

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

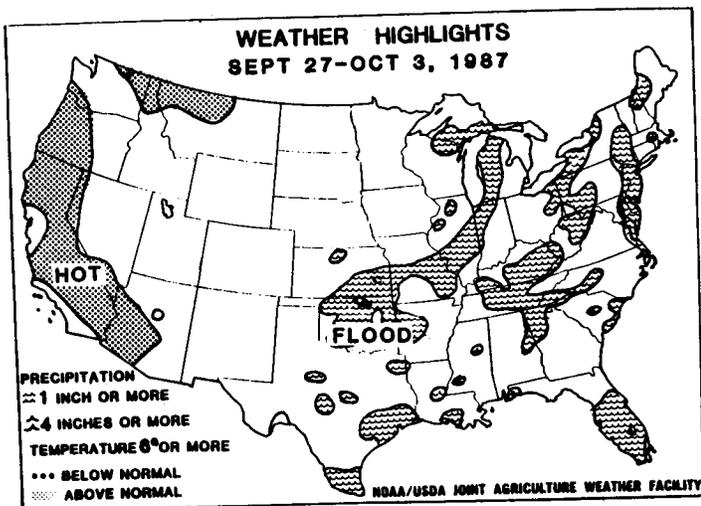
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National Weather Summary

September 27 - October 3, 1987



HIGHLIGHTS: The first half of the week, rains moved eastward from the upper Great Plains to the Atlantic seaboard. A second storm system moved into the northern Plains from western Canada on Thursday, swept across the upper Mississippi Valley and the Great Lakes on Friday, and brought cold blustery weather to the Northeast on Saturday.

SUNDAY...Light rain fell over Montana as cool weather spread across the northwest quarter of the Nation. Morning lows in the twenties and thirties were commonplace over the northern half of the Intermountain region. Showers and thunderstorms broke out in a broad band extending southwestward from Minnesota to Arizona, also from South Carolina to the Florida keys.

MONDAY...Thunderstorms moved through southern Kansas and northern Oklahoma, some of them accompanied by hail. Heavy rain fell in southern Texas. The skies were mostly clear west of the Rockies. Morning temperatures were in the twenties and thirties in parts of Wyoming and Montana.

TUESDAY...Minor flooding developed along the Chikaskia River in Oklahoma as a cold front extending from central Ohio to the central Gulf coast continued moving eastward. Severe thunderstorms with strong gusty winds moved across

Pennsylvania and New York. Thunderstorms were scattered across Arizona and New Mexico.

WEDNESDAY...Rains continued to move eastward along an advancing cold front, extending from New England southward to Florida. Thundershowers were scattered through the Great Lakes and upper Michigan.

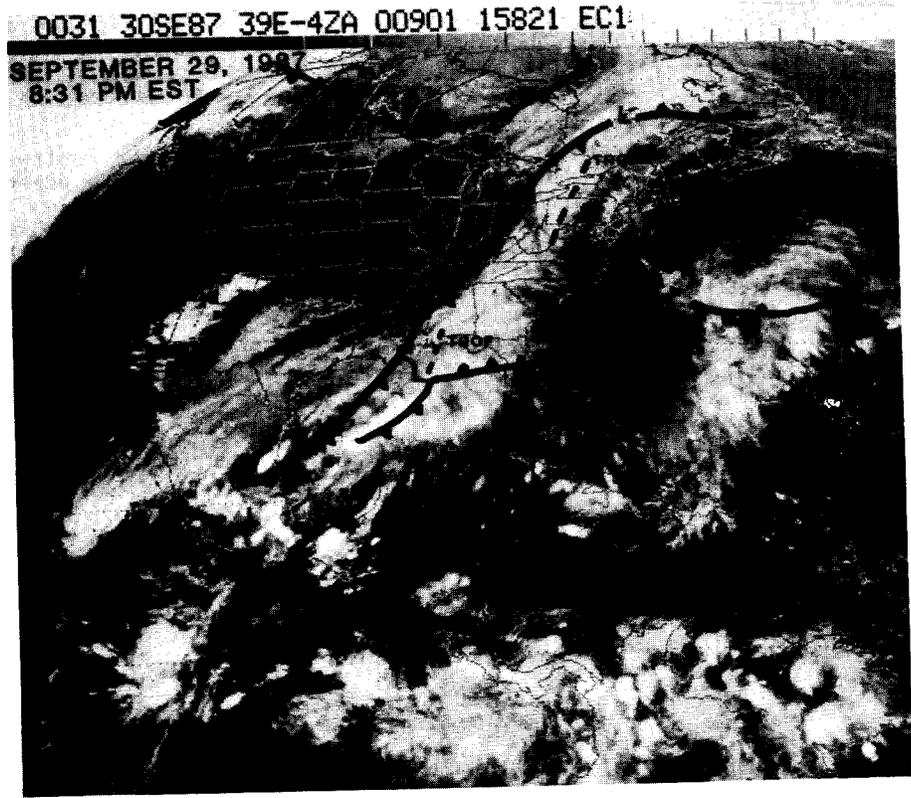
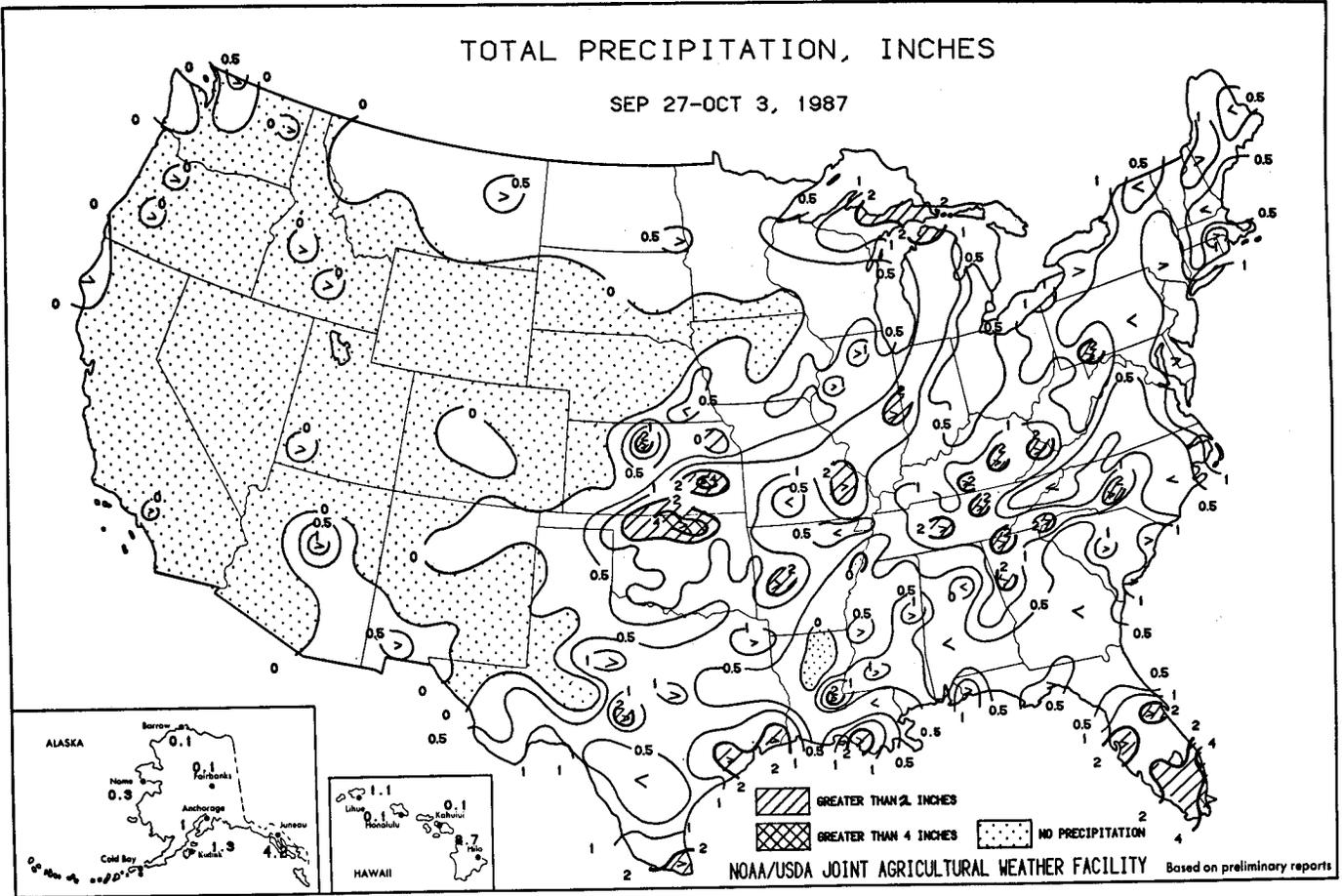
THURSDAY...Rains gradually ended along the eastern seaboard and were followed by cooler weather. Another storm system moved into the northern Plains from western Canada. A few showers fell in Minnesota, Wisconsin, and Michigan.

FRIDAY...Cold air plunged southward into the Mississippi and Ohio Valleys, while most of the western United States remained warm. By day's end, cold air was moving into the middle Atlantic States, Pennsylvania, New York, and New England.

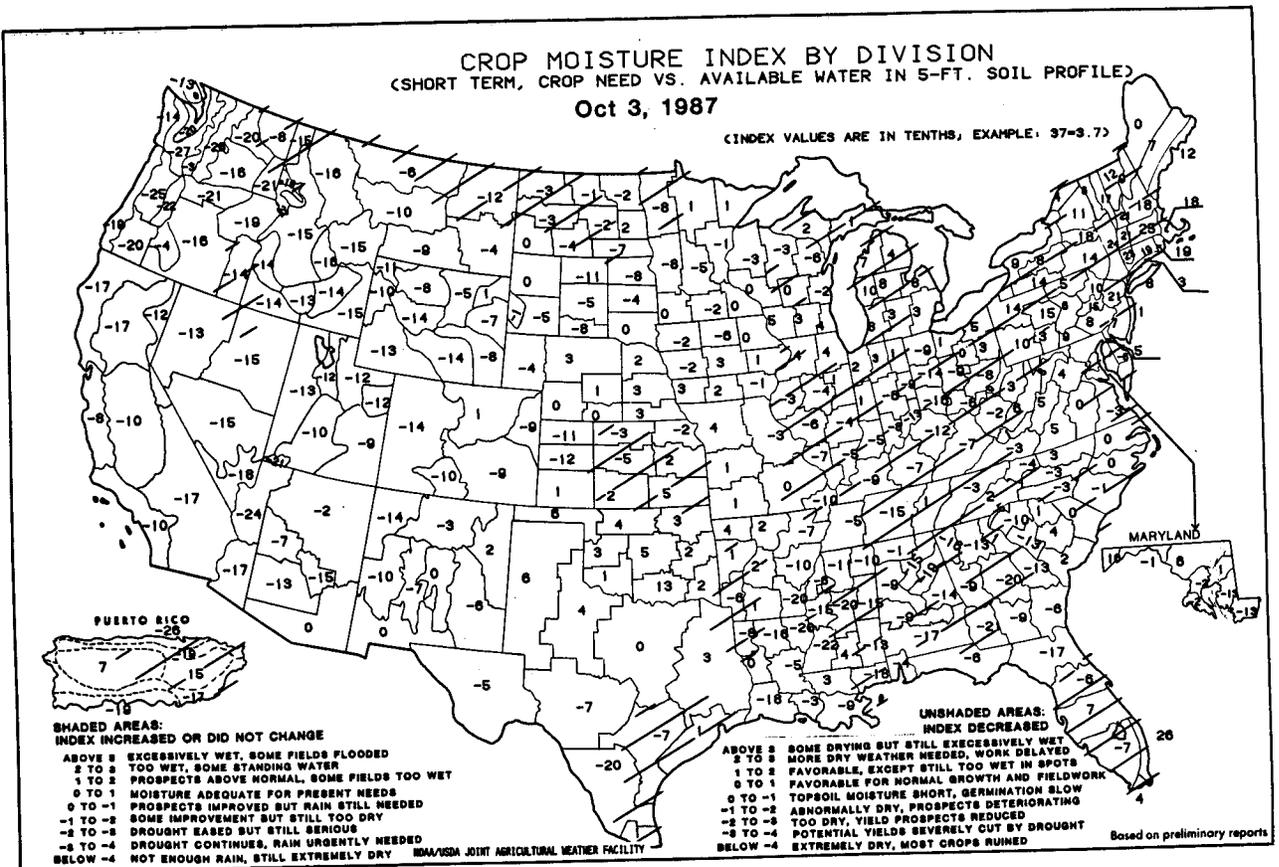
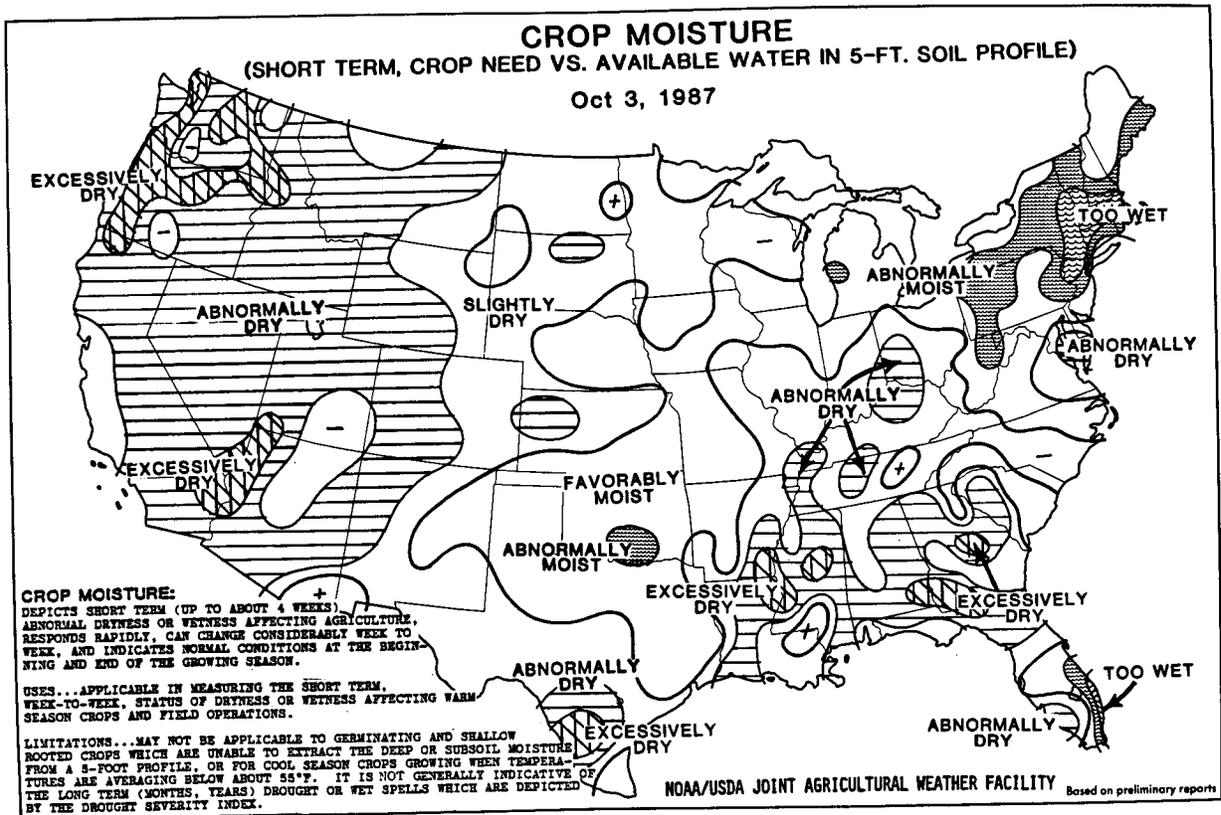
SATURDAY...Cold air continued to filter southward over much of the East, while warm weather prevailed in the West. Temperatures climbed to above 100 degrees in the Los Angeles and San Diego areas. Snow fell in the Catskill Mountains of New York State.

