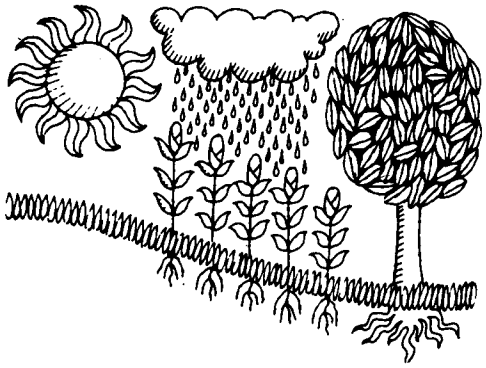


WEEKLY WEATHER AND CROP BULLETIN

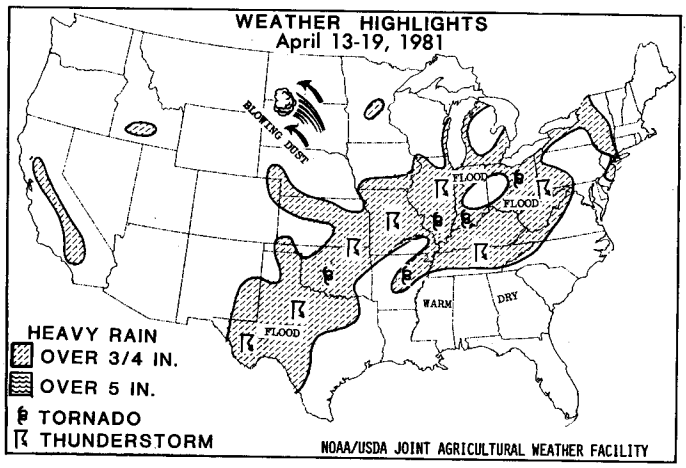
U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration, National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
Economics and Statistics Service
World Food and Agricultural Outlook and Situation Board

Volume 68, No. 16 | Washington, D.C. | April 21, 1981

National Weather Summary

April 13-19, 1981



HIGHLIGHTS: Drought conditions eased slightly in the western portion of the winter wheat area and in much of the Midwest Corn Belt. Continued dry weather in the Southeast again lowered the index. Drought became more intense in the northern Plains. At least normal rain will be needed in that area to start crops. Showers and thunderstorms were widespread from the Southwest into the southern and central Plains, the middle Mississippi Valley from the Tennessee Valley to the Great Lakes, and from the mid-Atlantic States to New England. Heavy rains caused flooding in Ohio and in western Texas.

MONDAY...A frontal system over the Nation's midsection spread showers and thunderstorms from western Texas through the lower half of the Missouri River Valley and into the Ohio River Valley. Storms dumped large hail from northwest Missouri through the northern half of Illinois. At least 18 tornadoes hit the same area. Temperatures were warm ahead of the front--rising into the eighties across the South.

TUESDAY...The cold front moved into New England and spread showers and thunderstorms along and ahead of it. Flooding occurred through northern Indiana and Ohio. The showers moved to a line from South Carolina through Arkansas to central Texas. Late in the day, showers developed from western Texas to eastern Utah.

WEDNESDAY...Rain and showers continued over much of the western half of Texas and eastern New Mexico. Some of the showers in Texas were rather heavy--2 inches or more. Strong gusty winds over the northern Plains kicked up clouds of dust attesting to the dry condition of the topsoil. Gusty wind and cool temperatures dominated the weather in the Northeast as the cool Canadian airmass swept across the area.

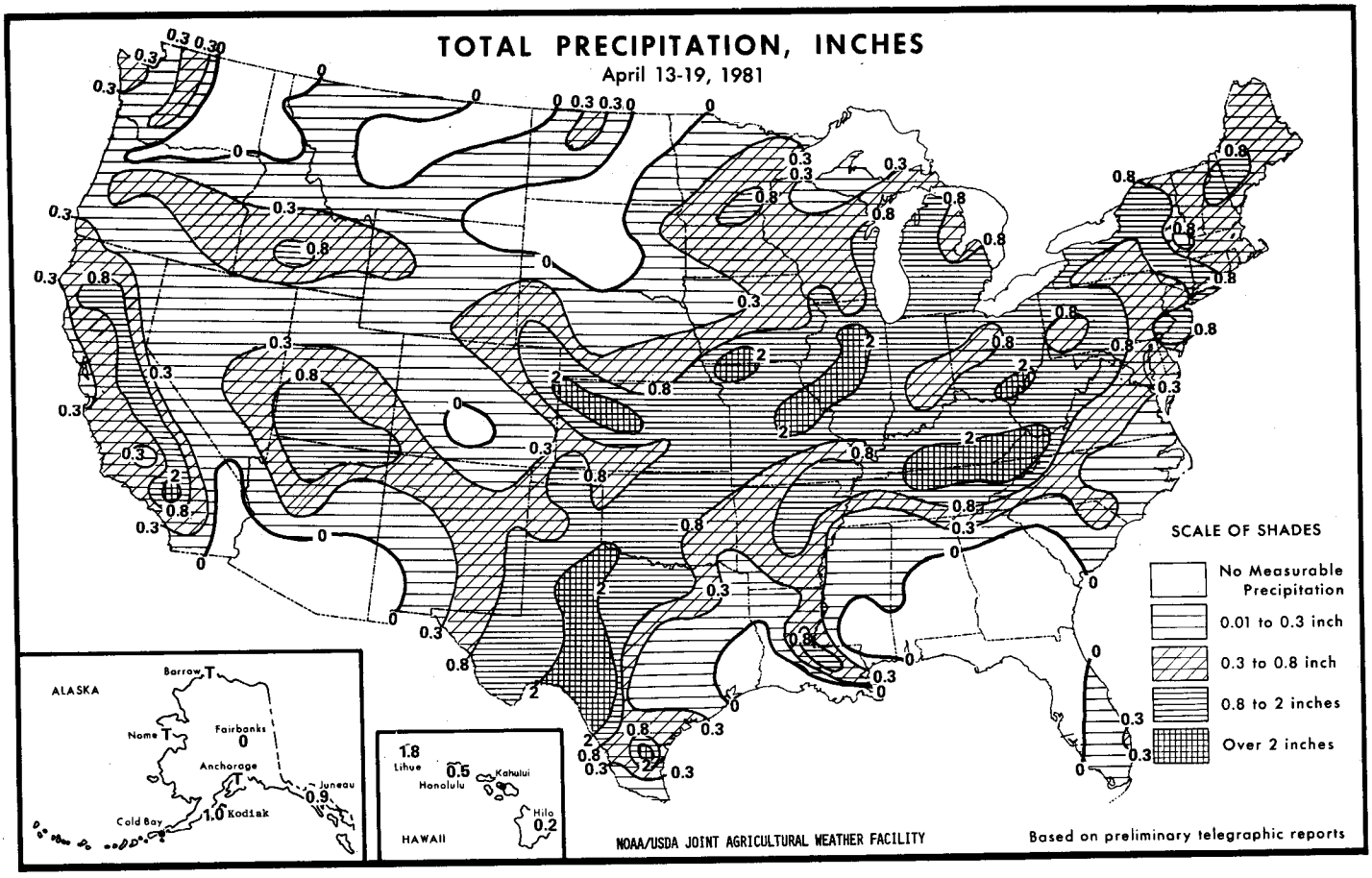
THURSDAY...Warm air began flowing northward from the Gulf of Mexico and reached into the northern Plains. Temperatures were in the eighties in North Dakota. Late in the day, another cold front cooled the area but started the blowing dust again. The warm weather helped produce thunderstorms over much of the eastern third of the Nation.

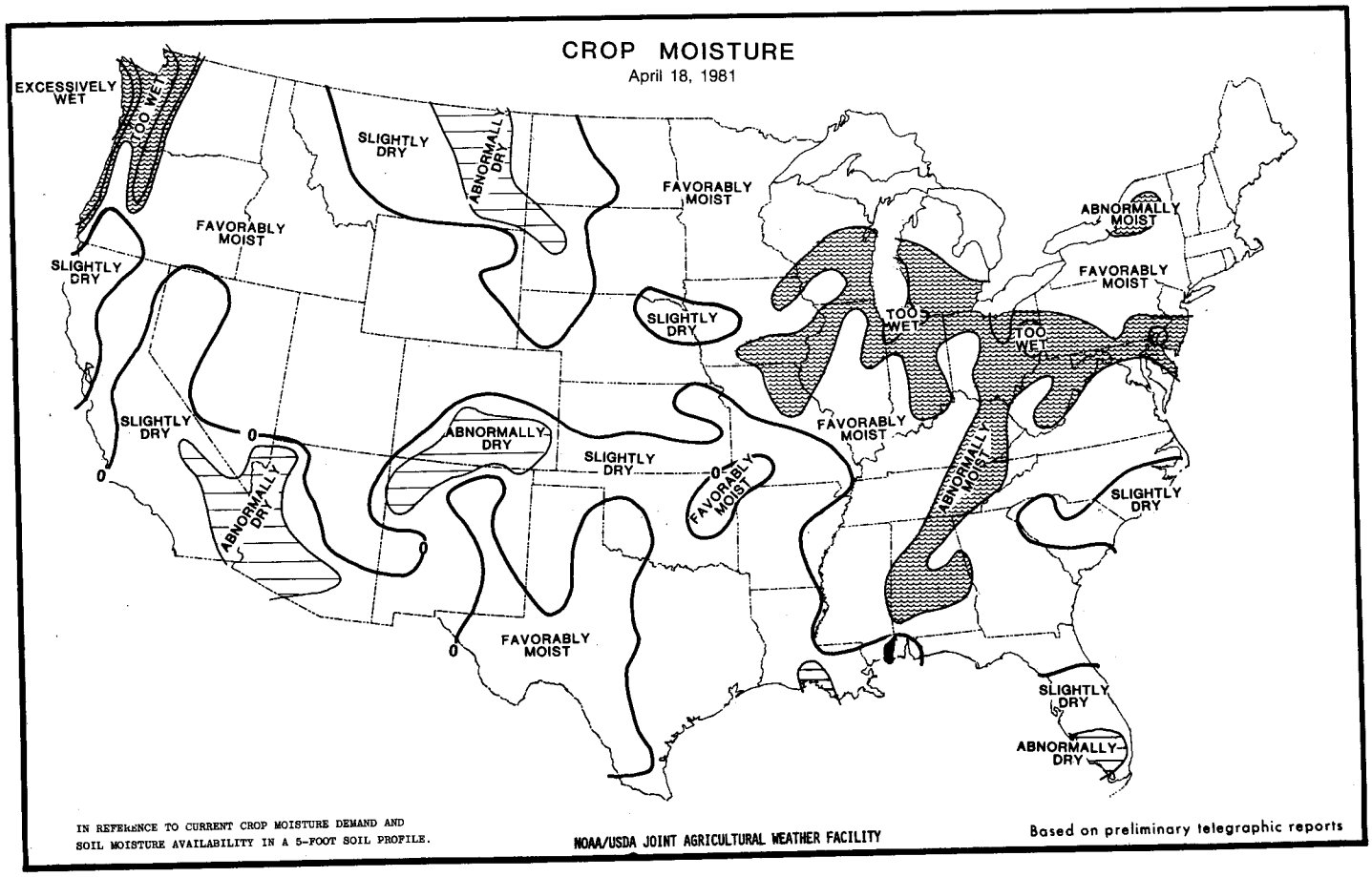
FRIDAY...Showers and thunderstorms developed in south central and southwestern Texas. Some areas had heavy storms, resulting in local flooding. As the cold front moved eastward, scattered showers and thundershowers continued from Louisiana to Ohio and from North Carolina to Maine.

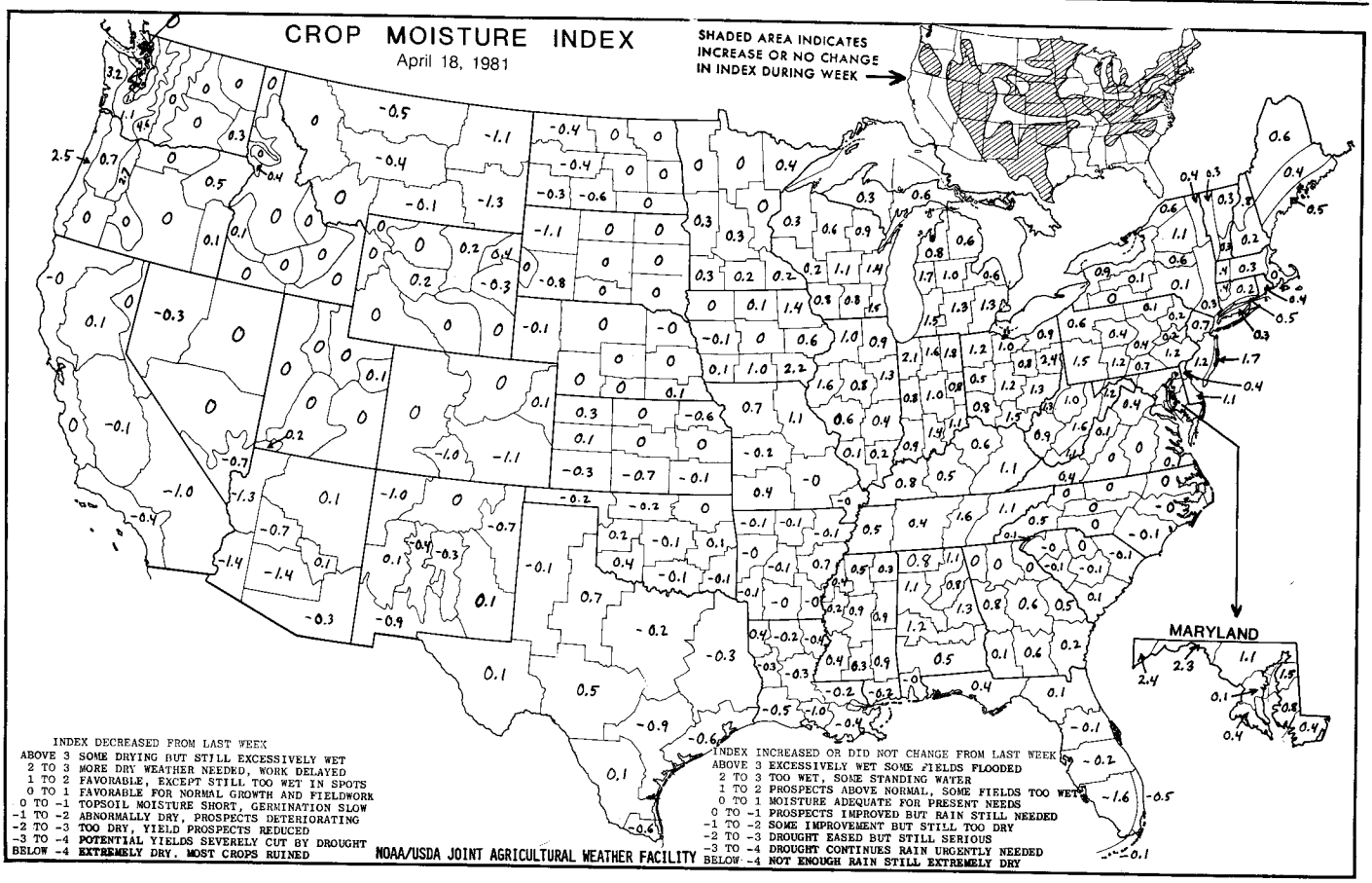
SATURDAY...Showers and thunderstorms were common from the Southwest, across much of the Plains, the middle Mississippi Valley and the Ohio and Tennessee Valleys. Rain was heavy over portions of western Texas and the Ohio Valley and some rivers were at or near flood stage. Temperatures were mild over much of the Nation but chilly around the Great Lakes.

SUNDAY...Showers and a few thunderstorms were widespread from the central Pacific Coast across the northern and central Rockies, the central Plains, the middle Mississippi Valley, into the Ohio Valley and the Great Lakes area. Showers also reached from the Carolinas into Pennsylvania. Severe thunderstorms were reported in eastern Oklahoma and Kansas and a tornado touched down in southeastern Illinois.

In This Issue


TOTAL PRECIPITATION, INCHES
April 13-19, 1981
SCALE OF SHADES
No Measurable Precipitation
0.01 to 0.3 inch
0.3 to 0.8 inch
0.8 to 2 inches
Over 2 inches
ALASKA
Barrow
Nome
Fairbanks
Anchorage
Juneau
Cold Bay
Kodiak
HAWAII
Lihue
Honolulu
Kahului
Hilo
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary telegraphic reports


CROP MOISTURE
April 18, 1981
EXCESSIVELY WET
TOO WET
SLIGHTLY DRY
ABNORMALLY DRY
FAVORABLY MOIST
ABNORMALLY MOIST
IN REFERENCE TO CURRENT CROP MOISTURE DEMAND AND SOIL MOISTURE AVAILABILITY IN A 5-FOOT SOIL PROFILE.
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary telegraphic reports



NOTICE - CROP MOISTURE INDEX MAPS — APRIL 21

To satisfy various public informational needs on the widespread drought, three versions of Drought Severity Index (Palmer) maps have been released weekly since early this year. Now that spring has arrived and planting of crops is progressing, it is customary to begin issuing the Crop Moisture Index weekly and the Drought Severity Index monthly. This schedule will be initiated this year beginning with the April 21 issue of the Bulletin.

The current schedule calls for three map versions of the Crop Moisture Index and only the national, boradview by category ("extreme, moderate", etc.) version of the Drought Severity Index, such as is shown at the top of page 4. the other two map versions of the Drought Severity Index, depicted on the bottom of page 4 and top of page 5, will be discontinued while their counterparts or similar versions of the Crop Moisture Index are being issued. This will reduce the chance of confusion between similar maps of the two Indexes. However, some groups needing the detailed, long term effects, such as to help delineate disaster areas or effects on water-sensitive economies (availability of irrigation water supplies, for instance) will have to contact our office directly. If this creates difficulties for you, send your comments to Don Haddock, Managing Editor of the Bulletin.

CROP MOISTURE INDEX

Characteristics: a modified version of the Drought Severity Index that indicates short term abnormal dryness or wetness affecting warm season crops and field operations; responds rapidly; can change considerably from week to week; and the index value is near zero (indicates normal conditions) at the beginning and ending of the growing season when crops use little or no water.

Uses: applicable in measuring the short term week-to-week status of dryness or wetness affecting warm season crops and field activities.

