



Arizona Farm Bureau Federation

325 S. Higley Rd, Suite 210
Gilbert, AZ 85296

October 25, 2021

Office of Pesticide Programs
Environmental Protection Agency Docket Center
1200 Pennsylvania Ave. N.W.
Washington, D.C. 20460-0001

RE: Docket ID EPA-HQ-OPP-2021-0575; EPA Draft Biological Evaluations for Clothianidin, Imidacloprid and Thiamethoxam.

To Whom It May Concern:

The Arizona Farm Bureau Federation represents farmers and ranchers from all across Arizona. Agriculture contributes \$23.3 billion dollars to the state's economy. A number of our state's farmers and ranchers would be negatively impacted if the Environmental Protection Agency (EPA) were to restrict or eliminate the availability of clothianidin, imidacloprid or thiamethoxam. We strongly support the continued use of these three active ingredients and urge the agency not to prohibit or restrict their availability and use.

Each of the neonicotinoids evaluated in EPA's biological evaluations are important to a number of Arizona's staple crops, including leafy greens, vegetables (cole crops), melons, cotton, and citrus. They are especially important to the production of leafy greens and vegetables, since Arizona is responsible for nearly 95% of the leafy vegetables consumed in the U.S. from November to March. 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.

Clothianidin and thiamethoxam offer flexibility for producers, as they are applied through various modes, either as a soil application, foliar application or seed treatment. The production of cole crops provides a useful example of the use of these different application methods that can be used to control damaging pests, such as the Bagrada bug. The bagrada bug became a major pest in cole crops starting in the fall of 2010, causing economically significant stand losses and yield quality reductions to broccoli, cauliflower, and cabbage.¹ Clothianidin has been used as a seed treatment (commercial product NipsIt) in broccoli to provide control against Bragada bug adults during stand establishment, when plants are especially vulnerable to pest damage. Bragada bug pressures have declined in the past several years and

¹ Palumbo, John C., "Impact of Bagrada Bug on Desert Cole Crops: Seven Years After the Outbreak." Veg IPM Update, Vol. 8, No. 10, May 17, 2017. Available online at: https://cals.arizona.edu/crops/vegetables/advisories/docs/170517%20Bagrada%20Bug%20Survey_2016_%20Seven%20years%20after%20outbreak_report.pdf. Accessed on July 14, 2017.

the usage of broccoli seed treated with clothianidin has also decreased.² However, pest control advisors (PCAs) who advise growers on pesticide use and application report that NipsIt continues to provide good to excellent control of bagrada adults at stand establishment.³ Although neonicotinoids are not the only chemistry available to deal with this particular pest, they are an important component, especially to ensure effective resistance management programs. Furthermore, not having these products would result in the use of older, more broadly toxic insecticides.

Clothianidin as a seed treatment has also been found to be an effective tool against the pale-striped flea beetle in guayule production. Guayule is a plant that produces rubber and has been grown on a small scale in Arizona for a number of years, but has yet to reach broad-scale commercialization. However, because there is interest in the rubber produced by guayule by large industrial entities like Bridgestone, there are farmers making investments in this crop and ongoing research at the University of Arizona to support the development of guayule as a commercial crop in the state. Decreases in the available water supply for commercial agriculture, particularly in central Arizona, make Guayule an appealing low water-use option for many growers. The commercial product NipsIt Inside is used as a seed treatment for guayule, as the plant is most susceptible to damage by pests when it is still young at stand establishment.⁴ Under the right conditions the pale-striped flea beetles can destroy a whole field of newly planted guayule.

In 2017 researchers at the University of Arizona helped support a Special Local Needs registration for NipsIt Inside seed treatment for guayule, because of the product's effectiveness against pale-striped flea beetle. In University of Arizona research, NipsIt seed treatment for Guayule resulted in stands with, on average, increases of +166% more guayule plants than without NipsIt. The treated seed provided effective control with long soil residuals that provide protection to plants in new guayule stands. Researchers screened many different seed treatments and foliar applications, but none were as effective as NipsIt.⁵ Any efforts to curtail or eliminate these use patterns could seriously jeopardize the cultivation of many crops, including new desert crop alternatives like guayule, that are otherwise extremely well adapted to our environment and to low water-use practices.

Thiamethoxam is a product used in Arizona to tackle aphid infestations in lettuce, spinach and cole crops. Aphids are one of the most significant problems facing the lettuce industry, causing economic damage to lettuce through direct injury, virus transmission, and contamination of heads.⁶ Consequently, having as many options as possible to tackle these pests is critical to preserving both quality and yield.

² Palumbo, John C., "Ten Years of Bagrada Bug on Desert Cole Crops." Veg IMP Update, Vol. 11., No. 12, June 10, 2020.

³ Ibid

⁴ Ellsworth, Peter., Naomi Pier and Isadora Bordini. "Push-Pull-Control: Securing Guayule's Future." Presentation at New Technologies Workshop for Field Crops, June 3, 2020.