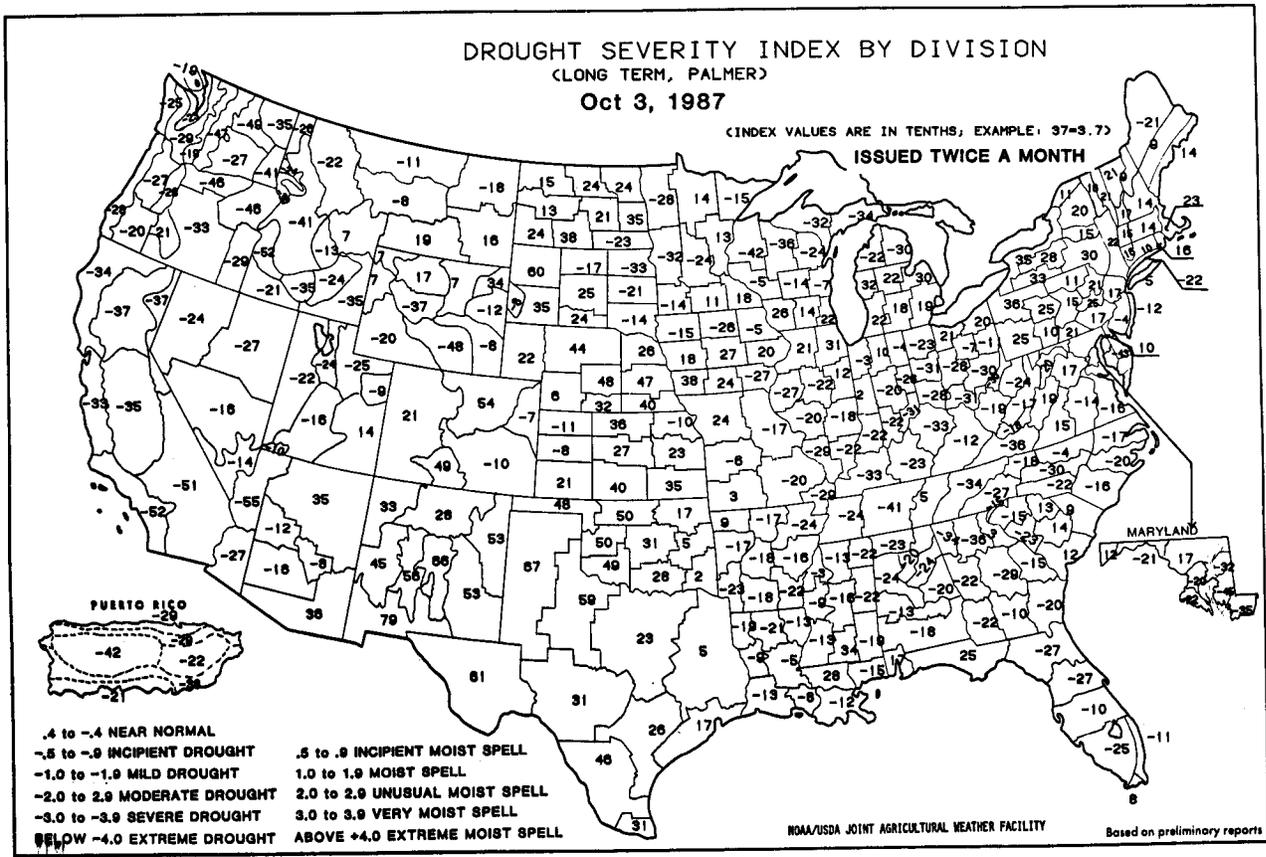
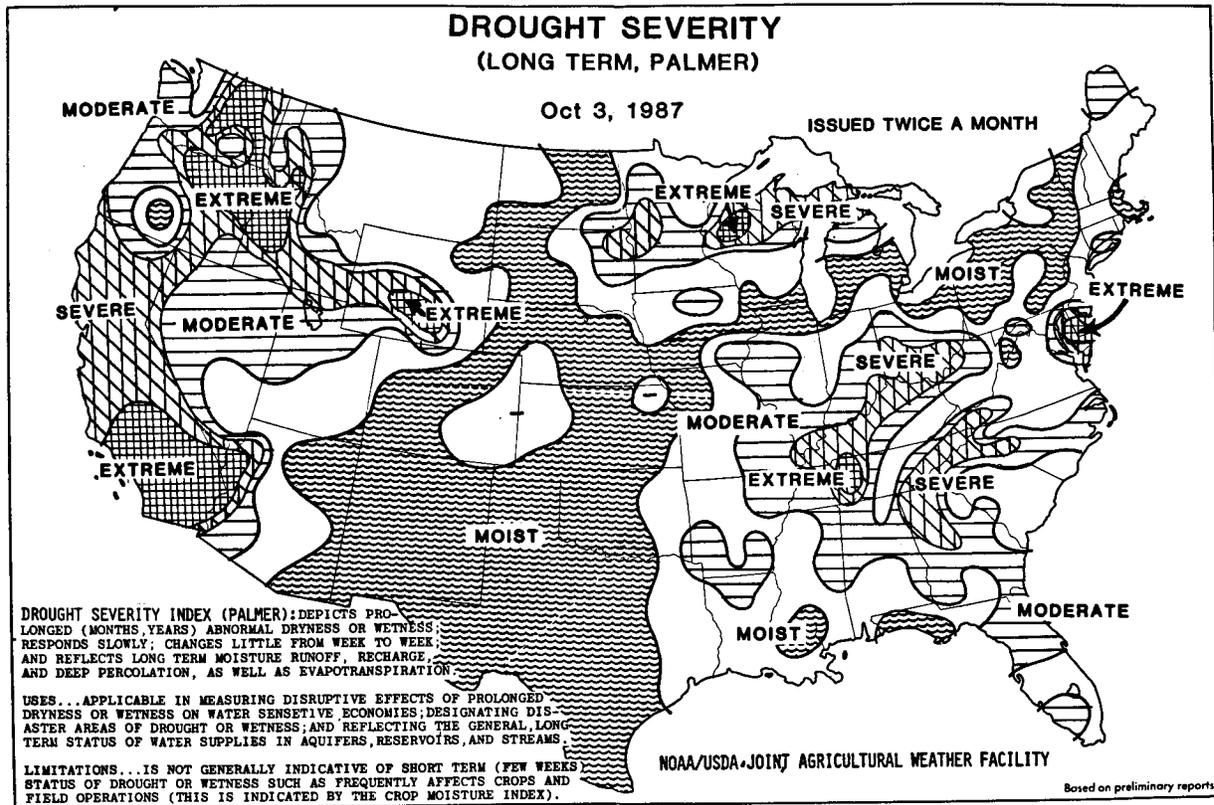
Contents

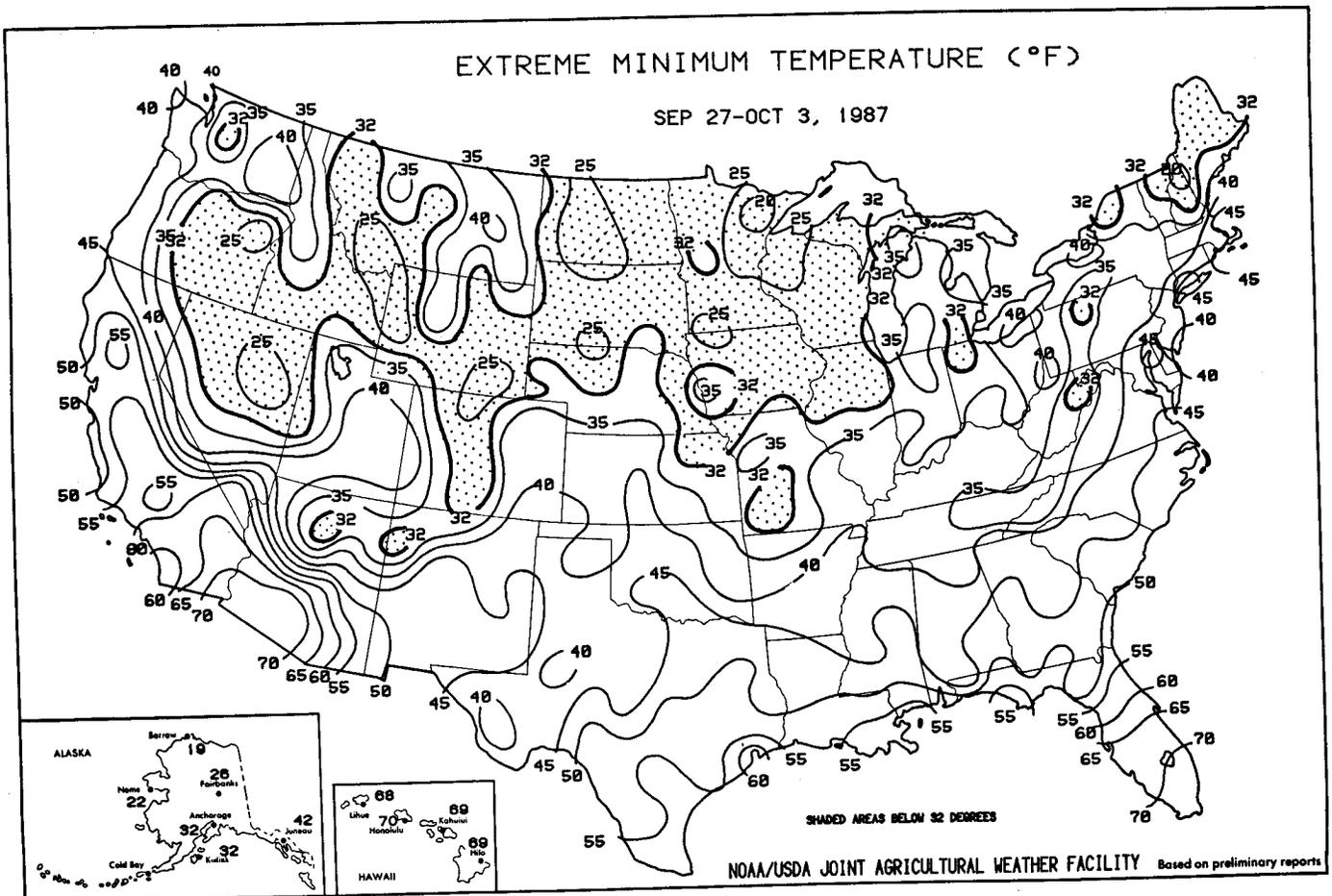
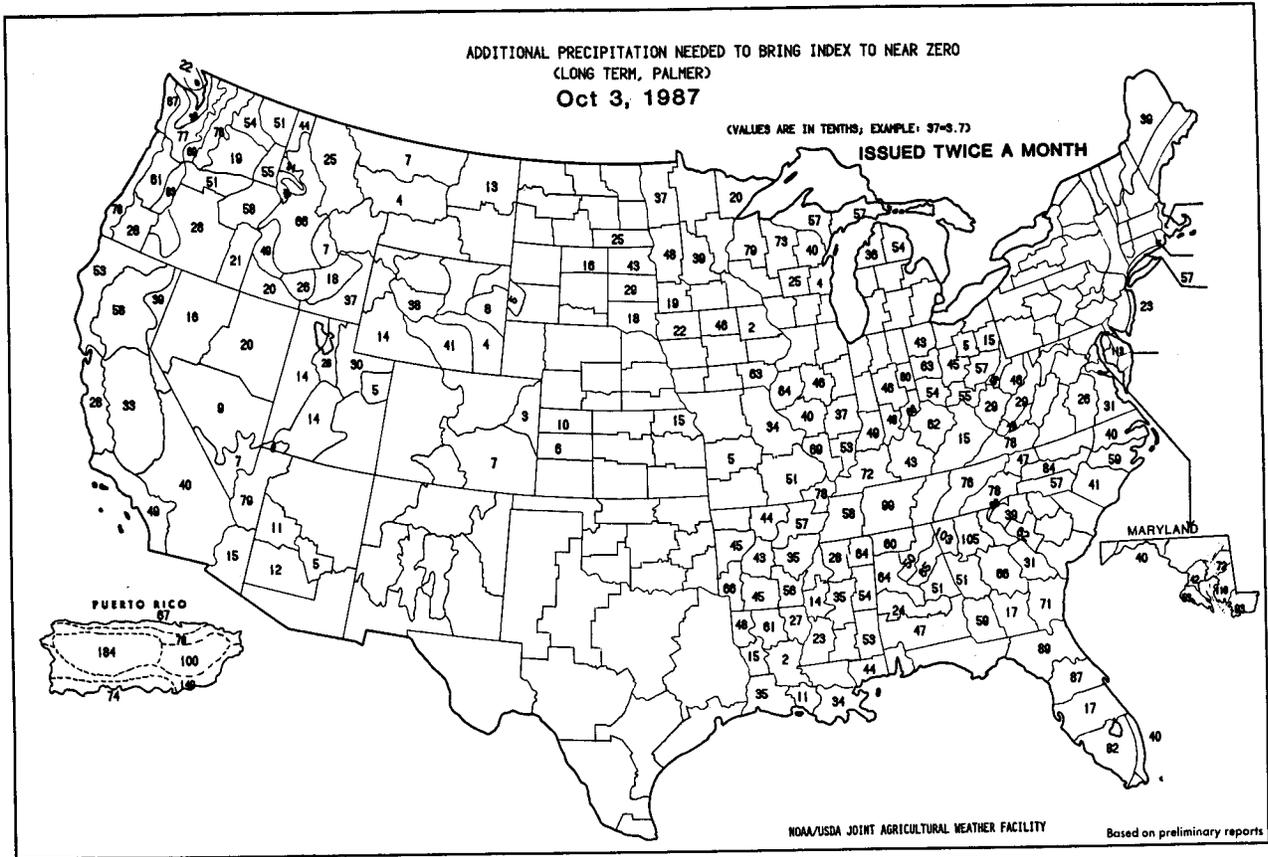
	Page
National Weather Summary	1
Total Precipitation & North American Satellite Image	2
Crop Moisture & Crop Moisture Index	3
Drought Severity & Drought Severity Index	4
Precipitation Needed to End Drought & Extreme Minimum Temperature	5
Average Temperature & Departure	6
National Weather Data for Selected Cities	7
September Weather and Crop Summary	10
September Precipitation & Percent of Normal	11
September Average Temperature & Departure	12
September Weather Data for Selected Cities	13
National Agricultural Summary	14
Crop Progress & Condition Tables	15
State Summaries of Weather and Agriculture	17
International Weather and Crop Summary & September Temperature and Precipitation Table	18
Average Dates of First Autumn Frost in Western USSR	17
Subscription and Mailing Permit Information & Denny Retires	28

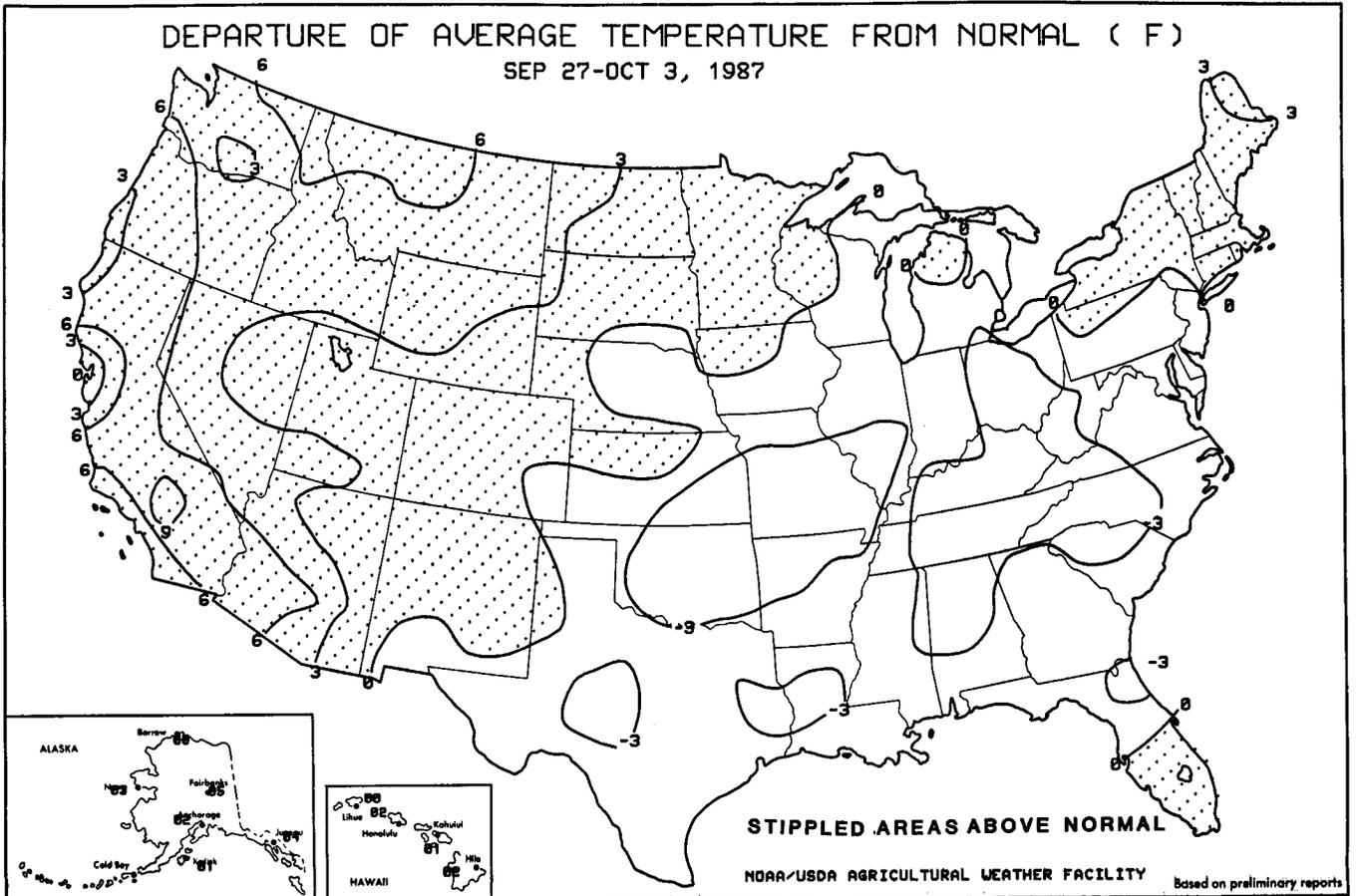
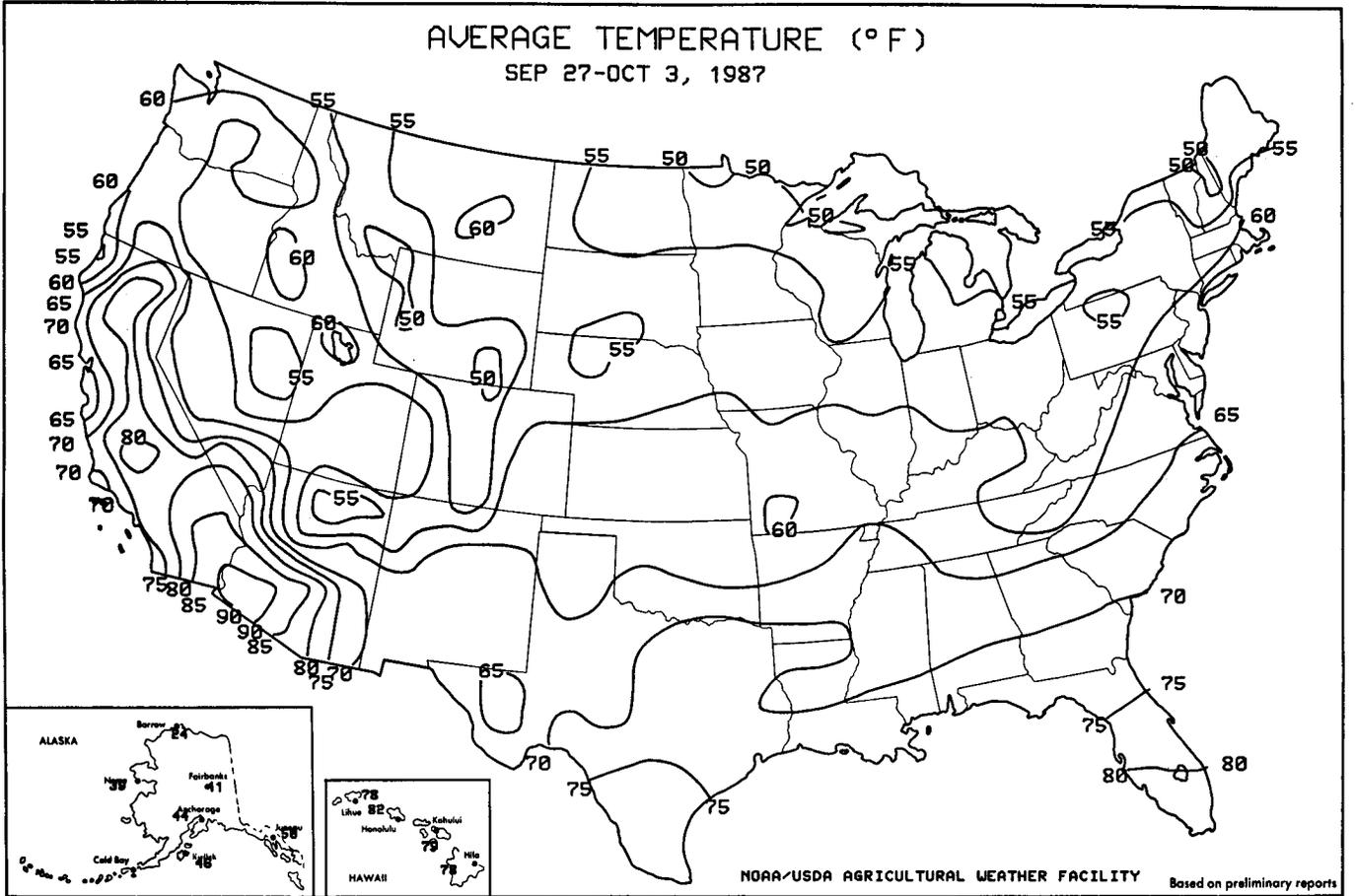


