

WEEKLY WEATHER AND CROP BULLETIN

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

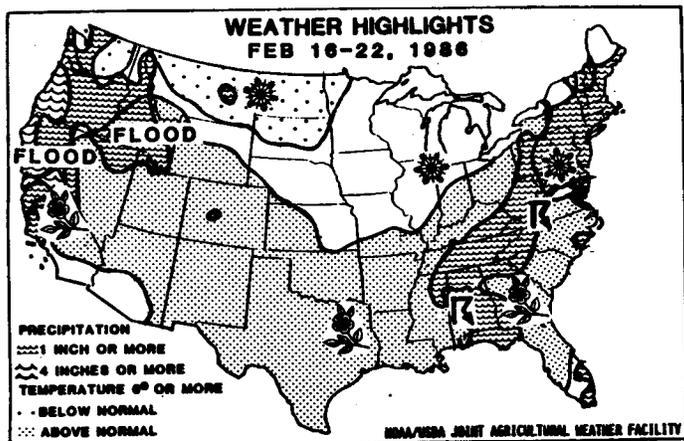
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February 16 to 22, 1986



HIGHLIGHTS: A succession of storms continued to batter California with rain, gusty wind, and mountain snow. The north central part of the State was hardest hit, and floods and erosion affected the area. After midweek the flow of moisture shifted northward and gave some respite to California. Heavy snow fell at high elevations of the central and northern Rockies. Lighter snow fell from the northern Great Plains to New England. Southerly flow of air into the southern Plains brought record-warm temperatures to Texas and then all across the South. The moisture laden air brought showers and thunderstorms to the East from the lower Mississippi Valley to Georgia and northward to Maryland. Early week rain and then snow covered the Northeast.

SUNDAY...Moist air continued to push eastward across the Western States bringing more rain, mountain snow, and gusty winds. Rain was moderate to heavy from the upper third of California to southern Washington. Snow fell from the northern Plains to southern New England and a band of freezing rain reached from southern Iowa to Pennsylvania. Rain showers were scattered from Mississippi and Alabama to the lower Ohio Valley.

MONDAY...A series of storms continued to badger central and northern California with widespread rain--some locally heavy. Moderate to heavy rain also fell along the Oregon coast. Moderate to heavy snow or rain fell over the central and northern Plateau and northern Rockies. In the East, precipitation fell everywhere east of the Mississippi River. Showers and a few thunderstorms reached from Alabama and northern Georgia into southeastern Pennsylvania. Snow fell from West Virginia to New England.

TUESDAY...A moist southwesterly flow continued to march storm systems onto the Pacific coast. More heavy rain fell in the central California area and moderate showers reached all the way to southern California. Snow or rain continued over the northern Plateau and Rockies. Record high temperatures occurred from the southern Plains through the lower Mississippi Valley. Light rain fell all along the east coast with snow in New England.

WEDNESDAY...Rain continued through California, Oregon, and the northern Plateau and Rockies. Snow fell at elevations above 7,000 ft. Even though the rain was more widespread, it was less intense than earlier in the week. Snow fell from the northern Plains into the Great Lakes and light rain reached from the upper Ohio Valley and the Carolinas to southern New England.

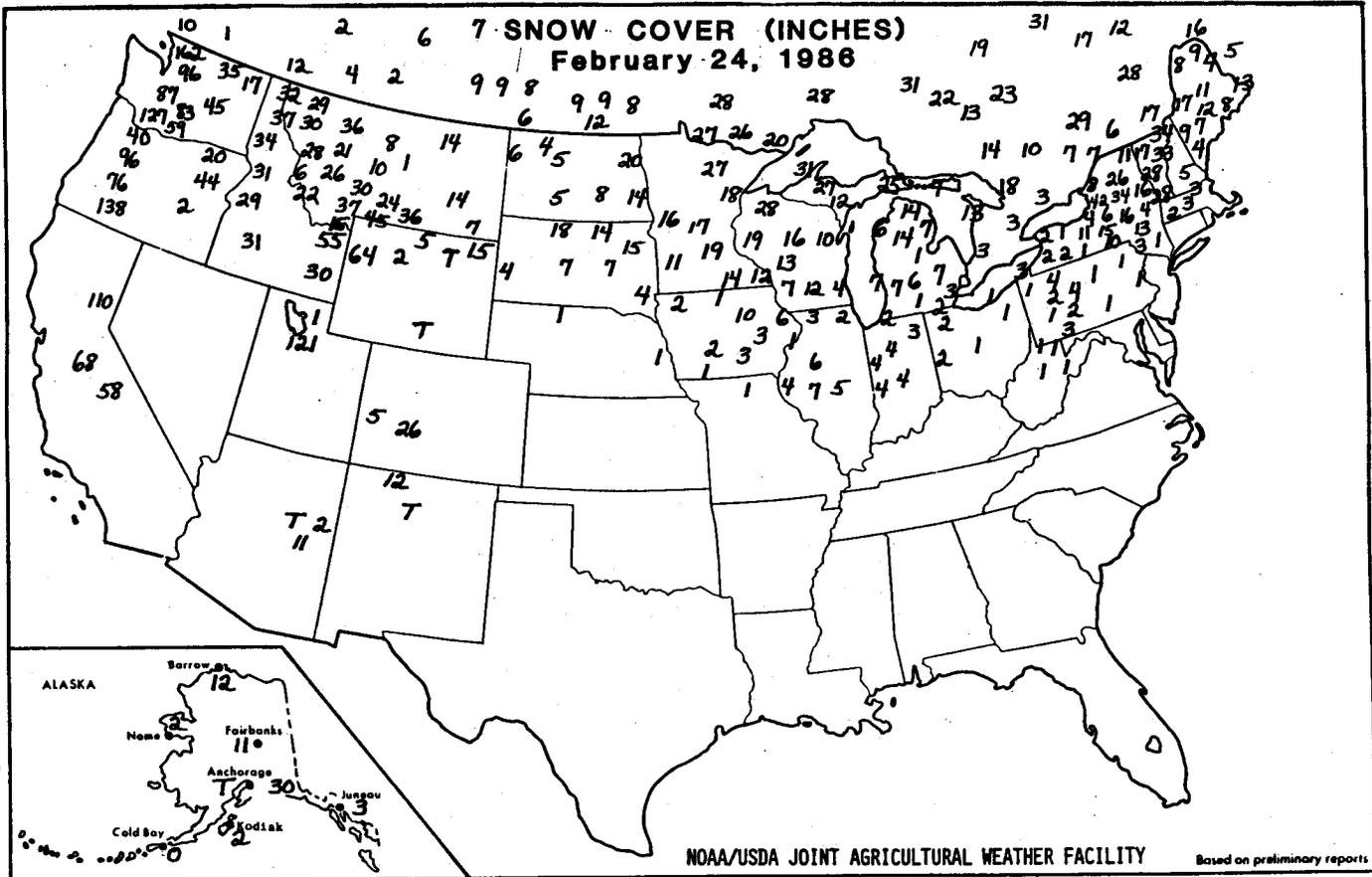
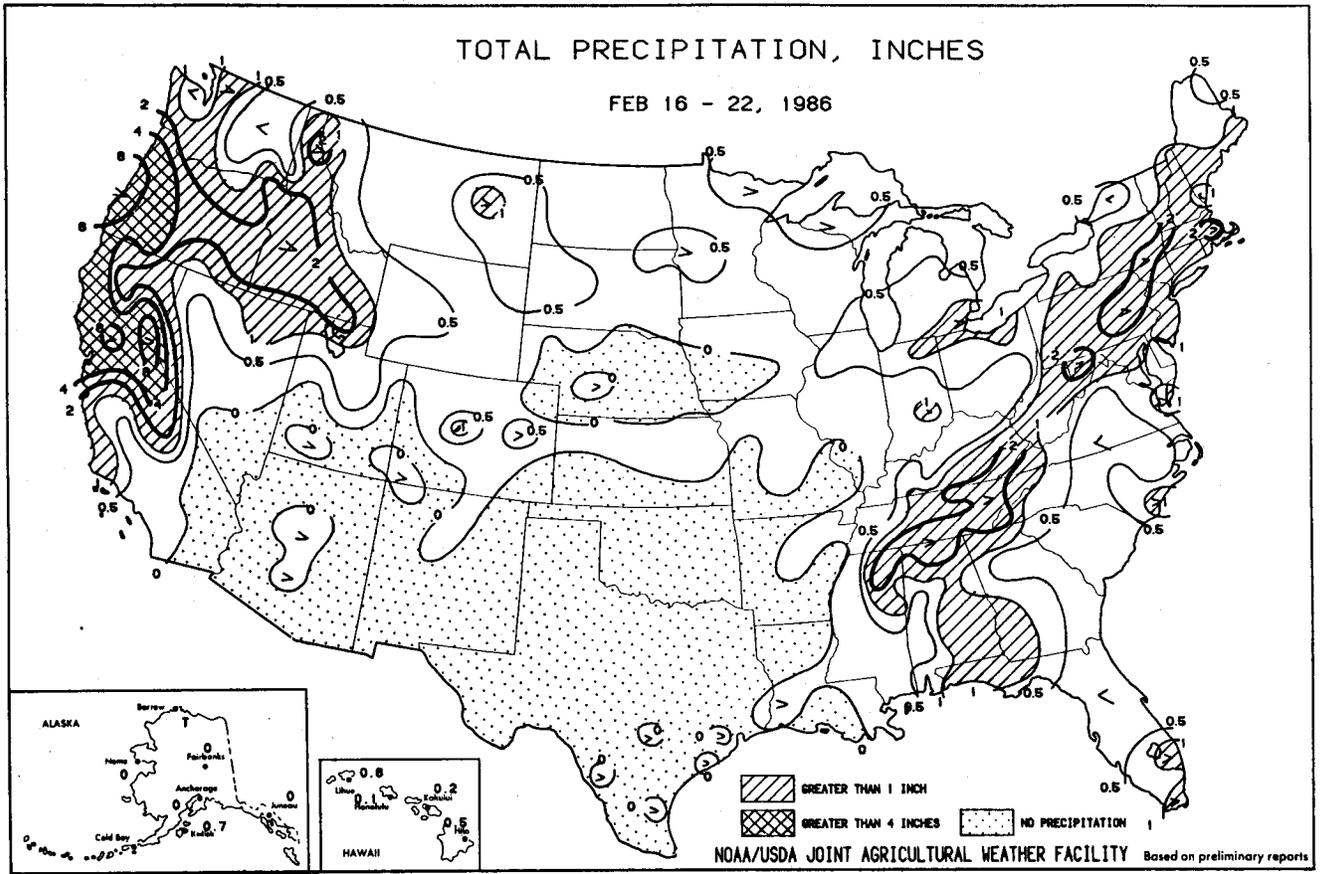
THURSDAY...Rain was tapering off in the West; only light rain fell in the Northwest quadrant. After a period of record-high temperatures, cold air was plunging southward through the Plains. Snow fell from eastern Colorado across northern Kansas into Illinois, replacing the snowcover that was lost during the warm spell. Light rain fell from central Missouri to the mid-Atlantic States and northeastward to New England.

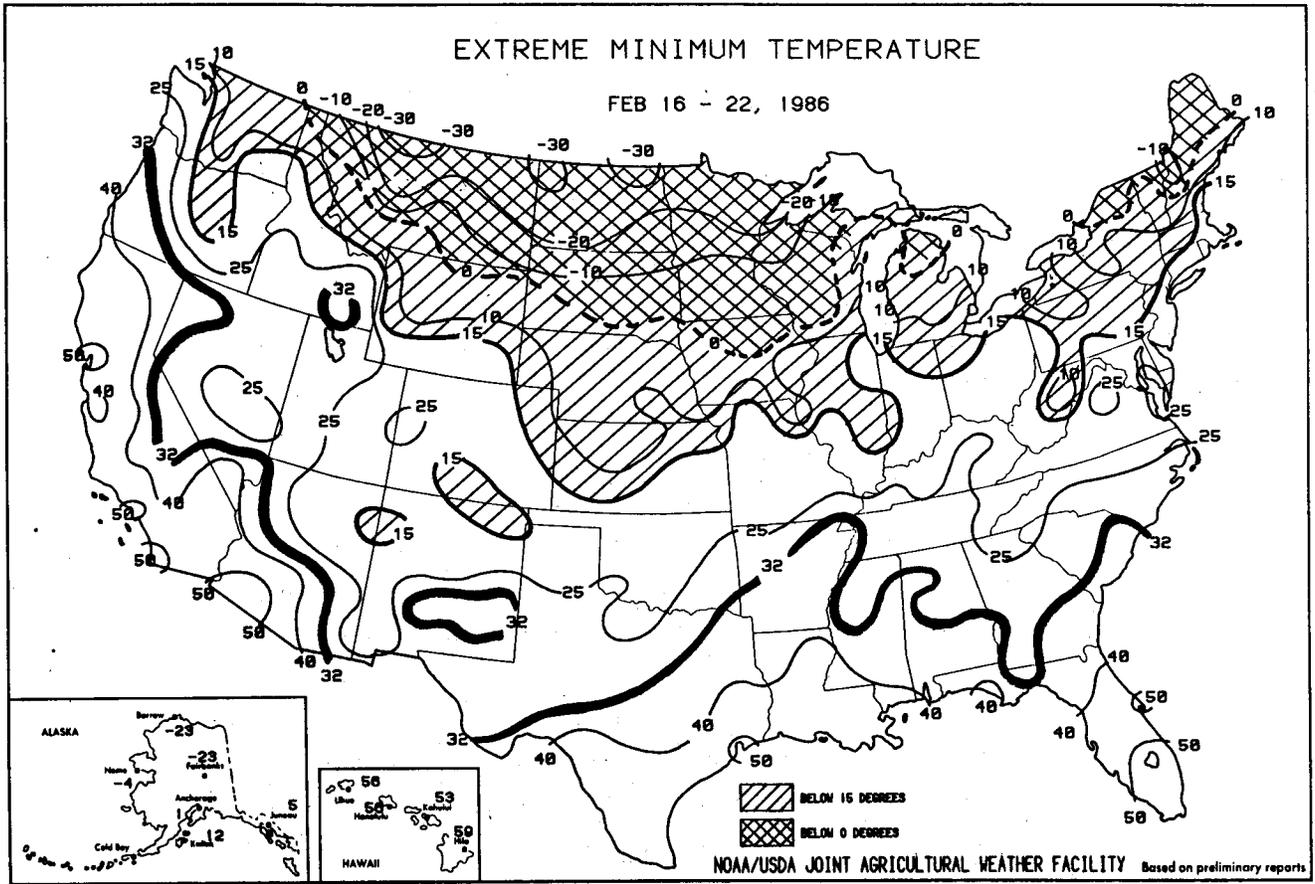
FRIDAY...The flow of moisture into the West shifted northward and brought rain to the Northwest. Snow fell in the Cascades and northern Rockies. Another storm in the East caused snow from eastern Ohio to northern Maine with freezing rain along the southern edge of this area. Light rain fell from the central gulf coast to the southern New England.

