

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
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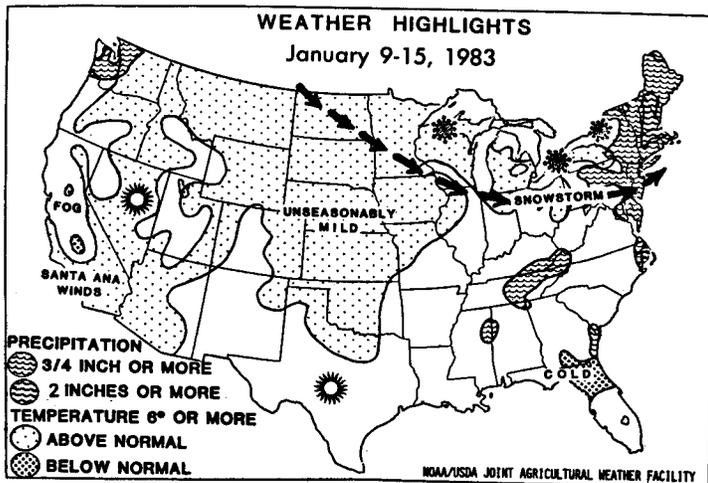
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Jan. 18, 1983

National Weather Summary

January 9 to 15



Northwest as a fair weather, high-pressure system extended into the area. A new arctic outbreak pushed southward through the Plains and western Great Lakes region. Snow continued to melt or evaporate over the Northwest and the western and northern parts of the central Plains wheatlands. Unseasonable warmth blanketed New England, breaking some daily and monthly records.

WEDNESDAY ... Cold arctic air pushed through the East as the wet storm moved off the New England coast. Snow fell from the Great Lakes into western North Carolina. Much warmer air prevailed across the High Plains and the eastern part of the Rockies as record-high temperatures were broken in the Dakotas and in California's south coast. The southwestern half of the Nation was generally fair, including most of the unusually damp Pacific Northwest as high pressure covered the area.

THURSDAY ... Freezing temperatures covered most of the country during the early morning, especially in the East where subfreezing readings extended into north-central Florida. Dry, sunny conditions dominated most areas except from the Great Lakes region to New England, where a few snow showers formed. Temperatures climbed to pleasant levels during the afternoon over all but the upper Northeast and North Central regions. It became unseasonably warm over the central Plains, breaking some daily high temperature records.

FRIDAY ... An intensifying, low-pressure storm system moved across the northern Plains into the Midwest, bringing snow, freezing drizzle, and frigid, blustery winds. Windchill readings dropped to as low as -10° to -20° from Iowa to Minnesota, and generally 1 to 4 inches of snow was dumped from southern Wisconsin to Pennsylvania. Fair skies covered much of the remainder of the Nation. Temperatures were quite warm over southern California, climbing into the low eighties.

SATURDAY ... The snowstorm moved to the New Jersey coast, spreading snow over much of the Northeast. About a half a foot of snow fell over parts of

HIGHLIGHTS ... Unusually light precipitation fell across the Nation. The heaviest amounts generally fell from the southern Appalachian Mountains into New England. The southwestern half was sunny and dry. Temperatures averaged unseasonably mild except over the Southeast and central valleys of California. The northwestern Plains were up to 20° above normal, while Santa Ana winds kept southern California about 12° warmer than usual. A snowstorm moved across the northern Plains to the New Jersey coast late in the week, bringing snow to most of the Northeast and frigid air east of the Rockies.

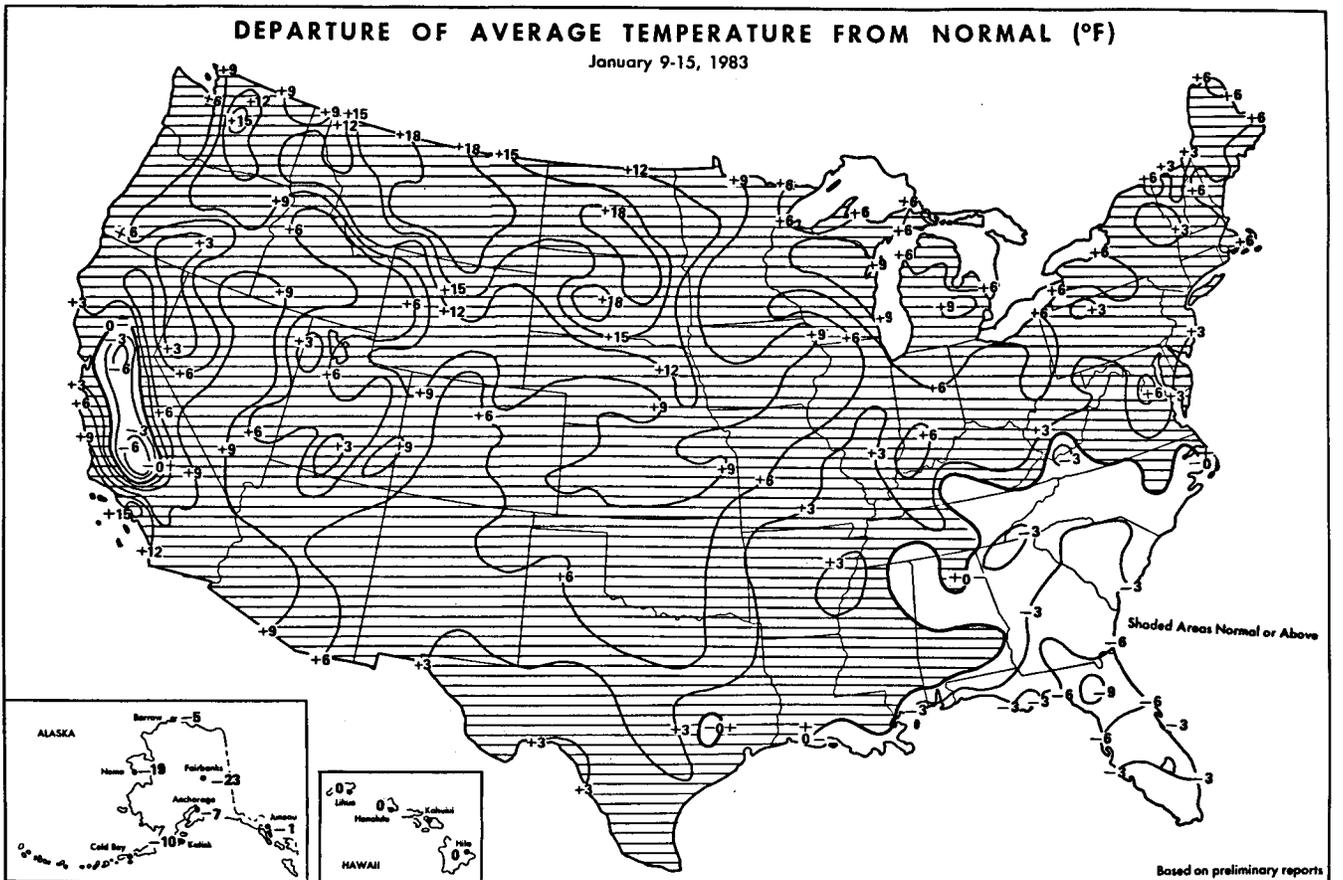
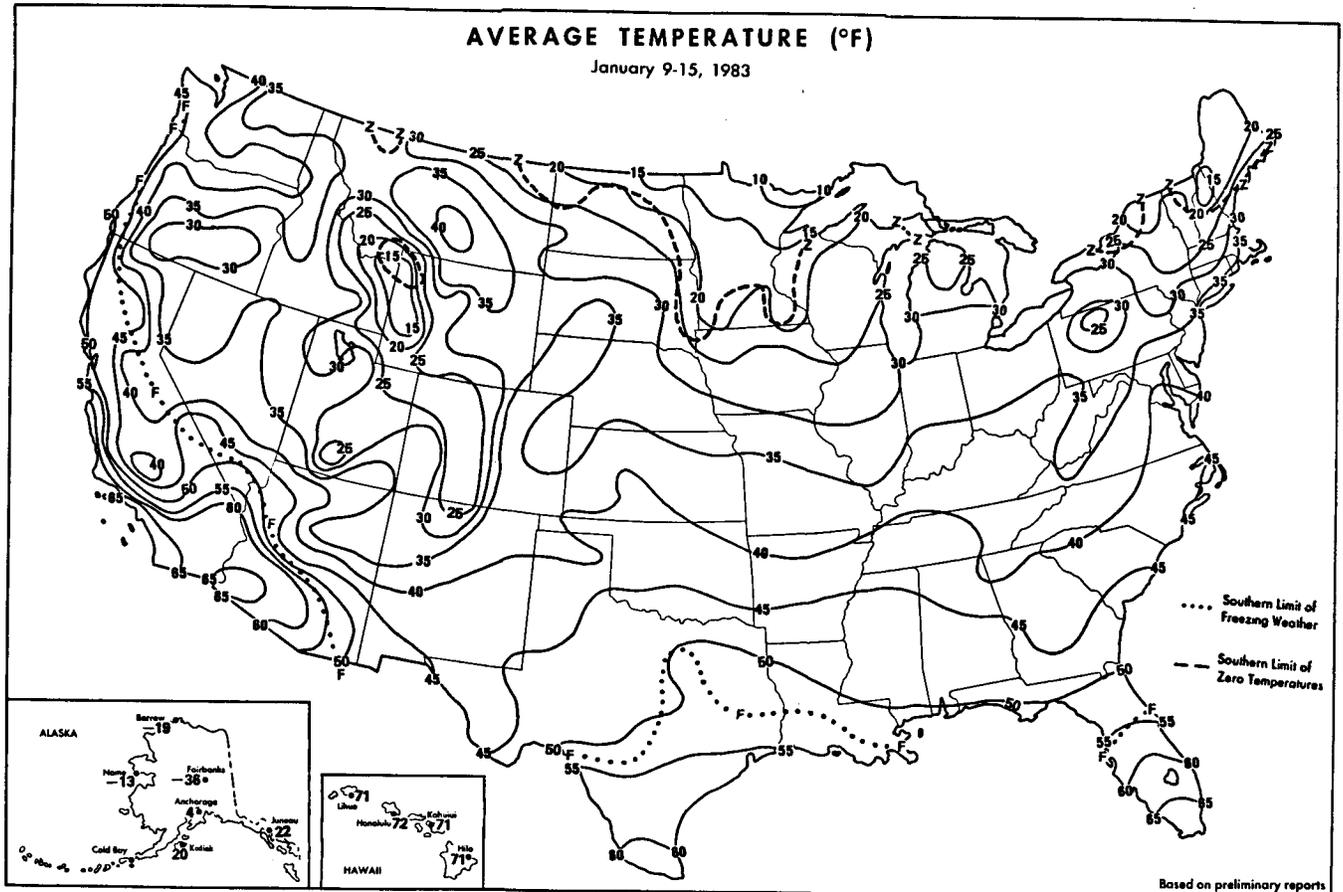
SUNDAY ... A bitterly cold, high-pressure system with fair skies settled over New England, while westerly winds brought unseasonable mildness to the upper Northwest. Gusty winds swept through the Rockies, Plains, and the Southwest. Santa Ana winds warmed southern California, sending 80 -degree readings to the coast. Widespread rain covered northeastern half of the Nation except in New England as a storm moved through the Plains and a stationary front extended across the Southeast.

MONDAY ... Rain lingered throughout the northeastern third of the Nation as a storm formed off the Carolina coast and another one pushed across the Midwest. Gusty northerly winds brought frigid air into the northern and central Plains while warming California's south coast into the eighties under a downslope Santa Ana. Clear skies with abundant sunshine dominated the desert Southwest and Great Basin States.

TUESDAY ... The storms combined over the Northeast, continuing the widespread wetness for the third consecutive day. In contrast, precipitation was unusually sparse and light across the Pacific

(continued on p. 14)

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Weather Data for the Week Ending Jan. 15, 1983

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 NOV. 28	PCT. NORMAL SINCE NOV. 28	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMPERATURE °F		PRECIPITATION	
																		01 INCH OR MORE	.50 INCH OR MORE		
AL BIRMINGHAM	54	33	67	23	44	-1	.3	-.8	.2	16.9	206	1.6	64	89	46	0	4	2	0	0	
MOBILE	62	37	71	28	50	-2	T	1.1	T	11.8	131	2.8	112	91	42	0	2	2	0	0	
MONTGOMERY	61	37	73	26	49	2	.3	.7	T	17.9	181	3.5	157	83	38	0	4	1	0	0	
AK ANCHORAGE	10	-2	27	-17	4	-7	T	.2	T	.9	53	.1	20	66	37	0	7	0	0	0	
BARROW	-13	-25	2	-35	-19	-5	T	.1	T	.1	33	T	0	78	58	0	7	1	0	0	
FAIRBANKS	-30	-42	-6	-50	-36	-23	0	.1	0	.8	80	.1	33	63	40	0	7	0	0	0	
JUNEAU	27	17	38	7	22	-1	1.9	.9	.7	4.5	64	3.3	165	97	81	0	7	7	1	1	
KODIAK	24	15	41	12	20	-10	1.8	.7	1.7	16.3	209	3.1	129	79	52	0	7	2	1	0	
NOME	-4	-22	15	-31	-13	-19	T	.2	T	1.7	142	0	0	67	43	0	7	1	0	0	
AZ PHOENIX	76	49	80	42	62	11	0	.2	0	2.4	185	0	0	60	18	0	0	0	0	0	
PRFSMOTT	59	28	61	26	43	7	0	.4	0	2.7	100	0	0	74	28	0	6	0	0	0	
TUCSON	72	44	77	35	58	7	0	.2	0	2.3	164	0	0	53	18	0	0	0	0	0	
YUMA	77	52	79	49	65	9	0	.1	0	2.0	333	0	0	38	14	0	0	0	0	0	
AR FORT SMITH	53	26	65	20	40	1	0	.5	0	6.3	143	.2	20	89	37	0	7	0	0	0	
LITTLE ROCK	53	32	65	24	43	2	0	.9	0	9.5	151	.4	21	72	45	0	3	0	0	0	
CA BAKERSFIELD	44	32	54	29	38	-9	T	.2	T	1.3	118	0	0	100	90	0	4	0	0	0	
EUREKA	60	39	71	36	50	3	.5	1.2	.5	13.7	126	.6	17	90	61	0	0	1	1	0	
FRESNO	46	38	57	37	42	-3	T	.4	T	2.9	104	0	0	98	80	0	0	0	0	0	
LOS ANGELES	82	53	87	48	68	14	0	.6	0	1.8	58	0	0	63	14	0	0	0	0	0	
RED BLUFF	60	35	71	25	48	3	T	1.0	T	5.4	83	0	0	89	46	0	2	1	0	0	
SACRAMENTO	44	34	61	32	39	-5	.1	.8	.1	4.7	92	.1	6	99	77	0	1	1	0	0	
SAN DIEGO	80	53	83	50	66	10	0	.4	0	2.3	85	0	0	68	21	0	0	0	0	0	
SAN FRANCISCO	55	39	61	35	47	-1	T	1.0	T	5.8	89	0	0	83	52	0	0	0	0	0	
CO DENVER	46	23	58	17	35	5	0	.1	0	2.3	329	0	0	61	34	0	7	0	0	0	
GRAND JUNCTION	46	21	50	18	34	8	0	.1	0	.3	38	0	0	77	30	0	7	0	0	0	
PUEBLO	55	18	73	12	37	7	0	.1	0	.3	60	0	0	84	23	0	7	0	0	0	
CT BRIDGEPORT	39	28	51	16	33	3	1.1	.4	.5	4.2	78	1.8	120	81	53	0	6	3	1	0	
HARTFORD	39	20	60	10	29	4	3.4	2.6	1.8	6.3	100	4.0	235	79	41	0	6	3	3	1	
DC WASHINGTON	46	34	54	25	40	5	.8	.2	.7	4.5	94	1.0	71	75	51	0	2	3	1	0	
FL APALACHICOLA	61	40	70	28	51	-2	T	.6	T	6.6	132	.5	36	89	48	0	2	1	0	0	
DAYTONA BEACH	62	40	76	28	51	-7	.1	-.3	.1	2.7	72	.4	40	88	45	0	2	1	0	0	
JACKSONVILLE	60	38	70	26	49	-6	.8	.2	.8	3.8	95	1.7	142	92	47	0	3	1	1	0	
KEY WEST	71	61	77	53	66	-4	.9	.6	.4	1.6	73	1.3	217	80	58	0	0	3	0	0	
MIAMI	74	56	81	43	65	-2	T	.5	T	1.9	68	.7	64	91	55	0	0	1	0	0	
ORLANDO	68	44	80	33	56	-5	T	.5	T	1.0	37	0	0	89	41	0	0	1	0	0	
TALLAHASSEE	61	35	70	24	48	-4	T	.8	T	6.6	102	.8	44	92	40	0	3	0	0	0	
TAMPA	67	44	77	33	56	-4	0	.5	0	1.3	37	0	0	92	49	0	0	0	0	0	
WEST PALM BEACH	72	53	80	41	63	-4	.2	-.3	.2	5.4	154	3.9	325	91	58	0	0	2	0	0	
GA ATLANTA	50	32	63	23	41	-1	T	1.0	T	9.3	137	2.1	100	84	47	0	4	1	0	0	
AUGUSTA	52	32	60	22	42	-4	.3	-.5	.3	7.2	129	1.5	88	85	44	0	4	1	0	0	
MACON	54	34	63	25	44	-4	.2	-.6	.2	9.6	152	2.1	117	88	47	0	3	1	0	0	
SAVANNAH	55	38	61	28	46	-4	1.4	.7	1.4	5.5	112	1.8	120	87	46	0	3	1	1	0	
HI HILO	80	63	81	60	71	0	.1	1.8	.1	8.4	38	.6	13	81	54	0	0	2	0	0	
HONOLULU	80	64	82	61	72	0	.1	.9	.1	2.5	41	.1	5	93	57	0	0	1	0	0	
KAHULUI	80	62	82	57	71	-1	.1	.9	.1	5.3	106	.1	6	89	57	0	0	1	0	0	
LIHUE	76	66	79	63	71	0	.6	.7	.3	5.4	53	.8	25	88	62	0	0	5	0	0	
ID BOISE	45	26	52	19	35	7	T	.3	T	3.1	141	.8	133	85	51	0	7	0	0	0	
LEWISTON	51	35	60	27	43	13	0	.3	0	1.6	76	.6	100	77	42	0	3	0	0	0	
POCATELLO	41	21	46	14	31	9	0	.3	0	2.3	144	0	0	84	48	0	7	0	0	0	
IL CHICAGO	35	20	43	10	28	5	.2	-.2	.1	8.3	319	.2	22	94	67	0	6	4	0	0	
MOLINE	36	21	43	12	28	7	.1	-.2	.1	5.5	212	.1	13	85	61	0	7	3	0	0	
PEORIA	36	22	43	12	29	6	T	.4	T	6.2	221	0	0	84	64	0	6	2	0	0	
QUINCY	37	22	43	12	30	6	T	.4	T	8.8	314	0	0	86	65	0	7	0	0	0	
ROCKFORD	33	19	41	10	26	6	.1	-.3	.1	4.4	157	.1	11	90	65	0	6	3	0	0	
SPRINGFIELD	36	24	43	14	30	4	.1	-.3	.1	9.4	313	.1	11	83	61	0	6	2	0	0	
IN EVANSVILLE	45	30	53	25	38	6	T	.8	T	8.8	163	0	0	77	47	0	6	0	0	0	
FORT WAYNE	39	26	51	16	32	7	.1	-.4	.1	5.1	138	.1	8	94	65	0	6	5	0	0	
INDIANAPOLIS	40	25	50	18	33	5	.2	-.5	.1	6.8	155	.2	14	89	63	0	6	5	0	0	
SOUTH BEND	37	26	47	19	32	7	.2	-.4	.1	4.0	103	.2	15	93	64	0	6	5	0	0	
IA DES MOINES	39	19	50	9	29	10	.3	0	.1	4.3	226	.3	50	90	65	0	6	4	0	0	
STOUC CITY	36	16	42	6	26	9	.1	0	.1	2.6	200	.1	50	90	68	0	7	3	0	0	
WATERLOO	35	16	45	7	25	9	.3	.1	.2	4.1	228	.3	60	84	61	0	7	3	0	0	
KS CONCORDIA	44	26	59	20	35	9	.1	0	.1	1.8	150	.1	50	82	50	0	6	2	0	0	
DODGE CITY	52	27	67	17	40	10	T	.1	T	1.0	167	0	0	77	31	0	5	0	0	0	
GOODLAND	43	25	50	17	34	7	T	.1	T	1.8	300	0	0	78	51	0	6	1	0	0	
TOPEKA	45	27	60	20	36	9	.1	-.1	.1	3.9	170	.1	17	80	46	0	6	2	0	0	
WICHITA	48	27	61	20	37	6	T	.2	T	1.6	94	0	0	87	44	0	6	0	0	0	
KY BOWLING GREEN	45	29	56	22	37	0	.2	-.1	.1	7.1	95	.3	12	97	64	0	5	2	0	0	
LEXINGTON	43	30	54	22	36	4	.1	-.8	.1	5.1	88	.1	5	90	56	0	5	3	0	0	
LOUISVILLE	45	29	56	22	37	4	T	.7	T	5.6	108	0	0	85</							