EXTENSIVE RAIN AND SHOWERS
EXTEND FROM EASTERN QUEBEC TO
CENTRAL MEXICO.
THUNDERSTORMS ARE SCATTERED
OVER NEW MEXICO.
THE BOTTOM OF THE SATELLITE
IMAGERY SHOWS AN ACTIVE INTER-
TROPICAL CONVERGENCE ZONE.









National Weather Data for Selected Cities

Weather Data for the Week Ending October 3, 1987

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 SEPT. 1	PCT. NORMAL SINCE SEPT. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	PRECIPI- TATION		
																		.01 INCH OR MORE	.50 INCH OR MORE	
AL BIRMINGHAM	79	52	86	40	65	-4	T	-1.8	T	3.2	69	33.0	76	90	40	0	0	0	0	
MOBILE	82	61	87	50	71	-3	-3	-1.5	T	3.6	52	58.1	110	93	46	0	0	1	0	
MONTGOMERY	84	55	91	45	70	-2	1.0	-1.1	T	4.0	79	45.8	117	90	33	2	0	2	1	
AK ANCHORAGE	50	37	53	32	44	2	1.0	1.0	T	2.9	108	10.1	90	93	61	0	1	1	0	
BARROW	27	21	31	19	24	0	0	0	T	1.3	213	4.7	130	96	81	0	0	2	1	
FAIRBANKS	49	33	53	26	41	5	4	4.2	T	1.6	47	4.9	59	86	50	0	0	7	4	
JUNEAU	54	46	61	42	50	4	4.2	2.5	T	10.9	153	38.4	106	96	80	0	0	3	2	
KODIAK	54	37	56	32	46	0	1.3	-1.3	T	1.7	108	55.3	128	97	61	0	0	3	3	
NOME	44	34	50	22	39	3	3	-1.1	T	2.6	104	8.5	71	88	64	0	2	4	0	
AZ PHOENIX	101	77	104	75	89	9	0	-1.1	T	0.6	83	5.3	104	41	18	7	0	0	0	
PRESCOTT	83	48	85	46	66	5	1	-1.2	T	1.2	71	10.5	71	63	17	0	0	1	0	
TUCSON	94	66	98	63	80	4	T	-1.2	T	2.3	164	10.5	120	54	17	7	0	0	0	
YUMA	104	77	108	73	90	8	0	-1.1	T	0	11	1.1	67	43	16	7	0	0	1	
AR FORT SMITH	79	49	88	35	64	-5	-5	-1.6	T	1.7	49	27.7	91	96	37	0	0	2	1	
LITTLE ROCK	77	56	83	42	67	-3	-3	-1.6	T	5.0	111	29.3	77	70	40	0	0	1	0	
CA BAKERSFIELD	97	64	102	58	81	7	T	0	T	7	4	4.1	102	58	21	7	0	0	0	
EUREKA	63	51	71	48	57	1	T	-1.3	T	4	18.0	76	94	78	0	0	1	0		
FRESNO	97	60	100	59	79	8	0	-1.1	T	0	6.7	93	75	21	7	0	0	0	0	
LOS ANGELES	79	64	90	62	71	3	0	0	T	0.1	67	3.1	37	97	63	1	0	0	0	
REDDING	100	55	104	48	77	5	0	-1.3	T	0	0	19.3	73	53	14	7	0	0	0	
SACRAMENTO	96	55	99	52	76	7	0	-1.1	T	0	0	8.8	80	83	18	7	0	0	0	
SAN DIEGO	82	64	104	62	73	3	0	0	T	0.7	350	5.8	91	93	66	1	0	0	0	
SAN FRANCISCO	73	53	83	52	63	0	0	-1.1	T	0	0	8.5	67	94	55	0	0	0	0	
CO DENVER	76	43	84	39	59	2	0	-1.3	T	0.7	53	15.9	123	71	20	0	0	0	0	
GRAND JUNCTION	80	46	83	40	63	1	T	-1.2	T	1	16	8.1	137	51	9	0	0	0	0	
FUJERO	80	41	88	38	61	0	T	-1.1	T	0.3	35	9.4	101	76	20	0	0	1	0	
CT BRIDGEPORT	71	54	78	45	63	1	1	-1.1	T	4.1	115	27.2	88	91	57	0	0	0	0	
HARTFORD	72	47	82	37	59	1	1	-1.4	T	7.4	173	36.1	110	98	48	0	0	3	0	
DC WASHINGTON	74	54	82	45	64	-2	1	-1.8	T	5.6	160	27.5	91	93	44	0	0	2	1	
FL APALACHICOLA	83	65	86	55	74	-1	1	-1.9	T	5.2	57	41.4	90	93	49	0	0	1	0	
DAYTONA BEACH	84	67	87	59	76	-2	1	-1.4	T	5.6	77	36.7	93	94	54	0	0	0	0	
JACKSONVILLE	83	60	88	50	72	-3	0	-1.4	T	7.2	103	38.0	86	97	51	0	0	3	0	
KEY WEST	87	76	90	72	82	0	0	0	T	3.5	9.5	140	34.6	116	96	66	2	0	7	3
MIAMI	88	75	91	73	81	1	0	3.8	T	2.0	20.9	37.5	80	95	61	1	0	6	2	
ORLANDO	87	69	91	63	78	0	0	2.1	T	2.1	8.6	42.5	99	92	51	3	0	1	1	
TALLAHASSEE	85	60	89	50	72	-2	0	1.8	T	4.0	58	60.4	112	95	37	0	0	1	0	
TAMPA	88	69	92	64	79	0	0	2.7	T	4.8	73	42.8	105	94	50	3	0	2	1	
WEST PALM BEACH	87	74	88	72	80	0	0	2.3	T	3.5	12.1	43.3	92	94	64	0	0	5	1	
GA ATLANTA	77	56	83	45	67	-2	1	1.4	T	1.3	3.0	89	39.1	101	87	38	0	0	2	1
AUGUSTA	82	53	87	42	67	-3	1	0.5	T	2.0	54	35.6	90	92	33	0	0	2	0	
MACON	83	55	88	44	69	-2	1	-1.6	T	1.5	43	32.9	90	92	47	0	0	3	0	
SAVANNAH	80	61	85	50	71	-2	1	-1.5	T	8.2	148	52.8	122	94	47	0	0	1	0	
HI HILO	84	71	88	69	78	2	2	7.1	T	5.3	19.9	27.1	108	95	70	0	0	4	3	
HONOLULU	90	74	93	70	82	2	2	-1.1	T	0.5	74	4.1	28	83	51	5	0	1	0	
KAHULUI	86	72	89	69	79	1	1	0	T	1.4	473	22.4	179	87	56	0	0	4	0	
LIHUE	83	73	85	68	78	0	1	-1.4	T	4.6	179	20.0	70	90	68	0	0	1	0	
ID BOISE	79	42	86	33	61	3	0	0	T	0	0	6.5	80	48	14	0	0	0	0	
LEWISTON	81	48	89	43	65	6	0	-1.2	T	0	1	8.0	84	55	19	0	0	0	0	
POCATELLO	78	32	85	28	55	1	0	-1.2	T	0	0	8.4	105	65	13	0	3	2	0	
IL CHICAGO	70	45	89	31	58	-2	1	-1.6	T	0.9	22	33.2	119	90	40	0	1	2	0	
MOLINE	71	45	85	28	58	-1	1	-1.3	T	0.3	1.1	27	95	88	40	0	1	1	0	
PEORIA	72	46	85	30	59	-1	1	-1.6	T	0.6	1.6	41	69	91	39	0	1	1	0	
QUINCY	74	48	83	32	61	-1	1	-1.9	T	0.1	1.7	38	71	87	39	0	1	1	1	
ROCKFORD	68	44	84	29	56	-2	1	1.0	T	1.0	2.4	60	112	93	47	0	1	1	1	
SPRINGFIELD	73	48	85	33	60	-3	1	-1.6	T	0.4	1.0	28	72	87	37	0	0	2	0	
IN EVANSVILLE	76	47	90	35	61	-3	1	-1.7	T	0.7	2.0	68	75	92	33	1	0	1	1	
FORT WAYNE	70	44	85	33	57	-3	1	-1.4	T	0.4	1.4	51	93	97	44	0	0	4	0	
INDIANAPOLIS	72	47	85	34	59	-2	1	-1.5	T	0.5	1.4	48	81	91	40	0	0	1	0	
SOUTH BEND	68	47	83	36	58	-2	1	1.4	T	0.6	4.1	117	88	92	46	0	0	4	0	
IA DES MOINES	71	47	83	30	59	-1	0	-1.6	T	0.5	1.4	42	115	86	32	0	1	0	0	
SIoux CITY	73	44	86	28	59	0	0	-1.7	T	0	1.4	53	103	80	29	0	1	0	0	
WATERLOO	70	43	83	26	57	-1	1	-1.7	T	0.4	1.8	49	96	88	32	0	2	0	0	
KS CONCORDIA	78	49	90	35	64	1	1	-1.2	T	0.4	1.6	48	130	75	28	1	0	1	0	
DODGE CITY	77	47	91	39	62	-2	1	-1.3	T	0	1.5	77	122	73	24	1	0	1	0	
GOODLAND	78	44	88	38	61	2	0	-1.3	T	0	1.5	100	127	63	19	0	0	0	0	
TOPEKA	76	46	86	30	61	-3	1	-1.7	T	0.7	1.8	48	113	93	31	0	1	0	0	
WICHITA	75	51	84	37	63	-3	1	1.3	T	0.5	2.1	56	141	89	34	0	0	2	2	
KY BOWLING GREEN	73	48	85	37	61	-4	1	-1.9	T	0.9	3.5	101	141	89	34	0	0	1	1	
LEXINGTON	73	48	86	39	61	-3	1	0.6	T	0	0.9	26	75	85	35	0	0	1	0	
LOUISVILLE	73	51	87	39	62	-2	1	-1.5	T	0.5	1.2	32	73	83	36	0	0	1	0	
LA ALEXANDRIA	82	55	87	46	68	-5	1	-1.6	T	0.5	1.5	45	98	89	41	0	0	0	0	
BATON ROUGE	83	60	86	51	72	-2	1	-1.7	T	0.1	0.8	17	119	89	41	0	0	1	0	
LAKE CHARLES	82	61	86	51	72	-3	1	-1.1	T	0.1	3.8	62	116	93	47	0	0	1	0	
NEW ORLEANS	82	63	85	55	72	-3	1	-1.9	T	0.9	1.3	21	113	93	45	0	0	1	1	

Based on 1951-80 normals.

