

WEEKLY WEATHER AND CROP BULLETIN

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

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service and World Agricultural Outlook Board

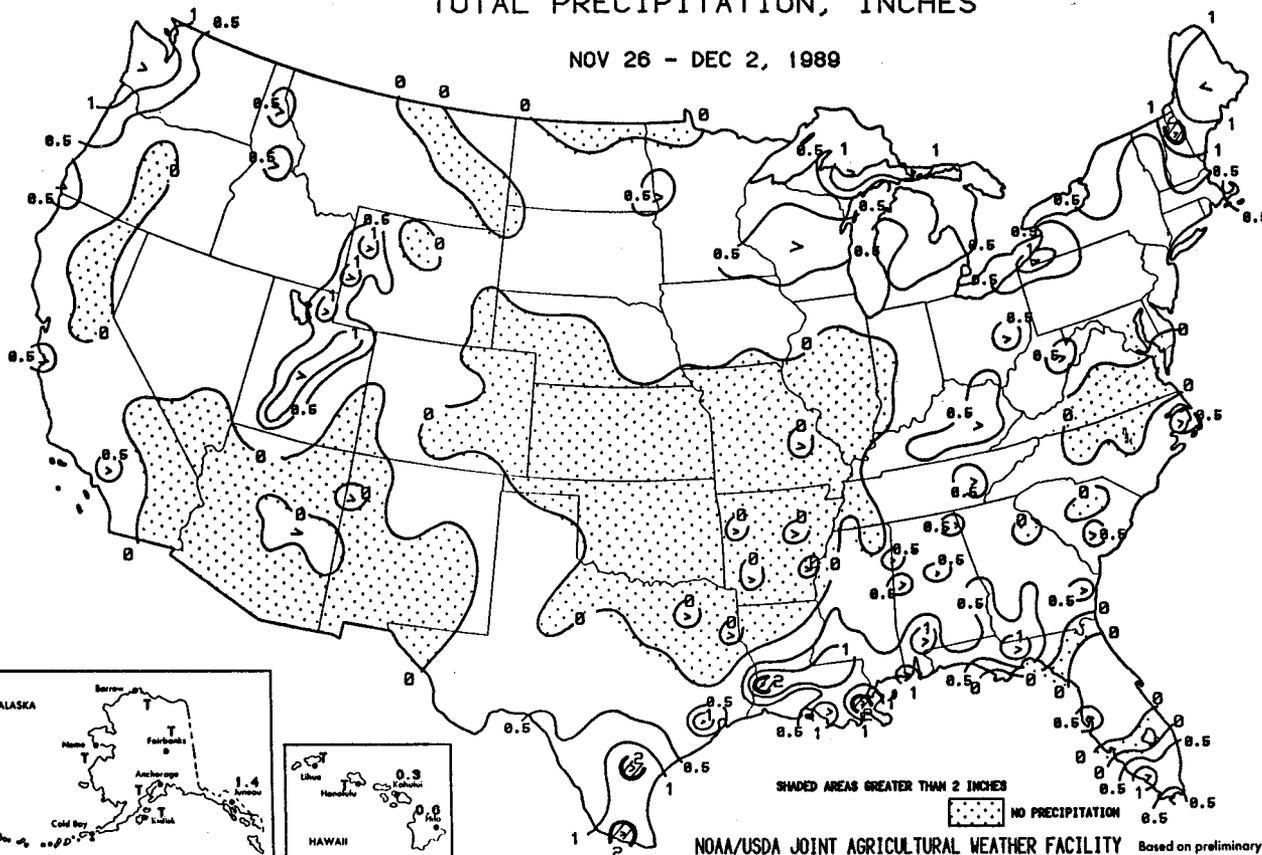
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Dec. 5, 1989

TOTAL PRECIPITATION, INCHES

NOV 26 - DEC 2, 1989



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

HIGHLIGHTS

Nov. 26 - Dec. 2, 1989

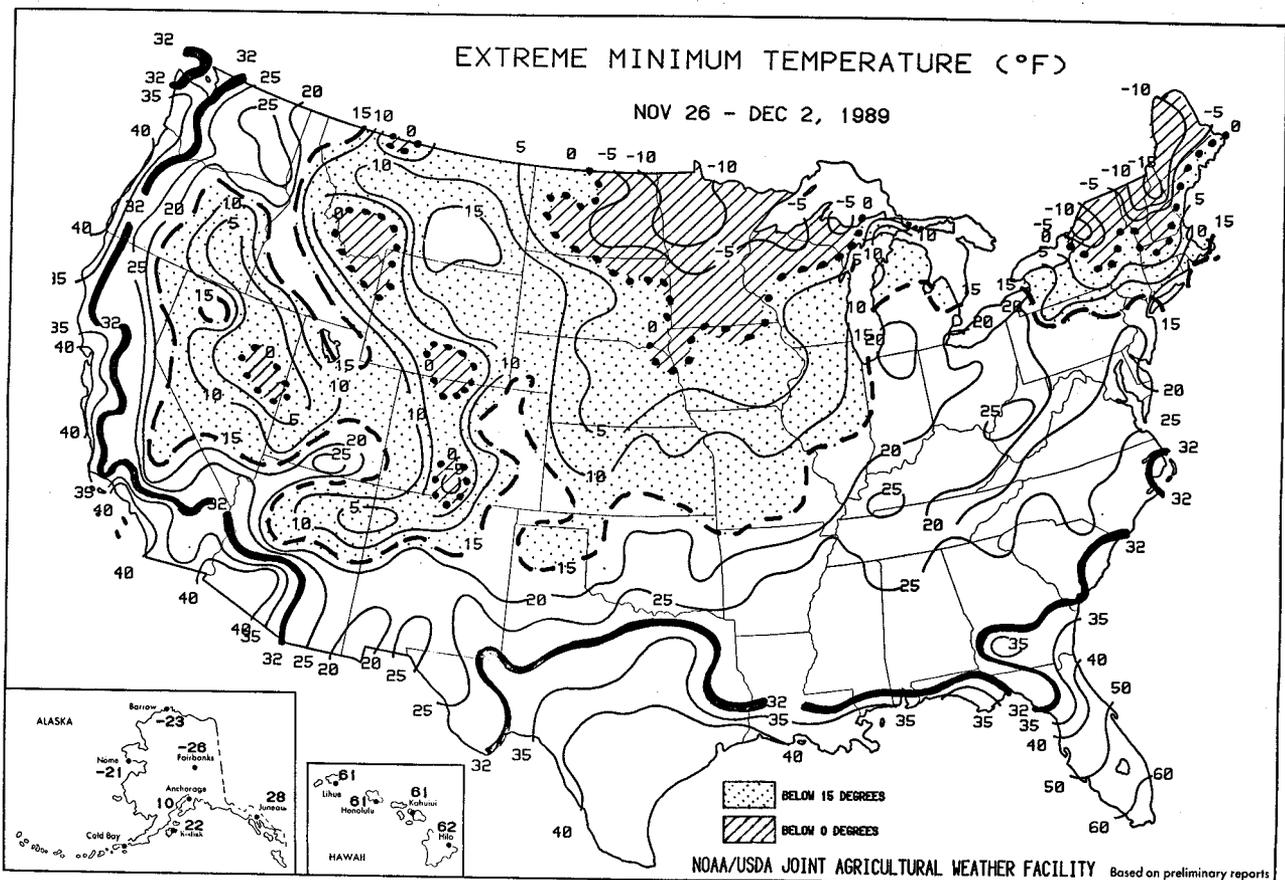
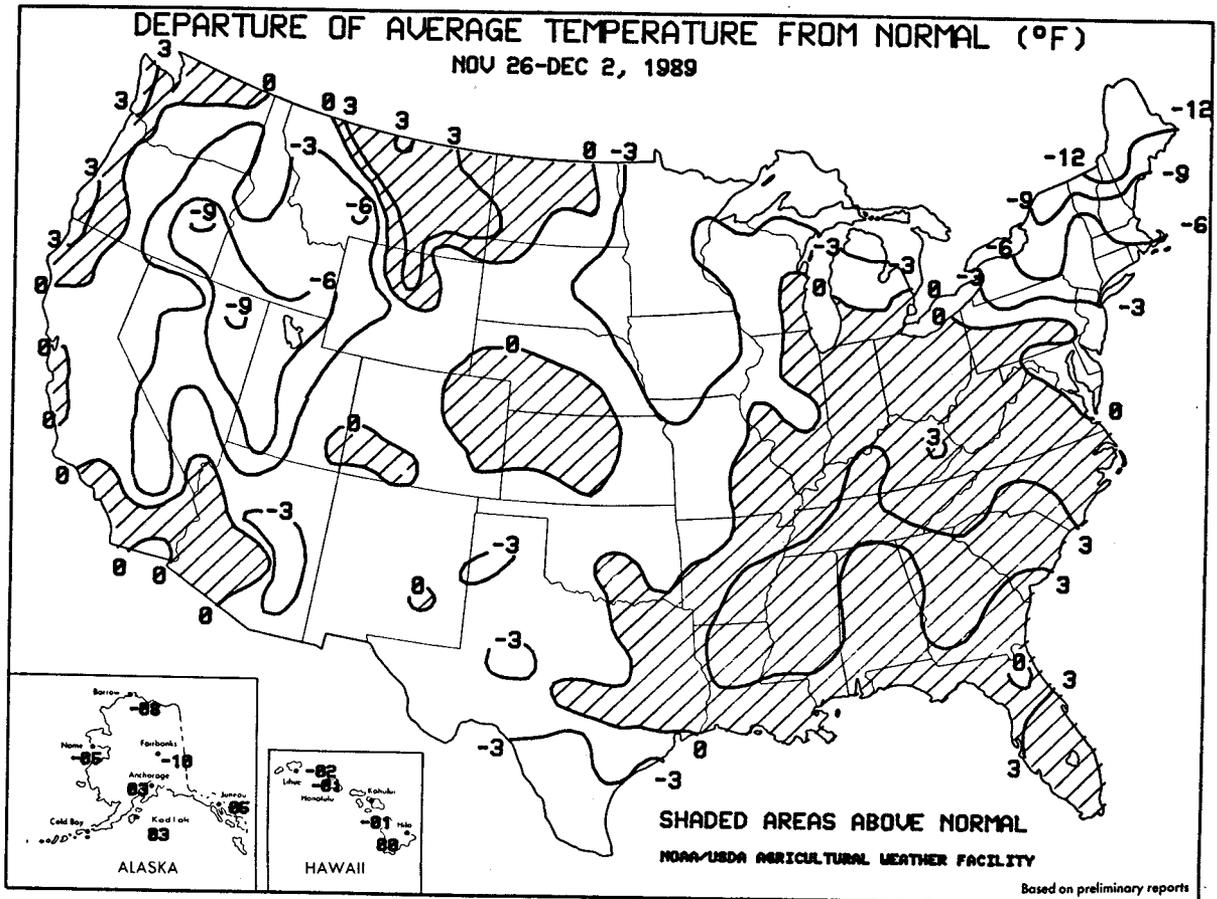
During the first half of the week, a winter storm spread snow and gusty wind from the **central Rockies**, across the **Great Lakes**, and into **New England**. Heavy rain fell along the **Gulf coast**, and record-high temperatures were set from **eastern Texas** and the **southeast** to the **lower Great Lakes**, preceding a cold front. Freezing temperatures dipped into **central California** on Wednesday, as **Bakersfield** tied their 31-degree record for the date. During the latter half of the week, Karen, a rare, late-season tropical storm, drenched **western Cuba** with heavy rain, while snow showers persisted across the **Great Lakes**. Beneficial rain fell across portions of the **southern Plains**, but dry weather continued to plague most of the hard red winter wheat. At week's end, a powerful storm system swept across the **Great Lakes** into

the **Northeast**. Strong northerly winds ushered arctic air into the **East** behind the system.

Contents

Page

Highlights & Total Precipitation Map	1
Temperature Departure & Extreme Minimum Temperature Maps	2
National Weather Data for Selected Cities	3
Record Dryness in the Great Plains	6
Snow Cover Map	8
National Agricultural Summary	9
State Summaries of Weather and Agriculture ...	10
Streamflow during October 1989	14
International Weather and Crop Summary & November Temperature/Precipitation Table ...	15
Subscription and Mailing Permit Information & Average Temperature Map	20