SATURDAY...Rain, with snow at higher elevations, continued across the Northwest to the northern Rockies. Lighter snow spread across the northern Plains to western New York. Showers and thunderstorms rumbled from southern Alabama through northern Florida, and lighter showers reached northward to eastern Pennsylvania.

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USA NOAA GOES-E 02/20/86 1501Z NE IR



A FRONTAL SYSTEM IN THE PACIFIC OCEAN APPEARS TO BE HEADING TOWARD THE PACIFIC NORTHWEST OF THE UNITED STATES INSTEAD OF CENTRAL CALIFORNIA AS IN PRECEDING DAYS. A FRONTAL SYSTEM, MEAN- DERING FROM IDAHO THROUGH OKLAHOMA AND GEORGIA, SEPARATES COLD POLAR AND ARCTIC AIR FROM MUCH WARMER TROPICAL AIR TO THE SOUTH. THE WARM AIR IS CAUSING SNOW TO MELT IN MUCH OF THE WEST.

The Drought Severity (Long-Term, Palmer) Index

Lyle M. Denny and Thomas R. Heddinghaus

The Drought Severity or Palmer Index is an index of meteorological drought (or moisture excess) and indicates prolonged abnormal conditions affecting water sensitive economics. The index usually ranges from about -6 to +6 with negative values denoting dry spells and positive values, wet spells weather (categories of values are given under the accompanying map). The equations for the index were derived from monthly average data and based on the concept of a balance between moisture supply and demand (Palmer, 1965). The equations have been modified to compute the index on a weekly basis for publication in the Bulletin. Input data consists of weekly temperature averages and precipitation totals for 350 climate divisions in the United States and Puerto Rico.

The index is a sum of the current moisture anomaly and a portion of the previous index to include the effect of the duration of the drought or wet spell. The moisture anomaly is the product of a climate weighting factor and the moisture departure. The weighting factor allows the index to have a reasonably comparable significance for different locations and time of year. An index value for a division in Florida would have the same local implication as a similar value in a more arid division in western Kansas. The moisture departure is the difference of water supply and demand. Supply is precipitation and stored soil moisture, and demand is the potential evapotranspiration, the amount needed to recharge the soil, and runoff needed to keep the rivers, lakes, and reservoirs at a normal level.

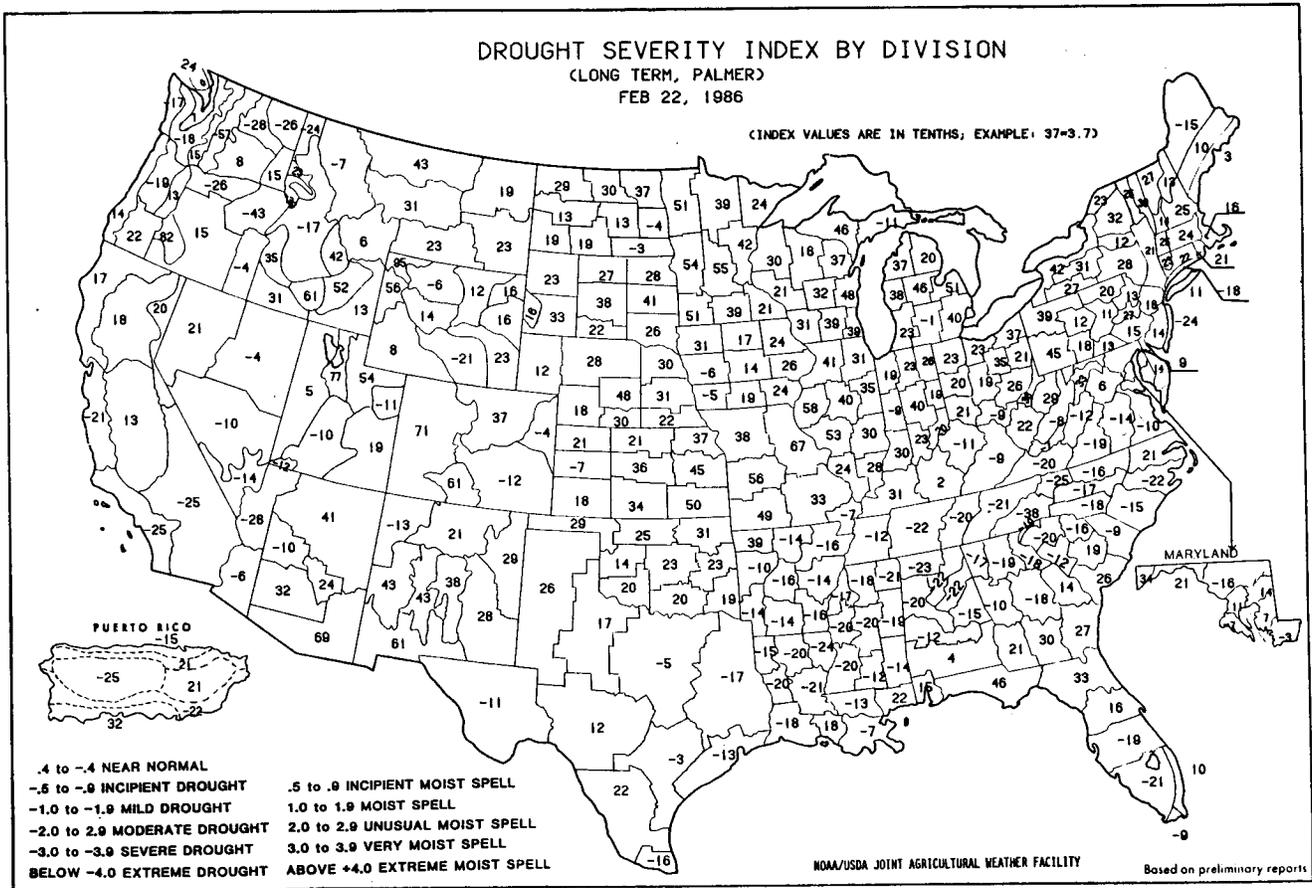
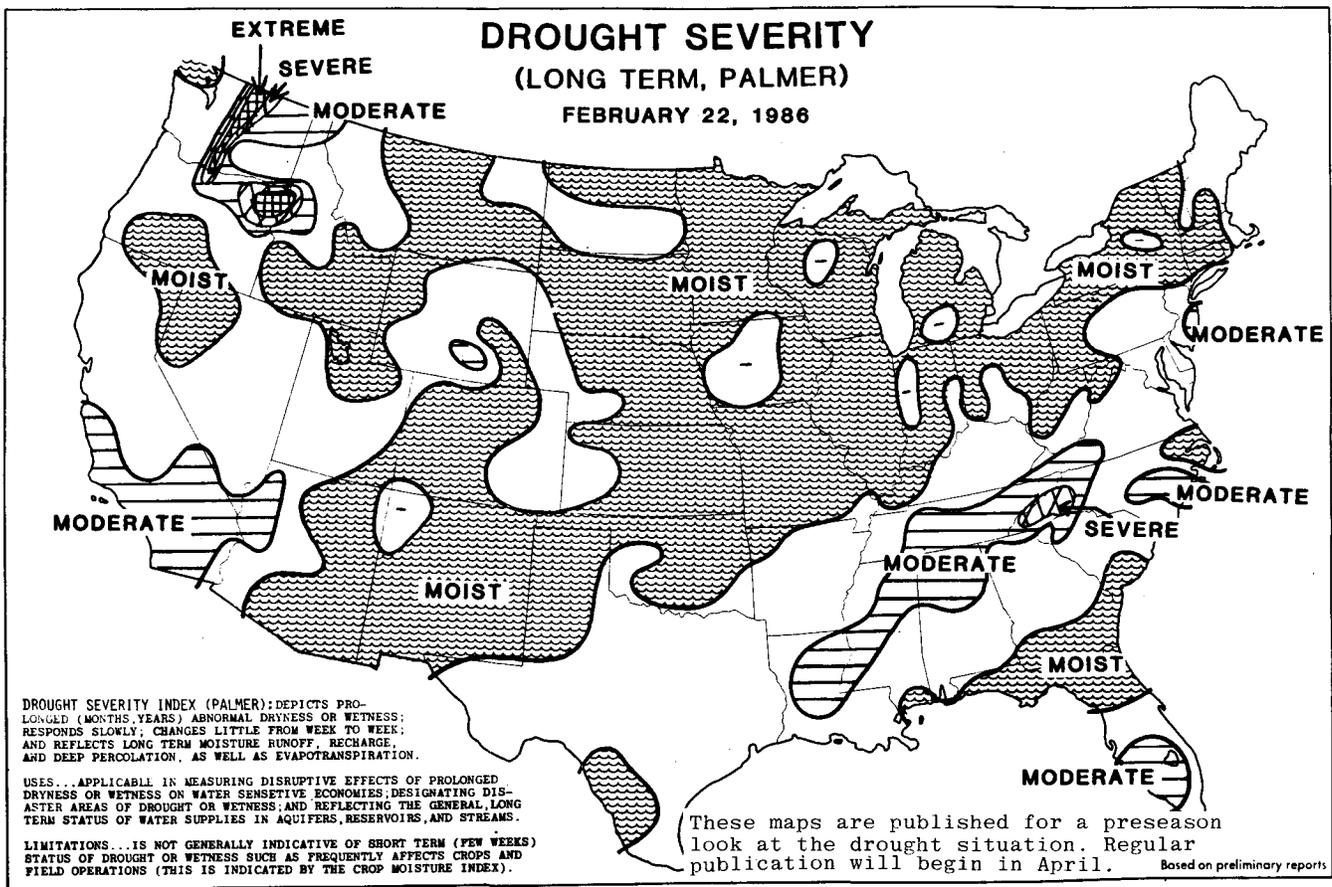
The index is measured from the start of a "wet" or "dry" spell and is sometimes ambiguous until a weather spell is established. A week of normal or better rainfall is welcome in an area that has experienced a long drought, but may be only a brief respite and not the end of the drought. Once the weather spell is established (by computing a 100 percent "probability" that an opposite spell has ended), the final value is assigned. To make the program have a real-time significance, a value is assigned based on a greater than 50 percent "probability" that the opposite weather spell has ended. This is not entirely satisfactory, but it does allow the index to have a value when there is a doubt that it should be positive or negative.

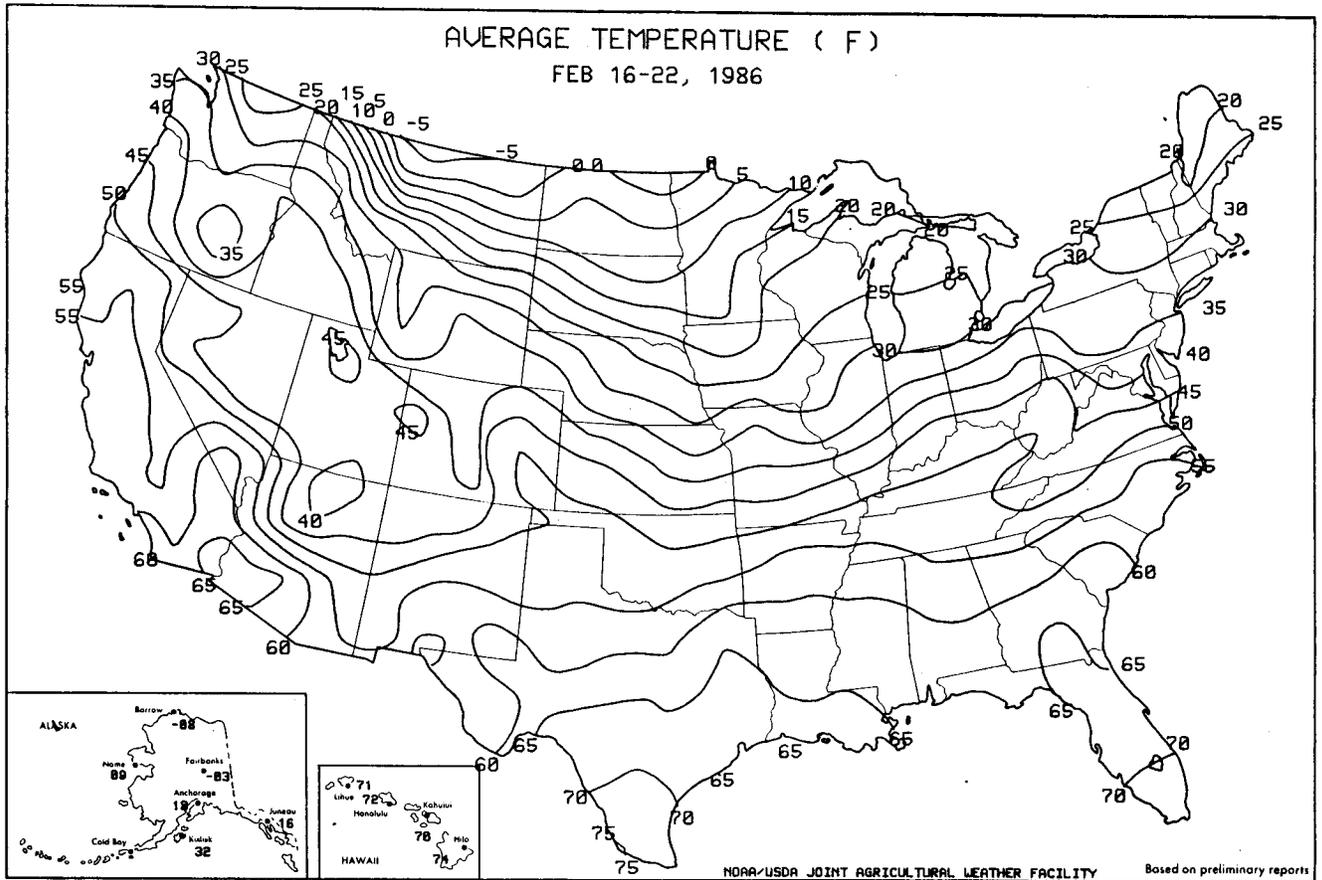
One aspect that should be noted, is that the demand part of the computations includes three parameters: potential evapotranspiration, recharge of soil moisture, and runoff--any one of which may produce negative values. If only enough rain fell to satisfy the expected evapotranspiration but not enough to supply the recharge and runoff, then a negative index would result. If such an odd situation continued, agriculture would progress at a normal pace but a worsening drought would be indicated. Shallow wells and springs would dry and the levels of rivers, lakes, and reservoirs would fall. Serious economic stress to the livestock trade, industries, and cities would eventually result. Then if rainfall fell below the minimum needed for agriculture, crops would suffer drastic and rapid decline because there would be no reserve water in the soil. Such a situation, to some extent, occurred during the Northeast drought in the mid-1960's when New York City almost ran out of water.