Weather Data for the Week Ending October 3, 1987

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 SEPT. 1	PCT. NORMAL SINCE SEPT. 1	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		
SHREVEPORT	85	58	91	50	72	-1	.2	-.5	.2	1.0	27	29.7	88	84	31	2	0	1	0		
ME CARIBOU	62	43	80	30	53	4	.6	-.1	.5	4.5	119	21.9	80	98	58	0	2	2	0		
PORTLAND	67	44	82	34	56	2	.4	-.5	.3	4.7	130	32.5	106	96	60	0	0	2	0		
MD BALTIMORE	74	50	83	42	62	-1	1.6	-.1	.5	7.8	209	32.1	99	95	45	0	0	2	0		
SALISBURY	75	49	83	40	62	-1	1.0	-.2	.7	4.8	111	29.9	85	96	47	0	0	2	1		
MA BOSTON	74	55	83	47	64	4	.4	-.4	.3	7.4	200	37.3	117	93	52	0	0	2	0		
CHATHAM	66	54	71	47	60	2	.4	-.1	.6	8.6	211	40.7	120	92	77	0	0	3	1		
MI ALPENA	63	44	82	34	53	0	1.0	-.4	.4	3.7	111	18.7	82	98	56	0	0	5	0		
DETROIT	67	46	84	34	56	-2	.3	-.2	1.1	2.7	112	28.5	119	92	45	0	0	3	0		
FLINT	66	44	82	34	55	-2	1.1	-.6	.8	5.7	223	21.6	95	98	55	0	0	4	1		
GRAND RAPIDS	66	45	81	34	55	-2	1.1	-.4	.4	4.8	137	25.3	98	95	50	0	0	4	0		
HOUGHTON LAKE	62	44	78	32	53	1	1.4	-.8	.7	4.9	161	19.2	88	89	58	0	1	4	1		
LANSING	66	43	81	32	55	-2	1.2	-.7	.8	5.0	158	22.5	97	94	51	0	1	4	1		
MARQUETTE	60	40	77	31	50	-3	2.1	1.3	1.4	4.3	107	26.0	110	94	55	0	3	6	1		
MUSKEGON	64	48	77	34	56	0	.7	0	.4	4.9	153	25.0	107	88	56	0	0	2	0		
SAULT ST. MARIE	59	40	78	32	50	-1	2.1	1.3	1.6	3.6	86	21.1	85	98	60	0	1	6	1		
MN ALEXANDRIA	68	45	85	33	56	3	.5	-.4	.4	2.4	99	14.9	71	80	38	0	0	1	0		
DULUTH	63	40	83	24	51	2	.5	-.1	.5	3.4	98	17.3	71	91	38	0	2	3	0		
INT'L FALLS	63	39	79	27	51	3	.2	-.6	.4	1.4	40	17.8	87	88	42	0	2	1	0		
MINNEAPOLIS	68	46	88	29	57	2	.2	-.5	.4	1.3	48	28.3	126	82	33	0	1	1	0		
ROCHESTER	66	43	80	25	54	0	.2	-.7	.4	2.0	57	22.1	92	87	39	0	2	0	0		
MS GREENWOOD	84	54	91	45	69	-1	.2	-.7	.7	1.0	29	31.6	78	86	31	1	0	1	0		
JACKSON	83	55	91	43	69	-3	.0	-.7	.0	1.5	40	39.3	97	93	37	1	0	0	0		
MERIDIAN	81	54	87	43	68	-3	.2	-.5	.2	4.4	115	46.7	112	99	43	0	0	1	0		
MO CAPE GIRARDEAU	76	51	84	38	63	-1	.6	-.1	.6	3.4	84	28.8	82	91	35	0	0	2	1		
COLUMBIA	73	47	83	32	60	-1	.9	0	.9	2.9	69	23.0	78	90	39	0	1	1	1		
KANSAS CITY	75	47	84	31	61	-1	.1	-.9	.1	3.7	78	28.7	96	85	34	0	1	1	0		
SAINT LOUIS	74	51	84	37	62	-1	1.1	-.5	.9	1.6	55	25.1	93	83	37	0	0	2	1		
SPRINGFIELD	72	47	81	30	59	-3	.2	-.7	.2	4.1	89	35.7	115	90	41	0	1	1	0		
MT BILLINGS	77	44	86	37	60	0	.2	-.3	.2	.7	50	11.8	96	67	20	0	0	1	0		
GLASGOW	74	41	90	35	57	5	.4	-.2	.4	.7	70	9.2	95	79	24	1	0	1	0		
GREAT FALLS	75	42	84	36	58	5	.2	0	.2	1.1	99	13.2	103	74	21	0	0	1	0		
HAVRE	76	40	88	34	58	5	.1	-.1	.1	.7	71	7.8	76	83	26	0	0	1	0		
HELENA	76	38	84	34	57	6	.2	-.2	.8	.9	90	9.5	98	81	23	0	0	0	0		
KALISPELL	70	34	76	31	52	3	.1	-.2	.1	.6	52	13.4	111	98	36	0	3	1	0		
MILES CITY	75	43	88	40	59	4	.4	-.1	.4	.8	69	11.9	98	68	24	0	0	1	0		
MISSOULA	75	34	80	30	55	4	.4	-.2	.4	.8	8	8.8	86	86	22	0	2	1	0		
NE GRAND ISLAND	75	44	87	33	59	0	.0	-.4	.0	1.2	45	23.0	111	78	24	0	0	0	0		
LINCOLN	74	45	86	27	60	0	.2	-.3	.2	3.2	102	28.9	121	90	30	0	1	1	0		
NORFOLK	74	43	85	27	58	0	.0	-.4	.0	3.2	143	25.4	120	81	26	0	2	0	0		
NORTH PLATTE	76	37	86	32	56	0	.2	-.3	.2	1.2	66	16.7	95	85	21	0	1	0	0		
OMAHA	72	49	85	35	60	0	.4	-.3	.4	1.6	42	29.1	111	82	39	0	0	2	0		
SCOTT'S BLUFF	77	38	87	34	57	1	.0	-.2	.0	.9	78	21.1	163	75	18	0	0	0	0		
VALENTINE	75	35	88	25	55	-1	.2	-.3	.2	.9	55	18.8	121	67	20	0	2	0	0		
NV ELY	77	27	81	24	52	0	.0	-.2	.0	.5	5	8.7	123	57	11	0	6	0	0		
LAS VEGAS	96	64	99	62	80	0	.0	-.1	.0	.4	3	3.4	112	25	10	7	0	0	0		
RENO	85	39	89	36	62	7	.0	-.1	.0	.4	6	6.1	119	62	12	0	0	0	0		
WINNEMUCCA	85	32	90	27	59	4	.0	-.1	.0	.4	6	6.9	124	34	13	3	5	0	0		
NH CONCORD	70	39	82	30	54	0	.3	-.4	.3	4.2	123	28.8	108	99	49	0	2	2	0		
NJ ATLANTIC CITY	73	46	81	39	60	-2	1.1	-.5	.8	4.3	137	35.2	111	97	52	0	0	2	1		
NM ALBUQUERQUE	82	53	85	50	67	3	.1	-.1	.1	.2	22	7.1	114	65	18	0	0	1	0		
CLOVIS	80	54	87	48	67	3	.0	-.4	.0	3.4	161	22.1	154	78	31	0	0	0	0		
ROSWELL	82	53	91	45	67	1	.2	-.3	.2	.8	41	13.9	156	83	29	1	0	0	0		
NY ALBANY	68	46	80	37	57	1	1.7	1.0	.9	7.9	226	29.9	111	97	56	0	0	3	2		
BINGHAMTON	65	46	77	35	56	1	.7	-.1	.4	4.7	131	28.2	101	97	55	0	0	5	0		
BUFFALO	66	50	80	38	58	1	1.2	-.6	.8	5.6	155	32.6	118	91	50	0	0	4	1		
NEW YORK	72	57	82	45	64	1	1.3	-.6	1.3	5.0	132	36.6	114	96	55	0	0	2	1		
ROCHESTER	66	49	83	40	58	0	1.4	-.8	.6	4.9	169	27.4	115	95	51	0	0	5	1		
SYRACUSE	68	47	81	40	58	1	.8	-.1	.3	6.1	172	25.7	88	96	49	0	0	4	0		
NC ASHEVILLE	69	46	75	34	57	-5	.5	-.3	.4	6.8	165	37.5	108	94	49	0	0	2	0		
CHARLOTTE	75	55	82	44	65	-2	.7	-.1	.4	6.9	178	31.1	91	88	39	0	0	2	0		
GREENSBORO	74	50	82	40	62	-3	.5	-.3	.4	7.2	183	40.1	120	93	43	0	0	2	0		
HATTERAS	78	57	82	47	68	-3	1.1	-.2	.9	7.8	124	52.7	125	98	50	0	0	3	1		
NEW BERN	81	57	87	46	69	-1	.1	-.1	.1	2.4	39	44.0	101	92	44	0	0	1	0		
RALEIGH	75	51	83	42	63	-3	.6	-.1	.6	5.5	154	36.0	109	94	42	0	0	1	1		
WILMINGTON	79	56	83	46	68	-3	.4	-.6	.3	6.4	106	43.7	99	96	52	0	0	2	0		
ND BISMARCK	70	36	87	21	53	1	.2	-.2	.2	.3	20	16.9	126	90	32	0	1	1	0		
FARGO	66	41	74	31	54	1	.3	-.1	.3	1.7	85	13.7	81	81	41	0	2	1	0		
GRAND FORKS	65	38	72	29	52	1	.1	-.3	.1	1.7	79	17.8	112	82	42	0	1	1	0		
WILLISTON	71	40	87	32	56	4	.2	0	.2	.6	45	11.3	95	87	29	0	1	2	0		
OH AKRON-CANTON	66	47	79	36	56	-3	.6	0	.3	2.4	74	24.1	85	92	51	0	0	1	0		
CINCINNATI	71	46	85	34	59	-4	.3	-.3	.3	1.2	37	25.9	82	87	38	0	0	4	1		
CLEVELAND	67	49	81	42	58	-1	1.1	-.6	.5	3.0	96	31.6	115	89	45	0	0	4	1		
COLUMBUS	71	45	85	33	58	-3	.3	-.2	.3	1.5	52	20.7	69	93	39	0	0	2	0		

Based on 1951-80 normals.

Weather Data for the Week Ending October 3, 1987

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 SEPT. 1	PCT. NORMAL SINCE SEPT. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F			
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	70	45	85	34	58	-3	.2	-.3	.2	.3	11	18.7	68	88	37	0	0	1	0
TOLEDO	69	42	85	28	55	-3	.3	-.2	.2	2.3	86	22.2	90	95	41	0	1	3	0
YOUNGSTOWN	65	48	79	38	57	-1	1.2	.6	.8	4.0	119	31.8	109	93	51	0	0	5	1
OK OKLAHOMA CITY	75	53	82	41	64	-4	1.0	.3	.7	4.6	122	37.1	144	84	39	0	0	2	1
TULSA	75	53	80	39	64	-5	.6	-.4	.6	3.5	74	33.8	108	86	37	0	0	1	1
OR ASTORIA	74	49	86	40	62	6	T	-1.0	T	1.0	26	33.6	80	96	52	0	0	0	0
BURNS	79	36	85	31	57	4	0	-.1	0	T	4	7.1	93	**	**	0	3	0	0
MEDFORD	90	45	98	40	67	7	0	-.3	0	0	0	9.4	80	74	15	3	0	0	0
PENDLETON	78	45	84	41	62	3	0	-.2	0	T	5	5.7	70	58	24	0	0	0	0
PORTLAND	82	50	92	45	66	7	0	-.5	0	.3	17	19.8	87	93	33	1	0	0	0
SALEM	81	44	89	39	63	5	0	-.5	0	.1	8	22.0	91	94	31	0	0	0	0
PA ALLENTOWN	71	46	81	38	59	-1	.8	-.1	.8	9.6	223	38.9	115	97	51	0	0	2	1
ERIE	66	52	82	41	59	1	.9	.1	.7	5.6	130	33.6	113	80	47	0	0	3	1
HARRISBURG	72	48	82	40	60	-2	.7	0	.3	8.5	220	30.1	100	94	45	0	0	3	0
PHILADELPHIA	74	51	82	43	63	-1	1.2	.5	1.0	3.8	102	28.1	88	92	46	0	0	2	1
PITTSBURGH	69	47	82	37	58	-1	.7	.1	.4	4.2	142	34.0	117	95	46	0	0	5	0
SCRANTON	68	46	79	39	57	-1	.7	0	.5	8.4	239	33.8	126	97	51	0	0	2	1
RI PROVIDENCE	73	49	81	40	61	3	.6	-.2	.4	7.7	198	33.0	100	98	54	0	0	2	0
SC CHARLESTON	80	59	86	49	70	-2	.8	-.1	.8	14.5	275	50.3	115	94	46	0	0	1	1
COLUMBIA	80	53	86	42	67	-3	.4	-.4	.4	5.3	116	47.2	116	96	39	0	0	2	0
FLORENCE	78	55	84	44	67	-3	.6	-.2	.6	4.2	96	31.6	86	98	40	0	0	1	0
GREENVILLE	75	51	82	41	63	-4	.2	-.8	.2	3.3	66	37.0	91	95	42	0	0	1	0
SD ABERDEEN	70	40	77	27	55	1	T	-.3	T	1.3	83	11.2	71	79	33	0	2	1	0
HURON	72	41	81	30	57	1	T	-.3	T	1.4	91	17.0	106	84	31	0	2	1	0
RAPID CITY	76	41	89	31	59	3	T	-.2	T	.7	63	11.5	80	63	18	0	1	0	0
SIOUX FALLS	70	42	82	25	56	0	0	-.5	0	2.1	70	15.3	73	79	30	0	2	0	0
TN CHATTANOOGA	76	51	85	42	63	-4	1.5	.7	1.5	4.1	88	39.9	98	93	42	0	0	1	0
KNOXVILLE	76	45	84	34	61	-6	T	-.6	T	2.0	61	29.4	81	97	39	0	0	1	0
MEMPHIS	79	57	87	43	68	-1	0	-.7	0	2.0	52	29.4	73	82	35	0	0	0	0
NASHVILLE	76	52	87	39	64	-3	.8	-.1	.8	2.0	49	21.0	55	88	38	0	0	1	0
TX ABILENE	82	55	87	43	69	-3	.1	-.6	.1	2.1	64	21.2	111	83	32	0	0	1	0
AMARILLO	77	50	86	39	64	-2	.1	-.3	.1	3.4	183	18.7	112	86	33	0	0	1	0
AUSTIN	85	63	91	53	74	-1	.7	-.2	.7	5.0	128	32.0	133	82	35	1	0	1	1
BEAUMONT	82	63	86	54	72	-3	3.8	2.7	3.3	11.4	198	51.9	122	97	53	0	0	3	1
BROWNSVILLE	87	67	92	59	77	-2	2.8	1.7	2.7	4.7	83	20.1	103	95	52	1	0	3	1
CORPUS CHRISTI	86	65	90	57	76	-2	.6	-.6	.6	1.0	14	26.6	102	89	45	1	0	2	1
DEL RIO	86	63	93	54	74	-2	.3	-.3	.3	.6	19	20.8	150	80	35	2	0	1	0
EL PASO	84	54	91	48	69	-1	T	-.3	T	.9	60	7.6	120	75	25	1	0	1	0
FORT WORTH	83	58	89	49	71	-3	T	-.8	T	1.4	37	20.1	82	83	32	0	0	1	0
GALVESTON	80	69	84	63	75	-3	2.3	1.2	2.3	4.5	69	30.5	97	80	49	0	0	1	1
HOUSTON	84	62	88	54	73	-3	1.2	.2	1.2	3.5	62	32.6	92	93	47	0	0	1	0
LUBBOCK	81	53	90	42	67	0	0	-.5	0	2.7	119	17.0	114	89	32	1	0	0	0
MIDLAND	84	52	94	39	68	-2	0	-.4	0	1.4	62	13.3	119	89	29	1	0	0	0
SAN ANGELO	82	54	89	46	68	-4	0	-.7	0	3.9	118	28.7	197	88	39	0	0	0	0
SAN ANTONIO	87	61	93	52	74	-1	.3	-.5	.3	2.2	55	32.8	145	83	35	2	0	2	0
VICTORIA	85	63	87	55	74	-3	1.2	-.1	1.2	3.2	48	35.0	118	92	46	0	0	1	1
WACO	86	58	94	48	72	-3	.5	-.3	.5	5.7	163	26.2	109	87	33	3	0	1	1
WICHITA FALLS	80	55	91	42	68	-4	.9	-.2	.9	2.2	59	28.1	130	88	35	1	0	1	1
UT BLANDING	80	46	82	41	63	5	0	-.3	0	.7	71	14.2	173	55	22	0	0	0	0
CEDAR CITY	80	45	83	41	62	4	0	-.2	0	.3	26	7.7	96	50	14	0	0	0	0
SALT LAKE CITY	75	44	83	38	60	0	0	-.2	0	.1	5	9.1	78	55	15	0	0	1	3
VT BURLINGTON	67	44	78	32	55	1	.5	-.2	.3	3.9	113	21.1	82	92	52	0	0	2	1
VA NORFOLK	76	54	83	47	65	-2	1.6	.7	1.2	7.4	160	37.5	105	95	48	0	0	2	0
RICHMOND	75	51	84	43	63	-2	.8	0	.5	4.7	123	33.4	99	98	44	0	0	1	0
ROANOKE	71	48	78	36	59	-4	.1	-.7	.1	11.1	321	43.4	143	94	46	0	0	1	0
WA COLVILLE	74	39	80	35	57	4	0	-.2	0	.4	38	12.9	108	76	39	0	0	0	0
QUILLAYUTE	75	44	90	37	60	5	.2	-.1	.1	2.0	28	56.8	86	96	46	1	0	2	0
SEATTLE-TACOMA	75	51	89	44	63	6	0	-.6	0	.9	40	20.3	87	96	45	0	0	0	0
SPOKANE	76	44	84	37	60	6	0	-.2	0	T	1	11.3	102	82	25	0	0	0	0
YAKIMA	78	38	83	33	58	2	0	-.1	0	0	0	4.6	89	89	24	0	0	0	0
WV BECKLEY	66	46	76	34	56	-2	.9	.2	.3	3.2	83	31.7	94	92	48	0	0	4	0
CHARLESTON	71	46	82	38	59	-4	.7	.1	.3	4.3	131	29.9	89	95	45	0	0	4	1
HUNTINGTON	72	47	85	35	60	-4	.7	.1	.6	2.2	66	25.7	78	95	42	0	0	4	0
PARKERSBURG	71	47	82	39	59	-3	.6	0	.4	2.2	73	19.9	65	93	41	0	0	4	0
WI GREEN BAY	66	42	84	27	54	0	.1	-.5	.1	1.7	49	16.4	72	88	37	0	2	0	0
LACROSSE	69	45	86	27	57	0	T	-.7	T	2.1	56	28.5	111	94	44	0	2	2	0
MADISON	66	41	82	26	54	-2	T	-.6	T	3.6	109	24.8	98	92	48	0	0	2	0
MILWAUKEE	67	48	83	33	58	0	.3	-.3	.2	2.3	73	30.0	121	83	43	0	0	2	0
WAUSAU	63	42	82	26	53	-1	.3	-.4	.2	2.5	59	19.0	72	92	43	0	3	0	0
WY CASPER	75	35	82	30	55	2	0	-.2	0	.6	72	11.2	120	66	13	0	3	0	0
CHEYENNE	73	39	81	32	56	3	0	-.2	0	.9	82	13.7	116	65	18	0	1	0	0
LANDER	74	41	81	36	57	4	0	-.3	0	.3	31	12.3	115	46	14	0	0	0	0
SHERIDAN	75	40	86	30	57	4	0	-.3	0	1.5	118	12.5	101	71	23	0	1	0	0
PR SAN JUAN	93	75	94	74	84	3	.2	-.1	.1	1.8	28	43.8	113	88	67	6	0	5	0

Based on 1951-80 normals.

September Weather and Crop Summary

Weather

HIGHLIGHTS: Early in the month, a heat wave in the West contributed to the spread of forest fires in California, Oregon, and Nevada. Generally, temperatures were above normal in the West, the northern Great Plains, the Ohio Valley, along the Atlantic seaboard, and along most of the Gulf coast. Above-normal rainfall for the month covered most regions from the Great Lakes eastward to New England and southward to Florida. Other areas of above-normal precipitation were in Texas, Oklahoma, and Arkansas. Late in the month, southern California and southern Arizona experienced above-normal thunderstorm activity.

SEPTEMBER 1-5...Very little rain fell in the interior of the Nation. Thunderstorms occurred almost daily in Florida and along the southeast coast. Mild temperatures prevailed in most of the East. The period began with hot weather reaching through the West into southern Canada. Forest fires in Oregon, California, and Nevada accompanied the heat wave. At midweek, weather cooled in the West and forests were moistened enough in some places to aid the fire-fighting effort. At the end of the week, showers developed through the Great Plains.

SEPTEMBER 6-12...The Labor Day weekend was wet through most of the Nation east of the Rockies. The rains persisted through the week and soaked most of the Atlantic and Gulf States, the southern and central Great Plains, and parts of the Great Lakes region. Some flooding occurred along the Atlantic coast. Fair weather prevailed in the West, but skies were obscured by smoke from forest fires in southern Oregon and northern California. At week's end, chilly weather moved into the north-central States.

