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418

Quantitative Usage Analysis for Fenamiphos

March 1, 1999

Analyst: Tim Kiely, BEAD/EAB

Fenamiphos is a nematicide - insecticide registered for use on a variety of vegetables and fruit, nurseries/greenhouses and turf. Yearly usage of fenamiphos is about 919,000 pounds of active ingredient (a.i.) on about 289,000 acres. Approximately 60% of the usage is on four crops (tobacco (230,000 pounds a.i.), grapes (130,000 pounds a.i.), oranges (98,000 pounds a.i.), and peanuts (74,000 pounds a.i.)). These four crops account for approximately 60% of the treated acreage.

For all sites, except pineapple, less than 20% of the available acreage is treated with fenamiphos. More than one-half of the pineapple acreage was probably treated (based on 1992 data, the most recent we have for pineapple).

This quantitative usage analysis (QUA) updates estimates provided in an earlier BEAD usage profile (Maurer, 3/95). The usage estimates for this QUA are based primarily on data from 1990 - 1996. This data indicates usage of fenamiphos on more sites than the previous estimate, but with fewer acres treated and pounds of a.i. applied.

134

U.S. EPA, Quantitative Usage Analysis, Fenamiphos, August 5, 1998 (last edited March 1, 1999)

Fenamiphos	Case #:	333	AI #:	100601	EPA's QUANTITATIVE USAGE ANALYSIS					Analyst:	Tim Kiely	
Site	Acres Grown (000)	Acres Treated (000)		% of Crop Treated		Lb AI Applied (000)			Average Application Rates			States of Most Usage
		Weighted Average	Est. Max.	Weighted Average	Est. Max.	Weighted Average	Est. Max.	lb ai/ acre/yr	# appl /year	lb ai/A /appl		
											(% of total lb ai used on this site)	
Raspberries	11	1	2	9%	21%	3	7	2.9	1.1	2.6	WA OR 100%	
Strawberries /1	51	1	1	1%	2%	0	1	0.1	1.0	0.1	CA	
Grapefruit	194	3	6	1%	3%	15	38	5.3	1.4	3.9	FL CA 99%	
Lemons	63	4	8	7%	13%	25	50	6.1	1.1	5.5	CA 80%	
Oranges	867	16	31	2%	4%	98	196	6.3	1.0	6.2	FL 81%	
Citrus, Other /2	51	1	3	2%	6%	5	15	4.8	1.1	4.6	CA FL 100%	
Apples	572	1	3	0%	1%	5	10	3.6	1.1	3.2	NY MI OH 85%	
Kiwifruit	7	1	1	9%	17%	1	2	1.3	1.0	1.3		
Pears	78	0	0	0%	0%	0	0	1.0	1.0	1.0	MI WA 100%	
Nectarines	29	1	2	3%	6%	2	4	2.2	1.0	2.2	CA 100%	
Cherries	128	1	3	1%	2%	4	9	3.5	1.0	3.5	MI CA 92%	
Peaches	212	2	7	1%	3%	10	31	4.0	1.0	4.0	SC CA NC 80%	
Plums & Prunes	140	0	1	0%	0%	1	3	4.6	1.3	3.7	CA 90%	
Grapes	825	42	84	5%	10%	130	272	3.1	1.4	2.3	CA 96%	
Melons	368	0	0	0%	0%	0	1	4.0	1.0	4.0	FL 100%	
Bananas	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Pineapples /1	29	15	20	53%	70%	25	40	1.7	1.0	1.7	HI	
Plantains	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

Almonds	429	0	1	0%	0%	1	2	2.6	1.2	2.1	CA 100%
Walnuts	205	0	0	0%	0%	0	0	6.0	1.5	4.0	CA 100%
Peanuts	1,610	36	72	2%	4%	74	158	2.1	1.0	2.0	NC GA FL VA 88%
Garlic	25	0	1	0%	2%	0	1	3.2	1.0	3.2	
Eggplant/Peppers	119	1	2	1%	2%	1	4	2.1	1.2	1.8	GA NJ CA 84%
Lettuce	268	0	1	0%	0%	0	1	1.0	1.1	0.9	CA FL 100%
Broccoli	114	16	19	14%	17%	31	44	1.9	1.1	1.6	CA 100%
Brussels Sprouts	3	0	1	13%	29%	2	4	5.0	1.0	5.0	CA 100%
Cabbage	85	8	10	9%	11%	4	8	0.5	1.0	0.5	FL CA 100%
Cabbage, Chinese /1	9	0	1	5%	11%	1	2	2.5	1.0	2.5	CA 100%
Cauliflower	58	6	7	10%	13%	9	13	1.5	1.0	1.5	CA St 98%
Cucurbits	285	0	0	0%	0%	0	1	2.7	1.0	2.7	GA MI NC FL 94%
Vegetables, Other /3	286	3	6	1%	2%	6	12	2.3	1.0	2.3	
Roots/Tubers /4	244	1	6	0%	2%	2	12	2.0	1.0	2.0	NJ 100%
Tomatoes	500	0	1	0%	0%	0	1	1.9	1.0	1.9	GA NC 89%
Beans/Peas, Green	723	2	3	0%	0%	4	9	2.8	1.0	2.8	GA 97%
Corn	72,284	2	4	0%	0%	1	2	0.5	1.0	0.5	LA AL OH TX 84%
Soybeans	62,879	7	13	0%	0%	9	18	1.3	1.0	1.3	MO IL TX FL AL 83%
Cotton	12,689	26	79	0%	1%	28	105	1.1	1.0	1.1	TX VA AR LA MS SC 72%
Hay, Other	33,427	0	0	0%	0%	0	0	1.0	1.0	1.0	NC 100%
Tobacco	695	76	153	11%	22%	230	351	3.0	1.0	3.0	
Greenhouse/Nursery	N/A	10	20	N/A	N/A	100	150	10.0	1.0	10.0	
Ornamentals /1	597	5	10	1%	2%	N/A	N/A	N/A	N/A	N/A	
Turf /5	1,533	N/A	N/A	N/A	N/A	90	150	N/A	N/A	N/A	
Totals	192,693	289	435			919	1,322				

324

Notes:

- /1 Data from 1990 - 1992.
- /2 Citrus, Other includes kumquats, limes, tangelos and tangerines.
- /3 Vegetables, Other includes asparagus and okra.
- /4 Roots/Tubers includes beets.
- /5 Turf includes golf courses and turf farms.

N/A refers to no available data.

A 0 or 0% indicates that the value is less than .5 or .5%.

Calculations of the above numbers may not appear to agree because they are displayed as rounded.

Usage data primarily covers 1990 - 1996 for most sites and as early as 1987 for some sites.

Likely averages are based on weighted averages of data with most recent years and more reliable data weighted more. Early years are weighted very low.

Likely maximums are mounts above which the actual usage is unlikely to be.

The likely maximum totals given are less than the totals for the individual sites since it is very unlikely that all sites would be treated at the likely maximum.

Application rates are calculated from likely averages or are based on typical rather than maximum rates.