National Weather Data for Selected Cities

Weather Data for the Week Ending December 2, 1989

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	
AL BIRMINGHAM	60	40	70	26	50	2	.3	-.7	.2	0	0	57.8	116	86	47	0	2	2	0	
MOBILE	66	47	77	32	56	1	1.0	-.1	1.0	0	0	56.7	96	84	47	0	1	1	1	
MONTGOMERY	66	40	81	27	53	1	.3	-.6	.3	0	0	65.5	147	90	42	0	1	1	0	
AK ANCHORAGE	26	16	33	10	21	3	0	-.2	T	0	0	26.2	190	85	63	0	7	0	0	
BARROW	-10	-22	4	-28	-16	-9	T	0	T	T	T	150	7.1	161	83	68	0	7	1	
FAIRBANKS	-6	-21	26	-26	-14	-10	T	-.2	T	0	0	9.8	101	81	66	0	7	0	0	
JUNEAU	38	32	45	28	35	5	1.4	.4	.7	.4	132	46.1	95	100	84	0	3	6		
KODIAK	39	31	42	22	35	3	2.6	1.3	1.0	1.8	500	51.0	92	95	86	0	3	2		
NOME	14	-4	24	-21	5	-5	.1	-.1	.1	0	0	20.0	143	83	61	0	7	2		
AZ PHOENIX	69	48	74	44	58	2	0	-.2	0	0	0	4.6	75	53	18	0	0	0		
PRESCOTT	53	21	59	13	37	-3	0	-.3	0	0	0	9.4	54	63	22	0	6	0		
TUCSON	64	38	73	31	51	-4	0	-.2	0	0	0	6.3	62	62	20	0	2	0		
YUMA	71	50	77	41	60	1	0	-.1	0	0	0	7.2	338	39	15	0	0	0		
AR FORT SMITH	59	31	77	22	45	0	0	-.8	0	0	0	46.7	126	88	30	0	5	0		
LITTLE ROCK	58	41	75	29	49	2	0	-1.1	0	0	0	47.3	105	65	43	0	2	0		
CA BAKERSFIELD	66	34	70	31	50	-1	.1	-.1	.1	0	0	2.9	58	87	29	0	3	1		
EUREKA	61	45	68	37	53	3	.2	-1.3	.2	0	0	24.7	76	80	54	0	0	1		
FRESNO	62	34	65	31	48	-1	.2	-.2	.2	0	0	6.9	78	99	38	0	3	1		
LOS ANGELES	76	49	83	46	63	4	.4	0	.4	0	0	4.2	41	52	14	0	0	1		
REDDING	62	33	69	27	48	-2	0	-1.5	0	0	0	29.6	86	94	37	0	2	0		
SACRAMENTO	60	36	62	33	48	-1	0	-.6	0	0	0	15.1	107	97	46	0	0	0		
SAN DIEGO	73	48	82	43	60	1	.1	-.2	.1	0	0	2.7	33	62	21	0	0	1		
SAN FRANCISCO	61	43	65	40	52	0	T	-.6	T	0	0	11.4	70	91	47	0	0	1		
CO DENVER	50	21	63	16	36	1	T	-.1	T	0	0	14.7	101	74	23	0	7	1		
GRAND JUNCTION	45	20	59	12	33	-1	T	-.1	T	0	0	5.5	75	66	27	0	6	0		
PUEBLO	55	16	67	7	35	-1	0	-.1	0	0	0	6.9	65	60	14	0	7	0		
CT BRIDGEPORT	43	27	57	13	35	-5	.5	-.4	.4	T	T	4	48.7	131	72	43	0	4	4	
HARTFORD	39	22	58	7	31	-5	.3	-.7	.3	T	T	4	53.2	132	78	39	0	5	2	
DC WASHINGTON	54	33	66	26	43	0	T	-.7	T	0	0	48.2	135	86	40	0	4	1		
FL APALACHICOLA	70	50	77	39	60	2	T	-.7	T	0	0	51.3	99	89	51	0	0	0		
DAYTONA BEACH	76	54	84	44	65	3	.3	-.3	.3	0	0	40.7	88	95	56	0	0	1		
JACKSONVILLE	72	48	80	35	60	1	T	-.4	T	0	0	48.0	98	95	49	0	0	0		
KEY WEST	79	72	85	68	76	3	.2	-.4	.2	0	0	29.5	78	92	74	0	0	1		
MIAMI	81	67	85	60	74	3	.7	.3	.3	0	0	42.0	75	92	66	0	0	3		
ORLANDO	78	58	85	49	68	4	.2	-.3	.2	0	0	41.1	87	94	54	0	0	1		
TALLAHASSEE	69	45	80	32	57	2	1.2	.2	1.2	0	0	59.0	98	96	46	0	1	1		
TAMPA	77	58	84	48	68	4	.7	.2	.7	0	0	38.9	87	93	56	0	0	1		
WEST PALM BEACH	80	65	85	56	73	3	.5	-.1	.3	0	0	36.7	64	93	61	0	0	3		
GA ATLANTA	63	41	76	30	52	4	.1	-.8	.1	0	0	58.8	132	79	36	0	1	1		
AUGUSTA	69	40	77	27	55	4	.1	-.5	.1	0	0	44.5	112	93	38	0	3	1		
MACON	67	42	77	27	54	3	.2	-.5	.2	0	0	42.6	104	91	37	0	1	2		
SAVANNAH	67	44	80	30	55	1	.1	-.4	.1	0	0	41.5	88	92	48	0	1	2		
HI HILO	81	64	86	62	73	0	.6	-2.9	.4	.6	59	161.1	139	93	60	0	0	2		
HONOLULU	84	64	86	61	74	-1	T	-.8	T	0	0	21.6	108	90	52	0	0	1		
KAHULUI	83	64	85	61	73	-1	.3	-.3	.2	.2	120	35.3	227	92	59	0	0	2		
LIHUE	79	64	83	61	72	-2	T	-1.3	T	0	0	52.8	137	88	58	0	0	0		
ID BOISE	40	23	43	17	32	-4	.1	-.2	.1	0	0	10.4	101	88	50	0	6	1		
LEWISTON	45	32	51	27	38	1	T	-.3	T	0	0	13.3	115	71	50	0	4	1		
POCATELLO	34	16	41	9	25	-6	.4	-.2	.4	0	0	9.5	97	92	62	0	7	1		
IL CHICAGO	45	23	63	12	34	0	.2	-.4	.1	T	T	13	29.0	91	84	46	0	6	3	
MOLINE	46	18	67	7	32	-1	.1	-.3	.1	T	T	0	31.2	89	90	45	0	6	2	
PEORIA	47	21	72	9	34	0	T	-.5	T	T	0	21.7	66	92	55	0	6	0		
QUINCY	50	22	70	8	36	0	T	-.4	T	0	0	17.6	49	83	37	0	6	0		
ROCKFORD	43	19	61	7	31	0	.1	-.4	.1	T	T	0	25.7	74	92	54	0	6	2	
SPRINGFIELD	49	23	73	10	36	-1	T	-.5	T	0	0	27.5	86	87	43	0	6	0		
IN EVANSVILLE	54	31	74	21	43	2	T	-.8	T	0	0	46.0	120	89	43	0	5	0		
FORT WAYNE	46	27	64	20	36	2	.2	-.4	.2	T	T	6	34.2	106	94	60	0	5	3	
INDIANAPOLIS	48	26	68	17	37	1	.1	-.6	.1	T	T	5	48.7	135	86	51	0	5	3	
SOUTH BEND	45	27	63	22	36	1	.5	-.2	.2	.2	.2	105	34.5	98	95	55	0	6	3	
IA DES MOINES	43	14	54	3	29	-3	T	-.3	T	T	T	0	28.6	96	89	50	0	7	1	
STIOUX CITY	40	9	50	-4	25	-5	.2	-.1	.2	T	T	0	18.9	76	97	61	0	7	1	
WATERLOO	39	12	47	1	25	-4	.2	-.1	.2	T	T	0	19.4	61	94	57	0	7	1	
KS CONCORDIA	52	21	60	10	36	0	T	-.2	T	0	0	24.3	92	72	31	0	7	0		
DODGE CITY	55	21	62	12	38	0	0	-.1	0	0	0	20.2	101	65	23	0	7	0		
GOODLAND	51	18	59	10	35	1	0	-.1	0	0	0	17.8	113	61	26	0	6	0		
TOPEKA	52	18	65	10	35	-2	0	-.3	0	0	0	37.8	117	83	30	0	7	0		
WICHITA	54	22	62	15	38	-1	0	-.3	0	0	0	34.2	123	72	27	0	7	0		
KY BOWLING GREEN	57	35	73	25	46	4	.7	-.3	.7	0	0	57.2	128	87	53	0	4	1		
LEXINGTON	53	33	67	21	43	2	.3	-.6	.2	T	T	0	51.4	122	89	55	0	4	2	
LOUISVILLE	55	34	71	23	45	3	.1	-.8	0	T	T	0	49.5	124	81	45	0	4	2	
LA ALEXANDRIA	65	49	82	30	57	4	.1	-1.0	.1	0	0	55.1	116	85	40	0	1	2		
BATON ROUGE	66	48	83	32	57	2	1.0	-.1	.6	T	T	0	81.1	159	85	46	0	1	3	
LAKE CHARLES	65	52	80	38	59	2	.5	-.6	.5	T	T	0	58.4	119	79	47	0	0	1	
NEW ORLEANS	66	53	80	40	60	3	1.4	-.3	1.4	T	T	0	61.2	112	87	54	0	0	1	

Based on 1951-80 normals

Weather Data for the Week Ending December 2, 1989

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
SHREVEPORT	63	46	82	30	54	3	0	-1.9	0	0	0	57.6	144	76	37	0	1	0	0
ME CARIBOU	17	3	33	-5	10	-14	0	-2	0	5	0	30.5	91	86	62	0	7	4	0
PORTLAND	34	17	52	4	28	-7	1.2	-1	0	216	0	40.0	102	83	42	0	7	4	0
MD BALTIMORE	51	30	63	21	40	-1	0	-1	0	0	0	49.6	129	87	47	0	5	2	1
SALISBURY	54	30	67	20	42	-1	0	-1	0	0	0	50.8	121	91	43	0	5	4	0
MA BOSTON	41	24	59	10	32	-7	0	-1	0	3	0	41.5	105	72	40	0	4	3	0
CHATHAM	42	27	54	19	34	-6	0	-1	0	0	0	45.2	107	76	49	0	4	2	0
MI ALPENA	35	16	41	11	25	-5	0	-2	0	115	0	20.5	76	93	63	0	7	5	0
DETROIT	45	27	59	20	38	0	0	-2	0	35	0	28.0	99	89	54	0	5	3	0
FLINT	43	24	57	15	34	0	0	-1	0	29	0	30.3	112	88	53	0	7	3	1
GRAND RAPIDS	43	25	56	19	34	0	0	-1	0	128	0	33.2	107	87	52	0	6	3	0
HOUGHTON LAKE	33	19	41	13	26	-3	0	0	0	46	0	19.4	74	91	57	0	7	4	0
LANSING	41	22	56	16	32	-1	0	0	0	76	0	30.0	109	97	57	0	7	2	1
MARQUETTE	29	11	33	-6	20	-4	1.4	0	0	400	0	27.8	80	96	73	0	7	4	2
MUSKEGON	43	25	57	19	34	0	0	-2	0	53	0	24.1	84	93	58	0	6	4	0
SAULT ST. MARIE	32	11	36	4	22	-5	1.0	0	0	233	0	24.6	80	93	66	0	7	5	0
MN ALEXANDRIA	30	6	43	-8	18	-4	0	0	0	0	0	20.9	87	95	71	0	7	1	0
DULUTH	31	6	40	-5	18	-3	0	-1	0	22	0	25.7	91	91	61	0	7	3	0
INT'L FALLS	25	2	38	-8	14	-3	0	-2	0	0	0	20.5	88	86	55	0	7	1	0
MINNEAPOLIS	34	12	41	2	23	-3	0	-1	0	0	0	22.9	90	90	60	0	7	1	0
ROCHESTER	33	10	40	-1	22	-4	0	-1	0	0	0	23.0	84	89	65	0	7	1	1
MS GREENWOOD	62	44	80	25	53	3	0	-1	0	0	0	60.5	126	88	49	0	2	1	0
JACKSON	66	46	83	28	56	4	0	-1	0	0	0	48.4	103	91	39	0	1	1	0
MERIDIAN	66	44	80	27	55	4	0	-1	0	0	0	63.6	133	87	38	0	2	1	0
MO CAPE GIRARDEAU	55	31	73	19	43	1	0	-1	0	0	0	48.2	117	87	41	0	5	0	0
COLUMBIA	51	23	68	10	38	-1	0	0	0	0	0	33.9	97	78	32	0	6	0	0
KANSAS CITY	50	20	64	11	35	-4	0	-3	0	0	0	37.1	107	79	33	0	7	0	0
SAINT LOUIS	54	28	76	16	41	2	0	-1	0	0	0	27.9	88	76	32	0	7	0	0
SPRINGFIELD	54	24	69	10	39	-1	0	0	0	0	0	30.7	83	82	29	0	6	0	0
MT BILLINGS	42	24	49	19	33	2	0	0	0	0	0	14.0	99	76	38	0	7	2	0
GLASGOW	36	16	44	7	26	3	0	0	0	0	0	10.0	95	89	58	0	7	1	0
GREAT FALLS	43	23	55	11	33	3	0	0	0	0	0	21.3	150	70	39	0	7	2	0
HAVRE	36	17	44	6	27	2	0	-1	0	0	0	11.2	100	88	57	0	7	0	0
HELENA	36	13	40	10	25	-3	0	0	0	0	0	11.9	109	89	51	0	7	1	0
KALISPELL	32	22	39	15	27	-1	0	-1	0	0	0	20.0	140	94	76	0	7	3	0
MILES CITY	41	21	48	15	31	5	0	-1	0	0	0	13.7	101	86	46	0	7	0	0
MISSOULA	30	16	35	10	23	-5	0	-1	0	0	0	13.0	108	95	76	0	7	2	0
NE GRAND ISLAND	49	15	61	4	32	0	0	-1	0	0	0	21.5	96	86	37	0	7	1	0
LINCOLN	47	14	59	6	31	-2	0	-2	0	0	0	23.2	88	87	35	0	7	1	0
NORFOLK	44	11	54	1	27	-3	0	-1	0	0	0	15.8	69	93	44	0	7	1	0
NORTH PLATTE	50	11	61	6	31	1	0	-1	0	0	0	13.8	73	90	29	0	7	0	0
OMAHA	43	16	54	4	29	-4	0	-2	0	0	0	21.8	74	80	52	0	7	1	0
SCOTTSDLUFF	47	15	53	11	31	0	0	-1	0	0	0	9.3	66	78	28	0	7	0	0
VALENTINE	42	12	54	3	27	-2	0	-1	0	0	0	12.1	72	72	41	0	7	1	0
NV ELY	40	5	45	-2	23	-7	0	0	0	0	0	6.7	81	84	34	0	7	1	0
LAS VEGAS	61	37	65	30	49	0	0	-1	0	0	0	2.2	59	35	13	0	2	0	0
RENO	46	22	50	19	34	-2	0	0	0	0	0	7.3	122	93	41	0	7	1	0
WINNEMUCCA	43	22	46	16	32	-2	0	-1	0	0	0	5.5	79	88	45	0	7	1	0
NH CONCORD	33	15	54	-1	24	-7	0	-3	0	71	0	37.5	112	83	45	0	7	5	0
NJ ATLANTIC CITY	50	28	65	18	39	-3	0	-1	0	0	0	48.8	127	82	45	0	4	3	0
NM ALBUQUERQUE	47	28	64	22	38	-3	0	-1	0	0	0	4.8	65	75	31	0	6	1	0
CLOVIS	48	29	68	19	39	-4	0	0	0	267	0	14.5	88	64	29	0	4	2	0
ROSWELL	52	34	78	28	43	0	0	-1	0	0	0	6.2	61	56	28	0	3	0	0
NY ALBANY	37	19	62	4	28	-5	0	-1	0	0	0	39.0	119	81	44	0	6	4	0
BINGHAMTON	34	17	53	3	26	-7	0	-1	0	10	0	37.1	109	89	55	0	7	5	0
BUFFALO	40	21	57	13	30	-5	0	-2	0	5	0	38.9	114	92	55	0	7	6	0
NEW YORK	47	31	59	19	39	-3	0	-1	0	13	0	53.9	138	73	40	0	4	3	0
ROCHESTER	39	19	53	10	29	-6	0	-3	0	0	0	31.3	108	90	56	0	7	6	0
SYRACUSE	37	18	57	3	27	-8	0	-3	0	5	0	34.8	97	89	53	0	6	5	0
NC ASHEVILLE	55	33	62	25	44	1	0	-1	0	0	0	57.2	140	88	48	0	4	1	0
CHARLOTTE	61	39	71	27	50	3	0	-1	0	0	0	46.2	116	84	37	0	2	1	0
GREENSBORO	58	35	68	23	46	2	0	-1	0	0	0	47.1	120	83	35	0	4	0	0
HATTERAS	62	46	69	33	54	1	0	-1	0	17	0	84.2	163	94	59	0	0	3	0
NEW BERN	65	40	74	29	53	2	0	-1	0	0	0	57.8	116	93	48	0	3	1	0
RALEIGH	59	36	67	24	48	2	0	-1	0	0	0	50.7	131	86	36	0	4	0	0
WILMINGTON	68	39	77	29	54	2	0	-1	0	0	0	59.6	119	96	47	0	2	2	0
ND BISMARCK	33	9	42	-5	21	-1	0	0	0	0	0	11.1	75	93	57	0	7	3	0
FARGO	27	4	38	-12	16	-5	0	-1	0	0	0	11.1	75	93	57	0	7	3	0
GRAND FORKS	28	5	42	-10	16	-3	0	-1	0	125	0	19.0	101	94	70	0	7	4	0
WILLISTON	32	14	40	2	23	1	0	-1	0	75	0	11.5	65	87	56	0	7	4	0
OH AKRON-CANTON	44	27	59	22	36	0	0	-1	0	0	0	11.1	86	95	63	0	7	1	0
CINCINNATI	51	31	68	20	41	2	0	-1	0	29	0	37.3	113	91	55	0	5	4	0
CLEVELAND	46	28	65	25	37	0	0	-1	0	0	0	47.7	128	81	49	0	5	2	0
COLUMBUS	49	28	65	22	39	1	0	-1	0	22	0	42.2	129	83	52	0	6	5	0
										0	0	42.0	122	86	55	0	5	3	0