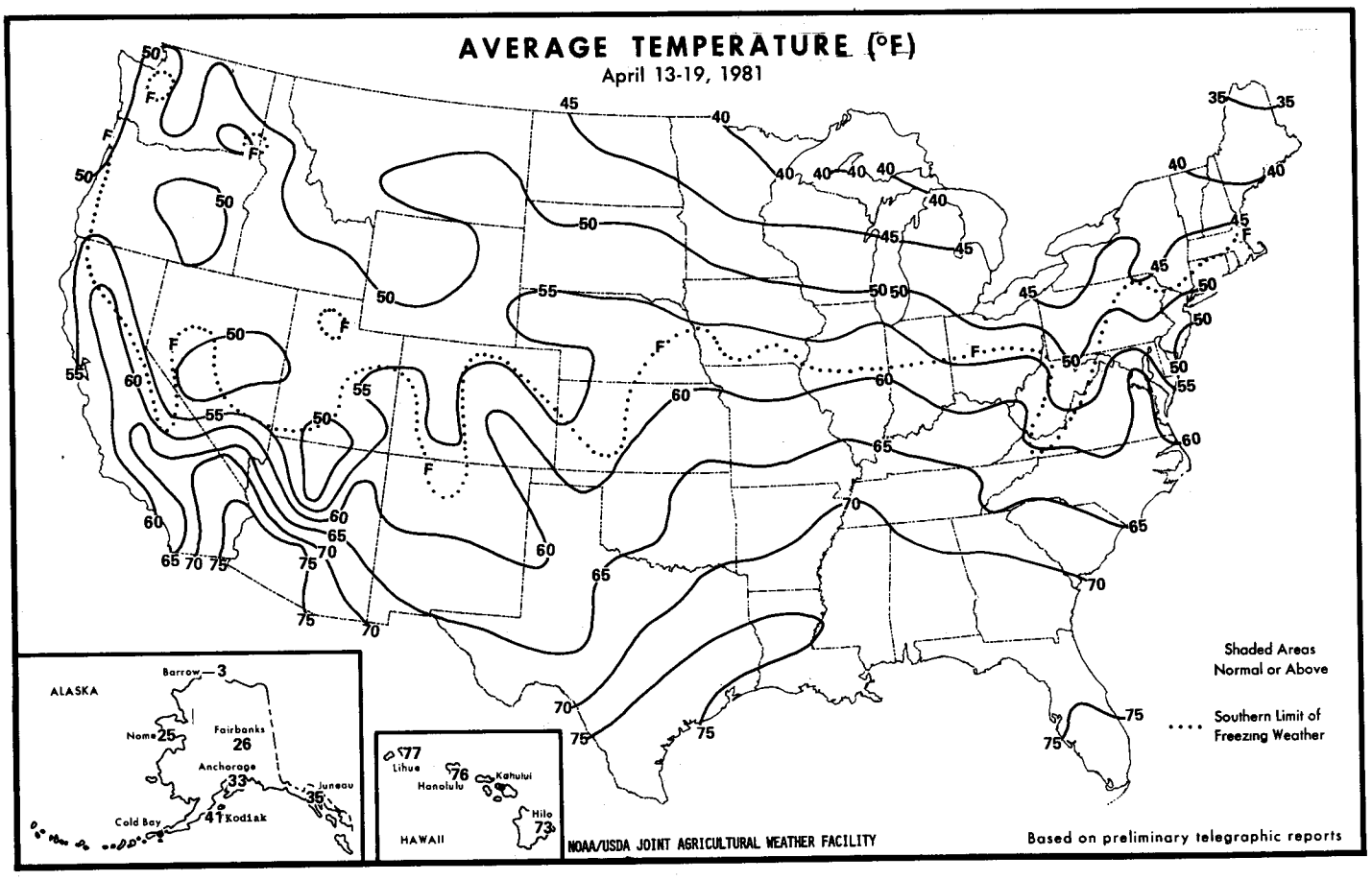
Time period: spans about 4 weeks, with the most recent week having the greatest influence and the earliest week having the least.

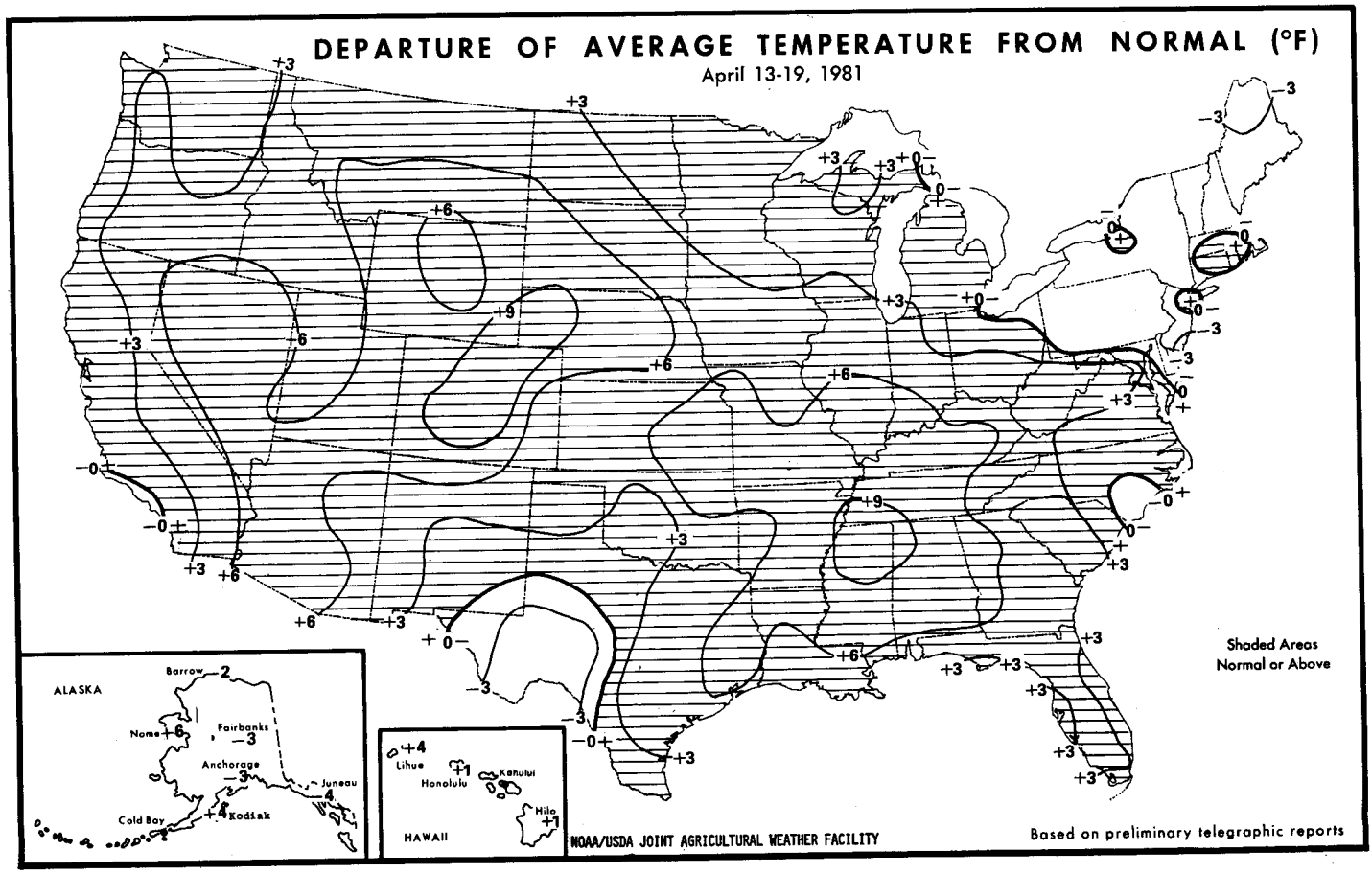
Limitations: the index may not be applicable for germination of shallow-rooted crops which are unable to extract the deep or subsoil moisture from a 5-foot profile, or for cool season crops growing when temperatures are averaging below about 55°F.

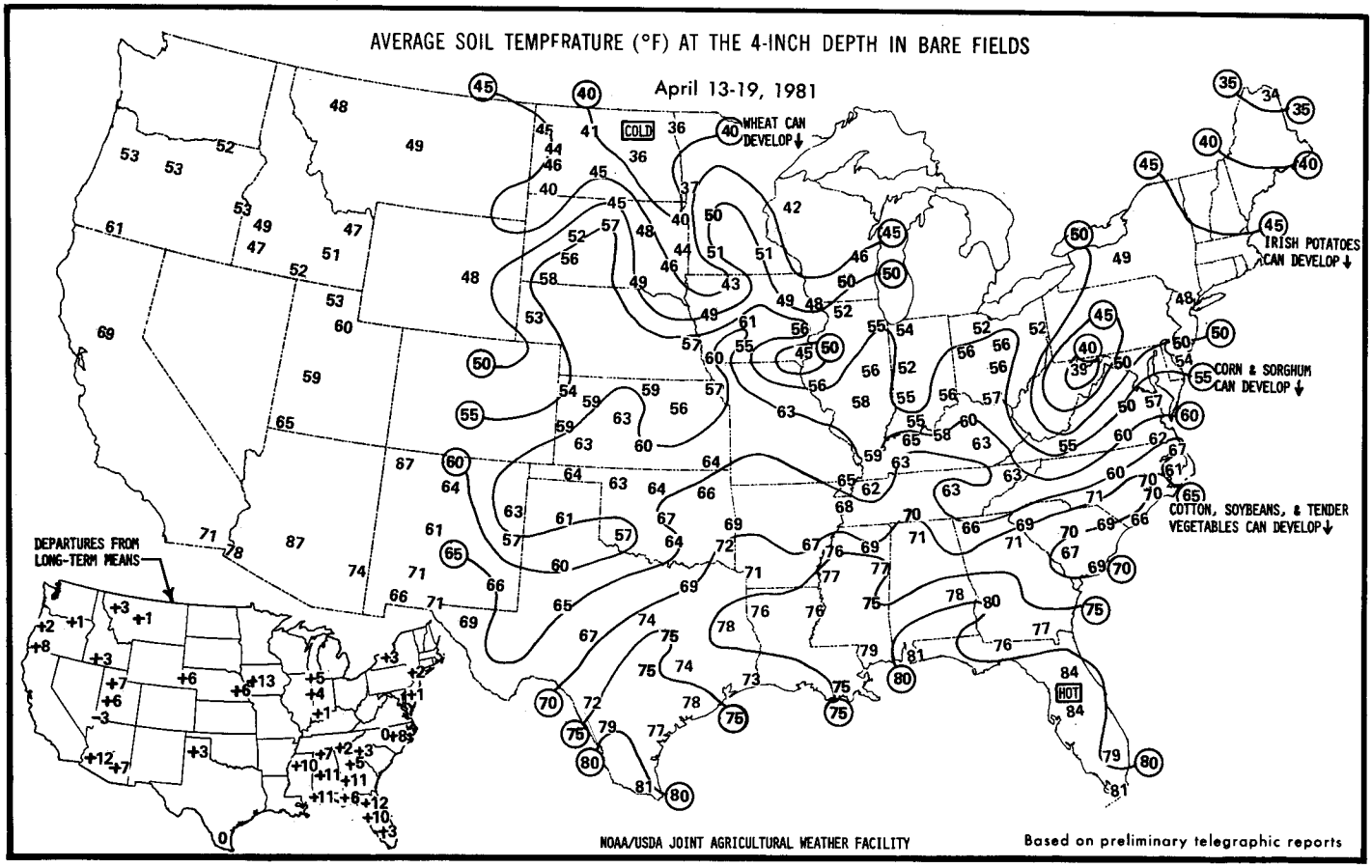
The Crop Moisture Index measures the degree to which moisture requirements of growing crops were met during the previous week. The index is computed from average weekly values of temperature and precipitation. These values are used to calculate the potential moisture demand. Taking into account the previous soil moisture condition and current rainfall, the actual moisture loss is determined.

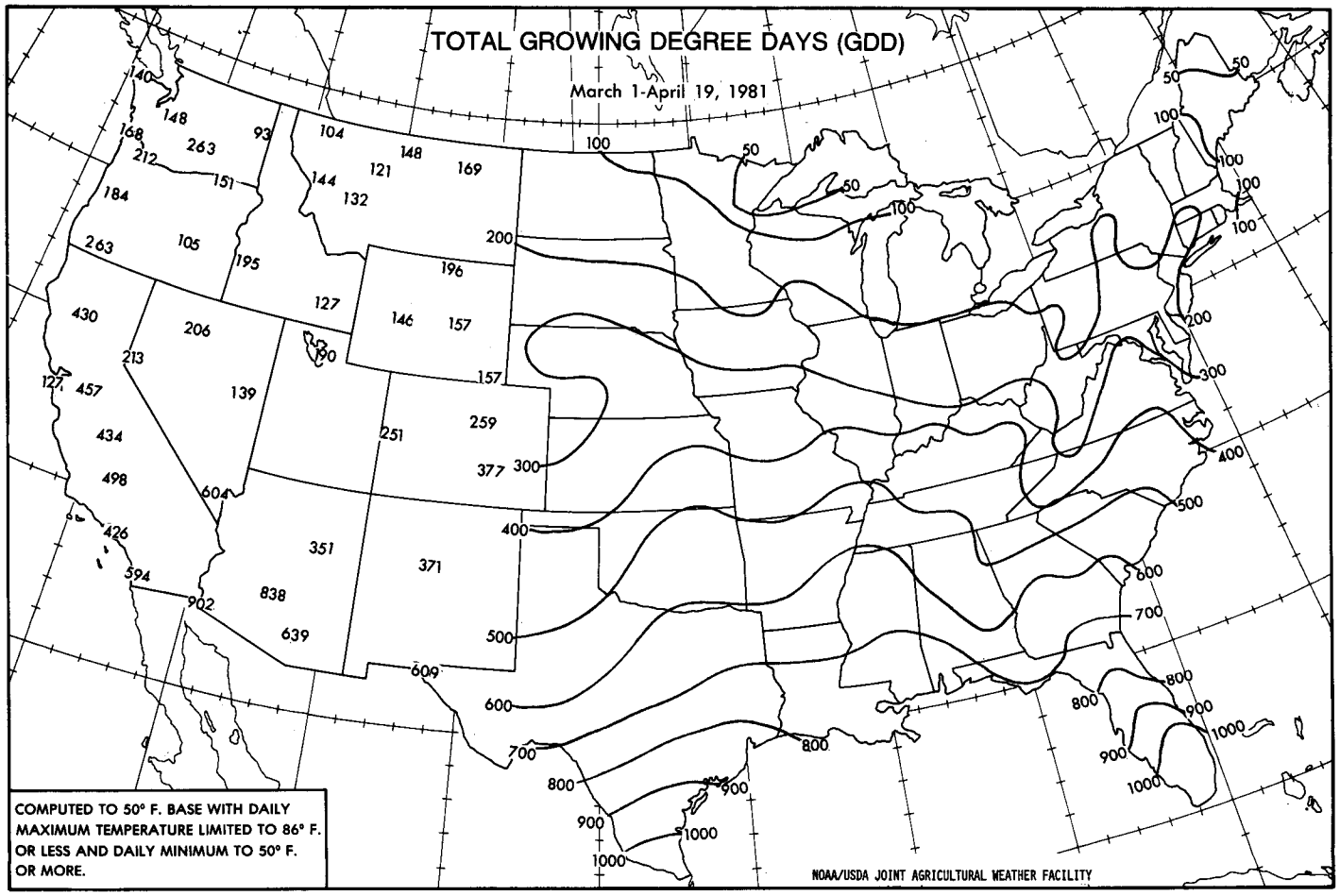
If the potential moisture demand, or potential evapotranspiration, exceeds available moisture supplies, actual evapotranspiration is reduced and the CMI gives a negative value. However, if moisture meets or exceeds demand the index is positive.

Local moisture conditions may vary because of differences in rainfall distribution or soil types. The type of agriculture and stage of crop development must be considered when assessing the impact of moisture conditions based on the Crop Moisture Index.


AVERAGE TEMPERATURE (°F)
April 13-19, 1981
ALASKA
Barrow 3
Nome 25
Fairbanks 26
Anchorage 33
Juneau 35
Cold Bay 41
Kodiak
HAWAII
Lihue 77
Honolulu 76
Kahului
Hilo 73
Shaded Areas Normal or Above
Southern Limit of Freezing Weather
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary telegraphic reports


DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
April 13-19, 1981
ALASKA
Barrow 2
Nome +6
Fairbanks −3
Anchorage −3
Juneau 4
Cold Bay +4
Kodiak
HAWAII
Lihue +4
Honolulu +1
Kahului
Hilo +1
Shaded Areas Normal or Above
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary telegraphic reports


AVERAGE SOIL TEMPERATURE (°F) AT THE 4-INCH DEPTH IN BARE FIELDS
April 13-19, 1981
COLD
WHEAT CAN DEVELOP
IRISH POTATOES CAN DEVELOP
CORN & SORGHUM CAN DEVELOP
COTTON, SOYBEANS, & TENDER VEGETABLES CAN DEVELOP
HOT
DEPARTURES FROM LONG-TERM MEANS
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary telegraphic reports


TOTAL GROWING DEGREE DAYS (GDD)
March 1-April 19, 1981
COMPUTED TO 50° F. BASE WITH DAILY MAXIMUM TEMPERATURE LIMITED TO 86° F. OR LESS AND DAILY MINIMUM TO 50° F. OR MORE.
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Weather Data for the Week Ending April 19, 1981