A detailed explanation and examination of the index is given by Alley (1984). Both Alley and Karl (1983) address the sensitivity of the index and list some limitations.

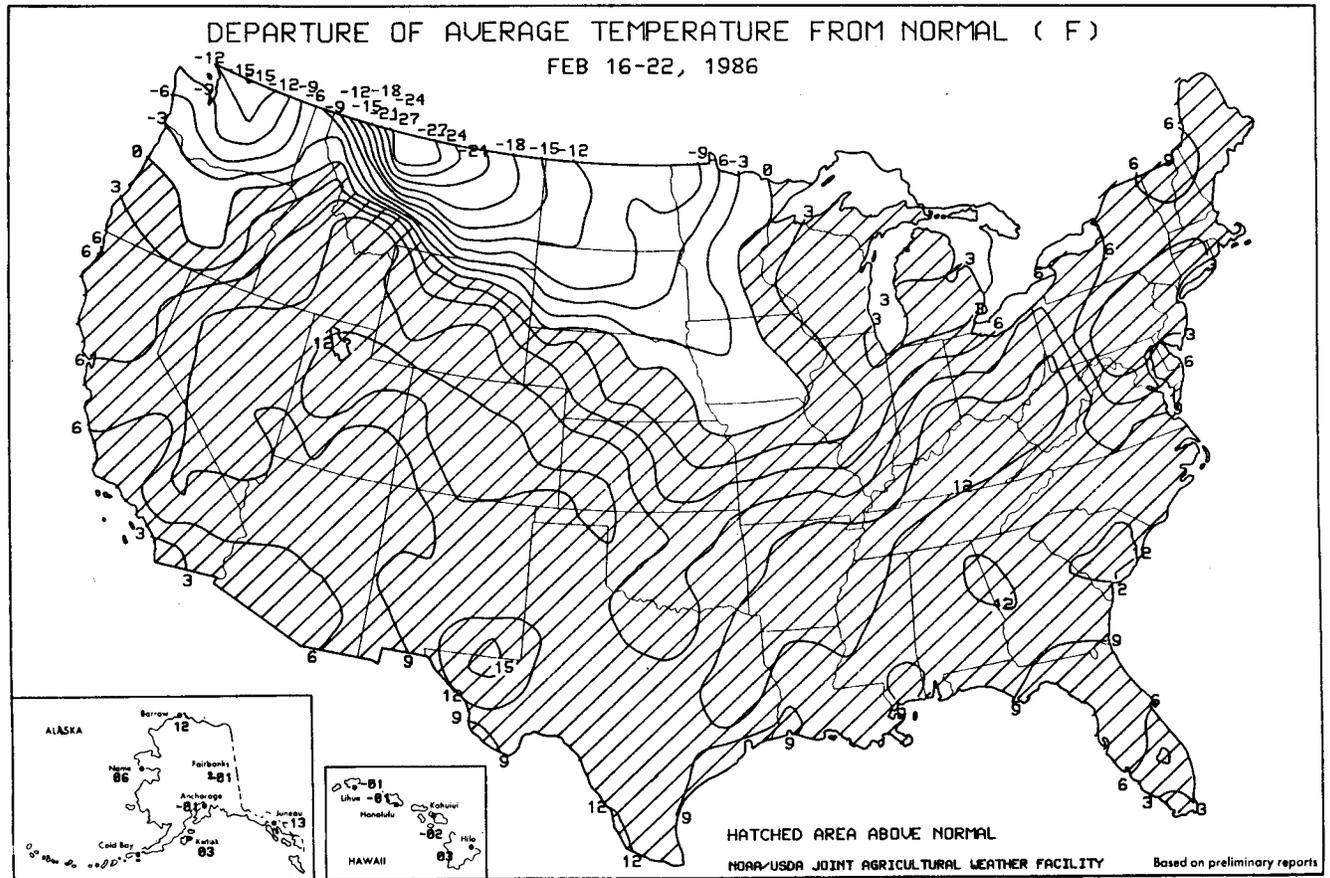
References

- Alley, W., 1984: The Palmer Drought Severity Index: limitations and assumptions. *Journal of Climate and Applied Meteorology*, 23, 1100-1109.
- Karl, T.R., 1983: Some spatial characteristics of drought duration in the United States. *Journal of Climate and Applied Meteorology*, 22, 1356-1366.
- Palmer, W.C., 1965: Meteorological drought. Weather Bureau Research Paper No. 45, U.S. Dept. of Commerce, Washington, DC, 58.





Point values may differ on these computerized maps from the reported values in the tables.



Weather Data for the Week Ending February 22, 1986

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	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 Dec. 1	PCT. NORMAL SINCE Dec. 1	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	69	46	78	32	57	10	.6	-.6	.5	5.7	41	2.8	32	91	55	0	1	2	0
MOBILE	72	54	78	39	63	9	1.5	-.7	.5	11.2	81	6.8	82	99	68	0	2	2	1
MONTGOMERY	71	49	77	32	60	10	1.7	-.5	.9	11.9	96	7.2	95	97	59	0	1	2	2
AK ANCHORAGE	25	10	35	1	18	-1	0	0	0	1.9	71	.4	25	84	47	0	7	0	0
BARROW	-2	-13	5	-23	-8	13	T	0	T	.5	82	.3	75	83	73	0	7	2	0
FAIRBANKS	9	-15	24	-23	-3	-1	T	T	T	.3	16	.2	22	83	51	0	7	0	0
JUNEAU	23	10	30	5	16	-13	T	T	T	17.2	152	8.0	119	50	23	0	7	0	0
KODIAK	40	24	52	12	32	3	.7	-.8	.3	35.3	179	16.5	122	94	50	0	7	4	0
NOME	18	0	23	-4	9	6	0	0	0	2.3	118	1.0	77	87	57	0	7	0	0
AZ PHOENIX	74	52	78	48	63	7	-.1	-.1	-.1	2.1	105	1.3	108	82	31	0	0	1	0
PRESCOTT	60	35	65	27	47	8	-.1	-.3	-.1	1.2	26	1.1	38	88	41	0	2	1	0
TUCSON	74	46	82	37	60	6	0	0	0	2.3	100	2.1	162	76	26	0	0	0	0
YUMA	79	54	83	50	66	6	0	0	0	.7	69	.4	67	63	27	0	0	0	0
AR FORT SMITH	69	38	80	30	53	10	0	0	0	4.2	63	3.8	100	91	40	0	2	0	0
LITTLE ROCK	71	46	83	32	58	13	.2	-.8	.2	6.7	64	3.5	53	82	50	0	1	1	0
CA BAKERSFIELD	66	48	71	39	57	3	T	T	T	1.8	73	1.6	84	94	54	0	0	2	0
EUREKA	59	51	62	49	55	6	5.7	4.5	2.1	20.2	116	17.4	155	89	74	0	0	7	3
FRESNO	65	51	67	40	58	7	1.0	.5	.5	6.5	126	5.8	166	90	61	0	0	4	1
LOS ANGELES	66	54	75	50	60	3	.3	-.3	.2	8.1	121	7.7	151	94	68	0	0	3	0
RED BLUFF	60	51	66	48	56	5	1.7	.9	.6	15.4	143	13.0	181	94	73	0	0	5	1
SACRAMENTO	64	51	70	45	57	6	5.9	5.3	2.7	14.7	158	12.4	194	97	71	0	0	4	3
SAN DIEGO	66	54	72	49	60	1	T	T	T	4.4	95	3.3	103	95	60	0	0	1	0
SAN FRANCISCO	62	54	67	49	58	6	4.6	3.8	1.9	13.9	128	12.2	167	94	75	0	0	5	3
CO DENVER	58	33	69	17	46	11	-.4	-.2	-.4	1.5	97	.9	90	63	29	0	3	1	0
GRAND JUNCTION	57	36	64	26	46	11	T	T	T	1.2	72	.5	45	82	35	0	2	0	0
PUEBLO	67	34	76	20	50	14	-.1	0	-.1	.7	84	-.4	80	67	19	0	3	1	0
CT BRIDGEPORT	37	29	43	19	33	2	1.5	.8	-.7	6.7	72	5.4	96	89	69	0	4	4	1
HARTFORD	35	27	39	15	31	3	1.7	.8	-.6	9.7	95	8.4	140	88	63	0	6	5	2
DC WASHINGTON	46	35	56	27	40	2	1.2	.5	-.5	6.0	75	5.3	110	96	68	0	3	6	1
FL APALACHICOLA	70	57	75	39	64	8	.8	-.2	.3	13.3	135	9.1	144	99	80	0	0	3	0
DAYTONA BEACH	78	55	84	44	66	7	.3	-.6	-.2	10.1	144	8.1	169	99	56	0	0	2	0
JACKSONVILLE	78	52	82	35	65	10	-.1	-.8	-.1	12.4	148	8.8	152	98	48	0	0	1	0
KEY WEST	79	63	82	58	71	1	.7	-.2	.7	4.7	95	2.5	76	98	63	0	0	1	1
MIAMI	81	61	83	54	71	3	.9	-.4	-.8	10.2	183	6.8	184	96	53	0	0	2	1
ORLANDO	80	57	83	45	69	7	.1	-.6	.1	12.3	202	8.8	210	97	47	0	0	1	0
TALLAHASSEE	75	51	80	28	63	9	1.1	-.2	.6	19.5	149	12.3	145	100	51	0	1	3	1
TAMPA	78	61	80	45	69	8	.3	-.6	-.2	4.8	72	3.7	82	97	57	0	0	2	0
WEST PALM BEACH	79	62	84	57	71	5	1.4	.7	1.2	9.2	130	7.8	163	96	55	0	0	2	1
GA ATLANTA	68	47	78	29	57	12	.3	-.8	.3	5.7	45	3.4	41	95	50	0	1	2	0
AUGUSTA	75	45	80	26	60	12	-.1	-1.0	-.1	5.5	53	3.9	55	98	43	0	1	3	0
MACON	74	48	80	27	61	11	.6	-.6	-.4	8.6	73	5.6	72	97	48	0	1	3	0
SAVANNAH	77	52	79	33	64	12	.3	-.5	.3	9.2	111	7.2	131	98	43	0	0	2	0
HI HILO	83	65	90	59	74	3	.5	-3.1	.2	7.7	24	5.3	27	88	48	1	0	2	0
HONOLULU	81	63	84	56	72	-1	-.1	-.6	-.1	1.5	16	1.4	24	88	50	0	0	1	1
KAHULUI	80	60	83	53	70	-2	-.2	-.6	-.2	2.8	29	1.9	28	92	51	0	0	1	0
LIHUE	80	62	86	56	71	-1	.6	-.3	.6	1.6	11	1.2	13	82	49	0	0	1	0
ID BOISE	50	37	57	29	43	6	3.1	2.9	1.3	6.5	168	5.3	212	94	60	0	2	6	2
LEWISTON	44	30	51	20	37	-3	-.2	0	-.1	2.0	58	1.6	76	88	60	0	4	4	0
POCATELLO	47	35	55	32	41	10	1.6	1.4	-.5	5.0	180	3.8	211	95	62	0	1	7	1
IL CHICAGO	35	25	40	17	30	3	.8	-.4	-.4	4.0	85	2.5	96	96	78	0	6	3	0
MOLINE	34	24	41	15	29	3	-.4	0	-.3	4.9	109	2.7	104	94	73	0	6	4	0
PEORIA	37	24	50	12	31	3	-.2	-.2	-.1	3.9	84	1.6	62	99	78	0	6	3	0
QUINCY	37	19	52	3	28	-2	-.3	-.1	-.2	4.4	106	2.0	83	97	73	0	7	2	0
ROCKFORD	33	24	39	13	28	4	-.5	-.3	-.4	5.1	122	2.9	126	99	79	0	6	3	0
SPRINGFIELD	41	26	62	17	34	3	-.1	-.4	-.1	3.8	76	1.3	45	97	75	0	5	2	0
IN EVANSVILLE	55	38	69	18	47	11	-.1	-.7	-.1	8.1	93	6.4	121	96	69	0	2	1	0
FORT WAYNE	39	26	50	13	33	5	.7	.3	.3	6.0	99	3.3	92	100	85	0	4	5	0
INDIANAPOLIS	49	32	62	20	41	10	-.2	-.4	-.1	6.5	86	3.2	71	98	75	0	3	4	0
SOUTH BEND	36	24	45	10	30	2	.7	.3	.3	5.8	83	3.3	83	97	74	0	5	4	0
IA DES MOINES	30	18	33	4	24	-2	T	T	T	3.2	111	1.9	106	91	67	0	7	0	0
SIoux CITY	28	16	35	6	22	-3	T	T	T	1.3	65	.8	62	95	68	0	7	0	0
WATERLOO	29	17	33	-1	23	-2	T	T	T	4.0	146	2.7	169	94	72	0	7	1	0
KS CONCORDIA	46	24	71	8	35	2	T	T	T	1.7	89	1.3	108	94	50	0	7	1	0
DODGE CITY	64	30	77	13	47	11	T	T	T	.6	40	.4	50	82	29	0	3	0	0
GOODLAND	59	26	75	13	42	9	-.1	0	-.1	.9	86	.4	67	85	32	0	4	1	0
TOPEKA	45	25	68	15	35	1	T	T	T	2.3	78	1.6	100	97	56	0	7	1	0
WICHITA	56	28	69	18	42	6	T	T	T	1.9	83	1.3	100	92	48	0	4	0	0
KY BOWLING GREEN	61	38	70	17	49	11	-.4	-.6	-.4	6.1	50	4.4	58	96	63	0	2	1	0
LEXINGTON	58	39	69	25	49	13	-.1	-.8	0	3.9	40	2.8	47	91	60	0	3	3	0
LOUISVILLE	60	39	72	21	50	13	T	T	T	5.6	59	4.6	78	89	57	0	2	2	0
LA ALEXANDRIA	74	55	82	40	64	9	T	T	T	8.9	64	3.3	37	89	58	0	0	0	0
BATON ROUGE	75	58	79	43	66	12	T	T	T	9.9	73	5.2	61	93	60	0	0	0	0
LAKE CHARLES	72	57	77	44	65	10	T	T	T	7.4	59	3.7	50	98	74	0	0	1	0
NEW ORLEANS	74	58	80	42	66	11	-.1	-.3	-.1	11.2	78	6.4	70	96	66	0	0	2	0

