

Chemical Applications on Lettuce

The NASS Arizona Field Office continues their series of on-farm agricultural chemical use statistics. The data presented in this summary are part of the data series on chemical use funded through the Water Quality Initiative.

The Water Quality Initiative is a multi-agency program designed to provide information for farmers, ranchers, and foresters to address on-farm and off-farm environmental issues. In the past, there has been an inadequate amount of farm level data to determine the magnitude of water quality problems or to permit an assessment of alternatives for farmers and other affected parties. This summary and other agricultural chemical reports help fill the needs of analysts evaluating the complex environmental issues.

The NASS Arizona Field Office is responsible for collecting on-farm agricultural chemical use information to support the evaluation of water quality and food safety issues. The Economic Research Service (ERS) conducts research on the impact of alternative pesticide regulations, policies, and practices.

Included in this summary is farm use of pesticides during 2004 on

lettuce grown in Arizona. This survey is conducted every other year.

Arizona lettuce growers applied herbicides to 55 percent of the 47,600 acres planted to head lettuce. Pronamide, Bensulide, and Benefin were the most common at 35, 32, and 29 percent, respectively. Insecticides were more widely used and applied to 94 percent of the planted acreage. A wide range of insecticides was used which included: zeta-cypermethrin on 79 percent of the planted acres; spinosad on 73 percent, and imidacloprid on 58 percent of the acres. Fungicides were applied to 47 percent of the acreage. Maneb was the most used fungicide, at 35 percent of the planted acreage.

Arizona lettuce growers applied herbicides to 66 percent of the 24,400 acres of romaine and leaf lettuce. Pronamide was applied to 53 percent of the acreage and Bensulide was applied to 32 percent of the acreage. Insecticides were applied to 97 percent of the acreage and zeta-cypermethrin and spinosad were the leading insecticides used at 75 and 77 percent, respectively. Fungicides were applied to 43 percent of the planted acreage. Maneb was the most used fungicide, at 40 percent of the planted acreage.

Lettuce: Agricultural Chemical Applications, 2004

Active Ingredient	-----Head Lettuce 1/-----					-----Other Lettuce 2/-----				
	Area Applied	Applica-tions	Rate per Applica-tion	Rate Per Crop Year	Total Applied	Area Applied	Applica-tions	Rate per Applica-tion	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 Pounds	Percent	Number	Pounds per Acre		1,000 Pounds
<u>Herbicides:</u>										
Acifluorfen	1	1.0	0.12	0.13	0.1	3	1.0	0.12	0.12	0.1
Benefin	29	1.2	1.23	1.44	19.7					
Bensulide	32	1.0	4.24	4.25	64.9	32	1.0	5.04	5.05	39.9
Bentazon	1	1.0	0.56	0.58	0.4	3	1.0	0.55	0.56	0.4
Pronamide	35	1.1	0.76	0.86	14.3	53	1.0	0.92	0.94	12.2
<u>Insecticides:</u>										
Acephate	16	1.1	0.71	0.77	6.0					
Benzoic acid	39	1.0	0.15	0.16	3.0	23	1.0	0.14	0.15	0.8
Cyfluthrin	18	1.3	0.04	0.05	0.5	41	1.2	0.04	0.05	0.5
Diazinon	26	1.2	0.59	0.69	8.7	26	1.0	0.49	0.49	3.1
Dimethoate	19	1.3	0.23	0.30	2.7	13	1.0	0.24	0.24	0.8
Emamectin benzoate	6	1.0	0.01	0.01	3/	4	1.0	0.01	0.01	3/
Endosulfan	20	1.0	0.91	0.94	9.1	24	1.1	0.93	0.98	5.7
Esfenvalerate	12	1.0	0.04	0.04	0.3					
Imidacloprid	58	1.1	0.24	0.27	7.5	73	1.1	0.17	0.18	3.3
Indoxacarb	18	1.1	0.07	0.08	0.7	8	1.2	0.08	0.09	0.2
Lambda-cyhalothrin	4	1.0	0.03	0.03	0.1	6	1.1	0.03	0.03	3/
Malathion	4	1.1	1.79	1.93	4.1					
Methomyl	51	1.1	0.69	0.79	19.4	69	1.5	0.68	1.01	16.9
Permethrin	32	1.1	0.17	0.18	2.8	45	1.4	0.17	0.23	2.6
Pymetrozine	1	1.0	0.09	0.09	3/	9	1.0	0.08	0.09	0.2
Spinosad	73	1.9	0.08	0.15	5.1	77	1.8	0.08	0.14	2.6
Zeta-cypermethrin	79	1.9	0.05	0.08	3.2	75	1.9	0.05	0.09	1.6
<u>Fungicides:</u>										
Coniothyrium minitan	5	1.0	0.10	0.10	0.2					
Dimethomorph	4	1.2	0.19	0.23	0.4	3	1.0	0.20	0.20	0.2
Iprodione	17	1.1	0.98	1.08	9.0	12	1.1	0.99	1.07	3.0
Maneb	35	1.2	1.28	1.49	25.0	40	1.0	1.32	1.36	13.1
Vinclozolin	10	1.0	0.95	0.98	4.9					

1/ 47,900 planted acres.

2/ 24,400 planted acres.

3/ Total applied is less than 50 pounds.