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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 NOV. 28	PCT. NORMAL SINCE NOV. 28	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE			
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
ME SHREVEPORT	62	36	73	30	49	2	7	0	13.8	217	.1	5	91	40	0	1	0	0	
ME CARIBOU	27	10	51	-10	19	8	.5	.1	3.4	89	.6	60	88	62	0	7	2	0	
ME PORTLAND	37	20	54	8	29	7	1.7	1.0	1.3	3.7	61	2.2	138	87	51	0	6	3	
MD BALTIMORE	44	31	52	21	37	4	.7	0	.6	4.7	90	.9	60	87	55	0	4	4	
MD SALISBURY	48	30	61	17	39	1	1.0	.2	.8	6.2	117	1.4	82	95	62	0	4	3	
MA BOSTON	41	28	59	19	35	6	2.4	1.5	1.7	4.8	74	2.9	161	81	46	0	6	3	
MA CHATHAM	44	33	53	27	38	-1	.8	-1	.6	5.5	-1	1.1	85	71	0	3	2	1	
MI ALPENA	30	15	41	1	23	5	.5	.1	.2	4.0	138	.9	100	96	75	0	7	5	
MI DETROIT	37	25	46	14	31	6	.2	-.3	.1	4.1	117	.2	20	87	61	0	6	3	
MI FLINT	37	25	46	10	31	8	.2	-.2	.3	3.5	135	.3	33	87	60	0	6	4	
MI GRAND RAPIDS	36	25	47	15	30	7	.5	0	.3	7.6	224	.7	64	81	59	0	6	3	
MI HOUGHTON LAKE	29	19	40	6	24	7	.5	-.1	.2	4.0	133	.8	89	91	67	0	6	5	
MI LANSING	36	24	47	9	30	7	.3	-.2	.2	4.4	138	.3	30	94	65	0	6	5	
MI MARQUETTE	25	14	34	5	20	7	1.1	.7	.4	4.7	134	1.8	200	99	72	0	7	6	
MI MUSKEGON	35	25	45	14	30	6	.5	0	.2	6.4	168	.7	64	87	66	0	6	5	
MI SAULT STE. MARIE	24	7	37	-14	16	1	.7	-.2	.4	6.1	169	1.3	130	94	62	0	7	5	
MN ALEXANDRIA	26	6	35	-6	16	8	.7	.6	.6	1.4	140	.8	400	89	64	0	7	3	
MN DULUTH	22	7	33	-5	14	6	.5	-.2	.3	2.3	105	1.1	183	87	69	0	7	3	
MN INT'L FALLS	20	0	32	-14	10	8	.2	0	.1	.7	41	.3	75	92	66	0	7	3	
MN MINNEAPOLIS	28	12	38	1	20	8	.1	0	.1	4.4	338	.5	167	89	59	0	7	3	
MN ROCHESTER	27	10	35	-1	19	6	.2	0	.1	3.5	269	.3	75	94	74	0	7	3	
MS GREENWOOD	54	37	65	30	46	1	T	-1.1	T	18.9	230	1.5	68	88	50	0	3	1	
MS JACKSON	61	34	71	26	47	0	.2	-.8	.2	20.7	272	2.7	123	97	43	0	4	2	
MS MERIDIAN	61	35	69	25	48	1	.3	-.7	.2	13.3	162	1.4	61	89	43	0	4	2	
MO CAPE GIRARDEAU	43	28	55	22	36	0	T	-.9	T	11.3	205	0	0	97	65	0	6	1	
MO COLUMBIA	43	25	58	16	34	5	T	-.3	T	7.1	263	0	0	86	54	0	7	0	
MO KANSAS CITY	41	22	58	14	32	5	.1	-.2	T	4.1	186	.1	14	93	55	0	6	2	
MO SAINT LOUIS	41	25	53	16	33	2	T	-.4	T	8.1	261	.1	11	90	58	0	6	1	
MO SPRINGFIELD	48	25	66	16	37	5	T	-.3	T	8.9	270	0	0	79	40	0	6	1	
MT BILLINGS	49	31	58	24	40	19	T	-.2	T	1.2	100	.1	33	64	31	0	5	0	
MT GLASGOW	34	17	44	9	26	17	T	-.1	T	1.2	171	.1	50	80	57	0	7	1	
MT GREAT FALLS	48	25	60	16	37	17	T	-.2	T	.9	75	0	0	73	32	0	6	1	
MT HAVRE	43	19	52	10	31	20	T	-.1	T	.3	50	0	0	91	46	0	7	1	
MT HELENA	46	27	56	15	37	19	0	-.1	0	1.3	144	.1	50	72	36	0	5	0	
MT KALISPELL	41	24	48	15	33	15	.1	-.3	.1	2.7	123	.8	100	79	47	0	6	1	
MT MILES CITY	41	24	50	20	32	18	.2	-.1	.2	1.1	183	.2	200	85	53	0	7	2	
MT MISSOULA	40	24	50	15	32	12	.1	-.2	.1	1.6	89	.5	100	93	61	0	6	1	
NE GRAND ISLAND	39	21	50	13	30	8	.3	.2	.3	2.1	350	.3	150	85	57	0	7	1	
NE LINCOLN	41	22	53	16	32	10	.1	0	.1	2.1	233	.1	50	80	59	0	7	2	
NE NORFOLK	38	19	43	10	29	10	.5	.4	.5	3.1	344	.6	200	91	65	0	6	3	
NE NORTH PLATTE	44	18	58	10	31	8	T	-.1	T	1.1	157	0	0	88	41	0	7	1	
NE OMAHA	37	20	48	11	29	9	.4	.2	.2	2.5	192	.4	133	87	69	0	7	3	
NE SCOTTSBLUFF	49	19	63	13	34	10	.1	.1	.1	.7	117	.1	100	62	31	0	7	1	
NE VALENTINE	46	19	61	10	33	13	.1	0	.1	.3	60	.1	50	69	34	0	7	1	
NV FLY	51	17	59	14	34	11	0	-.1	0	1.1	110	0	0	80	31	0	7	0	
NV LAS VEGAS	65	37	68	35	51	7	0	-.1	0	1.4	175	0	0	52	17	0	0	0	
NV RENO	49	18	53	14	33	2	0	-.3	0	1.8	95	0	0	95	37	0	7	0	
NV WINNEMUCCA	50	17	52	13	34	6	0	-.2	0	1.7	106	0	0	85	33	0	7	0	
NH CONCORD	37	15	57	3	26	5	2.2	1.5	1.7	3.8	76	2.5	179	89	50	0	7	3	
NJ ATLANTIC CITY	44	28	56	15	36	3	1.5	.6	1.1	6.8	105	1.9	100	96	61	0	5	2	
NM ALBUQUERQUE	53	25	57	20	39	4	0	-.1	0	.8	100	0	0	76	25	0	7	0	
NM CLOVIS	56	27	65	22	42	5	0	-.1	0	.6	75	0	0	81	25	0	7	0	
NM ROSWELL	58	27	64	24	43	5	0	-.1	0	1.5	214	0	0	67	27	0	7	0	
NY ALBANY	34	16	51	6	25	3	1.6	1.1	.8	3.3	75	1.6	145	85	44	0	7	3	
NY BINGHAMTON	35	20	45	11	28	6	1.4	.8	1.0	3.8	90	1.4	117	91	59	0	7	5	
NY BUFFALO	37	23	46	9	30	6	.7	0	.2	4.7	96	.8	57	95	72	0	5	6	
NY NEW YORK	42	30	57	23	36	4	1.1	.5	.4	4.1	77	1.8	138	77	51	0	5	3	
NY ROCHESTER	37	24	46	11	31	6	.6	.1	.3	3.4	89	.7	64	85	63	0	5	5	
NY SYRACUSE	33	18	42	5	25	1	.7	.2	.3	4.0	85	.8	67	96	68	0	6	4	
NC ASHEVILLE	45	28	55	19	36	-2	.5	-.3	.2	6.5	118	1.1	65	86	47	0	5	4	
NC CHARLOTTE	48	31	54	23	40	-2	.1	-.7	.1	5.4	96	.9	53	86	47	0	4	2	
NC GREENSBORO	46	30	53	20	38	-1	T	.7	T	5.2	104	.7	44	85	45	0	4	1	
NC HATTERAS	55	42	67	31	48	3	4.0	3.1	2.9	13.1	185	7.1	355	89	60	0	4	1	
NC NEW BERN	53	35	66	21	44	-2	.3	-.6	.2	7.6	127	1.9	112	93	51	0	2	3	
NC RALPHIGH	48	31	55	20	39	-1	.1	-.7	T	5.6	112	.9	56	88	47	0	3	3	
NC WILMINGTON	53	34	61	22	44	-2	.1	-.6	.1	8.9	168	2.6	173	88	43	0	3	2	
ND BISMARCK	37	16	49	8	27	19	T	-.1	T	.6	86	.1	50	89	51	0	7	1	
ND FARGO	29	8	36	-4	18	13	T	-.1	T	.4	50	.3	100	92	66	0	7	1	
ND GRAND FORKS	28	5	36	-5	16	12	.1	-.1	.1	.7	70	.3	75	83	60	0	7	1	
ND WILLISTON	35	10	43	-6	23	15	T	-.1	T	1.8	225	.3	150	92	60	0	7	0	
OH AKRON-CANTON	40	24	48	14	32	6	.7	0	.5	5.1	131	.7	50	85	59	0	6	4	
OH CINCINNATI	42	27	51	17	34	3	.1	-.7	T	5.3	110	.1	6	82	56	0	6	3	
OH CLEVELAND	41	26	50	19	34	7	.3	-.3	.2	4.6	121	.3	23	82	57	0	6	2	
OH COLUMBUS	40	27	48	18	33	5	.3	-.3	.2	5.2	130	.3	23	87	59	0	6	3	

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS.

Weather Data for the Week Ending Jan. 15, 1983

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 NOV. 28	PCT. NORMAL SINCE NOV. 28	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	39	25	50	17	32	4	.2	-.5	.1	4.6	112	.2	14	87	59	0	5	5	0
TOLEDO	37	24	47	14	31	6	.3	-.2	.3	4.5	125	.3	27	92	66	0	5	2	0
YOUNGSTOWN	41	27	49	20	34	8	.5	-.2	.5	4.2	98	.5	36	79	63	0	5	2	0
OK OKLAHOMA CITY	58	31	72	21	44	8	0	-.2	0	2.1	111	.2	40	79	33	0	2	0	0
TULSA	56	31	72	23	44	8	0	-.3	0	3.4	131	0	0	73	29	0	4	0	0
OR ASTORIA	54	37	57	29	45	5	.3	-1.9	.2	24.5	149	9.3	194	97	66	0	2	2	2
BURNS	40	14	43	10	27	3	0	-.4	0	2.9	104	.4	44	71	44	0	0	0	0
MEDFORD	39	22	45	20	30	-6	T	-.8	T	6.2	107	.1	6	100	83	0	7	1	0
PENDLETON	50	34	58	26	42	11	0	-.4	0	2.7	113	.5	56	79	48	0	3	0	0
PORTLAND	49	33	54	25	41	4	T	-1.4	T	13.0	134	3.8	127	97	70	0	4	0	0
SALFM	45	32	52	26	38	0	T	-1.6	T	14.6	134	3.9	115	93	78	0	3	0	0
PA ALLENTOWN	39	25	48	17	32	4	1.0	.3	.5	3.5	66	1.3	87	92	64	0	6	2	2
ERIF	40	25	49	17	33	8	.7	-.1	.2	4.5	102	.8	62	83	59	0	6	5	0
HARRISBURG	40	30	48	23	35	5	1.1	-.5	.8	2.9	62	1.1	85	88	62	0	6	3	1
PHILADELPHIA	44	29	58	20	37	4	1.4	-.7	1.0	5.0	100	1.9	136	86	57	0	4	3	1
PITTSBURGH	40	25	51	19	33	5	.6	-.1	.2	4.1	103	.6	43	87	60	0	6	5	0
SCRANTON	36	23	45	15	29	3	.5	0	.3	2.3	61	.5	45	82	58	0	7	3	0
RI PROVIDENCE	42	28	56	19	35	6	1.0	.3	.6	4.1	66	1.4	88	79	49	0	6	3	1
SC CHARLESTON	53	38	60	28	46	-3	.4	-.3	.4	5.7	116	1.3	87	86	45	0	2	1	0
COLUMBIA	51	31	58	21	41	-4	.2	-.5	.2	5.9	118	1.3	87	88	42	0	4	1	0
FLORENCE	52	35	58	26	43	-2	.4	-.3	.4	6.5	141	1.3	100	90	45	0	2	2	0
GREENVILLE	47	31	53	21	39	-3	.1	-.8	.1	8.1	123	.8	42	84	38	0	4	2	0
SD ABERDEEN	39	15	55	3	27	18	T	-.1	T	.1	13	0	0	82	51	0	7	0	0
HURON	41	19	57	9	30	18	T	0	T	.7	117	0	0	92	58	0	6	1	0
RAPID CITY	46	20	64	14	33	12	.1	.1	.1	.4	80	.1	100	76	37	0	7	2	0
STIOUX FALLS	35	13	40	-1	24	10	.4	-.3	.4	2.4	240	.4	200	96	71	0	7	2	0
TN CHATTANOOGA	49	31	62	20	40	0	.7	-.5	.5	12.7	147	1.2	46	87	48	0	5	3	1
KNOXVILLE	47	29	61	22	38	-2	.7	-.3	.4	6.8	93	1.3	59	92	58	0	4	3	0
MEMPHIS	52	35	65	26	43	4	T	-1.1	T	14.3	188	.4	17	81	46	0	2	0	0
NASHVILLE	51	31	64	23	41	3	.8	-.2	.8	8.2	115	1.0	45	86	49	0	5	2	1
TX ARILENE	62	33	70	24	47	4	0	-.2	0	1.7	113	0	0	83	27	0	4	0	0
AMARILLO	57	24	68	18	40	5	0	-.1	0	.8	80	.1	50	76	23	0	7	0	0
AUSTIN	64	39	71	35	52	3	0	-.4	0	2.9	88	.7	78	77	37	0	0	0	0
BEAUMONT	65	43	71	37	54	2	0	-.9	0	18.5	253	1.0	53	94	43	0	0	0	0
BROWNSVILLE	72	51	75	45	61	1	.1	-.2	.1	3.2	152	.5	83	97	55	0	0	2	0
CORPUS CHRISTI	70	45	77	39	57	1	0	-.4	0	.9	36	.2	25	83	33	0	0	0	0
DEL RIO	68	41	72	35	55	5	0	-.1	0	1.0	143	.1	50	79	34	0	0	0	0
EL PASO	59	31	63	25	45	2	0	-.1	0	2.7	338	0	0	78	25	0	4	0	0
FORT WORTH	63	35	72	31	49	5	0	-.4	0	3.0	107	.7	29	79	31	0	2	0	0
GALVESTON	69	50	98	46	59	6	0	-.7	0	8.1	145	2.1	140	90	51	1	0	0	0
HOUSTON	66	41	74	36	54	2	0	-.8	0	5.9	97	.1	6	84	38	0	0	0	0
LUBBOCK	58	27	66	20	42	3	0	-.1	0	2.7	300	.6	200	87	28	0	6	0	0
MIDLAND	61	29	68	22	45	2	0	-.1	0	1.5	214	.3	150	84	25	0	4	0	0
SAN ANGELO	64	30	72	24	47	1	0	-.2	0	1.5	136	.6	200	86	25	0	4	0	0
SAN ANTONIO	67	38	72	32	53	3	0	-.4	0	2.8	122	.5	71	77	28	0	1	0	0
VICTORIA	69	43	77	38	56	3	0	-.4	0	.9	31	.2	29	92	36	0	0	0	0
WACO	64	35	72	29	49	3	0	-.4	0	2.3	77	.2	22	89	38	0	0	0	0
WICHITA FALLS	62	35	70	28	48	7	0	-.2	0	2.4	120	.5	100	81	31	0	2	0	0
UT BLANDING	47	22	53	18	35	8	0	-.3	0	1.7	89	0	0	71	37	0	7	0	0
CEDAR CITY	52	25	59	23	38	10	0	-.1	0	1.2	109	0	0	71	30	0	7	0	0
SALT LAKE CITY	43	24	48	21	34	7	T	-.3	T	2.7	117	.2	33	84	48	0	7	0	0
VT BURLINGTON	32	14	51	2	23	6	1.1	-.7	1.0	3.5	103	1.2	133	86	51	0	6	4	1
VA NORFOLK	49	36	60	22	42	1	.5	-.3	.2	5.9	113	1.1	65	80	48	0	3	3	0
RICHMOND	47	32	56	20	40	3	.4	-.3	.2	4.8	98	.9	64	93	56	0	3	2	0
ROANOKE	44	30	51	23	37	1	.4	-.2	.4	4.3	91	.5	38	81	49	0	4	2	0
WA COLVILLE	38	25	49	20	31	8	0	-.5	0	5.1	150	1.3	118	93	84	0	6	0	0
QUILLAYUTE	52	37	55	28	44	6	2.8	-.5	2.0	24.7	102	10.1	140	99	70	0	3	5	2
SEATTLE-TACOMA	49	37	54	29	43	5	.4	-.9	.3	12.7	135	4.8	171	95	69	0	2	2	0
SPOKANE	45	32	53	24	39	14	T	-.6	T	4.4	113	.8	62	88	58	0	4	0	0
YAKIMA	53	28	61	23	40	14	0	-.4	0	3.0	143	.8	114	86	48	0	6	0	0
WV BECKLEY	40	23	53	12	32	1	.3	-.5	.1	3.0	55	.3	18	95	57	0	6	6	0
CHARLESTON	47	28	63	21	37	3	.6	-.2	.3	4.1	79	.6	35	85	45	0	4	5	0
HUNTINGTON	47	30	61	24	38	4	.4	-.4	.2	4.4	92	.4	25	79	48	0	5	2	0
PARKERSBURG	44	29	60	22	37	6	.5	-.3	.4	4.8	102	.5	29	88	53	0	6	4	0
WI GFREN BAY	29	18	39	6	24	8	.3	0	.2	3.5	167	.6	100	86	65	0	6	2	0
LA CROSSE	27	12	37	4	20	4	.2	0	.1	2.5	167	.2	50	99	73	0	7	2	0
MADISON	30	15	38	2	22	6	.1	-.2	.1	4.2	183	.2	33	94	74	0	6	4	0
MILWAUKEE	34	22	44	14	28	9	.2	-.2	.1	4.6	170	.2	22	89	63	0	6	4	0
WAUSAU	27	15	35	7	21	8	.3	-.1	.2	3.7	218	.7	140	87	64	0	7	2	0
WY CASPER	43	24	50	13	33	10	0	-.1	0	3.8	543	.1	50	76	39	0	6	0	0
CHEYENNE	48	24	56	19	36	10	0	-.1	0	.9	129	0	0	61	28	0	7	0	0
LANDER	40	18	50	13	29	10	0	-.1	0	1.6	229	0	0	74	41	0	7	0	0
SHERIDAN	50	25	63	19	38	17	T	-.1	T	.8	80	0	0	74	31	0	7	1	0
PR SAN JUAN	85	70	86	67	77	2	.2	-.7	.1	7.5	106	.7	37	88	57	0	0	3	0