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

Weather Data for the Week Ending February 22, 1986

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS				
	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 Dec. 1	PCT. NORMAL SINCE Dec. 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
ME SHREVEPORT	77	51	89	39	64	13	0	-.8	0	7.3	69	3.9	57	90	39	0	0	0	0
ME CARIBOU	28	9	40	-3	19	5	.5	-.1	-.4	8.2	114	5.9	148	81	47	0	7	2	0
ME PORTLAND	34	21	40	11	28	4	1.4	-.5	1.0	11.5	104	9.1	138	92	56	0	7	4	0
MD BALTIMORE	43	32	53	18	38	2	1.2	-.5	-.4	6.3	73	5.5	104	95	67	0	3	4	0
MD SALISBURY	54	34	66	18	44	7	.6	-.2	-.3	8.8	92	7.9	134	97	62	0	3	6	0
MA BOSTON	37	29	44	21	33	2	1.9	1.0	-.7	7.5	66	6.2	90	93	66	0	6	2	3
MA CHATHAM	40	31	43	21	35	4	1.6	-.6	-.7	7.0	56	5.5	72	97	74	0	2	4	0
MI ALPENA	30	15	35	-6	23	4	.3	-.1	-.3	4.5	97	1.9	70	96	74	0	7	1	2
MI DETROIT	34	24	43	13	29	2	1.5	1.1	-.5	5.9	104	4.4	138	96	76	0	6	6	0
MI FLINT	32	20	41	2	26	2	.7	-.4	-.4	4.6	97	3.2	119	98	77	0	5	3	1
MI GRAND RAPIDS	31	19	41	2	25	1	.9	-.5	-.4	6.2	111	4.2	135	96	80	0	7	5	0
MI HOUGHTON LAKE	30	17	41	-1	24	5	.5	-.1	-.4	4.4	101	2.4	96	95	72	0	7	2	0
MI LANSING	31	19	38	1	25	1	.7	-.3	-.4	4.3	84	3.0	103	99	79	0	6	4	0
MI MARQUETTE	29	12	36	-2	21	6	.6	-.1	-.4	7.6	129	3.6	106	96	73	0	7	4	0
MI MUSKOGON	32	20	42	6	26	1	.8	-.4	-.5	6.3	100	3.3	89	96	71	0	6	4	0
MI SAULT STE. MARIE	27	11	38	-7	19	4	-.4	0	-.4	6.0	98	2.5	71	96	69	0	7	3	0
MN ALEXANDRIA	18	2	25	-13	10	-4	-.7	-.6	-.7	3.3	157	2.0	143	90	74	0	7	2	1
MN DULUTH	22	2	33	-22	12	-1	-.3	-.1	-.2	1.9	61	1.1	58	89	63	0	7	4	0
MN INT'L FALLS	17	-5	27	-22	6	-3	-.6	-.4	-.3	1.8	78	1.3	93	92	61	0	7	4	0
MN MINNEAPOLIS	25	12	31	-3	19	0	.2	0	-.1	2.8	122	1.6	114	93	68	0	7	4	0
MN ROCHESTER	27	14	35	-1	20	2	.1	-.1	-.1	2.2	105	1.0	83	95	73	0	7	3	0
MS GREENWOOD	70	50	80	31	60	13	T	-1.1	T	5.9	42	2.0	23	90	53	0	1	0	0
MS JACKSON	73	51	83	33	62	12	T	-1.1	T	5.8	42	2.2	26	97	55	0	0	1	0
MS MERIDIAN	72	51	81	37	61	12	T	-1.0	T	7.7	54	3.4	40	96	61	0	0	1	0
MO CAPE GIRARDEAU	60	38	70	24	49	--	T	-.8	T	5.4	61	3.7	73	97	71	0	3	1	0
MO COLUMBIA	49	26	67	18	38	4	T	-.5	T	7.0	144	3.7	123	95	65	0	6	1	0
MO KANSAS CITY	43	23	58	13	33	-1	.1	-.3	-.1	2.5	74	1.2	60	96	62	0	7	1	0
MO SAINT LOUIS	51	29	71	23	40	5	T	-.6	T	8.5	153	4.8	145	97	60	0	4	1	0
MO SPRINGFIELD	59	30	73	21	44	7	T	-.6	T	5.0	87	1.9	59	93	46	0	3	0	0
MT BILLINGS	30	4	47	-1	17	-13	-.3	-.2	-.2	2.3	97	2.1	131	84	58	0	7	3	0
MT GLASGOW	7	-11	16	-27	-2	-21	-.2	-.1	-.1	1.2	108	.7	88	85	69	0	7	4	0
MT GREAT FALLS	13	-9	40	-22	2	-26	.1	-.1	-.1	1.7	72	1.3	81	84	67	0	7	3	0
MT HAVRE	5	-15	24	-30	-5	-27	T	-.1	T	.5	33	.4	44	80	50	0	7	1	0
MT HELENA	26	-1	51	-19	13	-15	-.4	-.4	-.2	1.8	114	1.5	150	96	61	0	7	4	0
MT KALISPELL	33	12	41	-10	23	-5	.5	-.3	-.3	4.5	110	3.8	152	91	53	0	7	5	0
MT MILES CITY	20	-3	35	-15	9	-15	.6	-.4	-.2	1.7	106	1.2	120	86	63	0	7	4	0
MT MISSOULA	37	22	48	6	29	0	.5	-.3	-.2	3.0	91	2.6	124	99	67	0	7	5	0
NE GRAND ISLAND	38	22	56	10	30	1	T	-.2	T	.8	42	.5	45	92	60	0	7	5	0
NE LINCOLN	37	19	54	6	28	0	T	-.3	T	.9	42	.5	36	93	60	0	7	0	0
NE NORFOLK	32	18	50	6	25	-1	T	-.2	T	1.7	96	1.2	109	89	63	0	7	0	0
NE NORTH PLATTE	42	19	50	9	31	2	T	-.1	T	1.8	148	1.0	125	90	56	0	7	1	0
NE OMAHA	33	18	43	4	26	-1	T	-.3	T	1.2	55	.8	57	92	68	0	7	0	0
NE SCOTTSBLUFF	50	23	59	13	37	5	.2	-.1	-.2	3.0	253	1.9	271	88	45	0	6	3	0
NE VALENTINE	40	13	50	2	27	1	.1	-.1	-.1	.9	85	.6	86	80	58	0	7	1	0
NV ELY	49	32	54	26	41	11	.2	0	.2	1.6	83	1.0	83	87	45	0	3	3	0
NV LAS VEGAS	71	50	77	41	61	10	0	-.1	0	.4	34	.4	44	58	24	0	1	0	0
NV RENO	52	38	59	32	45	7	3.1	2.9	1.3	5.8	180	5.2	260	88	51	0	1	5	3
NV WINNEMUCCA	52	40	56	33	46	9	.5	-.3	-.4	2.0	87	1.2	86	81	46	0	0	3	0
NH CONCORD	33	22	39	9	27	4	1.2	-.6	-.9	8.6	106	7.0	149	95	71	0	6	3	1
NJ ATLANTIC CITY	45	32	54	18	38	5	1.2	-.3	-.5	8.2	85	7.3	120	95	70	0	2	5	1
NM ALBUQUERQUE	62	35	69	24	49	9	T	-.1	T	1.4	114	1.2	171	77	23	0	2	1	0
NM CLOVIS	66	38	75	27	52	10	0	-.1	0	1.4	90	1.2	120	76	26	0	2	0	0
NM ROSWELL	75	40	84	33	57	11	0	-.1	0	1.2	170	1.2	240	67	17	0	0	0	0
NY ALBANY	35	25	39	16	30	6	1.9	1.3	1.1	8.2	115	6.2	151	98	73	0	6	6	1
NY BINGHAMTON	33	22	41	8	28	5	1.8	1.2	.9	8.1	112	5.9	137	98	84	0	5	7	1
NY BUFFALO	38	23	49	8	31	6	.8	-.2	-.4	9.8	117	4.8	98	99	79	0	4	5	0
NY NEW YORK	38	31	41	22	35	7	1.6	-.8	-.8	8.0	87	7.3	133	94	70	0	3	6	1
NY ROCHESTER	39	24	49	12	32	7	.7	-.1	-.4	5.3	79	3.3	80	96	76	0	6	4	0
NY SYRACUSE	37	24	44	7	31	6	1.0	-.3	-.5	6.2	78	4.4	94	98	75	0	4	5	1
NC ASHEVILLE	64	37	77	20	51	11	.8	-.1	-.6	3.6	37	2.9	47	99	43	0	1	2	1
NC CHARLOTTE	67	41	75	26	54	10	.2	-.7	-.2	2.8	28	1.9	28	93	52	0	1	3	0
NC GREENSBORO	60	39	68	24	50	9	.5	-.4	-.3	3.6	38	2.1	34	97	57	0	1	3	0
NC HATTERAS	64	45	72	27	54	8	.6	-.5	-.3	7.5	60	6.8	85	96	71	0	1	3	0
NC NEW BERN	68	45	75	26	57	10	.3	-.7	-.2	5.1	47	4.5	63	97	52	0	1	4	0
NC RALEIGH	65	42	73	23	53	11	.5	-.4	-.3	4.4	47	3.6	58	97	55	0	1	2	0
NC WILMINGTON	70	45	77	29	58	10	1.3	-.4	1.1	5.7	59	4.4	70	96	56	0	1	2	1
ND BISMARCK	14	-3	31	-24	5	-11	.2	-.1	-.1	1.0	67	.6	67	84	67	0	7	4	0
ND FARGO	12	-2	30	-15	5	-8	.2	-.2	-.1	1.7	116	1.1	122	86	70	0	7	5	0
ND GRAND FORKS	10	-10	27	-26	0	-11	.3	-.3	-.1	1.3	70	1.0	83	90	72	0	7	5	0
ND WILLISTON	12	-11	26	-32	0	-16	.5	-.3	-.2	1.6	106	1.0	100	85	66	0	7	5	0
OH AKRON-CANTON	44	29	52	18	37	9	.9	-.5	-.5	7.2	105	4.4	105	99	82	0	3	5	0
OH CINCINNATI	54	37	65	20	46	12	1.0	-.9	-.5	5.1	63	3.6	71	94	66	0	3	2	0
OH CLEVELAND	42	28	57	16	35	7	1.4	-.8	-.5	7.9	113	5.2	124	96	77	0	5	5	0
OH COLUMBUS	50	33	62	21	41	11	.6	-.1	-.3	6.1	86	4.3	98	95	74	0	3	5	0

