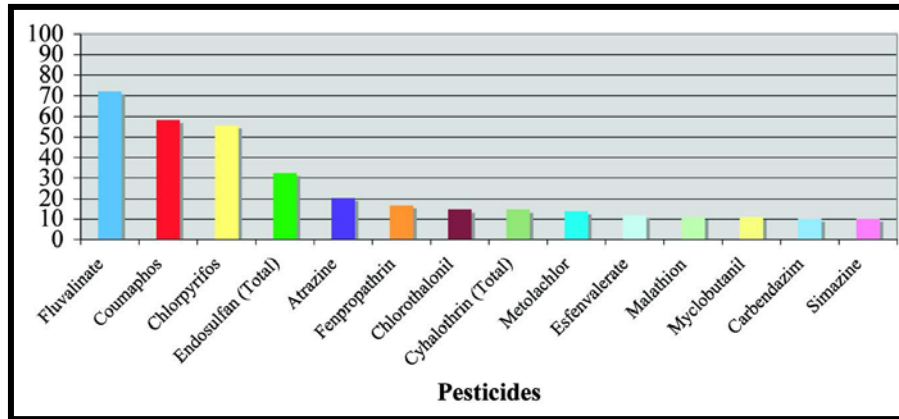


Figure 2. Most Frequently Detected Residues in Bee Pollen

Recent research has also demonstrated that fungicides in combination with neonicotinoids can interact to be 1000 times more toxic than when evaluated alone. Yet EPA only registers chemicals as a single compound. Since honey bees can forage over a range of 50 square miles, they are exposed to multiple pesticide applications and spray drift effects. Pollen containing pesticide residues is brought back to the hive, exposing other adult and juvenile members of the colony. This translates into an incalculable potential for subjecting bees to chronic exposures of pesticides and combinations of pesticides.

PFSP appreciates EPA's efforts to produce guidance that will provide more effective spray drift labeling, training and practices to the pesticide industry, applicators, regulators and other affected stakeholders. The need to address spray drift more effectively has been evident since 1996 when the National Coalition on Drift Minimization was created. Unfortunately, no action was ever taken on the 2001 proposal. EPA cites survey results showing that regulation of spray drift is minimal because state regulators view spray drift regulations and labeling to be confusing and largely unenforceable. PFSP urges EPA to act decisively in advancing improvements to spray drift labeling and practices.

PFSP supports desired outcomes of the draft EPA Pesticide Registration Notice (PRN), which provides new labeling language for pesticide products to provide guidance ".....to minimize drift and to protect people, other non-target organisms, and the environment from adverse effects that may be caused by off-target pesticide drift" and "to improve the consistency and clarity of pesticide labeling."

Honey bees and native pollinators merit priority consideration and protection in the development of spray drift guidelines and labels and training and best practices to minimize exposure and mitigate risk. EPA is to be commended for specifically recognizing “pollinators” in the definition of Adverse Effects on Wildlife: “*Any negative effects on the viability of beneficial insects (e.g. pollinators), fish, birds, or other wildlife, including but not limited to death.*”

While opinions may differ about whether managed honey bees are wildlife, PFSP recommends that EPA embrace honey bees in its definition of pollinators, whether considered as wildlife, an agricultural commodity or a domestic animal. The Farm Bill similarly treats honey bees in similar multiple ways. In addition, pesticide damage to plants is harmful to pollinators when plants that are damaged represent forage for honey bees. EPA makes reference to the presence of “beneficial insects”—such as honey bees—in evaluating whether drift could cause a harmful effect.

EPA’s specific reference to “*beehives and areas with pollinators*” is an appropriate example of when a labeling statement would be appropriate where spray drift from a particular pesticide may affect wildlife. PFSP believes specific warnings may be appropriate in risk assessments and labels where a pesticide known to be extremely toxic to bees.

PFSP concurs with consensus recommendations in the 2007 Pesticide Program Dialog Committee (PPDC) Spray Drift workgroup report. The workgroup found that pesticide labeling statements regarding drift are “.....wordy, unenforceable, confusing, impractical, and/or contradictory.” This is certainly not a good basis for protecting honey bees and native pollinators from pesticide spray drift. The workgroup effort was focused on terrestrial pesticide applications and water quality. However, PSFP believes the recommendations are generally applicable to managing risks associated with bees and other pollinators as non-target species.

PFSP endorses the consensus-based recommendations in the report:

1. Standardize pesticide drift labeling across products using concise, clear, enforceable statements;
2. Continue and expand applicator education and training, and community outreach programs;
3. Explore establishing performance standards for pesticide application equipment and practices to minimize drift, including continuing support for its Drift Reduction Technology project;
4. Work with states to tailor regulatory restrictions to local conditions; and
5. Strengthen the collection, use, and public availability of information on real-world outcomes of drift labeling, to evaluate its effectiveness in preventing harm from spray drift.

Improved spray drift regulations, labeling and training based on the above points will help protect honey bees and native pollinators from pesticide spray drift.

PFSP would emphasize that changing the label to address spray drift is only the first step. Applicator education and training on ways to reduce spray drift and risks must be a strong priority. Both EPA and industry have a shared responsibility. PFSP also supports EPA’s stated intention to develop best management practices (BMPs) guidance for applicators on spray drift. Such new guidance should be incorporated into education and training programs as soon as possible.

PFSP believes the wellbeing of honey bees and native ag pollinators is a critical natural resource concern that has been long neglected. 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.

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.

When pesticides are used, non-target species like honey bees and native pollinators are often placed at risk. As EPA notes in the PRN, "*...pesticide drift, even at low levels, may result in adverse effects on property, people, other non-target organisms, or the environments they inhabit or use. Some pesticides have the potential of causing adverse effects such as killing fish or other aquatic organisms, stunting plant growth, or disrupting reproduction in aquatic life and wildlife, depending on the level of exposure.*" The challenge is to better manage and mitigate risks of pesticide use (including spray drift) to honey bees and native pollinators when pesticides are used to help produce food, feed and natural fiber.

Widespread use of pesticides has greatly reduced the availability of acreage of safe forage and habitat for both honey bees and native pollinators. Insecticides can kill honey bees and native pollinators. Herbicides used to eradicate "weeds" contribute to monoculture agricultural landscapes in which native flowering plants that provide important forage for honey bees and native pollinators are eliminated. Spray drift increases the acreage adversely impacted. Beekeepers have experienced significant losses to their bees due to pesticide use on adjacent lands. Spray drift is

only one of many elements to be managed. With honey bees foraging up to a radius in excess of 2 miles, it is a considerable challenge to manage such risks.

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.

More commercial beekeepers are reportedly now placing their hives on Conservation Reserve Program (CRP) lands and wild lands rather than on alfalfa fields and other crop lands between periods of commercial crop pollination as a source of safe forage and nutrition, in large part because these lands experience little or no pesticide use or drift. 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 Conservation Reserve Program (CRP) lands for high quality and safe natural forage when the hives are not being used to pollinate crops. Major factors in this trend are that (1) little or no pesticide use occurs on CRP lands, and (2) CRP plantings tend to be rich in forage plants.

In closing, ag pollination services provided by honey bees 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 pollination services are clearly at risk if we do not take decisive action to protect and sustain honey bees, beekeepers and native pollinators.

PSFP has reached out to pesticide applicators in California, such as through a presentation to the Pesticide Applicators Professional Association, about ways to mitigate risks to honey bees of pesticide exposure. EPA's Office of Pesticides has a crucial responsibility and role in adequately protecting honey bees and native pollinators from exposure to pesticides, including through improved regulatory oversight and education regarding spray drift.

Respectfully Submitted,



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