South Dakota
2000 AGRICULTURAL CHEMICAL USAGE

Released: July 2001

OVERVIEW: *The agricultural chemical use estimates in this report are based on data compiled from the Agricultural Resources Management Study conducted during the fall of 2000. All results refer to on-farm use of fertilizers and pesticides on the targeted crops for the 2000 crop year. For South Dakota, these crops included winter wheat, other spring wheat, soybeans, and corn.*

OTHER SPRING WHEAT

SOUTH DAKOTA: Nitrogen was applied to 95 percent of South Dakota's 1.65 million acres of spring wheat (other than durum). Growers averaged 1.4 applications at the rate of 42 pounds per acre. Phosphate was applied to 83 percent of the spring wheat acreage at the rate of 26 pounds per acre. Herbicide was applied to 93 percent of the acreage. 2,4-D was the most popular herbicide for spring wheat, treating 56 percent of the acres at the rate of 0.30 pound per acre.

NATIONAL: Nitrogen was applied to 95 percent of the spring wheat acreage in the four states surveyed. Phosphate fertilizers were applied to 84 percent of the acreage in the states surveyed, while potash was applied to 27 percent of the planted acreage. Growers treated 95 percent of the other spring wheat acreage with herbicides; 2,4-D was the most prevalent with 45 percent of the planted acreage treated, closely followed by MCPA with 44 percent.

OTHER SPRING WHEAT, SOUTH DAKOTA, SELECTED YEARS
Acreage, Percent Receiving Fertilizer and Pesticides, Number of Applications, Rate per Application

Year 1/	Area Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied	Applications	Rate Per Application	Area Applied	Applications	Rate Per Application	Area Applied	Applications	Rate Per Application	Area Applied	Area Applied
	1,000 Acres	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Percent
1997	2,500	90	1.5	42	70	1.0	35	2/	2/	2/	86	2/
1998	1,950	85	1.4	41	66	1.0	35	11	1.0	26	73	2/
2000	1,650	95	1.4	42	83	1.0	26	12	1.0	14	93	2/

1/ Data for South Dakota was not collected in 1999. 2/ Insufficient reports to publish state level usage estimates.

OTHER SPRING WHEAT, SELECTED STATES, 2000
Acreage, Percent Receiving Fertilizer and Pesticides, Number of Applications, Rate per Application

State	Area Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied	Applications	Rate Per Application	Area Applied	Applications	Rate Per Application	Area Applied	Applications	Rate Per Application	Area Applied	Area Applied
	1,000 Acres	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Percent
MN	2,000	94	1.1	76	85	1.0	30	73	1.0	20	92	1/
MT	3,350	90	1.7	32	84	1.1	24	36	1.0	12	92	0
ND	6,800	97	1.6	46	83	1.0	30	12	1.0	16	97	1/
SD	1,650	95	1.4	42	83	1.0	26	12	1.0	14	93	0
Total 2/	13,800	95	1.5	45	84	1.0	28	27	1.0	16	95	2

1/ Insufficient reports to publish data. 2/ Refers to the 4 major other spring wheat states, which account for 91 percent of the U.S. acreage.

OTHER SPRING WHEAT, SOUTH DAKOTA, 2000: Frequency and Extent of Chemical Usage by Active Ingredient

Active Ingredient	Common Trade Name	Area Applied	Applications	Rate Per Application	Rate Per Crop Year	Total Applied
		Percent	Number	- - - Pounds Per Acre - - -		1,000 Pounds
2,4-D	1/	56	1.0	0.30	0.30	276
Bromoxynil 1/	Buctril	8	1.0	0.27	0.27	37
Clopyralid 1/	Stinger	12	1.0	0.08	0.08	16
Dicamba	Banvel	42	1.0	0.07	0.07	46
MCPA	1/	30	1.0	0.31	0.31	152
Metsulfuron-methyl 1/	Ally	10	1.0	0.003	0.003	2/
Thifensulfuron	Pinnacle	11	1.0	0.009	0.009	2
Tribenuron-methyl	Express	11	1.0	0.005	0.005	1

1/ Chemical marketed under several trade names. 2/ Total applied is less than 1,000 pounds.