Weather Data for the Week Ending December 2, 1989

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
DAYTON	47	29	65	20	38	1	.3	-.3	.2	T	0	47.5	148	89	60	0	5	4	0
TOLEDO	46	26	64	18	36	2	.1	-.5	.1	T	18	36.3	125	91	53	0	7	2	0
YOUNGSTOWN	44	27	62	22	35	0	.4	-.2	.2	T	17	41.9	121	88	53	0	7	4	0
OK OKLAHOMA CITY	56	32	68	23	44	0	0	0	0	0	0	40.5	136	66	25	0	2	0	0
TULSA	57	30	69	22	44	-1	0	0	0	0	0	29.4	80	75	27	0	5	0	0
OR ASTORIA	55	41	58	37	48	-3	1.7	-.9	1.6	1.6	223	49.5	84	92	59	0	0	2	1
BURNS	34	9	38	4	21	-9	.1	-.2	.1	0	0	9.4	107	97	70	0	7	1	0
MEDFORD	52	30	58	24	41	1	.1	-.7	.1	0	0	14.2	86	97	50	0	4	1	0
PENDLETON	39	29	52	24	34	-4	T	-.4	T	0	0	12.2	117	93	70	0	6	1	0
PORTLAND	49	37	54	33	43	0	.6	-.8	.3	.3	72	26.5	85	94	62	0	0	3	0
SALEM	48	34	53	31	41	-1	.5	-1.0	.2	.2	47	24.1	72	98	72	0	3	3	0
PA ALLENTOWN	44	28	60	17	36	-1	.2	-.7	.2	0	0	43.7	108	83	45	0	4	3	0
ERIE	43	27	60	23	35	-1	1.0	-.2	-.4	-.4	163	39.6	107	88	56	0	6	7	0
HARRISBURG	47	30	61	23	38	0	.2	-.6	.2	T	0	45.3	126	78	44	0	5	3	0
PHILADELPHIA	49	30	61	21	40	-1	.1	-.7	.1	0	0	47.5	125	81	42	0	4	2	0
PITTSBURGH	46	27	62	22	37	0	.2	-.4	.1	T	0	40.1	118	87	52	0	6	3	0
SCRANTON	40	24	57	13	32	-4	.1	-.5	.1	T	0	38.0	117	84	48	0	5	3	0
RI PROVIDENCE	42	24	58	11	33	-5	.3	-.7	.2	.1	21	54.3	133	71	39	0	5	3	0
SC CHARLESTON	68	45	80	35	57	3	.1	-.5	.1	0	0	50.7	105	93	49	0	0	2	0
COLUMBIA	69	40	78	27	55	5	0	-.7	T	0	0	46.6	102	94	39	0	3	0	0
FLORENCE	68	41	74	25	55	4	0	-.6	0	0	0	46.8	114	87	41	0	2	0	0
GREENVILLE	61	39	71	28	50	3	0	-.8	T	0	0	45.8	97	80	41	0	2	1	0
SD ABERDEEN	32	7	42	-1	20	-3	.3	.2	.3	0	0	18.4	107	95	62	0	7	2	0
HURON	35	9	43	2	22	-4	.4	-.3	.4	0	0	14.3	79	91	62	0	7	3	0
RAPID CITY	38	19	51	10	29	-1	.3	-.2	.3	0	0	12.8	82	86	55	0	7	2	0
SIOUX FALLS	37	9	44	0	23	-3	.2	0	.2	0	0	15.5	67	92	61	0	7	1	0
TN CHATTANOOGA	60	39	73	26	50	5	T	-.1	T	0	0	68.1	142	94	43	0	2	1	0
KNOXVILLE	57	34	73	23	46	1	.3	-.7	.2	0	0	53.4	125	97	50	0	4	3	0
MEMPHIS	59	41	77	26	50	3	0	-1.1	0	0	0	56.9	122	81	44	0	2	0	0
NASHVILLE	59	37	73	22	48	3	.4	-.5	.4	0	0	55.1	125	88	46	0	4	3	0
TX ABILENE	57	37	76	34	47	-2	.1	-.1	.1	.1	233	27.6	123	70	32	0	0	1	0
AMARILLO	52	25	69	14	38	-3	.2	-.1	.2	.2	667	19.2	104	73	25	0	7	1	0
AUSTIN	62	48	83	41	55	0	.2	-.3	.1	T	21	25.8	88	81	37	0	0	2	0
BEAUMONT	67	52	84	41	59	2	.2	-.9	.1	T	0	63.0	125	84	41	0	0	2	0
BROWNSVILLE	67	54	86	45	61	-4	1.0	-.7	1.0	1.0	0	20.4	84	91	58	0	0	2	1
CORPUS CHRISTI	64	52	88	43	58	-4	1.5	1.2	1.3	1.4	0	18.8	63	94	54	0	0	4	1
DEL RIO	60	44	81	38	52	-3	.6	-.5	.3	.3	625	9.1	54	75	41	0	0	4	0
EL PASO	56	35	70	26	46	-2	0	-.1	0	0	0	7.1	98	63	27	0	3	0	0
FORT WORTH	61	42	79	36	51	0	T	-.4	T	0	0	39.5	134	74	28	0	0	0	0
GALVESTON	63	54	78	45	59	-1	.3	-.6	.2	T	0	40.9	110	80	55	0	0	2	0
HOUSTON	65	52	84	43	58	1	T	-.8	T	T	4	56.5	132	85	42	0	0	1	0
LUBBOCK	53	32	75	24	43	-1	.1	0	.1	.1	450	14.8	86	65	29	0	4	1	0
MIDLAND	54	35	79	31	45	-3	.1	0	0	T	133	8.0	61	73	39	0	3	2	0
SAN ANGELO	57	39	83	35	48	-3	.3	-.1	.2	.1	200	17.5	100	82	41	0	0	2	0
SAN ANTONIO	60	46	81	40	53	-3	.7	-.3	.4	.3	309	22.1	80	83	49	0	0	4	0
VICTORIA	62	51	85	41	57	-2	.9	-.4	.5	.6	443	25.3	73	90	54	0	0	3	0
WACO	61	43	83	37	52	-1	.1	-.4	0	T	23	27.9	96	81	32	0	0	2	0
WICHITA FALLS	58	34	72	25	46	-2	0	-.3	0	0	0	36.4	143	71	27	0	4	0	0
UT CEDAR CITY	41	14	49	6	27	-7	.1	-.1	.1	0	0	6.4	66	95	49	0	7	1	0
SALT LAKE CITY	38	22	52	16	30	-4	.5	-.2	.4	0	0	10.6	76	94	55	0	6	2	0
VT BURLINGTON	31	12	53	-3	21	-9	.3	-.4	.1	T	18	34.7	111	85	49	0	7	5	0
VA NORFOLK	59	37	72	25	48	0	0	-.7	0	0	0	53.6	128	87	42	0	3	0	0
RICHMOND	59	32	69	24	46	1	T	-.7	T	0	0	47.1	116	88	34	0	4	0	0
ROANOKE	56	33	70	25	45	2	T	-.6	T	0	0	51.7	143	83	33	0	4	0	0
WA QUILLAYUTE	54	39	60	31	47	4	1.5	-2.0	1.4	1.4	131	77.8	86	98	69	0	1	4	1
SEATTLE-TACOMA	51	38	54	34	45	2	1.2	-.2	1.0	1.0	262	31.1	96	93	54	0	0	2	1
SPOKANE	33	25	37	21	29	-3	.4	-.1	.4	0	0	13.0	92	99	85	0	7	2	0
YAKIMA	40	27	47	22	34	-1	.2	-.1	.1	.1	86	5.3	81	96	66	0	7	2	0
WV BECKLEY	49	30	61	19	39	2	.2	-.4	.2	T	5	41.2	105	88	52	0	4	4	0
CHARLESTON	54	32	66	27	43	2	.3	-.4	.1	T	0	56.1	143	85	49	0	4	4	0
HUNTINGTON	54	31	69	25	43	1	.4	-.3	.3	0	0	57.7	153	83	48	0	4	3	0
PARKERSBURG	51	29	65	22	40	0	.2	-.3	.2	T	0	51.4	146	82	43	0	4	2	0
WI GREEN BAY	37	18	47	7	28	0	.9	-.6	.9	T	0	19.9	75	85	52	0	7	1	1
LACROSSE	37	16	43	5	27	-2	.6	-.3	.6	T	0	22.5	78	91	53	0	7	1	1
MADISON	40	19	49	7	29	0	.4	0	.4	T	0	24.1	83	89	52	0	6	1	0
MILWAUKEE	41	22	50	10	32	0	.1	-.3	.1	T	31	30.1	104	91	51	0	6	3	0
WAUSAU	34	14	46	1	24	-1	.7	-.3	.7	T	0	22.2	73	91	57	0	7	1	1
WY CASPER	37	20	47	11	29	0	.1	0	.1	0	0	13.4	125	80	48	0	7	2	0
CHEYENNE	46	18	54	10	32	1	T	-.1	T	0	0	12.0	93	77	29	0	7	0	0
LANDER	33	11	40	6	22	-4	.3	-.2	.3	0	0	15.1	121	87	50	0	7	2	0
SHERIDAN	37	17	46	10	27	-1	.1	0	.1	0	0	12.9	90	86	52	0	7	2	0

RECORD DRYNESS IN THE GREAT PLAINS

After receiving abundant rainfall during the late spring and summer, very little precipitation has fallen over the south-central portions of the country since mid-September (fig. 1). Even though precipitation in the region normally decreases during autumn and reaches a minimum during the winter, the amounts accumulated for the last 11 weeks were well under half the usual precipitation. In fact, many locations measured less than 25 percent of normal (fig. 2). Since the normal precipitation increases from north to south and from west to east, the greatest deficits were observed in the southeastern Plains and western Delta (fig. 3).

The hard red winter wheat region in the central and southern Plains (fig. 4) has just completed the driest

November on record (fig. 5), with most of Kansas and parts of Missouri, Nebraska, Oklahoma, and Texas reporting no measurable precipitation for the entire month. In Kansas City, this was the first time in 100 years that only a trace of precipitation fell during November. Above-normal temperatures and high winds during November further depleted topsoil moisture.

This developing dryness is again a concern for the hard red winter wheat which is planted and almost fully emerged. The condition of winter wheat has been deteriorating for the last several weeks in some of the important wheat-producing States (figs. 6-7).

