Agricultural Experiment Station
Cooperative Extension

37860 West Smith-Enke Road
Maricopa, Arizona 85138
(520) 568-2273
FAX: (520) 568-2556

December 26, 2023
U.S. Environmental Protection Agency
OPP Docket, EPA Docket Center (EPA/DC), 28221T
1200 Pennsylvania Avenue, NW
Washington, DC 20460-0001

Re: Acetamiprid: DRAFT Biological Evaluation and Associated Effects Determination for Endangered and Threatened Species and Their Designated Critical Habitats
EPA Docket ID: EPA-HQ-OPP-2023-0513

To Whom It May Concern:

The Arizona Pest Management Center is host to the University of Arizona's expert Integrated Pest Management (IPM) scientists, including Ph.D. entomologists, weed scientists and plant pathologists with expertise in the strategic tactical use of pesticides within IPM programs that protect economic, environmental and human health interests of stakeholders and the society at large. In coordination with the Western Integrated Pest Management Center, we contribute to federal comments on issues of pest management importance to stakeholders throughout the desert southwest including Arizona, New Mexico, Nevada, Colorado and the southeast desert regions of California.

We are writing at this time in response to the draft Biological Evaluation of Acetamiprid, EPA Docket number EPA-HQ-OPP-2023-0513, on behalf of agricultural stakeholders. We recognize that this draft Biological Evaluation is based upon current use practices, as specified on registered labels, including special local needs (SLN) Section 24(c) registrations, some of which are active in Arizona. Furthermore, we are aware of and previously commented on proposed mitigations in EPA's Proposed Interim Decision (PID) for Acetamiprid (Document ID: EPA-2012-0329-0119). Our previous comments, while they broadly address cotton usage of all neonicotinoid insecticides, provide detailed information on the use patterns and critical role of acetamiprid for whitefly management in cotton. **By this letter, we request incorporation of our previous comments on the PID into the current comment docket for this period.**

Furthermore, the PID only makes brief mention of the utility and benefits of whitefly control by acetamiprid. We wish to underscore the importance of this use pattern in Arizona cotton, where it is the only neonicotinoid in use this way.

Our previous comments documented the extent to which conservation biological control is central to the function of the cotton insect IPM system, especially when it comes to whitefly management[1]. Although we are fortunate to have a wealth of effective and selective chemistries for cotton insect pests, some of these compounds, including acetamiprid, have documented resistances among certain insect populations. Through years of applied research and intensive Extension education, our growers, and more importantly, the licensed Pest Control Advisors (PCAs) who manage their fields, are active stewards of the predator populations which are essential to the function of biological control. This is achieved by careful selection and timing of insecticide applications, only when needed to manage pests.

Acetamiprid is one of eight selective or partially selective chemistries available to manage whitefly pests in Arizona cotton, and the only neonicotinoid insecticide with significant use in cotton[2]. It is generally sprayed on 5% to 30% of Arizona cotton acres, primarily targeting *Bemisia* whiteflies. A single spray is typical. Therefore, potential reductions in the maximum seasonal rates for acetamiprid (although these have not been specifically proposed by EPA) would not be problematic for our growers.

This insecticide excels at adult plus immature control, in part because of its strong translaminar and acropetal movement. **Though use has declined in recent years, acetamiprid remains a critically important foliar neonicotinoid for our growers**. And despite reductions in efficacy, Assail (acetamiprid) routinely exceeds the adult and large nymph control provided by more recently developed chemistry. **It is particularly important in those situations where adult whiteflies rapidly immigrate and overtake a cotton field, due to nearby source crops or weeds declining in quality due to harvest, irrigation practices, or tillage / herbicide use.**

The rate structure for acetamiprid is different in Arizona for cotton due to the institution of a 50% rate increase under a Special Local Needs (SLN) 24(c) registration that has been in place since 2012 to combat acetamiprid-resistant whiteflies. The federal Section 3 labeled rate of 0.10 lbs ai / A is still adequate to control most *Bemisia* whiteflies in cotton. However, most practitioners use rates that exceed the main label, using the Arizona SLN label. There is general recognition that the partial selectivity benefits of acetamiprid diminish as rates increase to the SLN maximum.