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar. 2	PCT. NORMAL SINCE Mar. 2	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	83	60	89	55	72	8	0	- 1.1	0	8.4	93	14.8	76	88	41	0	0	0	0
MOBILE	84	61	89	57	73	4	0	- 1.3	0	3.5	30	13.5	66	94	47	0	0	1	0
MONTGOMERY	84	62	87	55	73	7	0	- 1.0	0	9.1	105	17.3	101	87	49	0	0	0	0
AK ANCHORAGE	42	25	47	19	33	-3	T	- .1	T	.3	38	2.4	96	69	34	0	7	0	0
BARROW	6	-10	12	-16	-3	-2	T	- .1	0	T	0	.4	36	94	75	0	7	0	0
FAIRBANKS	37	18	48	12	26	-3	0	- .1	0	.1	17	1.1	73	40	21	0	7	0	0
JUNEAU	40	29	47	26	35	-4	.9	.2	.3	3.5	66	12.8	101	92	60	0	7	7	0
KODIAK	46	36	50	31	41	4	1.0	.1	.6	9.0	148	27.7	172	91	60	0	1	4	1
NOME	32	16	40	-1	25	6	T	- .1	T	1.2	100	4.1	141	70	49	0	7	0	0
AZ FLAGSTAFF	62	36	68	31	49	7	.6	.3	.3	5.4	200	7.9	125	95	31	0	1	4	0
PHOENIX	90	68	94	63	79	11	T	- .1	T	1.2	120	3.1	148	49	16	6	0	0	0
TUCSON	85	60	89	55	72	6	T	- .1	T	2.2	275	4.3	195	57	20	0	0	0	0
WINSLOW	74	46	81	40	60	6	.1	0	.1	.5	71	1.4	88	77	24	0	0	2	0
YUMA	92	61	98	55	77	6	0	0	0	.2	40	1.0	71	44	15	5	0	0	0
AR FORT SMITH	77	58	87	50	67	5	.7	- .4	.5	4.3	66	8.6	71	89	49	0	0	3	0
LITTLE ROCK	78	58	83	50	68	6	1.0	- .2	.6	5.0	61	11.2	67	93	60	0	0	3	1
CA BAKERSFIELD	77	54	84	49	66	3	.2	- .1	.2	2.4	185	4.3	123	66	28	0	0	2	0
EUREKA	56	46	59	39	51	1	.3	- .3	.3	5.2	76	16.4	84	98	94	0	0	3	0
FRESNO	75	50	84	45	63	2	1.0	.7	.7	3.2	123	7.5	125	78	29	0	0	2	1
LOS ANGELES	63	54	66	52	58	-1	.4	- .1	.3	2.9	107	6.6	87	85	66	0	0	2	0
RED BLUFF	74	49	82	45	62	2	.9	.5	.7	6.1	165	13.5	116	82	42	0	0	2	1
SAN DIEGO	67	59	68	56	63	2	.1	0	.1	3.0	136	8.5	152	83	55	0	0	1	0
SAN FRANCISCO	63	46	71	42	55	0	.1	- .2	.1	3.8	109	12.1	109	89	54	0	0	2	0
STOCKTON	76	45	84	40	61	2	1.0	.6	.8	4.0	138	9.1	112	89	38	0	0	2	1
CO DENVER	70	44	79	34	57	9	.2	- .3	.2	3.0	125	3.7	106	60	27	0	0	1	0
GRAND JUNCTION	72	46	77	41	59	7	.2	- .1	.1	2.0	167	2.3	92	76	23	0	0	2	0
PUEBLO	75	46	82	42	61	8	T	- .3	T	1.0	83	1.6	76	57	22	0	0	0	0
CT BRIDGEPORT	57	39	78	29	48	-1	1.0	.2	.9	3.1	55	8.2	74	88	41	0	1	2	1
HARTFORD	63	37	79	29	50	2	.5	- .4	.5	1.9	31	9.5	74	75	28	0	2	1	0
DC WASHINGTON	69	50	83	41	60	3	.2	- .4	.1	3.0	59	6.2	60	85	38	0	0	3	0
FL APALACHICOLA	80	62	83	58	71	2	T	- .9	T	3.1	43	7.7	53	100	46	0	0	0	0
DAYTONA BEACH	82	59	87	53	70	0	T	- .6	T	3.0	60	8.8	87	92	21	0	0	1	0
FORT MYERS	89	63	91	59	76	3	0	- .4	0	1.4	33	3.8	47	94	37	4	0	0	0
JACKSONVILLE	85	57	91	51	71	3	0	- .7	0	5.7	102	11.3	93	97	49	1	0	0	0
KEY WEST	82	73	83	72	78	-1	.3	- .3	.2	1.2	40	3.9	58	86	61	0	0	?	0
MIAMI	83	72	84	71	78	3	.1	- .8	.1	1.5	38	6.8	81	74	48	0	0	1	0
ORLANDO	87	60	90	56	74	2	T	- .6	T	1.9	37	6.5	61	95	41	1	0	1	0
TALLAHASSEE	86	56	91	51	71	3	0	- .9	0	9.1	108	19.3	113	96	42	2	0	0	0
TAMPA	84	62	88	60	73	1	T	- .5	T	1.7	32	7.5	70	100	46	0	0	0	0
WEST PALM BEACH	81	70	85	66	76	2	.4	- .4	.4	2.9	54	7.5	70	79	18	0	0	2	0
GA ATLANTA	81	59	86	51	70	9	T	- 1.1	T	5.4	63	13.0	73	86	19	0	0	0	0
AUGUSTA	82	51	88	40	67	2	0	- .8	0	3.8	57	9.9	70	94	30	0	0	0	0
MACON	85	58	90	52	71	5	0	- .8	0	6.1	81	16.0	101	97	39	1	0	0	0
SAVANNAH	82	59	91	50	71	4	0	- .6	0	5.1	82	9.0	75	87	42	2	0	0	0
HI HILO	82	64	84	62	73	1	.2	- 2.8	.1	--	--	--	--	87	55	0	0	3	0
HONOLULU	84	69	87	66	76	1	.5	.2	.3	1.7	40	3.5	31	94	59	0	0	3	0
KAHULUI	86	64	91	61	75	1	-	- -	-	-	-	--	--	81	49	1	0	-	-
LIHUE	83	69	86	66	76	3	1.8	1.1	1.3	--	--	--	--	90	62	0	0	3	1
ID BOISE	69	38	76	25	54	5	.4	.1	.4	3.5	206	5.7	127	84	27	0	1	2	0
LEWISTON	68	40	75	31	54	4	0	- .3	0	2.3	144	4.3	113	72	30	0	1	0	0
POCATELLO	67	35	73	22	51	5	.3	.1	.3	2.1	150	3.5	109	78	25	0	2	2	0
IL CAIRO	76	59	82	47	68	7	1.1	.1	.8	4.3	57	9.0	58	--	--	0	0	2	1
CHICAGO	66	43	84	33	55	6	.8	0	.4	3.1	67	5.4	70	82	37	0	0	4	0
MOLINE	64	44	80	30	54	3	1.4	.5	1.2	4.3	90	6.9	87	81	47	0	1	3	1
PEORIA	64	47	80	32	56	4	1.9	.8	1.4	4.9	89	7.7	87	85	54	0	1	3	2
ROCKFORD	64	42	80	28	53	4	.5	- .4	.5	4.0	82	6.6	83	76	40	0	1	2	0
SPRINGFIELD	70	50	81	36	60	6	2.1	1.1	1.1	6.1	120	8.6	99	86	49	0	0	3	2
IN EVANSVILLE	75	52	83	38	63	6	1.1	.2	.8	3.9	54	7.3	52	84	50	0	0	3	1
FORT WAYNE	61	42	74	31	52	2	1.7	.9	.9	4.7	94	8.4	86	72	45	0	1	5	2
INDIANAPOLIS	69	46	79	33	57	5	.4	- .5	.2	3.9	65	7.2	64	79	40	0	0	4	0
SOUTH BEND	62	42	80	30	52	3	1.7	.7	.9	3.7	71	6.4	66	94	55	0	1	5	2
IA BURLINGTON	65	47	79	33	56	4	1.9	1.0	1.3	5.3	108	7.1	90	84	39	0	0	3	2
DES MOINES	66	44	77	31	55	5	.8	.1	.6	2.2	54	3.6	56	77	43	0	1	3	1
DUBUQUE	60	42	74	30	51	3	1.0	0	.7	4.5	82	7.3	86	83	47	0	1	4	1
SIOUX CITY	68	41	78	28	55	4	T	- .5	T	1.8	64	2.6	59	76	35	0	2	2	0
KS CONCORDIA	71	46	83	33	58	5	.8	.3	.6	3.1	107	3.3	75	91	44	0	0	3	1
DODGE CITY	72	44	88	30	58	3	.4	0	.3	2.0	91	2.4	73	94	35	0	2	3	0
GOODLAND	65	40	82	29	52	3	3.2	2.8	3.1	7.0	412	8.0	308	83	34	0	1	2	1
TOPEKA	71	50	86	34	61	6	.9	0	.6	3.7	84	4.2	66	84	48	0	0	4	1
WICHITA	76	52	88	42	64	7	.3	- .4	.2	2.5	71	3.0	56	79	32	0	0	4	0
KY LEXINGTON	71	49	80	37	60	4	1.7	.8	.7	5.7	79	10.6	72	85	41	0	0	3	2
LOUISVILLE	74	51	85	38	63	6	.9	0	.5	4.7	62	8.3	56	83	34	0	0	3	1
LA BATON ROUGE	84	64	86	60	74	6	1.0	- .2	.5	2.8	34	11.2	64	100	55	0	0	3	1

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending April 19, 1981

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar. 2	PCT. NORMAL SINCE Mar. 2	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	LAKE CHARLES	83	63	85	61	73	4	0	- 1.0	0	1.9	30	7.1	47	98	51	0	0	0	0
	NEW ORLEANS	84	63	86	58	73	5	.3	- .6	.3	3.2	40	12.4	70	99	56	0	0	1	0
	SHREVEPORT	83	62	85	58	73	6	.1	- 1.1	.1	2.3	32	8.7	58	94	45	0	0	1	0
ME	CARIBOU	43	24	51	11	33	-3	.3	- .3	.2	4.7	127	9.1	112	81	40	0	6	3	0
	PORTLAND	52	29	65	20	40	-3	.7	- .1	.4	3.5	63	11.5	91	83	37	0	5	3	0
MD	BALTIMORE	66	44	81	31	55	1	.5	- .2	.4	3.0	55	6.5	58	81	36	0	1	1	0
MA	BOSTON	59	39	78	31	49	0	.3	- .5	.3	2.3	38	10.0	75	78	35	0	1	1	0
	CHATHAM	52	39	67	31	45	-	.3	--	.3	3.6	--	11.4	--	65	41	0	1	2	0
MI	ALPENA	55	32	69	23	43	2	.5	0	.4	2.9	88	5.4	83	93	39	0	4	5	4
	DETROIT	60	38	76	29	49	1	1.2	.5	.9	3.1	70	6.7	84	90	49	0	2	5	1
	FLINT	58	36	75	26	47	1	.9	.2	.6	4.1	111	6.7	94	92	53	0	1	4	1
	GRAND RAPIDS	58	36	75	26	47	0	1.5	.7	.8	5.6	124	8.0	100	87	52	0	3	4	1
	HOUGHTON LAKE	53	32	68	23	43	1	1.0	.5	.9	3.2	100	6.3	103	86	43	0	4	2	1
	LANSING	59	37	77	26	48	1	1.2	.5	.8	5.0	122	6.9	91	96	54	0	2	4	1
	MARQUETTE	53	28	70	17	41	3	.1	- .6	.1	3.6	90	7.9	107	90	36	0	5	2	0
	MUSKEGON	56	38	68	25	47	1	.9	.1	.4	3.9	89	7.6	89	89	50	0	2	4	0
	SAULT STE. MARIE	49	25	62	18	37	1	1.0	.5	.6	3.7	119	6.8	103	91	48	0	6	4	1
MN	DULUTH	51	29	64	21	40	1	.7	.1	.6	2.5	74	4.2	76	85	37	0	5	2	1
	INT'L FALLS	54	26	67	16	40	1	.1	- .3	.1	1.6	76	2.1	57	83	37	0	6	1	0
	MINNEAPOLIS	60	36	72	29	48	2	.3	- .1	.2	1.5	56	3.9	93	80	35	0	3	4	0
	ROCHESTER	58	35	71	27	47	1	.6	0	.4	2.1	66	4.3	100	92	47	0	3	3	0
	SAINT CLOUD	58	31	68	23	45	1	1.1	.6	.8	2.6	100	4.1	98	88	40	0	3	3	1
MS	JACKSON	86	63	87	59	74	8	0	- 1.1	0	6.1	71	11.5	64	92	46	0	0	0	0
	MERIDIAN	85	62	89	60	74	8	T	- 1.2	T	11.6	122	18.7	99	89	48	0	0	1	0
MO	COLUMBIA	71	51		36	61	6	2.6	1.7	.9	4.8	96	6.7	79	81	45	0	0	4	3
	KANSAS CITY	71	50	.3	34	60	6	.8	0	.6	3.3	70	4.1	55	87	52	0	0	3	1
	SAINT LOUIS	73	53	85	40	63	6	1.7	.7	.9	5.2	95	8.1	86	94	45	0	0	3	2
	SPRINGFIELD	75	53	88	37	64	7	1.6	.5	1.0	4.1	73	6.7	68	91	45	0	0	3	1
MT	BILLINGS	67	38	80	26	52	7	T	- .3	T	1.7	89	2.0	63	59	20	0	2	1	0
	GLASGOW	64	30	78	19	47	3	T	- .1	T	.4	57	.5	31	58	18	0	3	0	0
	GREAT FALLS	64	32	75	23	48	4	0	- .3	0	2.2	138	3.0	91	54	16	0	5	0	0
	HAVRE	62	31	74	19	46	2	T	- .2	T	1.1	110	1.2	63	67	21	0	4	1	0
	HELENA	65	32	74	21	49	5	T	- .2	T	1.2	109	1.4	70	64	18	0	4	0	0
	KALISPELL	63	29	73	22	46	4	T	- .2	T	2.0	143	5.5	134	75	23	0	5	1	0
	MILES CITY	67	36	81	26	52	6	T	- .3	T	.4	33	.7	39	66	19	0	2	1	0
	MISSOULA	67	33	79	24	50	5	T	- .2	T	1.5	136	2.4	77	72	19	0	3	1	0
NE	GRAND ISLAND	69	44	80	30	57	6	.5	-.1	.4	3.7	142	4.1	108	88	34	0	1	3	0
	LINCOLN	68	44	81	32	56	4	.6	0	.4	3.2	103	3.6	80	94	46	0	1	4	0
	NORFOLK	68	43	78	29	56	6	T	- .5	T	2.6	100	3.1	79	82	32	0	1	2	0
	NORTH PLATTE	68	42	80	26	55	7	.1	- .4	.1	3.5	159	3.8	123	86	33	0	1	1	0
	OMAHA	67	43	79	32	55	4	.5	- .2	.4	2.1	64	2.5	50	87	39	0	2	3	0
	VALENTINE	68	38	82	20	53	7	T	- .4	T	1.5	88	1.7	65	58	29	0	2	0	0
NV	ELY	64	33	72	24	48	7	.5	.2	.4	2.4	160	3.4	136	70	23	0	2	2	0
	LAS VEGAS	84	55	93	43	70	6	T	- .1	T	.9	129	1.8	113	38	17	2	0	1	0
	RENO	68	37	75	27	52	5	.2	.2	.1	.9	113	1.9	63	71	17	0	2	2	0
	WINNEMUCCA	71	33	78	22	52	6	.1	- .1	T	1.2	109	2.2	79	58	17	0	4	2	0
NH	CONCORD	58	28	71	18	43	-1	.5	- .2	.4	2.6	59	10.8	114	70	29	0	5	3	0
NJ	ATLANTIC CITY	58	37	76	22	47	-5	.6	- .2	.6	5.0	78	9.3	69	94	44	0	2	2	1
	TRENTON	61	43	78	36	52	-1	1.0	.3	.9	4.4	77	8.2	73	87	44	0	0	2	1
NM	ALBUQUERQUE	73	44	80	39	59	3	.3	.1	.2	1.1	157	1.9	106	81	28	0	0	3	0
	ROSWELL	73	50	88	42	62	2	.6	.4	.5	.8	114	1.3	81	84	40	0	0	3	0
NY	ALBANY	58	31	69	22	45	-3	.2	- .4	.1	1.3	30	6.9	78	82	34	0	4	2	0
	BINGHAMTON	55	33	65	26	44	-1	.8	0	.5	2.1	44	6.9	72	90	37	0	4	4	0
	BUFFALO	53	35	59	30	44	-1	1.3	.6	.6	3.8	83	8.4	83	91	53	0	3	4	2
	NEW YORK	61	42	74	29	53	1	.8	0	.8	3.0	50	9.0	74	75	38	0	1	2	1
	ROCHESTER	56	34	63	28	45	-2	.9	.2	.5	2.4	57	6.8	76	92	51	0	4	3	0
	SYRACUSE	60	35	66	30	48	1	.6	- .2	.2	2.1	42	6.1	58	70	37	0	3	3	0
NC	ASHEVILLE	74	47	82	34	60	4	1.3	.5	.8	5.0	74	10.2	72	97	44	0	0	5	1
	CHARLOTTE	76	52	83	40	64	3	1.3	.5	.2	3.6	54	7.7	54	81	39	0	0	2	0
	GREENSBORO	72	49	83	38	60	1	T	- .7	T	3.1	55	7.4	60	87	38	0	0	1	0
	HATTERAS	70	56	76	50	63	4	.1	- .6	T	3.5	61	7.3	50	84	55	0	0	2	0
	RALEIGH	73	46	84	32	60	0	T	- .7	T	3.0	56	7.0	58	92	38	0	1	1	0
	WILMINGTON	76	51	88	39	63	-1	.1	- .6	.1	3.9	65	8.1	64	94	44	0	0	1	0
ND	BISMARCK	62	31	81	16	47	3	T	- .4	T	.2	12	.8	31	70	24	0	4	0	0
	FARGO	62	28	77	12	45	2	T	- .5	T	.7	35	1.3	45	72	25	0	5	1	0
	WILLISTON	66	28	82	15	47	4	0	- .3	0	.3	23	.7	32	71	19	0	4	0	0
OH	AKRON-CANTON	60	39	70	30	49	1	1.8	1.0	1.1	6.4	123	11.8	116	82	47	0	2	6	1
	CINCINNATI	69	47	80	37	58	4	1.6	.8	.9	5.3	84	9.8	77	80	43	0	0	4	2
	CLEVELAND	59	37	77	29	48	-1	1.3	.5	.5	4.8	94	8.4	82	89	52	0	3	5	1
	COLUMBUS	67	43	75	33	55	3	.8	0	.3	5.2	96	10.6	99	88	49	0	0	5	0
	DAYTON	67	42	76	19	55	3	.9	.2	.5	4.3	81	7.9	76	86	50	0	1	3	1
	TOLEDO	60	37	75	27	49	0	1.5	.8	.7	2.7	64	6.6	81	92	54	0	3	5	1
	YOUNGSTOWN	58	35	65	21	46	-2	1.2	.4	.4	5.1	93	9.8	90	86	50	0	4	4	0
OK	OKLAHOMA CITY	74	55	86	46	64	3	1.5	.7	.7	5.6	144	6.9	105	90	53	0	0	4	2