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

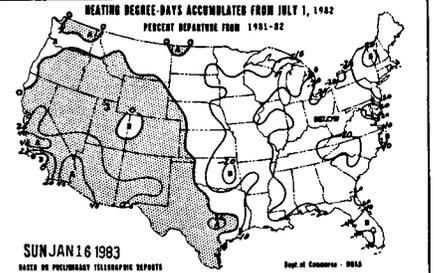
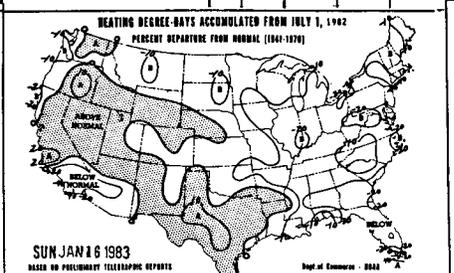
+100 = NORMAL & ACTUAL NEAR THE SAME

HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING JAN. 16, 1983.

BASED ON 1941-70 NORMALS.

+ACCUMULATION FROM JULY 1, 1982

Table with 12 columns: STATES AND STATIONS, WEEKLY TOTAL, WEEKLY DEPARTURE*, SEASONAL ACCUMULATION TOTAL, SEASONAL ACCUMULATION DEPARTURE*, DEPARTURE FROM 1981-82, and corresponding columns for the second and third sections.



National Agricultural Summary

January 10 to 16

HIGHLIGHTS: Above-normal temperatures and limited precipitation over the major winter wheat producing areas left new seedings without snow cover and vulnerable to possible winterkill. The crop was generally in fair to good condition with only light wind damage in scattered areas.

Drier conditions permitted the cotton harvest to resume across Texas and the Southwest. Growers were busy shredding stalks and tilling picked fields. Cold weather slowed new growth and bloom on Florida's citrus trees, making them less susceptible to freeze damage. Harvest of oranges and grapefruits for processing remained active.

The vegetable harvest continued active in the major producing areas of the South. Florida's tender vegetables received light to moderate leaf burn from cold winds and scattered frost. Mild temperatures and open pastures reduced the amount of supplemental feeding of livestock in many areas. Calving and lambing were active.

SMALL GRAINS: Despite the absence of snow cover, winter wheat was generally in fair to good condition throughout the major production areas. However, mild weather, which eliminated the remaining protective snow cover, left nearly all areas vulnerable to winterkill. Warmer temperatures and adequate moisture supplies brought stands out of dormancy in Texas. Excess rainfall caused leaching of nitrogen in the Blacklands; some stands were reported in poor condition. On the High Plains, irrigated wheat was in good condition, while dryland stands improved with moisture from previous snowfalls. Winter wheat in Kansas and Oklahoma was in good condition. Growers were concerned about the lack of snow cover. Across the Northern Plains, snow cover was light to none. Additional snowfall would be beneficial, as some light wind damage has occurred in scattered areas. Cooler and drier weather helped slow the development of foliage diseases on small grains in Georgia. Condition of the crop was generally good in this State.

OTHER CROPS: Frozen fields in Indiana permitted the completion of the corn harvest. Some scattered fields remain standing across the Corn Belt. Wetness continued to delay the completion of the soybean harvest across the South.

The Texas cotton harvest was nearing completion on the High Plains after open weather allowed harvesting to resume.

Wet fields kept operations at a standstill. Continued dry weather is needed to complete the harvest. Nearly all the cotton acreage has been picked at least once in Arizona, and harvest nears completion. Growers were shredding stalks and tilling land. Oklahoma's cotton harvest reached 90% after earlier snowfalls delayed picking. Excess soil moisture slowed cotton plowdown in some California fields.

Tobacco producers continue to grade and market the 1982 crop. The burley market in Kentucky reopened on January 10. Seedbed preparation was

in the final stages in Georgia. Sugarbeet fields look good in California. Harvest was active. The Florida sugarcane harvest continued active; light leaf burn to young cane resulted from recent cold weather.

FRUITS AND NUTS: The Texas pecan harvest neared completion, although wet conditions prevented picking in many Trans-Pecos orchards. Harvest resumed in New Mexico with drier conditions.

Cold weather slowed new growth and bloom of citrus trees in Florida. Additional rainfall would benefit all areas. Harvesting of oranges and grapefruits for processing was very active. Arizona's Navel orange season was virtually complete. Lemon and grapefruit picking continued on a limited scale. Grapefruit harvest was slow in the Lower Rio Grande Valley of Texas. Lemon and Navel orange harvests were active in California. Fog caused some citrus rind problems in the San Joaquin Valley. Avocado harvest was active with December wind damage showing in some Ventura County orchards.

VEGETABLES: A cold front at midweek brought scattered showers and colder temperatures to Florida's vegetable growing areas. Light to moderate leaf burn occurred in scattered areas. Total shipments declined 7% from the previous week. Snap beans, celery, peppers and Southern peas were the only vegetables gaining in volume. The strawberry harvest continued active.

In the Lower Rio Grande Valley of Texas, harvest of bell peppers was active. Spring onions continued to make good progress. The carrot harvest was in full swing in the San Antonio-Winter Garden area, but the cabbage harvest virtually stopped because of low prices. The Trans-Pecos lettuce harvest was finished. Fall seeded onions were showing little bulb enlargement. Field preparation increased in California as drier weather prevailed in most areas. Broccoli and cauliflower harvesting was active along the central coast, San Joaquin Valley, and in southern California. The lettuce harvest remained light in the Palo Verde Valley, but cutting was active in the Imperial Valley. Potato digging was slow in Riverside County, but potato sorting and packing was very active in the Tulalake-Butte Valley. Blooming of strawberries continued on the south coast. Warm weather provided excellent conditions for Arizona's vegetable harvest. Cauliflower harvesting neared its peak in Yuma County. Lettuce picking continued strong in Yuma county but was limited elsewhere in the State.

PASTURE AND LIVESTOCK: Mild temperatures and the lack of snow cover helped reduce supplemental feeding of livestock in many areas. Wheat pastures were short, and grazing was limited in northwest Oklahoma and most of Kansas. Calving and lambing continued active in many areas of the Nation.

State Summaries of Weather and Agriculture

ALABAMA: Temperatures averaged below normal. Rainfall less than 0.25 in.

ARIZONA: Sunny, mild weather continued for second week under influence upper level high pressure ridge. High temperatures reached 50's and lower 60's high country, 80's in lower Desert areas. No precipitation anywhere. Average temperatures varied 3 to 11° above seasonal normals.

Planting wheat, barley progressing at steady rate. In Yuma County wheat, barley growers pre-

paring seedbeds, planting late fields. Established early planted fields in jointing stage. Maricopa, Pinal, Pima Counties land preparations, planting, irrigation taking place. Delays still noted due to later than normal cotton harvest. Stands established, making average development earlier planted fields those counties. Southeastern areas taking advantage recent warm spell to continue planting, irrigation small grains. Soil wet, hard to work some areas Graham County. Alfalfa haying activities at seasonal slow period.

Guar harvest continued Yuma County, limited saflower planting began Yuma County. Warm weather allowed cotton growers to continue efforts to wind down cotton harvest. Nearly all cotton acreage picked at least once, most nearing completion. Yuma County cotton harvest finished, only limited residue disposal operations taking place. Second picking, rooding activities going full tilt elsewhere in State. As harvest completed, stalks shredded, land tilled to meet plowdown dates. Continued warm weather provided excellent field conditions for vegetable harvest. Mixed vegetable harvest including carrots, broccoli, cabbage, green onions, cauliflower, various mixed greens progressed steadily Salt River Valley areas. Cauliflower harvest reach peak Yuma County next week. Picking fall lettuce strong Yuma County, limited movement elsewhere State. Spring lettuce planting winding down Statewide, most planting activity in Willcox, Marana areas. Tangerine harvest increased, volume movement taking place. Some Navel oranges picked but season virtually complete. Lemons, grapefruit picked on limited scale based primarily on demand. Citrus groves remained good condition.

ARKANSAS: Dry with near normal temperatures. Midweek was unusually warm with temperatures reaching into the mid-70's. Highest normal 45°, lowest 36°. Highest mean 46°, lowest 37°. Highest temperature 74°, lowest 14°. Departures from normal ranged from +5 to -4°. Most rainfall 0.03 in., least zero.

Winter wheat in fair to good condition. Pastures in good condition. Livestock doing well on plentiful roughage supplies.

CALIFORNIA: A strong high pressure ridge continued to dominate the weather over State. The inland valleys, including the Sacramento and San Joaquin, were colder than normal; some localities as much 10° below normal. An almost complete reversal of the temperatures trend occurred over the South Coast, the southeast Interior, and most of the Sierra Nevada. There, weekly mean temperatures were as much as 10 to 15° warmer than normal. No precipitation was noted.

Growth continued slow due to cold temperatures and foggy conditions. Seeding of barley and wheat done in Sacramento Valley as land drying permitted. Much of the winter grain crop treated for annual weeds. Still a few fields of cotton do not meet minimum plowdown requirements. Heavy soils saturated with moisture present cotton plowdown problems. San Joaquin sugarbeet fields look good with harvesting activities ongoing. Warm, dry weather in south has hastened alfalfa growth. Some alfalfa cut for hay. The milo harvest in Riverside is complete. Pruning, dormant spraying of peaches and prunes active. Brush removal and burning, almond orchards. Application of fertilizers, herbicides in vineyards and orchards, some irrigating in San Joaquin Valley. Bareroot nursery stock digging continues. Bacon and Zutano avocado harvest continues, December wind damage showing in Ventura County avocados. Lemon and Navel orange harvest active, some citrus rind problem in San Joaquin Valley due to fog. Grapefruit harvest slow, Desert area but Mandarin harvest active. Ground preparing increasing as fields dry San Joaquin, Sacramento Valleys. Harvesting artichokes, brussels sprouts, Central Coast. Light harvest asparagus Desert. Broccoli, cauliflower harvest active Central Coast, San Joaquin Valley, Southern California. Carrot pulling still light Desert, moderate San Joaquin, Salinas Valleys. Celery cutting active Southern California. Lettuce harvest active Imperial Valley, light Palo Verde Valley. Potato sheds going full time Tulelake-Butte Valley. Digging slow Riverside County. Strawberries blooming South Coast. Ground preparation, planting early tomatoes most districts. Range growth continues slow due to cold days, frosty

nights most districts. Supplemental feeding increasing. Sheep grazing alfalfa fields San Joaquin Valley.

COLORADO: Light snow fell in the mountains on the 9th, and strong northwest winds blew in most areas on the 9th and 10th. Gusts of 40 to 60 mph were common, especially in the mountains and north-eastern foothills. The rest of the week was mild and dry. Temperatures as a whole, were well above normal in all areas of the State.

FLORIDA: Dry, Panhandle but scattered showers, Peninsula on the 10th produced variable rainfall averaging 0.25 in. Strong polar cold fronts swept southward on the 11th and 15th, producing fair, dry and cold conditions, 12th through 16th. Freezing temperatures with frost occurred mornings of 13th, 14th and 16th over most of State except extreme south with hard freezes Panhandle, extreme north. Temperatures averaged 10° below normal except only 5° below normal, south.

Soil moisture adequate west, north, south short central. Sugarcane harvest continues active. Light leaf burn to young cane from recent cold weather. Land being prepared for planting early corn and tobacco. Small grains normal progress. Fieldwork expected to increase rapidly. Very favorable pasture conditions south, poor to fair elsewhere. Frost damage some areas. Cattle fair to good condition. Cold weather benefitted citrus trees by slowing new growth and bloom. Very little if any frost damage. Rain needed all areas. Harvest of oranges for processing very active. Picking of grapefruit also active for processing fresh markets. Early week temperatures about normal in vegetable areas. A front at midweek brought scattered showers, colder temperatures. Some light to moderate leaf burn of tender crops caused by cold wind, scattered frost. Total shipments decreased 7% from previous week. Crops gaining in volume were snap beans, celery, peppers and souther peas. Supplies about steady cabbage, carrots, escarole, strawberries, tomatoes and watermelons. Volume declined cauliflower, Chinese cabbage, sweet corn, cucumbers, eggplant, lettuce, parsley, radishes and squash. Potato harvest underway. Limited supply of fall watermelons continues available but should decline with colder weather. Strawberry harvest continues active.

GEORGIA: Temperatures below normal Statewide. Greatest departures extreme southeast. Averages from upper 30's in mountains to upper 40's in souther half. Rainfall amounts light, less than 0.50 in. except in southeast where 1.00 to 2.00 in. fell. Weekend of 15th and 16th dry. Temperatures below normal.

Soil moisture adequate. Farm activities remain at slow pace. Cooler and drier weather slowing development of foliage diseases in small grains, condition improved to good rating. Tobacco bed preparation in final stage. Pastures good condition. Cattle fair to mostly good. Hogs good condition.

HAWAII: Weather favorable for most crops. Cool nighttime temperatures slowing crop progress. Sulfur fumes from volcanic eruption, Island of Hawaii caused some damage to vegetable crops; however, not in major growing areas. Some losses anthurium flowers and nursery products. Papaya crop good condition, suffered very little damage. Vegetable supplies adequate. Some sugar mills resumed grinding.

IDAHO: A strong high pressure system brought unseasonably warm temperatures to most of the State and confined precipitation to the Panhandle

region. Some valley areas were plagued with fog by the end of the week due to a strong inversion. The warmest temperature reported in the State was 60° at Lewiston while Stanley had the cold temperature with -13°. Precipitation limited mostly to the northern third of the State. Many Panhandle stations had over 1.00 in. of precipitation during the week. Mullan reported the greatest weekly amount with 1.73 in.

Routine chores and crop marketing continue as the main farm activities. The favorable weather and road conditions allowed farmers to sell some of their crops at area markets. Calving and lambing occurring in certain areas. Feed supplies adequate with potatoes for feeding reported to be in plentiful supply.