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

Weather Data for the Week Ending February 22, 1986

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	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 Dec. 1	PCT. NORMAL SINCE Dec. 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERA- TURE °F		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	50	33	60	19	41	11	.8	.3	.4	7.1	106	4.9	117	96	76	0	3	5	0
TOLEDO	36	26	46	13	31	5	1.2	.8	.4	4.9	82	3.3	97	100	84	0	4	6	0
YOUNGSTOWN	44	29	52	15	37	10	.9	.3	.5	5.1	71	3.1	70	98	80	0	3	4	0
OK OKLAHOMA CITY	68	36	83	21	52	10	0	0	-.4	.9	28	.6	32	81	33	0	3	0	0
TULSA	65	34	76	22	50	0	0	0	-.5	0	2.6	.6	46	87	39	0	3	0	0
OR ASTORIA	47	35	52	29	41	0	2.6	.8	1.0	19.4	67	16.8	95	93	65	0	2	4	3
BURNS	39	29	45	15	34	0	2.1	2.1	1.8	5.0	300	4.3	538	—	—	0	3	6	1
MEDFORD	50	42	56	37	46	0	4.2	3.7	1.5	8.0	93	7.2	141	98	76	0	0	7	3
PENDLETON	43	32	56	21	38	0	.8	.5	.3	4.8	110	3.5	135	93	66	0	4	5	0
PORTLAND	46	34	57	29	40	0	2.0	1.1	.9	10.9	70	8.7	94	98	68	0	3	5	2
SALEM	48	37	58	30	43	0	4.5	3.4	1.8	16.4	92	13.9	130	95	72	0	2	5	2
PA ALLENTOWN	36	27	40	11	32	2	2.6	1.8	.9	10.1	107	8.5	149	94	73	0	4	7	2
ERIE	40	24	51	10	32	7	.6	0	.3	7.2	98	4.4	107	98	79	0	4	5	0
HARRISBURG	36	30	40	14	33	1	2.2	1.5	.7	8.0	96	6.6	129	89	71	0	3	6	2
PHILADELPHIA	42	29	49	17	36	2	1.2	.5	.8	8.4	96	7.5	142	94	70	0	4	6	0
PITTSBURGH	47	33	56	19	40	11	1.2	.6	.5	7.8	107	5.5	117	92	69	0	3	4	2
SCRANTON	36	26	41	14	31	4	1.7	1.1	.6	7.1	111	5.1	134	97	74	0	4	7	1
RI PROVIDENCE	37	29	44	19	33	3	1.6	.6	.8	10.6	93	9.2	133	90	63	0	7	4	2
SC CHARLESTON	75	50	79	34	62	12	.1	-.8	.1	7.0	78	5.8	98	98	47	0	0	0	0
COLUMBIA	74	45	80	26	59	12	.7	-1.0	T	3.3	30	2.5	33	96	41	0	1	1	0
FLORENCE	74	47	80	33	60	13	.6	-.8	T	3.1	34	2.2	36	94	46	0	0	0	0
GREENVILLE	67	43	75	25	55	10	.7	-.5	.4	4.0	34	2.5	33	94	49	0	1	2	0
SD ABERDEEN	15	1	28	-11	8	0	.5	-.4	.4	1.6	115	1.1	110	91	73	0	7	2	0
HURON	21	6	32	-4	13	0	.9	.3	.1	1.5	97	.8	80	92	68	0	7	3	0
RAPID CITY	31	10	49	3	20	0	.4	-.2	T	2.1	156	1.3	144	92	69	0	7	2	0
SIOUX FALLS	24	10	32	0	17	0	T	-.2	T	1.2	64	.8	67	89	70	0	7	1	0
TN CHATTANOOGA	66	42	78	25	54	11	2.0	.8	1.9	6.9	49	4.5	51	97	49	0	1	2	1
KNOXVILLE	64	40	75	20	52	10	2.0	1.0	1.7	6.9	56	4.6	58	97	55	0	3	0	1
MEMPHIS	67	47	80	35	57	12	T	-1.1	T	6.5	50	3.2	40	94	57	0	0	0	0
NASHVILLE	66	41	78	31	54	12	.5	-.5	.5	4.7	38	3.8	50	90	53	0	2	1	0
TX ABILENE	75	44	88	26	59	11	0	-.2	0	1.6	60	1.5	83	62	22	0	2	0	0
AMARILLO	67	35	78	22	51	10	0	-.1	0	1.3	91	1.0	111	78	26	0	3	0	0
AUSTIN	81	52	97	38	66	12	0	-.7	T	2.7	47	1.6	44	72	29	3	0	0	0
BEAUMONT	72	58	78	46	65	9	.1	-.9	.1	5.7	49	2.9	40	99	65	0	0	0	0
BROWNSVILLE	83	62	94	48	73	9	0	-.4	T	1.7	46	1.3	52	96	47	1	-.4	0	0
CORPUS CHRISTI	83	56	97	46	69	9	T	-.4	T	4.4	102	2.8	97	96	41	2	0	0	0
DEL RIO	86	51	97	45	68	12	0	-.2	0	1.8	102	1.8	150	61	16	3	0	0	0
EL PASO	73	46	81	32	60	10	0	-.1	0	.5	39	.4	50	52	18	0	1	0	0
FORT WORTH	74	43	87	30	58	9	0	-.5	0	3.1	64	2.5	78	79	30	0	1	0	0
GALVESTON	68	57	73	50	63	6	0	-.6	T	5.0	59	2.4	50	98	74	0	0	0	0
HOUSTON	80	57	91	44	69	13	0	-.8	T	7.3	77	3.5	60	90	45	1	0	0	0
LUBBOCK	72	39	83	26	55	12	0	-.1	0	1.1	90	.9	113	75	24	0	3	0	0
MIDLAND	77	43	90	26	60	11	0	-.2	0	.5	34	.4	44	64	22	1	2	0	0
SAN ANGELO	79	45	91	30	62	11	0	-.2	0	.9	47	.9	69	61	18	2	1	0	0
SAN ANTONIO	83	48	97	37	66	11	0	-.5	T	3.4	76	3.3	106	74	25	3	0	0	0
VICTORIA	81	55	95	43	68	11	T	-.6	T	4.2	72	1.8	49	96	40	2	0	0	0
WACO	77	45	92	32	61	10	0	-.5	T	6.6	126	4.6	139	87	32	1	1	0	0
WICHITA FALLS	70	39	86	24	54	8	0	-.3	0	1.2	42	1.1	65	71	33	0	3	0	0
UT BLANDING	51	32	56	24	41	7	.1	-.1	.1	1.6	48	1.6	76	86	49	0	4	1	0
CEDAR CITY	54	36	59	26	45	10	0	-.2	T	1.1	57	.7	54	85	42	0	3	1	0
SALT LAKE CITY	55	40	64	30	47	12	.6	-.2	.3	3.5	94	2.1	88	85	48	0	2	5	0
VT BURLINGTON	33	18	40	2	26	7	.6	-.2	.5	6.8	122	5.2	163	88	62	0	5	2	1
VA NORFOLK	59	40	73	25	50	8	1.2	-.4	.5	5.5	58	4.6	73	96	69	0	1	5	1
RICHMOND	55	39	69	22	47	7	.8	0	.4	5.7	63	5.1	89	95	65	0	1	3	0
ROANOKE	56	36	67	22	46	7	.4	-.4	.3	4.3	52	3.5	66	96	58	0	2	3	0
WA COLVILLE	36	18	46	2	27	0	.3	-.1	.1	5.9	101	5.2	153	92	76	0	7	3	0
QUILLAYUTE	41	25	50	16	33	0	1.2	-1.8	.5	25.6	62	22.0	89	99	68	0	6	6	0
SEATTLE-TACOMA	43	31	51	22	37	0	.7	-.3	.3	13.1	83	11.3	119	87	59	0	3	6	0
SPOKANE	34	20	39	6	27	0	.2	-.1	.1	5.4	87	4.8	126	97	66	0	6	4	0
YAKIMA	39	20	46	8	29	0	.3	-.2	.3	3.9	115	2.9	138	93	54	0	7	2	0
WV BECKLEY	55	36	67	19	46	13	.7	-.1	.4	5.6	62	3.9	66	97	56	0	3	4	0
CHARLESTON	61	40	73	17	50	14	1.1	-.3	.5	8.4	91	5.7	97	89	49	0	2	2	0
HUNTINGTON	59	40	67	20	49	13	.3	-.4	.3	6.4	75	4.3	80	95	53	0	2	3	0
PARKERSBURG	53	35	64	21	44	10	.4	-.3	.2	6.5	73	4.6	75	90	64	0	3	4	0
WI GREEN BAY	30	17	36	3	24	5	-.1	-.2	.1	2.8	82	1.0	50	95	70	0	6	4	0
LA CROSSE	31	16	37	-1	24	3	-.1	-.1	.1	2.3	86	1.2	75	89	65	0	7	3	0
MADISON	31	20	36	4	25	4	-.4	-.1	.3	5.5	163	3.2	168	97	75	0	7	3	0
MILWAUKEE	32	23	37	13	28	4	1.0	-.6	.6	7.1	151	4.5	173	96	79	0	6	3	1
WAUSAU	29	13	37	-5	21	4	.2	-.1	.1	2.3	79	1.1	69	88	66	0	7	3	0
WY CASPER	47	27	53	10	37	9	.3	-.1	.3	2.3	159	1.2	133	83	52	0	4	2	0
CHEYENNE	48	27	62	16	38	8	.1	-.1	0	1.4	131	.6	86	85	39	0	6	2	0
LANDER	44	25	50	8	34	8	.6	-.5	.5	3.0	203	1.3	144	82	43	0	4	3	1
SHERIDAN	33	7	53	-3	20	0	-.7	-.1	.1	1.2	58	.8	62	91	52	0	7	1	0
PR SAN JUAN	83	68	84	64	75	0	1.0	.6	.5	5.4	60	3.3	73	94	58	0	0	5	0

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

HEATING DEGREE DAY DATA WEEKLY SUMMARY
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

LAST DATE OF DATA COLLECTION PERIOD IS 2-22-1986
ACCUMULATIONS ARE FROM JULY 1
** = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL, WEEK TOTAL, WEEK DEV, WEEK FROM, WEEK TO, CUM TOTAL, CUM DEV, CUM FROM, CUM TO, CUM PRCT. Lists cities from AL BIRMINGHAM to MT HELENA with corresponding weather data.

National Agricultural Summary

February 17-23, 1986

HIGHLIGHTS: Precipitation curtailed fieldwork across the Southeast and along the east coast. However, the moisture and warmer temperatures were beneficial for crop growth. Corn and sorghum planting was underway in Texas. A few fields of cotton were seeded in Arizona. Snow protected wheat adequately in the northern third of the Nation. Small grains lacked protection in the central Great Plains when temperatures dipped well below freezing. Rain continued in central and northern California but eased as the week ended. Rain and strong wind reduced almond pollination. Growers were concerned about reduced pollination in apricots, nectarines, and peaches. Damage to vegetables increased as waters rose to flood stage in some areas. Soil moisture ranged from excessive along the west coast, adequate in central areas, and adequate to surplus in the Eastern States and in the Southeast. Livestock were mostly good. Warmer temperatures eased stress.

SMALL GRAINS: Wheat and other small grains were mostly good to fair. Most small grains in the northern third of the Nation were protected from cold temperatures. However, in the central Plains, small grains lacked snow cover during low temperatures. In the southeast, rain and warm temperatures provided growth and development. Greening of small grains stretched from the Southeast as far north as Oklahoma.

Wheat was fair to good in Texas. In the Plains, small grain new growth was prevalent following moisture from recent snow. Earlier cold temperatures curtailed insect activity, but some light rust problems still exist. Warmer temperatures improved growth in central Texas and in the Blacklands. Oklahoma's wheat was mostly good. Recent snow boosted soil moisture, but additional moisture is needed for growth. Much of the central Plain lacked snow protection, but wheat in Nebraska was mostly good. Wheat in Kansas was subject to freeze damage as temperatures dipped below freezing. Arizona wheat and barley was good to excellent. Thirty percent (%) of Arizona's acreage was in the jointing stage. Moisture stressed small grains on heavy soils in California, but desert dryland small grains looked good. Water damage is expected to be minimal if soils dry quickly.

OTHER CROPS: Flood waters covered much of the agricultural land in the northern half of California which stopped field activities. Arizona's cotton growers pre-irrigated, applied herbicides, and prepared seedbeds. Cotton seeding continued in western Arizona. Corn and sorghum planting was underway in Texas with seeding 5 and 2% completed, respectively. Land preparation was underway in Arkansas, and growers in Missouri fertilized some fields.

Tobacco seedbed preparation and seeding continued as weather permitted in the Carolinas and in Virginia. Georgia tobacco plants were good. In Florida, land preparation for tobacco continued as soils dried.

FRUIT AND NUTS: In California, heavy rain and strong winds were detrimental to almond pollination in the Sacramento and northern San Joaquin Valleys. Growers were concerned about reduced pollination in some varieties of apricots, nectarines, and peaches. Aerial spraying was used to treat almond and apricots for blossom blight, brown rot and shothole fungus. Rain delayed grape pruning and herbicide applications. Citrus harvest was slowed in the northern and central areas, but progress was not interrupted in the desert. Some Navel oranges rotted while hanging on the tree. Citrus shipments slowed in Arizona's central and western areas. Varieties shipped included lemons, grapefruit, tangerines, and Valencia and sweet oranges. Florida citrus groves were good. Moisture was adequate in most areas, but irrigation was needed in the south and in the High Sand Hills. New growth and bloom increased with many groves loaded with bloom buds. Early orange harvest slowed, but grapefruit movement was very active.

Fruit trees began bud swell as far north as Kentucky. South Carolina fruit growers were concerned about trees blooming early, increasing the chance for freeze damage. A few early peach varieties bloomed in central Georgia. Peach trees continued breaking buds in many areas in the Blacklands and in central and east Texas. Dormant sprays were applied in many eastern orchards.

VEGETABLES: Spring-like temperatures and rain was beneficial to Florida's vegetables. Spring planting was drawing to a close in the south but increased in the central areas. Vegetable shipments declined primarily due to reduced supplies of snap beans, cabbage, cauliflower, cucumbers, eggplant, lettuce, peppers, strawberries, and tomatoes. Carrots, celery, sweet corn, escarole, and squash volume increased. In Texas, melon planting neared completion in the Rio Grande Valley and was just beginning in the Winter Garden area. Harvest of carrots and broccoli continued. Trans-Pecos cantaloup planting progressed, and onion transplants were set-out. Onion and potato planting was underway in the Knox-Haskell area. In Arizona, spring lettuce developed well. Seeding drew to a close. Other spring vegetable plantings included potatoes, cantaloups, and watermelons. Rain slowed vegetable harvest in central California. Excessive rain damaged artichoke roots along the central coast. Broccoli volume was moderate with variable quality in Salinas and Santa Maria. Despite rain, broccoli did well in the Firebaugh district, but floods damaged broccoli in Mendota. Rain slowed celery harvest along the south coast and reduced quality. Lettuce harvest was active in the Imperial Valley, but white fly infestation caused fields to have a yellow appearance. Early planted tomatoes were flooded in the northern San Joaquin Valley.

PASTURES AND LIVESTOCK: Warmer temperatures and moisture improved pastures in the Southeast. Livestock was mostly good. Warm weather eased stress and supplemental feeding. Hay supplies were becoming critically short in some northern areas.

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 SRS State Statistical Offices in cooperation with the National Weather Service.

ALABAMA: Rainfall totals exceeded 2.00 in. Huntsville with over 1.00 in. recorded several stations. Temperatures averaged about 10° above normal.

Soil moisture normal. Livestock, poultry generally good.

ARIZONA: Several weak disturbances passed over State but produced only isolated, very light precipitation. Skies partly sunny south, partly cloudy to cloudy north. Temperatures from 3 to 9° above seasonal normals.

Wheat, barley stands good to excellent. Stands established on practically all acreage. Crops jointing west, central, 30% of acreage jointing. Cotton growers busy with pre-irrigation, herbicide application, seedbed preparation. Few fields west planted. Alfalfa good. Sheep grazing continued, insect control prevalent. Hay growers becoming concerned over increased populations of aphids, weevils. Corn planting continued west. Yuma safflower good. Citrus shipments slowed west, central areas. Varieties shipped included lemons, grapefruit, tangerines, Valencia oranges, sweet oranges. Groves good. Pecans shipped from central areas, apple tree pruning advanced southeast. Spring lettuce plantings developing nicely, seeding winding down. Thinning, insect control took place. Other spring vegetable, melon plantings included potatoes, cantaloups, watermelons. Yuma County, Iceberg, Leaf lettuce shipments continued strong. Other mixed vegetables also harvested. Maricopa County, large amounts of mixed vegetables packed at seasonal levels. Lettuce packing Parker should begin 26th. Broccoli harvest continued Eloy-Marana district. Dry onion crop made good progress.

ARKANSAS: Unseasonably mild, spotty rainfall early week. Temperature extremes 23°; 89°. Rainfall none to 0.60 in.

Land preparation underway. Wheat, oats excellent. Pastures excellent. Livestock good. Fruit trees budding.

CALIFORNIA: Torrential rains and major flooding hit northern State early week. Rains ceased over all but north coast late weekend.