Figure 1
TOTAL PRECIPITATION, INCHES
SEPT. 17 - DEC. 2, 1989

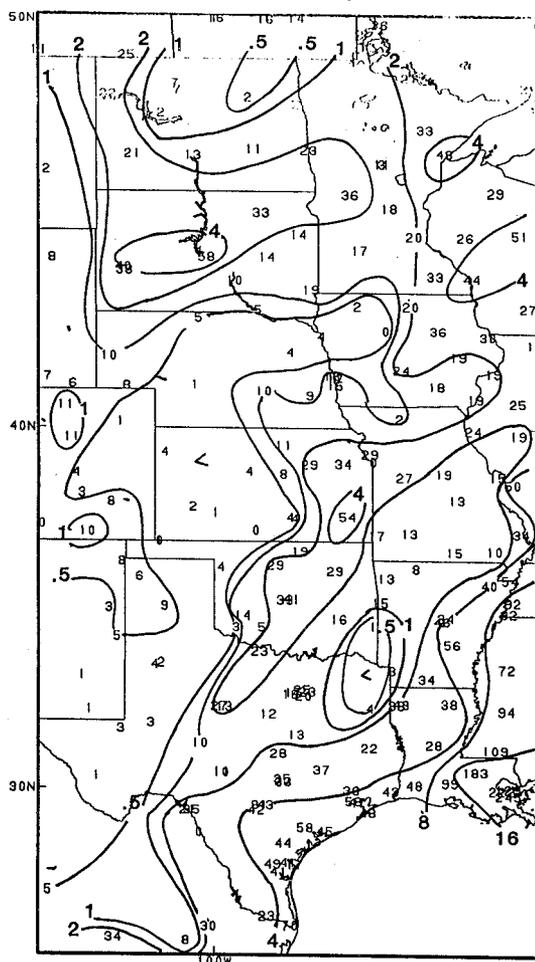


Figure 2
PERCENTAGE OF NORMAL PRECIPITATION
SEPT. 17 - DEC. 2, 1989

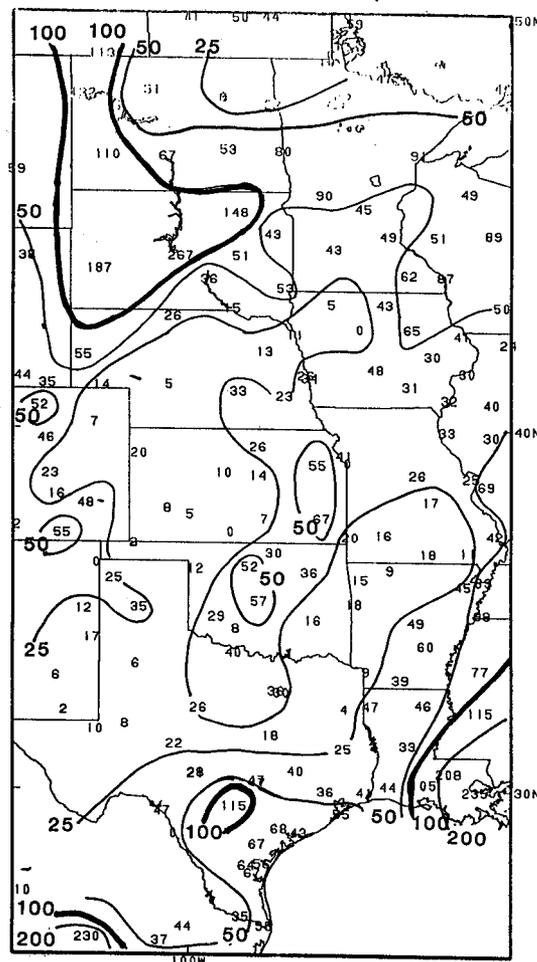


Figure 3
DEPARTURE FROM NORMAL
PRECIPITATION, INCHES
SEPT. 17 - DEC. 2, 1989

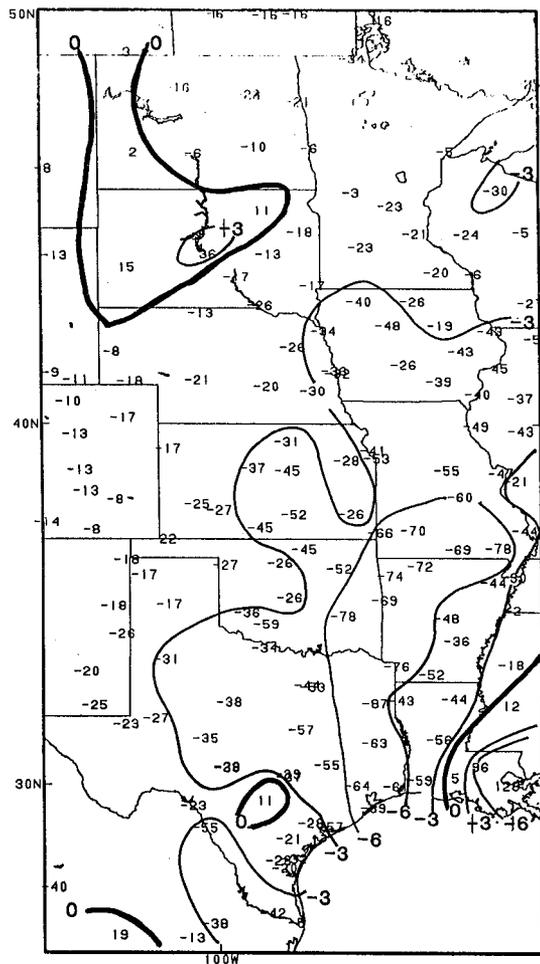


Figure 4

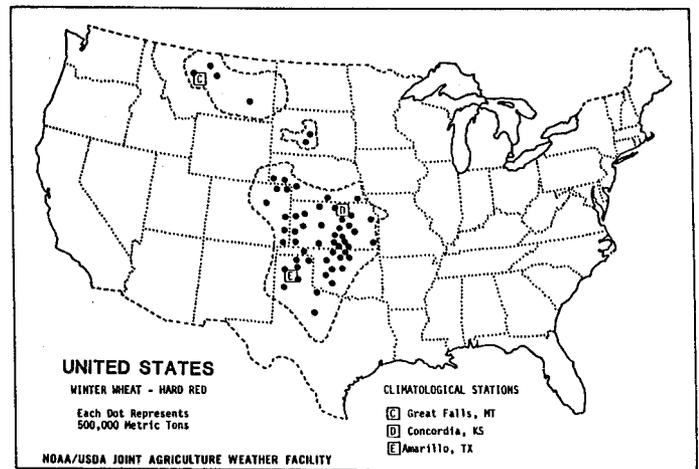
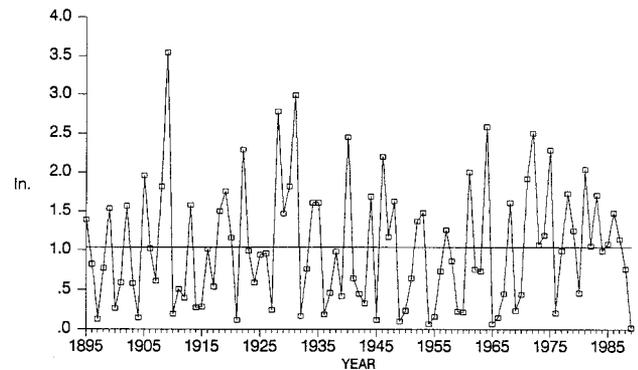


Figure 5

PRIMARY HARD RED WINTER WHEAT REGION
 NOVEMBER PRECIPITATION, 1895-1989



National Climatic Data Center, NOAA

Figure 6

Crop Condition
Oklahoma Winter Wheat

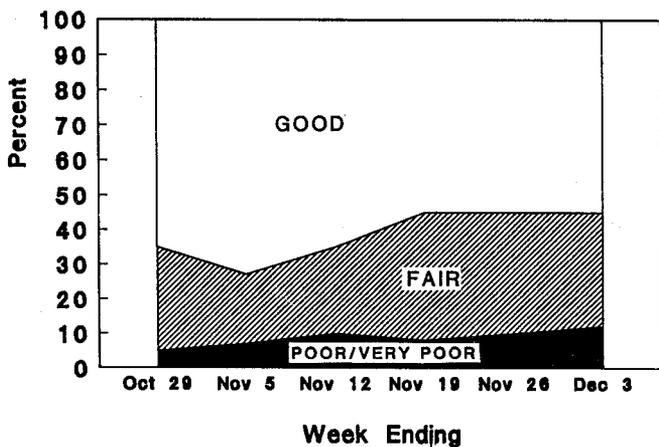
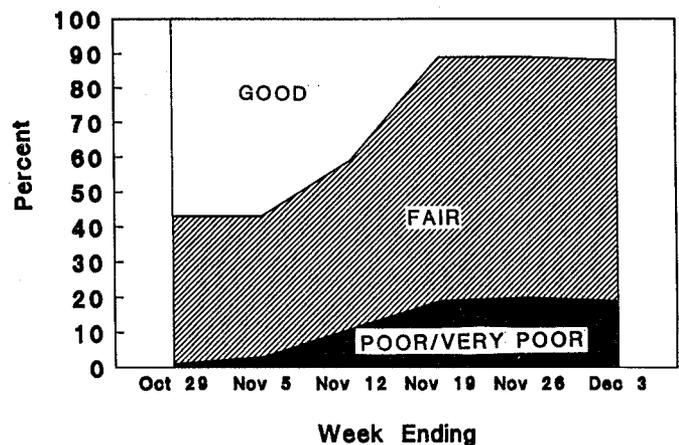


Figure 7

Crop Condition
Nebraska Winter Wheat



National Agricultural Summary

November 27 - December 3, 1989

HIGHLIGHTS: Lack of moisture concerned winter wheat producers in the **Plains**. Soil moisture supplies were mostly adequate in the **Southeast**, short in the **Plains**, and short to adequate in the **Pacific Northwest**. **Indiana's** corn harvest neared completion.

CORN: Eastern Corn Belt harvesting continued. Harvest was nearly complete in Indiana. Pennsylvania's advanced to 86 percent (%) completion, 1 percentage point behind the 5-year average.

SOYBEANS: Harvest continued in portions of the South. Arkansas' harvest was virtually complete. Alabama's harvest moved to 91 percent finished, while South Carolina's progress jumped to 74% completion, 7 points ahead of normal.

COTTON: Texas harvest progressed well in the Plains areas. Further quality reduction was caused by cold weather and freezing precipitation. Excellent quality was reported in the southern California harvest.

SMALL GRAINS: Winter wheat seeding continued in the Southeast and in Arizona and California. Colorado's crop was in mostly good condition. Kansas wheat needs moisture. Light green bug infestations continued. Nebraska's crop showed effects of drought and high winds. Cattle were removed from some Oklahoma wheat pastures because grazing pulled out plants. Continued lack of moisture further reduced dryland wheat fields in the Texas Plains. Cold temperatures slowed growth in irrigated fields.

OTHER FIELD CROPS: Oklahoma's peanut harvest was 98% complete, and Texas' was 84%. Florida's sugarcane harvest was in full swing. Louisiana's sugarcane harvest was 79% complete, 4 points ahead of average. Sorghum harvest was winding down in most remaining areas.

FRUITS AND NUTS: Florida's citrus groves needed rain. Early orange harvest for processing increased. Grapefruit movement was active, and tangerine and tangelo harvests increased. California's kiwi and olive harvests were nearly completed. Desert lemon and grapefruit were progressing well. Georgia's pecan harvest was 80% complete.

VEGETABLES: California's central-coast broccoli was in good supply, with good quality. Desert broccoli was moderate and the Cauliflower quality varied. Kern District carrot harvest continued. Fall vegetable harvest was active in south Florida. Harvest of carrots for processing was completed in west Oregon. Onion packing continued. Rio Grande Valley, Texas, harvests progressed well. Spinach harvest was under way, and carrot harvest was increasing in the San Antonio-Winter Garden area.

PASTURES AND LIVESTOCK: Pastures rated fair to mostly good in the South. Livestock generally rated in good condition. Supplemental hay feeding was active in Montana.

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

ALABAMA: Rainfall under 0.25 in.; near 1.00 in. isolated areas. Temperatures within 1 to 4° below normal.

Days suitable for fieldwork 4.5. Soil moisture 86% adequate, 14% surplus. Cotton 96% harvested, 96% 1988, 96% avg. Soybeans 91% harvested, 86% 1988, 90% avg. Winter wheat 80% seeded, 84% 1988, 83% avg. Livestock, pastures mostly good. Primary activities: Harvesting cotton, soybeans, pecans; seeding winter annuals; shredding cotton stalks; repairing, storing harvest equipment; pruning fruit trees; general care of livestock, poultry.

ARIZONA: Winter storm system, much colder air, 40 to 50 mph winds early in period; mostly clear skies west, south; cloudy, snow showers northeast; warming statewide by weekend. Temperatures 5° below to 2° above normal. Extremes 8°; 77°. Precipitation none to traces; snowfall traces to 7.00 in.

Cotton harvest essentially complete southeast; active elsewhere. Stalk shredding, plow down active southeast; moderate elsewhere. Alfalfa hay good; harvest activity light central, west; sheeping off moderate. Wheat, barley 36% seeded, 25% emerged. Harvest, packing lemons, oranges, grapefruit, tangerines continued; also harvested boston, leaf, romaine, head lettuce, mixed vegetables. Fall lettuce harvest completed east; apples being packed; harvest, packing pecans continued. Cattle, calves mostly fair; ranges provided below average to average feed supplies; stockwater supplies short to adequate; ranges, pastures poor, soil moisture continues short; southeast ranges provided light winter feed.

ARKANSAS: Dry, temperatures slightly below normal. Extremes 16°; 81°. Rainfall none to 0.09 in.

Days suitable for fieldwork 7.0. Soil moisture 65% short, 35% adequate. Soybeans 100% mature, 98% 1988, 99% avg.; 99% harvested, 91% 1988, 87% avg.; 99% fair, 1% good. Cotton 99% harvested, 97% 1988, 96% avg.; 1% poor, 84% fair, 15% good. Wheat 99% planted, 92% 1988, 90% avg.; 1% poor, 21% fair, 75% good, 3% excellent. Oats 99% planted, 98% 1988, 96% avg.; 1% poor, 32% fair, 61% good, 6% excellent. Main activities: Cotton scrapping, soybean harvest; wheat fertilization, seeding; harvesting pecans; stalk cutting, disking; soil testing; livestock management. Pecan yields fair. Pasture growth slow due dry conditions. Hay supplies good. Livestock good to fair.