SEPTEMBER 13-19...Wet weather was widespread in the Mississippi Valley, parts of the central and southern Plains, the Great Lakes, and the Northeast. Local flooding developed in Texas, Oklahoma, Pennsylvania, southern New York, and southern New England. The western third of the Nation had mostly fair weather, except for western Washington. Some dry pockets were in the Ohio and Tennessee Valleys, also along the Coastal Plains from Georgia to North Carolina. Florida was generally warm and dry. High pressure over the Pacific northwest and northern Rockies brought scattered frost to those regions.

SEPTEMBER 20-26...The week was dry and seasonably warm over most of the Nation. Wet weather, which began the previous week over the Northeast, gradually ended. Showers and thunderstorms were almost a daily occurrence over parts of the desert Southwest. Heavy showers and thunderstorms developed over southern Florida late in the week. A storm brought light showers and strong winds to the Pacific northwest and northern Rockies on Saturday.

SEPTEMBER 27-30...Rains moved eastward from the northern Plains to the Atlantic seaboard. On Wednesday, a storm system started moving southward from western Canada into Montana and the Dakotas.

Row Crop Development

Below-normal temperatures slowed crop development in the eastern half of the Nation early in September. As temperatures returned to above-normal levels, crops continued their rapid pace to maturity, except in the Great Plains, where below-

normal temperatures lingered until around midmonth. Rain, the second week in the Southeast and the third week in the Corn Belt and Delta provided much needed moisture for late planted soybeans.

Corn was 93 percent mature by September 27, compared with 80 percent in 1986 and the 78 percent average. Maturity was finished, or near completion, in all States except Colorado, Michigan, Pennsylvania, and Wisconsin. Harvest reached 27 percent completion, 15 points above normal and 14 points above 1986. Georgia's harvest was 90 percent finished, just slightly ahead of normal. Harvest reached the half-way mark in both Missouri and Illinois, 20 and 37 points ahead of normal, respectively. Corn harvest was more than half finished in Kentucky and Texas and was approaching the half-way point in Kansas and North Carolina. Harvest was ahead of normal in all major producing States, except North Carolina.

By the end of September, seventy-five percent of the soybean acreage had reached the leaf dropping stage, 9 points ahead of 1986 and 13 points ahead of normal. Soybeans were just beginning to drop leaves in the Carolinas but were nearing completion in the Corn Belt. Soybean harvest was 20 percent finished, compared with 8 percent in 1986 and 9 percent average. In Illinois and Indiana, harvest neared the half-way mark, 28 and 35 points ahead of normal, respectively. Harvest was 24 percent finished in Minnesota and 34 percent finished in Ohio. Harvest had not begun in North Carolina, South Carolina, and Tennessee.

Sixty-four percent of the cotton acreage had reached the boll opening stage compared with 58 percent in 1986 and 63 percent normally. Bolls opening lagged considerably behind normal in New Mexico and Oklahoma during most of September. By September 27, cotton harvest reached 23 percent completion, 9 points ahead of normal. Harvest was ahead of normal by 23 points or more in Alabama, Arkansas, Mississippi, Missouri, and Tennessee. Harvest had not begun in New Mexico and Oklahoma because of slow development. Warm weather was needed in Oklahoma and Texas for the crop to reach full maturity.

Sorghum reaching maturity totaled 69 percent of the acreage, compared with 67 percent in 1986 and 58 percent normally. Forty percent of the acreage was harvested, 6 points above normal. Harvest lagged behind normal in Oklahoma and Texas. Illinois and South Dakota harvests were progressing 5 times faster than normal.

Rice was 75 percent harvested compared with 76 percent in 1986 and 59 percent normally. The first crop harvest was finished in Texas and neared completion in Louisiana.

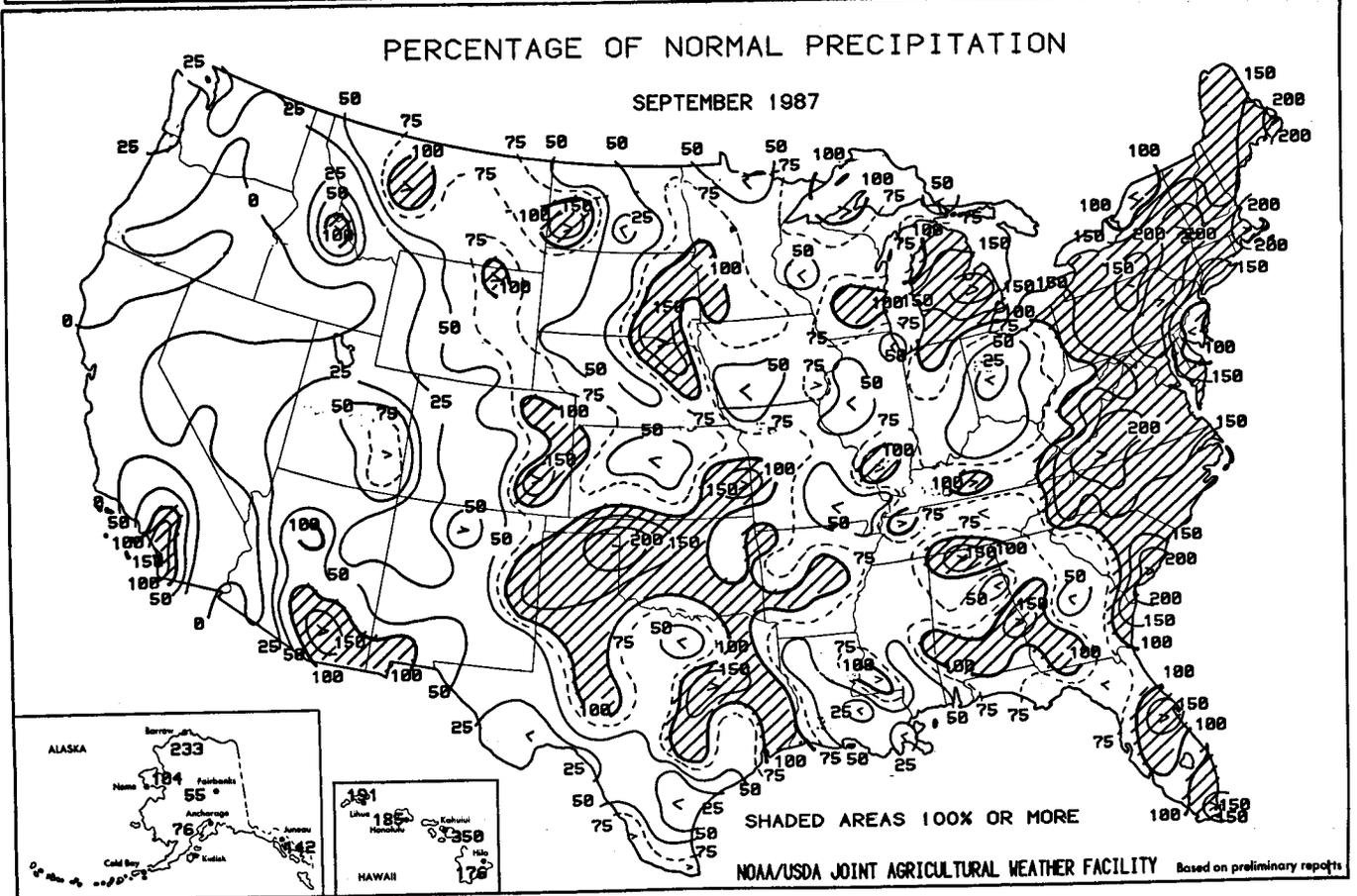
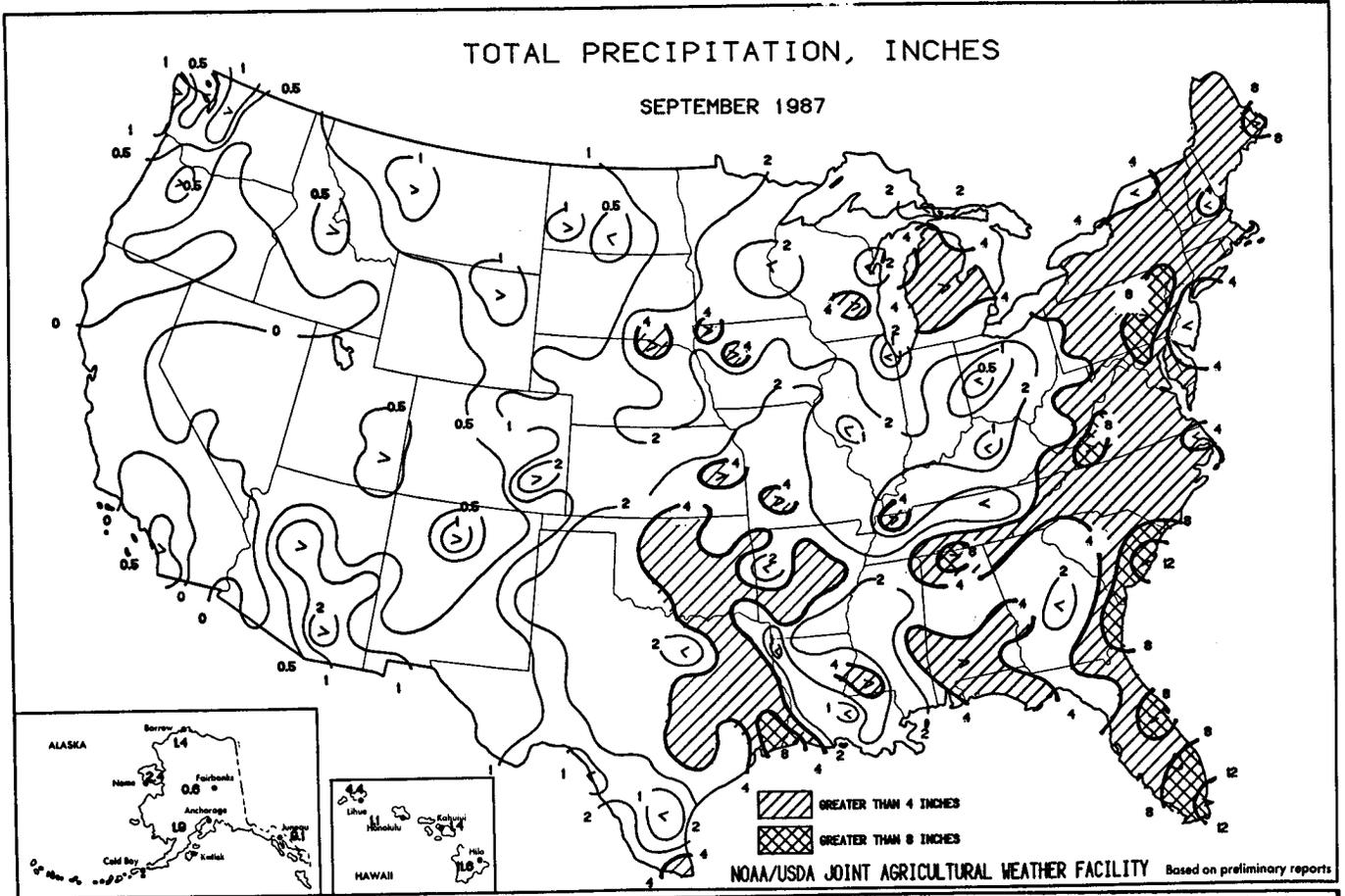
Winter Wheat Seeding

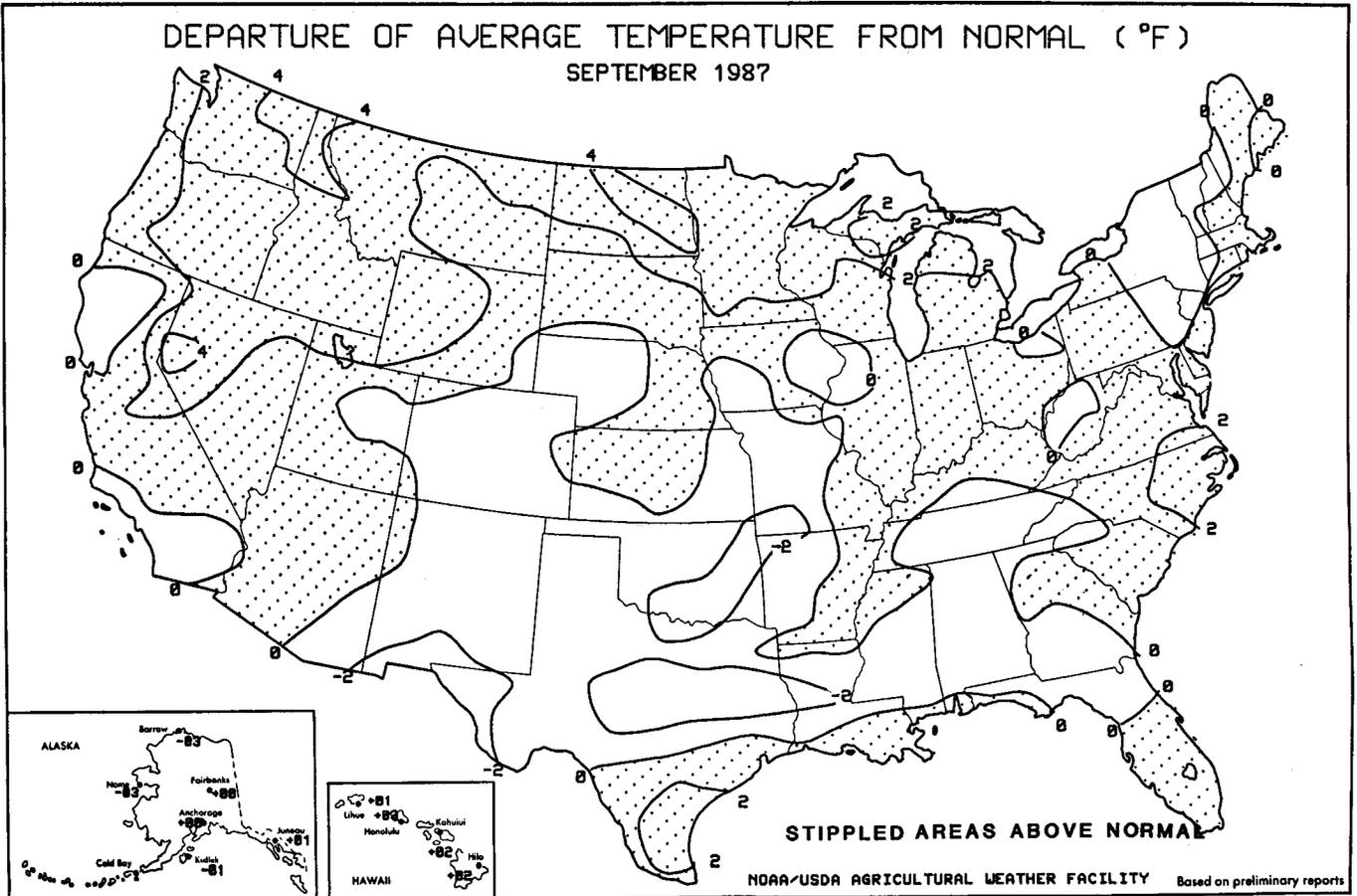
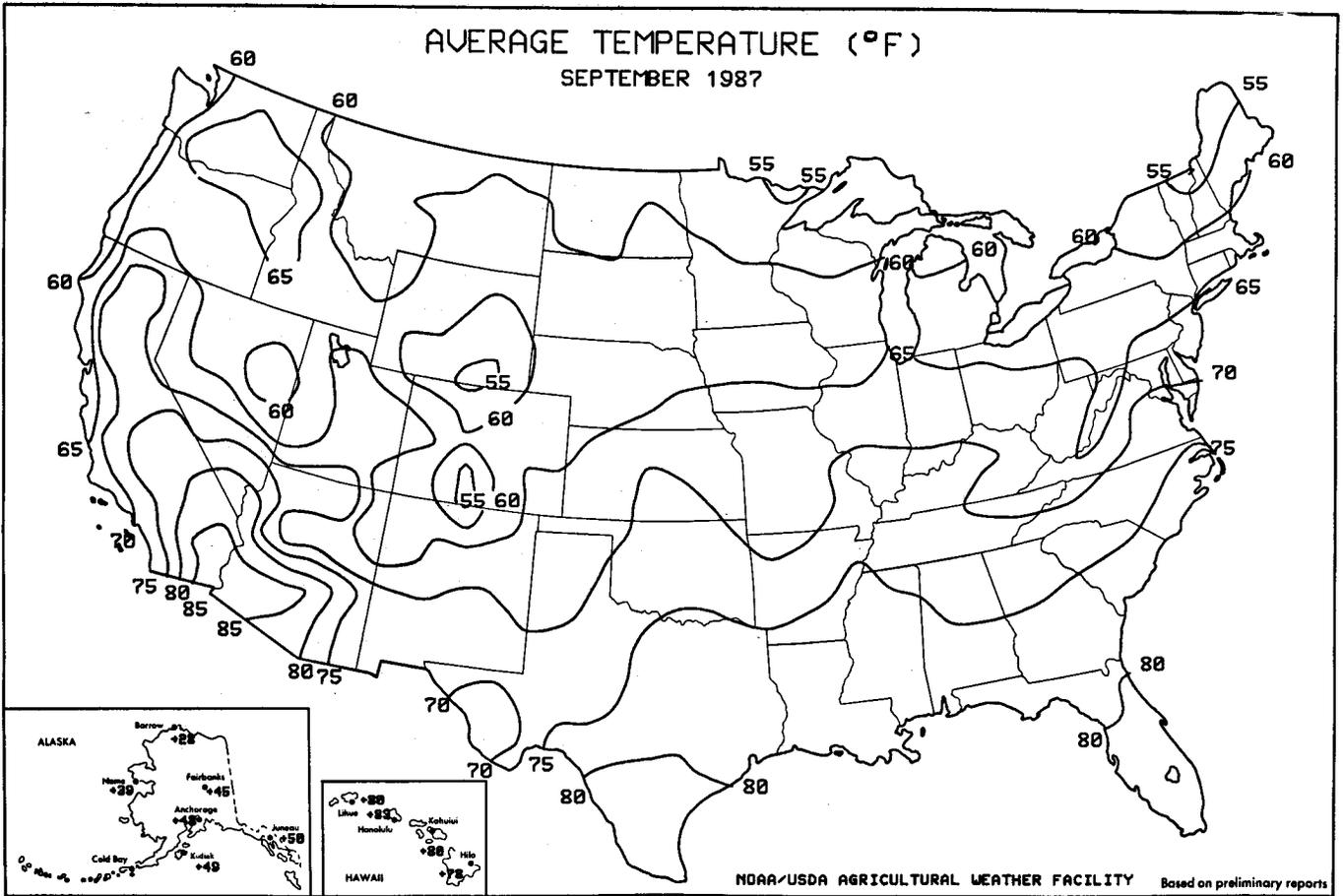
Winter wheat seeding got off to an early start the latter part of August. By September 27, 50 percent of the acreage was seeded, 11 points ahead of normal. Dryness hampered seeding and germination in some Corn Belt States.