United States Department of Agriculture — National Agricultural Statistics Service
South Dakota Agricultural Statistics Service, P.O. Box 5068, Sioux Falls, SD, 57117-5068 605-330-4235
Access our reports via the Internet at http://www.usda.gov/nass/

WINTER WHEAT

SOUTH DAKOTA: Nitrogen was applied to 91 percent of the 1.35 million acres of winter wheat. Growers averaged 1.4 applications to the winter wheat acreage at the rate of 35 pounds per acre. Phosphate was applied to 61 percent of the winter wheat acreage at the rate of 30 pounds per acre. Herbicide was applied to 56 percent of the winter wheat acreage. Glyphosate (Roundup) was the most popular herbicide for winter wheat, treating 39 percent of the acres at the rate of 0.40 pound per acre.

NATIONAL: Nitrogen was applied to 87 percent of the 2000 winter wheat acreage in the 16 states surveyed. Growers averaged 1.5 applications per acre, applying 44 pounds of nitrogen per treatment. In the states surveyed, 54 percent of the planted winter wheat acreage received phosphates and potash was applied to 17 percent of the acreage. Herbicides were applied to 37 percent of the winter wheat acreage. 2,4-D and Metsulfuron-methyl (Ally) were the two most commonly used herbicides with 13 and 12 percent of the reported acreage being treated, respectively.

WINTER WHEAT, SOUTH DAKOTA, SELECTED YEARS
Acreage, Percent Receiving Fertilizer and Pesticides, Number of Applications, Rate per Application

Year 1/	Area Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide 2/
		Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Area Applied
	1,000 Acres	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Percent
1996	1,580	78	1.2	40	65	1.0	28	2/	2/	2/	65	2/
1997	1,050	78	1.3	36	58	1.0	25	2/	2/	2/	89	2/
1998	1,500	94	1.5	37	92	1.0	26	2/	2/	2/	88	2/
2000	1,350	91	1.4	35	61	1.0	30	12	1.0	8	56	0

1/ Data for South Dakota was not collected in 1999. 2/ Insufficient reports to publish data.

WINTER WHEAT, SELECTED STATES, 2000
Acreage, Percent Receiving Fertilizer and Pesticides, Number of Applications, Rate per Application

State	Area Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Area Applied
	1,000 Acres	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Percent
KS	9,800	94	1.5	37	65	1.0	28	6	1.0	18	31	8
MT	1,500	82	1.5	38	77	1.0	30	43	1.0	13	91	1/
NE	1,750	90	1.4	32	68	1.0	26	1/	1/	1/	26	1/
SD	1,350	91	1.4	35	61	1.0	30	12	1.0	8	56	0
Total 2/	38,070	87	1.5	44	54	1.0	35	17	1.0	49	37	4

1/ Insufficient reports to publish data. 2/ Refers to 16 major winter wheat states, which account for 88 percent of U.S. acreage.

WINTER WHEAT, SOUTH DAKOTA, 2000
Frequency and Extent of Chemical Usage by Active Ingredient

Active Ingredient	Common Trade Name	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
		Percent	Number	- - - Pounds per Acre - - -		1,000 Lbs.
2,4-D	1/	26	1.0	0.32	0.32	114
Dicamba	Banvel	15	1.1	0.13	0.15	31
Glyphosate 1/	Roundup	39	1.1	0.40	0.46	244
MCPA	1/	4	1.0	0.35	0.35	19
Metsulfuron-methyl 1/	Ally	20	1.0	0.004	0.004	1

1/ Chemical marketed under several trade names.

CORN

SOUTH DAKOTA: Nitrogen was applied to 99 percent of the state's 4.30 million corn acres in 2000. Growers averaged 1.5 nitrogen applications at the rate of 63 pounds per acre. Phosphate was applied to 92 percent of the acreage at the rate of 36 pounds per acre, and potash to 39 percent at the rate of 21 pounds per acre. Herbicide was applied to 100 percent of the corn acreage, while insecticide was applied to 15 percent. Atrazine (AAtrex) was the most popular herbicide, treating 42 percent of the acres at the rate of 0.54 pound per acre. Acetochlor (Harness) was the second leading herbicide, treating 34 percent at the rate of 0.98 pound per acre.