⁵ Ibid

⁶ Palumbo, John C., "Impact of Planting Date on Aphid Infestations and Compensation in Head Lettuce." Veg IPM Update, Vol. 7, No. 23, November 11, 2015. Available online at: https://cals.arizona.edu/crop/vegetables/advisories/docs/111115_Lettuce_Planting_Date_Impact_on_Aphid_Species.pdf. Accessed on July 18, 2017.

According to the Arizona Pest Management Center pesticide use database, Imidacloprid insecticides are reportedly used on over 50 different crops in Arizona and throughout the southwestern states. The most significant crop uses of imidacloprid in Arizona include lettuces, cole crops, melons, cotton, spinach, celery, potatoes, pecans and citrus. Over the past 8 years, imidacloprid applications have accounted for about 40% of all reported neonicotinoid use in Arizona agriculture⁷. The largest portion of imidacloprid use is on lettuces, melons and cole crops. Like other neonicotinoids, imidacloprid products provide very effective alternatives to broad-spectrum insecticides and help to preserve natural enemies for biological control of insect pests in many crops, making them a valuable component of integrated pest management programs.

A study conducted by the University of Arizona found that imidacloprid is applied as soil systemic on more than 80% of the lettuce acres in Arizona to control both whiteflies and aphids.⁸ According to Dr. John Palumbo, Research Scientist and Extension Specialist at the University of Arizona, there are alternatives to imidacloprid, but they are not as effective and are much more expensive to use. Additionally, he notes that if growers were to lose the use of imidacloprid on lettuce and cole crops the cost of production would increase significantly. Growers would be forced to rely on multiple foliar spray applications, and the use of pyrethroids, organophosphates, and carbamates, all broad-spectrum insecticides and older chemistries, would increase greatly.

It would not be an exaggeration to suggest that the first approved use of imidacloprid in fall vegetable production in Yuma in 1993 was keystone to saving the industry from collapse there⁹. Today, it still functions to maintain plant health in the face of large populations of whiteflies immigrating from other source summer crops. Furthermore, the University of Arizona, under Dr. John Palumbo's leadership, has developed, promoted and maintained landmark neonicotinoid sharing agreements among cotton, melon and vegetable growers.¹⁰ These guidelines are referred to worldwide as models for proactively organizing agricultural stakeholders around common goals of product stewardship and resistance management.

Imidacloprid is used in Arizona melon production and provides effective and inexpensive control of aphids too limit the spread of potentially devastating aphid-borne potyviruses. It also provides 30-45 days control of whitefly nymphs in early spring melons (planted Jan-Feb), and helps in delaying whitefly infestations in late planted melons (planted Mar-Apr)¹¹. Imidacloprid also has critical uses in production

⁷ Fournier, A., W. Dixon, P.C. Ellsworth. 2017. Arizona Pest Management Center Pesticide Use Database. University of Arizona Cooperative Extension.

⁸ Palumbo, J. C., "Insecticide Usage on Desert Lettuce, 2020-2021." UA VegIPM Update, Vol. 12, No. 13, June 30, 2021, <https://vegetableipmupdates.arizona.edu/sites/default/files/210630%20Insecticide%20Usage%20on%20Desert%20Lettuce%202020-21.pdf>

⁹ Palumbo, J. C., A.R. Horowitz, and N. Prabhaker. 2001. Insecticidal control and resistance management for *Bemisia tabaci*. Crop Protection 20: 739-765.

¹⁰ Palumbo, J. C., Ellsworth, P. C., Dennehy, T. J. and Nichols, R. L. (2003). Cross-Commodity Guidelines for Neonicotinoid Insecticides in Arizona. IPM Series 17. Publ. No. AZ1319. University of Arizona, College of Agriculture and Life Sciences, Cooperative Extension, Tucson, Arizona. 4 pp. URL: <http://arizona.openrepository.com/arizona/handle/10150/146722>

¹¹ Palumbo, J.C. 2020. Impact of Proposed EPA Label Changes on Neonicotinoid Uses on Produce and Melon Crops in the Desert Southwest, 2018-2019. Vegetable IPM Update, Vol. 10, No. 12. University of Arizona. <https://acis.cals.arizona.edu/docs/default-source/agricultural-ipm-documents/vegetable-ipm-updates/2020/200415-impact-of-proposed-epa-label-changes-on-neonicotinoids.pdf>

of pecans and chile peppers, as documented in previous Arizona Pest Management Center comments to EPA¹²

The use of imidacloprid is also critical in the movement of citrus nursery stock. Because of the Asian Citrus Psyllid found in certain parts of Arizona, citrus nursery stock within the quarantine areas are treated with imidacloprid prior to out-of-state shipment. Furthermore, according to Brian McGrew, Quarantine Program Coordinator, Plant Services Division of the Arizona Department of Agriculture, imidacloprid is also an important tool for the citrus growers because of maximum residue levels that restrict the use of certain alternative products in some markets. He also notes the importance of maintaining imidacloprid as a tool to protect the Arizona citrus industry against potential infection from citrus greening disease (Huanglongbing), and as another product to rotate to for resistance management.¹³

The Arizona Farm Bureau has previously submitted comments regarding clothianidin, imidacloprid, and thiamethoxam noting their importance to protecting a number of Arizona's crops, which we wish to incorporate by reference (Docket ID #EPA-HQ-OPP-2008-0844-1255). The Arizona Pest Management Center has also submitted several comment letters related to previous dockets providing detailed information on the usage of clothianidin, imidacloprid, and thiamethoxam in Arizona which we support and also incorporate by reference.