Nebraska's wheat was 90 percent seeded, compared with 78 percent in 1986 and 81 percent average. Fifty-five percent of the acreage was emerged, 7 points behind 1986 but 5 points above normal.

In Oklahoma, winter wheat seeding reached 45 percent completion, 20 points above normal. At 20

(Continued to p. 22)





Temperature and Precipitation Data for **September 1987**

States and Stations	Temperature of		Precipitation Inches		States and Stations	Temperature of		Precipitation Inches		States and Stations	Temperature of		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
AL BIRMINGHAM	73	-1	4.3	-1.1	LA ALEXANDRIA	75	-3	1.5	-1.5	COLUMBUS	67	1	1.5	-1.3
AL MOBILE	77	-1	3.6	-2.9	LA BATON ROUGE	78	0	0.8	-3.6	DAYTON	67	1	0.3	-2.1
AL MONTGOMERY	76	0	4.0	-0.7	LA LAKE CHARLES	78	0	3.9	-1.8	TOLEDO	64	0	2.3	-0.2
AK ANCHORAGE	48	0	1.9	-0.6	LA NEW ORLEANS	78	0	1.3	-4.5	YOUNGSTOWN	62	-1	3.8	0.7
AK BARRON	28	-2	1.3	0.7	ME SHREVEPORT	77	0	1.0	-2.3	OK OKLAHOMA CITY	73	-1	4.6	1.1
AK FAIRBANKS	45	0	0.7	-0.4	ME CARIBOU	55	1	4.5	1.0	OR TULSA	72	-1	3.5	-0.9
AK JUNEAU	50	1	9.1	2.7	ME PORTLAND	59	1	4.6	1.4	OR ASTORIA	59	0	1.0	-2.2
AK KODIAK	49	-1	7.5	1.2	MD BALTIMORE	69	0	7.3	3.8	BURNS	60	1	T	-0.6
AK NOME	39	-3	2.4	0.1	MA SALISBURY	70	2	4.1	0.2	MEDFORD	67	2	0.0	-0.7
AZ FLAGSTAFF	57	-1	1.5	0.0	MA BOSTON	65	1	7.3	3.9	PENDLETON	66	2	T	-0.5
AZ PHOENIX	87	2	0.6	-0.1	MA CHATHAM	62	0	8.0	4.3	PORTLAND	66	3	0.3	-1.3
AZ PRESCOTT	67	2	1.1	-0.4	MI ALPENA	60	2	3.2	0.1	SALEM	63	1	0.1	-1.4
AZ TUCSON	80	-1	2.3	1.0	MI DETROIT	65	1	2.3	0.1	PA ALLENTOWN	64	-1	8.8	4.7
WINSLOW	71	2	0.1	-0.7	MI FLINT	63	1	5.8	3.5	ERIE	65	2	5.4	1.4
YUMA	89	1	T	-0.2	MI GRAND RAPIDS	62	0	4.5	1.3	HARRISBURG	66	-1	8.4	4.8
AR FORT SMITH	73	-1	1.7	-1.5	MI HOUGHTON LAKE	60	2	4.4	1.6	PHILADELPHIA	69	0	2.7	-0.7
AR LITTLE ROCK	74	0	5.0	1.2	MI LANSING	62	1	4.9	2.4	PITTSBURGH	65	1	4.0	1.3
CA BAKERSFIELD	76	-1	T	-0.1	MI MARQUETTE	62	0	2.7	-1.0	SCRANTON	62	-1	8.2	4.9
CA EUREKA	57	0	T	-0.9	MI MUSKOGON	57	1	4.6	1.7	RI PROVIDENCE	64	1	7.4	3.9
CA FRESNO	76	1	0.0	-0.2	MI SAULT ST. MARIE	57	2	1.9	-2.0	SC CHARLESTON	78	2	14.5	9.6
CA LOS ANGELES	70	0	0.1	-0.1	MN ALEXANDRIA	61	3	2.4	0.2	COLUMBIA	75	0	5.3	1.0
CA REDDING	74	-2	0.0	-1.1	MN DULUTH	57	3	2.9	-0.3	FLORENCE	75	1	4.2	0.1
CA SACRAMENTO	72	0	0.0	-0.3	MN INT'L FALLS	56	3	1.4	-1.8	GREENVILLE	71	-1	3.2	-1.4
CA SAN DIEGO	70	-1	0.6	0.5	MN MINNEAPOLIS	63	2	1.4	-1.1	SD ABERDEEN	61	1	1.3	-0.2
CA SAN FRANCISCO	64	0	0.0	-0.2	MN ROCHESTER	60	1	2.0	-1.3	HURON	62	1	1.4	0.0
CA STOCKTON	—	-	0.0	-0.2	MN ST. CLOUD	59	2	1.9	-0.9	RAPID CITY	62	1	0.7	-0.3
CO DENVER	62	0	0.7	-0.5	MS GREENWOOD	75	0	1.0	-2.3	SIoux FALLS	63	2	2.1	-0.7
CO GRAND JUNCTION	66	-1	0.1	-0.6	MS JACKSON	75	-1	1.5	-2.0	TN CHATTANOOGA	71	-1	4.0	-0.3
CO PUEBLO	65	-1	0.3	-0.5	MS MERIDIAN	74	-1	4.4	0.8	KNOXVILLE	70	-2	1.9	-1.0
CT BRIDGEPORT	66	0	4.1	0.8	MO COLUMBIA	68	-1	2.9	-1.0	MEMPHIS	75	1	2.0	-1.6
CT HARTFORD	63	-1	7.0	3.0	MO KANSAS CITY	68	-2	3.7	-0.6	NASHVILLE	72	0	2.0	-1.7
DC WASHINGTON	72	1	5.1	1.9	MO SAINT LOUIS	71	1	1.6	-1.1	TX ABILENE	74	-2	2.1	-0.9
FL APALACHICOLA	79	0	5.1	-3.6	MO SPRINGFIELD	68	-2	4.1	-0.2	AMARILLO	68	-2	3.4	1.7
FL DAYTONA BEACH	80	0	5.6	-1.1	MT BILLINGS	61	2	0.7	-0.6	AUSTIN	79	0	5.0	1.5
FL FT. MYERS	83	1	7.9	-0.7	MT GLASGOW	61	3	0.7	-0.2	BEAUMONT	78	-1	11.4	6.0
FL JACKSONVILLE	79	0	7.2	0.7	MT GREAT FALLS	59	1	1.1	0.1	BROWNSVILLE	83	1	4.7	-0.5
FL KEY WEST	85	2	7.1	0.8	MT HAVRE	59	1	0.6	-0.4	CORPUS CHRISTI	81	0	1.0	-5.6
FL MIAMI	84	2	10.3	2.3	MT HELENA	60	4	0.8	0.0	DEL RIO	79	-1	0.6	-2.1
FL ORLANDO	83	2	8.7	2.3	MT KALISPELL	57	3	0.6	-0.5	EL PASO	72	-3	0.9	-0.5
FL TALLAHASSEE	77	-1	4.0	-2.5	MT MILES CITY	61	1	0.8	-0.3	FORT WORTH	77	-1	1.4	-2.0
FL TAMPA	81	0	4.8	-1.5	MT MISSOULA	59	4	0.1	-0.9	GALVESTON	81	1	4.5	-1.3
FL WEST PALM BEACH	83	1	11.9	2.6	NE GRAND ISLAND	65	0	1.2	-1.3	HOUSTON	79	0	3.5	-1.7
GA ATLANTA	74	1	3.0	-0.1	NE LINCOLN	66	0	3.2	0.3	LUBBOCK	71	0	2.7	0.6
GA AUGUSTA	76	1	2.0	-1.5	NE NORFOLK	64	1	3.2	1.1	MIDLAND	73	-1	1.4	-0.7
GA MACON	75	-1	1.5	-1.8	NE NORTH PLATTE	61	-1	1.2	-0.5	SAN ANGELO	73	-3	3.9	0.8
GA SAVANNAH	78	1	8.2	3.0	NE OMAHA	65	-1	1.6	-1.9	SAN ANTONIO	79	0	2.2	-1.5
HI HILO	78	2	11.6	5.0	NE SCOTTSBLUFF	61	-1	0.9	-0.2	VICTORIA	81	1	3.2	-3.0
HI HONOLULU	83	3	0.5	-0.1	NE VALENTINE	60	-1	0.9	-0.5	WACO	77	-2	5.7	2.5
HI KAHULUI	80	1	1.4	1.0	NV ELKO	60	2	0.1	-0.4	WICHITA FALLS	74	-2	2.2	-1.2
HI LIHUE	79	1	4.4	2.1	UT ELY	57	1	0.1	-0.6	BLANDING	64	1	0.7	-0.2
ID BOISE	66	3	0.0	-0.6	UT LAS VEGAS	81	1	T	-0.3	CEDAR CITY	65	1	0.3	-0.7
ID LEWISTON	68	5	T	-0.8	UT RENO	65	5	T	-0.3	MILFORD	62	-1	0.2	-0.5
ID POCATELLO	61	2	0.0	-0.6	UT WINNEMUCCA	63	3	0.0	-0.3	SALT LAKE CITY	67	2	0.1	-0.8
IL CAIRO	72	0	1.0	-2.5	NH CONCORD	59	-1	4.0	0.9	VT BURLINGTON	59	1	3.6	0.4
IL CHICAGO	65	1	0.9	-3.2	NJ ATLANTIC CITY	67	0	3.5	0.6	VA NORFOLK	74	2	7.0	2.7
IL MOLINE	64	0	1.1	-2.6	NM ALBUQUERQUE	69	-1	0.2	-0.6	RICHMOND	72	2	4.5	1.0
IL PEORIA	66	0	1.6	-2.0	NM CLOVIS	69	0	3.3	1.5	ROANOKE	69	0	11.1	8.0
IL QUINCY	66	-1	1.7	-2.5	NY CROSWELL	71	0	0.8	-1.0	WA COLVILLE	63	5	0.4	-0.5
IL ROCKFORD	63	-1	2.4	-1.3	NY ALBANY	61	-1	7.0	3.8	QUILLAYUTE	58	1	1.7	-4.4
IL SPRINGFIELD	68	0	1.0	-2.2	NY BINGHAMTON	59	-1	4.5	1.2	SEATTLE-TACOMA	63	3	0.9	-1.1
IN EVANSVILLE	71	2	2.0	-0.7	NY BUFFALO	63	1	5.4	2.1	SPOKANE	63	3	T	-0.7
IN FORT WAYNE	65	1	1.4	-1.2	NY NEW YORK	68	-1	3.7	0.2	WALLA WALLA	69	3	T	-0.8
IN INDIANAPOLIS	68	1	1.4	-1.3	NY ROCHESTER	61	-1	4.6	1.9	YAKIMA	63	2	0.0	-0.3
IN SOUTH BEND	65	0	3.6	0.4	NY SYRACUSE	61	-1	6.0	2.7	WV BECKLEY	64	1	2.8	-0.8
IA DES MOINES	65	0	1.4	-1.7	NC ASHEVILLE	66	-1	6.8	3.0	CHARLESTON	67	-1	3.9	0.9
IA DUBUQUE	62	0	3.3	0.8	NC CHARLOTTE	74	1	6.8	3.3	ELKINS	62	0	5.7	2.5
IA SIOUX CITY	64	0	1.4	-1.1	NC GREENSBORO	72	2	7.2	3.6	HUNTINGTON	69	0	2.1	-0.9
IA WATERLOO	62	1	1.8	-1.6	NC HATTERAS	76	1	7.7	1.9	PARKERSBURG	67	-1	2.1	-0.8
KS CONCORDIA	69	2	1.6	-1.5	NC NEW BERN	77	3	2.4	-3.4	WI GREEN BAY	61	2	1.6	-1.6
KS DODGE CITY	69	0	1.5	-0.3	NC RALEIGH	73	2	5.5	2.3	LACROSSE	63	1	2.1	-1.4
KS GOODLAND	65	0	1.5	0.1	NC WILMINGTON	77	2	6.4	0.7	MADISON	61	0	3.6	0.6
KS TOPEKA	68	0	1.8	-1.6	ND BISMARCK	59	1	0.3	-1.1	MILWAUKEE	63	1	2.2	-0.5
KS WICHITA	70	0	2.1	-1.3	ND FARGO	60	2	1.7	-0.1	WAUSAU	60	2	2.3	-1.6
KY BOWLING GREEN	69	-1	3.5	0.3	ND GRAND FORKS	59	3	1.7	-0.3	WY CASPER	59	0	0.6	-0.2
KY JACKSON	68	2	2.9	-0.2	ND WILLISTON	59	3	0.6	-0.7	CHEYENNE	58	0	0.9	-0.1
KY LEXINGTON	70	1	0.9	-2.4	OH AKRON-CANTON	63	0	2.1	-0.8	LANDER	61	2	0.3	-0.5
KY LOUISVILLE	71	1	1.2	-2.2	OH CINCINNATI	68	1	1.2	-1.7	SHERIDAN	59	1	1.4	0.3
					OH CLEVELAND	63	-1	2.1	-0.8	PR SAN JUAN	84	2	1.7	-4.3

Based on 1951-80 normals.

National Agricultural Summary

September 29 to October 4, 1987

HIGHLIGHTS: Soybean and corn harvests leaped toward completion as a result of near ideal harvesting weather. Cotton and sorghum harvests progressed at a much slower pace. Dryness prolonged winter wheat seeding and slowed germination in some Southeast, Delta and Pacific Northwest States. Farmers were able to work 5 to 6 days in most areas. Rain impeded fieldwork in the Northeast and in Oklahoma. Soil moisture was becoming short in the Southeast, Delta, and Pacific Northwest.

Winter wheat seeding advanced 16 percentage points from the previous week to 66 percent (%) completion, 12 points above normal. Forty-four percent of the crop was emerged and in mostly good condition. Corn harvest reached 40% completion, compared with 17% in 1986 and 19% normally. Harvest jumped 13 points from the previous week. Nearly a fourth of soybean crop was combined with harvest reaching 44% completion, 24 points above normal. Soybean harvest was more than half finished in most Corn Belt States. Cotton was 31% harvested, 11 points above normal. Sorghum harvest reached 48% completion, compared with 36% in 1986 and 39% normally. Rice was 85% harvested, 5 points above normal. Burley tobacco stripping was underway in Kentucky and Tennessee. Livestock was mostly good.

SMALL GRAINS: Winter wheat seeding surged 16 points ahead of the previous week despite inadequate moisture in a few areas. The crop was 66% seeded, compared with 57% in 1986 and 54% normally. Forty-four percent of the acreage was emerged, 15 points above average. Emerged plants were mostly good. Seeding was virtually finished in the northern Great Plains and approached completion in the central Plains. Kansas wheat producers seeded a fourth of their crop, ending the week with seeding 20 points above the 60% average. Growers continued reworking and reseeding washed-out fields in Oklahoma. Seeding was 60% finished, 15 points above normal. Dry conditions held seeding to 24% completion in Oregon, 11 points below normal. Seeding had not begun in California, lagging slightly behind normal.

CORN: Near ideal weather conditions pushed corn harvest 13 points ahead of the previous week to 40% completion. Harvest was 21 points above normal and 23 points above 1986. More than 50% of the acreage was harvested in Georgia, Illinois, Indiana, Kansas, Kentucky, Missouri, North Carolina, and Texas. Harvest was at least 20% finished in all other major producing States, except Colorado, Michigan, Pennsylvania, and Wisconsin. Corn was virtually mature, except in Colorado and Pennsylvania.

SOYBEANS: Soybean harvest more than doubled from the previous week to 44% completion. This compares with 13% harvested last year and 20% normally. In Iowa, nearly 50% of the acreage was harvested reaching 60% completion, 36 points ahead of normal. Minnesota's harvest surged 44 points from the previous week, surpassing the 17% average by 51 points. Harvest progress was furthest along in Illinois at 70% completion, compared with 40% normally. Harvest had not begun in the Carolinas and was moving at a slow pace in Alabama and Georgia. Soybeans dropping leaves reached 84% completion, 7 points ahead of normal. Dropping leaves was ahead of normal, except in the Southeast and Mississippi.

