

## SOUTH DAKOTA CROP WEATHER SUMMARY, 2004

### GENERAL

South Dakota dealt with another year of predominantly dry weather, and many areas continued to struggle with drought. Small grain seeding and row crop planting advanced ahead of normal, however, cool weather caused row crops to mature much slower than normal, pushing row crop harvest behind as well. Range and pasture conditions as well as soil moisture and stock water supplies varied during 2004, as precipitation was scattered and several areas received below normal precipitation for the year.

### JANUARY

January started with above-normal temperatures and below-normal snowfall, with temperatures dropping and snow falling toward the end of the month. The average snow depth for the state at month's end was 4.2 inches. With much of the state lacking snow cover for the majority of the month, many were unsure of the winter's effects on fall seedings. Mild weather was beneficial to livestock producers, with feed and stock water supplies adequate in most areas.

### FEBRUARY

Temperatures during February averaged slightly above normal, with precipitation slightly below normal. The average snow depth for the state at the end of the month was 1.9 inches. Moisture levels and snow cover were the main concerns for producers this month. Calving and lambing season was welcomed with favorable weather, with livestock in mostly fair to good condition for the month.

### MARCH

Warm weather and precipitation were common throughout the state during March. Temperatures averaged 7.5 degrees above normal for the month, with soil moisture levels rated slightly higher than last year. Some producers got an early start on spring field activity, and most anticipated March 31<sup>st</sup> as the starting date for fieldwork.

### APRIL

Warm temperatures started off the month, with temperatures falling below normal by month's end. Precipitation totals were below normal during April, causing stock water supplies and soil moisture levels to be very short to short throughout the state. Seeding of small grains neared completion by the end of the month, well ahead of 2003's progress. The average emergence rate of small grains was at 45 percent by the end of the month.

### MAY

May started off with significant soil moisture level decreases, due to high temperatures and minimal precipitation; but by the end of the month, subsoil moisture levels had risen to 47 percent adequate to surplus. With precipitation falling frequently, only 18.3 days were suitable for fieldwork during May. Small grain seeding wrapped up early in the month, with row crop planting progressing ahead of average rates. By month's end, corn and soybeans were 97 and 72 percent planted, respectively.

### JUNE

Cool, damp weather was common throughout the state in June, with only 18.1 days suitable for fieldwork during the month. Soil moisture levels improved. Crops and livestock were rated in mostly fair to excellent condition. Small grain development advanced ahead of average. Row crop planting and

development was in line with the five-year averages, with the first cutting of alfalfa 70 percent complete by the end of the month.

### JULY

Cool weather in early July gave way to hot, dry weather by the end of the month, causing soil moisture levels to decline during crucial crop development stages. Topsoil was rated at 45 percent very short to short with subsoil moisture levels rated at 49 percent very short to short by month's end. Stock water supplies also deteriorated during the month, with livestock rated in good to excellent condition throughout much of the state. Small grain harvest began later than normal, with winter wheat harvest 81 percent complete by the end of the month.

### AUGUST

August started off with showers and thunderstorms, with strong winds and hail causing damage to crops and livestock throughout several areas of the state. Cool, dry weather caused crop maturity to remain behind normal, with corn and sorghum silage harvest only 9 and 15 percent complete, respectively, by month's end. Stock water supplies and soil moisture levels declined, with topsoil moisture rated 56 percent very short to short and subsoil moisture rated 52 percent very short to short by the end of the month.

### SEPTEMBER

September started off with above-normal temperatures, which fell to below normal by the end of the month. Soil moisture levels improved throughout the month, and stock water supplies also improved. Precipitation was also beneficial to range and pasture conditions, with cattle and sheep rated in good to excellent condition throughout the state. With crops reaching maturity later than normal, due to cooler temperatures earlier in the growing season, harvest also began later than normal. By month's end, corn was 2 percent harvested and soybeans were 6 percent harvested.

### OCTOBER

Temperatures varied from above normal to below normal for the month, with precipitation doing little to improve soil moisture levels. Row crop harvest advanced during the 20.8 days suitable for fieldwork this month, yet harvest remained well behind normal throughout the state. Alfalfa harvest was in line with average, wrapping up towards the end of the month. Many producers began to utilize field residue for grazing, as pasture and range land continued to be dry.

### NOVEMBER

Warm, dry weather for much of November allowed producers to make significant advancements in harvest progress. Winter wheat emergence was primarily completed mid-month, with corn harvest 93 percent complete by month's end. Soil moisture levels varied little throughout the month, with topsoil moisture rated 81 percent adequate to surplus and subsoil moisture rated 68 percent adequate to surplus by the end of the month.

### DECEMBER

December brought mild weather, along with minimal snowfall. The average snow depth for the state at month's end was 0.20 inch. Many producers worried that much more snow would be required to protect winter wheat and alfalfa from harsh winter temperatures. Mild weather allowed producers to graze fields longer, helping to save on feed supplies.