- Imidacloprid: Response to EPA Proposed Interim Decision for Arizona and the Desert Southwest. University of Arizona, Arizona Pest Management Center. May 4 2020. Docket ID: EPA-HQ-OPP-2008-0844. https://acis.cals.arizona.edu/docs/default-source/ipm-assessment-documents/arid-swpmc-info-requests/imidacloprid_comments_apmc_5-4-20_vf.pdf
- Fournier A.J., P.C. Ellsworth, W.A. Dixon II. 2016. Imidacloprid Use in Arizona Citrus. University of Arizona, Arizona Pest Management Center. http://ag.arizona.edu/apmc/docs/Imidacloprid-Use-In-Arizona-Citrus_4-14-16.pdf
- Thiamethoxam: Response to EPA Proposed Interim Decision for Arizona and the Desert Southwest. University of Arizona, Arizona Pest Management Center. May 4 2020. Docket ID: EPA-HQ-OPP-2011-0581. https://acis.cals.arizona.edu/docs/default-source/ipm-assessment-documents/arid-swpmc-info-requests/thiamethoxam_comments_apmc_5-4-20_vf.pdf
- Neonicotinoid Use in Cotton: Response to EPA Proposed Interim Decisions for Arizona. University of Arizona, Arizona Pest Management Center. May 4 2020. Docket ID: EPA-HQ-OPP-2011-0865 - Clothianidin
EPA-HQ-OPP-2008-0844 - Imidacloprid
EPA-HQ-OPP-2011-0581 - Thiamethoxam
https://acis.cals.arizona.edu/docs/default-source/ipm-assessment-documents/arid-swpmc-info-requests/apmc_neonicotinoids_in_cotton_pid_comments_vf.pdf

¹²University of Arizona, Arizona Pest Management Center. Imidacloprid: Response to EPA Proposed Interim Decision for Arizona and the Desert Southwest. May 4 2020. Docket ID: EPA-HQ-OPP-2008-0844. https://acis.cals.arizona.edu/docs/default-source/ipm-assessment-documents/arid-swpmc-info-requests/imidacloprid_comments_apmc_5-4-20_vf.pdf

¹³ Fournier A.J., P.C. Ellsworth, W.A. Dixon II. 2016 Imidacloprid Use in Arizona Citrus. University of Arizona, Arizona Pest Management Center. http://ag.arizona.edu/apmc/docs/Imidacloprid-Use-In-Arizona-Citrus_4-14-16.pdf.

- Neonicotinoid Insecticide Use and Pollinator Protection in Several Crops and Recreational Turf in Arizona and New Mexico. University of Arizona, Arizona Pest Management Center. Jul 24 2017. Docket ID: EPA-HQ-OPP-2011-0100
https://acis.cals.arizona.edu/docs/default-source/ipm-assessment-documents/arid-swpmc-info-requests/apmc_neonicotinoids_in_cotton_pid_comments_vf.pdf

As a member of the American Farm Bureau Federation (AFBF), we support their comments submitted to the above referenced docket and share the same concerns regarding the EPA's draft Biological Evaluation (BE). We concur with their assessment that the methodologies used to conduct the biological evaluations do not account for the judicious use of the products, and instead use standard assessment methods which rely on maximum use patterns allowed on product labels. Consequently, by overstating the quantities used there is an overestimation of the impact on species. Thus, the decisions based on the EPA's biological evaluations may lead to limitations on use and availability of these products which are not based on accurate quantitative analyses of use.

The draft biological evaluations identified a significant number of species as likely to be adversely affect (LAA). In the evaluation for clothianidin 1,225 species out 1,821 were determined to be LAA, or 67%; for thiamethoxam 1,396, or 77%; and for imidacloprid 1,455 species, or 79%. Given these findings, EPA's methodology essentially transfers the responsibility to make accurate and realistic assessments regarding pesticide use and risk to other agencies (i.e. U.S. Fish and Wildlife Service and the National Marine Fisheries Service) and has the potential to further proliferate inaccurate findings throughout the course of the evaluation process.

We urge EPA to consider in its decision making the benefits on clothianidin, thiamethoxam, and imidacloprid to farmers ability to efficiently produce food and fiber and to utilize data and usage patterns instead of assumed product use. It is important to ensure any potential mitigations or limits on these products as a result of this biological evaluation is rooted in the best available science and data.

Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Stefanie A. Smallhouse".

Stefanie Smallhouse, President
Arizona Farm Bureau Federation