ILLINOIS: Temperatures 1 to 7° above normal as warm trend continues. Minimum temperatures in the teens. Maximum readings in the 50's in the south. Precipitation light over the State.

Livestock and small grains in mostly good condition with the mild weather beneficial to crops and livestock.

INDIANA: Long awaited freezing of soils permitted some tilling and completion of corn harvest although some scattered fields remain standing. Other activities: Cleaning barns, hauling manure, limited spreading of fertilizer, cleaning fence rows, processing tobacco for market, cutting wood, butchering, repairing equipment, attending meetings, bringing records up to date, caring for livestock and usual chores.

IOWA: Mild and dry. Temperatures were 8 to 9° above normal in southwest to 4° above normal in northeast. Precipitation averaged less than 0.10 in. of water equivalent in all but the eastern counties of the northeast and east central districts, and fell mostly on the 10th and 11th.

KANSAS: Precipitation limited to first part of week, traces to 0.10 in. north central and 0.19 in. northeast. Temperatures averaged 35 to 39° and 6 to 10° above normal.

Winter wheat generally good condition despite absence of snow cover. Grazing wheat generally light and scattered. Considerable cropland acreage in condition to blow. Cattle doing well in response to fair weather. Early calving and lambing getting underway. Mild weather allows slackening heavy feeding schedule. Major activities care of livestock and repair work.

KENTUCKY: Week characterized by several intrusions of cold Canadian air. Temperatures averaged 1 to 2° above normal. Precipitation light averaging 0.25 in., about 0.50 in. below normal.

Burley markets reopened January 10. Cold week limited field activities to livestock care and feeding.

LOUISIANA: Temperatures ranged from 20 below normal southeast to 2° above normal northwest. Extremes 73° and 22°. Rainfall less than 0.10 in. Harvesting winter vegetables, caring for livestock, and routine chores.

MARYLAND AND DELAWARE: Continued mild weather prevailed over the two State area. Temperatures averaged 4 to 6° above normal. Maximums averaged in the mid 40's in western Maryland to the 60's on the Lower Shore. Minimum temperatures ranged from mid teens in western Maryland to mid 20's in central Maryland. Precipitation light west of the mountains to 0.84 in. in Salisbury. Saturday the 15th was cloudy all day with precipitation as rain and snow. High temperatures in the low 40's and low temperatures in the low

30's. Sunday the 16th was partly cloudy and colder with rain and snow mixed. High temperatures in the mid 30's and lows in the mid 20's.

MICHIGAN: Above normal temperatures prevailed for another week. Average temperatures ranged from 5° above normal over the southwest Lower Peninsula to just above normal over the east half of the Upper Peninsula. Precipitation light in the southwest and south central Lower Peninsula, however moderate over the rest of the State. Snowfall and snow cover remained well below normal across most of the Lower Peninsula.

MINNESOTA: Temperatures averaged 6 to 11° above normal. Extremes were 47° at Browns Valley and -18° at Warroad. Precipitation averaged near normal to 0.25 in. above normal. Precipitation totals generally 0.15 to 0.40 in. Snowfall amounts ranged from a trace in the extreme west and east central and 1 to 3 in. elsewhere except 4 to 6 in. near Lake Superior. Snow depth at weeks end less than 3 in. northwest and southeast and 4 to 11 in. elsewhere except 12 to 19 in. northeast.

MISSISSIPPI: Week characterized by slightly below normal temperatures along with below average precipitation. Some rainfall preceded a cold frontal system during the early part of the period, however rainfall totals were generally light with amounts averaging less than 0.10 in. Statewide. Greatest 24-hour rainfall total 0.50 in. at Yazoo City. Highest temperature 73° at both Bay St. Louis on the 10th and Laurel on the 15th. Lowest temperature 14° at Oxford on the 16th.

Soil moisture surplus. Wet fields from earlier rains limited fieldwork to 2.0 days suitable. Winter wheat condition fair to good. Pasture and livestock condition fair to good. Hay and roughage and feed grain supplies adequate.

MISSOURI: Temperatures 3 to 10° above normal. Precipitation averaging less than 0.10 in. was below normal throughout the State.

MONTANA: Temperatures continued unseasonably warm across entire State. Second week in a row weekly averages ranged 10 to 20° above normal. Precipitation light, most areas less than 0.10 in. Thompson Falls reported 0.75 in. early in week. High temperature 60° at Great Falls, low 13° below zero West Yellowstone.

Winter wheat condition fair to good. Snow cover protection none to light. Wind damage light. Cattle 90% receiving supplemental feed, sheep 95%. Livestock condition good. Grazing open.

NEBRASKA: Precipitation less than 0.10 in. over Panhandle and northwest, increasing to 0.75 in. in parts of the northeast. Temperatures 10° above normal.

NEVADA: Mostly clear skies, no precipitation. With mostly clear skies afternoon highs soared well above seasonal normals, but also allowed temperatures to drop sharply at night. Temperatures averaged 4 to 7° above normal. Extremes: 71 and 7°. Air pollution serious western valleys.

Open weather easy for livestock maintenance. Mild weather favorable for newborn calves and lambs.

NEW ENGLAND: Precipitation above normal. Between 10 to 18 in. of snow fell in southern and extreme eastern Maine, southernmost New Hampshire, north-eastern Massachusetts, and extreme northeastern Connecticut. Temperatures averaged 5 to 7° above normal. The warmest day, 19th; 61° at Lowell, MA. The coldest day was at Diamond Lake, NH; -18° on 10th.

NEW JERSEY: Temperatures near normal, averaging 30° north, 34° south and 35° coastal areas. Extremes 7° at Newton and 61° at Hammonton. Precipitation well above normal, averaging 1.98 in. north, 1.89 in. south and 1.53 in. coastal sections. Heaviest 24-hour total 1.70 in. on 10th to 11th at Canoebrook. Heaviest (24-hr) snowfall 6.5 in. on 15th to 16th at Newton. Total snowfall 8 in. at Belvidere Bridge, Canoebrook, Charlotteburg, Flemington; 7 in. at Newton; 5.5 in. at Neshanic Station; 4 in. at New Brunswick; 0.50 in. at Freehold.

Farmers caring for livestock and tending to other normal winter chores.

NEW MEXICO: No precipitation. Temperatures higher.

Soil moisture adequate. Fields drying. Lettuce seeding, cotton picking, pecan harvesting resumed. Cattle and sheep in good condition. Grazing small grain. Supplemental feeding common.

NEW YORK: Average temperatures near normal, from teens in north to low 30's in west and south-east. Midweek northern temperatures between -10 and -20°. Precipitation light until weekend. The weekend: 3 in. of snow on Niagara Frontier, 2 in. on New York City and Long Island, up to over 2 feet in central eastern areas. Water equivalent totals ranged from 0.50 in. in west up to 3.00 in. Catskill region.

NORTH CAROLINA: Temperatures 4° below normal. Precipitation varied.

Soil moisture: 56% adequate and 44% surplus. Days suitable for fieldwork: 2.6. Conditions: Wheat, oats, barley and rye fair to mostly good. Harvest: Soybeans 95%, 1981 100%, average 100%. Hay and feed grain: Mostly adequate to surplus. Major farm activities: Soybean harvest, cutting of firewood, fence repair and machine maintenance.

NORTH DAKOTA: Above normal temperatures and generally below normal precipitation. Temperatures averaged 13 to 20° above average. Extremes from 54° south central to -12° northeast. Scattered precipitation covered the State. Most fell as rain. Heaviest amounts in northeast which was only district with above normal precipitation.

Mild winter thus far good for livestock and feed supplies. Additional snowfall would be welcomed for protection of wintering crops and to provide soil moisture next spring.

OHIO: Highs in mid to upper 30's, lows in low to mid 20's; 1 to 4° above normal except northeast a little below normal. Light precipitation averaged 0.25 to 0.50 in. Statewide. Snow cover, 1 to 2 in. central and 4 in. north. Bare soil temperature 4 in. depth in upper 20's north, upper 30's south. Soil freeze depth 2 to 4 in. maximum for week.

Winter wheat in good to excellent condition. Livestock remained mostly outdoors until snow fell. Above normal conditions prevented stress. Farm activities included caring for livestock, cleaning barns, chopping wood, purchasing fertilizer, repairing machinery and attending farm auctions.

OKLAHOMA: No precipitation fell in State. Temperatures averaged 2 to 8° above normal.

Wheat pasture very short in northwestern third of State. Cattle still in generally good condition Statewide. Cotton 90% harvested.

OREGON: Rainfall averaged 1.25 in. along coast; 0.55 in. in the Willamette Valley; less than 0.20 in. in remainder of State. Temperatures varied from 3° below normal in southwestern valleys to 12° above normal in northern areas. Soil moisture supply adequate to surplus. Fall seeded grains gen-

erally in good shape. Small amounts of spraying being applied on wheat, alfalfa and clover fields. Weed spraying in strawberry fields getting started. Caneberry training and orchard pruning continuing. Filbert catkins visible for several weeks now. Livestock condition good to excellent. Early calving and lambing underway. Pasture condition mostly good, but very wet. Good quality hay in short supply in some areas.

PENNSYLVANIA: Mild until weekend when seasonably cold with first snowstorm of season. Fourth consecutive warmer than normal week as temperatures averaged 4 to 8° above normal. Extremes 51 and 5°. Rain early in the week and snow 15th and 16th produced precipitation totaling from 0.50 in. western half of State to 1.50 in. northeast with about 1.00 in. elsewhere. Snowfall ranged from 2 to 3 in. western and southern sections and 10 to 20 in. through the Poconos.

PUERTO RICO: Island average rainfall 0.43 or 0.38 in. below normal. Highest weekly total 2.23 in., highest 24-hour total 1.70 in. Temperatures averaged about 77 to 75° on Coasts and 72 to 68° Interior Divisions. Mean station temperatures ranged from 77.4 to 62.9°. Extremes 90 and 56°. Total rainfall 0.25 in.

SOUTH CAROLINA: Sharply colder midweek, weekend average colder than usual. Rainfall mostly light. Activities include caring for livestock, pruning fruit trees, winter maintenance with repair of farm machinery and routine chores.

SOUTH DAKOTA: Temperatures averaged 10 to 15° above normal. Extremes: 65 and -5°. Precipitation scattered, 8 to 15 in. of snow fell in northern Black Hills and 4 to 10 in. in the southeast. Significant snow cover in northern Black Hills, east and southeast, remainder of State relatively snow free.

TENNESSEE: A cold front moved rapidly across the State - 10th and again on 15th. Rain generally Statewide beginning of the week with amounts ranging from less than 0.10 in. in the west to near 0.25 in. in the east. Small amounts of rain or snow fell in the east near midweek and again toward the weekend. Cool weather occurred early in the week with strong warming on 13th, turning cold near the weekend. Low temperatures in the teens and low 20's Statewide, while highest readings in the mid-60's.

TEXAS: High pressure dominated most week bringing fair skies to most State. Light rain showers South Texas and the Lower Rio Grande Valley late week. Temperatures averaged 1 to 5° above normal over all State, except Lower Valley where readings normal. Precipitation below normal.

Range and livestock: Ranges and pastures improved as warmer temperatures returned. Native pastures continue "green-up" following recent rainfall; spring growth good many areas because improved moisture supplies. Some heavily grazed pastures becoming short Low Plains; most producers good hay supplies winter feeding. Producers Cross-Timbers moving cattle back to wheat pastures, as small grains continue to improve. Supplemental feeding active. Auction markets higher scattered areas.

Commercial vegetables: Lower Rio Grande Valley, sluggish grapefruit marked slowed harvest some groves. Bell pepper harvest active. Spring onions continue good progress. Laredo, cabbage and broccoli harvest active. Producers side-dressing onions. San Antonio-Winter Garden, cabbage harvest virtual standstill some areas because low prices. Carrot harvest full swing. Trans-Pecos, lettuce harvest complete El Paso. Fall-seeded onions green-topped; little bulb enlargement noticed. Pecan harvest

winding down; although wet conditions preventing completion many Trans-Pecos orchards. Quality 1982 crop poor. Producers continue prune peach trees East Texas; many have started spraying dormant oil.

Crops: Dry, open weather prevailed during week; field operations good progress where conditions permitted. Land preparation spring-planted crops active southern half State, although muddy conditions Upper Coast prevented farmers from returning to fields. Small grains good progress during week with warmer temperatures and adequate moisture supplies. Cotton harvest winding down High Plains; open weather allowed harvesting operations resume. Some areas still too wet; operations remain standstill. However, continued dry weather, producers complete harvest soon. Some stands, crop quality affected recent moisture; stringing-out problem. Gins active Trans-Pecos. Warmer temperatures brought many small grain fields out of dormancy; stands across State making good progress. Irrigated wheat High Plains good condition; dryland stands improving with moisture from recent snow. Some minor freeze damage scattered areas; stands should recover. Blacklands some stands poor condition because excess rainfall and leaching of nitrogen. Producers trying top-dress fields; wet conditions prevented fertilizing operations some areas. South Central Texas, some wheat fields stunted lack early moisture. Insects and disease continue problems central portions State. Wheat condition was 68% of normal with 4% excellent; 33% good; 54% fair; and 9% poor. This compares with 74% of normal last year. Sugarcane harvest active Valley. Cotton harvested 98%, 99% 1981, 99% average. Pecans harvested 99%, 100% 1981, 98% average.

UTAH: Light precipitation in northeast during forepart of week. Unseasonably warm temperatures averaged 5° above normal, ranging from 13° above to 1° below normal for reporting stations.

Sorting and marketing of apples continued. Onion storage losses mount-up to 80% of 1982 crop lost in storage. Demand for potatoes slow. Routine chores, care of livestock major activities.

VIRGINIA: Clear mid-period. Precipitation at beginning of period as rain and light snow at end falling mostly in the southeast and southwest. Average 0.40 in. Warm early, cold at end with temperatures continuing above normal.

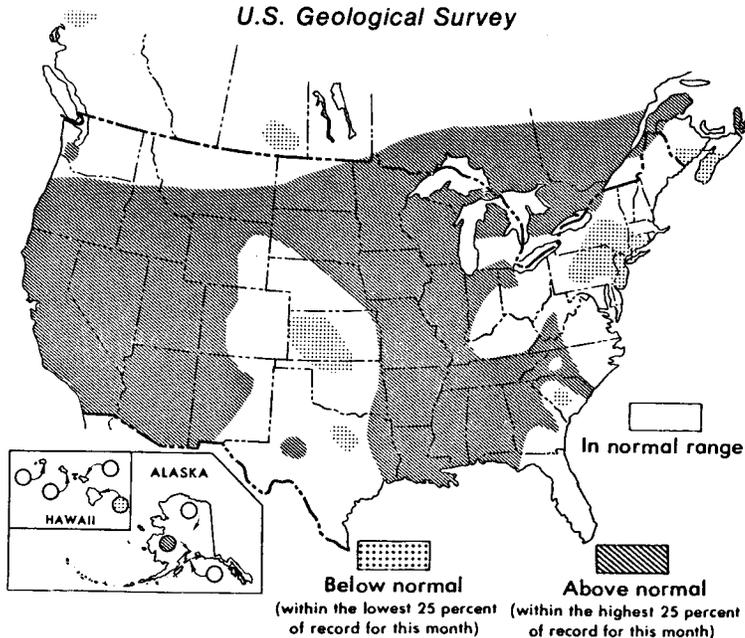
Topsoil moisture continued to be abundant with 71% adequate and 29% surplus. Days suitable for fieldwork improved fractionally to 2.8 days. Livestock care continues to be the major chore with stock still in good condition. Calving and lambing active with no unusual problems reported. Pastures and winter grains and grazing crops in excellent condition for this time of year. The percent of forage requirements secured from grazing dropped nearly 14 points, from 2 weeks ago, to 26. Other major activities include attending meeting, training sessions, cutting firewood, equipment maintenance, record keeping and tax preparation and spring planting, orchard pruning and tobacco marketing. Some bean fields still left to be harvested.

WASHINGTON: High pressure dominated the weather through most of the week. A weak, nearly stationary frontal system produced slightly above

(continued on p. 17)

STREAMFLOW DURING DECEMBER

U.S. Geological Survey



Sixty percent of the key index gaging stations in parts of 23 States reported flows within the highest 25 percent of record during December and record-high December flows were set on key index stations in at least 14 states, according to the U.S. Geological Survey, U.S. Department of the Interior.

The combined flow of the Nation's "Big Five" rivers--Mississippi, St. Lawrence, Columbia, Ohio, and Missouri--which was boosted by runoff from rain-swollen streams, ended the year on a wet note,

averaging 1,203 billion gallons a day (bgd), almost twice the average for the month and the seventh straight month that flows have been above average.

The "Big Five" rivers, which account for streamflow runoff for more than half of the conterminous United States, provide a useful check on the Nation's water-resource conditions.

The intense flooding that affected much of the Mississippi and Missouri River basins boosted streamflow on those rivers to their highest December flows in 55 years of record. Flow of the Missouri River at Hermann, Mo., averaged 117 bgd, 347 percent above average for December. On the Mississippi River near Vicksburg, Miss., December flow averaged 741 bgd, 142 percent above average.

In the areas heaviest hit by the flooding, streamflow runoff at many sites set new record highs and the recurrence intervals of flooding in parts of Arkansas, Illinois, Louisiana, and Missouri exceeded 100 years. This means that on the long-term average, a flood of this magnitude is not expected to occur more than once in 100 years.

