

Dimethoate Use in Hawaii -- Vegetable Crops

Hi Stephanie.

With apologies for the delay. Here is the information we were able to obtain to follow-up on the conference call ([cover letter](#) and [response](#)).

If you have further questions, please contact either Mike Kawate or me. I will be out of the office for the rest of this week. I will return on Monday, January 8.

Happy New Year,
Cathy

=====

On 17 Nov 2006 at 15:52, Plummer.Stephanie@epamail.epa.gov wrote:

Hello, Cathy.

In our October 17th conference call, some of the participants agreed to provide EPA with crop-specific information (pests, application practices, alternatives, costs, etc.) within about a month. I'm just following up to see how things are coming along and find out when we can expect to receive the information. Thank you.

Stephanie Plummer
Chemical Review Manager
Office of Pesticide Programs
Special Review and Reregistration Division
(703) 305-0076

The Western IPM Center is headquartered in the UC Agriculture and Natural Resources Building at 2801 Second Street, Davis, CA 95618.

UNIVERSITY OF HAWAII AT MĀNOA

College of Tropical Agriculture and Human Resources
Department of Plant and Environmental Protection Sciences

January 1, 2007

Stephanie Plummer
Special Review and Reregistration Division (7508P)
Office of Pesticide Programs
Environmental Protection Agency
1200 Pennsylvania Ave., NW.
Washington, DC 20460-0001

Subject: **Dimethoate Conference Call Follow-up**

The attached comments are being submitted as the follow-up to a conference call on October 17, 2006 regarding important uses of dimethoate in Hawai'i. These comments are being submitted on behalf of the Western Integrated Pest Management Center.

In summary, grower representatives have indicated that dimethoate is important for the production of the following crops in Hawai'i:

**leaf lettuce,
melons,
green beans,
tomatoes,
herbaceous ornamentals,
corn (seed crop),
soybeans (seed crop).**

Attached is information for the vegetable crops. The information for the seed and ornamental crops were submitted on November 27, 2006.

Information and comments have been provided by staff of the Cooperative Extension Service of the College of Tropical Agriculture and Human Resources and a representative of the Environmental Stewardship Committee of the Hawai'i Farm Bureau Federation.

Comments compiled and submitted by:



Mike Kawate
Pesticide Registration Specialist
Voice: 808-956-6008
mike@hpirs.stjohn.hawaii.edu



Cathy Tarutani
Educational Specialist
Voice: 808-956-2004
cathy@hpirs.stjohn.hawaii.edu

3050 Maile Way, Gilmore Hall 310, Honolulu, Hawai'i 96822

Telephone: (808) 956-7076, Facsimile: (808) 956-2428, E-mail: peps@ctahr.hawaii.edu, Web: www2.ctahr.hawaii.edu

An Equal Opportunity/Affirmative Action Institution

Generally applicable information

The items in this section generally apply to crops for which the application of dimethoate is important.

1. Targeted Pests

Mites, leafminers, and aphids are the main targets for dimethoate applications.

2. Alternatives

Mites. Alternatives for mite controlled include abamectin (Agri-mek[®]) which is very effective. However, Agri-mek[®] is extremely expensive, costing approximately \$700/gallon. This product is also a Restricted Use Pesticide. Very few of Hawai'i's small farmers or their workers are certified pesticide applicators. RUPs are unavailable for use by these growers.

Leafminers. Abamectin (Agri-mek[®]) is also used for leafminer control (with the same restrictions). However, Agri-mek[®] is extremely expensive, costing approximately \$700/gallon. This product is also a Restricted Use Pesticide. Very few, of Hawai'i's small farmers or their workers are certified pesticide applicators. RUPs are unavailable for use by these growers. Leafminers do have biocontrols which are very effective if there are no other insecticides used which will kill the biocontrol agents. However, in short term row crops a number of insecticides are used which can reduce leafminer biocontrol.

Aphids. Imidacloprid can be used for aphid control but is also very expensive (~\$600/gal) and is out of reach, financially, for small farmers.

3. Time Line

Timeline has no relevance here in Hawaii. Crops are grown year round, sequentially, and in adjacent farms so various (all) crop stages and insect stages are continuously present.

4. Economic Impact

It is difficult to predict what the economic impact would be if the dimethoate became unavailable for use or if there would be limitations to its use. Certainly the use of more expensive insecticides would affect the farmer's bottom lines. Additionally, without alternate chemistries available for rotation then it is expected that leafminers and mites would develop resistance to the few remaining alternatives to be very rapid. Ultimately losses could be 100% if the remaining products fail to control these insect pests. There have been reports of farms with no fruit at all once mites get into the flowers and cause them to abort.

Leaf Lettuce

1. Size of Industry

Information about the number of acres in leaf lettuce production is not available. The Hawaii Field Office of the National Agricultural Statistics Service (NASS) does not

Leaf Lettuce (continued)

provide statistics about this crop to avoid disclosing information that may attributable to individual operations.

NASS lumps production of “other lettuces”. This category *excludes* head and semi-head lettuces and romaine and *includes* other lettuces and “salad mix” greens.

Other lettuces (2004)

Production: 2.1 million pounds

Value: \$4.3 million

NASS indicated that this combined category of lettuces now accounts for 43 percent of all lettuce production and 74 percent of total farm revenue. The relatively high value is due to the mix of higher priced lettuces such as butterhead, green leaf, red leaf and salad greens that make up the bulk of this combined category.

2. Application Information

Leaf lettuce is planted four (4) or five (5) times in Hawai'i. Dimethoate may be applied once per crop cycle, for a maximum of five (5) applications of dimethoate per year.

Percent Crop Treated

100% We are assuming that dimethoate is applied at least once during the cropping cycle.

Melons

1. Size of Industry

Watermelons is the only crop for which statistics are available. Cantaloupes and honeydew melons are among the other melons grown in Hawai'i. However, NASS does not provide statistics about these crops to avoid disclosing information that may attributable to individual operations.

NASS reports that in 2004 watermelon was second in production by volume of Hawai'i's vegetable and melon crops; 10.1 million pounds of watermelons were produced.

Watermelons		
	2004	2005
Harvested acres*:	510 acres	450 acres
Production:	10.1 million pounds	11.3 million pounds
Value:	\$2.4 million	\$3 million

*Note: NASS reports acreage harvested for vegetables and melons as the product of acres planted and the number of times each is harvested (e.g., 1 acre planted and harvested 3 times during the year equals 3 harvested acres).

Melons (continued)

2. Application Information

Melons may be planted two (2) times a year in Hawai'i and growers may apply dimethoate two (2) times per crop cycle.

Percent Crop Treated

100% We are assuming that dimethoate is applied at least once during the cropping cycle.

3. Targeted Pests

Mites, leafminers, and aphids are the main targets for dimethoate applications.

Green Beans

1. Size of Industry

Values provided by NASS.

Green beans

Harvested acres: 130 acres

Production: 700,000 pounds

Value: \$763 million

2. Application Information

Not available.

Percent Crop Treated

100% We are assuming that dimethoate is applied at least once during the cropping cycle.

Tomatoes

1. Size of Industry

NASS reported that, in 2005, Hawaii's tomato farmers (field and greenhouse types) led all other vegetable and melon growers with \$9.8 million in farm revenues or 18 percent of the overall total. Locally grown tomatoes represented 72% of Hawaii's market share.

Tomatoes

Harvested acres: 660 acres

Production: 14.2 million pounds

Value: \$9.8 million

2. Application Information

Not available.

Tomatoes (continued)

Percent Crop Treated

100% We are assuming that dimethoate is applied at least once during the cropping cycle.