NATIONAL: Nitrogen was applied to 98 percent of the 2000 corn acreage in the 18 states surveyed. Corn growers averaged 1.7 applications per acre while applying 77 pounds of nitrogen per treatment. Phosphates were applied to 84 percent of the acreage and potash was applied to 66 percent. Herbicides were applied to 97 percent of the corn acreage in 2000. Atrazine (AAtrex) continued to be the most commonly used herbicide with 68 percent of the reported acreage being treated. In 2000, 29 percent of the corn acreage was treated with insecticides.

CORN, SOUTH DAKOTA, SELECTED YEARS
Acreage, Percent Receiving Fertilizer and Pesticides, Number of Applications, Rate per Application

Year	Area Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Area Applied
	1,000 Acres	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Percent
1995	2,800	90	1.4	56	72	1.0	34	29	1.0	19	92	7
1996	4,000	88	1.5	60	77	1.0	33	39	1.0	20	91	25
1997	3,800	96	1.4	60	80	1.0	36	31	1.0	22	93	10
1998	3,900	94	1.3	62	78	1.0	38	25	1.0	22	95	1/
1999	3,600	98	1.5	60	88	1.1	37	49	1.0	24	95	18
2000	4,300	99	1.5	63	92	1.0	36	39	1.0	21	100	15

1/ Insufficient reports to publish data.

CORN, SELECTED STATES, 2000
Acreage, Percent Receiving Fertilizer and Pesticides, Number of Applications, Rate per Application

State	Area Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide 2/
		Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Appli-cations	Rate Per Appli-cation	Area Applied	Area Applied
	1,000 Acres	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Percent
IA	12,300	95	1.5	87	74	1.0	53	74	1.0	69	100	16
MN	7,100	97	1.9	59	91	1.2	52	76	1.0	68	99	8
NE	8,500	99	1.9	79	82	1.0	33	22	1.0	11	97	55
SD	4,300	99	1.5	63	92	1.0	36	39	1.0	21	100	15
Total 1/	73,770	98	1.7	77	84	1.1	51	66	1.0	75	97	29

1/ Refers to 18 major corn states, which account for 93 percent of U.S. acreage. 2/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available available because amounts of active ingredient are not comparable between products.

CORN, SOUTH DAKOTA, 2000
Frequency and Extent of Chemical Usage by Active Ingredient

Active Ingredient	Common Trade Name	Area Applied	Applica-tions	Rate Per Application	Rate Per Crop Year	Total Applied
		Percent	Number	- - - Pounds Per Acre - - -		1,000 Pounds
2,4-D	1/	2	1.1	0.76	0.86	89
Acetochlor 1/	Harness	34	1.0	0.98	1.03	1,507
Atrazine 1/	AAtrex	42	1.0	0.54	0.59	1,062
Bromoxynil 1/	Buctril	7	1.0	0.23	0.23	70
Clopyralid 1/	Stinger	12	1.0	0.07	0.07	36
Dicamba	Banvel	30	1.0	0.28	0.28	363
EPTC 1/	Eradicane	6	1.0	2.93	3.10	797
Flumetsulam	Broadstrike	12	1.0	0.02	0.02	13
Glyphosate 1/	Roundup	16	1.6	0.63	1.06	748
Imazapyr 1/	Lightning	4	1.0	0.002	0.002	2/
Imazethapyr	Pursuit	4	1.0	0.007	0.007	1
Isoxaflutole	Balance	4	1.0	0.07	0.07	12
Metolachlor	Dual	8	1.0	0.79	0.79	264
Nicosulfuron	Accent	21	1.0	0.01	0.01	12
Primisulfuron	Beacon	8	1.0	0.02	0.02	6
Rimsulfuron	Basis	13	1.0	0.008	0.008	5

1/ Chemical marketed under several trade names. 2/ Total applied is less than 1,000 pounds.