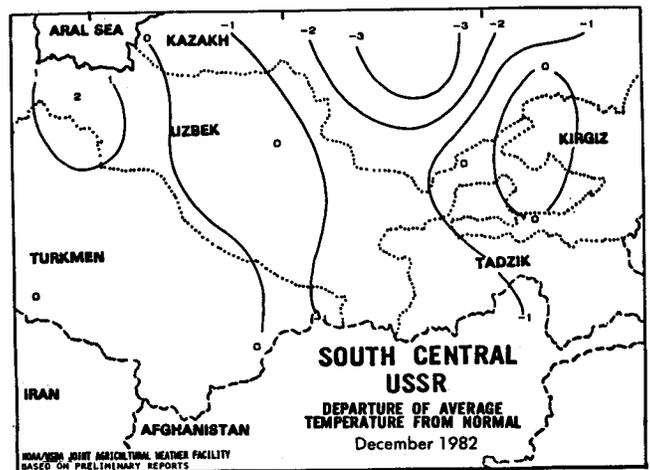
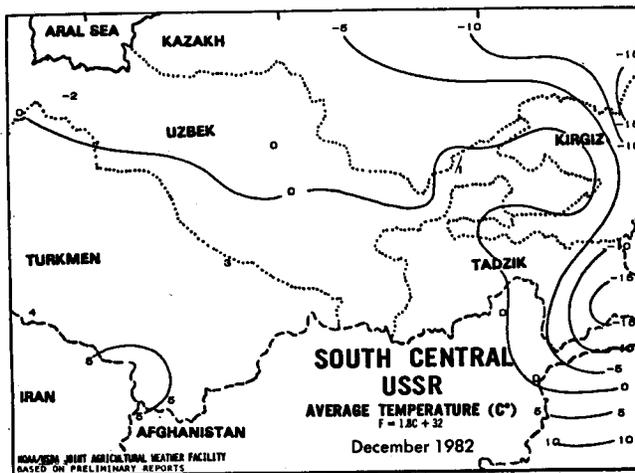
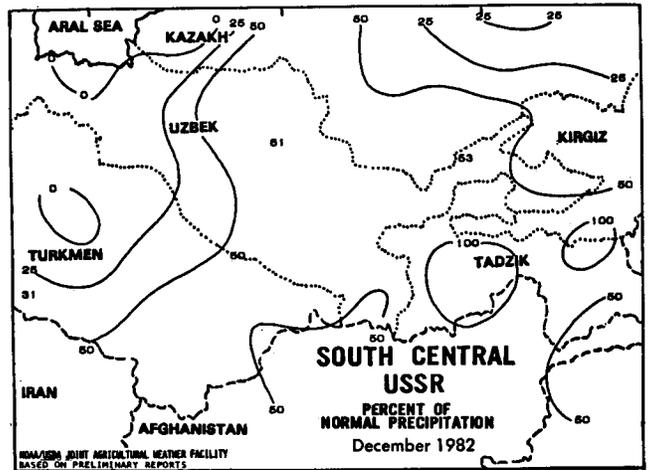
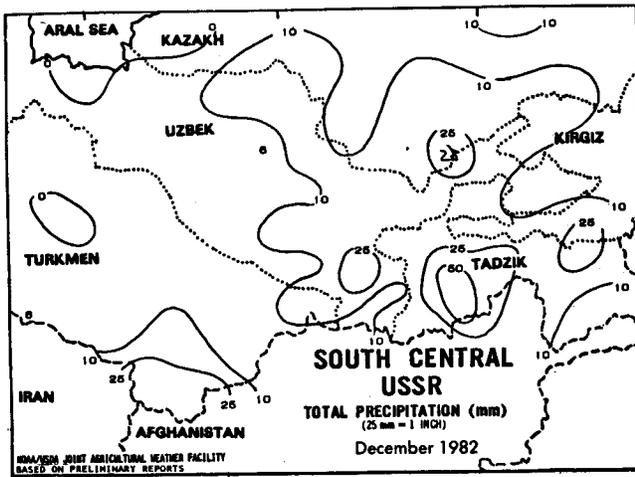
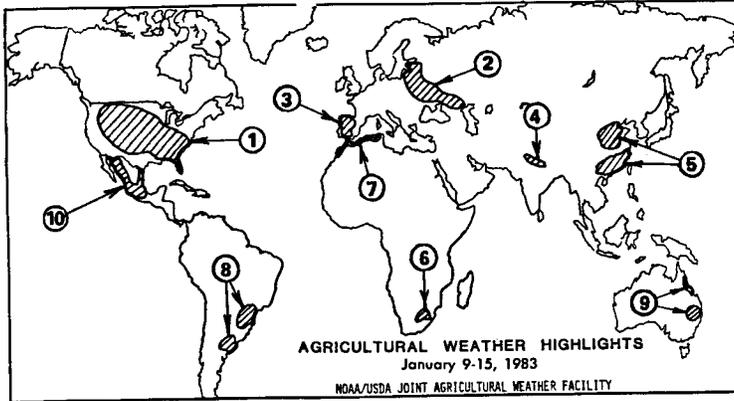
An indication of the record-high December streamflow in the Midwest was the flow of the Mississippi River at Keokuk, Iowa, which averaged 81.2 bgd, the highest December average flow in more than 100 years of continuous records at that site.

In contrast to the many record-high streamflows, key index gaging stations in parts of Kansas, Texas, South Carolina, Wisconsin, and a large area of southeastern New York reported well-below-average streamflows--within the lowest 25 percent of record. For example, flow of Massapequa Creek at Massapequa on Long Island, N.Y., averaged 2.8 million gallons a day (mgd), the third lowest December average flow in 47 years of record. Also in the East, streamflow conditions in the Delaware River basin remain extremely low, and drought emergency measures continue. Reservoir levels in the basin are still only about 39 percent of their full capacity.

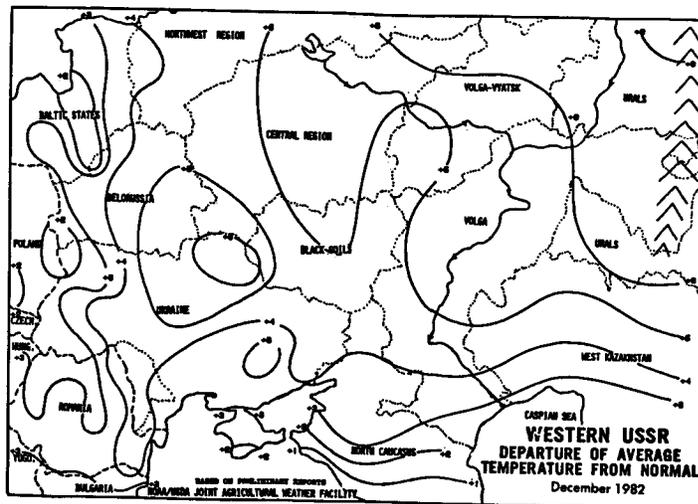
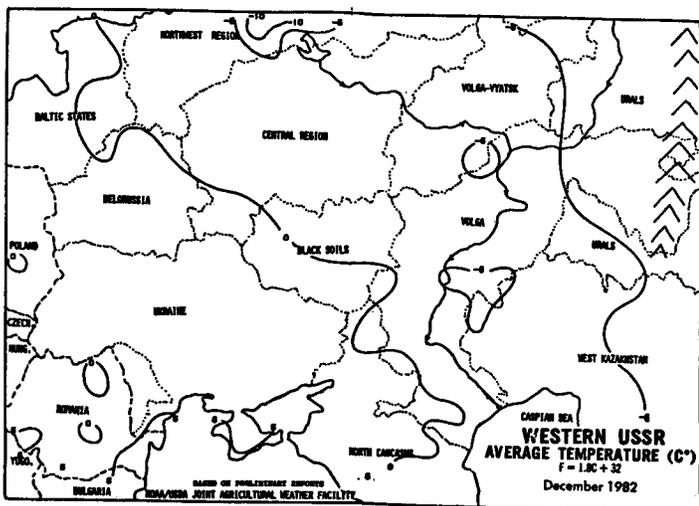
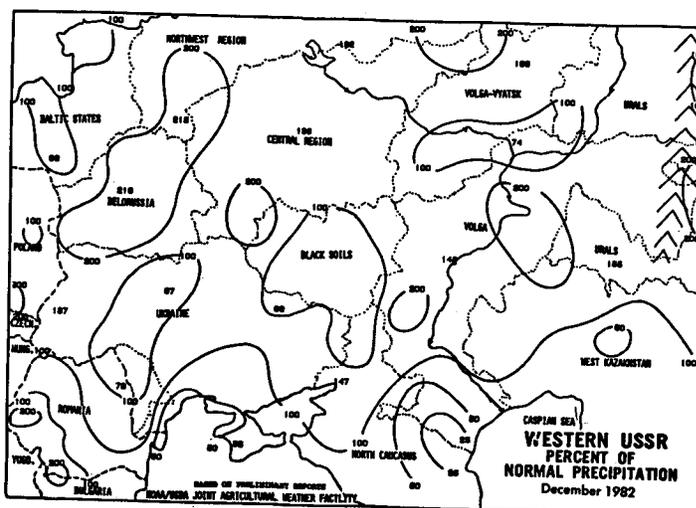
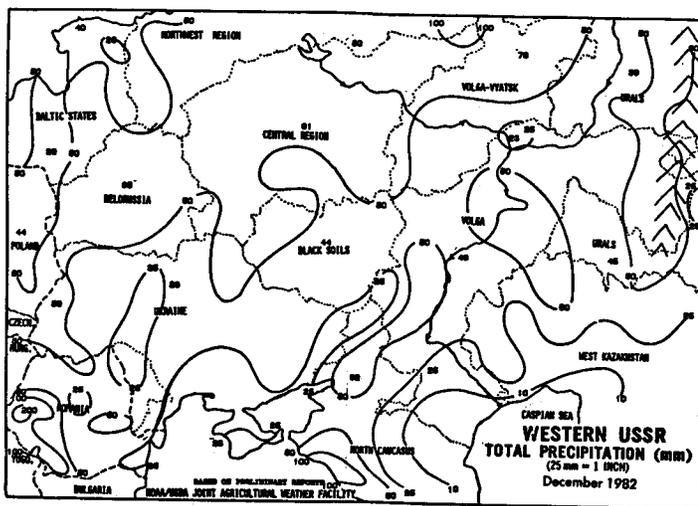
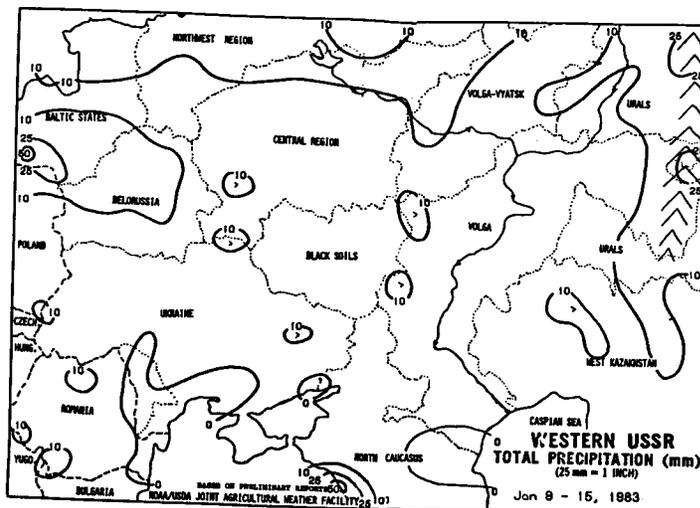
International Weather and Crop Summary

January 9 to 15

1. UNITED STATES ... Unseasonable mildness over western half reduces supplemental feeding of livestock, but maintains wheat without protective snow cover in central Plains and loss of dormancy in southern Plains. Wet, cold weather over parts of Southeast delays completion of soybean harvest. Cold in Florida makes citrus trees dormant, and with wind, causes some leaf burn to tender vegetables.
2. WESTERN USSR ... Winter grains of the Baltic States, Belorussia, the Ukraine, and parts of the North Caucasus lack a protective snowcover and are highly vulnerable to winter-kill.
3. EUROPE ... Soils are too dry for good establishment of winter grains in Spain.
4. SOUTH ASIA ... Dry weather continues to stress unirrigated winter wheat in northern India.
5. EASTERN ASIA ... Dry weather covers dormant winter grains in the North China Plain; showers aid reservoir and soil moisture supplies in southern China.
6. SOUTH AFRICA ... Beneficial rains fall north and east of Maize Triangle, but continued hot, dry weather in Southwest adversely affecting corn pollination.
7. NORTHWESTERN AFRICA ... Unfavorably dry weather continues in Morocco; generally favorable moisture aids growth in Algeria and Tunisia.
8. SOUTH AMERICA ... Widespread rain in Argentina's crop areas aids reproductive development and early grain-filling of corn and sorghum, but hot weather continues; generally dry weather aids Brazil's soybeans which are flowering with mostly adequate moisture.
9. AUSTRALIA ... Summer crop areas receive light rain, while east coast sugarcane areas benefit from significant showers.
10. MEXICO ... Rain was generally too light to halt field operations, but cloudiness likely reduces sunshine needed for optimum development of winter vegetables.

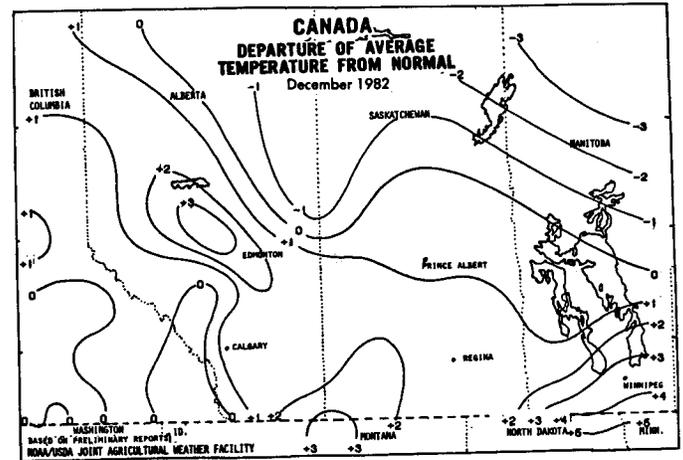
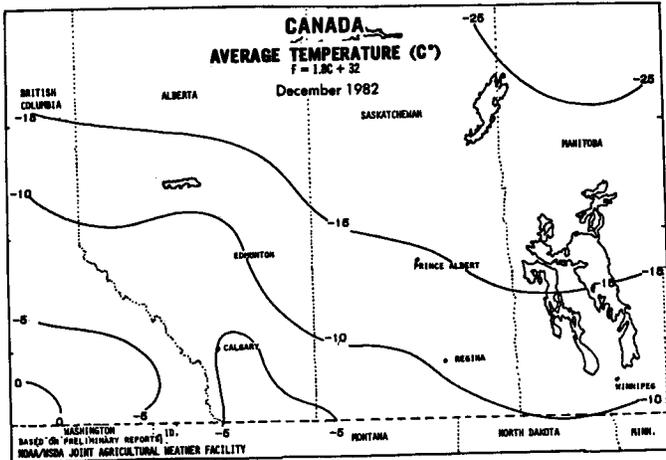
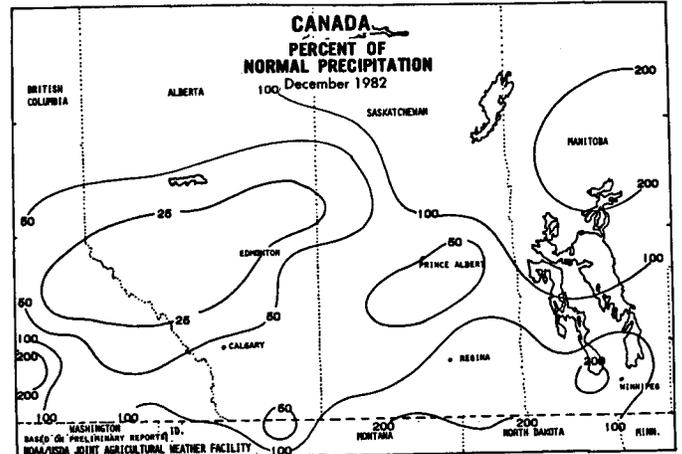
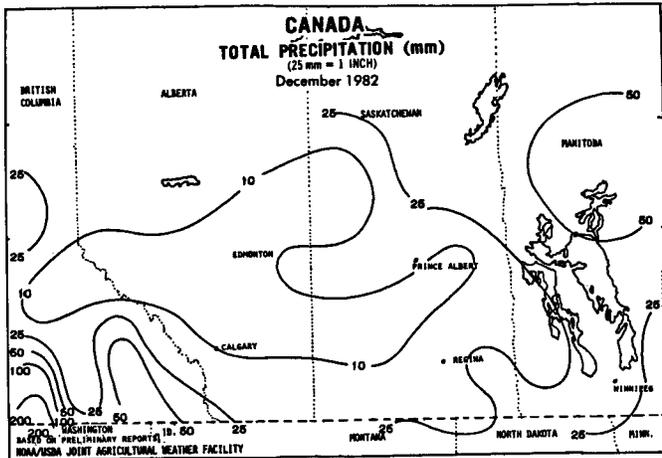
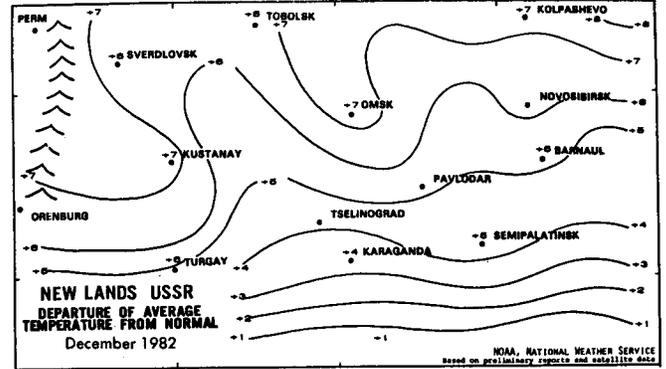
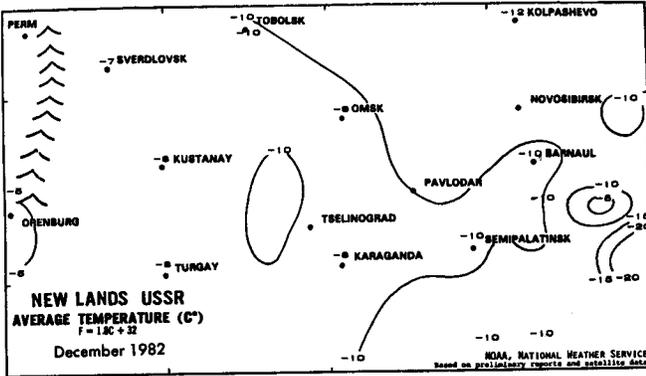
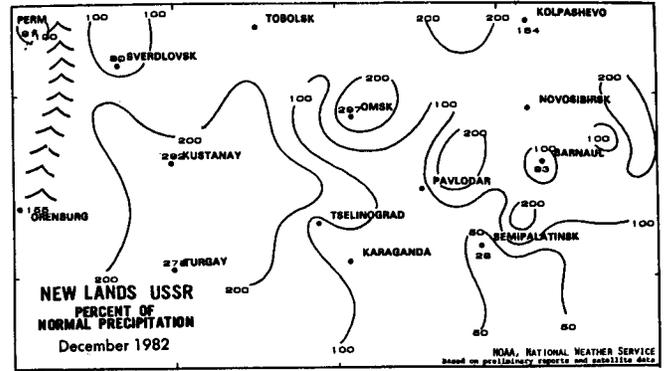
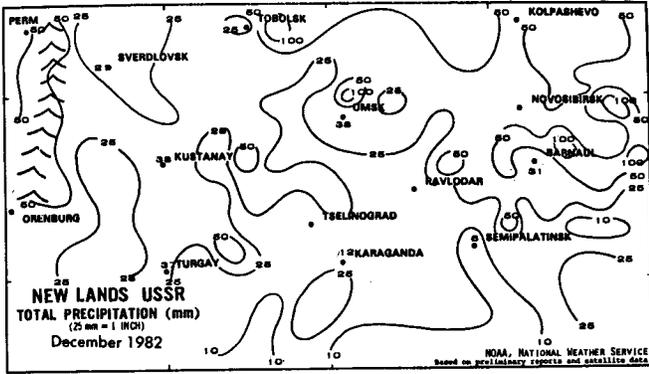


WESTERN USSR...Light precipitation in the form of rain and drizzle covered the major winter grain areas of the eastern Ukraine, southern Black Soils, southern Volga Valley, and the North Caucasus. Beneficial precipitation fell on these areas during December, bringing relief from the chronic dryness of the previous 4 months. The precipitation improved topsoil moisture, but subsoil moisture is still very low. Temperatures over these areas fluctuated widely during December and as a result, crop resistance to winterkill is low. Temperatures this past week continued December's above-normal pattern over the entire region. Winter grain areas of the Baltic States, Belorussia, the Ukraine, and North Caucasus are without a protective snow cover, therefore, the crop is highly vulnerable to winterkill in the event of a cold air outbreak.

