

## 2004 SOYBEAN CHEMICAL USAGE

Phosphate was the most commonly used fertilizer on soybeans; it was applied to 26 percent of acreage in the Program States. A total of 1,095.9 million pounds of phosphate were applied to the Program State acreage. Potash was the next most frequently applied fertilizer, with 23 percent of acres planted being treated; a total of 1,733.9 million pounds were applied. Nitrogen had the smallest acreage coverage at only 21 percent of Program State acres.

Herbicides were applied to 97 percent of the Program State acreage though one active ingredient clearly dominated. Glyphosate was used on 87 percent of all the acres treated, 0.73 pounds of glyphosate were applied per acre per application, and 57.7 million total pounds of glyphosate were applied. The next four most widely used active ingredients were chlorimur-ethyl, sulfentrazone, trifluralin and pendimethalin, but their percent of acres treated were much smaller.

Insecticides were used on 4 percent of the Program State acres, but individual active ingredients only covered a maximum of 1 percent of soybean Program State acreage. Fungicides were applied to only 1 percent of the Program State acres; only the active ingredient azoxystrobin was reported.



### SOYBEANS: Acreage, Percent Receiving Fertilizer or Chemicals, Number of Applications, Rates per Application, Selected States, 2004

State	Area Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied 1/	Applications	Rate per Application	Area Applied 1/	Applications	Rate per Application	Area Applied 1/	Applications	Rate per Application	Area Applied 1/	Area Applied 1/
	1,000											
	Acres	Percent	Number	Pounds	Percent	Number	Pounds	Percent	Number	Pounds	Percent	Percent
IL	9,950	14	1.6	22	18	1.6	66	32	1.6	103	98	1
IN	5,550	15	1.6	24	25	1.5	58	40	1.5	100	99	2/
IA	10,200	10	1.6	24	11	1.5	58	15	1.5	71	98	1
<b>MN</b>	<b>7,300</b>	<b>19</b>	<b>1.7</b>	<b>17</b>	<b>18</b>	<b>1.5</b>	<b>39</b>	<b>16</b>	<b>1.6</b>	<b>46</b>	<b>98</b>	<b>2/</b>
<b>Total 3/</b>	<b>61,150</b>	<b>21</b>	<b>1.5</b>	<b>18</b>	<b>26</b>	<b>1.5</b>	<b>47</b>	<b>23</b>	<b>1.5</b>	<b>81</b>	<b>97</b>	<b>4</b>

1/ Refers to acres receiving one or more applications of a specific fertilizer or chemical.

2/ Data not published due to insufficient number of reports.

3/ Refers to eleven major soybean states including: AR, IL, IN, IA, KS, MN, MO, NE, ND, OH, and SD.

### SOYBEANS: Frequency and Extent of Chemical Usage By Active Ingredient, Minnesota, 2004 1/

Ingredient	Area Applied 2/	Applications	Rate per Application	Rate per Year	Total Applied
	Percent	Number	Pounds per Acre	Pounds per Acre	1,000 Pounds
<b>Herbicides</b>					
Clethodim	3	1.1	0.15	0.16	38
Cloransulam-methyl	5	1.1	0.03	0.03	12
Fomesafem	3	1.2	0.17	0.20	41
Glyphosate	83	1.6	0.72	1.11	6,762
Imazamox	4	1.0	0.02	0.02	7
Imazethapyr	3	1.0	0.04	0.04	9
Pendimethalin	4	1.0	0.80	0.80	235
Sulfosate	2	1.0	1.16	1.16	198
Trifluralin	11	1.0	0.79	0.81	651

1/ Planted acres in 2004 for Minnesota were 7.3 million acres.

2/ Refers to acres receiving one or more applications of a specific chemical.