SOYBEANS

SOUTH DAKOTA: In 2000, nitrogen was applied to 38 percent of South Dakota's 4.40 million soybean acres. Growers averaged 1.0 applications at the rate of 14 pounds per acre. Phosphate was applied to 43 percent of the acreage at the rate of 35 pounds per acre, and potash to 12 percent at the rate of 23 pounds per acre. Herbicide was applied to 98 percent of the South Dakota soybean acreage. Glyphosate (Roundup) was the most popular herbicide, treating 67 percent of the acres at a rate of 0.65 pound per acre. Imazethapyr (Pursuit) was the second leading herbicide treating 23 percent at the rate of 0.04 pound per acre.

NATIONAL: Soybean producers in the 18 states surveyed applied nitrogen fertilizer to 18 percent of the area planted to soybeans. They averaged 1.0 nitrogen applications per acre , with an average application rate of 23 pounds per acre. Phosphate was applied on 24 percent of the soybean acreage in the states surveyed. Potash was applied to 27 percent of the planted soybean acreage and 97 percent was treated with herbicides. The most widely used herbicide was Glyphosate (Roundup), applied to 62 percent of the soybean acreage. Soybean growers in the states surveyed applied insecticide to only 2 percent of the soybean acres planted.

SOYBEANS, SOUTH DAKOTA, SELECTED YEARS,
Acreage, Percent Receiving Fertilizer and Pesticides, Number of Applications, Rate per Application

Year 1/	Area Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied	Applications	Rate Per Application	Area Applied	Applications	Rate Per Application	Area Applied	Applications	Rate Per Application	Area Applied	Area Applied
	1,000 Acres	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Percent
1997	3,500	35	1.2	29	34	1.0	36	18	1.0	23	90	1/
1998	3,450	32	1.0	27	32	1.0	35	11	1.0	8	96	1/
1999	4,100	47	1.0	20	47	1.0	45	19	1.0	27	98	0
2000	4,400	38	1.0	14	43	1.0	35	12	1.0	23	98	0

1/ Insufficient reports to publish data.

SOYBEANS, SELECTED STATES, 2000
Acreage, Percent Receiving Fertilizer and Pesticides, Number of Applications, Rate per Application

State	Area Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied	Applications	Rate Per Application	Area Applied	Applications	Rate Per Application	Area Applied	Applications	Rate Per Application	Area Applied	Area Applied
	1,000 Acres	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Percent
IA	10,700	15	1.0	49	22	1.0	47	22	1.0	59	98	1/
MN	7,300	8	1.0	16	9	1.0	34	24	1.0	67	95	0
NE	4,650	30	1.0	14	20	1.0	38	15	1.0	9	98	1/
SD	4,400	38	1.0	14	43	1.0	35	12	1.0	23	98	0
Total 2/	71,010	18	1.0	23	24	1.0	48	27	1.0	76	97	2

1/ Insufficient reports to publish data. 2/ Refers to 18 major soybean states, which account for 97 percent of U.S. acreage.

SOYBEANS, SOUTH DAKOTA, 2000
Frequency and Extent of Chemical Usage by Active Ingredient

Active Ingredient	Common Trade Name	Area Applied	Applications	Rate per Application	Rate per Crop year	Total Applied
		Percent	Number	- - - Pounds per Acre - - -		1,000 Lbs.
Bentazon 1/	Basagran	6	1.0	1.33	1.33	346
Clethodim	Select	4	1.0	0.10	0.10	16
Glyphosate 1/	Roundup	67	1.5	0.65	1.02	3,028
Imazamox	Raptor	4	1.0	0.02	0.02	4
Imazethapyr	Pursuit	23	1.0	0.04	0.04	39
Pendimethalin	Prowl	8	1.2	0.53	0.67	227
Sethoxydim	Poast	5	1.0	0.37	0.37	80
Sulfosate	Touchdown	4	1.0	0.90	0.98	175
Trifluralin 1/	Treflan	21	1.0	0.93	0.93	845

1/ Chemical marketed under several trade names.

PRSRT STD
POSTAGE & FEES PAID
USDA
PERMIT NO. G-38

William G. Hamlin, State Statistician
Stephen W. Noyes, Deputy State Statistician

SOUTH DAKOTA AGRICULTURAL STATISTICS SERVICE
3528 S. Western Ave., P.O. Box 5068
Sioux Falls, South Dakota 57117-5068

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

ADDRESS SERVICE REQUESTED