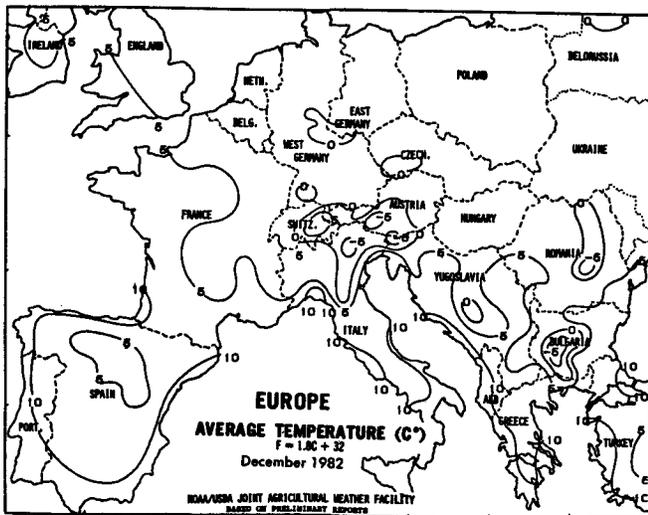
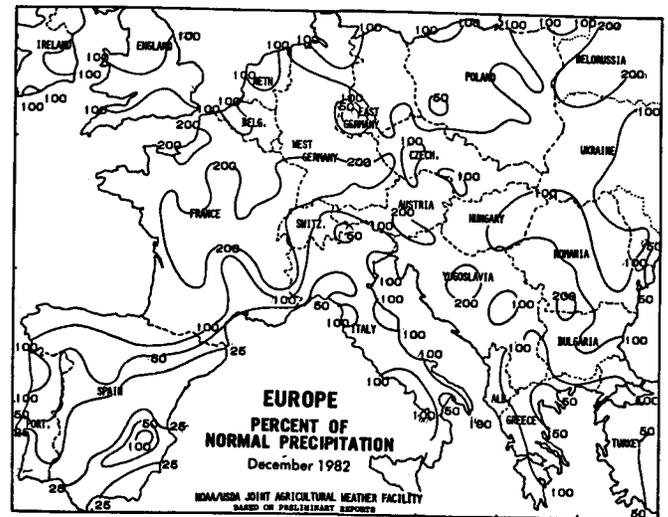
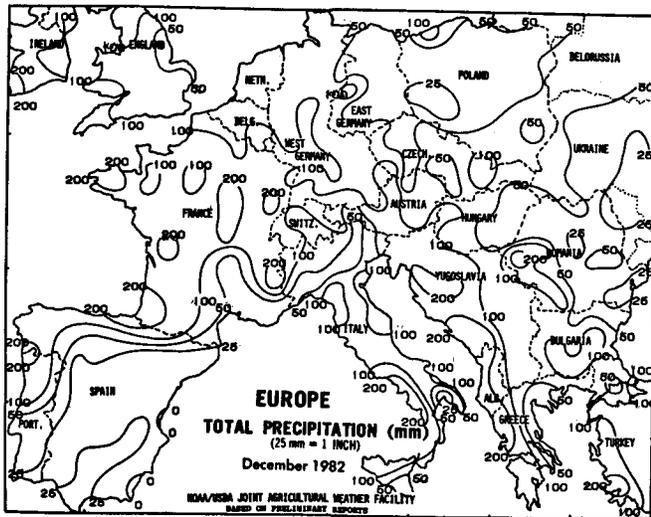
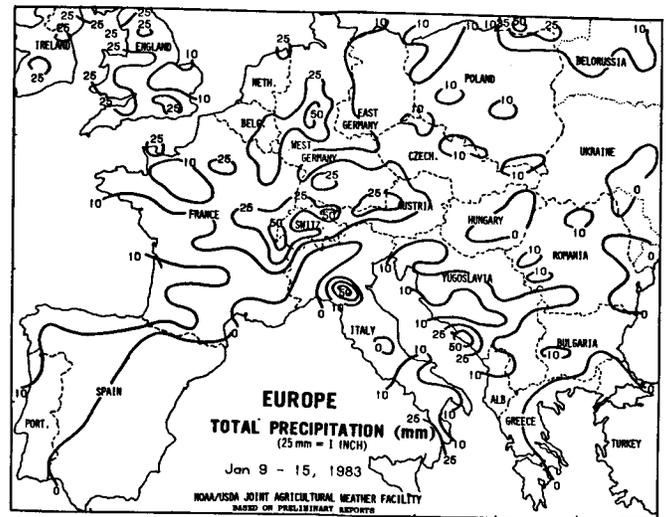


National Weather Summary (continued from front cover)

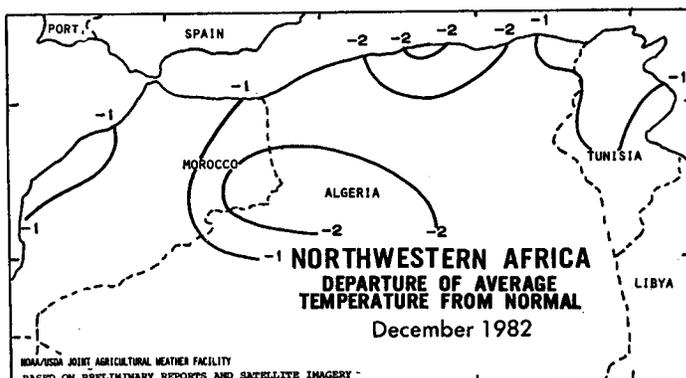
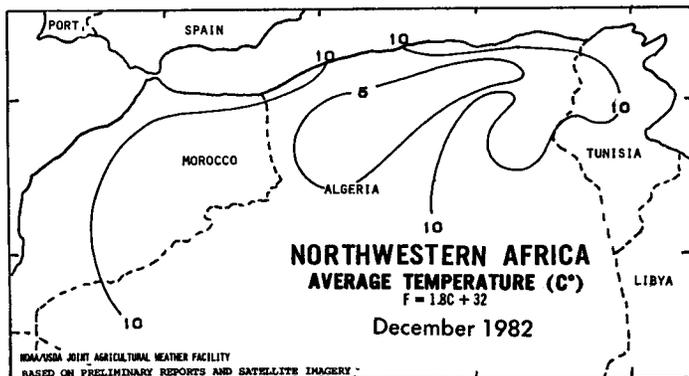
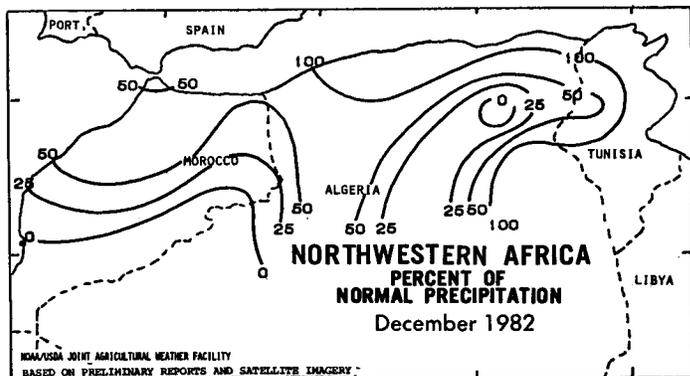
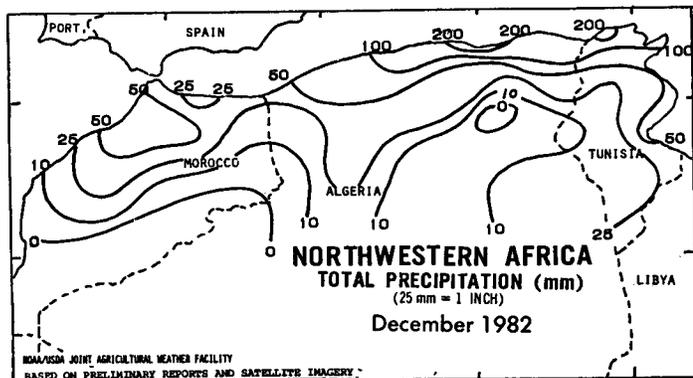
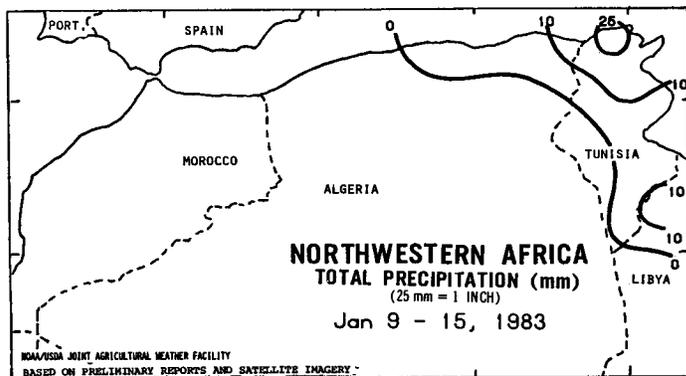
West Virginia into New England. Other than the snow, precipitation was scarce across the Nation. A few showers fell over South Texas and along the Pacific Northwest coast. Frigid air settled over a large area east of the Rockies, while the extreme Southwest continued with unseasonably warm temperatures.



EUROPE...Wet weather over parts of England and most of northern and central France, continued December's wet pattern. The heavy rains in central France in December produced local flooding. In Spain, dry weather in southern winter wheat areas since late November has created unfavorable conditions for good early establishment of winter grains. In northern and central Spain, below-normal precipitation in December coupled with recent dryness is also prompting concern. Poland and East Germany received near- to above-normal rainfall in December, which improved the low soil moisture levels in these areas. In the southeast, favorable moisture covered most winter grain areas, but widely fluctuating temperatures in Romania has reduced snow cover and limited plant winter hardiness. Winter grains in this area are quite vulnerable to winterkill in the event of a cold air outbreak.



NORTHWESTERN AFRICA...Dry weather continued to cover Morocco, continuing December's below-normal rainfall pattern. The dry weather in northern Morocco is stressing winter grains in the vegetative stage. The dryness in southern Morocco has been of longer duration which may have produced some planting delays. Topsoil moisture in these southern areas is too low for favorable germination and early plant establishment. In contrast, generous rains in December in Algeria and Tunisia provided favorable moisture for emergence and early plant growth. Generally dry weather continued over Algeria this past week, but northern Tunisia received light rain.



State Summaries (continued from p. 12)

normal precipitation over the western half of the State. Just the opposite happened east of the Cascades as totals were all less than 0.10 in. there. The marine air was very warm. Weekly mean temperatures were 5 to 10° above normals in the west, and 10 to 15° above normals in the east.

West: Warmer and drier weather allowed outdoor activities to resume. Christmas tree growers busy cleaning up fields as well as planting seedlings. Certified strawberry plants being dug and sorted. Farmers also attending meetings.

East: Unseasonably warm weather experienced following last week's deluge. This allowed orchard and vineyard pruning to resume. Other activities includes working on farm equipment and attending educational meetings. Winter wheat lacking snow cover, could be vulnerable to cold and winds.

WEST VIRGINIA: Temperatures 2 to 7° above normal. High 63°, low 12°. Precipitation normal north central and northeast, below normal rest of State. Range 0.26 in. to 1.06 in.

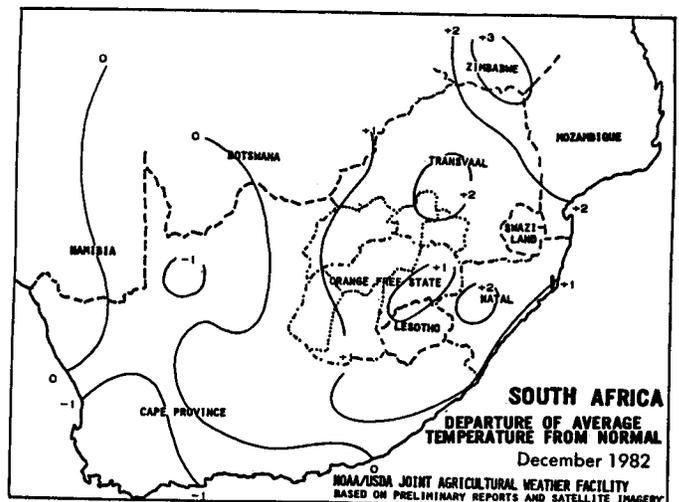
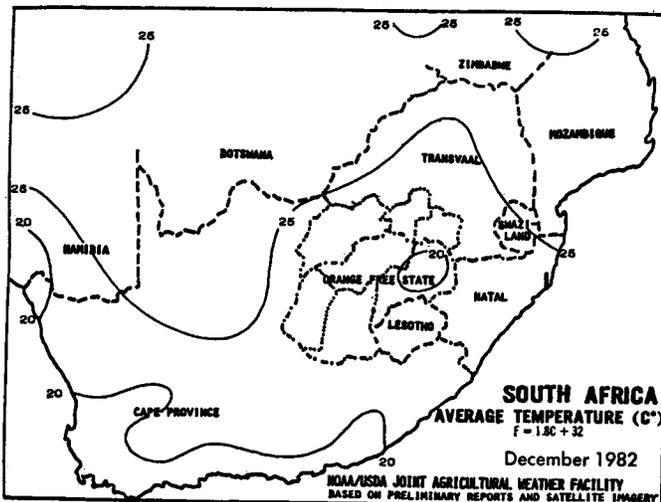
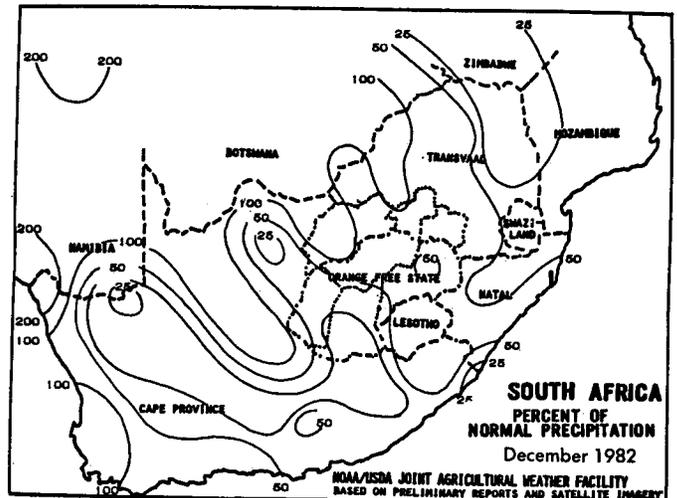
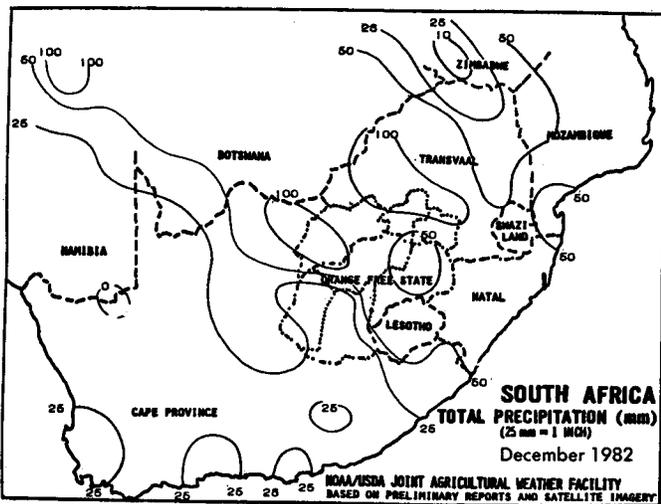
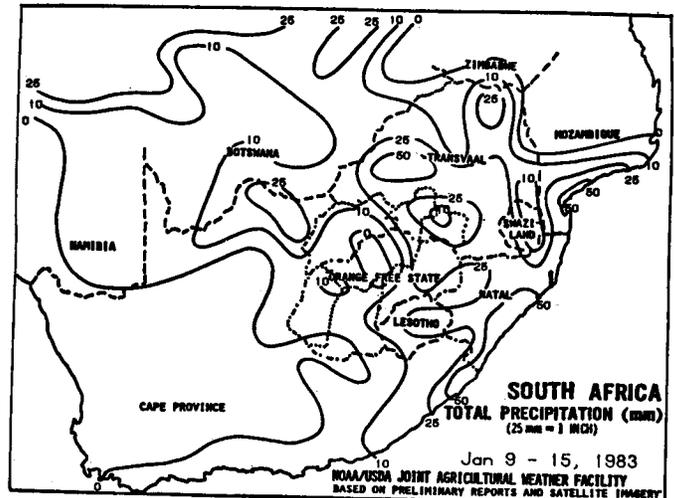
Soil moisture mostly adequate to short. Days worked averaged 4.0. Hay, grain and other feed supplies adequate.

