

Arid Southwest IPM Network
Response to Dimethoate Question
Response date: 1/20/06
Compiled by Al Fournier, Arizona Pest Management Center

Summary:

Information on the benefits of dimethoate use on the following 14 crops was requested from participants in Arizona, California, Nevada, and New Mexico: (1) alfalfa, (2) asparagus, (3) corn, (4) cotton, (5) oranges, (6) spring wheat, (7) peanuts, (8) pears, (9) sorghum, (10) tobacco, (11) wheat, (12) soybeans, (13) grapefruit, and (14) safflower. Responses were received from Arizona and Nevada for dimethoate use in alfalfa, cotton, and citrus. I have pasted comments from my contacts below.

Alfalfa in Arizona:

“The only crop on the list that I can speak on is Alfalfa. There is a considerable amount of dimethoate used during the winter (Dec-Mar) for aphid weevil control. It is a cheap alternative. Growers do not have very many cost effective treatments to control these pests in alfalfa. Dimethoate is a critical piece of their Integrated Pest Management program. In my opinion it also plays a key role in our local Insecticide Resistant Management programs for our Vegetable Industry. By having an effective alternative such as dimethoate available for aphid control, growers can effectively control aphids in rotation with pyrethroids. What this does is 1) economically control aphids in alfalfa, and 2) keep the neonicotinoids, and other new chemistries that are critical to our produce industry out of alfalfa and preserve a non-treated refugia from these a.i's for whiteflies. Sidenote: One of the best things Bayer didn't do was register Provado on alfalfa. This is one of the factors that many feel is responsible for the sustained efficacy of the neonicotinoids on whiteflies in the desert. Another reason to have dimethoate in alfalfa is it reduces our reliance on pyrethroids, which are heavily used during the year on ALL crops. Many of our major pests are exposed to pyrethroids in alfalfa (worms, thrips, whiteflies, etc.). Dimethoate allows the growers this alternative.”

--John Palumbo, Vegetable IPM Specialist and IR4 Coordinator, University of Arizona

Alfalfa in Nevada:

“Dimethoate is used on alfalfa forage and seed in Nevada. It was used on about 7500 acres according to my Ag Stats book for Nevada, which makes it a fairly important tool. It is used primarily on aphids and is considered a valuable tool for controlling them.”

-- Jay Davison, Area Extension Specialist, University of Nevada, Reno

Citrus in Arizona:

“Dimethoate is used in all citrus varieties in AZ for control of citrus thrips and occasionally in mixes for woolly whitefly. Although alternatives are available, the loss of

Dimethoate would hinder our ability to rotate insecticide classes, thus disrupting our resistance management programs. There are not very many effective insecticides currently in use for thrips control in AZ citrus.”

1. List of commonly used insecticides for thrips control in AZ citrus.
2. Spinosad - Most effective product available; limited number of applications; resistance is of concern.
3. Dimethoate - Effective early season product.
4. Formetanate - Very effective, but REI and other label restrictions greatly negate the amount used.
5. Cyfluthrin - Effective, but resistance appears to be developing.
6. Fenpropathrin - No longer effective due to resistance.

--David Kerns, Citrus IPM Specialist, University of Arizona

“Yes, there is some use of Dimethoate in orange and grapefruit crops for the control of citrus thrips.”

--James Truman, Farm Manager, Citrus Agricultural Center, University of Arizona:

Cotton in Arizona:

“Dimethoate is a compound that is occasionally used by cotton growers. Most all treatments are made by ground in a band on very young cotton and principally for thrips (and other early season insect) control. As such, it has a niche fit for some growers, but would not be considered keystone. I think where it might be important is for some of the very oddball pests that sometimes attack desert cotton and for which there are few alternatives. I would hesitate to specify which pests these are. But the point is that many of the replacements (including some of the new seed treatments) are not as broad spectrum as dimethoate.

--Peter Ellsworth, IPM Specialist, University of Arizona