Flood waters covered much of agricultural land northern half of State. Wet weather stopped field activities central, north. Considerable flooding. Minimal damage small grains, other field crops expected if can dry. Grain on heavy soils stressed, too much moisture. Desert dry land grain looking good. Some alfalfa cut, baled desert areas. Heavy rains, strong winds detrimental to almond pollination Sacramento, northern San Joaquin Valleys. Damage substantial but will take time to fully assess. Storms halted much fieldwork. Honeybees kept in hives by rain. Growers concerned about reduced pollination some varieties of apricots, nectarines, peaches. Spraying by air observed in apricots, almonds to treat for blossom blight, brown rot, shothole fungus. Pruning of grapes, herbicide applications delayed by rain. Citrus harvest also slowed. Few cases of rot in Navel oranges on trees. Picking of lemons, tangerines continued San Joaquin Valley, weather permitting. Citrus harvest not interrupted desert areas. Artichokes fairly heavy Salinas variable quality, frosted appearance. Excessive rains caused root damage central coast. Asparagus active desert weather warm. Harvest continued Palo Verde Valley good volume, demand.

Rains slowed harvesting Contra Costa, Orange Counties; quality good. Broccoli moderate with variable quality Salinas, Santa Maria. Broccoli doing well despite rains Firebaugh District, some flood damage Mendota. Harvest continued Riverside, but decreased desert as some shippers finished. Carrot harvest active Imperial-Coachella Valley. Cauliflower fairly light Salinas, Santa Maria variable quality. Desert harvesting decreased some shippers finished. Celery Santa Maria very light. Harvest south coast slowed by rain, weakening quality. Lettuce Imperial Valley active with yellowed fields caused by white fly infestation. Cutting Palo Verde Valley light. Spring harvest start March 1. Fall potato movement Tulelake-Butte Valley below last years. Demand moderate, but prices low. Harvest continued White Rose, Red varieties Palo Verde Valley good quality, demand. Strawberry picking slowed by rain south coast. Sweetpotato hotbed preparation being done San Joaquin Valley. Early planted tomato fields flooded San Joaquin Valley, damage to be assessed. Wet conditions halted planting Tulare County. Ranges, pastures saturated with some flooded. Feed lots extremely muddy. Extreme wet conditions hampering supplemental feeding. Stock ponds full to overflowing.

COLORADO: Strong westerly winds dominated weather pattern bring new snow to mountains. Precipitation considerably less lower elevations with only one storm system, 20th produced significant moisture western valley, eastern Plains. Precipitation ranged from 0.39 in. of new moisture with this storm to 4.3 in. mountains. Temperatures varied considerably, most stations reported average temperatures of 10 to 15° above normal.

Wheat mostly good. Major activities care, feeding of livestock.

FLORIDA: Widespread rain statewide on 18th with amounts of 0.25 to 1.00 in. Few lingering, light showers, 19th. Scattered showers again 23rd with rain amounts of 0.10 to 0.50 in. statewide. Temperatures averaged 2 to 5° above normal.

Soil continued wet much of central, eastern Panhandle, upper northern Peninsula. Moisture supplies becoming short some west central Peninsular areas, but elsewhere generally adequate. Soils began drying, land preparation for corn, tobacco, other crops become more active, however, some areas remained too wet for fieldwork. Warmer temperatures stimulated growth of small grains; topdressing with nitrogen resumed. Sugarcane harvest declining rapidly. Small grain pastures grew rapidly; permanent pastures continued to recover as temperatures warmed. Grazing from permanent pastures continued very limited as more time, warmer nights needed for recovery from winter frosts. Conditions mostly fair with few upper Peninsular areas showing poor grazing. Cattle condition showing some improvement seasonally, varied from fair to good statewide. Calving active, increasing. Citrus groves good. Moisture adequate most areas; some irrigation south, and on High Sand Hills. New growth, bloom increasing, many groves loaded with forming bloom buds. Early orange harvest slowing. Grapefruit movement very active. Most Temple harvest going to processing plants. Weather mostly favorable vegetable producing areas. Rain early week southern areas

beneficial. Warm spring like temperatures mostly low 60s, highs to mid 80s. Winter harvest continued southern areas. Spring planting drawing to close south, increasing central areas. Shipments declined from previous week primarily due to reduced supplies of snap beans, cabbage, cauliflower, cucumbers, eggplant, lettuce, peppers, strawberries, tomatoes more than offsetting increases in carrots, celery, sweet corn, escarole, potatoes, squash.

GEORGIA: Temperatures about 13° above normal. Extremes 83° Dublin on afternoon of 20th to 25° several stations on morning of 24th. Rain 1 day north, 2 days central, 3 days south. Some rain totals excess of 1.00 in. north, west central. Elsewhere, amounts under 1.00 in.

Soil moisture short, north central; short to adequate, north; adequate, central, southwest, surplus, southeast. Small grain topdressing and land preparation active as weather and soil conditions permitted. Small grains fair to mostly good. Tobacco plants good. Pasture poor to good, mostly fair. Cattle fair to mostly good. Hogs fair to mostly good. Few early peach varieties blooming central.

HAWAII: Agricultural crops made mostly fair with some poor progress under variable weather conditions. Winds 5 to 20 mph becoming gusty toward weekend as frontal system passed islands. Macadamia, banana, anthurium, nursery operators Hilo and surrounding districts busy with cleanup activities following windstorm week ago. Macadamia, papaya industry Hilo districts suffered damages, production not expected to be seriously affected since trees destroyed were only fraction of total producing trees. Floriculture industries suffered losses to shade structures as well as plant injury. Damage to bananas severe in exposed areas with production expected to drop substantially and not pickup for next six months. Hawaii island Cavendish supplies accounted for over 50% of State's output. Vegetable production to be lower for few weeks. Pineapple, sugarcane being harvested.

IDAHO: Southwesterly flow allowed warm temperatures across most of southern half, northern half remained under influence of cold Canadian air. Contrast caused significantly higher than normal snowfall north, rain lower elevations, south. Southern valleys 10 to 12° warmer than normal, Panhandle and northern mountains averaged 7 to 10° lower than normal. Precipitation amounts above normal entire State.

Conditions remained wet, farm activity virtual standstill. Feeding, caring for livestock comprised major activities. Livestock good with feed supplies short most areas of State. Calving, lambing underway with farm problems despite wet, muddy conditions.

ILLINOIS: Mean temperatures normal to 3° above normal northern half to 3 to 7° above normal south. High temperatures mid 30s north to mid 50s south. Snowfall 2 to 4 in. north, 5 to 8 in. central, none south.

Winter wheat mostly good. Livestock good to fair.

INDIANA: Average temperatures 1 to 2° below normal northwest, 2 to 4° above normal elsewhere. Precipitation variable, mostly 0.30 to 0.60 in.

Fields muddy most of week. State under snow cover late period. Activities limited mostly to indoor work, caring for livestock, usual chores. Overwintering crops greening up before snowfall.

IOWA: Temperatures averaged near normal, precipitation light over east to negligible elsewhere. Diminishing snow cover weekend varied from 6 to 10 in. northeast, none to 2 in. elsewhere. Daily highs mostly 20s and 30s. Coldest 21st with lows to -5° Algona, Decorah.

Livestock good. Farm activities include general livestock care, shop work, machine maintenance, other usual chores.

KANSAS: Temperatures averaged 35 to 38° northeast, 41 to 46° west and south; 5 to 10° above normal west and south, 2 to 4° above normal northeast. Precipitation averaged traces to none south, mostly 0.10 in. or less north.

Wheat subject to freeze damage, wide range of temperatures and no snow cover. Farmers lining up seed supplies for spring planting. Favorable conditions for calving, lambing, marketing crops and livestock.

KENTUCKY: Spring like until cooler on 21st. Temperatures averaged 10 to 15° above normal. Maximum 70s minimum dipped into 20s. Precipitation averaged 0.25 to 0.50 in. Heaviest rain early and over southeast, spots recorded almost 2.00 in. Locations over west varied from 0.10 to 0.50 in.

Agricultural activity minimal, but grasses and fall seeded grains beginning to green. Buds on early trees swelling. Soil moisture ample. Burley markets closing. Winter feed supplies ample. Livestock generally satisfactory condition.

LOUISIANA: High pressure produced no rainfall and above normal temperatures statewide through 22nd. Moderate cold front moved through over weekend producing light rainfall, lower temperatures over southeast, east central areas. Temperatures averaged 9 to 13° above normal. Temperature extremes 30° Red River research station, 89° Shreveport. Almost no precipitation except for southeast averaging 0.10 in. Boothville reported greatest weekly total with 0.39 in.

Main activities: Routine chores, caring for livestock, and preparing for spring planting.

MARYLAND & DELAWARE: **Maryland:** Temperatures averaged 3° above normal over State; lowest temperature 12° Patuxent; highest temperature 69° Patuxent. Precipitation averaged 0.93 in., ranging from 0.20 to 1.89 in.

Fieldwork no days suitable. Topsoil moisture surplus; subsoil moisture surplus. Small grains fair to good. Farmer's main activities: Equipment maintenance and preparing to top-dress small grain crops.

Delaware: Temperatures averaged 2° above normal over State; lowest temperature 13° Georgetown; highest temperature 65° Georgetown. Precipitation averaged 0.77 in., ranging from 0.63 to 0.85 in.

Fieldwork no days suitable. Topsoil moisture surplus, subsoil moisture surplus. Small grain fair to good. Farmers' main activities: Equipment maintenance and preparing to top-dress small grain crops.

MICHIGAN: Temperatures averaged 3° above normal across State. Southern half of State had heavy snowfall beginning of week, moderate snowfall toward end of week.

Major farm activities include marketing grain, hauling manure, attending farm meetings, plowing snow and equipment repair. Livestock good. Feed supplies adequate. Calving continued. Snow covers entire State. Small grain fields good condition.

MINNESOTA: Cool, snowy week. Temperatures averaged 20° above normal southeast, 1° to 9° below normal elsewhere. Temperature extremes -25°; 39°. Precipitation averaged 0.11 in. below normal to 0.36 in. above normal. Snow depth weekend averaged 6 to 22 in.

Little or no activity on late corn harvest. Livestock good. General snow cover protecting hay, winter grains.

MISSISSIPPI: Temperatures well above normal most of week, extremes 23°; 85°. Heavy rains northeast early week. Greatest 24-hour rainfall 2.54 in.

Fieldwork 1.0 days suitable, 2.3 1984, 3.0 avg. Soil moisture surplus. Pastures, livestock good. Wheat good to fair. Supplies of feed grains, roughage adequate to surplus.

MISSOURI: Temperatures ranged from 10° below normal northwest to 10° above normal southeast. Southwest third received no precipitation, rest of State averaged 0.10 in. or less.

Main activity continued to be care of livestock. Some fields being fertilized.

MONTANA: Temperatures continued very cold across Plains, 10° to 27° below normal. Very cold most of week, moderating temperatures last of week. Minimums low 30° to 35° below zero north central and northeast. Most of west, southwest milder temperatures. Southwest temperatures about 5° above normal, west near normal. Precipitation mostly moderate to heavy. Heaviest west with amounts 0.25 to 2.00 in. Precipitation north central, northeast 0.10 to 0.50 in., other areas around 0.50 in.

Winter wheat snow protection 29% fair, 52% good, 18% excellent. Wind damage winter wheat fields 7% none, 60% light, 33% moderate. Winter wheat 67% fair, 33% good. Calving 15% complete, lambing 10% complete. Grazing 5% open, 33% difficult, 63% closed. Hay, roughage supplies mostly short.

NEBRASKA: Temperatures Panhandle 6° above normal, remainder State near normal. Precipitation spotty, only traces except 0.25 in. Panhandle.

Wheat mostly good. Recent snow helped topsoil moisture condition. General chores, livestock care, building and equipment repairs, financial statement and tax preparation.

NEVADA: Moderate to heavy rain beginning of week followed by a series of warm storms that spilled snow and rain to Sierras and rain again to western areas through 20th. Runoff from heavy rains brought western rivers to flood levels. Many areas evacuated, extensive property damage. Precipitation also general over northern, central sections but southern areas dry.

Flooding agricultural areas devastating to newborn calves and lambs. Livestock feeding operations nearly impossible.

NEW ENGLAND: Wet, mild week. Temperatures averaged 3° to 6° above normal across most northern areas, 2° to 3° above normal elsewhere. Precipitation (rainfall and melted water equivalent of snowfall) average between 0.50 to 1.00 in. across western central Maine, northern New Hampshire, western Vermont; between 1.00 to 1.50 in. across coastal Maine, southern New Hampshire, northeastern and southeastern Vermont. Southern areas received most with between 1.50 to 2.13 in.

Farmers tending to livestock and winter chores, readying sugaring equipment.

NEW JERSEY: Temperatures near normal, averaging 32° north, 37° south, 39° coastal. Extremes 13°; 55°. Precipitation above normal, averaging 2.18 in. north, 1.49 in. south, 0.92 in. coastal. Heaviest 24-hour total 1.12 in. 18th, 19th. Heaviest 24-hour snowfall 1 in. 22nd, 23rd. Depth of snow on ground 24th 4 in. extreme northern portion of State.

Inclement weather deterred outside activities. Soil moisture ample to excessive. Farmers caring for livestock, getting machinery ready, ordering supplies.

NEW MEXICO: Average weekly temperatures well above normal statewide. Temperatures 9°, northern mountains, to 86° southeastern Plains. Precipitation none most areas to 0.52 in., northern mountains.

Days suitable for fieldwork 4.3. Soil moisture 39% short, 61% adequate. Barley 27% fair, 73% good. Irrigated wheat 36% fair, 64% good. Dryland wheat 17% poor, 50% fair, 33% good. Onions, lettuce 100% good. Cattle 37% fair, 63% good. Sheep 50% fair, 50% good. Range 21% poor, 58% fair, 21% good.

NEW YORK: Mild, wet. Temperatures averaged about 5° above normal. Highs reached upper 40s several areas. Late cold trend led to sub-zero weather north 22nd. Rain and/or snow on most days. Heavy rains drenched southeast. Weekly precipitation reached 2.00 in. more from southern tire across Catskills into Upper Hudson Valley.

Farm activities included tending livestock, repairing machinery, preparing taxes, and routine farm chores.

NORTH CAROLINA: Temperatures averaged 10° above normal Mountain Region; 8° to 10° above normal Piedmont Region; 7° to 8° above Coastal Plain Region. Precipitation ranged from 0.17 to 2.27 in.

