



## *Arizona Farm Bureau Federation*

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March 31, 2017

U.S. Environmental Protection Agency  
1300 Pennsylvania Avenue, NW  
Washington, DC 20460-0001

RE: EPA-HQ-OPP-2009-0316-0019; Registration Reviews: Draft Human Health and Ecological Risk Assessments

To Whom it May Concern:

The Arizona Farm Bureau Federation represents farmers and ranchers from across Arizona. Our members produce an array of crops and livestock that contribute over \$17 billion of economic impact to the state. Our comments below address the Environmental Protection Agency's (EPA) preliminary ecological risk assessment of pyrethroids, as we believe it does not fully recognize the critical role this chemistry provides to the success of a number of Arizona's agricultural crops.

Arizona's abundant sunshine, fertile soils and access to water allow for the production of a vast number of crops. According to the Arizona Pest Management Center Pesticide Use Database, over 80 crops in the state use pyrethroids for insect control. The primary Arizona crops using pyrethroids include lettuce and other leafy greens, alfalfa, cotton, corn, cole crops, and melons. Other crops include beans, citrus, and various forage and vegetable seed crops. Although many of Arizona's crops benefit from the use of pyrethroids, we will highlight two of the major crops, leafy vegetables (i.e. lettuce/leafy greens) and alfalfa.

### Leafy Vegetables

Approximately 95% of the leafy vegetables consumed in the in the U.S. from November to March are produced in Arizona. These are high value crops with strict quality standards that allow for little to no damage or contamination of the harvested product. Therefore, controlling various pests from infesting and contaminating leafy vegetables is critical.

The successful production of Arizona's leafy vegetables relies on the use of pyrethroids to quickly and effectively control pests not successfully controlled by newer selective insecticides. In fact, annual surveys of lettuce growers and Pest Control Advisors show that pyrethroids, applied through foliar sprays and sprinkler chemigation, were the most commonly used insecticide class over the last 12 years.<sup>1</sup>

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<sup>1</sup> Palumbo, John. "Insecticide Usage on Desert Lettuce, 2015-2016," *UA VegIPM Update*, Vol. 7, No. 12, June 8, 2016. Available online at:

The primary pests targeted are flea beetles, crickets, plant bugs and some Lep larvae including looper and earworm. According to University of Arizona reports and information provided by John Palumbo, University of Arizona Professor and Extension Specialist, pyrethroids are one of the few inexpensive and safe broad-spectrum insecticides still available for use in tank-mixes where they are combined with a selective insecticide product for the effective control of the aforementioned pests. Tank-mixing pyrethroids is valuable to Arizona's growers for several reasons:

- Selective insecticides alone do not provide broad-spectrum insect control that was once available with older, broadly toxic products such as Organophosphates and Carbamates.
- Although the goal of tank mixes is broad-spectrum control, there are cases where certain combinations of a pyrethroid and selective insecticide provide enhanced control where the pyrethroid addresses the adult pest and the selective insecticide addresses larval control.
- It is economically beneficial to combine a broad-spectrum product with a selective product in a single application, rather than multiple applications for multiple pests with selective products.

Harvested leafy green products are also subject to contamination from plant bugs including false chinch bug, Lygus bug, stink bug, and the three-cornered alfalfa hopper. Because of growth in the fresh-cut and bagged salad products market, preventing insect contamination has become even more important. Growers consistently apply one to two sprays per season to control plant bugs and prevent lettuce from being rejected due to excessive plant contamination.<sup>2</sup> Pyrethroids are the primary insecticide used for this purpose because of their safety, short residual and pre-harvest interval. No other alternatives have similar attributes.

### Alfalfa

Arizona is extremely productive and unique when it comes to alfalfa production. According to USDA data from 2015, there were 300,000 acres of alfalfa harvested that produced 2.52 million tons valued at \$406 million. Arizona growers have the highest alfalfa yields in the nation with 8.4 tons per acre on average, compared to about 6.4 tons per acre in California. The national average is 3.4 tons per acre.<sup>3</sup>

Alfalfa farmers rely on pyrethroids (alone or in a mix) to address aphids, alfalfa weevil, caterpillars and leafhoppers. In conversations with University of Arizona Extension Area Agent, Ayman Mostafa, there are few insecticide options for alfalfa that are effective. Furthermore, in the last 10 to 15 years there has been a lack of new chemistries to address pest infestations in alfalfa. Given the limited options for effective pest control, the continued use of pyrethroids as a crop protection tool is critically important to maintain the productivity of Arizona's alfalfa farmers.

Pyrethroids are a key component for the broad-spectrum management of pests in many of Arizona's crops, but especially so in leafy vegetables and alfalfa. They pose little risk to human health and the environment when used according to label directions and are not persistent in the environment.

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<https://cals.arizona.edu/crops/vegetables/advisories/docs/060816%20Insecticide%20Usage%20Summary%20in%20Lettuce%202016%20New.pdf>. Accessed March 27, 2017.

<sup>2</sup> Palumbo, John. "Insect Losses and Management on Desert Lettuce: 2004-2016." *VegIPM Update*, Vol. 7, No. 4, July 6, 2016. Available online at: [https://cals.arizona.edu/crops/vegetables/advisories/docs/070616%20Twelve-year%20Lettuce%20Insect%20Losses%20Summary\\_Revised.pdf](https://cals.arizona.edu/crops/vegetables/advisories/docs/070616%20Twelve-year%20Lettuce%20Insect%20Losses%20Summary_Revised.pdf). Accessed March 22, 2017.

<sup>3</sup> Blake, Cary. "Alfalfa: High cutworm damage, gains made in TRR control in Arizona." *Western Farm Press*, August 17, 2016. Available online at: <http://www.westernfarmpress.com/alfalfa/alfalfa-high-cutworm-damage-gains-made-trr-control-arizona/>, Accessed March 22, 2017.

Although pyrethroids can negatively impact beneficial insects, these impacts are greatly reduced when they are applied properly and used only when needed in accordance with University integrated pest management guidelines.

Pyrethroids provides effective broad-spectrum pest control where few alternatives exists. We strongly encourage the EPA to consider the extremely safe track record and the economic importance of the pyrethroids to Arizona's farmers as it conducts its ecological risk assessment.

Sincerely,

A handwritten signature in dark ink, appearing to read "Kevin Rogers". The signature is fluid and cursive, with the first name "Kevin" and last name "Rogers" clearly distinguishable.

Kevin Rogers, President  
Arizona Farm Bureau Federation