



# IOWA AGRICULTURAL CHEMICAL USE

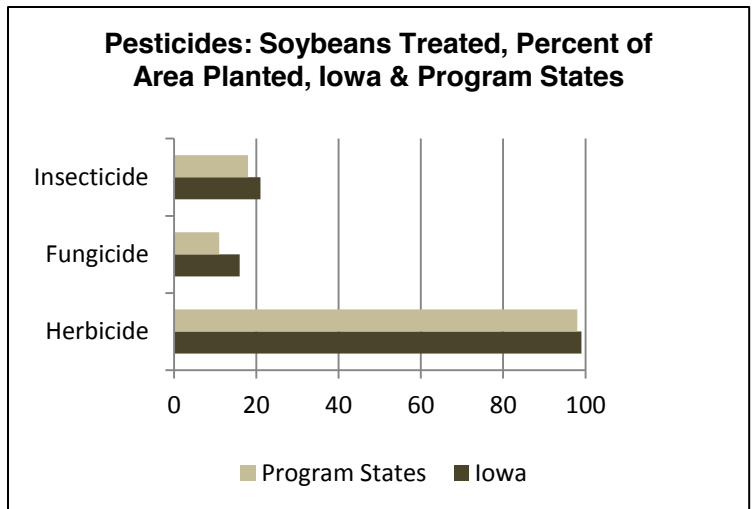
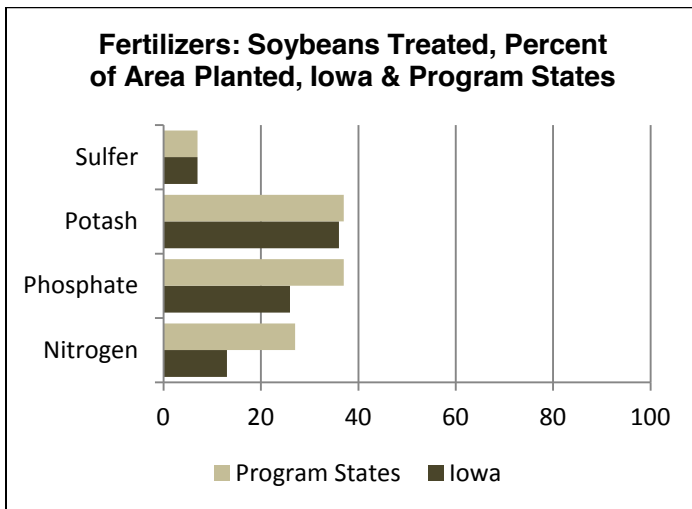


## Soybeans, Fall 2012

The Agricultural Chemical Use Program of the National Agricultural Statistics Service (NASS) is the U.S. Department of Agriculture's official source of statistics about on-farm and post-harvest fertilizer and pesticide use and pest management practices. NASS conducts field crop agricultural chemical use surveys as part of the Agricultural Resource Management Survey.

NASS conducted the soybean chemical use survey in fall 2012, collecting data about fertilizer and pesticide use, as well as pest management practices, for the 2012 crop year. A crop year is the period beginning immediately after harvest of the previous year's crop and ending at harvest of the current year's crop.

NASS conducted the 2012 Agricultural Chemical Use Survey among soybean producers in 19 states: Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, Ohio, South Dakota, Tennessee, Virginia, and Wisconsin. These states accounted for 96 percent of the soybean acreage planted in the United States in the 2012 crop year. All 2012 soybean chemical use data refer to these "program states" and are based on 2,491 individual questionnaires.



### Top Pest Management Practices, by Percent of Planted Soybean Acres, Iowa

<b>Prevention</b>	No-till or minimum till used	75
<b>Avoidance</b>	Rotated crops during past 3 years	93
<b>Monitoring</b>	Scouted for weeds	97
<b>Suppression</b>	Scouting data compared to published information to assist decisions	43

**Herbicides:** Herbicide active ingredients were applied to 99 percent of the acres planted to soybeans in Iowa. Glyphosate potassium salt was the most widely applied herbicide with 51 percent of planted acres treated at an average rate of 1.01 pounds per acre per application. The herbicide glyphosate isopropylamine salt was second, with 33 percent of the acres receiving an application with an average rate of 0.893 pounds per acre per application.