Days suitable for fieldwork 3.4. Soil moisture 13% short, 74% adequate, 13% surplus. Wheat 31% fair, 69% good. Oats 45% fair, 55% good. Barley 2% poor, 42% fair, 56% good. Rye 2% poor, 41% fair, 57% good. Pasture 18% poor, 50% fair, 32% good. Supplies: Feed grains 96% adequate, 4% surplus. Hay, roughage 97% adequate, 3% surplus. Activities: Topdressing small grains, preparing and seeding tobacco beds, applying herbicides to Christmas trees, spreading lime, discing and plowing fields, pruning fruit trees, tending livestock, cutting firewood, mowing, attending meetings, tax preparation, conservation work, machinery repair, other farm maintenance.

NORTH DAKOTA: Temperatures below normal for second week in a row. Averaged from 16° below normal north central and southwest to 10° below normal east central. Lowest temperature 37° below west central 20th. High temperature 39° west central and southwest 21st. Precipitation in form of snow averaged above normal across State. Greatest amount 0.57 in. water equivalent west central.

Additional snow adding to good snow cover of fall seeding crop. Cold stressing livestock. Warmer temperatures in store for week ahead.

OHIO: Temperatures averaged 4° to 8° above normal. Highs averaged upper 30s to low 50s; lows averaged upper 20s to upper 30s. Precipitation water equivalent under 1.00 in., ranging 0.15 to 1.20 in.

Snow cover melted, more arrived with colder weather weekend. No winter stress on crops or livestock. Water absorbed by thawed soils statewide.

OKLAHOMA: Temperatures averaged 50 above normal north central and central to 90 above normal southern third State. No precipitation recorded.

Wheat greening, mostly good. Recent snow boosts soil moisture supplies but additional precipitation needed for wheat and pasture growth. Pastures dormant but hay supplies still average to surplus. Livestock good. Cattle maintaining weight. External parasite problems warrant control measures.

OREGON: Generally 2 to 50 warmer than normal across entire southern half of State, up to 40 cooler than normal over northern half. Heavy rainfall. Excessive snow melt contributed to flooding latter half of week. Laurel Mountain on northern coast heaviest rainfall 7.71 in.; Salem, Eugene rainfall 4.47 in., 6.37 in. respectively; 2.52 in. Klamath Falls; 3.28 in. Lakeview.

Soil moisture adequate to surplus statewide. North central, central areas 1 to 2 ft. of snow on 13th, 14th. Winter wheat crop well protected by snow cover east; little winter kill expected. Some areas expect progress to be behind normal this spring. West, crops very wet; growers continued to spray and fertilize between storms. Training, dormant spraying continued on fruit, berries. Livestock fair to good. Hay supplies extremely low. Spring calving started.

PENNSYLVANIA: Week wet, warm. State average temperature 34, 60 above normal. Precipitation 1.57 in., 0.92 in. above normal.

Activities: Caring for livestock, normal winter chores.

PUERTO RICO: Island average rainfall 0.43 in., 0.12 in. below normal. Highest weekly total 2.07 in. Highest 24-hour total 1.60 in. Temperatures averaged about 75° on coasts, 69° interior division. Mean station temperatures ranged from 61 to 78°. Extremes 47°; 90°. Total rainfall 0.67 in., plus 0.18 in.

SOUTH CAROLINA: Temperatures averaged 10 to 150 above normal across State, dropped near weekend. Rainfall light, varying from 0.50 in. northwest to only a trace southern part of State.

Farmers continued routine winter chores, land preparation for spring planting. Warmer than normal temperatures have fruit growers concerned about trees blooming too early and suffering possible freeze damage.

SOUTH DAKOTA: Average temperatures ranged 3 to 110 below normal. Extremes -20°; 58°. Precipitation spotty; below normal southeast and south central, above normal northeast and north central, normal elsewhere. Snow depth range less than 5 in. west and southern quarter to 15 in. north central and northeast.

Livestock mostly good. Feed supplies short west. Major agricultural activities include caring for livestock, attending farm meetings.

TENNESSEE: Temperatures averaged 100 above normal from upper 40s to mid 50s. Extremes 230 middle; 80° west. Abundant rain east; west received only scattered amounts. Bulk of rain received early week.

TEXAS: Warmest February weather ever recorded hit many parts State last week. Afternoon temperatures upper 80s, mid 90s common 18th through 20th. Not much moisture accompanied record heat, humidities quite low. Rain scarce, which gave some areas chance to dry up preparation for spring planting. Hot spell suddenly ended late 18th. On 21st Arctic surge dropped temperatures 20 to 30° 24-hour. Morning of 22nd coldest time of week over most State. Warming

trend late weekend. Temperatures above normal. Light rains east, along Gulf Coast.

Crops: Wheat 12% poor, 42% fair, 42% good, 4% excellent. Small grains new growth Plains following moisture for recent snow. Cold temperatures two weeks ago slowed insect problems; light rust problems still exist. Winds last week depleted some topsoil moisture Plains. Blacklands, Central growth improved because warmer temperatures. Good rain would be beneficial. Good progress reported most other areas State. Minimal insect disease pressures. Corn 5% planted, none 1985, none avg. Grain sorghum 2% planted, none 1985, none avg. Planting corn, grain sorghum expanded some areas south, Rio Grande Valley. Warmer temperatures, drying conditions allowed producers make good progress. Early planted fields south, along Upper Coast show good emergence. Planting activities should increase as favorable weather continues.

Commercial Vegetables: Rio Grande Valley, melon planting about complete. Some harvest carrots, cabbage, broccoli. Onions maturing rapidly. San Antonio - Winter Garden, melon planting underway. Light harvest spinach, carrots, cabbage, other greens continued. Onion transplants being set-out. Trans-Pecos, cantaloups planted. Onion transplants set-out. Both crops irrigated. High Plains land preparation underway. Onion, potato planting underway Knox-Haskell area. East bedding sweetpotato preparation land continued. Early vegetable planting underway. Peach trees continued break buds many areas east, Blacklands, central. Dormant sprays being applied many east orchards.

Range and Livestock: Ranges, native pastures showing improvement many areas State. Recent moisture over Plains, Central, East, warmer temperatures improved grazing. Small grain pastures also picked up. Livestock conditions also improved Plains from stress cold weather two weeks ago. Weight gains improving. Supplemental feeding diminished some areas.

UTAH: Storm system with considerable convective activity released copious rain, produced extensive flooding northern portions of State. Three counties declared disaster areas. Precipitation highly variable throughout State with individual stations ranging from none to 4.15 in. Mountains northern areas ranged from moderate to extremely heavy; elsewhere weekly accumulations generally light to heavy. Hot week which increased snow melt and further aggravated flooding. Maximums averaged 80° above normal, minimums averaged 170 above.

Warmer weather brought hints of spring to State. Sales of garden supplies increasing. Farmers beginning to make plans for spring crops. Mountain flooding caused damage to farm land northern mountain valleys, but moisture welcomed dry southwest. Muddy yards slowed hay, livestock sales. Feed supplies remain adequate. Livestock good shape.

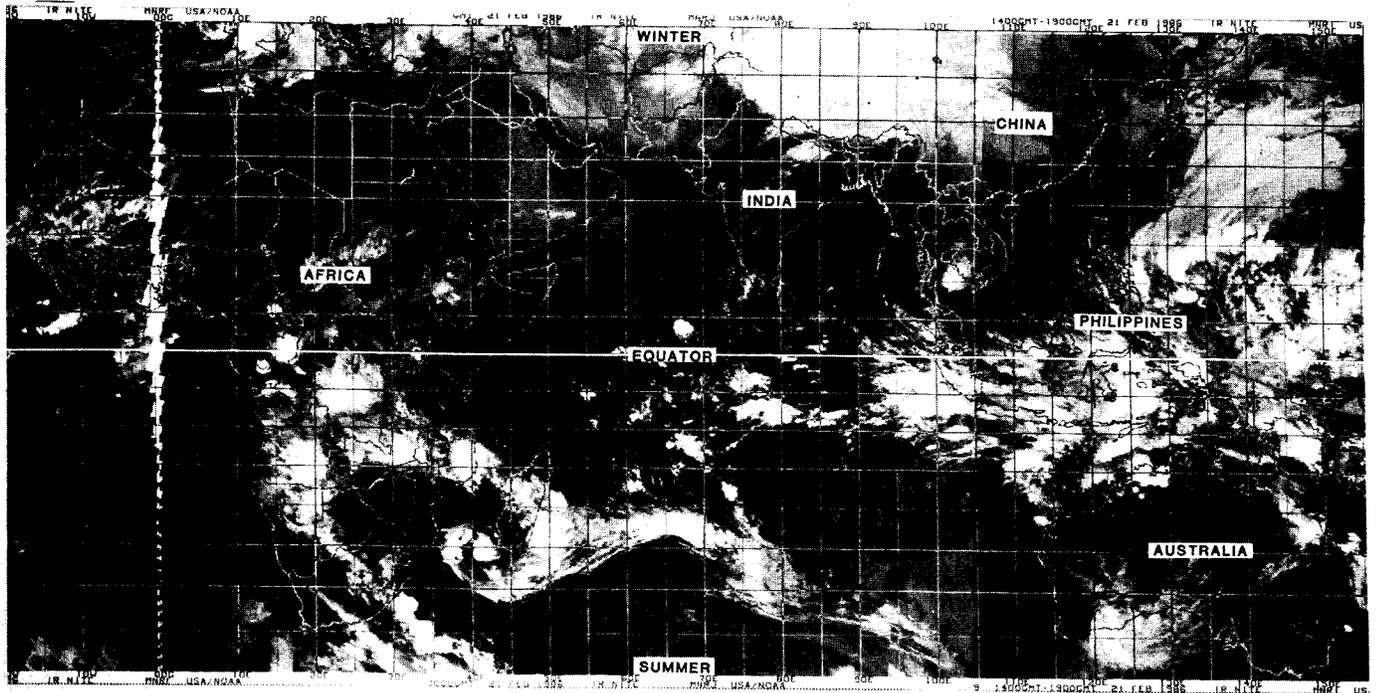
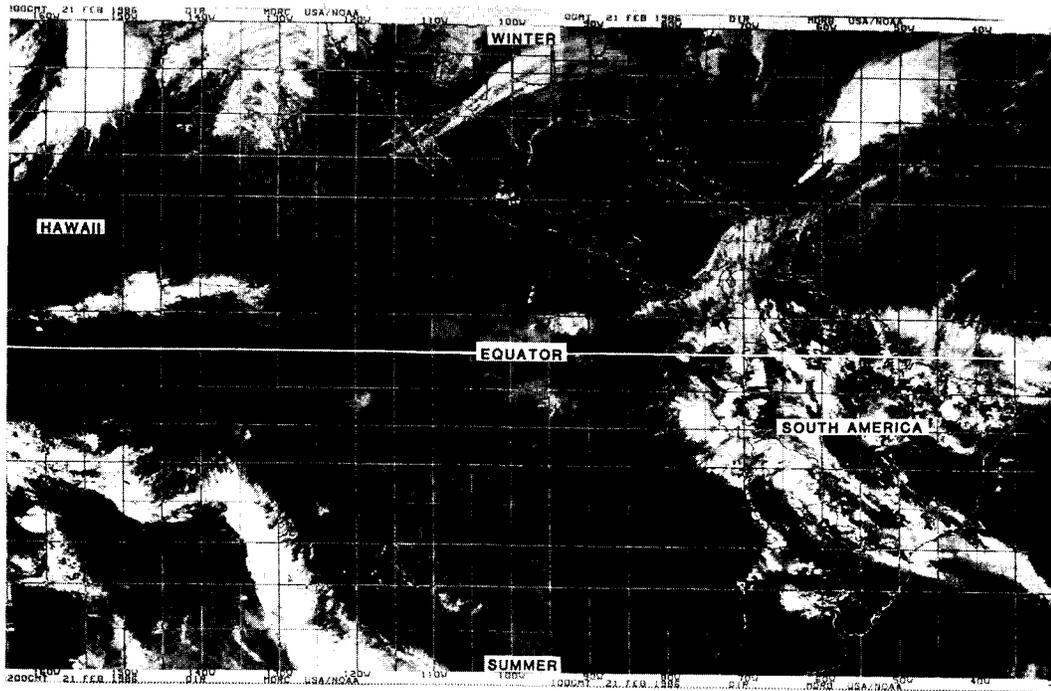
VIRGINIA: Cloudy, wet, foggy. Temperatures averaged 60 above normal, ranged 100 to low 70s. Precipitation averaged 0.75 in. most areas. Precipitation ranged 0.10 to 1.50 in.

Days suitable for fieldwork restricted by cloudy, wet weather to average 0.3 days. Topsoil moisture 34% adequate, 66% surplus. Small grain topdressing with nitrogen limited by wet weather. Small grains good to excellent, growth good with recent warm temperatures. Powdery mildew reported one area. Pastures good to excellent, some overseeding. Due to poor weather, activities limited mostly to livestock care, tax preparation, attendance at meetings.