12 WEATHER

AVERAGE TEMPERATURES, 1971-2000

Table with 14 columns: WEATHER STATION, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, ANNUAL. Rows list various South Dakota locations such as ABERDEEN, ACADEMY, ALEXANDRIA, etc.

SOURCE: SOUTH DAKOTA STATE CLIMATOLOGIST.

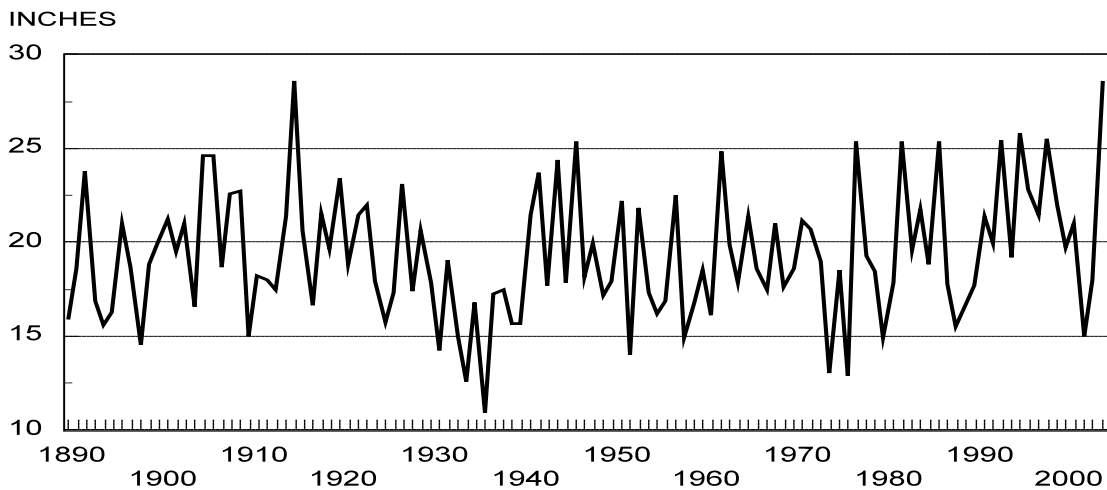


### PRECIPITATION, SOUTH DAKOTA, 2003-2004

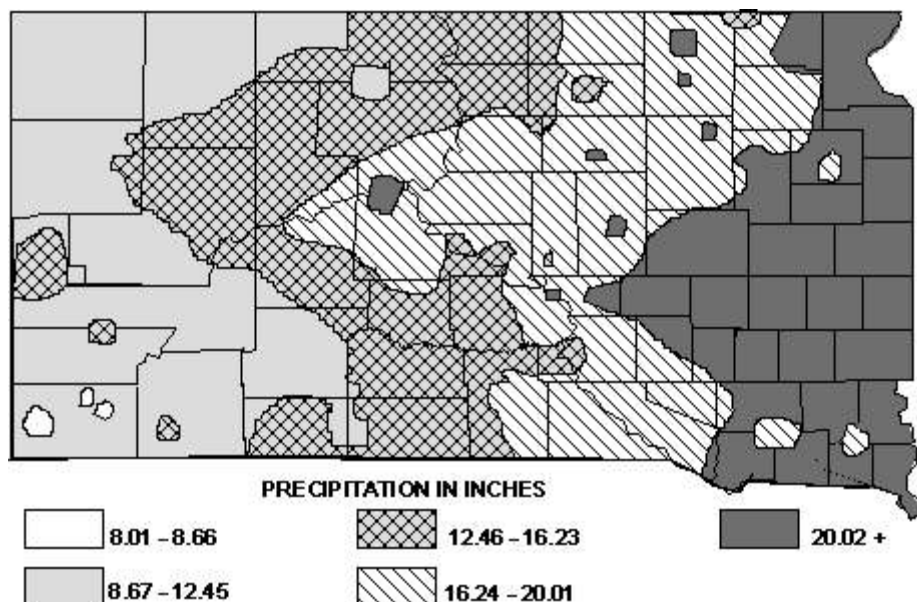
DIST.	STATION	GROWING SEASON				ANNUAL				
		APR 1 - SEPT 30 2003		APR 1 - SEPT 30 2004		2003		2004		
		TOTAL	DEPARTURE FROM NORMAL	TOTAL	DEPARTURE FROM NORMAL	TOTAL	DEPARTURE FROM NORMAL	TOTAL	DEPARTURE FROM NORMAL	
----- INCHES -----										
NW	CAMP CROOK	9.35	-1.76	10.00	-1.11	14.80	+0.43	13.85	-0.52	
	NEWELL	8.94	-2.45	9.43	-1.96	12.75	-2.73	13.16	-2.32	
	LEMMON	12.43	-1.13	9.40	-4.16	15.59	-2.65	11.82	-6.42	
	DUPREE	9.12	-4.26	14.51	+1.13	13.32	-4.52	19.75	+1.91	
NC	MOBRIDGE	10.74	-1.95	11.48	-1.21	12.84	-4.10	14.52	-2.42	
	FAULKTON	13.75	-1.10	20.89	+6.04	18.08	-2.23	25.22	+4.91	
	ABERDEEN	18.11	+2.95	16.91	+1.75	21.28	+1.06	21.77	+1.55	
NE	WAUBAY	17.52	+1.63	19.28	+3.39	19.95	-1.00	24.71	+3.76	
	WATERTOWN	14.08	-2.29	19.65	+3.28	18.14	-3.80	27.12	+5.18	
	MILBANK	13.64	-2.44	21.45	+5.37	16.17	-5.88	26.55	+4.50	
WC	SPEARFISH	14.10	-1.10	10.43	-4.77	20.10	-1.56	14.43	-7.23	
	RAPID CITY	8.13	-4.26	9.87	-2.52	10.97	-5.67	13.16	-3.48	
	COTTONWOOD	7.42	-5.32	9.71	-3.03	11.24	-5.92	13.13	-4.03	
	MILESVILLE	8.59	-6.09	16.36	+1.68	12.89	-6.74	20.99	+1.36	
C	PIERRE	10.61	-4.20	14.10	-0.71	13.60	-6.28	18.70	-1.18	
	HIGHMORE	12.98	-3.01	19.19	+3.20	15.39	-5.84	24.00	+2.77	
	HURON	12.60	-2.70	21.90	+6.60	16.42	-4.48	29.71	+8.81	
EC	MITCHELL	NA	NA	22.46	+5.67	NA	NA	28.10	+5.24	
	BROOKINGS	NA	NA	22.00	+4.26	NA	NA	24.99	+2.18	
	SIoux FALLS	18.07	+0.02	25.48	+7.43	21.81	-2.88	30.92	+6.23	
SW	OELRICHS	12.36	-0.63	7.41	-5.58	18.15	+0.90	10.92	-6.63	
	PORCUPINE	9.10	-4.14	9.87	-3.37	14.99	NA	14.55	NA	
SC	MURDO	11.18	-3.04	12.78	-1.44	15.22	-4.55	17.94	-1.83	
	KENNEBEC	15.21	+0.92	14.67	+0.38	18.87	+0.16	22.01	+3.30	
	WINNER	11.22	-6.20	16.33	-1.09	15.44	-8.28	22.41	-1.31	
SE	PICKSTOWN	13.42	-4.10	16.62	-0.90	NA	NA	21.51	-1.86	
	YANKTON	23.57	+4.82	NA	NA	29.05	+3.96	NA	NA	