SORGHUM: Sorghum was 81% mature, 10 points ahead of the 71% average. Oklahoma's sorghum was maturing 10 points slower than normal. Sorghum harvest gained 8 points from the previous week but was limited somewhat by the slow progress in Arkansas, Kansas, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas. Harvest was ahead of normal except in Oklahoma and Texas. Sorghum harvest neared completion in Arkansas, Louisiana, and Mississippi.

COTTON: Cotton bolls were opening 3 points slower than the 71% average. Boll opening trailed 25 points behind normal in Oklahoma at 35% completion. Texas and New Mexico were 9 and 18 points behind normal, respectively. Cotton harvest made significant gains in the Southeast and Delta but was held down by the slower pace in the Southwest and southern Great Plains. Harvest was up 8 points from the previous week at 31% completion. Twenty-eight percent was harvested by this date last year, and 20% would normally be harvested. The rapid harvest overloaded cotton gins in Arkansas. Harvest had not begun in Oklahoma, and warm weather is needed through October for maturity. Cotton matured well across Texas until temperatures fell below normal. Harvest was winding down in the Blacklands and central and eastern areas. Cotton growers quickly plowed and shredded stalks in Arizona.

OTHER CROPS: Rice was 85% harvested, 3 points ahead of 1986 and 5 points above average. Harvest neared completion in the Delta. California's harvest was 8 points ahead of normal at 85% completion.

Peanut harvest trailed behind normal in the Southeast and Texas. Disease reduced yield potential in southern Texas. Dry soil slowed digging in some areas of Georgia. Cool temperatures and disease caused problems.

Burley tobacco harvest neared completion in most areas. Stripping was underway in Kentucky and Tennessee. Flue-cured harvest lingered in North Carolina and Virginia but was finished in the other States.

FRUIT AND NUTS: Florida citrus trees were good. New growth slowed, and some fruit reached color-break. Harvest continued but much slower than in 1986. Early orange harvest increased in Texas. Quality and size were good. Arizona citrus was good. California raisin and wine grape harvests were virtually complete. Late variety peach and plum harvests continued. Valencia orange harvest was winding down while navel orange matured normally. Desert lemon harvest was active, and summer grapefruit picking continued.

VEGETABLES: Rain slowed vegetable planting on Florida's southern areas. Harvest was limited mostly sweet corn, radishes, squash, and cucumbers. Rain delayed planting in the Rio Grande Valley. Intermittent rain slowed vegetable harvest in east Texas. San Antonio-Winter Garden vegetable prospects look good. California vegetable harvest consisted mostly of broccoli, carrots, cauliflower, celery, lettuce, sweet corn, and cucumbers. Fall lettuce harvest should begin soon in the Huron District. Celery and cauliflower transplantings continued along the southern coast.

PASTURES AND LIVESTOCK: Pastures were mostly fair. Pastures declined as moisture supplies decreased. Livestock was mostly good.

Crop Progress

FOR WEEK ENDING OCTOBER 4, 1987

WINTER WHEAT
% PLANTED

	1987	1986	AVG.
ARK	9	7	8
CALIF	0	1	1
COLO	91	91	93
GA	4	9	8
IDAHO	65	60	61
ILL	29	11	18
IND	30	12	27
KANS	80	75	60
MICH	30	5	35
MO	38	10	18
MONT	90	38	66
NEBR	99	90	92
N MEX	85	80	NA
N C	4	8	8
OHIO	33	7	25
OKLA	60	55	45
OREG	24	38	35
S DAK	96	83	95
TEX	65	56	44
WASH	68	67	68

20 STATES 66 57 NA

EXCL. STATES WITH NA 66 57 54

THESE 20 STATES PRODUCED 91% OF THE 1986 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

WINTER WHEAT
% EMERGED

	1987	1986	AVG.
ARK	2	0	NA
CALIF	0	0	0
COLO	68	71	73
GA	2	7	NA
IDAHO	31	27	30
ILL	6	6	5
IND	10	11	11
KANS	45	50	25
MICH	15	3	NA
MO	16	7	7
MONT	63	22	39
NEBR	90	80	68
N MEX	80	70	NA
N C	1	2	NA
OHIO	5	3	5
OKLA	35	30	15
OREG	8	15	12
S DAK	88	69	73
TEX	38	36	19
WASH	49	54	49

20 STATES 42 39 NA

EXCL. STATES WITH NA 44 41 29

THESE 20 STATES PRODUCED 91% OF THE 1986 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

CORN
% MATURE

	1987	1986	AVG.
COLO	61	79	79
GA	100	100	100
ILL	100	100	99
IND	100	97	88
IOWA	100	99	94
KANS	99	97	90
KY	100	98	88
MICH	90	50	80
MINN	99	80	84
MO	100	100	94
NEBR	98	96	84
N C	100	100	100
OHIO	97	87	92
PA	69	66	56
S DAK	95	75	88
TEX	100	98	99
WIS	93	69	85

17 STATES 97 90 90

THESE 17 STATES PRODUCED 94% OF THE 1986 CORN CROP.

CORN
% HARVESTED

	1987	1986	AVG.
COLO	5	3	8
GA	93	94	92
ILL	68	24	21
IND	52	18	11
IOWA	30	7	16
KANS	60	50	35
KY	70	52	36
MICH	10	1	4
MINN	21	2	7
MO	66	34	39
NEBR	20	10	12
N C	57	75	73
OHIO	35	14	13
PA	9	12	7
S DAK	21	2	9
TEX	89	86	85
WIS	19	2	5

17 STATES 40 17 19

THESE 17 STATES PRODUCED 94% OF THE 1986 CORN CROP.

SOYBEANS
% DROPPING LEAVES

	1987	1986	AVG.
ALA	50	47	47
ARK	42	34	33
GA	43	48	52
ILL	99	96	92
IND	100	94	91
IOWA	99	88	90
KANS	80	85	70
KY	66	54	49
LA	59	48	52
MICH	97	80	90
MINN	100	97	98
MISS	64	70	68
MO	83	73	67
NEBR	98	96	85
N C	23	19	20
OHIO	99	95	94
S C	14	27	24
S DAK	100	80	92
TENN	70	55	55

19 STATES 84 78 77

THESE 19 STATES PRODUCED 96% OF THE 1986 SOYBEANS CROP.

SOYBEANS
% HARVESTED

	1987	1986	AVG.
ALA	16	9	10
ARK	8	12	6
GA	3	2	4
ILL	70	27	40
IND	68	17	28
IOWA	60	9	24
KANS	20	15	15
KY	15	10	6
LA	24	15	15
MICH	10	1	5
MINN	68	10	17
MISS	20	14	10
MO	28	8	13
NEBR	30	10	15
N C	0	0	0
OHIO	50	17	24
S C	0	0	0
S DAK	56	11	24
TENN	8	5	3

19 STATES 44 13 20

THESE 19 STATES PRODUCED 96% OF THE 1986 SOYBEANS CROP.

RICE
% HARVESTED

	1987	1986	AVG.
ARK	92	89	69
CALIF	25	20	17
LA	99	99	94
MISS	100	97	75
TEX	100	100	100

5 STATES 85 82 70

THESE 5 STATES PRODUCED 97% OF THE 1986 RICE CROP.

**GRAIN SORGHUM
% MATURE**

	1987	1986	AVG.
ARK	100	95	NA
ILL	100	89	NA
KANS	70	65	55
LA	100	100	99
MISS	99	100	98
MO	93	85	83
NEBR	98	90	74
OKLA	65	60	75
S DAK	92	65	75
TENN	100	95	87
TEX	80	72	79

11 STATES 82 75 NA

EXCL. STATES
WITH NA 81 74 71

THESE 11 STATES PRODUCED 96%
OF THE 1986 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

**GRAIN SORGHUM
% HARVESTED**

	1987	1986	AVG.
ARK	95	90	83
ILL	77	25	24
KANS	25	15	15
LA	99	98	95
MISS	94	98	78
MO	67	32	41
NEBR	30	6	12
OKLA	10	10	20
S DAK	28	5	12
TENN	87	80	60
TEX	61	60	67

11 STATES 48 36 39

THESE 11 STATES PRODUCED 96%
OF THE 1986 GRAIN SORGHUM CROP.

**COTTON
% BOLLS OPENING**

	1987	1986	AVG.
ALA	98	92	89
ARIZ	93	98	95
ARK	98	94	93
CALIF	100	100	91
GA	78	76	78
LA	100	99	93
MISS	100	100	98
MO	100	79	92
N MEX	80	100	98
N C	99	98	98
OKLA	35	35	60
S C	94	94	91
TENN	98	96	95
TEX	41	31	50

14 STATES 68 62 71

THESE 14 STATES PRODUCED 100%
OF THE 1986 COTTON CROP.

Crop Condition

FOR WEEK ENDING OCTOBER 4, 1987

**COTTON
% HARVESTED**

	1987	1986	AVG.
ALA	57	20	21
ARIZ	12	15	9
ARK	60	48	33
CALIF	10	2	1
GA	27	13	14
LA	64	67	37
MISS	64	74	35
MO	76	38	39
N MEX	1	1	3
N C	14	10	14
OKLA	0	0	3
S C	30	17	23
TENN	60	55	30
TEX	18	16	17

14 STATES 31 28 20

THESE 14 STATES PRODUCED 100%
OF THE 1986 COTTON CROP.

WINTER WHEAT

STATE	VP	P	F	G	EX
ARK	0	16	27	50	7
COLO	0	3	28	56	13
GA	0	0	30	70	0
IDAHO	1	3	35	44	17
KANS	0	0	15	33	52
MICH	0	5	25	45	25
MONT	3	0	16	68	13
NEBR	0	0	10	88	2
N MEX	0	0	0	75	25
OKLA	0	0	20	75	5
OREG	0	0	50	50	0
S DAK	0	0	22	63	15
TEX	0	4	14	61	21
WASH	0	0	35	65	0

SOYBEANS

STATE	VP	P	F	G	EX
ALA	4	19	70	7	0
ARK	5	12	57	26	0
GA	2	10	47	38	3
IOWA	0	0	11	52	37
KANS	0	0	0	20	80
KY	8	29	48	15	0
LA	3	3	40	46	8
MICH	2	8	30	45	15
MINN	0	0	10	65	25
MISS	0	30	45	20	5
MO	0	7	34	52	7
NEBR	0	0	21	69	10
N C	0	7	42	48	3
OHIO	2	8	32	50	8
S C	2	1	46	51	0
S DAK	0	0	21	73	6
TENN	0	28	59	10	3

COTTON

STATE	VP	P	F	G	EX
ALA	0	9	67	24	0
ARIZ	0	0	0	95	5
ARK	0	0	6	56	38
CALIF	0	0	0	65	35
GA	0	5	34	41	20
LA	0	0	15	61	24
MISS	0	0	10	75	15
N MEX	0	0	13	87	0
N C	0	12	41	41	6
OKLA	0	0	20	80	0
S C	3	4	77	16	0
TEX	0	2	22	65	11

GRAIN SORGHUM

STATE	VP	P	F	G	EX
ARK	0	10	25	65	0
KANS	0	0	4	40	56
MISS	0	5	65	30	0
NEBR	0	0	10	73	17
OKLA	0	1	17	80	2
S DAK	0	0	21	73	6
TEX	0	2	15	62	21

CORN

STATE	VP	P	F	G	EX
COLO	0	2	18	74	6
GA	3	6	35	53	3
IOWA	0	0	14	51	35
KANS	0	5	14	42	39
MICH	3	12	30	40	15
MINN	0	1	15	64	20
NEBR	0	1	10	69	20
PA	2	10	26	41	21
S DAK	0	0	10	73	17
TEX	0	3	23	55	19
WISC	0	2	6	56	36

VP - VERY POOR P - POOR F - FAIR G - GOOD EX - EXCELLENT

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 totals mostly under 0.50 in. Temperatures averaged 6° below normal.

Days suitable for fieldwork 6.2. Soil moisture 86% short, 14% adequate. Harvest conditions continued favorable; lack of moisture slowed small grain seedings. Corn 88% harvested, 86% 1986, 85% avg. Sorghum 64% harvested, 69% 1986, 68% avg.; 9% poor, 70% fair, 21% good. Cotton 98% bolls opened, 92% 1986, 89% avg.; 57% harvested, 20% 1986, 21% avg.; 9% poor, 67% fair, 24% good. Soybeans 78% turning color, 76% 1986, 74% avg.; 50% dropping leaves, 47% 1986, 47% avg.; 35% mature, 30% 1986, 30% avg.; 16% harvested, 9% 1986, 10% avg.; 4% very poor, 19% poor, 64% fair, 14% good. Peanuts 54% dug, 28% 1986, 70% avg.; 43% combined, 14% 1986, 59% avg.; 22% poor, 64% fair, 14% good. Winter wheat 20% seeded, 17% 1986, 13% avg. Pastures mostly fair; livestock mostly good. Primary activities: Harvesting row crops, fall vegetables, hay, catfish; defoliating cotton; seeding small grains; soil testing; general care of livestock, poultry.

ALASKA: Clear, cold early week turned to rain, snow higher elevations late week. Temperature lows ranged 3° cooler than normal to 5° warmer than normal. Highs ranged normal to 6° warmer than normal. Seasonal precipitation totals 3.50 in. drier than normal to 3.00 in. wetter than normal.

Days suitable for making hay, harvesting grain 3.0. Topsoil moisture adequate. Subsoil moisture 1% short, 99% adequate. Second cutting hay harvest neared 90%; growers waiting for drier weather to bale downed hay. Commercial potato harvest continued Tanana Valley while operations wrapped-up Matanuska Valley. Carrot harvest continued. Winter hay availability mostly adequate to surplus. Livestock good to excellent.

ARIZONA: Precipitation 27th to 29th isolated, mostly light showers, thunderstorms central, eastern mountains. Flagstaff received 0.75 in., some small hail 27th. Southeasterly winds spread moisture 30th bringing thunderstorms to southeast, central mountains, Mogollon Rim. Activity restricted to southeastern quarter 1st, rainfall generally light. Abundant sunshine 2nd, 3rd, very dry air, temperatures summer-like reaching 105° lower deserts, upper 80s 5,000 ft., upper 70s mountains, occasional afternoon clouds. Gusty easterly winds 3rd, 20 to 30 mph central, southern sections. Precipitation limited to central, eastern mountains, southeast. Temperatures 1 to 9° above normal.

Defoliation, harvest active west; ginning moderate to active. Stock shredding, plowing prompt; fields quickly prepared for small grains, vegetables following cotton. Cotton picked Graham County, defoliation continued. Alfalfa fair to good; curing conditions unsatisfactory south as temperatures fall, moisture levels increased. Growers expect one last cutting; sheeping off, green chop to follow. Curing conditions favorable west; yields seasonably low. Movement quality hay through November northwest; sheep moved into western areas by 31st. Corn silage harvest active east, 25% harvested; sorghum fair. Corn, sorghum good south. Lemon harvest continued west, movement active; crop packed. Grapefruit picked west; maturity testing ongoing central areas, harvest expected shortly. Citrus groves good. Lettuce, cauliflower, broccoli progressed west, planting continued; fields thinned. Fall lettuce

sidedressed, irrigated south; harvest continued slowly, accelerating by 11th southeast. Green onions, greens shipped central area. Chile peppers harvested south; few bell peppers picked. Apple harvest continued southeast, granny smith picked. Pecans harvested. Fall honeydews, cantaloups picked central areas; movement heavy. Cantaloups harvested west; few honeydews expected shortly. Pumpkins, winter squash shipped southeast; watermelon movement winding down.

ARKANSAS: Temperatures dropped well below normal end of week; extremes 27°; 90°. Scattered showers north, central portions first of week. Rainfall normal to 1.96 in.

Days suitable for fieldwork 7.0. Soil moisture 62% short, 38% adequate. Major farming activities: Harvesting cotton, rice, sorghum, soybeans; seeding small grains, cutting hay, preparing land, establishing fall pastures. Cotton harvest rapid pace, gins overloaded. Rice harvest winding down, yields higher than expected, levees being disced. Soybean harvest underway, bean size smaller most non-irrigated fields. Sorghum harvest almost complete, late planted fields remained. Wheat, oat seeding underway, crop fair to good. Alfalfa hay 45% fair, 55% good. Other hay 4% poor, 63% fair, 33% good. Pastures not greening up as expected due to dry weather. Livestock good.

CALIFORNIA: High pressure continued over Western United States much of week bringing dry conditions to State. Above normal temperatures over much of State, especially inland areas. Blue Canyon averaged 12° above normal, Yosemite 11° above normal.

Above normal temperatures increased harvest activity. Cotton, rice harvest active. Yields good to excellent. Corn harvest active, some silage still cut. Harvest continued, dry beans, sunflower, sugarbeets, alfalfa. Alfalfa seed harvest virtually complete. Ground preparation underway winter grains, new alfalfa fields. Granny smith apple harvest continued. Dates Coachella Valley harvested. Fall avocado varieties harvested Riverside County. Raisin rolling, picked-up nearly complete. Wine, table grape harvest virtually done. Harvest late variety plums, peaches progressed. Pomegranate, olive, persimmons harvest active. Valencia orange harvest winding down. Navel oranges matured normally. Desert lemon harvest active. Picking summer grapefruit continued. Almond, walnut, pistachio harvest progressed. Artichokes fairly light, good quality Castroville. Beans harvested for freezing Merced-Atwater, Modesto-Turlock. Harvesting continued south coast. Broccoli fairly heavy Salinas, good quality. Santa Maria production moderate, good quality, mostly to freezing plants. Plantings Westside damage from Horned Larks. Fields Kings County progressed well. Carrot fairly heavy Salinas good quality. Production Kern-Tulare continued to increase. Cauliflower fairly heavy Salinas; fairly light, Santa Maria good quality. Transplanting south coast continued, fall plantings Westside continued treatment for lepidoptera larvae. Some fields started to form curds. Celery heavy Salinas-Watsonville, fairly light Santa Maria-Oceano, good quality. Transplanting continued south coast. Sweet corn harvest active Westside; light south coast. Cucumber packing fairly active Westside; light south coast. Lettuce fairly heavy, continued to decrease Salinas; moderate Santa Maria, variable weight, quality.