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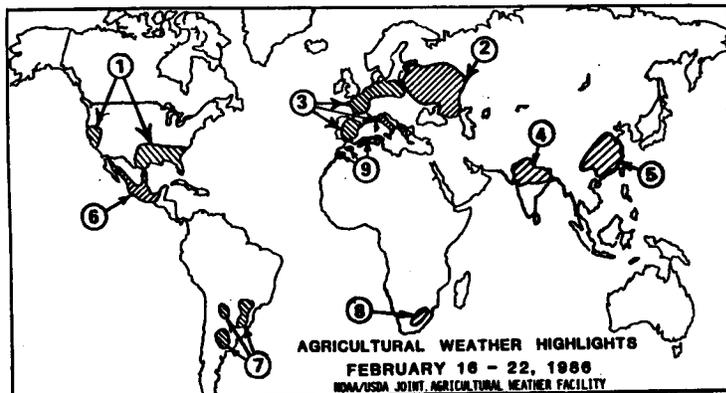
GLOBAL WEATHER SATELLITE IMAGE

February 21, 1986



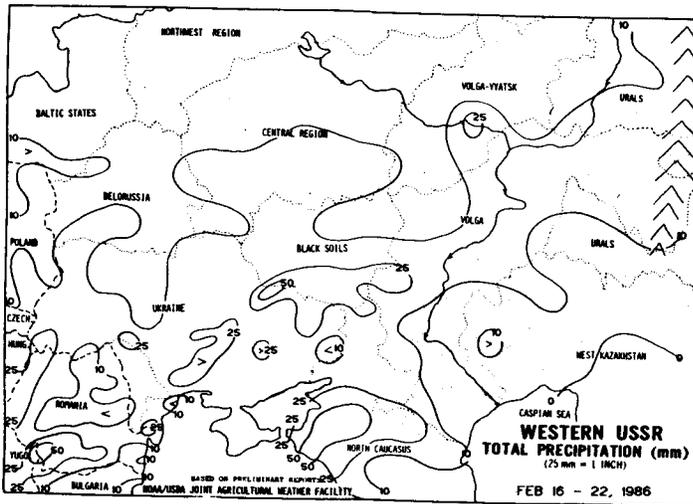
International Weather and Crop Summary

February 16-22, 1986

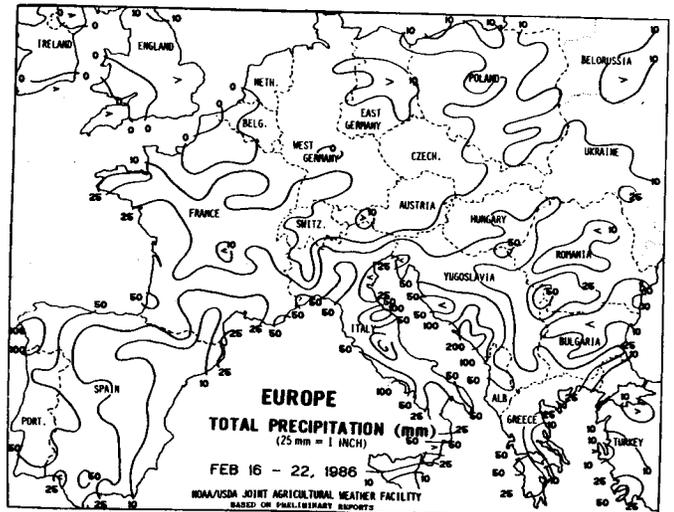


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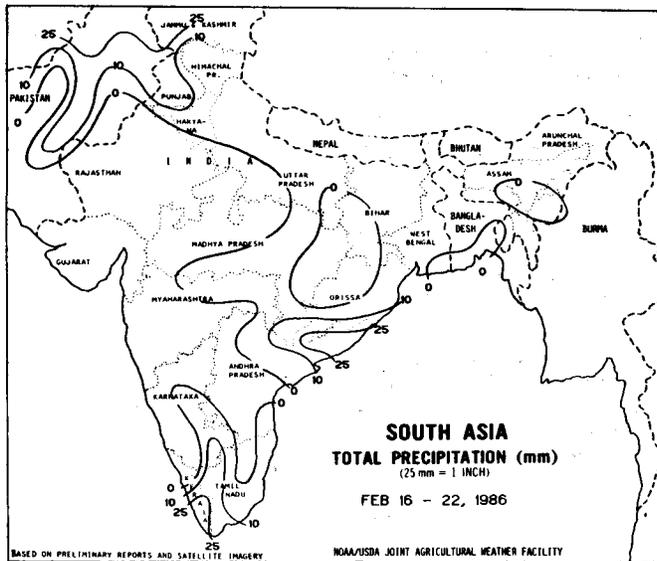
1. UNITED STATES ... Precipitation curtails fieldwork across the Southeast and along the east coast. California rain eases at weekend but reduces pollination and damages vegetables.
2. WESTERN U.S.S.R. ... In the north, snow protects winter grains from bitter cold. In the south, snow follows early-week rain.
3. EUROPE ... Cold, dry weather covers northern winter grains. Showers in Spain, Italy, and Greece benefit winter grains in the vegetative stage.
4. SOUTH ASIA ... Showers continue to benefit wheat in the filling stage across the north.
5. EASTERN ASIA ... Beneficial rain covers the rice region, but cool temperatures may slow early planting. Winter wheat remains dormant.
6. MEXICO ... Unseasonable hot weather occurs over northern Mexico, increasing wheat's moisture usage and rapidly drying topsoils where early cotton and vegetable plantings are underway.
7. SOUTH AMERICA ... Substantial rain maintains ample moisture for Brazil's northern soybeans while warmer, drier weather returns to the south where moisture is marginally sufficient. In Argentina, dry, mild weather favors crop development.
8. SOUTH AFRICA ... Below-normal rainfall may be limiting moisture for corn in the filling stage in parts of the Maize Triangle.
9. NORTHWESTERN AFRICA ... Showers benefit winter grains.



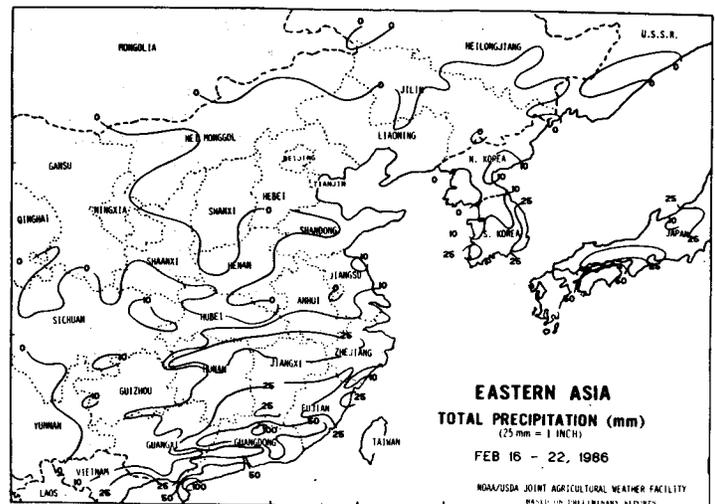
WESTERN U.S.S.R. ... Light snow covered northern winter grain areas, increasing the snow cover. In addition, bitter cold weather covered the north with nighttime lows ranging from -20 to -25 degrees C. Snow cover was sufficient to protect winter grains from potential winterkill. In the south, snow followed early-week rain in the Ukraine and North Caucasus. Weekly temperatures were below normal over the region.



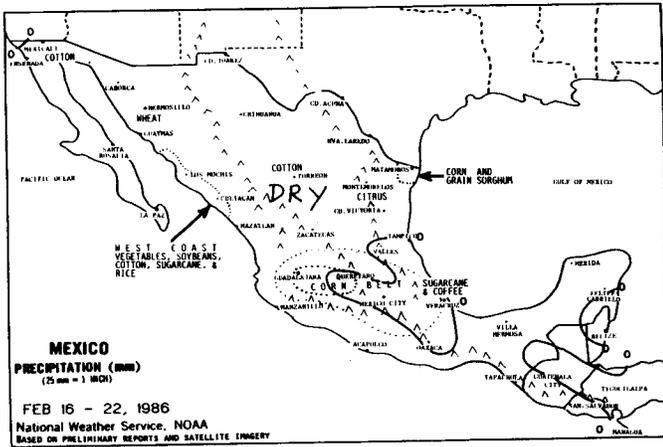
EUROPE ... High pressure continued to cover northern Europe, keeping most crop areas generally dry. The principal storm track remained across the Mediterranean with showers occurring on most days. Rainfall amounts in Spain, Italy, and Greece generally ranged from 25 to 50mm, benefiting winter grains in the vegetative stage. Weekly temperatures were below normal in the north, keeping winter grains dormant. Near-normal temperatures covered the south.



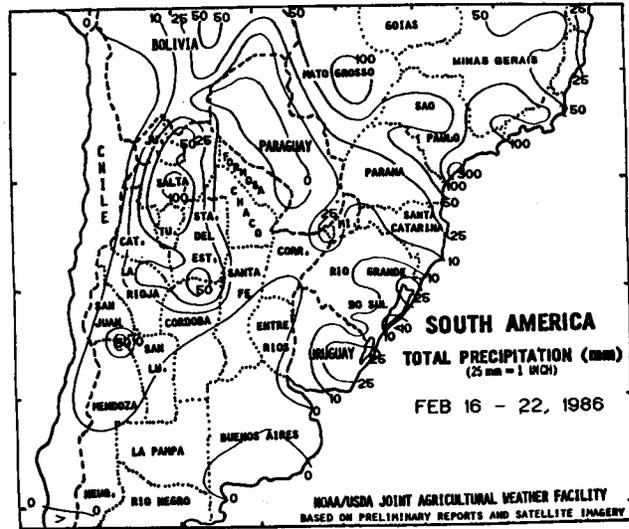
SOUTH ASIA ... Timely showers continue to favor wheat across northern Pakistan and India. Wheat in northern Pakistan received the heaviest rain (10 to 30mm). Light showers (1 to 8mm) covered much of Punjab, Haryana, and Uttar Pradesh in India. The increase in rainfall over the past 3 to 4 weeks has been especially beneficial for nonirrigated wheat in the filling stage across the north. Temperatures favorably averaged below normal, helping to reduce evaporation rates.



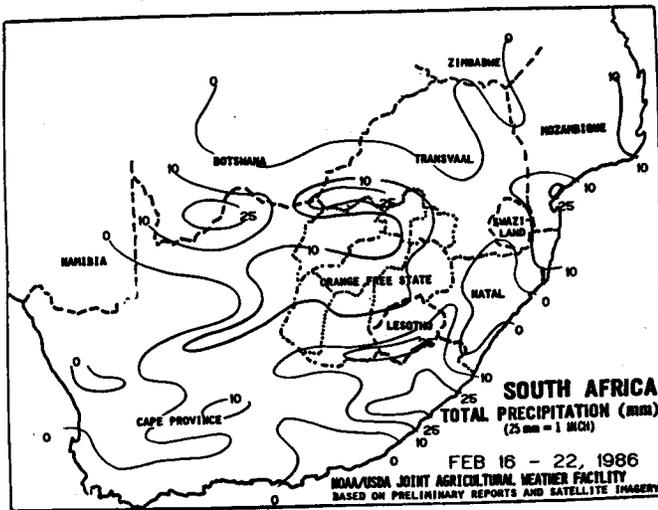
EASTERN ASIA ... Increased rainfall in southern China is building moisture supplies for early rice planting. Rice planting in the south normally begins in late February. Much of Guangdong received 50 to 100mm of rain, but slightly below-normal temperatures may slow rice planting. Most of the rice region benefited from more than 25mm of rain. Light, mixed snow and rain fell in the North China Plain early in the week. Winter wheat remained dormant in most of the region. Wheat normally breaks dormancy in early March in southern areas and in mid-March in the north.



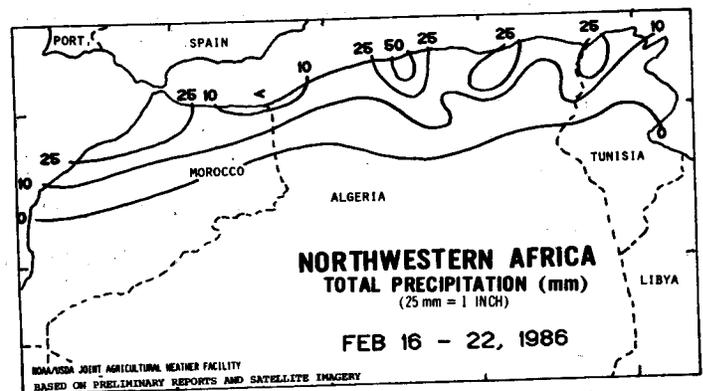
MEXICO ... Warm, dry weather covered most of the country. Very light showers were confined to the eastern portion of the Southern Plateau corn belt and east coast sugarcane areas. Fieldwork delays, if any, were minimal in these areas. Unseasonable hot weather prevailed over northern Mexico. Weekly temperatures averaged 4 degrees C above normal in the northwestern wheat areas and 7 to 9 degrees C above normal in the northeast. Maximum temperatures pushed into the 30's C on several days, increasing wheat's moisture usage and rapidly drying topsoils where early planting of cotton and vegetables may be underway.



SOUTH AMERICA ... In Brazil, substantial rain (50 to 90mm) fell over northern soybean areas, from Mato Grosso do Sul to southern Minas Gerais, with some locally heavy amounts in excess of 100mm. Weekly totals decreased to the south with less than 5mm of rain falling over western Rio Grande do Sul. Warm weather returned to southern soybean areas by midweek with maximum temperatures reaching the low to mid-30's C. Adequate to abundant moisture is available for crop development in northern soybean areas while supplies are marginally adequate in the south. In Argentina, dry weather covered most crop areas with seasonal temperatures favoring crop development. Unusually heavy rain fell in northwestern Argentina, outside of the major crop areas, as a storm system intensified late in the week.



SOUTH AFRICA ... A frontal passage produced variable rainfall in much of the region. Heaviest amounts of rain (25 to 30mm) in the Maize Triangle occurred in the western Transvaal. Most of the corn areas received between 2 and 20mm. The West Transvaal and Northwest Orange Free State, the two major corn producers, received the least amount of rain (2 to 10mm). Below-normal rainfall during the last 2 to 3 weeks may be limiting moisture for late-planted corn entering the filling stage later than normal in parts of the Transvaal and the Orange Free State. Temperatures averaged near normal, but gradually increased during the week. Late in the week, high temperatures reached 33 degrees C in the western Maize Triangle.



NORTHWESTERN AFRICA ... Showers (10 to 25mm) covered winter grains over much of the region. The rain in Morocco and Algeria continued to provide abundant moisture for winter grains in the vegetative stage. The second consecutive week of significant rain covered winter grains in Tunisia, improving moisture conditions.

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WASHINGTON: Cool dry air throughout State early in week with a low pressure system developing midweek bringing significant rainfall west, snow east of Cascades.

Days suitable for fieldwork less than 3.0. Soil moisture 10% short, 10% adequate, 20% surplus. Range, pastures 60% short, 40% adequate. Hay supplies 10% short, 90% adequate. Temperatures below-normal. Snow cover still good. Pruning continued. Lambing, calving increasing.

WEST VIRGINIA: Temperatures averaged 3 to 140 above normal. High 750 Williamson, low 200 Circleville. Average temperature 440. Precipitation averaged above normal all divisions except northwest, ranging from 0.31 to 2.82 in. Average precipitation 1.46 in.

Days worked 0.1. Soil moisture surplus to adequate. Feed supplies adequate to short.

WISCONSIN: Temperatures slightly above normal through midweek, slightly below normal weekend. Snow 1 to 7 in. north during week; rain 3.00 to 6.00 in., wet snow south on 18th through 20th. Farm activities limited to feeding livestock, spreading manure, attending meetings.

WYOMING: Temperatures well above normal except mountain areas. Precipitation for most part below normal. Moran reported water equivalent of 4 in. Range, livestock good. Warmer temperatures reduced stress. Calving, lambing continued with losses reported light. Supplemental feeding continued. Winter wheat good. Crop producers continue preparations for spring planting.

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