CALIFORNIA: Rain continued beginning week. High pressure began to rebuild over west 27th, continued through week. Temperatures below normal beginning week, near or above normal by weekend. Wet soils slowed fieldwork early week. Drying soils increased field activity. Seeding winter grains continued. Emerged fields generally good. Herbicide applications early seeded fields. Cotton harvest central area nearly completed. Shredding, discing stalks approached completion; Southern harvest continued, excellent quality. Grain sorghum, corn, dry bean harvests approached completion. Seeded new alfalfa fields. Sheep grazed many central, southern alfalfa fields. Sugarbeet harvest continued. Rice stubble burned as air quality regulations, stubble moisture

allowed. Pruning, herbicide application continued in vineyards. Kiwi, olive harvests nearly completed. Date harvest winding down. Zutano avocado harvest proceeded. Persimmons harvested. Pruning, herbicide treatments, fumigation continued in stone fruit, nut orchards. Navel orange harvest continued; temperatures enhanced color, smaller sizes. Desert lemon, grapefruit progressing well. Orlando tangerine harvest began, Fairchild picking well underway. Satsuma mandarins picked, packed. Broccoli light supply, generally good quality, central coast. Desert broccoli moderate supply. Cauliflower light supply, variable quality central coast. Carrot harvest continued, Kern district. Celery moderate supply. Head lettuce seasonally declining supply, Huron area. Potato harvest continued, Riverside County. Livestock good condition statewide. Movement to feedlots, winter ranges heavy. Range, pasture conditions, water supplies valley, foothill areas improved with much needed rainfall. Range very dry southern area. Supplemental feeding continued.

COLORADO: Weather mostly dry, windy mostly fair skies. Temperatures near normal in most areas. Near record high temperatures reached along front range 26th.

Major farm activities included: Harvest of remaining corn, sorghum acreages, fall tillage, feed, care of livestock. Winter wheat remains mostly good, windy conditions, high temperatures, lack of topsoil moisture is of growing concern.

FLORIDA: Highest temperatures 70s to low 80s north to mostly mid 80s Peninsula. Rain confined to Panhandle, extreme south, with most totals 1.00 in. or less.

Soil moisture Panhandle mostly adequate, Peninsula short to adequate. Cotton harvest virtually complete. Soybean harvest winding down. Sugarcane harvest full swing. Winter wheat seeding active. Pastures Panhandle, northern, central Peninsula poor to fair. Winter pastures Panhandle northern Peninsula good except progress slow extreme northern Peninsula with limited rainfall. Grazing southern Peninsula mostly good, patches only poor to fair. Cattle fair to good. Citrus groves, trees good; however, rain needed all areas. Cold temperatures 4th, low to mid 30s, no citrus damage. New growth stopped. Early orange harvest increased for processing. Grapefruit movement active both fresh, processing. Tangerine, tangelo harvests increased for Christmas trade. Weekend cold over major vegetable producing areas inflicted only minimal damage. Fall harvest continued south. Volume leaders: Tomatoes, cucumbers, squash, peppers, sweet corn, snap beans, radishes. Also available: Carrots, celery, eggplant, escarole, lettuce, strawberries. Initial harvest regular carrots underway central production area.

GEORGIA: Many locations rain, totals very light. Most under 0.25 in. isolated areas, 0.50 in. south. Temperatures around normal north, 1 to 4° below normal central, south. Extreme highs upper 60s northeast, upper 70s central, near 80 south. Coldest lows mid, upper teens north, low, mid 20s central, south.

Days suitable for fieldwork 5.1. Soil moisture 25% short, 70% adequate, 5% surplus. Cotton 94%

harvested, 93% 1988, 92% avg. Sorghum grain 98% harvested, 98% 1988, 96% avg. Soybeans 82% harvested, 89% 1988, 83% avg. Wheat 1% poor, 30% fair, 67% good, 2% excellent; 58% planted, 76% 1988, 74% avg.; 32% emerged, 55% 1988, 55% avg. Other small grains fair to good, planting near avg. Pecans 80% harvested, 69% 1988, 73% avg. Production, quality disappointing. Pastures fair to good. Cattle, hogs good.

HAWAII: Favorable weather for crop production continued over islands. Warm, sunny days with cool evening temperatures prevailed. Winds variable 5 to 20 mph. Temperatures low 60s to mid 80s. Rainfall 0.01 to 4.00 in.

Days suitable for farm work 7.0. Papaya production decreasing. Pineapple, sugar harvesting continuous. Peak macadamia nut harvesting continues.

IDAHO: Temperatures, precipitation below normal across State.

Fieldwork halted several areas. Little in southwest, south central, east. Other activities: Repairing machinery, evaluating pests. Some movement of potatoes east. Livestock good. Feeding across State. Hay, roughage supplies adequate, except far north short.

ILLINOIS: Temperatures normal to 5° below normal across State. Light showers north, virtually none elsewhere.

Wheat mostly good. Livestock good condition.

INDIANA: Temperatures 1 to 3° below normal. Lows low to upper 20s, highs low to upper 40s. Precipitation up to 0.75 in.

Corn harvest nearing completion. Soybean harvest is virtually complete. Other activities: Plowing, tilling, spreading fertilizer, hauling grain, moving hay, hauling manure, processing tobacco, care of livestock, machinery repair. Farmers had a good week, weather conditions mostly favorable for fieldwork.

IOWA: Temperatures 2 to 7° below normal. Extremes -5°; 69°. Precipitation all on the 27th; trace to 0.39 in.; average 0.10 in. Livestock mostly good. Activities include spreading fertilizer, hauling grain, machinery repair, tending livestock.

KANSAS: Temperatures 1° above normal southwest, normal west central, central. Northeast, east central 3° below normal, rest of State 2° below normal. Precipitation zero all areas, reports of trace amounts snow northeast.

Harvest grain sorghum complete. High winds early in week caused some dust blowing, mostly few areas western area. Winds caused further depletion soil moisture. Wheat needs precipitation to relieve moisture stress. Green bug populations continue to be noted, infestations light.

KENTUCKY: Precipitation below normal, rainfall generally less than 0.50 in. Scattered showers early; scattered snow showers north and east late week. Temperatures slightly above normal. Temperatures above normal early; highs mid 60s to lower 70s and lows upper 30s to mid 40s. Temperatures colder late week, highs 30s, lows upper teens to mid 20s.

Soil moisture adequate. Pasture, fall seeded crops mostly good. Ample supplies of good quality hay available across State. Burley prices

improved 38 cents from opening week. Belt total marketings 238 million pounds, avg. price 167.05 per cwt.

LOUISIANA: Temperatures 1 to 3° above normal except west central where temperatures slightly below normal. Extremes 26°; 85°. Rainfall none to 1.09 in.

Days suitable for fieldwork 4.8. Soil moisture 33% short, 38% adequate, 29% surplus. Pecans harvested 80%, 66% 1988, 74% avg. Soybeans harvested 100%, 96% 1988, 96% avg. Sugarcane harvested 79%, 79% 1988, 75% avg. Sweet potatoes harvested 99%, 100% 1988, 98% avg. Wheat planted 96%, 86% 1988, 79% avg.; emerged 86%, 75% 1988, 69% avg.; 6% poor, 49% fair, 42% good, 3% excellent. Livestock 3% poor, 38% fair, 57% good, 2% excellent. Pasture 2% very poor, 14% poor, 54% fair, 30% good. Vegetable 2% very poor, 12% poor, 58% fair, 28% good.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 0.11 in. Temperatures 42°, normal 35°. Extremes 10°; 68°.

DELAWARE: Precipitation 0.02 in. Temperatures 41°, normal 34°. Extremes 14°; 64°.

MICHIGAN: Temperatures 1 below to 5° above normal. Extremes -5°; 63°. Precipitation 0.11 to 1.41 in. across State. Snowfall trace amounts to several inches. Heaviest snow northern, western areas.

Major activities: Finishing corn harvest, pruning, spraying orchards, repairing machinery, attending farm meetings, marketing grain. Livestock good. Feed supplies adequate.

MINNESOTA: Temperatures 3 to 6° below normal. Extremes -13°; 40°. Precipitation 0.06 to 0.66 in. Greatest weekly total .80 in.

MISSISSIPPI: Warm, dry. Temperatures 2° above normal. Extremes 19°; 83°. Rainfall 0.25 in.; 0.92 in. below normal.

Days suitable for fieldwork 4.1, 2.9 1988, 3.0 avg. Soil moisture 5% short, 75% adequate, 20% surplus. Cotton harvested, 98%, 97% 1988, 95% avg. Pecans 82% harvested, 62% 1988, 67% avg. Soybeans 95% harvested, 86% 1988, 87% avg. Wheat good; 95% planted, 82% 1988, 76% avg. Hay, roughage supplies 5% short, 85% adequate, 10% surplus. Livestock, pastures good. Activities: Feeding cattle, fall tillage, finishing row crop harvest.

MISSOURI: Temperatures 6° below normal west central plains, near normal elsewhere. Rainfall nearly non existent.

Topsoil 86% short, 14% adequate. Subsoil 77% short, 23% adequate. Wheat 2% very poor, 23% poor, 57% fair, 18% good. Pasture 9% very poor, 36% poor, 42% fair, 12% good, 1% excellent. Hay supply 1% very short, 14% short, 72% adequate, 13% surplus. Livestock water 18% critically short, 46% short, 36% adequate. Livestock 16% fair, 80% good, 4% excellent.

MONTANA: Temperatures slightly cooler than normal west and southwest. Other areas slightly above normal. Most areas had from 0.01 in. to 0.33 in. precipitation.

Topsoil mostly adequate. Wind damage mostly none to light. Winter wheat fair to good. Grazing lower elevation pastures and ranges open. Grain, hay stubble providing feed with about one third of all livestock receiving hay.

NEBRASKA: Temperatures averaged normal to 6° below normal. Temperature extremes 1°; 68°. Precipitation amounted to a few one-hundredths.

Topsoil moisture 97% short, 3% adequate. Subsoil moisture 88% short, 12% adequate. Winter wheat 19% poor, 69% fair, 12% good. Crop showing effects of drought, high winds caused soil erosion and damage to wheat especially in sandy soil. Some Russian Wheat Aphid activity in Panhandle. Light snow in many areas, not enough moisture in it to help winter wheat. Main activities: finish fall tillage, fertilizer application; fencing and moving cattle to harvested fields; tax planning; ordering supplies for next year. Pasture, range feed supplies 29% very short, 52% short, 19% adequate. Hay, roughage supplies 13% very short, 56% short, 31% adequate. Mild conditions allowed cattle to continue grazing crop residues. Dusty conditions, changing temperatures caused respiratory problems in some calves.

NEVADA: Winter storm 25th, 26th brought 12.00 to 48.00 in. snow northern Sierra with several in. falling northern mountains of State. Temperatures 2 to 8° below normal. Maximums near normal, minimums well below normal with freezing temperatures all stations.

Main farm, ranch activities feeding, caring for livestock. Cooler weather increased feed requirements. Movement potatoes to market continuing.

NEW ENGLAND: Precipitation (rainfall, water equivalent of snow) 0.25 to 0.50 in. Connecticut, Rhode Island, coastal Massachusetts, 1.00 to 1.50 in. coastal Maine, 0.50 to 1.00 in. remainder. Temperatures 10° near Canadian border to low 30s south coast.

Major farm activities: Machinery maintenance, tending livestock, general farm work.

NEW JERSEY: Temperatures much below normal; 30° north, 35° south, 39° coastal. Extremes 7°; 65°. Precipitation below normal; 0.28 in. north, 0.15 in. south, 0.06 in. coastal. Heaviest 24-hour total 0.38 in. on 27th, 28th. Trace amounts of snowfall were received.

Harvest of soybeans, corn for grain progressed as conditions permitted. Wet conditions this fall, frequently interrupted progress. Some fruit pruning continued. Christmas trees cut, dug, selling begun. Firewood cut, livestock cared for.

NEW MEXICO: Temperatures well below normal most locations; late week storm brought snow to mountains, northern areas.

Days suitable for fieldwork 6.6. Soil moisture 90% short, 10% adequate. Cotton 92% harvested; 17% poor, 50% fair, 33% good. Wheat 100% emerged; 20% very poor, 25% poor, 42% fair, 13% good. Cattle 67% fair, 33% good. Sheep 57% fair, 43% good. Ranges, pastures 22% very poor, 23% poor, 50% fair, 5% good.

NEW YORK: Below normal temperatures, precipitation. Snow squalls to the lee of Lake Erie, Ontario common. Precipitation 30% of normal in Hudson Valley to 87% of normal in the Northern Plateau. Amounts 0.10 in. at Dansville to 0.94 in. at Boonville. Temperatures 4 to 13° below normal. Extremes -20° Newcomb; 62° Albany.

Fruit growers grading, packing the years crops. Pruning underway. Christmas tree cutting in full swing. Some corn for grain still to be harvested.

NORTH CAROLINA: Temperatures 3° below to 3° above normal across State. Extremes 18°; 77°. Precipitation none to 0.60 in.

Days suitable for fieldwork 4.7. Soil moisture 3% short, 84% adequate, 13% surplus. Pasture 7% poor, 29% fair, 60% good, 4% excellent. Livestock feed from pasture 62%. Crop condition: Wheat 3% poor, 16% fair, 76% good, 5% excellent; oats 4% poor, 13% fair, 79% good, 4% excellent; barley 5% poor, 14% fair, 78% good, 3% excellent; rye 3% poor, 21% fair, 73% good, 3% excellent; hay, roughage supplies 2% short, 84% adequate, 14% surplus. Feed grain supplies 1% short, 96% adequate, 3% surplus. Plantings completed: wheat 83%, 88% 1988, 86% avg.; oats 89%, 95% 1988, 93% avg.; barley 91%, 97% 1988, 95% avg.; rye 89%, 91% 1988, 89% avg. Major activities: Planting small grains, cover crops; soybean harvest, Christmas tree harvest. Other activities included: Harvesting cotton; cutting wood; tending livestock, general farm maintenance.

