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Office of Pesticide Programs
Regulatory Public Docket (7502P)
Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460-0001

RE: Docket ID Number EPA-HQ-OPP-2010-0889
Registration Petition for Sulfoxaflor

To Whom it may concern:

I would like to provide comments in regards to the registration petition submitted to EPA for a the new insecticide compound sulfoxaflor developed by Dow AgroSciences, LLC. I am currently a Professor of Entomology and Extension Specialist with the University of Arizona and have been conducting applied research and outreach programs for the past 20 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 leafy vegetables and cucurbits for the past 3 years. Based on my experiences thus far, and my understanding of its toxicological profile, sulfoxaflor appears to be an excellent alternative to many of the insecticide products presently available to western vegetable growers.

Arizona and California are the leading producers of leafy vegetables in the US. In both the coastal and desert growing regions, insect management is one of the primary constraints to economic production that growers face. In particular, aphids are major threat to these crops and often require multiple pesticide applications to prevent losses in yield and quality. These pests are presently managed through an integrated approach that stresses avoidance through cultural practices. However, these tactics do not work effectively by themselves. Biological control is not practical, and is not used primarily because of the market demands for insect-free produce. Consequently the produce industry relies on a number of insecticide alternatives to provide an inexpensive and quality product. On average, growers will apply 4 applications (sometimes more under heavy pressure) during a crop season to control a complex of aphid species. To date, spirotetramat is the most commonly used, followed by the neonicotinoids. Among the older products, growers typically use combinations of endosulfan, acephate,

dimethoate and pyrethroids. Generally speaking when used in proper rotations, this arsenal of active ingredients provides economic control of the aphid complex on leafy vegetables.

However, there is now a need for new, effective insecticide alternatives in leafy vegetable production. First, neonicotinoids have become less effective due to heavy usage over the past 17 years. We anticipate that this decline in efficacy will continue since generic imidacloprid is very inexpensive and growers can economically increase rates to achieve effective control. Endosulfan, which still provides good control of the green peach aphid, *Myzus persicae*, is being removed from the market and will not be available to growers after 2012. In addition, the lettuce aphid, *Nasonovia ribis-nigri,* has become an important pest of lettuce crops. Among the currently available alternatives, spirotetramat provides residual control, but the neonicotinoids and other compounds provide poor control of this species. In comparison, trials I have conducted on lettuce show that sulfoxaflor provides good residual control of *N. ribis-nigri*, as well as the other aphid species commonly found on leafy vegetables. Thus in my view, sulfoxaflor is a good candidate as a rotational partner with spirotetramat for control of our aphid complex in western lettuce.

Sweetpotato whitefly, *Bemisia tabaci* B-biotype, is another major pest to western melon growers. Most recently a new crinivirus (Curcurbit Yellows Stunting Disorder Virus) has become established on fall melons that is vectored solely by adult *Bemisia* whiteflies. The only economically effective means of suppressing the virus to date has been through vector management with insecticides. The effective alternatives growers presently rely on for control include mixtures of endosulfan, oxymyl, or neonicotinoids in combination with pyrethroids, and as many as 6 spray applications are made during the crop season to suppress the virus. This management approach is likely not sustainable as selection pressure on these compounds continues to increase. Further, with the impending loss of endosulfan, the increasing threat of neonicotinoid resistance, and the uncertainty of maintaining organophosphate and carbamate tolerances in the future, it is my opinion that the availability of alternative active ingredients to manage whiteflies will be necessary for sustainable production. Efficacy trials I've conducted on melons have shown that sulfoxaflor is highly active against whitefly adults, comparable to the neonicotionids. Based on anecdotal observations, the compound does not appear to negatively impact natural enemies or pollinators. Again, in my view, sulfoxaflor is a good candidate as an alternative insecticide for adult whitefly control in western melon crops.

I strongly believe that without the availability of new insecticide alternatives for control of aphids and whiteflies, economic production of leafy vegetables and melons in Arizona and California may not be sustainable in the future. An active ingredient such as sulfoxaflor is an excellent candidate to replace many of the older compounds presently used due to its insecticidal activity against key pests, and its fit in our existing IPM programs. Finally, I think it is

worth noting that Dow AgroSciences has a proven track-record of providing the vegetable industry with effective and environmentally sound IPM tools such as spinosad, spinetoram and methoxyfenozide. I have the same expectations from sulfoxaflor. I appreciate the opportunity comment on this decision making process 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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