## 2004 OTHER SPRING WHEAT CHEMICAL USAGE

Nitrogen fertilizer was applied to 93 percent of the 2004 spring wheat planted acreage in the Program States. Spring wheat growers in the Program States applied nitrogen 2.0 times per acre on average, putting down 48 pounds of nitrogen per acre per treatment. Fertilizers with phosphate were applied to 79 percent of the planted acreage and 25 percent of the planted acreage received potash applications.

Spring wheat producers in the states surveyed treated 96 percent of their planted acreage with herbicides. MCPA was the most widely applied herbicide with 46 percent of the planted acreage being treated in the Program States. It was applied at a rate of 0.29 pounds per acre per application. The next four most frequently applied active ingredients were fenoxaprop, glyphosate, 2,4-D, and bromoxynil octanoate.

Insecticides were applied to only 2 percent and fungicides were applied to 20 percent of the other spring wheat acres planted in the Program States.

### SPRING WHEAT: Acreage, Percent Receiving Fertilizer or Chemicals, Number of Applications, Rates per Application, Major States, 2004

State	Area Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied 1/	Appli-cations	Rate per Appli-cation	Area Applied 1/	Appli-cations	Rate per Appli-cation	Area Applied 1/	Appli-cations	Rate per Appli-cation	Area Applied 1/	Area Applied 1/
	1,000											
	Acres	Percent	Number	Pounds	Percent	Number	Pounds	Percent	Number	Pounds	Percent	Percent
<b>MN</b>	<b>1,700</b>	<b>98</b>	<b>1.6</b>	<b>67</b>	<b>91</b>	<b>1.1</b>	<b>43</b>	<b>54</b>	<b>1.2</b>	<b>32</b>	<b>99</b>	<b>10</b>
MT	3,000	79	1.7	34	69	1.3	26	13	1.4	16	95	2/
ND	6,200	98	2.5	46	86	1.6	32	27	1.5	16	97	2/
<b>Total 3/</b>	<b>13,710</b>	<b>93</b>	<b>2.0</b>	<b>48</b>	<b>79</b>	<b>1.4</b>	<b>33</b>	<b>25</b>	<b>1.4</b>	<b>21</b>	<b>96</b>	<b>2</b>

1/ Refers to acres receiving one or more applications of a specific fertilizer or chemical.

2/ Data not published due to insufficient reports.

3/ Refers to seven major spring wheat states including; ID, MN, MT, ND, OR, SD, and WA.

### OTHER SPRING WHEAT: Frequency and Extent of Usage by Active Ingredient, Minnesota, 2004 1/

Active Ingredient	Area Applied 2/	Applications	Rate per Application	Rate per Year	Total Applied
	Percent	Number	Lbs. Per Acre	Lbs. Per Acre	1,000 Pounds
<b>Herbicides</b>					
2,4-D	8	1.0	0.55	0.55	76
2,4-DP, Dimeth. Salt	4	1.0	0.37	0.37	25
Acetic acid (2,4-D)	4	1.0	0.44	0.44	32
Bromoxynil	12	1.0	0.29	0.29	60
Bromoxynil octanoate	39	1.0	0.30	0.30	200
Clodinafop-propargil	13	1.0	0.05	0.05	12
Clopyralid	14	1.0	0.08	0.08	18
Dicamba	4	1.0	0.08	0.08	5
Fenoxaprop	30	1.0	0.08	0.08	43
Flucarbazone-sodium	13	1.0	0.02	0.02	5
Fluroxypyr	8	1.0	0.07	0.07	9
Glyphosate	7	1.0	0.63	0.63	75
MCPA	68	1.0	0.34	0.35	403
MCPA, dimethyl. Salt	5	1.0	0.40	0.40	35
Thifensulfuron	15	1.0	0.008	0.008	2
Tribenuron-methyl	9	1.0	0.006	0.006	1
<b>Fungicides</b>					
Pyraclostrobin	13	1.1	0.06	0.06	14
Tebuconazole	33	1.0	0.10	0.10	56

1/ Planted acres in 2004 for Minnesota were 1.7 million acres.

2/ Refers to acres receiving one or more applications of a specific chemical.