NORTH DAKOTA: Temperatures 4° below normal east central to 1° above normal southwest, northwest. Extremes -14° northeast; 47° west central. Snow storm early week dropped 3.00 to 6.00 in. of new snow south central, southeast. Statewide precipitation none north central to 0.26 in. southeast.

Soil moisture below normal. Snow depth 0.80 in. Snow cover protection: Winter wheat 15% sufficient, rye 15%, alfalfa 17%. Livestock good, receiving supplemental forages. Hay, roughage supplies 15% short, 83% adequate, 2% plentiful. Pastures open for grazing 65%.

OHIO: High temperatures low to upper 40s. Lows 20s. Extreme 11°; 69°. Precipitation generally under 0.25 in. Bare soil temperatures at 4.00 in. depth low 30s.

Some corn, soybeans remain to be harvested. Farmers plowing whenever field conditions permit. Dryers running at full capacity.

OKLAHOMA: Temperatures 8° below normal southeast to 4° below normal Panhandle. Southwest 0.02 in.

Days suitable for fieldwork 6.6. Topsoil 100% short. Subsoil 50% short, 50% adequate. Wheat 12% poor, 33% fair, 55% good; 97% emerged, 97% 1988, 95% avg.; 35% grazed, 40% 1988, 35% avg. Some cattle removed from wheat pasture because grazing pulling up plants. Greenbug, mite infestations south. Cotton 80% harvested, 75% 1988, 40% avg. Sorghum 95% harvested, 87% 1988, 85% avg. Soybeans 95% harvested, 90% 1988, 80% avg. Peanuts 98% harvested, 92% 1988, 95% avg. Pastures fair to good. Cattle good; marketings stable, prices slightly higher.

OREGON: Precipitation on 26th, 27th most locations. Rest of week, dry except heavy rain on 2nd north coast. Weekly total precipitation nearly 2.00 in. Cascades, 1.50 in. north coast, 0.50 in. north Willamette Valley, less than 0.10 in. northeast. Temperatures 3 to 10° below normal east of Cascades, about 4° above normal coast, elsewhere near normal.

Soil moisture short to adequate. Much fall seeded grain was late to emerge, shows small size going into cold season Columbia Basin. Russian wheat aphid not much problem. Winter tree pruning underway in fruit orchards. Harvest of carrots for processing completed west. Potato, onion packing continued. Livestock good to excellent. Some calving east. Range, pasture fair to good. Fall pasture growth has been good due to rains southwest.

PENNSYLVANIA: Dry, mild in early week, changed to cold by weeks end. Temperatures 33°, 5° below

normal. Extremes 6°; 66°. Precipitation 0.27 in., 0.49 in. below normal.

Corn 86% harvested, 90% 1988, 87% avg. Soybean harvest 82% complete, 91% 1988, 92% avg. Activities: Harvesting hay, haylage, corn, soybeans; maintaining machinery, spreading manure, caring for livestock.

SOUTH CAROLINA: Temperatures 1 to 4° above normal. Precipitation 0.01 in. in northwest to 0.30 in. in southeast.

Days suitable for fieldwork 5.7. Soil moisture 25% short, 73% adequate, 2% surplus. Cotton 5% poor, 57% fair, 38% good; 95% harvested, 96% 1988, 94% avg. Soybeans 2% poor, 77% fair, 21% good; 74% harvested, 80% 1988, 67% avg. Sorghum fair to good; 77% harvested, 88% 1988, 88% avg. Pasture, livestock good.

SOUTH DAKOTA: Temperatures 1 to 5° below normal over most of State. Extremes -6°; 56°. Precipitation about normal. 18" snow west central, 1.00 to 6.00 in. snow most of State. Maximum moisture accumulation 1.15 in. Yearly precipitation above normal parts of northwest, northeast, west central, below normal most of State. Range 3.43 in. above normal to 8.30 in. below normal. Snow cover 1.00 to 4.00 in. north.

Subsoil short to critically short. Topsoil is still short. Winter wheat good.

TENNESSEE: Southerly winds ahead of low pressure brought warm temperatures 27th. Cold front 28th brought much colder temperatures. Cool, dry conditions prevailed 29th through 3rd. Temperatures slightly below normal. Between 0.10 to 0.50 in. rain middle, east on 27th. Rest of week rain free.

Soils beginning to get dry. Bookkeeping, meetings, equipment repair main activities.

TEXAS: Chilly temperatures highlighted weather. Two cold fronts in succession swept through State. First front triggered showers along coast.

Another front swept through weekend, clearing to north, triggering good rains south. Temperatures below normal. Rainfall variable. Generally light north, wet deep south. Moderate rains other areas.

Crops: Grain sorghum harvest completed Plains, open conditions allowed good progress. Few fields still remain. Yields good. Sorghum harvested 98%, 99% 1988, 96% avg. Cotton harvest good progress Plains. Further yield reductions with latest cold weather, light freezing precipitation. Trans Pecos recent cold weather may have caused some damage. Harvest good progress. Cotton harvest Plains could end ahead of normal, open conditions continue. Small grains continued suffer many areas, overall condition decline. Scattered showers Blacklands, central could have benefitted better stands; some additional die back weaker stands. Greenbug, mite activity increased, some spraying underway. Most planting completed. Plains, continued lack of moisture caused further declines dryland fields. Colder temperatures slowed growth irrigated fields. Wheat 99% planted, 100% 1988, 98% avg. Peanut harvest winding down Low Plains, Cross Timbers. Grades continued lower because weather related problems. Wet conditions central, south slowed harvest. Soybean harvest winding down Plains, producers reporting average yields. Upper Coast many producers wrapping up harvest. Other crops: Peanuts harvested 84%, 94% 1988, 87% avg. Pecans 56%, 69% 1988, 64% avg. Soybeans harvested 88%, 97% 1988, 89% avg. Sugarbeets 96%, 97% 1988, 86% avg. Sunflowers harvested 88%, 94% 1988, 91% avg. Oats planted 93%, 92% 1988, 93% avg.

Commercial Vegetables: Rio Grande Valley, supplies peppers, tomatoes, lettuce, cabbage increasing. Broccoli, onions, carrots good progress. Citrus harvest increasing, gift fruit movement steady. San Antonio Winter Garden, harvest spinach underway good yields. Carrot harvest gaining momentum. Other crops good progress. Pecan harvest beginning slow down south. Other areas, harvest active. Yields down; quality, prices good.

Range and Livestock: Poor forage conditions persisted many parts State. Rainfall central, south brought only slight relief. Plains, dryland small grains supplying only limited grazing. Some young stockers respiratory problems. Plains because dry, windy conditions. Many producers cull herds.

UTAH: Temperatures 3° below normal in northwestern two third, 4° above normal in southeastern third. Precipitation was very heavy in northern mountain division, to very light in southern part of State.

Harvest of late crops completed. Fall tillage winding down. Winterization of equipment, facilities continued. Alfalfa hay short supply.

VIRGINIA: Week began mild temperatures, ended unseasonably cold. Average for period near normal. Extremes 12°; 74°. Precipitation sparse.

Days suitable for fieldwork 3.9. Topsoil 16% surplus, 84% adequate. Soybeans 86% harvested, 72% 1988, 68% avg. Winter grains, grazing crops 11% excellent, 58% good, 29% fair, 2% poor. Pastures 23% excellent, 53% good, 23% fair, 1% poor. Forage from pastures, winter grazing crops dairy cattle 14%, beef cattle 63%, sheep 63%. Livestock 27% excellent, 67% good, 6% fair. Marketing burley tobacco and cattle, supplemental livestock feeding, attending meetings.

WASHINGTON: Temperatures 2° above normal to 4° below normal, east; 2° above normal to 3° below normal, west. Precipitation none to 0.61 in., east; 0.30 to 1.96 in., west.

Days suitable for fieldwork 3.9. Soil moisture 25% short, 60% adequate, 15% surplus. Range, pasture 65% short, 35% adequate. Hay, other roughage 10% short, 90% adequate. Emerged crops look good across the State. Some areas are in need of moisture, snow cover. Winter wheat 35% fair, 65% good. Snow, rain slowed fieldwork. Activities included orchard clean up; fruit tree, vine pruning; caneberry pruning, tying; carrot digging; spraying for Russian wheat aphids; Christmas tree harvest; feeding livestock.

WEST VIRGINIA: Temperatures 36°, 1 to 4° below normal. Extremes 10°; 68°. Precipitation 0.33 in.; below normal.

Days suitable for fieldwork 3.3. Soil moisture 4% short, 85% adequate, 11% surplus. Corn good; harvest 91% complete. Wheat seeding 92% complete. Livestock, good. Farm activities: Corn harvest, stripping tobacco, fencing, feeding livestock.

WISCONSIN: Temperatures 24°. Extremes -12°; 55°. Precipitation 0.20 to 0.50 in. Snow 1.00 to 4.00 in. north, 27th; 4.00 to 8.00 in. Lake Superior snowbelt, 27th, 1st.

Frost depth 2.80 in., snow depth 1.10 in. as of December 1.

WYOMING: Temperatures generally below normal. Precipitation mostly below normal.

Winter wheat fair to good. Additional moisture needed for good development. Livestock mostly good. Mild weather reducing stress, feed requirements. Movement to winter pastures, market continues.

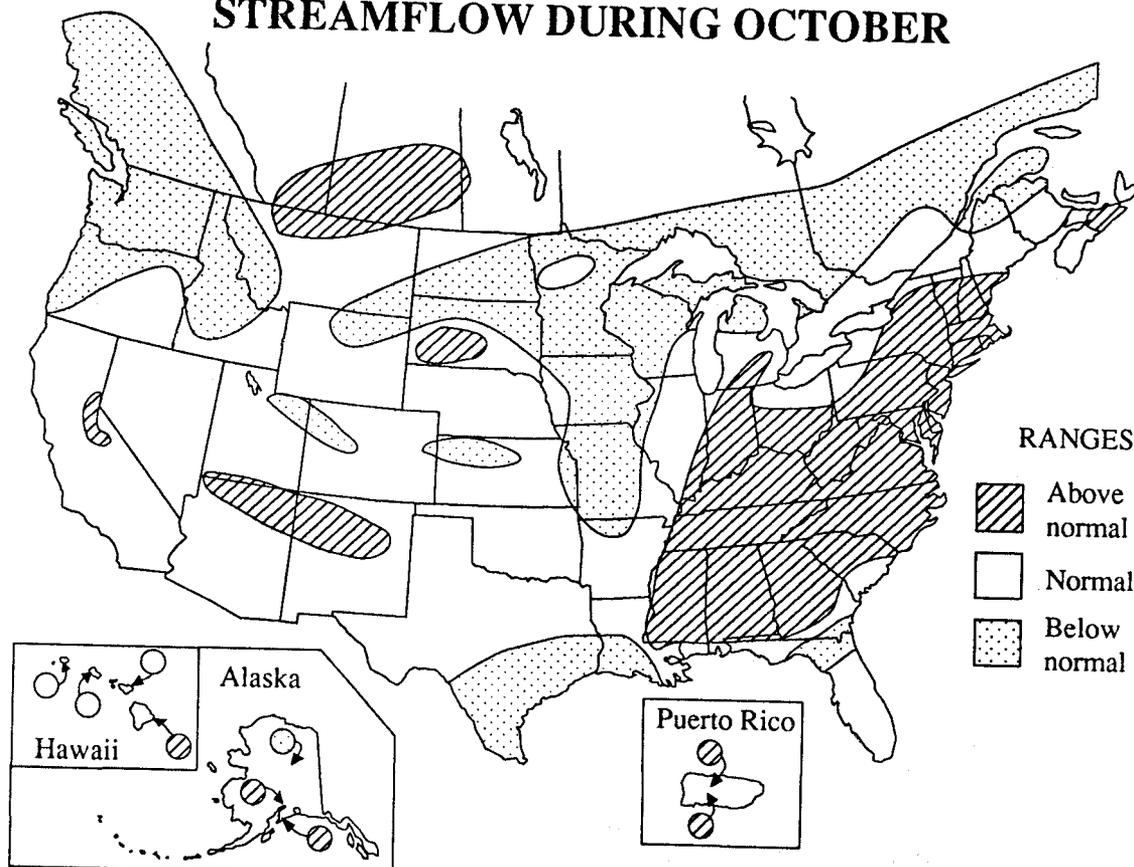
National Water Conditions

UNITED STATES
Department of the Interior
Geological Survey

CANADA
Department of the Environment
Water Resources Branch

OCTOBER 1989

STREAMFLOW DURING OCTOBER



Streamflow was in the normal to above-normal range at 73 percent of the index stations in southern Canada, the United States, and Puerto Rico during October. Below-normal range streamflow occurred in 29 percent of southern Canada and the conterminous United States. Total flow was 24 percent above median. The combined flow of the three largest rivers in the lower 48 States (the Mississippi, St. Lawrence, and Columbia) was in the normal range but 21 percent above median during October.

Monthend index reservoir contents for October 1989 were in the below-average range at 22 of 100 reporting sites. Reservoirs with contents in the below-average range and significantly lower than last year (with normal maximum contents of at least 1,000,000 acre-feet) were: Gouin, Quebec; International Falcon, Texas; Lake McConaughy, Nebraska; Lake Oahe, South Dakota; Fort Peck, Montana; the Pathfinder and associated reservoirs, Wyoming; Bear Lake, Idaho-Utah; and Lake Berryessa, California. Mean October elevations at the four master gages on the Great Lakes (provisional National Ocean Service data) were in the normal range on all lakes except Lake Superior, where the mean was in the below-normal range. Utah's Great Salt Lake declined to 4,204.50 feet above National Geodetic Vertical Datum of 1929 in October.

November 1989

MONTHLY DATA FROM SELECTED FOREIGN CITIES
 CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
 *** = DATA NOT AVAILABLE

International Weather and Crop Summary

HIGHLIGHTS

November 26 - December 2, 1989

USSR ... The first bitter cold weather of the season covers most winter grain areas. The extreme cold, however, was not of sufficient duration to produce widespread winterkill, and snow cover provided adequate protection.