NA = NOT AVAILABLE.  
SOURCE: SOUTH DAKOTA STATE CLIMATOLOGIST.

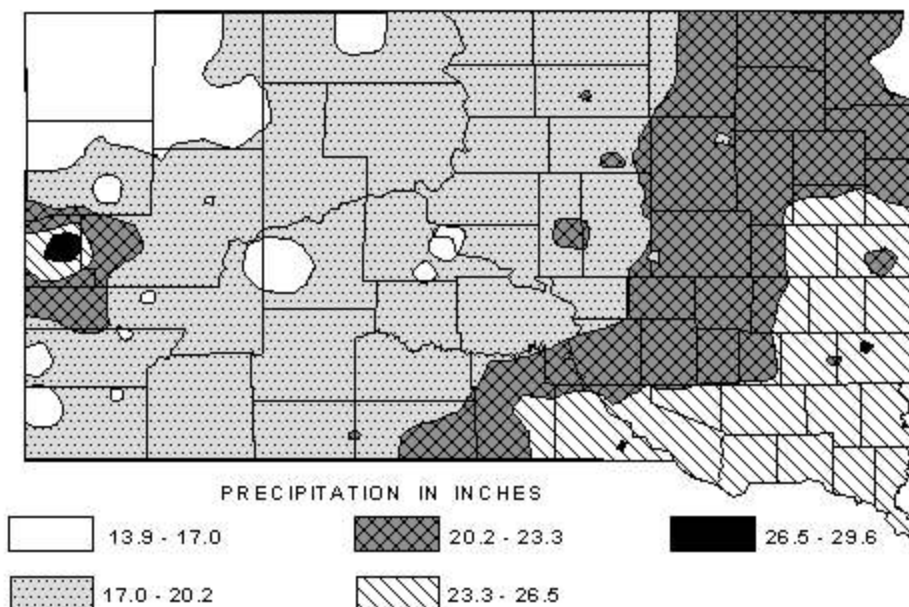
### AVERAGE ANNUAL PRECIPITATION, SOUTH DAKOTA, 1890-2004



**GROWING SEASON PRECIPITATION,  
SOUTH DAKOTA, APRIL THROUGH SEPTEMBER, 2004**



**GROWING SEASON PRECIPITATION,  
SOUTH DAKOTA, APRIL THROUGH SEPTEMBER AVERAGE, 1971-2000**



SOURCE: SOUTH DAKOTA STATE CLIMATOLOGIST