

## 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 2006 on

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

Arizona lettuce growers applied herbicides to 70 percent of the 48,000 acres planted to head lettuce. Pronamide, Bensulide, and Benefin were the most common at 61, 35, and 27 percent, respectively. Insecticides were more widely used and applied to 100 percent of the planted acreage. A wide range of insecticides was used which included: zeta-cypermethrin on 97 percent of the planted acres; spinosad on 95 percent, and imidacloprid on 81 percent of the acres. Fungicides were applied to 82 percent of the acreage. Iprodione was the most used fungicide, at 67 percent of the planted acreage.

Arizona lettuce growers applied herbicides to 68 percent of the 27,300 acres of romaine and leaf lettuce. Pronamide was applied to 56 percent of the acreage and Bensulide was applied to 24 percent of the acreage. Insecticides were applied to 93 percent of the acreage and zeta-cypermethrin and spinosad were the leading insecticides used at 82 and 78 percent, respectively. Fungicides were applied to 56 percent of the planted acreage. Maneb was the most used fungicide, at 41 percent of the planted acreage.

### Lettuce: Agricultural Chemical Applications, 2006

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
<b>Herbicides:</b>										
Benefin	27	1.0	1.205	1.222	16.1					
Bensulide	35	1.0	5.354	5.381	91.6	24	1.0	4.954	5.134	33.3
Pronamide	61	1.0	0.649	0.668	19.6	56	1.1	0.659	0.720	11.1
<b>Insecticides:</b>										
Acephate	31	1.0	0.824	0.837	12.4					
Acetamiprid	13	1.1	0.067	0.071	0.4	24	1.0	0.065	0.067	0.4
Benzoic acid	70	1.2	0.192	0.224	7.5	28	1.0	0.155	0.158	1.2
Cyfluthrin	24	1.1	0.041	0.043	0.5	32	1.3	0.041	0.053	0.5
Cypermethrin	15	1.0	0.092	0.093	0.7					
Diazinon	38	1.0	0.590	0.592	10.8	22	1.1	0.514	0.586	3.5
Dimethoate	11	1.1	0.240	0.260	1.4	4	1.0	0.236	0.240	0.2
Emamectin benzoate	13	1.0	0.011	0.012	0.1	4	1.0	0.011	0.011	3/
Endosulfan	42	1.0	0.954	0.964	19.5					
Esfenvalerate	5	1.1	0.044	0.046	0.1					
Imidacloprid	81	1.0	0.268	0.273	10.6	60	1.1	0.201	0.211	3.4
Indoxacarb	14	1.1	0.072	0.076	0.5	8	1.1	0.077	0.082	0.2
Lambda-cyhalothrin	11	1.2	0.028	0.033	0.2	14	1.1	0.027	0.028	0.1
Methomyl	53	1.1	0.672	0.740	18.9	56	1.1	0.633	0.713	10.9
Permethrin	42	1.0	0.185	0.187	3.8	33	1.0	0.175	0.181	1.6
Pymetrozine						1	1.1	0.084	0.093	3/
Spinosad	95	1.5	0.078	0.117	5.4	78	1.6	0.077	0.120	2.6
Zeta-cypermethrin	97	1.8	0.046	0.083	3.9	82	1.6	0.047	0.077	1.7
<b>Fungicides:</b>										
Boscalid	8	1.3	0.434	0.558	2.2	3	1.0	0.445	0.459	0.3
Dimethomorph	5	1.0	0.194	0.198	0.5	6	1.0	0.192	0.201	0.3
Fenamidone	3	1.0	0.217	0.223	0.3	4	1.0	0.199	0.204	0.2
Iprodione	67	1.1	0.993	1.083	34.7	32	1.2	0.996	1.149	10.0
Maneb	59	1.0	1.227	1.254	35.7	41	1.0	1.305	1.334	14.9
Phosphorous acid	2	1.1	1.225	1.315	1.3	4	1.0	1.117	1.167	1.3
Pyraclostrobin	2	1.0	0.151	0.158	0.2	9	1.0	0.133	0.138	0.3
Sulfur	5	1.3	1.674	2.143	4.9	9	1.0	2.026	2.071	5.1

1/ 48,000 planted acres.

2/ 27,300 planted acres.

3/ Total applied is less than 50 pounds.