NORTHWESTERN AFRICA ... Rain continues to benefit Moroccan winter grains. Limited moisture in Algeria and Tunisia slows planting.

EUROPE ... Unseasonably cold weather continues across northern and eastern crop areas. Widespread rain persists in the southwest.

SOUTH ASIA ... Locally heavy rain floods eastern Tamil Nadu. Light scattered showers help emerging wheat in the north.

EASTERN ASIA ... Dry weather continues over most crop areas.

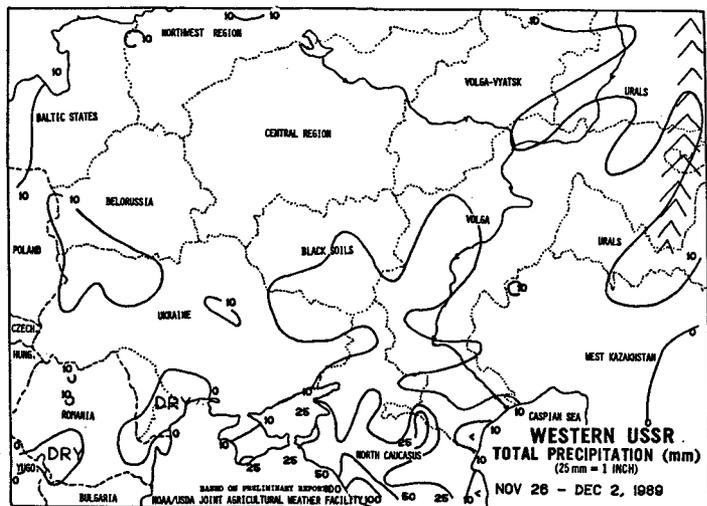
SOUTHEAST ASIA ... Heavy rain soaks the east coast of the Malaysian peninsula and the northern coast of Java, increasing irrigation reserves.

SOUTH AFRICA ... Beneficial rain favors newly planted corn in central and eastern portions of the Maize Triangle, while light showers fall in the west.

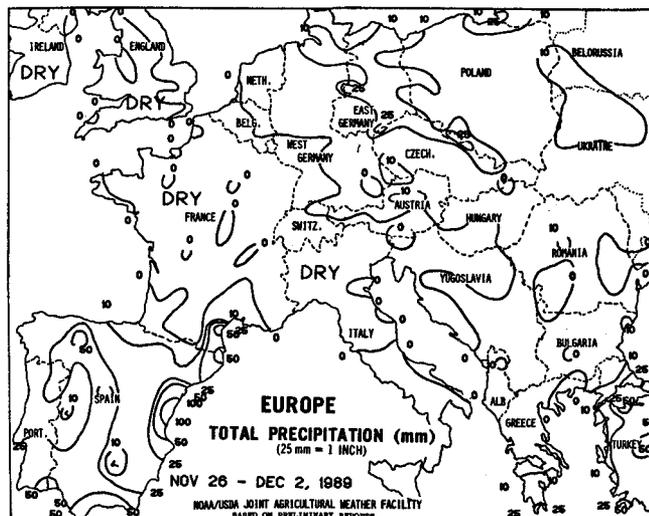
SOUTH AMERICA ... In Argentina, showers in western and northern crop areas benefit summer crops but slow winter wheat harvesting. Welcomed dryness helps soybean planting in southern Brazil.

AUSTRALIA ... Early warm and dry weather favors winter grain harvest in the southeast, followed by late-week rain and fieldwork delays.

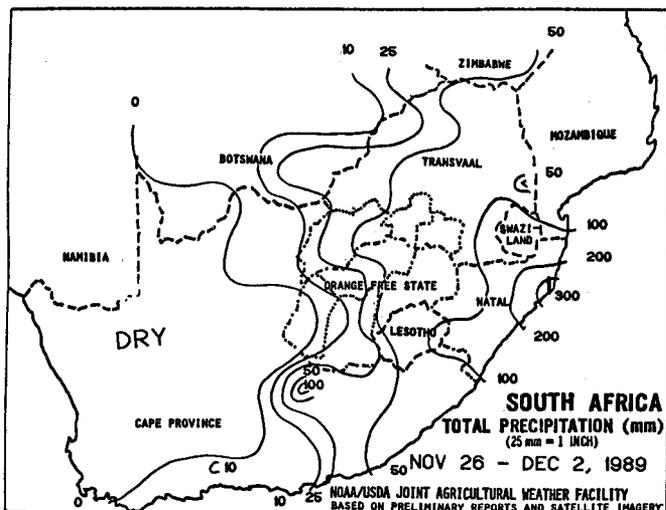
COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
	AVG MAX	AVG MIN	HI	LO	AVG	F/NRM	DPART	
NORWAY OSLO	3	-1	11	-13	1	2.3	73.5	-18.6
SWEDEN STOCKHOLM	4	-1	11	-14	2	-0.9	59.5	8.4
FINLND HELSINKI	2	-2	9	-18	0	-0.3	48.8	-18.8
U KING GLASGOW	9	2	15	-7	6	-1.1	37.8	-75.5
EDINBURGH	9	3	14	-5	6	0.3	13.4	-50.8
BIRMINGHAM	9	3	15	-5	6	-0.2	45.2	-17.0
LONDON	10	3	16	-8	7	0.2	35.0	-47.5
IRELND DUBLIN	10	7	14	1	8	1.2	36.8	-32.3
ICELND REYKJAVIK	3	1	9	-6	2	0.5	75.0	-3.8
DENMRK COPENHAGEN	7	2	14	-6	5	-0.6	20.9	-27.1
LUXEMB LUXEMBOURG	7	1	12	-8	4	-0.2	48.1	-25.5
SWITZL ZURICH	6	1	17	-7	3	-0.5	26.7	-53.1
GENEVA	7	2	18	-11	5	-0.6	61.1	-35.4
FRANCE PARIS	10	3	16	-8	6	-0.2	42.2	-12.6
STRASBOURG	6	-1	18	-10	3	-2.0	57.0	9.4
BOURGES	11	3	19	-6	7	0.4	25.6	-36.0
BOURDEAUX	15	8	20	-1	11	3.0	81.2	-15.3
TOULOUSE	15	8	23	1	12	3.5	33.2	-21.5
MARSEILLE	16	8	21	-2	12	1.4	67.1	3.9
SPAIN VALLADOLID	14	7	20	2	11	3.7	90.2	39.6
MADRID	16	8	24	-1	12	3.1	122.6	56.6
SEVILLE	20	11	27	7	16	1.3	258.7	180.6
E GRMY LEIPZIG	6	1	15	-7	3	-1.2	60.7	24.2
DRESDEN	6	1	15	-7	3	-1.0	106.3	64.3
W GRMY HAMBURG	7	1	14	-7	4	-0.7	23.7	-40.0
BERLIN	6	1	14	-6	4	-1.3	56.3	9.2
DUSSELDORF	10	3	17	-7	7	0.4	32.0	-31.0
STUTTGART	7	-2	17	-13	3	-1.2	17.8	-29.8
NURNBERG	6	0	15	-12	3	-0.6	46.9	5.7
MUNICH	6	-2	17	-15	2	-1.4	56.3	-1.0
AUSTRI VIENNA	7	1	19	-9	4	-0.9	27.5	-14.4
INNSBRUCK	8	-1	19	-8	4	0.3	49.4	-9.5
CZECH PRAGUE	4	-2	14	-12	1	-1.9	32.3	4.6
POLAND WARSAW	4	-1	15	-17	1	-1.9	33.9	-5.9
LODZ	4	-1	15	-17	2	-0.7	41.6	2.5
KATOWICE	5	0	18	-16	3	0.1	34.3	-6.6
PRZEMYSL	4	0	17	-13	2	-1.4	32.4	-12.1
HUNGAR BUDAPEST	8	1	18	-10	4	-0.8	39.9	-14.7
YUGOSL SARAJEVO	8	-2	21	-18	3	-3.0	104.6	-6.4
ROMANI BUCHAREST	9	1	20	-19	5	-1.1	22.5	-24.6
BULGAR SOFIA	8	1	21	-13	4	-2.1	44.8	-5.5
ITALY MILAN	10	4	19	-3	7	0.1	30.2	-30.8
VERONA	10	2	18	-7	6	-1.0	52.9	-27.0
VENICE	11	4	17	-3	8	-0.4	42.4	-54.4
GENOA	14	10	19	2	12	-0.8	27.8	-131.5
ROME	16	7	21	-1	12	-0.6	48.0	-58.7
NAPLES	17	8	23	0	12	0.1	88.8	-64.6
GREECE THESSALONIKA	14	7	24	-3	11	-0.8	33.2	-18.1
LARISSA	15	5	27	-2	10	-0.8	45.8	-8.2
ATHENS	17	12	23	5	15	-1.3	47.8	-8.6
TURKEY ISTANBUL	13	7	22	-1	10	-1.5	87.8	-0.2
ANKARA	10	1	20	-10	6	-0.4	98.3	73.3
CYPRUS LARNACA	22	13	26	8	18	-0.2	30.4	-7.7
USSR TALLINN	3	-1	10	-13	1	0.5	83.2	26.2
LENINGRAD	1	-2	11	-28	0	-0.4	42.9	-9.6
KAUNAS	2	-2	10	-17	0	-2.2	26.5	-23.4
MINSK	0	-4	9	-24	-2	-2.3	29.5	-18.2
KAZAN	-2	-6	3	-22	-4	0.0	45.8	9.1
MOSCOW	-1	-4	7	-20	-3	-1.1	54.9	6.1
SVERDLOVSK	-3	-7	7	-22	-5	0.4	16.5	-10.6
OMSK	-4	-10	4	-21	-7	1.2	20.1	-2.7
KUSTANAY	-1	-7	5	-17	-4	2.0	43.4	22.0
KRASNOYARSK	-2	-9	6	-26	-5	3.1	16.2	-18.5
NOVOSIBIRSK	-5	-10	4	-23	-7	2.4	20.6	-7.3
BARNAUL	-5	-10	2	-21	-7	0.0	19.7	-17.4
KHABAROVSK	-2	-9	5	-18	-6	2.5	29.7	13.9
VLADIVOSTOK	2	-3	13	-11	0	0.9	63.4	29.3
KIEV	2	-2	11	-14	0	-1.6	40.9	-10.4
LVOV	3	-2	18	-15	1	-1.7	44.7	-3.4
KIROVOGRAD	3	-2	12	-16	0	-1.7	39.4	4.1



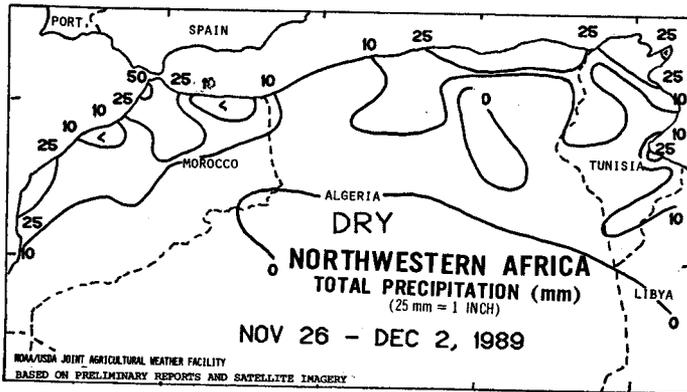
WESTERN USSR ... The first bitter cold weather of the season covered winter grains over most of the region. Coldest weather occurred early in the week over winter grains in the Central Region, the northern Black Soils Region, the Volga Vyatsk, and the upper Volga, where minimum temperatures dropped to as low as -26 degrees Celsius (C). While temperatures in these areas reached the threshold for potential winterkill, the combination of snow cover and the short duration of extreme cold minimized the potential for significant winterkill. Extreme minimum temperatures over the remainder of the region ranged from -10 to -17 degrees C. Snow cover continued to increase over the northern two-thirds of the region, where precipitation amounts ranged from 3 to 10mm. Greatest amounts of precipitation (25-50mm) covered winter grains in the central North Caucasus, where moderate rain changed to snow by week's end. Winter grain areas in the southern Ukraine were without a protective snow cover. By week's end, gradual warming began spreading eastward across the region.



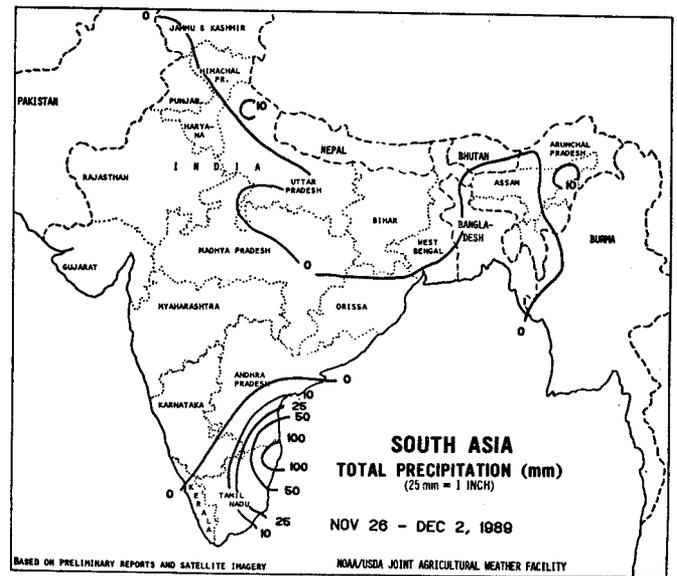
EUROPE ... Unseasonably cold weather (5-10 degrees C below normal) continued over much of northern and eastern Europe, causing winter grains in sections of northwestern Europe to become dormant. Light snow cover likely protected dormant winter grains from minimum temperatures in the -15 to -20 degrees C range across northeastern growing areas. Light to moderate snow and rain (5-20mm, with isolated amounts in excess of 20mm) fell in north-central and eastern crop areas, while northwestern Europe remained mostly dry. In the southwest, moderate to heavy rain (10-50mm, with scattered rainfall in excess of 50mm) persisted across much of the Iberian Peninsula, continuing fall fieldwork delays and localized flooding, especially in southern Spain. Above-normal temperatures across the region accelerated drying rates, however, and favored vegetative growth of winter grains.