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending April 19, 1981

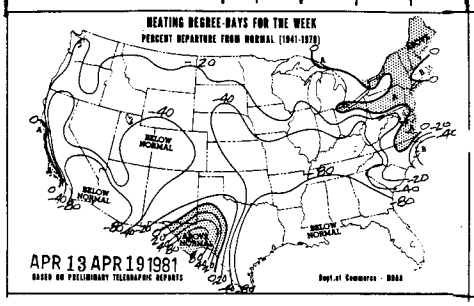
STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar. 2	PCT. NORMAL SINCE Mar. 2	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
TULSA	79	58	89	44	69	7	1.7	.7	.8	3.4	68	5.8	70	92	48	0	0	4	1
OR ASTORIA	62	40	71	31	51	3	.2	- .9	.2	11.0	115	22.1	81	84	52	0	1	2	0
BURNS	65	31	74	16	48	4	.5	.4	.5	2.2	220	3.9	98	85	53	0	5	1	0
MEDFORD	72	40	78	29	56	5	.2	0	.2	1.5	65	3.9	48	91	43	0	1	1	0
PENDLETON	64	39	71	29	51	0	T	- .2	T	1.7	106	4.0	89	82	33	0	2	0	0
PORTLAND	67	42	78	31	54	4	T	- .4	T	3.6	73	9.0	60	91	39	0	1	1	0
SALEM	66	37	76	28	52	2	T	- .5	T	5.2	88	10.6	61	94	42	0	1	1	0
PA ALLENTOWN	60	38	76	28	49	-1	.5	- .4	.5	2.8	47	8.1	69	88	40	0	1	3	1
ERIE	53	34	64	26	44	-1	.9	.1	.7	5.0	102	11.1	114	86	48	0	4	3	1
HARRISBURG	63	42	78	29	52	-1	.7	0	.7	3.2	65	9.5	94	78	37	0	1	3	1
PHILADELPHIA	62	42	80	32	52	-1	1.2	.4	1.1	4.6	79	8.1	72	82	38	0	1	2	1
PITTSBURGH	62	37	69	28	49	-1	.4	- .4	.3	4.9	86	9.6	88	90	42	0	3	4	0
SCRANTON	57	38	73	28	47	-2	.6	- .1	.4	2.3	53	11.0	131	78	36	0	2	3	0
RI PROVIDENCE	61	38	83	28	50	2	.5	- .3	.5	3.1	50	8.7	65	78	32	0	2	1	1
SC CHARLESTON	81	56	89	48	68	3	.1	- .5	.1	3.7	58	6.9	54	97	48	0	0	1	0
COLUMBIA	83	54	90	36	68	4	.1	- .7	T	3.0	43	7.9	55	94	36	1	0	1	0
GREENVILLE	78	52	86	40	65	4	.2	- .8	.2	3.9	48	8.0	48	86	41	0	0	1	0
SD ABERDEEN	64	35	83	20	50	5	.1	- .4	.1	2.2	105	2.6	84	66	23	0	2	1	0
HURON	66	38	81	23	52	6	T	- .5	T	2.1	95	2.2	65	78	28	0	1	0	0
RAPID CITY	67	36	81	21	52	6	T	- .5	T	.1	5	.4	13	64	29	0	1	0	0
SIOUX FALLS	64	39	76	25	52	5	.1	- .4	.1	2.3	82	2.8	65	77	36	0	1	3	0
TN CHATTANOOGA	79	54	86	46	67	6	.5	- .5	.5	6.9	81	14.1	77	90	43	0	0	2	1
KNOXVILLE	75	54	83	43	65	4	1.8	.9	1.0	6.1	86	10.9	65	94	57	0	0	5	1
MEMPHIS	80	63	85	55	72	9	.1	- 1.2	.1	6.3	75	11.3	62	82	51	0	0	3	0
NASHVILLE	78	55	84	40	66	5	2.3	1.4	1.8	7.1	95	12.6	75	89	47	0	0	2	2
TX ABILENE	74	57	86	48	65	0	1.8	1.2	1.2	3.8	165	6.4	145	92	58	0	0	5	1
AMARILLO	74	49	85	41	62	5	.6	.3	.4	2.7	208	3.0	136	79	31	0	0	3	0
AUSTIN	82	65	87	61	74	5	.2	- .7	.1	2.8	70	6.2	67	94	56	0	0	4	0
BEAUMONT	83	67	84	61	75	6	0	- 1.0	0	2.0	36	8.8	63	98	56	0	0	0	0
BROWNSVILLE	84	70	87	67	77	2	.1	- .3	.1	3.6	277	6.2	144	92	55	0	0	1	0
CORPUS CHRISTI	83	69	86	65	76	3	.1	- .4	0	2.5	119	6.9	119	95	60	0	0	2	0
DEL RIO	75	62	85	55	69	-4	2.9	2.6	1.1	4.5	300	5.4	169	94	50	0	0	4	3
EL PASO	75	54	89	47	65	1	.2	.2	.2	.6	86	2.2	138	78	30	0	0	3	0
FORT WORTH	78	61	82	54	69	4	.9	- .1	.9	4.4	88	6.8	73	88	62	0	0	2	1
GALVESTON	77	70	79	67	73	4	0	- .6	0	.4	9	3.9	39	95	84	0	0	0	0
HOUSTON	86	66	88	62	76	6	T	- .8	T	2.0	43	6.6	55	93	50	0	0	0	0
LUBBOCK	69	52	89	40	60	0	1.7	1.5	.6	2.9	223	3.8	173	95	53	0	0	4	1
MIDLAND	71	52	86	43	62	-3	1.5	1.3	.6	1.9	211	3.2	178	96	57	0	0	4	1
SAN ANGELO	73	56	84	49	64	-3	2.9	2.5	1.5	5.1	283	7.4	218	90	61	0	0	4	3
SAN ANTONIO	83	67	87	62	75	5	.1	- .6	T	1.3	42	5.1	72	96	56	0	0	3	0
VICTORIA	84	67	87	64	76	5	.6	- .1	.6	1.6	48	5.0	67	98	54	0	0	2	1
WACO	80	63	85	56	71	3	T	- .9	T	2.5	54	5.7	64	95	61	0	0	2	0
WICHITA FALLS	75	57	87	50	66	1	1.3	.6	.4	3.6	103	7.1	120	96	55	0	0	5	0
UT BLANDING	67	40	75	36	54	10	1.1	.9	.7	3.7	264	4.1	117	--	37	0	0	4	1
SALT LAKE CITY	66	44	73	35	55	6	.2	- .4	.1	2.5	81	4.0	70	76	34	0	0	3	0
VT BURLINGTON	53	31	63	24	42	-1	.7	0	.4	3.4	97	9.3	135	84	40	0	4	3	0
VA LYNCHBURG	70	45	83	35	58	1	.6	0	.4	3.8	75	8.1	76	89	39	0	0	3	0
NORFOLK	70	49	85	36	59	1	.2	- .4	.1	3.1	61	6.4	54	83	44	0	0	2	0
RICHMOND	69	48	85	34	59	1	.5	- .1	.2	3.8	75	7.2	65	83	35	0	0	3	0
ROANOKE	70	46	80	33	58	2	.5	- .2	.4	3.3	65	6.1	55	86	40	0	0	3	0
WA COLVILLE	65	33	72	25	49	2	0	- .2	0	2.5	147	5.3	102	--	--	0	3	0	0
OMAK	68	36	74	29	52	3	0	- .2	0	.7	50	3.8	93	--	--	0	1	0	0
QUILLAYUTE	61	36	72	29	48	3	.8	- 1.1	.5	17.5	109	33.1	77	98	45	0	3	3	1
SEATTLE-TACOMA	62	42	68	34	52	3	.1	- .5	1	3.6	69	10.5	70	81	39	0	0	1	0
SPOKANE	61	34	68	22	48	2	T	- .2	T	2.0	87	4.4	67	76	31	0	3	0	0
WALLA-WALLA	69	42	77	32	55	2	0	- .4	0	3.2	139	7.4	123	73	28	0	1	0	0
YAKIMA	68	33	74	23	50	0	0	- .1	0	.1	13	1.7	59	75	24	0	2	0	0
WV BECKLEY	68	44	77	34	56	4	1.2	.4	.8	4.4	70	7.1	53	82	34	0	0	4	1
CHARLESTON	74	46	86	30	60	4	1.3	.6	.9	4.4	75	10.0	78	91	38	0	1	6	1
HUNTINGTON	74	48	85	33	61	5	2.0	1.3	1.5	5.1	85	10.0	82	89	42	0	0	4	1
PARKERSBURG	70	47	78	33	58	3	1.4	.6	.7	3.5	60	7.5	64	77	33	0	0	3	2
WI GREEN BAY	55	36	70	28	46	1	1.2	.5	.8	4.2	124	6.9	121	89	47	0	3	4	1
LA CROSSE	61	41	73	28	51	3	.5	- .2	.3	3.8	103	6.1	111	93	45	0	1	3	0
MADISON	61	37	78	26	49	4	.4	- .3	.3	3.3	92	5.8	97	84	39	0	2	4	0
MILWAUKEE	57	38	80	28	47	2	.9	.2	.8	4.5	115	7.7	113	91	46	0	1	3	1
WY CASPER	65	34	77	24	50	3	.1	- .3	.1	1.8	100	2.5	93	75	27	0	4	1	0
CHEYENNE	64	38	73	31	51	8	.4	.1	.3	1.4	74	1.9	68	75	34	0	2	2	0
LANDER	64	35	73	27	50	6	.3	- .3	.3	3.1	119	4.0	118	65	33	0	2	1	0
SHERIDAN	66	32	76	20	49	5	T	- .5	T	.8	35	1.4	37	67	22	0	3	0	0
PR SAN JUAN	84	76	85	73	80	2	.2	- .6	.2	6.1	165	11.5	115	78	58	0	0	2	0

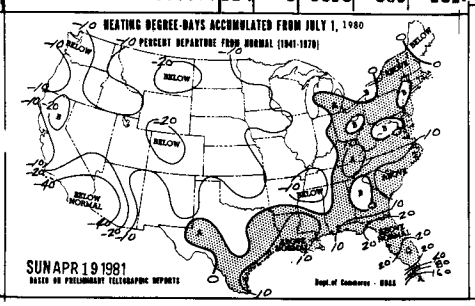
BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

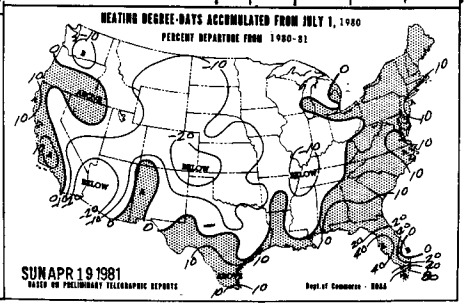
HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING APR. 19, 1981.

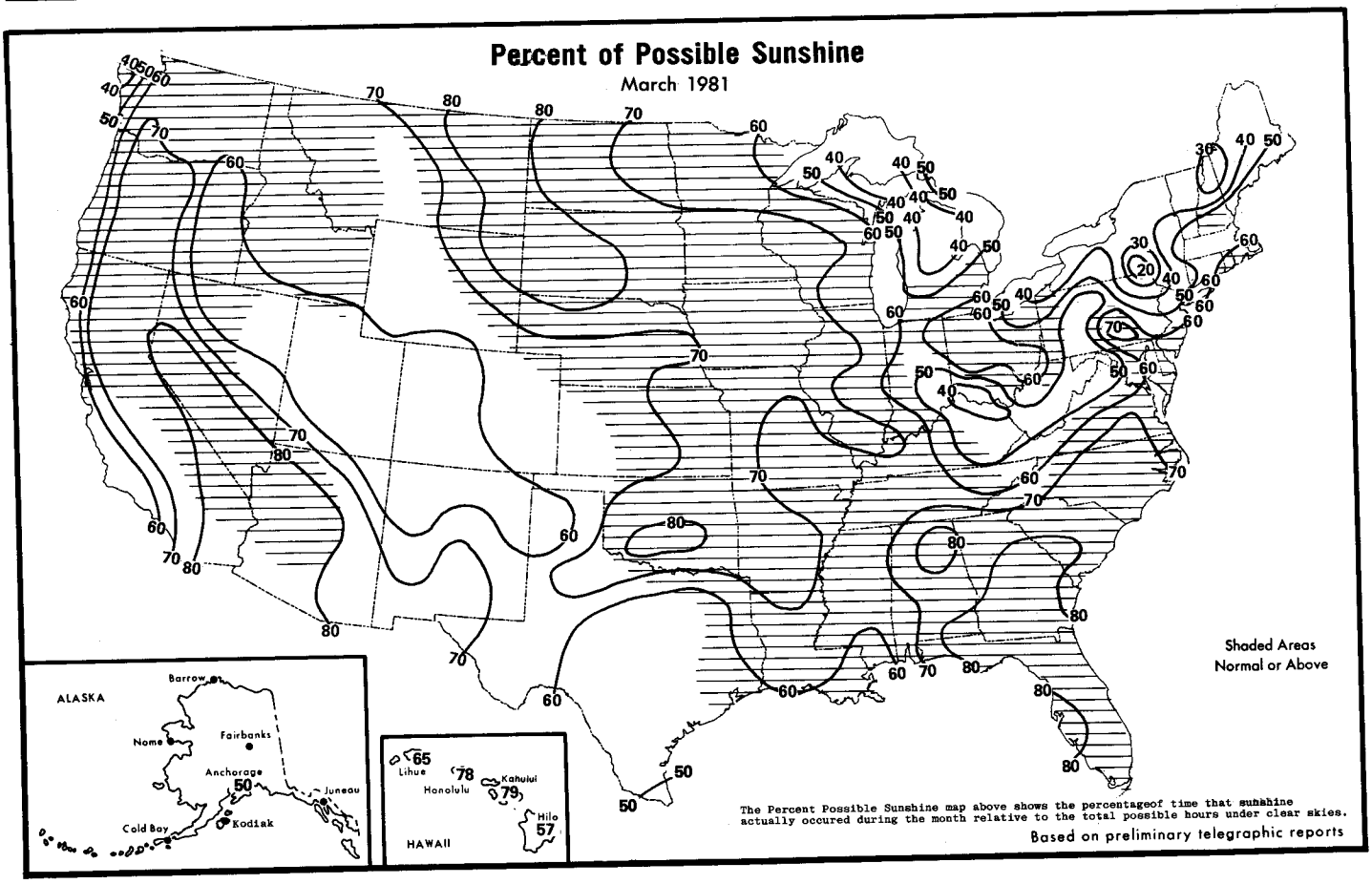
BASED ON 1941-70 NORMALS. + ACCUMULATION FROM JULY 1, 1980.

STATES AND STATIONS	WEEKLY TOTAL	WEEKLY DEPARTURE*	SEASONAL ACCUMULATION + TOTAL	SEASONAL ACCUMULATION + DEPARTURE*	SEASONAL ACCUMULATION + DEPARTURE FROM 1979-80
ALA.					
BIRMINGHAM	0	-24	2930	-127	-94
MOBILE	0	-7	1804	-122	-167
MONTGOMERY	0	-15	2429	-180	-344
ARIZ.					
FLAGSTAFF	109	-50	5149	-1269	-1264
PHOENIX	0	-14	643	-898	-384
TUCSON	0	-18	1268	-469	-114
WINSLOW	33	-47	3944	-554	-490
YUMA	0	-7	392	-611	-145
ARK.					
FORT SMITH	13	-14	3214	-83	-397
LITTLE ROCK	7	-22	2984	-323	-1
CALIF.					
BAKERSFIELD	10	-23	1709	-418	-170
EUREKA	97	-9	3421	-415	-392
FRESNO	22	-19	2223	-318	-82
LOS ANGELES	46	0	884	-687	-552
RED BLUFF	23	-28	2013	-542	-134
SAN DIEGO	2	-20	557	-775	-43
SAN FRANCISCO	73	-5	3391	-224	-168
STOCKTON	27	-22	2296	-369	-186
COLO.					
DENVER	51	-69	4421	-1107	-1143
GRAND JUNCTION	37	-56	4287	-1054	-840
PUEBLO	31	-60	4146	-962	-1050
CONN.					
BRIDGEPORT	118	-4	5334	269	286
HARTFORD	101	-18	5998	48	297
DEL.					
WILMINGTON	86	-2	4757	48	174
D.C.					
WASHINGTON	42	-16	3667	-407	-136
FLA.					
APALACHICOLA	0	-7	1578	217	153
DAYTONA BEACH	0	-2	1126	229	242
FORT MYERS	0	0	467	10	126
JACKSONVILLE	0	-2	1620	293	206
KEY WEST	0	0	174	122	101
LAKELAND	0	0	949	271	330
MIAMI	0	0	247	61	67
ORLANDO	0	-1	876	143	242
TALLAHASSEE	0	-7	1927	366	205
TAMPA	0	0	982	264	355
WEST PALM BEACH	0	0	346	47	6
GA.					
ATLANTA	2	-28	2911	129	141
AUGUSTA	12	-6	2823	300	137
MACON	0	-10	2190	33	72
SAVANNAH	4	-9	2141	198	263
IDAHO.					
BOISE	77	-34	4972	-366	-13
LEWISTON	75	-27	4330	-685	-304
POCATELLO	96	-39	6006	-401	-78
ILL.					
CAIRO	17	-20	3470	-290	-387
CHICAGO	71	-39	5725	-350	-312
MOLINE	72	-20	5832	-241	-443
PEORIA	67	-25	5595	-192	-515
ROCKFORD	81	-33	6031	-408	-768
SPRINGFIELD	43	-38	4983	-336	-498
IND.					
EVANSVILLE	32	-25	4353	-110	-469
FORT WAYNE	53	-13	5851	-1	-395
INDIANAPOLIS	53	-33	5324	-24	-325
SOUTH BEND	93	-22	5411	-625	-205
IOWA.					
BURLINGTON	72	-21	5605	-244	-457
DES MOINES	70	-34	5481	-893	-514
DUBUQUE	96	-22	6171	-662	-554
SIOUX CITY	67	-39	5826	-778	-589
KANS.					
CONCORDIA	49	-35	4496	-852	-913
DODGE CITY	52	-24	4053	-769	-1162
GOODLAND	87	-24	4894	-816	-815
TOPEKA	40	-32	4554	-475	-625
WICHITA	24	-37	3911	-613	-823
KY.					
LEXINGTON	34	-34	4653	-116	-103
LOUISVILLE	35	-28	4192	-269	-302
LA.					
BATON ROUGE	0	-7	1860	-190	-24
LAKE CHARLES	0	-3	1809	-311	-150
NEW ORLEANS	0	-3	1500	-35	-12
SHREVEPORT	0	-12	2273	-119	-26
MAINE.					
CARIBOU	216	-19	8455	-268	-279
PORTLAND	170	-16	6755	-46	-162
MD.					
BALTIMORE	74	-3	4603	-76	-286
MASS.					
BOSTON	110	-2	5477	-247	-339
MICH.					
ALPENA	146	-25	7169	-512	-298
DETROIT	111	-8	6294	-299	-8
FLINT	125	-6	6593	-94	-159
GRAND RAPIDS	123	-8	6344	-20	-264
HOUGHTON LAKE	150	-8	7381	-248	-115
LANSING	106	-20	6446	-348	-159
MARQUETTE	170	-22	8440	-222	-211
MUSKEGON	129	-10	6439	-107	-30
S. STE. MARIE	189	-5	8713	-468	-441
MINN.					
DULUTH	172	-9	8569	-263	-69
INTERNATL FALLS	171	-12	9084	-589	-671
MINNEAPOLIS	117	-18	6816	-937	-544
ROCHESTER	126	-12	6979	-701	-429
ST. CLOUD	132	-18	7446	-820	-721
MISS.					
JACKSON	0	-14	2571	-288	-77
MERIDIAN	0	-16	2376	-7	-69
MO.					
COLUMBIA	39	-30	4740	-130	-426
KANSAS CITY	42	-33	4685	-443	-545
ST. LOUIS	32	-27	4229	-341	-483
SPRINGFIELD	29	-32	4059	-343	-233
MONT.					
BILLINGS	86	-54	5228	-1390	-732
GLASGOW	126	-24	6640	-1643	-936
GREAT FALLS	118	-29	6062	-867	-323
HAVRE	129	-16	6578	-1460	-491
HELENA	114	-39	6387	-1004	-616
KALISPELL	129	-29	6529	-1125	-504
MILES CITY	86	-49	5802	-1514	-950
MISSOULA	105	-40	6188	-948	-475
NEBR.					
GRAND ISLAND	57	-47	5198	-873	-884
LINCOLN	54	-39	4980	-938	-919
NORFOLK	65	-43	5590	-1006	-746
NORTH PLATTE	69	-49	5465	-828	-435
OMAHA	61	-26	5539	-241	-766
VALENTINE	76	-54	5731	-1058	-891
NEV.					
ELY	114	-51	5982	-893	-153
LAS VEGAS	5	-23	1758	-806	-431
RENO	89	-38	4762	-614	-55
WINNEMUCCA	93	-45	5221	-711	-80
N.H.					
CONCORD	153	-9	7098	-301	-465
N.J.					
ATLANTIC CITY	121	-30	5532	-836	-653
TRENTON	95	-8	5016	-310	-520
N. MEX.					
ALBUQUERQUE	43	-20	3906	-257	-13
ROSWELL	34	-6	3170	-468	-270
N.Y.					
ALBANY	139	-15	6666	-222	-498
BINGHAMTON	146	-7	6870	-162	-410
BUFFALO	142	-4	6182	-181	-112
NEW YORK	92	-1	4948	-296	-435
ROCHESTER	152	-23	6320	-99	-137
SYRACUSE	118	-8	6296	-103	-253
N.C.					
ASHEVILLE	30	-33	4080	-31	-194
CHARLOTTE	17	-14	3468	-312	-113
GREENSBORO	35	-8	3899	-180	-190
HATTERAS	21	-20	3143	-502	-424
RALEIGH	38	-8	3675	-249	-200
WILMINGTON	16	-3	2872	-462	-246
N. DAK.					
BISMARCK	126	-23	7083	-1310	-973
FARGO	138	-17	7839	-804	-745
WILLISTON	124	-29	6976	-1509	-991
OHIO.					
AKRON-CANTON	102	-11	5815	-1	-70
CINCINNATI	51	-25	5218	-387	-56
CLEVELAND	121	-7	5980	-250	-69
COLUMBUS	70	-26	5271	-124	-146
DAYTON	64	-29	5494	-147	-154
TOLEDO	114	-1	6356	-385	-161
YOUNGSTOWN	125	-7	6322	-346	-151
OKLA.					
OKLAHOMA CITY	24	-14	3230	-392	-422
TULSA	15	-22	3149	-469	-312
OREG.					
ASTORIA	100	-20	3600	-872	-308
BURNS	116	-28	6183	-222	-93
MEDFORD	63	-40	5981	-465	-92
PENDLETON	95	-4	5535	-286	-590
PORTLAND	74	-27	3471	-791	-350
SALEM	91	-16	3978	-299	-199
PA.					
ALLENTOWN	110	-6	5329	-159	-283
ERIE	138	-1	6106	-144	-150
HARRISBURG	85	-15	5096	-104	-122
PHILADELPHIA	92	-8	4948	-305	-366
PITTSBURGH	104	-5	5875	-298	-124
SCRANTON	122	-9	5977	-84	-454
R.I.					
PROVIDENCE	108	-13	5668	-152	-509
S.C.					
CHARLESTON	8	-3	2380	-250	-177
COLUMBIA	13	-3	3022	-448	-47
GREENVILLE	19	-11	3414	-308	-184
S. DAK.					
ABERDEEN	100	-42	6818	-1225	-797
HURON	89	-40	6502	-1045	-578
RAPID CITY	94	-46	5543	-1149	-713
SIOUX FALLS	91	-37	6432	-922	-541
TENN.					
CHATTANOOGA	12	-22	3553	-136	-10
KNOXVILLE	26	-15	3862	-436	-338
MEMPHIS	12	-24	2684	-498	-398
NASHVILLE	12	-26	3600	-14	-138
TEXAS.					
ABILENE	22	0	2415	-166	-82
AMARILLO	57	-29	3733	-284	-627
AUSTIN	0	-8	1674	-61	-14
BEAUMONT	0	-6	1688	-170	-133
BROWNSVILLE	0	0	677	-25	-22
CORPUS CHRISTI	0	0	1101	-171	-187
DEL RIO	0	-8	1488	-35	-142
EL PASO	18	0	2447	-217	-228
FORT WORTH	2	-16	2309	-60	-114
GALVESTON	0	0	1392	-168	-84
HOUSTON	0	-2	1495	-61	-83
LUBBOCK	46	-5	3150	-325	-141
MIDLAND	36	-16	2873	-267	-114
SAN ANGELO	24	-9	2322	-94	-117
SAN ANTONIO	0	-6	1570	0	-83
VICTORIA	0	0	1343	-116	-20
WACO	0	-10	2092	-38	-241
WICHITA FALLS	22	-1	2645	-225	-327
UTAH					
SALT LAKE CITY	67	-43	4761	-758	-160
VT.					
BURLINGTON	161	-10	7323	-40	-598
VA.					
LYNCHBURG	56	-1	4197	-115	-48
NORFOLK	52	-2	3666	-285	-280
RICHMOND	51	-5	4083	-262	-528
ROANOKE	54	-9	4297	-166	-152
WASH.					
QUILLAYUTE	115	-20	4348	-682	-194
SEATTLE-TACOMA	89	-25	3854	-693	-317
SPOKANE	118	-13	5640	-539	-101
WALLA WALLA	67	-18	4107	-397	-394
YAKIMA	100	-8	4585	-951	-886
W. VA.					
BECKLEY	61	-30	5429	-199	-61
CHARLESTON	41	-23	4714	-322	-124
HUNTINGTON	37	-23	4599	-158	-67
PARKERSBURG	42	-30	4703	-99	-139
WIS.					
GREEN BAY	135	-10	7161	-318	-115
LACROSSE	96	-21	6342	-662	-584
MADISON	107	-27	6663	-526	-504
MILWAUKEE	123	-16	6546	-275	-85
WYO.					
CASPER	104	-49	5819	-996	-1193
CHEYENNE	95	-59	5457	-1043	-1019
LANDER	106	-46	6018	-1116	-1151
SHERIDAN	106	-41	5882	-1089	-970