**Insecticides:** Insecticides were applied to 21 percent of the 2012 soybean planted acreage in Iowa. The three most common, Chlorpyrifos, Bifenthrin, and Lambda-cyhalothrin, were applied to 14, 4, and 4 percent of the planted acres, respectively.

Active Ingredient	Iowa			Program States		
	Total Applied (pounds)	Crop Year Average LB / Acre / Application	Percent of Planted Acres	Total Applied (pounds)	Crop Year Average LB / Acre / Application	Percent of Planted Acres
<b>Pesticide Use on Soybeans</b>						
<b>HERBICIDE:</b>						
Glyphosate pot. salt	7,059,000	1.01	51	70,826,000	0.979	59
Glyphosate iso. salt	3,895,000	0.893	33	29,550,000	0.843	30
Glyphosate	1,117,000	0.819	12	6,539,000	0.838	7
Glyphosate dim. salt	755,000	0.951	6	2,421,000	0.864	2
2,4-D, 2-EHE	562,000	0.559	11	4,098,000	0.51	11
Trifluralin	531,000	0.724	8	1,306,000	0.79	2
Pendimethalin	460,000	0.863	5	1,559,000	0.874	2
Sulfentrazone	389,000	0.25	16	1,078,000	0.17	8
Fomesafen	163,000	0.235	7	1,347,000	0.208	8
Clethodim	122,000	0.063	19	524,000	0.073	9
Glufosinate-ammonium	108,000	0.426	2	1,253,000	0.373	3
Flumioxazin	53,000	0.056	10	602,000	0.075	11
Imazethapyr	37,000	0.066	6	205,000	0.052	5
Fluazifop-p-butyl	34,000	0.083	4	195,000	0.094	3
Cloransulam-methyl	33,000	0.031	11	83,000	0.024	4
Quizalofop-p-ethyl	33,000	0.073	4	118,000	0.064	2
Chlorimuron-ethyl	17,000	0.015	13	187,000	0.022	11
Saflufenacil	15,000	0.029	6	80,000	0.028	4
Thifensulfuron	8,000	0.009	9	31,000	0.009	5
Fluthiacet-methyl	2,000	0.008	2	10,000	0.005	2
<b>TOTAL HERBICIDE</b>	<b>16,093,000</b>		<b>99</b>	<b>132,979,000</b>		<b>98</b>
<b>INSECTICIDE:</b>						
Chlorpyrifos	393,000	0.307	14	2,090,000	0.422	6
Bifenthrin	59,000	0.14	4	153,000	0.07	3
Lambda-cyhalothrin	18,000	0.047	4	141,000	0.03	6
Gamma-cyhalothrin	1,000	0.006	3	6,000	0.007	1
<b>TOTAL INSECTICIDE</b>	<b>486,000</b>		<b>21</b>	<b>4,060,000</b>		<b>18</b>
<b>FUNGICIDE:</b>						
Pyraclostrobin	100,000	0.106	10	397,000	0.101	5
Propiconazole	27,000	0.132	2	125,000	0.085	2
Trifloxystrobin	27,000	0.132	2	73,000	0.075	1
<b>TOTAL FUNGICIDE</b>	<b>173,000</b>		<b>16</b>	<b>1,081,000</b>		<b>11</b>
<b>Fertilizer Use on Soybeans</b>						
Nitrogen	19,200,000	15	13	321,100,000	15	27
Phosphate	134,500,000	55	26	1,329,300,000	47	37
Potash	270,000,000	78	36	2,214,700,000	78	37
Sulfur	8,800,000	14	7	66,900,000	13	7