SOUTH AFRICA ... Beneficial rain (25-94mm) returned to the central and eastern Maize Triangle, favoring newly planted corn. Lighter rain (1-10mm) and somewhat warmer weather, however, dominated much of the western and southern Triangle. Although timely planting rains benefited much of the west, more rain is needed for normal development, as seasonal warming hastens crop growth rates. Midweek moderate to heavy showers (50-150mm) covered most crop areas of Natal and the eastern Cape Province, causing some local flooding. Inundating rain (200-312mm) fell along Natal's northeast coast. The rainfall along Natal's coastal sugarcane region broke a drying trend that began in early November.

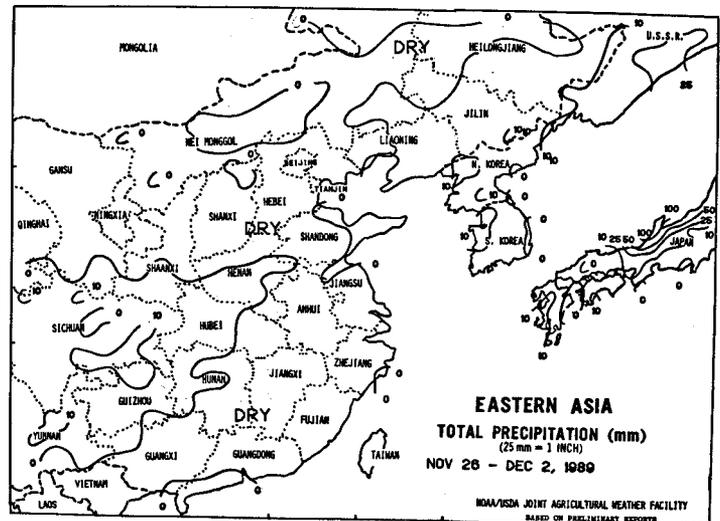


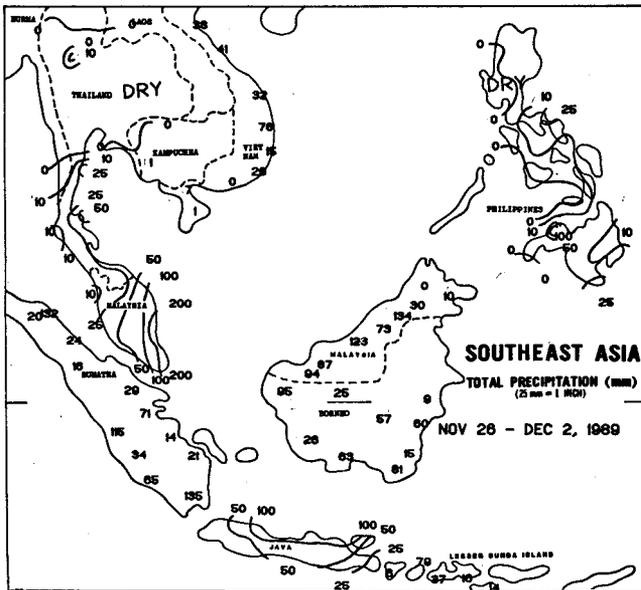
NORTHWESTERN AFRICA ... Widespread light to moderate rain (10-39mm) continued over Moroccan winter grain areas, providing abundant topsoil moisture for crop emergence and early growth. Although light rain (3-23mm) continued to moisten topsoils in western and central Algeria, topsoil moisture remained limited for crop emergence, and planting is likely progressing slowly. In eastern Algeria and Tunisia, moderate rain (25-41mm) over northernmost winter grain areas provided favorable moisture conditions for crop emergence and early plant establishment. Southernmost crop areas, however, continued unfavorably dry.



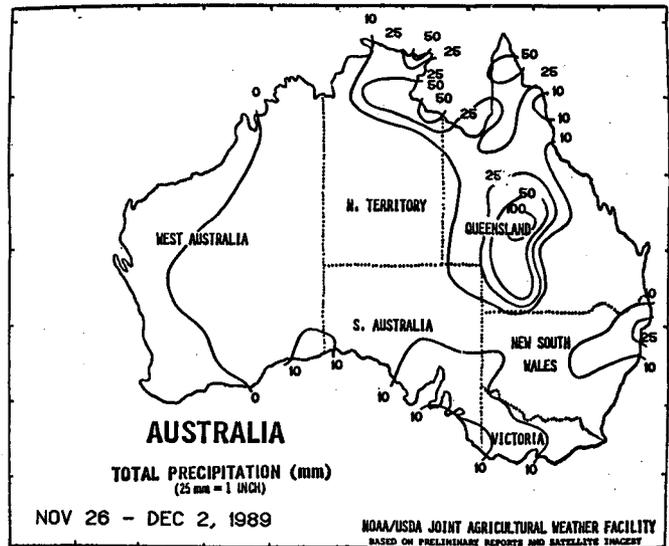
SOUTH ASIA ... Dry, seasonably warm weather dominated most of the region, favoring late-summer crop harvests. Variable, but locally heavy rain (28-134mm) fell in eastern Tamil Nadu and extreme southeastern Andhra Pradesh. Northeastern Tamil Nadu received excessive rainfall in recent weeks, flooding some crop areas. Scattered light rain (2-10mm) over winter wheat regions from Bihar to northwestern Uttar Pradesh provided some useful moisture for emerging grains, although coverage was not widespread.

EASTERN ASIA ... Mostly dry weather continued across eastern and southern China, allowing late double-crop rice harvest in the southeast to proceed to near completion. Scattered rain (5-20mm) fell over sections of Sichuan, western Hubei, Guizhou, and Yunnan. In the east, a frontal system brought rain (10-60mm, with isolated amounts in excess of 60mm) to sections of South Korea and Japan, and mostly light snow (less than 10mm) to North Korea and southeastern Manchuria. Near-normal temperatures across the Yangtze Valley induced hardening of winter crops. Elsewhere, mean weekly temperatures in the northeast continued above normal, while near-normal to below-normal temperatures covered southern crop areas.

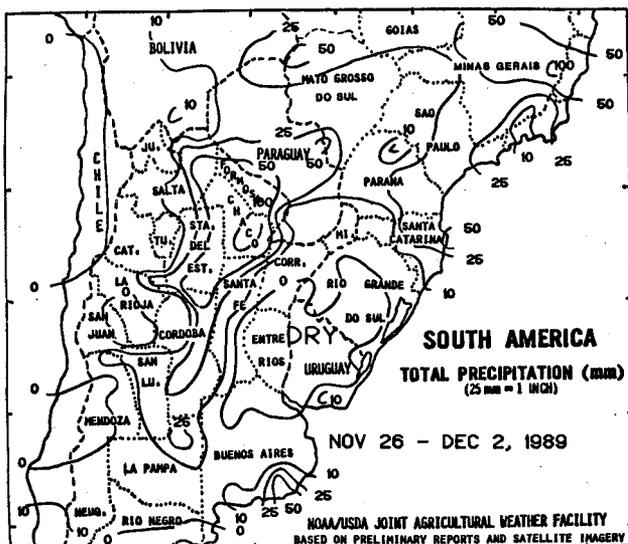




SOUTHEAST ASIA ... Heavy rain (100-212mm) fell along the east coast of the Malaysian peninsula and along the north coast of the Javanian peninsula, causing some flooding but also increasing irrigation reserves for rice planting, usually underway in Java during December. Widespread variable rain (20-100mm or more) prevailed over the remainder of Malaysia and Indonesia, maintaining favorable irrigation reserves. Significant rain (10-67mm) also fell along the east coast of Thailand's peninsula, while light rain (2-10mm) fell in the west. Dry, warm weather favored maturing rice in Thailand. Unseasonable, scattered showers (1-24mm), however, fell in the far northern region. In the Philippines, light to moderate rain (10-38mm) was limited mostly to the eastern half of the islands. Typhoon Irma turned to the northeast completely missing the Philippines. Isolated heavy showers (36-102mm) were scattered over the southern islands.



AUSTRALIA ... Mostly dry and warm weather covered eastern areas early in the week, favoring rapid progress in winter grains harvest. Winter grains maturation and drydown in the southeast were accelerated by much-above-normal weekly mean temperatures (3-7 degrees C above normal). A frontal system brought light to moderate rain (5-20mm) by late in the week, however, causing fieldwork delays in South Australia, Victoria, and southern New South Wales. Scattered light showers (less than 10mm) in coastal northeastern Queensland caused few additional sugarcane harvest delays, following heavy rain last week. Western Australia remained favorably dry.



SOUTH AMERICA ... In Argentina, substantial rain (10-40mm) fell in western crop areas from northeastern La Pampa through Cordoba, benefiting summer crop emergence but slowing early wheat harvesting. Heavier rain (50-111mm) fell from northern Cordoba into northern cotton areas. Rainfall diminished to 15mm or less in Santa Fe and 5mm or less in Buenos Aires, except along the south coast where 10-60mm of rain fell. Dry weather prevailed in southeastern Santa Fe, northeastern Buenos Aires, and Entre Rios. Corn, sorghum, sunflower seed and soybean plantings reached 95, 70, 88, and 35 percent, respectively, by late November. Welcomed drier weather covered Uruguay and Rio Grande do Sul, Brazil following earlier wetness. Showers covered the remainder of south-central Brazil, producing less than 20mm in western Parana and Sao Paulo, but 25-50mm or more further north. Soybean planting reached 40 percent, compared with the 67-percent average as of November 24. Soil moisture is adequate for crop establishment throughout the region.

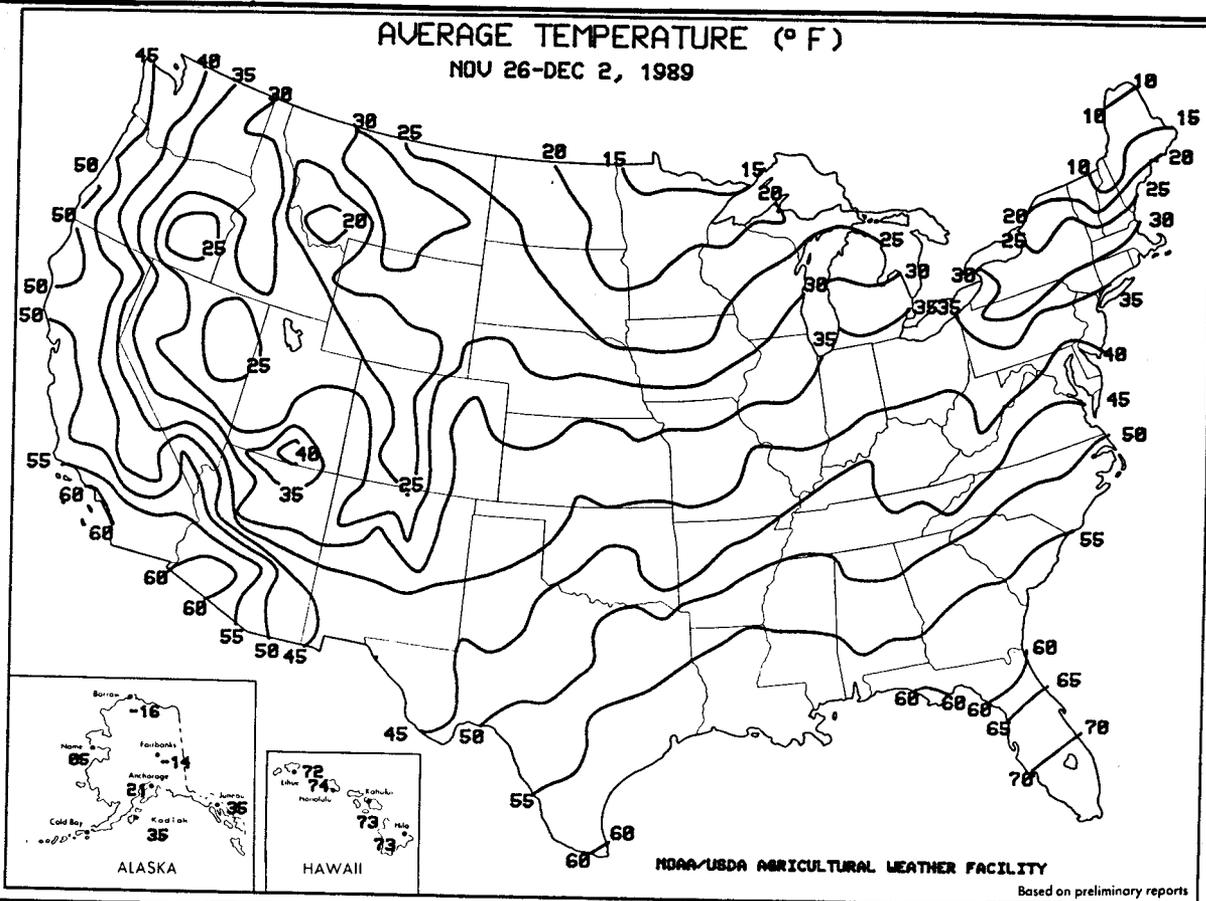
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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Climate Analysis Center
Managing Editor Douglas Le Comte
Meteorologists Tom Heddinghaus (202) 382-1444
Vilhelm Bjerknes, Bob Stefanski, Wes Byrd, and Eyad Atallah

Subscriptions (202) 447-7917 . . . Jeanette Hill

U.S. DEPARTMENT OF AGRICULTURE
Economics Management Staff
Editor Sharon Lee
National Agricultural Statistics Service
Agricultural Statistician . . . Tom Kurtz (202) 447-2157
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NOAA/USDA Joint Agricultural
Weather Facility
Room 5844 USDA South Building
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