WISCONSIN: A major weather system on the 10th produced 1 to 8 in. of snow in north. Morse reported 8 in. of snow on the ground. Another major snowstorm occurred on 14th with 6 to 8 in. of snow being reported in Oconto and Door Counties. Light snow flurries reported somewhere in the State on each day of the week. Mild temperatures gave way to much cooler temperatures by the end of the week. Temperatures ranged from a polar-like -2° in Duluth-Superior on the 15th to a much more moderate 44° in Milwaukee, Racine, West Allis and Wind Point on the 10th.

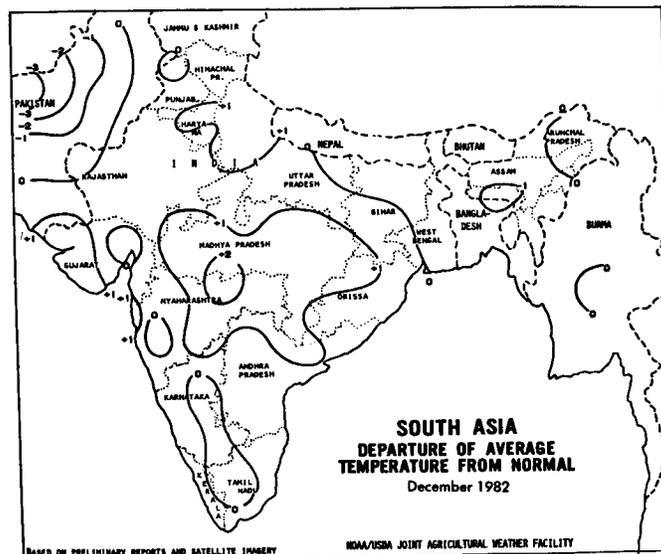
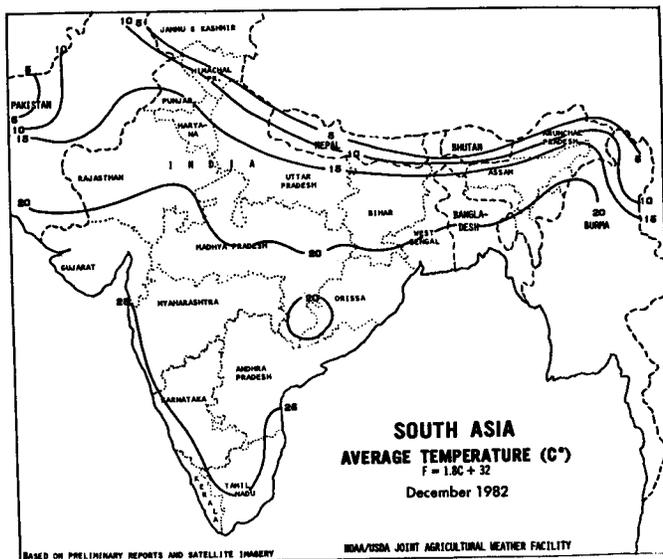
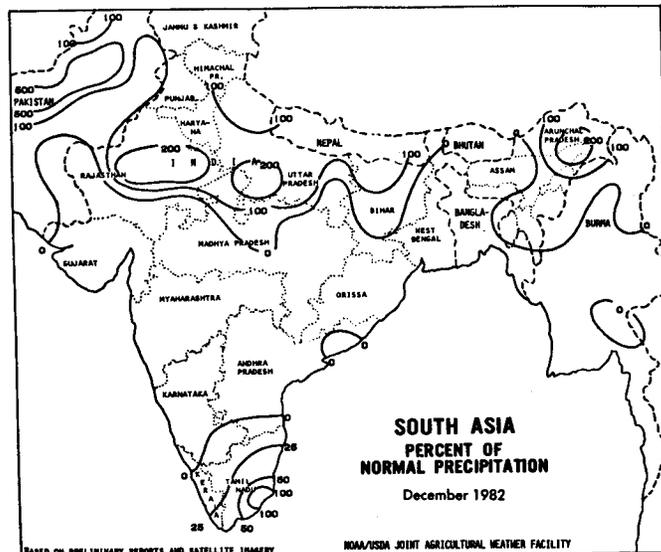
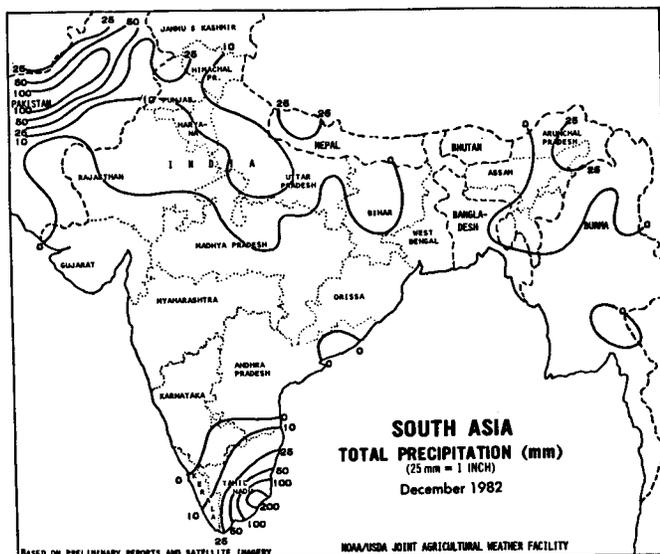
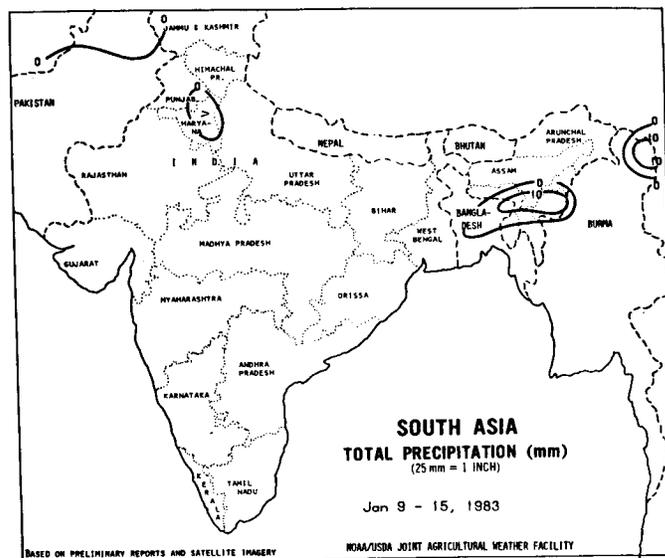
WYOMING: Temperatures above normal. Precipitation figures down.

Winter wheat mostly good condition, light wind damage few areas. Livestock mostly good condition. Some early calving. Other activities: Repairing equipment, feeding livestock.

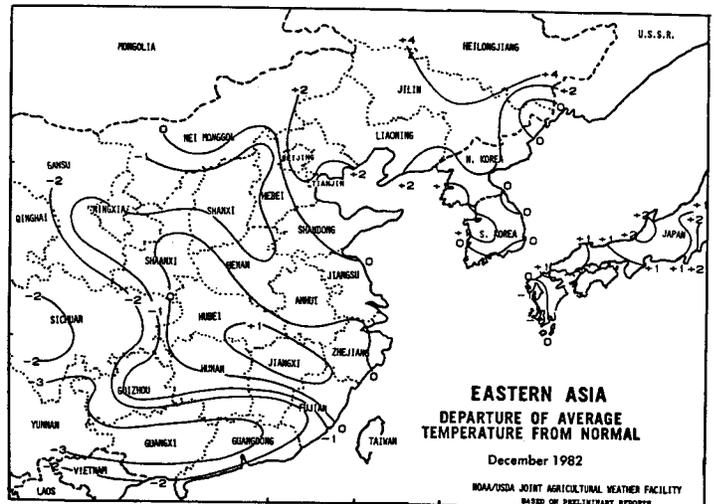
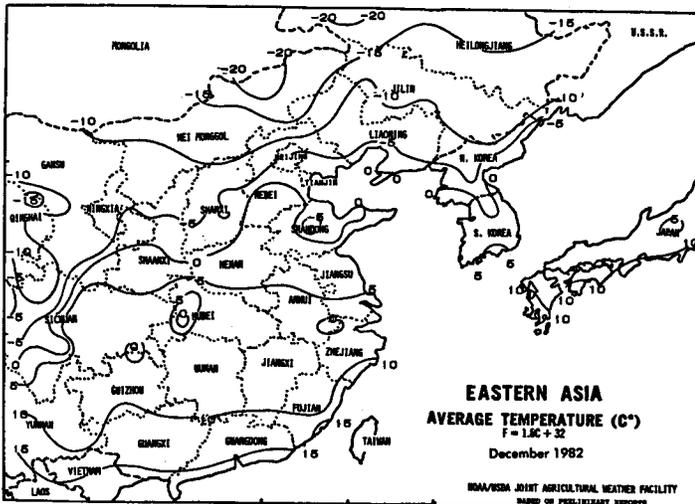
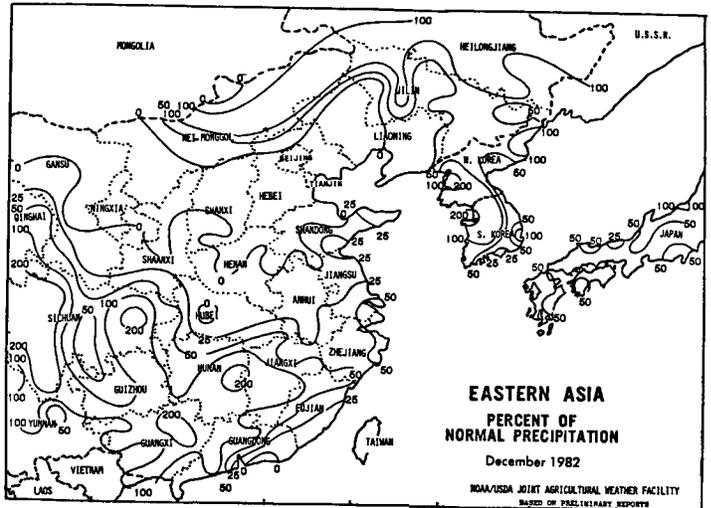
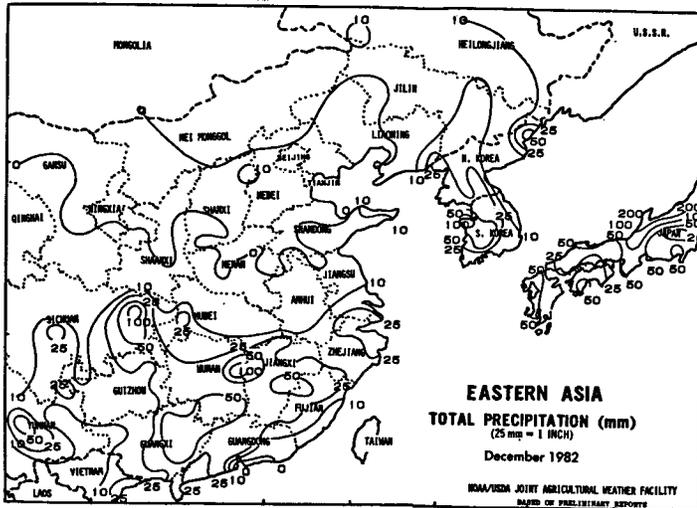
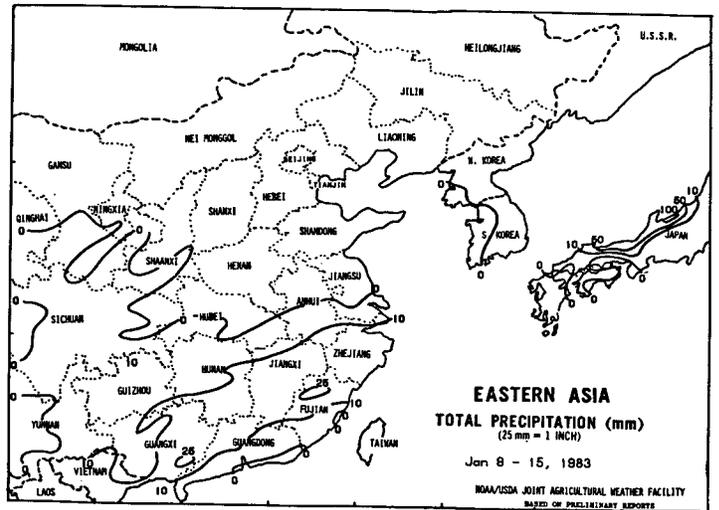
SOUTH AFRICA...Beneficial rains fell across northern and eastern portions of the Maize Triangle, while central and southwestern corn areas continued too dry. An extended dry spell and above-average temperatures during December created unfavorable growing conditions for corn in much of the Transvaal and the Orange Free State. Corn is in the tassel/silking period in many areas, and hot, dry weather can affect pollination and grain formation seriously. Thus, the rains which fell recently were extremely useful for crop development. However, maximum temperatures continue to average above the optimum range for corn which places further stress on the crop. Widespread rains and mild weather are needed throughout the Maize Triangle to prevent further deterioration of crop conditions.



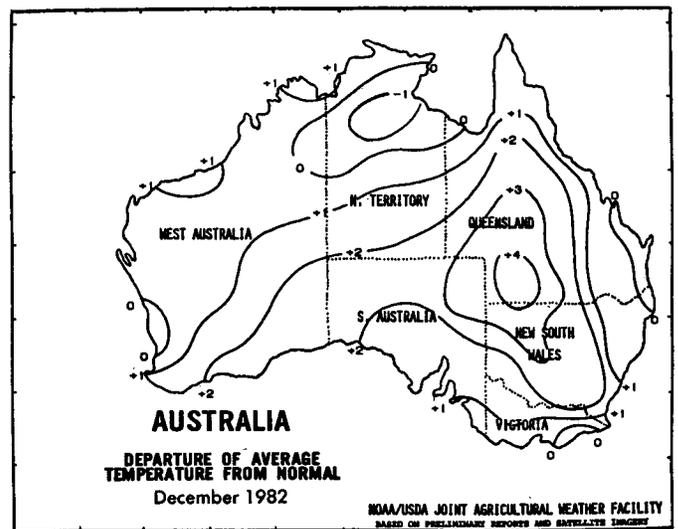
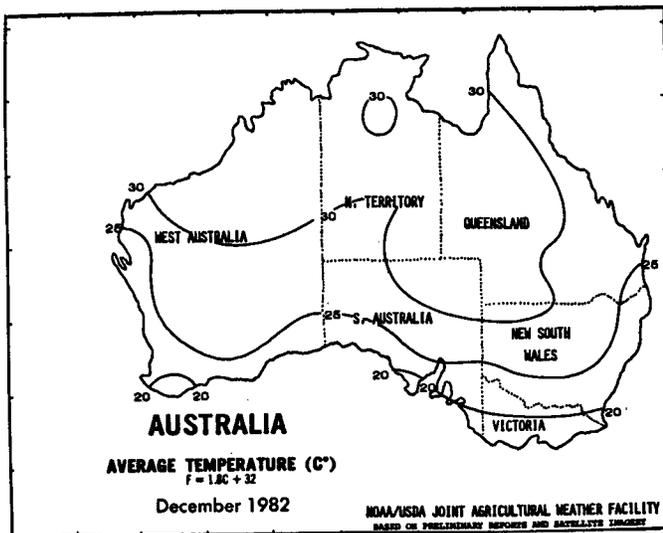
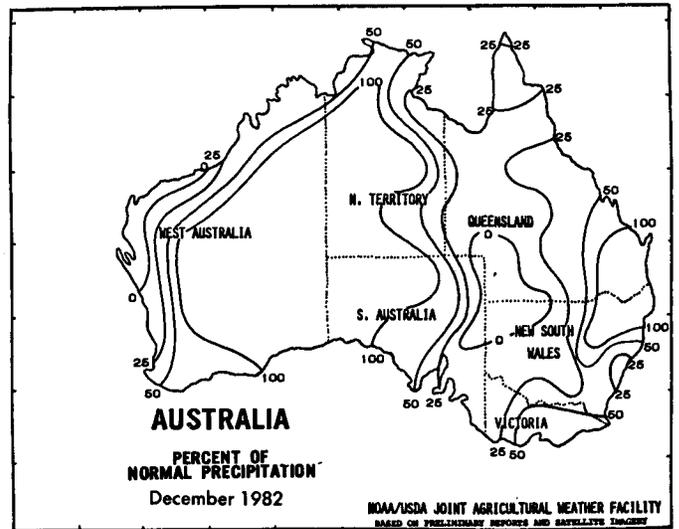
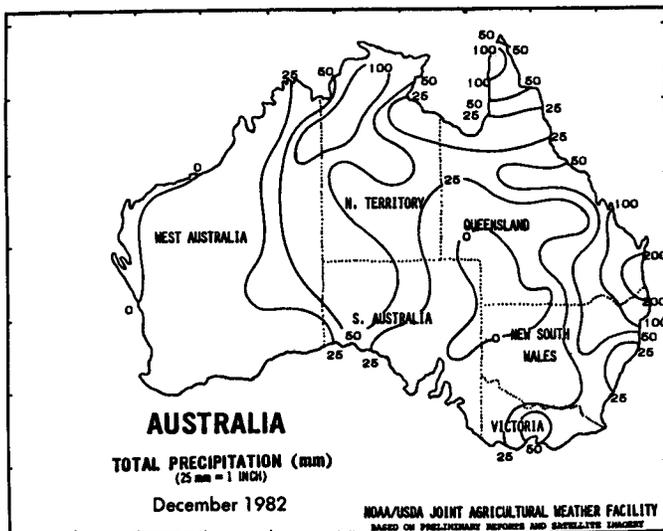
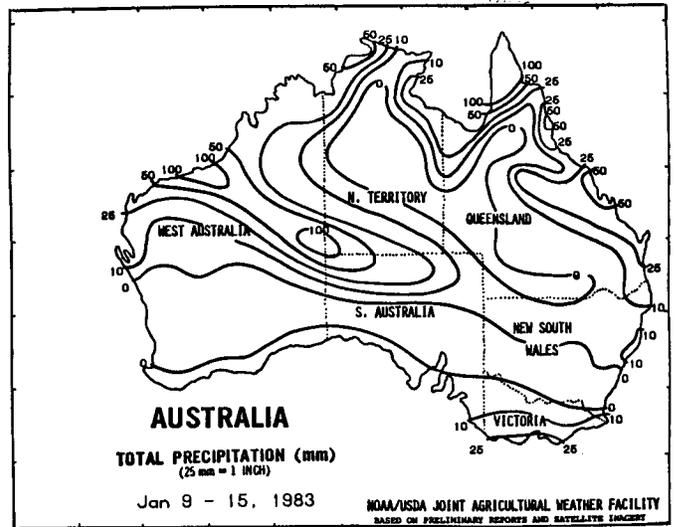
SOUTH ASIA... Dry weather covered most of India, continuing December's dry weather pattern over the southern two-thirds of the continent. Winter grains in Pakistan received beneficial rains in early December, but dry weather followed and continued into the present. In northern India, although above-normal precipitation in December fell over winter grains in Punjab, Haryana, and Uttar Pradesh, rainfall amounts were light. Dry weather has recently returned to these areas, and more rain will be required in upcoming weeks in unirrigated areas as the crop enters the moisture-sensitive reproductive stage.