**Pest Management Practices:** Scouting for weeds was the top pest management practice on soybean acreage in Iowa.

Practice	Iowa		Program States	
	Percent of Area Planted	Percent of Operations	Percent of Area Planted	Percent of Operations
<b>PREVENTION PRACTICES:</b>				
No-till or minimum till used to manage pests	75	75	67	67
Seed treated for insect or disease after purchase	39	36	36	31
Field edges/etc. chopped, mowed, etc	37	38	43	39
Equipment and implements cleaned after field work to reduce spread of pests	19	18	34	31
Plowed down crop residue	14	12	22	21
<b>AVOIDANCE PRACTICES:</b>				
Rotated crops during past 3 years	93	92	84	79
Crop or plant variety chosen for specific pest resistance	53	50	48	46
Row spacing, plant density, or row directions adjusted	17	16	18	16
Planting or harvesting dates adjusted	12	12	16	13
Planting locations planned to avoid cross infestation of pests	7	9	13	12
<b>MONITORING PRACTICES:</b>				
Scouted for weeds	97	96	94	93
Scouted for insects & mites	94	91	86	83
Scouted for diseases	82	78	77	74
Weather data used to assist decisions	70	70	60	58
Established process used	29	26	21	19
Written or electronic records kept to track the activity of pests	25	18	23	20
Field Mapping data used to assist decisions	16	11	10	8
Diagnostic laboratory services used for pest detection via soil or plant tissue analysis	8	6	6	5
<b>SUPPRESSION PRACTICES:</b>				
Scouting data compared to published information to assist decisions	43	35	25	22
Ground covers, mulches, or other physical barriers maintained	41	39	35	31
Pesticides with different mechanisms of action used to keep pest from becoming resistant to pesticides	27	24	24	22
Buffer strips or border rows maintained to isolate organic from non organic crops	4	5	3	3
Biological pesticides applied	2	3	2	2

## Data Summary Published to NASS Website

Complete data from the 2012 agricultural chemical use survey are available on the NASS website at [http://www.nass.usda.gov/Surveys/Guide\\_to\\_NASS\\_Surveys/Chemical\\_Use/](http://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/Chemical_Use/)

## Who Uses the Agricultural Chemical Use Program Data

NASS collects information directly from growers, who participate voluntarily and on a confidential basis. The data are fact-based and report actual chemical use. The growers benefit directly and indirectly when public and private organizations rely on these accurate, timely data in making decisions about health, environment, safety, trade, and other issues. Some examples of how the data are used:

- **USDA** — to evaluate the safety of the nation's food supply, assess risks and benefits, make decisions about product registrations, quantify the benefits of conservation practices, and market commodities internationally.
- **U.S. Geological Survey (USGS)** — to assess the quality of the nation's streams, rivers, and groundwater; the impact of human activities; and the effectiveness of integrated pest management.
- **Environmental Protection Agency (EPA)** — to include actual use levels in product reviews. Without NASS survey information, EPA could assume higher levels are applied, thereby overcounting chemical use, overestimating risk, and perhaps cancelling registrations for chemicals farmers rely on.
- **State government agencies** — to assess pesticides' impacts on water quality and to evaluate the need for special pesticide registrations and emergency exemptions.
- **Chemical manufacturers** — to make research and development, marketing, and other business decisions.
- **Commodity groups** — to help establish industry trends and educate stakeholders.
- **Public interest organizations** — to educate the public and represent the public interest in policy discussions about pesticides and pest management.
- **Researchers** — to study important issues such as sustainability and the impact of integrated pest management.

**To IOWA PRODUCERS: This report contains results collected from the annual Agricultural Resource Management Survey. Your operation, large or small, represents Iowa agriculture. We appreciate your assistance in providing timely and accurate data. Thank you for your support.**

*~Greg Thessen, State Statistician , Iowa Field Office*



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