

Pesticide Information Request Response

Arid Southwest IPM Network

Arizona Pest Management Center

March 1, 2010

Data Request: Dimethoate Re-registration Review

Date Sent: December 18, 2009

Comments Due: Unspecified

Process / Data Sources: Al Fournier of the Arizona Pest Management Center (APMC) reviewed Arizona pesticide use reporting database to generate information on dimethoate use (1991-2009), and solicited additional input from Arizona IPM Specialists on current dimethoate use patterns in cotton and vegetables. He forwarded the request to Arid Southwest IPM Network partners at New Mexico State University, University of California Cooperative Extension and University of Nevada Reno. He received information back from NM and CA.

Response for Arizona

According to pesticide use reports, dimethoate has been an important insect management tool in several Arizona crops, including alfalfa, citrus, cotton, lettuce and other vegetable crops. Dimethoate is used in all production areas of the state and can be applied at any time of the year (depending on crop production patterns). In 2008, dimethoate was applied on no more than 61% of cabbage, 25% of chile peppers, 6% of broccoli, 5% of alfalfa and 2% of upland cotton. There was also significant use on various citrus crops, although data are lacking to calculate percent use. Targeted pest in Arizona crops include aphids, thrips, and weevils, among many others. In all these crops, there has been a decline in dimethoate use from 1990 levels to recent years, but it remains an important management tool in these crops. It can be used in rotation with other chemistries to promote sound resistance management.

Response for California

Table 1 below lists dimethoate uses in California for 2007 by commodity, pounds, acres and number of applications. Dimethoate is an important insecticide in California used on about 50 different commodities primarily as an aphicide, but is also used against thrips, *Liriomyza spp.* leafminers and a few other insect pests. Crops with major use in 2007 included alfalfa, beans, broccoli, forage corn, citrus crops (especially oranges), cotton, lettuces, and tomatoes. Given the number of crops that dimethoate is used on in CA, we have not provided specifics on the percentage of each crop treated or timing of treatment. Overall, it is used at various times of the year in different production regions of southern CA. Dimethoate is considered an important IPM tool. Dimethoate is critical to the crops where it is used not so much because it the only option for insecticidal control of aphids or other pests, but rather because it is so economical to use. Dimethoate is also needed in rotation with other aphicides for insecticide resistance management.

Response for New Mexico

Replies from five of New Mexico's largest pesticide distributors indicate that a significant amount of dimethoate was sold in NM in 2009. The five companies that responded estimated a total about 1650 gallons of dimethoate were sold in 2009. According to distributors, major uses include aphid control in pecans and alfalfa, and alfalfa weevil control in alfalfa. In 2009, dimethoate use was common in alfalfa, cotton, pecans, chiles and possibly onions in various parts of the state. There are also a few specialty uses of dimethoate (e.g., for control of Pinyon

needle scale) for which few other products are available. Alternatives are available for some of the crops and uses, but are more expensive, hence the continued reliance on dimethoate in many cases.

Table 2: Reported Dimethoate Use in California, 2007			
Chemical commodity	Pounds Applied	Applic.	Acres
ALFALFA	47808	1915	122348
ANIMAL PREMISE	8		4
BEAN	24941	1059	52293
BROCCOLI	21993	3677	48070
BRUSSELS SPROUT	4866	335	6054
CABBAGE	712	130	1554
CANTALOUPE	52	2	173
CAULIFLOWER	5498	979	11699
CELERY	5966	1232	11595
CHINESE CABBAGE (NAPA)	6	5	55
CHRISTMAS TREE	151	16	117
CITRUS	374	14	525
COLLARD	9	3	30
CORN, (FORAGE-FODDER)	19274	824	40861
CORN, HUMAN CONSUMPTION	464	19	940
COTTON	8236	397	21371
ENDIVE (ESCAROLE)	41	131	169
GRAPE	5813	150	5393
KALE	129	85	533
LANDSCAPE MAINTENANCE	201		
LEMON	1383	33	494
LETTUCE, HEAD	3687	1151	15627
LETTUCE, LEAF	3609	1718	15631
MELON	1613	58	3653
MUSTARD	48	20	201
N-GRNHS FLOWER	10	23	19
N-GRNHS PLANTS IN CONTAINERS	39	77	20064
N-GRNHS TRANSPLANTS	7	21	19
N-OUTDR FLOWER	33	28	47
N-OUTDR PLANTS IN CONTAINERS	798	81	538689
N-OUTDR TRANSPLANTS	2	12	133361
ORANGE	57232	1467	34785
PEAS	926	252	2692
PECAN	105	10	320
PEPPER	1755	146	5731
POMELO	44	3	14
POTATO	12	2	24
RESEARCH COMMODITY	39		
RIGHTS OF WAY	12	1	10
SAFFLOWER	2188	39	4474
SORGHUM (FORAGE-FODDER)	55	1	112
SORGHUM/MILO	375	13	796
SPINACH	55	15	184
SQUASH	13	1	45
STRUCTURAL PEST CONTROL	59		
SWISS CHARD	19	9	75
TANGELO	574	36	328
TANGERINE	6359	227	5973
TOMATO	60387	1870	133244
TURNIP	41	11	174
UNKNOWN	122	4	210
VEGETABLES, LEAFY	8	11	33
WATERMELONS	706	22	1326
WHEAT	2293	101	5914
TOTAL USE in all Crops	291152	18436	1248054