Acetamiprid remains among the most effective *Bemisia* whitefly chemical controls available to Arizona cotton producers. However, cotton producers are acutely aware of two issues: whitefly resistance to insecticides, and the keystone role that conservation biological control plays in our system. As a result, **acetamiprid use remains stewarded, modest, restrained, and strategic in Arizona cotton**. It is typically called upon to help mitigate large migrations of

[1] Ellsworth, P. C., Bordini, I., Pier, N. and Naranjo, S. E. 2022. Integrating chemical & biological control in cotton. IPM short. Arizona Pest Management Center, University of Arizona, Tucson, AZ, pp. (http://hdl.handle.net/10150/665531; Accessed 22 December 2023)

[2] Bordini, I., AJ Fournier, SE Naranjo, NM Pier, PC Ellsworth 2020 (revised 8/2022). Cotton insecticide use guide: Knowing and balancing risks. *Arizona Pest Management Center IPM Short.* Cooperative Extension, College of Agriculture and Life Sciences, University of Arizona, Tucson, AZ, pp. (http://hdl.handle.net/10150/665532; Accessed 22 December 2023)

adults into cotton fields or as a late season option to control adults and immatures, preventing honeydew deposits on exposed cotton fibers.

As EPA moves ahead to consider and implement mitigations that will be needed to address risks to listed threatened and endangered species from acetamiprid use, we urge the Agency to consider the limited though important uses of acetamiprid in Southwest desert cotton for the control of whiteflies.

Reference:

Ellsworth, P.C., A.J. Fournier, W.A. Dixon II. 2020. Neonicotinoid Use in Cotton: Response to EPA Proposed Interim Decisions for Arizona. University of Arizona, Arizona Pest Management Center. 5/4/20. https://www.regulations.gov/comment/EPA-HQ-OPP-2012-0329-0119

Who We Are

Dr. Peter Ellsworth is Director of the Arizona Pest Management Center (APMC), State IPM Coordinator for Arizona and Professor of Entomology / Extension IPM Specialist with expertise in developing Integrated Pest Management systems in cotton and other crops and measuring implementation and impact of IPM and pest management practices. Dr. Al Fournier is Associate Director of the APMC / Associate Specialist in Entomology, holds a Ph.D. in Entomology, and has expertise in evaluating adoption and impact of integrated pest management and associated technologies. He works with the Western IPM Center, representing stakeholders in the desert Southwest states in EPA registration reviews.

These comments are the independent assessment of the authors and the Arizona Pest Management Center as part of our role to contribute federal comments on issues of pest management importance and do not imply endorsement by the University of Arizona or USDA of any products, services, or organizations mentioned, shown, or indirectly implied in this document.

Our Data and Expert Information

Through cooperative agreements with Arizona Department of Agriculture, the Arizona Pest Management Center obtains use of, improves upon, and conducts studies with ADA's Form1080 data. Growers, pest control advisors and applicators complete and submit these forms to the state when required by statute as a record of pesticide use. These data contain information on 100% of custom-applied (i.e., for hire) pesticides in the state of Arizona. Grower self-applied pesticide applications may be under-represented in these data. In addition, the Arizona Pest Management Center is host to scientists in the discipline of IPM, including experts in the usage of this and other compounds in our agricultural systems. We actively solicit input from stakeholders in Arizona, including those in the regulated user community, particularly to better understand use patterns, use benefits, and availability and efficacy of alternatives. The comments within are based on the extensive data contained in the Arizona Pest Management Center Pesticide Use Database, collected summary input from stakeholders and the expertise of APMC member faculty.

Through the Crop Pest Losses and Impact Assessment Signature Program, partially funded through the Western IPM Center, the Arizona Pest Management Center conducts annual surveys with state-licensed pest control advisors (PCAs), who are the primary pest management decision makers, in consultation with growers. The surveys, conducted at face-to-face meetings, provide detailed information on crop yield losses to specific insect pests, weeds and diseases, control costs, and pesticide use for the key crops, cotton and lettuce. Cotton data have been collected since 1991 and lettuce data since 2005. Data are collected for all of Arizona and neighboring production regions of California, with typical responses representing up to 70% of acres planted in Arizona. These data provide detailed information on shifting pest trends, chemical use and costs, and often compliment and augment information from the APMC Pesticide Use Database, particularly for pesticide uses for which the state does not mandate reporting.

Thank you for your consideration. Please feel free to contact us with any questions.

Sincerely,

Dr. Al Fournier and Dr. Peter C. Ellsworth
Arizona Pest Management Center
University of Arizona
Maricopa Agricultural Center
37860 West Smith-Enke Rd.
Maricopa, AZ 85138