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OPP Docket, Environmental Protection Agency
2822IT 1200 Pennsylvania Ave, NW
Washington, DC 20460

RE: Docket ID No. EPA-HQ-OPP-2010-0889

To whom it may concern,

As a Professor of Entomology and Extension Specialist with the University of Arizona, I have been conducting applied research and outreach programs in leafy vegetables and melons for the past 26 years at the Yuma Agricultural Center in Yuma, AZ. I have had the opportunity to evaluate the efficacy of sulfoxaflor against a number of key insect pests on theses crop for the past 7 years. I previously submitted letters in support of the sulfoxaflor registration in 2011 and 2013, and would like to offer my further support for the new proposed registration with a few additional comments that emphasizes the registration of sulfoxaflor in melons, and the importance for AZ and CA growers to be able to tank-mix insecticides.

First, I completely support EPA's proposed registration decision that includes the leafy vegetables and cole crops on the proposed label for sulfoxaflor. In my 26 years in working insecticides and IPM programs in Leafy vegetable and Brassica crops, I have never experienced, or been aware of any bee toxicity issues surrounding the application of insecticides in these crops (this includes tank-mixtures). Thus, it is logical that EPA chose to register sulfoxaflor on these crops. Because of its cost-effective insecticidal activity against key sucking pests and its fit in our existing IPM/IRM programs, sulfoxaflor is an excellent alternative to many of the older organophosphate and carbamate compounds presently used as in out cropping system.

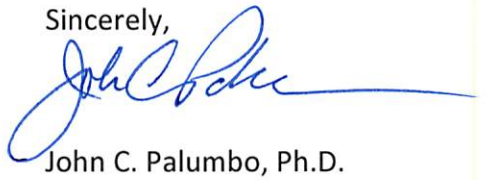
However, I was disappointed with EPA's decision to not include melons (cucurbits) in the proposed registration of sulfoxaflor. Speaking specifically for melon production in the desert southwestern growing areas of AZ and CA, sulfoxaflor has an ideal fit in the production of fall melons. In the past 8 years, melon growers in the southwestern U.S. have become heavily dependent on the availability of effective insecticides such as sulfoxaflor for the control of adult sweet potato whiteflies, *Bemisia tabaci* (b-biotype) because of the establishment of a new whitefly-vectored virus, *Cucurbit Yellows Stunting Disorder Virus* (CYSDV). Without effective management of the whitefly vector, CYSDV will cause yield losses in excess of 70%. CYSDV suppression is primarily achieved through multiple, insecticide applications during the 2-3-week growth period prior to bloom when plants are most susceptible to virus infection. Prior to the loss of sulfoxaflor, the compound was used exclusively as an effective adulticide during this pre-bloom period on small melon plants in rotation with other neonicotinoid, OP/carbamate and diamide compounds. Sulfoxaflor was not used during bloom when honeybees are present because other alternatives (ie., acetamiprid, cyazypyr) were available. Unfortunately, the loss of sulfoxaflor for pre-bloom use in melons for CYSDV management places

increasing selection pressure on whiteflies to these other compounds, and particularly the neonicotinoids. It is reasonable to me that sulfoxaflor could be labeled for use on cucurbits by restricting them to pre-bloom use only. This would clearly assist AZ and CA melon grower in effectively managing whiteflies and CYSDV, as well as allow for the continual economic production of melons.

As for tank mixtures, EPA clearly recognizes the needs and economic benefits of tank mixing pesticides to allow growers to target a broad spectrum of insect pest species with a single application. This has always been important for vegetable growers in AZ and CA where tank-mixing is the norm because of the need to control a cross-spectrum of pests (i.e., sucking and chewing insects) occurring at the same time, and doing so largely with selective, reduce-risk compounds. Although the need to tank mix is often an economic choice, it is also a practical choice for AZ and CA growers. Because of frequent surface irrigation, there is generally only a small window of time for treating fields prior to each irrigation with ground application equipment. If tank mixtures were not allowed, the alternative would be back-to-back aerial spray applications when fields are being irrigated. However, as you are likely aware, aerial application is more expensive, seldom provides the same level of spray coverage on large plants as ground sprays, and can lead to increased risk of spray drift. As mentioned earlier, I have not previously experienced or been aware of bee toxicity issues with common tank mixtures on leafy vegetable or melon crops with sulfoxaflor or any other insecticide when applied following label directions. Further, many of my efficacy trials involve tank-mixtures of broad-spectrum (e.g., pyrethroid) and selective chemistries, and because the modes of action are often so different, synergized activity against pests and non-target organisms has not be measured. But achieving enhanced activity against one pest is not the objective of tank-mixing in our IPM systems, rather the intent is to achieve cross- or broad-spectrum insect control rather than enhanced or synergized activity against a single pest. Finally, and perhaps most importantly, because there is a lack of scientific data on the risks of tank-mixtures causing unreasonable adverse effects on pollinators and non-target enemies, I don't believe it is advisable for EPA to restrict tank-mixing on sulfoxaflor or other insecticide registrations until such time data becomes available to support such an assumption.

I appreciate the opportunity to comment on the proposed registration for sulfoxaflor and am hopeful that you will give this information your consideration. If you have any questions concerning my comments, please feel free to contact me. Thank you.

Sincerely,



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