WATER SUPPLY OUTLOOK FOR THE WESTERN UNITED STATES

Issued as of April 1, 1981

The table shows the runoff forecast in percent of the 15-year (1963-77) average. The forecasts are for the remainder of the water year, except for the full water year for the Sacramento and San Joaquin Basins; April 1 to September 30, 1981, for the Columbia, Missouri, Yellowstone, and North Platte Basins; April 1, 1981, to July 31, 1981, for the Snake; November 1, 1980, to June 30, 1981, for the Little Colorado Basins; and January 1 to June 30, 1981, for the Gila Basin. The publication "Water Supply Outlook for the Western United States", issued as of April 1, 1981, contains the complete water supply forecasts for about 375 stations in the Western United States.

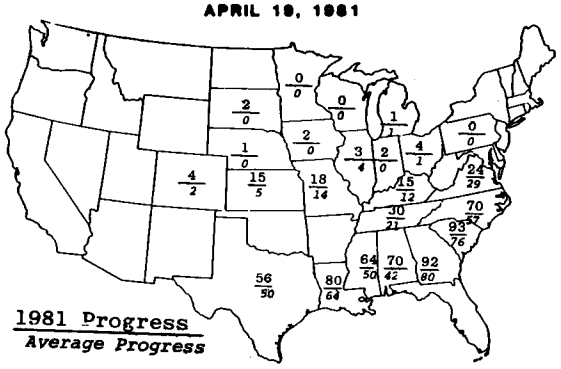
National Weather Service
and Soil Conservation Service

River	Station	Forecast 1,000 Acre-Feet	Percent 15-Year Average
Columbia	Grand Coulee, WA	52700	77
Columbia	The Dalles, OR	70800	68
Snake	Lower Granite, WA	12400	54
Sacramento	Red Bluff, CA	6100	68
San Joaquin	Big Creek, CA	950	74
Weber	Gateway, UT	121	39
Jordan	Utah Lake, UT	165	68
Truckee	L. Tahoe-Farad	140	51
Colorado	L. Powell infl.	3500	50
Green	Green River, UT	1600	54
San Juan	Bluff, UT	450	52
Little Colo.	Woodruff, AZ	3.6	30
Gila	Solomon, AZ	14.0	25
Rio Grande	San Marcial, NM	85	25
Arkansas	Pueblo, CO	100	38
Missouri	Ft. Peck, MT	2112	43
Yellowstone	Sidney, MT	3726	48
North Platte	Glendo, WY	357	37

National Agricultural Summary

April 13-19, 1981

PERCENT OF CORN ACREAGE PLANTED
APRIL 19, 1981



HIGHLIGHTS: Rainfall in the central and southern Plains provided much needed moisture for the winter wheat crop. The showers slowed planting operations in the Corn Belt, but provided ample moisture for good germination. Soil moisture was still rated short to adequate in most areas of the Nation, except in parts of the Corn Belt where heavy rainfall produced adequate to surplus moisture supplies. In the eastern north central States, fieldwork was limited to 1 to 3 days while up to 7 days were available in western areas. In the north Atlantic States 3 to 4 days were favorable for fieldwork, and the South Atlantic had 3 to 6 days available. Elsewhere in the Nation, 4 to 6 days were suitable for fieldwork. Winter wheat was rated fair to good; jointing extended into Kansas. Spring wheat seeding reached 43% complete, 24 points ahead of last year and average. Cotton planting was 25% complete, 5 points ahead of last year. Seven percent of the corn was planted, compared with 3% last year and the average of 5%. Very little acreage was seeded in the Corn Belt. Texas grain sorghum planting was 65% complete. This was the only major sorghum producing State to report any planting operations. Rice seeding was 47% complete, surpassing last year's 30%. Virtually no soybeans were planted. Pastures rated fair to good except in parts of the Southwest and in the northern Plains where conditions were poor to fair due to dry weather.

SMALL GRAINS: Winter wheat rated fair to mostly good throughout major producing areas. Rainfall over the central and southern Plains provided much needed moisture for the growing crop. Development of the winter wheat crop continued well ahead of recent years. Kansas wheat was 70% jointed, compared to only 15% last year and the average of 25%. Oklahoma wheat was 10% headed. At this time a year ago, none of the crop was heading. Texas wheat was 20% headed, 13 points ahead of a year earlier. Arizona wheat was heading with some early fields beginning to ripen. Pacific Northwest winter wheat rated good to excellent.

Spring wheat seeding in the 5 major producing States reached 43% complete, 24 points ahead of last year and average. Rain is needed in most areas to replenish soil moisture and promote good growth. Oats seeding ranged from 21% complete in North Dakota to virtually complete in Indiana, Nebraska, and Iowa. In all areas, seeding progressed ahead of normal.

CORN: In the 17 major producing States, corn planting was 7% complete, 4 points ahead of last year and 2 points ahead of average. Planting in the Corn Belt was delayed by rain and wet fields. However, moisture was needed in many areas to insure good germination. Most planting activity centered in the Southeast. Planting was 92% complete in Georgia and 70% complete in North Carolina. Only growers in Minnesota, Pennsylvania, and Wisconsin failed to plant any acreage. However, this is not unusual for this early in the season. Emerging plants in the South were in fair to good condition.

COTTON: Cotton planting in the 14 major States was 25% complete, ahead of last year and average. Planting in the Southwest was nearing completion reaching the 80% mark in California and 70% in Arizona. Texas planting centered in the Blacklands. Showers on the Plains provided needed moisture for germination. Planting was active in all States except Oklahoma, where planting usually doesn't get underway until later.

OTHER CROPS: Grain sorghum seeding in Texas reached 65% complete, 1 point ahead of last year and 8 points ahead of normal. Planting was active in northern areas of the State. Additional moisture is needed in Southern areas.

Rice seeding in the 5 major States was 47% complete, 10 points ahead of a year earlier. Planting ranged from 5% complete in California to 85% in Texas. A shortage of irrigation water curtailed planting in a few areas of Texas.

Peanut planting was 16% finished in Georgia, 10% in Texas, 6% in Alabama, and just getting underway in North Carolina. Progress was slower than recent years.

Tobacco transplanting reached 92% complete in Georgia, 84% in South Carolina, and 20% in North Carolina. Plants were in fair to good condition.

FRUITS AND NUTS: Many deciduous trees were blooming in northern production areas. Eastern growers reported flowering stages ranging from early pink to full bloom. Most peach trees were past full bloom and leafing out in southern areas. Low temperatures brought some frost to eastern areas but damage should prove minimal. Freezing temperatures also damaged California's apricot crop. Wind machines were used in vineyards, to prevent freeze damage. Texas pecan trees were budding.

Condition of Florida's citrus groves varied depending whether or not the groves were irrigated. Rain is needed in all areas. The Valencia orange harvest increased but grapefruit movement was limited to the lower east coast.

Arizona's lemon harvest was virtually complete, but the Valencia orange harvest remained in full swing. Grapefruit harvest continued steady.

California's lemon, Desert grapefruit, and Valencia orange harvest continued active. The Navel orange harvest neared completion in southern areas but continued active in central areas. Almonds sized well.

The citrus harvest in Texas continued with only late oranges remaining for harvest.

VEGETABLES: Warm days and mild nights prevailed in Florida's vegetable growing areas. Irrigation continued active to offset the very dry conditions. Total shipments were up 18% from the previous week. Only snap beans, carrots, Chinese cabbage, and strawberries showed declines in volume.

Arizona's lettuce harvest was complete in western areas, but was in full swing in central areas. Harvest of other vegetables continued.

California producers harvested artichokes, asparagus, broccoli, cauliflower, carrots,

celery, lettuce, potatoes, and spinach. Tomato planting neared completion.

Texas producers continued planting summer vegetables. Growers harvested carrots and onions.

PASTURES AND LIVESTOCK: Pastures generally rated fair to good except in parts of the Southwest and the northern Plains where dry conditions curbed growth and caused poor to fair conditions. Ranchers began turning herds onto rangelands. Calving and lambing were nearly complete except in extreme northern parts of the Nation. Most areas reported only light losses of newborn. Livestock were in fair to good condition.

CROP PROGRESS
FOR WEEK ENDING APR 19, 1981

CORN
% PLANTED

	1981	1980	AVG.
COLO	4	0	2
GA	92	54	80
ILL	3	0	4
IND	2	0	0
IOWA	2	0	0
KANS	15	3	5
KY	15	3	12
MICH	1	0	1
MINN	0	0	0
MO	18	3	14
NEBR	1	0	0
N C	70	44	57
OHIO	4	0	1
PA	0	0	0
S DAK	2	0	0
VA	24	25	29
WIS	0	0	0
17 STATES	7	3	5

THESE 17 STATES PRODUCED 93% OF THE 1980 CORN CROP.

RICE
% PLANTED

	1981	1980	AVG.
ARK	24	6	23
CALF	5	10	NA
LA	56	50	54
MISS	54	24	39
TEX	85	83	77
5 STATES	40	30	NA
EXCL. STATES WITH NA	47	34	43

THESE 5 STATES PRODUCED 98% OF THE 1980 RICE CROP.

NA = NOT AVAILABLE

SPRING WHEAT
% PLANTED

	1981	1980	AVG.
IDA	52	50	40
MINN	60	11	23
MONT	25	15	25
N D	28	10	7
S DAK	81	51	34
5 STATES	43	19	19

THESE 5 STATES PRODUCED 92% OF THE 1980 SPRING WHEAT CROP.

COTTON
% PLANTED

	1981	1980	AVG.
ALA	24	9	23
ARIZ	70	73	66
ARK	6	3	5
CALF	80	75	NA
GA	30	12	45
LA	20	0	5
MISS	19	2	9
MO	2	1	4
N MEX	10	3	12
N C	10	8	14
OKLA	0	0	0
S C	47	6	33
TENN	8	2	6
TEX	18	15	16
14 STATES	25	20	NA
EXCL. STATES WITH NA	19	14	16

THESE 14 STATES PRODUCED 99% OF THE 1980 COTTON CROP.

NA = NOT AVAILABLE

State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by ESS State offices in cooperation with the National Weather Service.

ALABAMA: Temperatures 6° above normal. Highs in 90's some southern counties. Rainfall very light northern counties.

Soil moisture short to adequate. Fieldwork: 6.0 days suitable. Activities: Row crop planting, plowing, applying lime and fertilizer, care of livestock and poultry. Planting progress: Corn 70%, 31% 1980, 42% average; cotton 23%, 9% 1980, 23% average; peanuts 6%, 4% 1980, 9% average; sorghum 5%. Wheat headed 39%, 33% 1980. Wheat turning color 6%. Condition: Corn fair to good; wheat good; pastures and livestock mostly fair.

ARIZONA: Sunny, very warm through midweek. Clouds, scattered showers, cooler air, through weekend. Precipitation mostly eastern two-thirds of State. Amounts mostly 0.10 to 0.50 in. Average temperatures 2 to 10° above normal.

Cotton preparations, planting excellent progress, approximately 70% crop planted. Small grains making average progress, western areas, some central areas heads turning color, approaching maturity. Sugarbeets growing well, ahead normal, yield prospects, preliminary sugar tests better than average crop. Alfalfa haying running ahead normal. Land preparations, planting corn, sorghum making good progress. Some earliest plantings good stand. Lettuce harvest Yuma area completed, harvest central areas full swing. Harvest mixed vegetables making good progress. Potato harvest began. Dry onions approaching maturity. Lemon harvest virtually complete. Harvest Valencia oranges full swing. Grapefruit harvest steady. Weeding, thinning, vine turning cantaloups, watermelons, active as needed. Small fruit forming,

growing well. Higher elevation ranges fair, southern Deserts poor to fair. Livestock fair to good. Water supplies, soil moisture adequate.

ARKANSAS: Temperatures well above normal, humid conditions. Highest temperature 89°, lowest 34°. All departures from normal ranged from +3 to +8°. Most rainfall 1.30 in., least trace.

Rice planting 24% 1981, 6% 1980, 23% average. Cotton planting 6% 1981, 3% 1980, 5% average. Planting of soybeans just underway. Wheat good condition, heading out in northeast. Six days available for fieldwork. Soil moisture supplies short. Forage supplies on pastures below average in western areas. Livestock condition good.

CALIFORNIA: Mid-April came and went on a dry note with precipitation totals dropping further behind the normals for this time of year. Only Eureka on the North Coast and San Jose recorded rain during the week. Average temperatures were a very mixed bag with above normal in the Southeast Interior, the Sierra, and the San Joaquin Valley. The Central Coast was slightly below normal and the remainder of the State near normal. Highest temperature was 98° at Blythe and the low 20° at Alturas and Tulelake.

Small grains doing well. Wheat being sprayed for aphids. Irrigated fields look good, non-irrigated fields showing stress. Cotton planting active. Sugarbeets doing well. Rice groundwork active. Alfalfa cutting active. Lemon, Desert grapefruit and Valencia orange harvest continued. Navel orange harvest near complete southern California, continued in central California. Almonds sizing well. Pocket of freezing temperatures in San Joaquin and Stanislaus Counties destroyed half of each county's apricot crop. Wind machines required North Coast vineyards, no freeze damage. Late variety walnuts blooming Sacramento Valley. Storms late in week stopped fieldwork many locations. Artichokes at peak volume. Asparagus for market full swing, diversion to processors increasing. Broccoli, cauliflower good supply, mostly Central Coast. Carrot harvest active Desert, good sizes. Celery harvest continues South Coast. Lettuce harvest active San Joaquin Valley, still light coastal areas. Grading dry onions increasing Desert. Spring potato harvest increasing Kern County. Harvest spinach processing slowing. Strawberry volume increasing coastal districts. Planting processing tomatoes winding down, some frost damage with small acreage lost. Range conditions continue good. Lower elevation grasses starting to mature southern areas. Sheep shearing active. Early lambs moving to market. Milk, egg production normal.

COLORADO: Scattered showers moved across State 14th, 15th in mostly the southern and western portions. Precipitation, generally less than 0.10 in. Widespread rain 19th; again generally less than 0.10 in. Temperatures averaged up to 10° above normal.

Corn planted 4%, 0% 1980, 2% average. Barley seeded 60%, 11% 1980, 38% average; emerged 27%, 8% 1980, 17% average. Oats seeded 66%, 8% 1980, 32% average. Onions seeded 55%. Sugarbeets 59% seeded, 2% 1980, 25% average. Spring wheat seeded 57%, 8% 1980. Winter wheat pastured 13%, 10% 1980. Jointed 13%. Livestock in good condition. Ranges and pastures in fair condition. Six days suitable for fieldwork.

