

20 October 2008

Tracy Perry  
EPA  
HQ-OPP

Re: Comment on EPA-HQ-OPP-2008-0615-0001

Dear Ms. Perry,

As an Integrated Pest Management Specialist, my charge is to develop science-based programs of integrated pest management that reduce risks of all kinds: human health, environmental, and economic. The decision to use any pesticide should be grounded in these risk reduction goals.

Endosulfan has been used in this country for about a half century. As such, the use patterns and grower dependencies are well known, especially in cotton in Arizona. Recently, EPA has identified issues surrounding occupational hazard and aerial application of this material. The State of Arizona through regulations of the Arizona Department of Agriculture requires all aerial uses to be reported by users / applicators. We have analyzed endosulfan usage in Arizona cotton using this pesticide use reporting database. I will not detail these results again. However, I would like to incorporate our previous reports into this comment by way of reference and link to the original data posted on our Arid Southwest IPM Network website, [http://ag.arizona.edu/apmc/Arid\\_SW\\_IPM.html](http://ag.arizona.edu/apmc/Arid_SW_IPM.html), a site dedicated to responding to consumer, client, regional, and federal inquiries regarding pest management tactics. These reports may be viewed or downloaded from [http://ag.arizona.edu/apmc/Arid\\_SWPMC\\_Info\\_Requests.html](http://ag.arizona.edu/apmc/Arid_SWPMC_Info_Requests.html). Specifically, reports are located at:

2002: [http://ag.arizona.edu/apmc/docs/Endosulfan\\_Response\\_12-4-02.pdf](http://ag.arizona.edu/apmc/docs/Endosulfan_Response_12-4-02.pdf)

2006: [http://ag.arizona.edu/apmc/docs/Endosulfan\\_Response\\_9-29-06.pdf](http://ag.arizona.edu/apmc/docs/Endosulfan_Response_9-29-06.pdf)

The 2002 comment covers use years, 1999-2001, while the 2006 report covers use years, 2001-2005. We have not updated use statistics for 2006-2008; however, by way of this comment I wish to provide some information on the progress of Arizona cotton growers in managing their insect pest spectrum.

The 2006 cotton season saw extraordinarily low insect pressures statewide, contributing to the lowest foliar insecticide use on record (i.e., since 1978). In fact, many growers' fields were never sprayed for insect pests at all that year. In 2007, this trend continued and growers statewide did very little spraying for insect pests. In these two years, cotton growers averaged about 1.3 sprays for all insect pests season-long. The character of these sprays tended towards very narrow

spectrum and relatively safe compounds. The most popular whitefly active ingredient was acetamiprid; the most popular Lygus active ingredient was flonicamid. This latter compound was only recently registered in Arizona (late 2006) and has proven very effective at controlling Lygus bugs.

Endosulfan usage in these last three years has declined significantly and reflects the relatively low insect pressure that Arizona cotton growers have faced. This reduced dependence is likely to continue given effective alternatives, emphasis on conservation biological control, and use of selective chemistries. However, endosulfan is still of strategic value as the only compound with broad-spectrum capabilities to control whiteflies and Lygus simultaneously. Furthermore, as the only member of its chemical class in use today, it provides an important rotational alternative to prevent and mitigate resistances that might build-up over time to other compounds and modes of action.

More to the point, mixers, loaders, and applicators can be protected from occupational hazards of endosulfan according to EPA-generated models and Arizona pesticide use data and effective enforcement. However, it will require setting and enforcing the daily handling limits for these classes of workers. Given our exceptionally small industry (less than 25 people statewide) involved in the application of endosulfan aerially and given the capacity to monitor pesticide use and enforce daily limits by ADA, Arizona cotton growers should be able to have safe access to this effective active ingredient. In addition, the Arizona Pest Management Center and University of Arizona Cooperative Extension in collaboration with the Arizona Department of Agriculture are capable of developing effective educational programs for this small user group to make sure any new use requirements are understood and complied with.

I am happy to respond to any questions or comments you may have regarding Arizona's use of endosulfan by cotton growers.

Respectfully,



Peter C. Ellsworth, Ph.D.  
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IPM Specialist & State IPM Coordinator  
University of Arizona