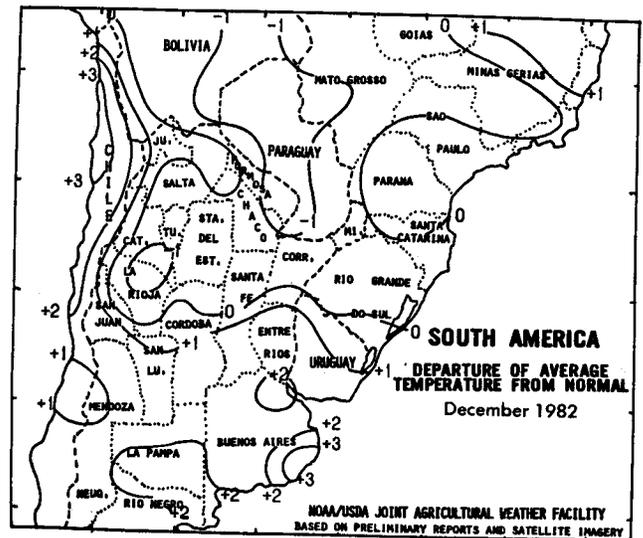
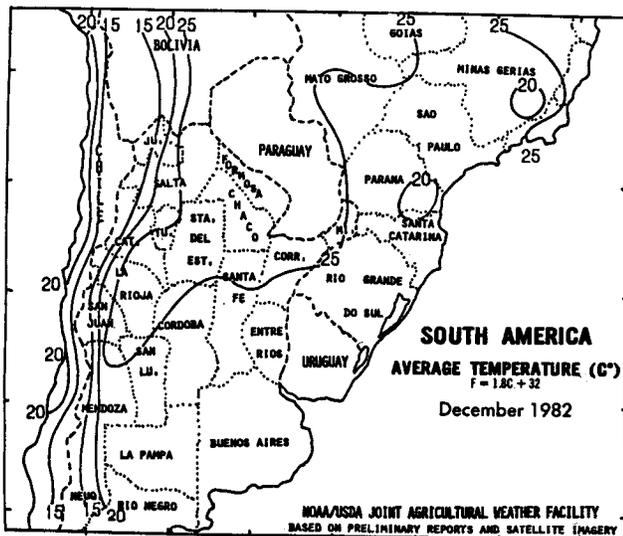
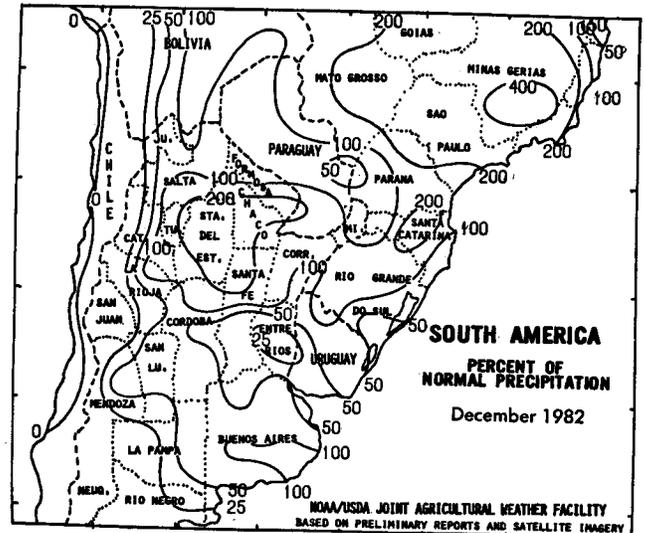
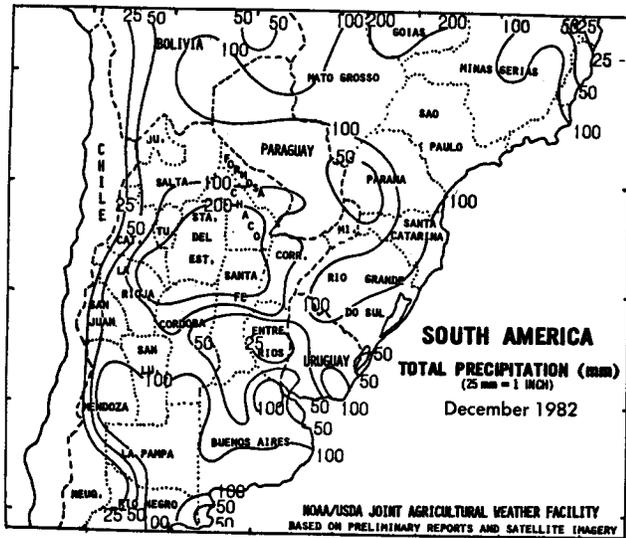
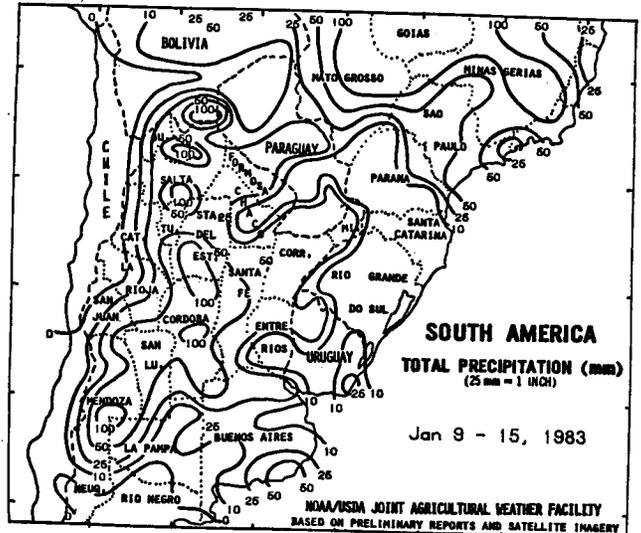
EASTERN ASIA... Dry weather over the major winter grain areas in the North China Plain continued December's below-normal rainfall pattern. Snow cover is probably light over most of the area due to the lack of moisture. Winter grains entered dormancy in these areas in early December, and since then, conditions have been too cold for growth. In southern China, heavy rains at the end of December aided both reservoir and soil moisture supplies. Recently, showers have continued in this area. In South Korea, dry weather covered most of the region, but favorable moisture conditions exist for dormant winter grains.



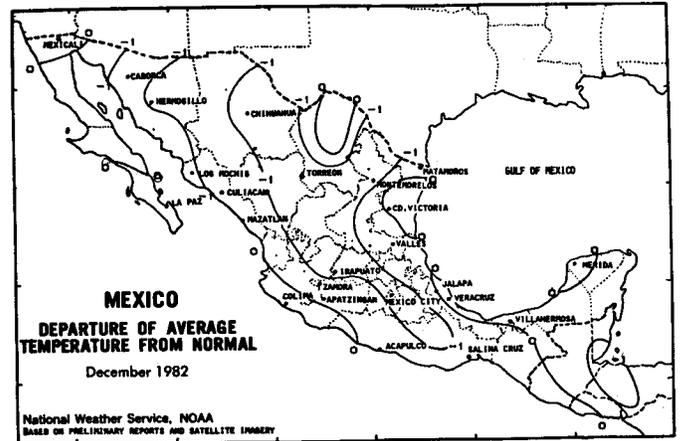
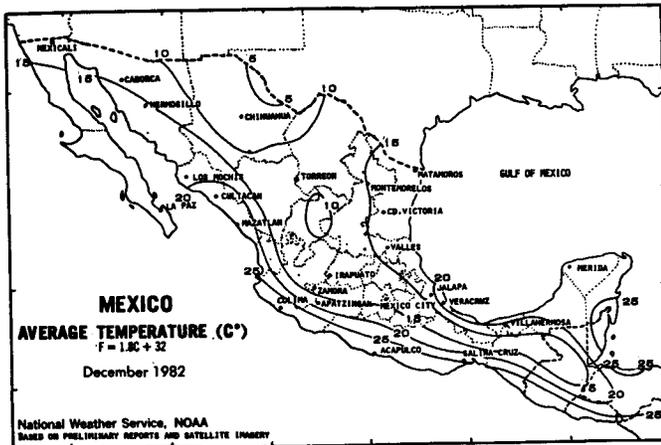
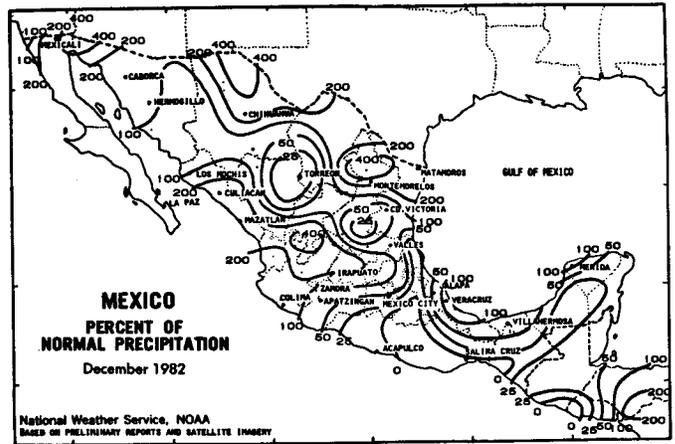
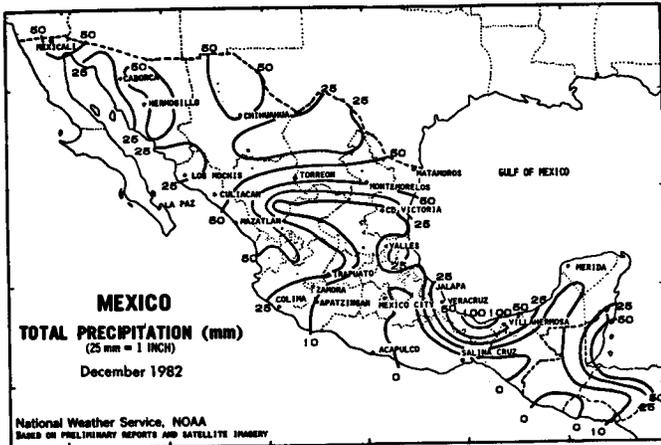
AUSTRALIA...Tropical storms caused nearly all of Australia's rainfall during the week. Tropical Cyclone Jane produced unusually heavy rainfall across the interior of Western Australia before dissipating as it moved southeastward across the continent. Eastern grain areas received virtually no moisture from this system. Tropical storms also produced substantial rains along extreme northern Australia and along sugarcane areas of east coastal Queensland. Some moisture penetrated into central Queensland, but most summer crop areas received minimal rainfall. Near-average December rainfall in southeastern Queensland and northern New South Wales aided summer crop development, but severe water shortages continue throughout eastern Australia due to one of the worst droughts in Australia's history.

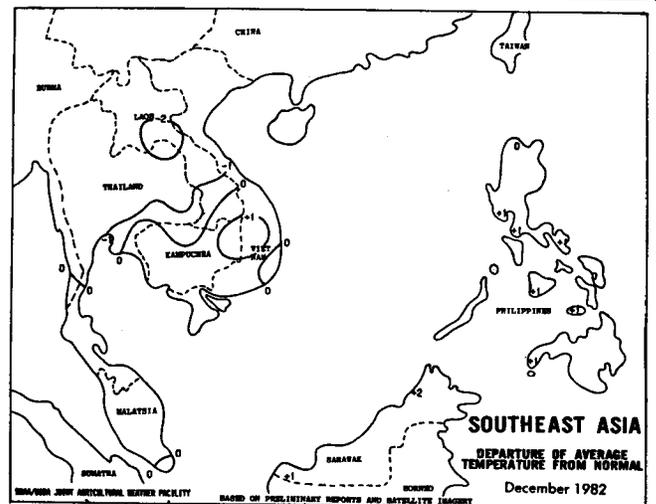
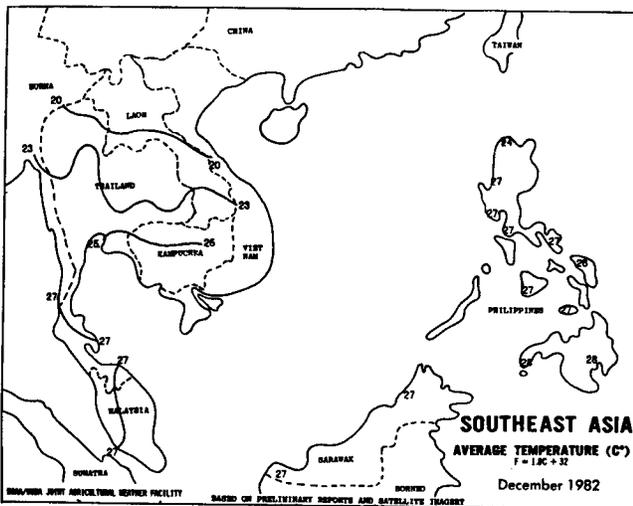
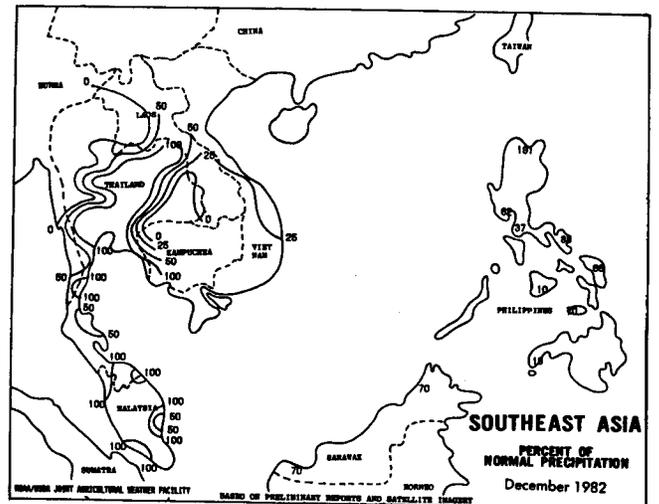
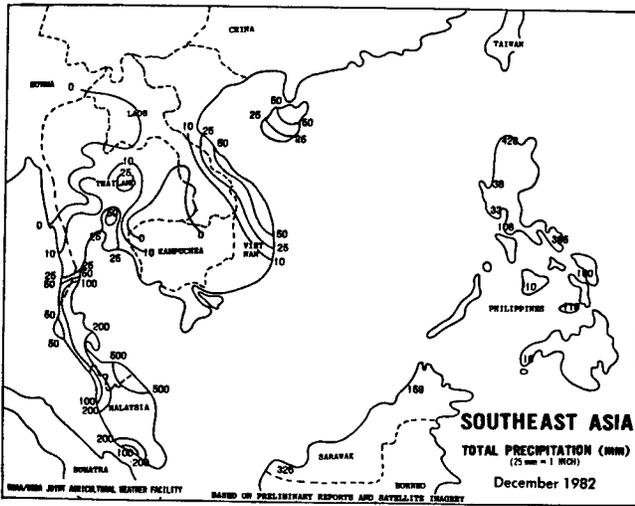


SOUTH AMERICA...Widespread showers covered much of Argentina's crops, benefiting cotton and sorghum in the north and corn and soybeans further south. The rain extremely benefited the drier areas of southern Santa Fe and northern Buenos Aires where December rainfall was below average. Some localized areas of dryness severely stressed corn as hot weather coincided with the crucial reproductive stage of development. The recent showers eased the moisture deficiency, but temperatures averaged above normal again until the weekend. Additional moisture is needed. In Brazil, drier weather in December allowed completion of soybean planting. Moisture supplies are adequate for flowering of early-planted soybeans in Rio Grande do Sul. Moisture is generally adequate for soybeans in Parana, but additional rains are needed in southwestern portions where December rainfall was below average. Early-planted soybeans should be in the pod formation stage in Parana and more northern areas.



MEXICO... Rain was light in the principal agricultural areas, even though considerable cloudiness moved across the country. Thus, field operations continued on schedule, but sunlight was likely less than optimum for development of winter vegetables. December's rain was twice the normal in the Culiacan Valley vegetable fields and the Montemorelos citrus orchards. Citrus orchards further south was considerably drier and needed irrigation. Northernmost areas of the country received above-normal rain which benefited rangeland vegetation and winter wheat in December.





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