FLORIDA: Continued fair, mostly dry weather. Warm days with highs well into the 80's. Continued mild nights. A few light showers mostly over southern Peninsula brought amounts of 0.25 in. or less.

Soil moisture very short. Corn, tobacco fair condition. Tobacco transplanting practically complete, replanting continues. Peanut planting underway Panhandle, progress slow due to dry soils. Small grains have headed and in good condition. Sugarcane fair growth. Land being prepared for planting soybeans. Pastures poor to fair. Growth restricted by lack of soil moisture. Cattle fair to good. Citrus grove condition varies depending on irrigation. Groves need rain all areas. New crop fruit progressing. Valencia harvest increasing. Grapefruit movement limited to lower East Coast. Warm days, mild nights prevailed in vegetable areas. Weather continued generally dry with a few light showers, mostly over southern Peninsula. Irrigation active all areas. Total shipments up 18% from previous week. Harvest gained cabbage, celery, sweet corn, cucumbers, eggplant, okra, potatoes, radishes, squash and tomatoes. Supplies about steady cauliflower, escarole, lettuce, parsley and peppers. Volume declined snap beans, carrots, Chinese cabbage and strawberries. Commercial harvest of strawberries about complete Hillsborough-Manatee area. U-Pic and harvest for processors still active. Watermelon crop condition continues fair to good. Harvest confined to very light scrapping in a few early fields. Harvest expected to get underway next week.

GEORGIA: Dry week. Amounts of rain less than 0.25 in. north with none south. Temperatures well above normal, averaging mid-60's north to near 70° south. Weekend continued very warm with scattered thundershowers extreme north, dry elsewhere.

Soil moisture mostly short to adequate. Six days suitable for fieldwork. Corn 92% planted, last year 54%, average 80%; condition fair to good. Final nitrogen and cultivation given many southern fields. Tobacco 92% transplanted, last year 66%, average 89%; condition mostly fair to good. Peanuts 16% planted, last year 8%, average 30%; condition mostly fair to good. Dry soils slowed planting and germination. Watermelons 86% planted, 58% last year, 82% average; condition fair to good. Cotton 30% planted, 12% last year, 45% average. Sorghum 12% planted, last year 6%. Soybeans less than 0.5% planted, none last year, 2% average. Vegetables mostly fair to good, lack of moisture main concern. Small grains fair to mostly good. Most acreage headed, needs moisture to fill heads. Peaches and apples good, spraying very active. Pastures, cattle and hogs fair to mostly good.

HAWAII: Favorable weather continues Hawaiian chain. Rains beneficial to crops. However, lack of rainfall Kohala Mountain Watershed decreased irrigation water in reservoirs but not affecting crops. More rains would be helpful. Irrigation and spraying frequent to maintain fair to good crop progress. Vegetables: Supplies up. Yields improving most crops. Bananas: Supplies decreasing seasonally. Papayas: Expected to decline. Another gap approaches. Pineapples: Harvesting days getting frequent. Sugar: Harvesting active. Pastures: Generally fair to good. Some dry areas fair to poor.

IDAHO: Temperatures averaged near normal early in the week but shot up to 10 to 15° above normal. Heavy rains 13th in many areas, mostly dry period through 18th with more rain the 19th.

Spring wheat planted 52%, 50% 1980, 40% average. Spring barley 42%, 41% 1980, 46% average. Sugarbeets 52%, 58% 1980, 51% average. Dry peas 30%, 20% 1980, 27% average. Lentils 22%, 54% 1980, 38% average. Onions 76%, 68% 1980, 80% average. Potato planting very active in the southwest, other areas just underway. Winter wheat good to excellent, some foot rot. Calving and lambing over 85% complete. Feed supplies remain adequate.

ILLINOIS: Temperatures 3 to 8° above normal. Precipitation northern third 0.40 in. to 1.00 in., elsewhere amounts ranged 1.00 to 2.00 in.

Winter wheat condition 26% excellent, 71% good, 3% fair. Corn planting 3% complete, 0% 1980, 4% average. Alfalfa condition 15% excellent, 77% good, 8% fair. Pastures 11% excellent, 65% good,

24% fair; supplying 55% roughage requirements livestock, 28% 1980, 41% average. Soil moisture 33% short, 62% adequate, 5% surplus. Fieldwork: 2.8 days suitable.

INDIANA: Wet, warm week. Temperatures averaged 4° above normal and ranged from 28 to 83°. Rainfall 1.70 to 2.00 in. north and south, 0.70 to 1.00 in. central. Sunshine 42% of possible central and south, 72% in north.

Soil temperatures in 50's and 4° above normal. Fieldwork averaged 1 day. Topsoil moisture mostly adequate to surplus. Subsoil moisture short to mostly adequate. Pastures fair to mostly good. Spring cropland 92% plowed, 1980 55%, average 70%. Corn 2% planted, 1980 0%, average 0%. Oats 95% seeded, 1980 25%, average 60%. Wheat good condition. Wheat 10 in. high, 1980 6 in., average 5 in. Wheat 25% jointed, 1980 5%, average 10%.

IOWA: A mild week with occasional showers. Precipitation light over the northwest and west central to locally heavy in the northeast, southeast and south central districts.

Topsoil moisture: 23% short, 58% adequate, 19% surplus. Subsoil moisture: 45% short, 50% adequate, 5% surplus. Plowing: 93% complete, last year 66%, normal 69%. Oat acreage planted: 99% complete, last year 56%, normal 63%. Oat acreage emerged 68%. Corn acreage planted: Less than 2% complete. Fieldwork: 3.0 days suitable. Crop conditions: Pasture, good; winter wheat, good; alfalfa hay, good; oats, good. Livestock in excellent condition.

KANSAS: Scattered rains 0.25 to 0.50 in. east and north central plus general weekend rains 0.75 to 1.50 in. over State including 2.00 to 4.00 in. extreme northwest and 1.00 to 3.00 in. remainder northwest, west central, and extreme southeast portion. Temperatures averaged 55° northwest to 65° southeast or 5 to 9° above normal.

Large increase parasitic wasps and lady beetles stopped greenbug populations in small grains. Chinch bugs moving from bunch grass into wheat, some stunting reported. Eighty-eight percent reporting counties show topsoil moisture short, 12% adequate. Wheat condition fair to good. Wheat jointing 70%, last year 15%, average 25%. Corn planted 15%, last year 4%, average 5%. Six days suitable for fieldwork.

KENTUCKY: Temperatures averaged 6 to 8° above normal. Rainfall amounts mostly 1.00 to 2.00 in. with highest totals in east.

Early spring farm work well ahead of normal progress. Soil moisture short to adequate. Corn 15% planted, 3% last year, 12% average. Tobacco plants up in 80% of beds. Plants 85% size of dime or less but ahead of normal development. Pastures improving, mostly good condition. Barley heading in southern counties, wheat just beginning to head. Small grains mostly good and growing rapidly. Few fields have thin stands. Alfalfa weevils present, some spraying; some fields may be cut early.

LOUISIANA: Rainfall: Average 0.5 in. east central, minimal elsewhere. Temperatures: 6 to 8° above normal north, 4 to 5° above normal south. Extremes: 53 and 90°.

Soil moisture short. Fieldwork: 6.2 days suitable. Spring plowing 85% complete, 47% 1980. Corn planted 80%, 38% 1980, 64% average; emerged 62%. Rice planted 56%, 50% 1980, 54% average; emerged 49%. Sugarcane condition fair to good. Wheat condition good. Pastures, livestock fair to good. Vegetables rated fair, need rain.

MARYLAND AND DELAWARE: Temperatures near normal. Highs mid to upper 60's , lows mid 40's. Precipitation ranged 0.50 to 4.24 in.

Topsoil moisture adequate to surplus. Subsoil short to adequate. Three days suitable for fieldwork. Pasture and hay good condition. Small grains mostly good. Tobacco beds planted, farmers spraying beds. Vegetable plantings increased; peas 80%, snap beans and spinach 20%, potatoes and sweetpotatoes 80%. Apples and peaches in full bloom, except in western areas.

MICHIGAN: Both extremely warm and unseasonable cold temperatures occurred. However average temperatures ranged only 1 to 5° above normal. Precipitation over 1.00 in. fell over west central and southern Lower. Western Upper average 0.30 in. and elsewhere average 0.60 to 0.75 in.

Cool, wet weather allowed slow planting progress. Midweek frost damaged buds on cherry trees in northwest Lower Peninsula. Extent of damage yet to be determined. Oats 70% planted, last year 8%, 28% normal. Sugarbeets 40% planted, 12% last year, and 30% normal. Corn planting in earnest over a week away. Soil moisture supplies adequate.

MINNESOTA: Temperatures averaged near normal except northeast district up to 3° below normal, northwest up to 3° above normal, southwest up to 5° above normal. Extremes: 82° Grand Forks, 10° Warroad. Precipitation averaged up to 0.50 in. below normal southwest, northwest and north central districts; near normal southeast and south central; slightly above normal northeast; up to 0.75 in. above normal central, west central districts; slightly below normal east central. Precipitation totals were 1.00 to 1.25 in. central and east central; light in northern districts except locally in northeast; generally 0.50 to 1.00 in. southern districts.

Good field progress as dry weather prevailed. Strong winds and dust storms a problem in western half of State. Topsoil moisture rated 12% very short, 33% short, 52% adequate, and 8% surplus. Soil temperatures considerably lower than one week ago. Planted: Spring wheat 62%, 1980 11%, normal 23%; oats 58%, 1980 5%, normal 24%; barley 45%, 1980 5%, normal 12%; flax 4%, 1980 0%, normal 4%; field corn 0%, 1980 0%, normal 0%; soybeans 0%, 1980 0%, normal 0%; sugarbeets 45%, 1980 15%, normal 6%; potatoes 2%, 1980 0%, normal 2%; sunflowers 0%, 1980 0%, normal 0%; green peas for processing 31%, 1980 2%, normal 8%; sweet corn for processing 0%, 1980 0%, normal 0%. Emerged: Spring wheat 18%, 1980 0%, normal 5%; oats 17%, 1980 0%, normal 8%; barley 5%, 1980 0%, normal 3%.

MISSISSIPPI: Temperatures 6 to 11° above normal. Extremes: 47 and 90°. Warm, dry weather. Thundershowers brought light rain to scattered areas in northern two-thirds of State.

Soil moisture short. Fieldwork: 6.0 days suitable. Plowing 85% completed. Rice 54% planted, 24% last year, 39% average. Cotton 19% planted, 2% last year, 9% average. Corn 64% planted, 32% last year, 50% average; condition good to fair. Winter wheat 64% headed, 12% last year; condition good. Watermelons 80% planted. Pasture and livestock condition good.

MISSOURI: Temperatures remained warm, ranging from 5 to 9° above normal. Springtime thunderstorms provided varying amounts of precipitation.

Fieldwork: 4.2 days suitable. Plowing 90% completed, last year 62%. Corn 18% planted, last year 3%. Cotton 2% planted, last year 1%. Winter wheat in fair to good condition. Pasture condition fair. Topsoil moisture supply short to adequate.

MONTANA: Very mild and mostly dry. Temperatures averaged from 1° above normal in western division to 8° above in southeastern division. The warmest temperatures of season were recorded at midweek. Highest 84° at Baker, lowest 10° at West Yellowstone. Very windy conditions late in week caused considerable soil erosion. Some light to moderate precipitation fell over west and parts of south central early in week. Elsewhere it remained very dry.

Topsoil and subsoil short eastern third of the State, adequate northwest and north central, short to adequate elsewhere. High winds causing erosion especially eastern third of State. Days suitable for fieldwork: 5. Winter wheat condition generally fair to good and growing. Winterkill light. Spring wheat planted 25%. Oats and barley planted 30%. Sugarbeets planted 45%. Calving 80%, lambing 75% and shearing 75% complete. Ranges and pastures growing most areas. About 85% of cattle and sheep still on supplemental feed.

NEBRASKA: Precipitation widespread over the east at beginning of week and over the entire State at the end of the week. Temperatures 4 to 11° above normal.

Winter wheat condition fair to good. Best conditions in southwest; poorest in northern Panhandle and some central and southeastern fields. Oats seeding 95%, 55% last year and normal. Corn planting 1%, 0% last year and normal. Chinch bugs in large numbers reported in southeast, serious threat to adjacent sorghum fields yet to be planted. Topsoil moisture 77% short and 23% adequate. Subsoil 89% short and 11% adequate. Pasture and range feed supplies mostly short. Livestock weight gain very good. Days suitable for fieldwork: 6.2.

NEVADA: Sunny first half of week. Cloudy with widespread rain all areas except northeast at end of period. Temperatures averaged several degrees above normal due very warm weather midweek. Extremes: 93 and 15°.

Rain beneficial to ranges most areas. Inclement weather hampered beginning alfalfa hay cuttings extreme southern valleys. Livestock starting to move to summer ranges.

NEW ENGLAND: Temperatures averaged near normal with a cool period midweek. Light precipitation totalling 0.25 to 0.75 in. fell across the region on the 14th and 18th.

Maple syrup production finished in northern regions and higher elevations. Fieldwork started in southern areas with potatoes being planted in Connecticut and Rhode Island.

NEW JERSEY: Temperatures averaged near normal. Extremes: 22° at Newton and Pomona on the 16th and 81° at Toms River on the 18th. Rainfall averaged 0.76 in. north, 0.90 in. central and 0.90 in. south. Estimated soil moisture, in percent of field capacity, averaged 98 north, 96 central and 95 south. Four inch soil temperature averaged 51° north, 56° central and 55° south. Total sunshine at Trenton for April 13 thru April 19th was 55% of possible hours.

Fieldwork: 4.4 days suitable. April showers continue to improve soil moisture levels. Soil preparation and planting active as conditions permit. Spinach moving to market. Some asparagus cut but warmer temperatures needed to increase growth. Fruit spraying active. Peach bloom past peak in South. Apples beginning pink-bud stage. Grain, hay and pasture growth increasing.

NEW MEXICO: Shower activity 13th and 14th. Warmer midweek with rain again on 18th. Temperatures averaged about 4° warmer than normal.

Soil moisture remained in short supply. Outside activities interrupted by rainfall midweek and late in the week. Preplant activities continuing as planting operations beginning to increase in activity. Cotton planting underway in Dona Ana County, however very limited in most other areas. Approximately 10% has been seeded. Alfalfa in good condition with some early first cuttings continuing in the southernmost areas. Irrigated wheat and barley were in good condition with the dryland crop in fair condition. Corn planting continuing. Onion and lettuce in good condition. Chile planting continuing. Pecan and apple orchards in good condition. Ranges were mostly poor to fair condition and beginning to green up and show growth. Some supplemental feeding of livestock continuing with livestock in mostly fair to good condition.

NEW YORK: Temperatures ranged from the low 40's in the northern sections to the upper 40's to 50 in the lower Hudson Valley. Widespread rain occurred on the 14th and the 17th with several stations reporting over an inch of rain total for the week.

NORTH CAROLINA: Fieldwork: 5.9 days suitable. Soil moisture: 17% very short, 59% short, 24% adequate. Conditions: Wheat, oats, barley, and rye mostly good; tobacco plant beds mostly good; peaches fair to mostly good; Irish potatoes good; truck crops fair to mostly good; pasture fair to good; tobacco plant supplies adequate. Plantings: Corn 70%, 1980 44%, 57% average; cotton 10%, 1980 8%, 14% average; soybeans underway, 1980 0.5%; flue-cured tobacco 20%, 1980 5%; peanuts underway. Major activities: Soil preparation, corn planting and caring for tobacco plantbeds.

NORTH DAKOTA: Temperatures 2 to 7° above normal. Averages from 42° north central to 49° west central and southwest. Extremes: 86° west central and 9° northeast. Precipitation averaged 0.27 to 0.42 in. below normal.

Dry windy weather further depleted soil moisture. The wind, along with already dry soil, is causing serious soil erosion problems. Topsoil moisture very short 20%, short 50%. Subsoil very short 24%, short 33%. General rain needed to replenish soil moisture and improve pasture growth. Even with rain, pastures would need several weeks to recover in many areas. Average of 6.7 days suitable for fieldwork. Some delays due to dirt storms and cool soil temperatures. Seeding progress with last year and average: Hard red spring wheat 28, 10, 7; durum wheat 11, 3, 3; oats 21, 7, 5; barley 21, 8, 4. Sugarbeets 46% planted. Flax about 1% planted.

OHIO: Temperatures averaged above normal with greatest deviations in southern sections. Highs into 70's. Lows averaged from upper 30's to upper 40's; near freezing or lower 15th and 16th with frost. Precipitation ranged from 0.50 in. to over 3.00 in.

Rain and wet soils slowed fieldwork and planting activity. Early week low temperatures nipped some crops but caused no significant damage. Corn planting 4%, 0% 1980, 1% average. Tobacco bed sown 95%, 75% 1980, 85% average. Potatoes planted 15%, 5% 1980, 20% average. Oats planted 75%, 10% 1980, 40% average. Sugarbeets planted 65%, 5% 1980, 30% average. Days favorable: 1.5. Pasture condition good. Soil moisture 1% short, 44% adequate, 55% surplus.

OKLAHOMA: Temperatures averaged from 1° above normal southwest to 8° above normal northeast. Beneficial rains ranged from slightly over 0.50 in. Panhandle and southeast to over 1.50 in. northeast and southwest.

Scattered rains last week coupled with general rains weekend temporary relief moisture stressed wheat crop. Wheat jointing: 80% 1981, 75% 1980, 80% average. Wheat heading: 10% 1981, 0% 1980, 10% average. Days suitable for fieldwork: 5.6.

OREGON: Near normal temperatures along coast and western valleys; 1 to 4° below normal east of the Cascades. Precipitation 1.30 in. along coast; little over 1.00 in. in Willamette Valley; almost 2.00 in. in north Cascades; 0.30 in. in north central, northeastern, and High Plateau regions; no precipitation in south central and southeastern sections.

Soil moisture supplies mostly adequate; short in Jackson County. Winter wheat mostly good to

excellent. Most spring seeding complete at lower elevations; very little at higher elevations. Seed crops generally good condition; some rust showing up. Aphids, mites and ladybugs in mint; flamers ready when weather permits. Frost caused minor damage in Hood River Valley; extent unknown in other areas. Sprays continue to go on. Most fruit crops in bloom or petal fall stages. Filbert leafroller sprays continue to go on. Potatoes continue to go in; early fields emerging. Onion sprays going on in east; western growers ready to plant. Asparagus harvest delayed due to frost damage on emerged crop. Most vegetable crops a couple of weeks away from planting. Livestock, range and pasture condition good. Fertilizing pastures in full swing; spraying for tansy ragwort underway.

PENNSYLVANIA: Daily alternating conditions between cloudy, mild and showers with cool sunny and dry weather produced near normal temperatures and precipitation for the week. Temperature extremes 19 and 80°. Rainfall totaled from 0.50 to 1.00 in.

Fieldwork: 3.0 days suitable. Moisture adequate to short. Activities: Plowing; discing; spreading manure and fertilizer; spraying; planting oats, potatoes, strawberries and tobacco beds; repairing equipment. Plowing 58%, last year 8%. Potatoes 19% planted compared with less than 5% last year. Corn less than 5% planted, same as last year. Tobacco beds 12% sown, behind last year's 59%. Barley and wheat pre-boot, condition good. Hay stand conditions fair to good. Feed from pastures average to below average. Peaches 32% pink, 23% full or past. Cherries 17% pink, 27% full or past. Apples 17% pink. Some frost damage reported to fruit and vegetables.

PUERTO RICO: Island average rainfall 0.48 or 0.63 in. below normal. Temperatures averaged 78° on Coasts and 74 to 71° Interior Divisions. Extremes: 97 and 52°.

SOUTH CAROLINA: Rainfall below normal, only widely scattered showers.

Cotton planting 47% complete, well ahead of last year's 6% and 33% average. Corn planted at 93% complete, 43% last year and 76% average. Tobacco transplanted 84%, last year 33%, average 58%. Wheat condition fair to good, some acreage being irrigated. Additional rainfall needed, 50% headed. Peaches in good condition. Vegetable condition fair to good. Snap beans planted 86%, last year 82%. Cucumbers 70% planted, last year 65%. Watermelons 83% planted, 62% last year, 82% average. Cantaloups 66% planted, last year 62%.

SOUTH DAKOTA: Warm weather continues. Average 6 to 10° above normal. Extremes: 88 and 10°. Precipitation scattered, only localized significant amounts.

Fieldwork continued, with 6 days suitable. Topsoil moisture critically short over most of west. East River: Short extreme north and extreme south, adequate sandwiched in between. Farm activities, small grain seeding, row crop field preparation, calving and lambing. Winter wheat and rye in good condition. Some showing drought stress in west, some damaged by soil blowing in central areas was reseeded. About 33% of all small grains emerged. Livestock in good condition, little death loss. Calving 65% completed, lambing 80%. Stock water supplies short. Pastures poor condition north central, northwest and west central, fair condition elsewhere. Some East River cattle being moved to pastures. Oats seeded 80%, 1980 41%, average 35%. Barley seeded 73%, 1980 40%, average 29%. Spring wheat seeded 81%, 1980 51%, average 34%. Flax planted 13%, 1980 3%, average 3%. Corn planted 2%, 1980 0%, average 0%.

TENNESSEE: A high pressure brought fair weather early in the week. Cold fronts during mid and late week brought an average of 1.25 in. across the State. Temperatures averaged above normal.

Fieldwork: 4.5 days suitable. Soil moisture adequate. Spring plowing 79% completed, 1980 53%, average 63%. Tobacco plant bed 97% seeded, 1980 92%, average 98%. Corn planted 30%, 1980 12%, average 21%. Cotton 8% planted, 1980 4%, average 7%. Pastures 38% good, 56% fair, 6% poor. Cattle in good condition. Wheat mostly in good condition. Oats mostly in fair condition. Activities include plowing and planting along with general farm chores.

TEXAS: Weather: The first part of week a cold front moved into State then dissipated South Texas toward midweek. This frontal system triggered scattered thunderstorms. The end of week southerly flow at surface combined with an upper level disturbance also triggered scattered thunderstorms. Temperatures for week were 4 to 6° above normal in North Central and Northeast Texas. Elsewhere they were near normal. Average temperatures range from near 60 in northwest to middle 70's in the southern part of State. Rainfall was 0.50 to 1.00 in. above normal through West Texas, then generally 0.33 to 0.75 in. below normal elsewhere. Average rainfall ranges from less than 0.25 in. in Southwest Texas to 1.00 to 1.50 in. in North Central and East Texas.

Commercial vegetables: Lower Rio Grande Valley, harvest of carrots, onions continued. Onions developed well. Irrigation continued. Citrus harvest continued, only late oranges remaining. San Antonio-Winter Garden area, carrot harvest continued. Tomatoes, onions, watermelons progressing well. East Texas, watermelon planting continued. Tomato planting virtually complete. Sweetpotato planting continues. North Texas, tomatoes, peppers, onions progressing well. Trans-Pecos region tomatoes, onions doing well. Plains, potato, onion planting nearly complete, both crops doing well. Peach trees continue to set fruit and outlook remains good. Pecan trees continue to bud, into prepollination stage.

Range and livestock: Scattered showers provided some relief to ranges, pastures. Plains, north central rains helped promote growth of grasses. Central, South Texas pastures beginning to show heat stress. Livestock in good condition. Supplemental feeding continued at limited level.

Crops: Moisture fell over most areas. Rainfall interrupted corn planting northern High Plains, provided significant boost to wheat, other small grains. Cotton planting active Blacklands. The Plains received rainfall which provided needed moisture for germination. Sorghum planting active North Texas. Some greenbug damage occurred southern areas. Additional moisture needed in southern areas. Wheat and other small grains received boost from heavy rains over the Plains and Edwards Plateau. Wheat in boot and heading stage most areas. Reported wheat condition Statewide 12% excellent, 38% good, 40% fair and 10% poor. Peanut planting active South Texas. Rice planting continued at above normal pace. Shortage of irrigation water curtailed planting in few areas. Sugarbeet planting continued on High Plains but interrupted by rainfall. Cotton planted 18%, 15% 1980, 16% average. Rice planted 85%, 83% 1980, 77% average; emerged 52%, 39% 1980. Sorghum planted all purposes 65%, 64% 1980, 57% average. Wheat headed 20%, 7% 1980. Corn planted 56%, 61% 1980, 50% average. Peanuts planted 10%, 8% 1980, 11% average. Sugarbeets planted 96%, 86% 1980, 88% average.

UTAH: Recurring periods scattered shower activity. Accumulated amounts moisture quite variable ranging from little or none to over 2.00 in. Average temperatures continued well above normal ranging between 4 and 8° above.

Soil moisture conditions improved. Fieldwork ahead of normal. Good progress during week with

6 days of dry conditions. Soil moisture below normal. Irrigation water outlook below last 2 years, but should be adequate. Small grain planting major activity. Spring wheat 56% planted, barley 65%, and oats 37%. No frost damage to fruit yet. Apricots in full bloom, sweet cherries and peaches will peak next week. Cattle and sheep in good condition, but ranges need moisture.

VIRGINIA: A wet week with rain falling each day. Seasonal with highs generally in the 60's and 70's, lows in the 40's and 50's, occurring on the 13th through the 19th.

Soil moisture supplies 42% short, 56% adequate, improved except in southeast. Fieldwork: 4.4 days suitable. Corn planting progress at 24%, 25% 1980, 29% average. Soybean planting at 8%, less than 1% 1980, 2% average progress. No report of peanut plantings, seedbed preparation continues southeast. Potato plantings essentially complete Eastern Shore, other areas 60% complete. Pasture and hay rated fair in northern areas, excellent elsewhere. Wheat rated good to mostly excellent. Alfalfa sprayed for alfalfa weevil. Some fruit damaged by frost but prospects for a normal crop remain good. No reports of heavy damage. Some tobacco planted southeast.

WASHINGTON: West: The week started with cold and windy weather, even to the point of snow. By midweek warming temperatures set in, resulting in about normal average temperatures for the week. Total precipitation was between 0.10 and 0.30 in. higher than normal. Spring activity flourished again. Seed bed preparation continued. Crops being planted were: Vegetable seed crops, barley, raspberries, strawberries and green peas. Harvest of field rhubarb and tulips continued. Dairymen green chopping grass. More cattle scat out on pastures.

East: The week started out cold and windy, but warming temperatures set in by midweek. But the average temperature for the week ended between 1 and 7° below normal. Precipitation was below normal in all areas, between 0.10 and 0.20 in. Damage occurred in the fruit region due to cold snap. Extent unknown at this time. Damage did vary upon location, type of crop and stage of development. Poor weather also hindered pollination. Wheat may have suffered some damage. Extent unknown. April 17, first good cut of asparagus. Hop tying and corn planting underway. Wheat and barley conditions range from average to above average. Spring planting will resume when drier conditions prevail. Soil moisture good.

WEST VIRGINIA: Temperatures averaged above normal. High 86° Charleston, low 18° Greenbank. Heavy rains and storm damages in some areas late in the week.

Soil moisture adequate to surplus. Days suitable for fieldwork: 3.1. Main activities: Plowing, fencing, general chores. Wheat, barley and oats fair to good. Corn good to fair. Tobacco beds 65% planted, 30% emerged. Pasture and hay fair. Fruit fair to good. Hay, grain, and other feed supplies adequate.

WISCONSIN: Temperatures averaged 3° above normal. Highs varied from 50's to 70's, lows 20's to 40's. Extremes: 82° Racine 17th, 15° Eagle River 15th. Rainfall ranged from 0.30 in. west to 1.25 in. east. Heaviest rains evening 13th.

Fieldwork: 3.0 days suitable. Lighter soils being worked as most heavy soils were too wet. Oats 30% planted, 1980 2%, normal 10%. Most farmers finished seeding oats south, north just beginning. Early planted oats up nicely. Winter wheat and rye growing good. Spring plowing 20% done, 1980 2%, normal 9%. Corn ground being plowed south where planting will begin soon. Hay fields showing early growth, some fields spotty due to lodged oats and delayed oats combining last summer. Potatoes being planted in sandy areas of central part of State, some peas planted south. A few tobacco beds seeded. Fruit trees budding. Soil moisture adequate to surplus.

WYOMING: All stations reported mild spring weather with above normal temperatures and little precipitation. Temperature extremes from 81° in Belle Fourche Drainage to 13° in Belle Fourche and Snake Drainages. Below normal precipitation.

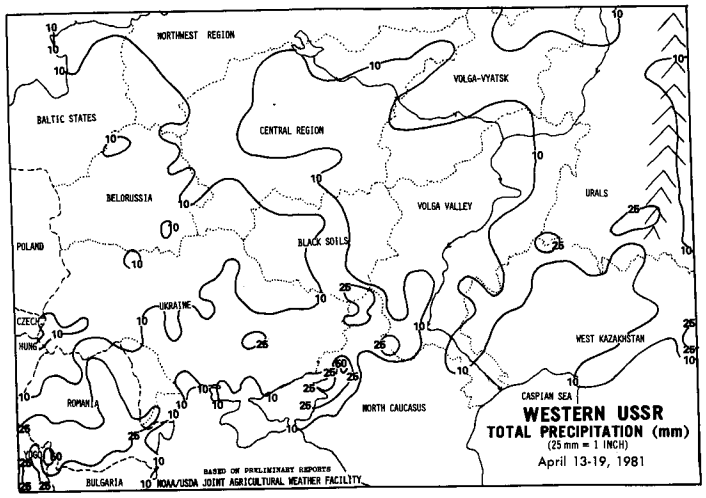
Topsoil moisture short 76% State. Average 6 days suitable for fieldwork. Acreage planted: Spring wheat 40%; oats 40%; sugarbeets 70%; barley 60%. Acreage emerged: Spring wheat 15%; oats 10%; barley 30%. Winter wheat mostly good condition. Spring calves born 75%. Range ewes lambed 45%. Farm flock ewes lambed 80%. Sheep shorn: Range 50%; farm flock 80%. Livestock producers plan to start moving livestock to summer range in early May.

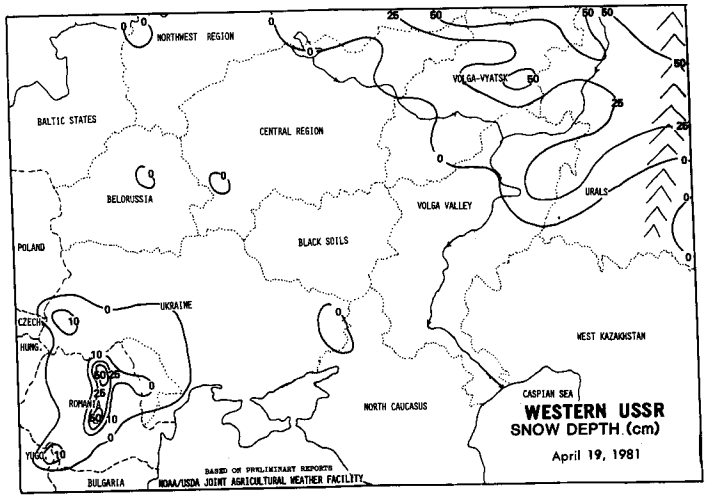
International Weather and Crop Summary

April 13-19, 1981
HIGHLIGHTS

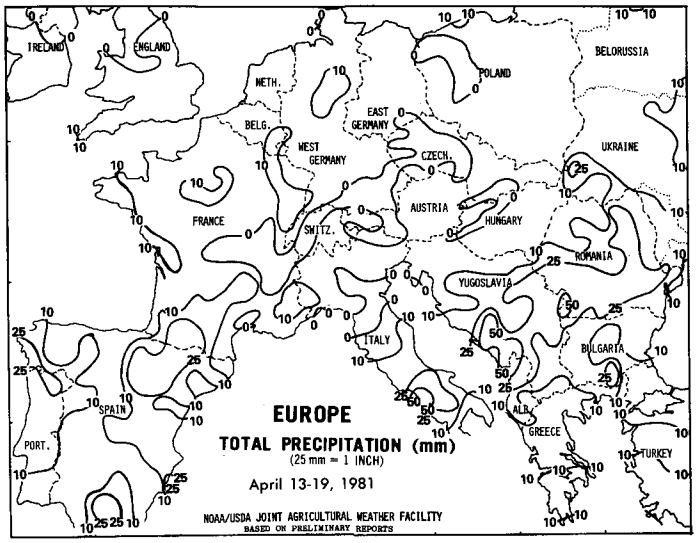
WESTERN USSR:	Soil moisture conditions were generally favorable, but colder than normal temperatures slowed or halted crop development.
EUROPE:	Soil moisture remains marginal in southern Spain and is being depleted in northern Italy. Cold weather stopped winter grain growth in Poland.
NORTHWESTERN AFRICA:	Above normal rainfall improved late-season growing conditions for winter grains in Tunisia, Algeria, and parts of northern Morocco.
SOUTH ASIA:	Heavier rains in Bangladesh and eastern India have caused some flooding of newly planted cropland.
CHINA:	Heavy rains in southern China slackened somewhat, but conditions remained much too wet. Winter grain areas received some beneficial rainfall.
CANADA:	Dry weather prevailed in the Prairie Provinces with pre-season moisture supplies somewhat short.
THAILAND:	Beneficial rains fell in northern and central zones, while relatively dry weather occurred in the eastern portion.
SOUTH AMERICA:	Favorable weather aided corn and soybean harvests in Brazil and Argentina. Beneficial moisture fell in wheat areas of southern Buenos Aires while dry weather continues in the wheat area of Rio Grande do Sul.
AUSTRALIA:	Minimal rainfall occurred in the wheat belt.
MEXICO:	Moderate rains aided Southern Plateau corn, eastern citrus and sugarcane, and North Central cotton.

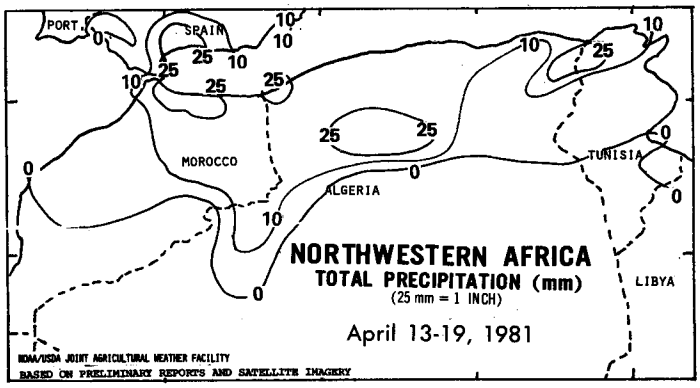
WESTERN USSR: Above normal precipitation returned to important winter grain areas in the southern and eastern Ukraine and northwestern parts of the North Caucasus. The moisture will slow fieldwork in some places, but it benefited winter wheat, which was reported to be in the boot stage of development. Growth was slowed substantially by cooler weather following the storm, and some new light snow covered fields in the southwestern Ukraine. Temperatures across the northern half of the belt were too cold for winter grain growth, as readings stayed below normal in nearly all areas. Spring grain areas in the upper Volga Valley remained snow covered. Fieldwork and sowing of spring grains was reported as far north as the Chernozem Region. Cotton prospects have been boosted by continued above-normal rain, which lessens the current need for irrigation. Rainfall intensities, however, have been light enough so as not to necessitate much replanting.





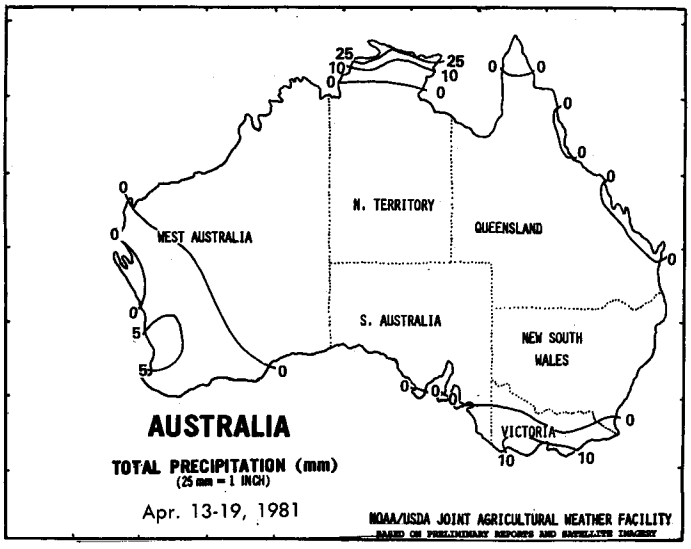
EUROPE: Precipitation over the northern two-thirds of the region remained mostly below normal, with only a few localized areas of above normal amounts. A weak low pressure system moving across the Mediterranean spread beneficial moisture over Iberia, southern Italy, and the Balkan Peninsula. Growing conditions in Portugal and northern Spain remained generally good, although subsoil moisture is still in short supply. These light rains must continue for another month to prevent further yield losses. Moisture conditions in southern Spain are only marginal, and winter grains should be in the heading stage of development. Northern Italy is becoming somewhat dry again following a second consecutive rainless week. Subsurface soil moisture is short, and surface moisture is being depleted. Near-normal temperatures prevailed in the southwestern countries, while the northwest stayed above normal and the east dipped below normal. Winter grain growth in Poland was brought nearly to a halt by the cold weather.

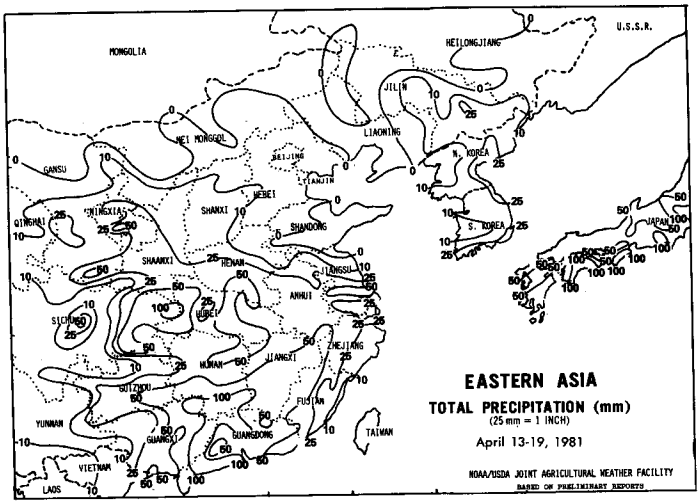




NORTHWESTERN AFRICA: Northeastern winter grain areas in Morocco received substantial rainfall, but only 5 to 10 mm accumulated over the rest of the northern belt. This helped final stages of grain filling. Harvesting should be in progress in the south, if meager yields warrant the effort. In Algeria and Tunisia, above-normal rainfall in most winter grain areas helped late grain filling.

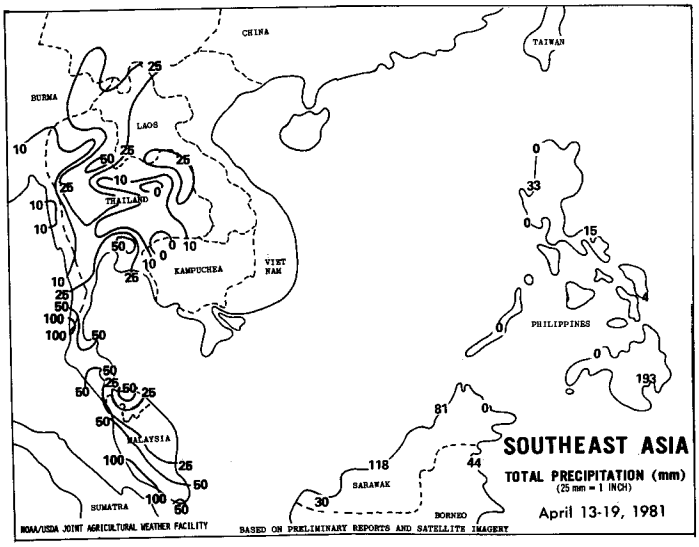
AUSTRALIA: The planting season for winter wheat, barley and other autumn seeded crops usually begins by late April and lasts until June. Thus, weekly weather summaries will begin with this issue. Timely autumn rainfall, which usually increases in April and May, will be important for successful crop emergence and early development. Soil moisture supplies are somewhat short in many grain producing areas, especially in northern New South Wales and West Australia. Although satellite photos show some light shower activity over West Australia late in the week, weekly rainfall amounts were minimal. Elsewhere, dry weather prevailed in the wheat areas where land preparation for autumn sowing should have begun.

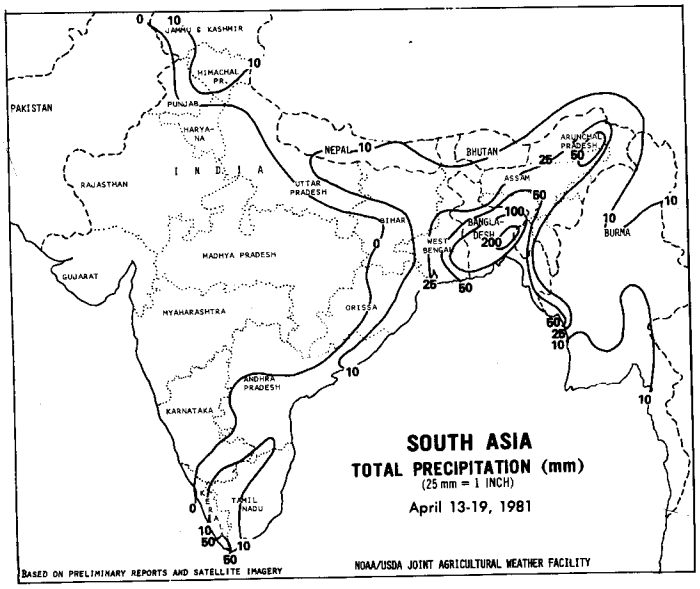




EASTERN ASIA: Rainfall slackened somewhat south of the Yangtze River. However, totals for the week were far above normal, and the possibility of flooding and waterlogging of newly planted fields continued. The area of rain spread northward into the wheat belt. Much of Henan, Anhui, and Jiangsu benefited from more than 25 mm of rainfall. Very little rain fell in Shandong, but much of Hebei received 4 to 8 mm of light rainfall to improve growing conditions; normal totals for April are around 10 mm. In South Korea, rainfall decreased to somewhat below normal, but conditions should remain favorable for all crops. Temperatures averaged near normal in South Korea and in the Chinese winter grain belt, but stayed above normal in southern China.

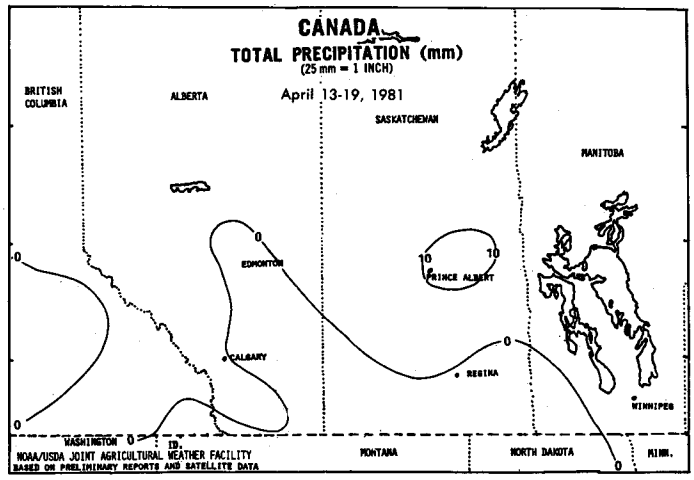
SOUTHEAST ASIA: Beginning in this issue, weekly weather summaries will monitor the development and progress of the 1981 monsoon season in Southeast Asia and assess its impact on corn and rice grown in Thailand. The planting season begins in April and May with the onset of the wet season. Northern and central portions of Thailand received 10 to 50 mm of weekly rainfall while the eastern zone received only minimal amounts. This early season moisture is beneficial not only for soil moisture reserves but also to raise reservoir levels used for irrigation and hydroelectric power generation.

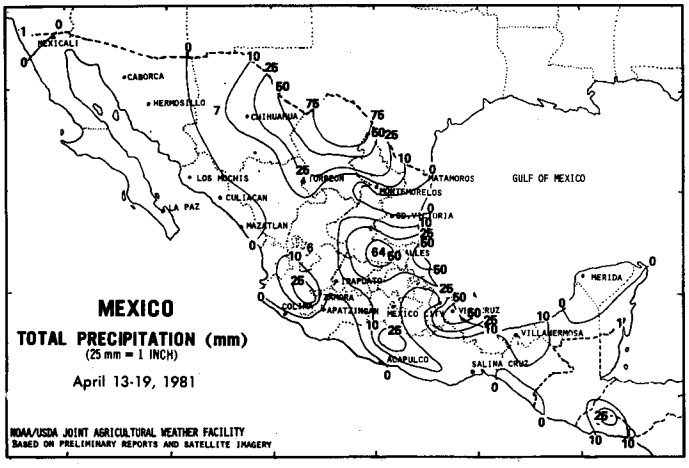




SOUTH ASIA: Rainfall increased sharply in Bangladesh and eastern India. Reports of flooded crops came from Bangladesh, where 100 to 200 mm of rainfall fell on fields already wet from above normal rainfall in recent weeks. Crop losses should not be irretrievable, for time remains to replant and still obtain good yields. Dry weather in northern India and Pakistan favored winter grain harvesting. Rainfall returned to parts of extreme southern India, where rainfall normally increases at this time.

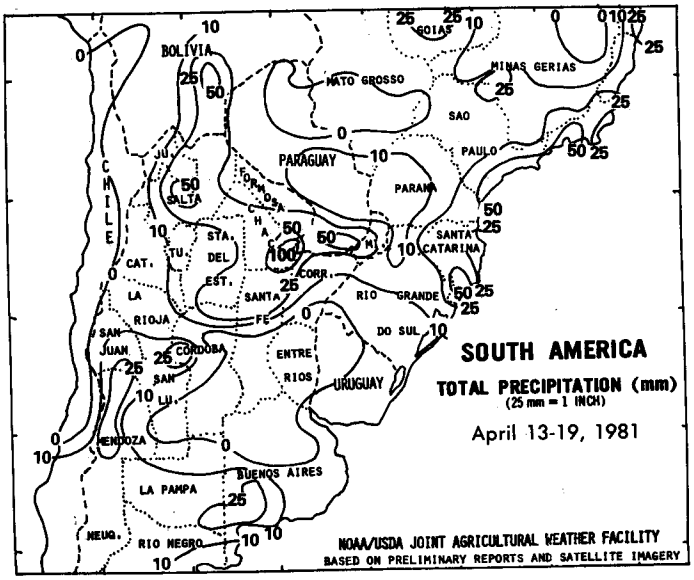
CANADA: The spring planting season is just ahead in the Canadian Prairies. Weekly weather summaries will begin with this issue as relatively dry weather prevailed throughout the Region. For background, monthly rainfall generally increases from April through July providing timely moisture for sowing of spring wheat, barley, and other crops usually planted from late April to early June. Grain crops approach the moisture sensitive reproductive period by late June. Thus, pre-season soil moisture reserves, timely growing season rainfall, and favorable temperature patterns are very important for crop development. A special article summarizing the pre-season weather situation in the Canadian Prairies is presented in this issue.





MEXICO: Moderate rains over most of the Southern Plateau corn belt improved soil moisture, helping germination and early growth. Soils had become rather dry over the corn areas since no significant rain had fallen since February. The rain pattern also extended eastward and benefited citrus and sugar cane from Valles to Veracruz. Only light rains dotted the upper northeast, but irrigation water should generally be ample. The north central cotton areas had about 25 mm of rain to help the young crop and reduce irrigation needs. Sunny dry weather over the northwest favored field work and possibly harvesting of some early winter wheat.

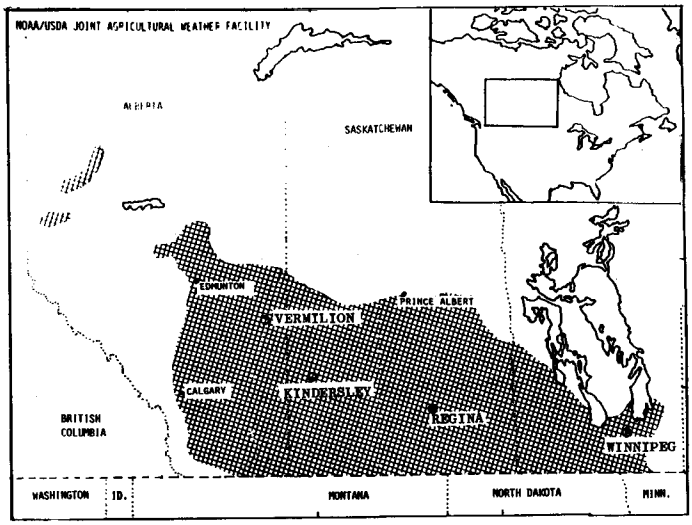
SOUTH AMERICA: Dry weather in the major corn/-soybean area of Argentina (Cordoba, Santa Fe, Entre Rios and northern Buenos Aires) aided harvest activities which should be in full swing again after the previous week's rainfall. Locally heavy showers produced 25 to 100 mm of rainfall in the more northern cotton area of Formosa and Chaco; and, 20 to 50 mm of rain fell in the southern wheat area of Buenos Aires. Rainfall in southern Buenos Aires provided beneficial moisture for wheat sowing which normally begins in May. In Brazil, weekly rainfall was mostly light (less than 15 mm) in most corn/soybean areas, except toward coastal regions where 20 to 70 mm fell. Harvest activities for corn and soybeans continued unimpeded in general except for some minor localized delays due to wet fields in Santa Catarina. Minimal rainfall occurred in the wheat growing area of Rio Grande do Sul. Moisture will be needed in this area for winter wheat sowing which should begin very soon.



CANADIAN PRAIRIE PRE-SEASON WEATHER SUMMARY

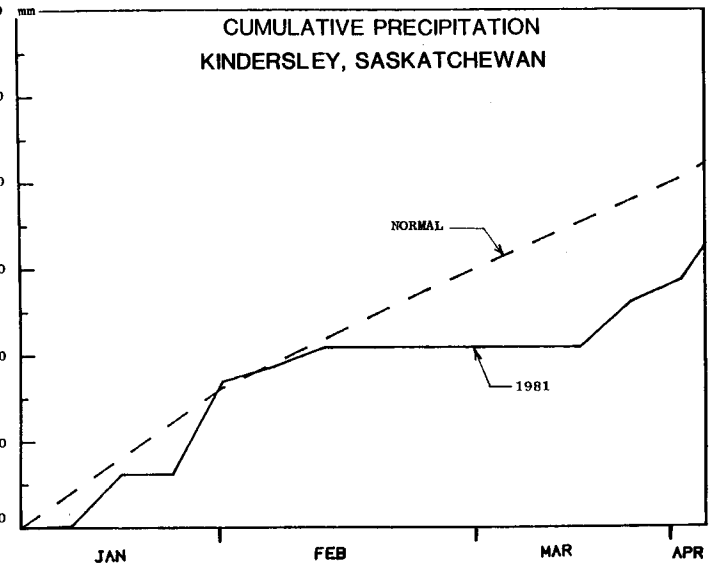
By Lyle Denny and Ray Motha
NOAA/USDA Joint Agricultural Weather Facility

A brief review of the autumn-winter weather pattern in the Canadian Prairies may be useful as the spring planting season approaches. Soil moisture reserves at the beginning of the growing season provide the key to initial seedling germination and emergence while timely rainfall during the growing season helps determine potential yield prospects.

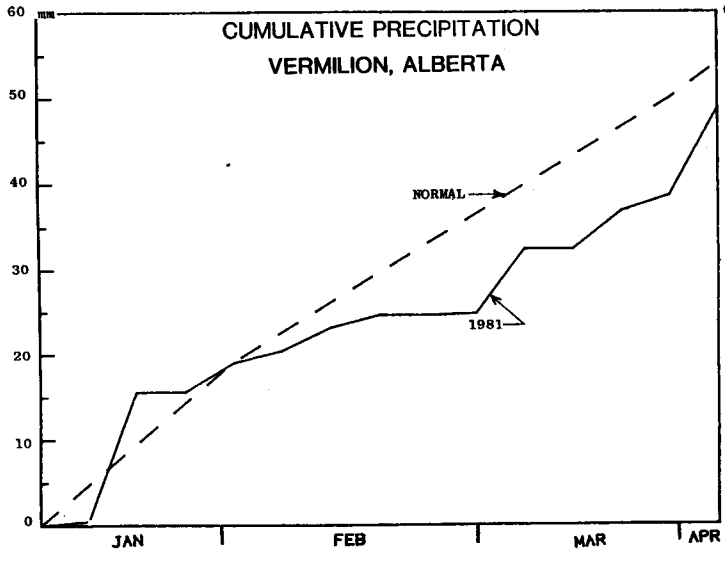


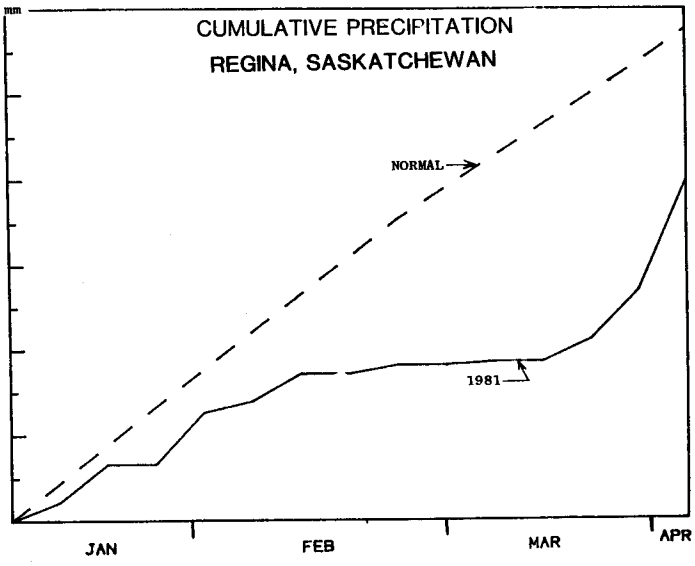
During the post-harvest period from September through November, precipitation was mostly near or above the seasonal average throughout the Canadian Prairies. This moisture replenished much needed soil reserves after a relatively dry 1980 crop season. The one area which remained considerably below normal was central Saskatchewan and east-central Alberta. Rainfall during December was above normal in all areas except eastern Saskatchewan and southern Manitoba--two areas which had good soil moisture supplies. Thus, the soil moisture status was relatively good in most areas by the end of 1980.

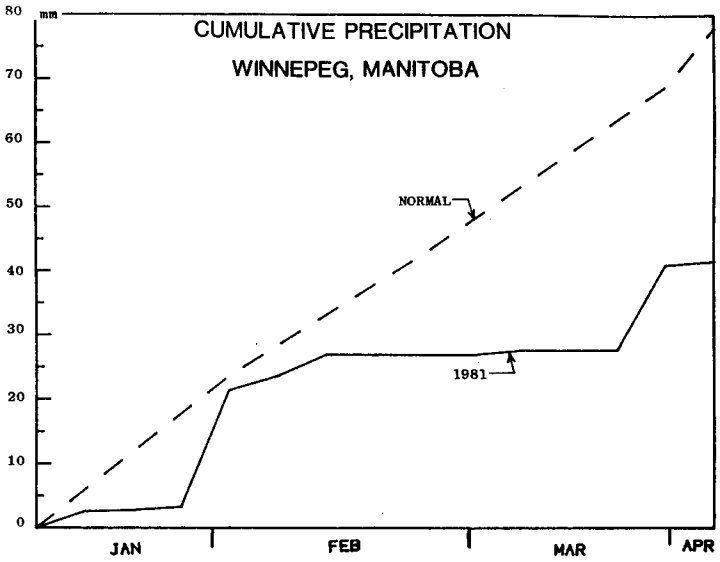
The 1981 winter in the Canadian Prairies was characterized by warm weather (much above normal temperatures) and low snowfall (below normal precipitation) during January through March. Cumulative precipitation from early January through the first week in April is plotted for four stations in the Canadian Prairies to provide a brief view of the 1981 preseason moisture pattern. The four stations are Vermilion, Alberta; Kindersley and Regina, Saskatchewan; and, Winnipeg, Manitoba. These stations were chosen to represent a cross section through the major wheat producing region. These figures indicate that soil moisture, especially in the surface layer, may have become somewhat deficient during the winter months.



Precipitation was much below the seasonal average from early February through mid-March, particularly in the central and eastern portion of the spring wheat belt. During the latter part of March and early April, however, significant precipitation fell in Alberta and Saskatchewan (as indicated by the station plots). Although some beneficial moisture fell in Manitoba in late March, the dry weather pattern has continued into April in the eastern portion of the wheat belt.







Thus, additional moisture is needed in the topsoil, especially in eastern wheat areas. Further, some areas of central Saskatchewan and east-central Alberta may be deficient in soil moisture throughout the entire profile due to last season's below normal rainfall pattern.

It should be noted that, based on long-term climatological data, mean monthly rainfall during the winter months in the Canadian Prairies averages about 25 mm or less. During the spring, monthly rainfall increases until a maximum is reached during June and July. Thus, with the planting season still ahead, timely spring rains may occur to provide sufficient moisture for early crop growth. The 1981 crop season will need a relatively normal rainfall pattern during the spring and summer months to ensure good yield prospects.

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