Fall harvest to begin 9th, Huron District; Firebaugh District to start end of October. Watermelon, cantaloup, honeydew, mixed melon harvests active, statewide. Desert harvest started, good quality, both cantaloups, honeydews. Cantaloup harvest, Fresno County, nearly complete, quality good. Onions for dehydration being lifted from few fields Tulelake-Butte Valley. Harvest to begin in earnest 9th. Pepper picking fairly heavy Salinas; moderate Santa Maria; good quality. Harvest active Delta, central valley, south coast, good quality. Fall potato harvest full swing, good quality, Tulelake-Butte Valley. Sweetpotato harvest continued Merced-Atwater. Processing, fresh market tomato production continued, good quality, statewide. Range, pasture conditions remained poor due hot dry weather. Fire hazard continued extreme. Supplemental feeding increased because poor range feed conditions. Springs, ponds drying up, water being hauled for livestock. Movement livestock winter pasture continued heavy. Calving, lambing active.

COLORADO: Temperatures 1 to 3° above normal. Little rain on 4th, dry for remainder of period. Precipitation none to 0.08 in.

Days suitable for fieldwork 6.3. Soil moisture 18% very short, 33% short, 49% adequate. Corn good; maturity behind average but catching up. Barley harvest complete. Oats 93% harvested; spring wheat 91% harvested. Winter wheat good, seeding neared completion. Fall potatoes 49% harvested, ahead of last year, behind average. Livestock, pastures good.

FLORIDA: Midweek cold front brought first fall weather. Accompanying rain light northern areas, excessive southern areas.

Soil moisture lower Peninsula adequate to surplus; other areas short to adequate. Harvesting cotton, hay, peanuts active. Early fields soybeans ripening. Sugarcane planting continued. Sugarcane continued good growth. Land preparation for planting small grains. Armyworms problem some hay fields. Pastures good to excellent south; northern pastures poor to fair. Cattle generally good to excellent. Citrus tree condition good all areas. Moisture adequate, very little irrigation. New growth slowing, some fruit on tree color break. Harvest continued but slower than last year. Caretakers cultivating, spraying. Cooler weather over vegetable producing areas. Rain slowed plantings, southern areas. Crops harvested sweet corn, radishes, squash, cucumbers.

GEORGIA: Temperatures about 5° below normal. Extremes 28° Blairsville, 91° Albany. Rain totals between 0.50 to 1.00 in. north, near 0.33 in. east, under 0.25 in. elsewhere. Greatest total 1.80 in. West Point.

Days suitable for fieldwork 5.9. Soil moisture 19% very short, 54% short, 27% adequate. Sorghum grain 8% poor, 39% fair, 47% good, 6% excellent; 60% harvested, 43% 1986. Peanuts 20% poor, 60% fair, 20% good; 71% dug, 36% 1986, 74% avg.; 52% threshed, 25% 1986, 61% avg. Digging slowed some areas due to dry soils. Short soil moisture, cool temperatures, diseases caused problems. Soybeans some insect pressure, dry weather stress. Pecans 6% poor, 33% fair, 60% good, 1% excellent. Hay, pastures mostly fair to good. Cattle, hogs mostly good. Main activities: Haying; harvesting corn, cotton, peanuts, apples, sorghum; small grain planting; pasture reseeding; controlling insects and diseases.

HAWAII: Cold front brought light to heavy rains. Heaviest in windward areas. Record temperatures start, end of week. Most crops fair to good. Irrigation remained heavy. Water restrictions in one major vegetable region may be lifted soon.

Temperatures low 70s to low 90s. Rainfall ranged none to 12.80 in.

Days suitable for fieldwork 7.0. Banana production steady. Papaya production heavy. Chinese, head cabbage supplies steady. Watermelon steady, good quality. Blight outbreak reduced anthurium output.

IDAHO: Temperatures across State near normal or few degrees above normal. Precipitation totals 0.10 to 0.40 below normal throughout State.

Days suitable for fieldwork 7.0. Winter wheat 65% seeded, 60% 1986, 61% avg. Winter wheat 31% emerged, 27% 1986, 30% avg. Winter wheat fair to good. Potatoes 73% harvested, 45% 1986, 43% avg. Dry beans 92% harvested, 77% 1986, 74% avg. Onions 84% harvested, 66% 1986, 73% avg. Apples 64% harvested, 42% avg. Sugarbeets 14% harvested, 20% 1986, 12% avg. Corn for grain harvest getting underway. Third cutting alfalfa hay 85%. Livestock good. Range, pasture dry, short, providing limited grazing.

ILLINOIS: Temperatures average 3 to 5° below normal. Precipitation light north, south; totals 1.00 in. or more central, few south. Harvesting corn, soybeans continued to progress well ahead of average, several farmers complete.

Days suitable for fieldwork 5.7. Soil moisture 50% short, 49% adequate, 1% surplus. Pasture 1% very poor, 14% poor, 39% fair, 36% good, 10% excellent.

INDIANA: Temperatures averaged 3 to 8° below normal. Freezing temperatures except northwest corner. Lows upper 20s, highs low 80s. Precipitation widespread. Totals 1.00 in. or more north, central, near 0.50 in. south.

Days suitable for fieldwork 5.7. Topsoil moisture 40% short, 58% adequate, 2% surplus. Subsoil moisture 50% short, 49% adequate, 1% surplus. Corn 18% moisture content. Soybeans 97% mature, 78% 1986, 72% avg. Tobacco 100% harvested, 97% 1986, 92% avg. Wheatland 63% plowed, 49% 1986, 59% avg. Rye 57% seeded, 29% 1986, 39% avg. Pastures 6% very poor, 22% poor, 42% fair, 30% good. Scattered showers some areas. Good week for corn, soybean harvest.

IOWA: Dry, cool. Precipitation spotty, southeast only. First frost 3rd. Temperature extremes 23° Ames 3rd; 85° 1st, Glenwood, Leon, Onawa.

Days suitable for fieldwork 6.7. Topsoil moisture 11% short, 89% adequate; subsoil moisture 9% short, 86% adequate, 5% surplus. Winter wheat 50% seeded, 25% 1986, 44% avg. Fall tillage 6%, none 1986, 4% avg.; fall fertilizer application 5%, none 1986, 3% avg. Livestock mostly good to excellent. Cattle replacement slow due to prices of feeder cattle. Pastures 4% poor, 16% fair, 54% good, 26% excellent.

KANSAS: Temperatures averaged 6° below normal southeast, to 3° above normal northwest. Precipitation light. Most areas less than 0.50 in., none in many areas northwest, northeast. Some areas extreme east 1.00 to 2.00 in.

Days suitable for fieldwork 5.5. Soil moisture 34% short, 60% adequate, 6% surplus. Wheat seeding good progress, especially rapid west. Row crop harvest ahead of normal, wet weather slowed south central, southeast. Topsoil moisture rapidly depleting central and west, some wheat dusted in or planted deeper to reach germination moisture. Corn harvest good progress, farthest along east. Sorghum harvest moderate progress, late stands susceptible to early freeze. Soybean harvest good progress. Pasture condition slowly decreasing as dry weather prevails, adequate grazing available most areas.

KENTUCKY: Weather varied greatly from warm first of week, wet middle, record cold weekend. Temperatures averaged 2 to 6° below normal. Cold Canadian air over weekend. Setting new record low temperatures on 4th. Temperatures dropped to upper 20s, lower 30s. Rainfall averaged 0.50 to 1.25 in.

Days suitable for fieldwork 5.0. Soil moisture 44% very short, 47% short, 9% adequate. Corn harvest continued at record pace. Silage harvest active. Soybean harvest underway most areas. Late crop soybean yields reduced by dry weather. Tobacco stripping began to increase; burley 6% stripped. Quality generally good. Pastures 27% very poor, 30% poor, 36% fair, 6% good, 1% excellent. Lack of moisture delayed fall seedings.

LOUISIANA: Temperature 2 to 4° below normal. Temperature extremes 46°; 91°. Rainfall averaged none to 0.56 in.

Days suitable for fieldwork 6.5. Soil moisture 61% short, 39% adequate. Corn 100% harvested, 100% 1986, 98% avg. Rice 100% ripe, 100% 1986, 99% avg. Soybeans 80% turning color, 78% 1986, 78% avg. Hay final cutting 93%, 92% 1986, 88% avg. Winter wheat 2% planted, 4% 1986, 5% avg. Sweetpotatoes 83% harvested, 77% 1986, 71% avg. Sugarcane good; 95% planted, 94% 1986, 79% avg. Livestock good; pastures fair to good; vegetables fair. Main activities: Harvesting cotton, rice, sorghum, sweetpotatoes, soybeans; baling hay; planting sugarcane, fall vegetables, winter pastures, winter wheat.

MARYLAND & DELAWARE: Maryland: Average temperature 64°, normal 63°. Lowest temperature 32°, highest temperature 85°. Killing frost in mountains only. Precipitation averaged 0.29 in.

Days suitable for fieldwork 5.6. Topsoil moisture adequate. Subsoil moisture short to adequate. Corn 95% mature, 90% avg. Corn 65% harvested, 50% avg. Corn fair. Soybeans fair to poor, mostly fair. Soybeans 75% turning, 80% avg. Soybeans 55% shed leaves, 50% avg. Soybeans 5% harvested. Tobacco 95% harvested, 95% avg.

Delaware: Average temperature 64°, 64° normal. Precipitation averaged 0.17 in.

Days suitable for fieldwork 5.2. Topsoil moisture short to adequate, mostly adequate. Subsoil moisture short. Corn 54% harvested, 50% avg. Corn 99% mature, 95% avg. Soybeans poor to fair. Soybeans 75% turned color, 80% avg. Soybeans 2% harvested.

MICHIGAN: Temperatures ranged 2° below to 2° above normal. Temperature extremes 26°; 85°. Precipitation ranged 0.20 to 2.01 in. across State.

Days suitable for fieldwork 3.0. Soil moisture 45% adequate, 55% surplus. Corn 90% mature, 50% 1986, 80% avg.; 10% harvested, 1% 1986, 4% avg.; 3% very poor, 12% poor, 30% fair, 40% good, 15% excellent. Soybeans 97% shedding, 80% 1986, 90% avg.; 10% harvested, 1% 1986, 5% avg.; 2% very poor, 8% poor, 30% fair, 45% good, 15% excellent. Winter wheat 30% planted, 5% 1986, 35% avg.; 15% emerged, 3% 1986, NA avg.; 5% poor, 25% fair, 45% good, 25% excellent. Dry beans 30% harvested, 5% 1986, 50% avg. Major activities: Dry bean, soybean, corn for grain harvesting; potato, sugarbeet digging; winter wheat planting, corn silage and hay cutting. Excellent apple harvest continued.

MINNESOTA: Temperatures averaged near normal to 3° above normal for State. Temperature extremes 19°; 90°. Precipitation averaged 0.23 to 0.60 in. below normal for State.

Field corn 99% mature, 80% 1986, 84% avg.; 21% picked, 2% 1986, 7% avg.; 22% moisture content, 28% 1986, 28% avg. Soybeans 99% mature, 65% 1986, 75% avg.; 68% combined, 10% 1986, 17% avg.; 11%

moisture content, 15% 1986, 15% avg. Sunflowers 17% harvested, 4% 1986, 7% avg. Sugarbeets 33% harvested, 29% 1986, 26% avg. Potatoes 90% harvested, 65% 1986, 69% avg. Dry beans 94% harvested, 61% 1986, 59% avg.

MISSISSIPPI: Temperatures near normal to 4° below; extremes 35°; 92°. Cold front with little or no rain brought cool afternoons, chilly mornings across State. Greatest 24-hour rainfall 0.94 in.; greatest weekly rainfall 1.35 in.

Days suitable for fieldwork 6.3, 6.2 1986, 5.1 avg. Soil moisture 30% very short, 50% short, 15% adequate, 5% surplus. Corn 100% mature, 100% 1986, 99% avg.; 90% harvested, 95% 1986, 78% avg.; 2% very poor, 3% poor, 20% fair, 65% good, 10% excellent. Hay 94% harvested, 94% 1986, 93% avg. Sorghum silage 98% harvested, 100% 1986, 94% avg. Peanuts 81% harvested, 85% 1986, 71% avg. Sweetpotatoes 70% harvested, 73% 1986, 57% avg. Corn silage 100% harvested, 100% 1986, 99% avg. Wheat 10% planted, 14% 1986, 12% avg. Pecans 3% harvested, 1% 1986. Soybeans 100% podding, 100% 1986, 100% avg.; 84% coloring, 82% 1986; 64% shedding, 70% 1986, 68% avg.; 34% mature, 46% 1986; 20% harvested, 14% 1986, 10% avg.; 30% poor, 45% fair, 20% good, 5% excellent. Sorghum 99% mature, 100% 1986, 98% avg.; 94% harvested, 98% 1986, 78% avg.; 5% poor, 65% fair, 30% good. Rice 100% mature, 100% 1986, 96% avg.; 100% harvested, 97% 1986, 75% avg.; 70% fair, 30% good. Cotton 100% open bolls, 100% 1986, 98% avg.; 64% harvested, 74% 1986, 35% avg.; 10% fair, 75% good, 5% excellent.

MISSOURI: Temperatures averaged 3 to 7° below normal. First freezing temperatures. Spotty rains early week.

Days suitable for fieldwork 5.6. Topsoil moisture 25% short, 75% adequate. Moisture mostly short south central, southeast. Soybean harvest varies 16% southwest to 55% east central. Corn harvest ranged 41% northwest to virtual completed southeast. Winter wheat seeding well ahead of normal all areas. Pastures 4% very poor, 7% poor, 42% fair, 46% good, 1% excellent.

MONTANA: Continued very warm with temperatures generally 4 to 8° above normal. Precipitation heaviest northeast 0.50 to 1.25 in. Dry west, southwest, south central.

Days suitable for fieldwork 6.2. Topsoil moisture 35% short, 61% adequate, 4% surplus. Subsoil moisture 22% short, 74% adequate, 4% surplus. Sugarbeets 15% harvested, 2% 1986, 11% avg. Dry beans 87% harvested, 87% 1986, 78% avg. Potatoes 66% harvested, 45% 1986, 47% avg. Corn silage 88% harvested, 70% 1986, 81% avg. Cattle, calves moved from summer pastures 46%, 51% 1986, 56% avg. Sheep, lambs moved from summer pastures 51%, 58% 1986, 60% avg.

NEBRASKA: Temperatures averaged near normal. Extremes 25°; 91°. Precipitation 0.25 to 1.00 in. southeastern quarter of State.

Days suitable for fieldwork 6.7. Topsoil moisture 24% short, 74% adequate, 2% surplus. Subsoil moisture 13% short, 85% adequate, 2% surplus. Fall crop harvest full swing, some areas need freeze to halt plant growth. Progress well ahead of last year, normal. Dry beans, potato, sugarbeet, alfalfa seed, grass seed harvest active. Alfalfa hay 4th cutting many areas, 5th cutting some eastern counties. Range, pasture feeds adequate. Cattle moving to new stubble fields. Hay moved to winter pastures. Weaning, vaccinating, dehorning active.

NEVADA: Weather again dominated by strong high pressure system. Temperatures 5 to 10° above normal all areas, some record highs. No precipitation recorded anywhere.

Potato harvest well along. Alfalfa seed, small grain combining in windup stage. Late cuttings alfalfa hay still in progress all areas. Seventh cuttings alfalfa hay expected extreme south. Onion harvest about 50% completed. Winter grain, garlic planting in progress.

NEW ENGLAND: Temperatures averaged near normal ranging low 50s near Canadian Border to low 60s along southern coast. Average rainfall ranged 0.50 to 1.50 in. across northern area, 1.50 to 2.50 in. across southern area.

Days suitable for fieldwork 5.0. Soil moisture 43% adequate, 57% surplus. Grazing availability 20% short, 80% adequate. Fieldwork progress 2.0 days behind. Maine potatoes 63% harvested, 34% 1986, 68% avg.; good to excellent. Field corn good; 57% harvested, 53% 1986, 52 avg. Third crop hay good; 73% harvested, 74% 1986, 80% avg. Apples 68% picked, 69% 1986, 58% avg.; good to excellent. Cranberry 33% harvested, size average, color good. Major farm activities: Chopping corn, haying, harvesting fruits, vegetables; repairing, servicing machinery; fall clean-up chores.

NEW JERSEY: Temperatures averaged slightly below normal. Extremes 28°; 87°. Rainfall averaged 1.66 in. north, 1.62 in. central, south. Heaviest 24-hour total 1.84 in. on 3rd, 4th. Estimated soil moisture percent field capacity averaged 91% north, 82% central, 79% south. Four inch soil temperatures averaged 60° north, 63° central, 65° south.

Soil moisture adequate to excessive. Below normal temperatures slowed crop growth. Few colder parts of State received record early snow. Fall vegetable harvest active. Apple, cranberry harvest progressed well. Potato digging neared completion. Sweetpotato harvest active. Wet soil conditions slowed silage making, corn, soybean combining in areas of heavy soils. Pasture growth good.

NEW MEXICO: Temperatures over State ranged 27° Quemado, 91° Tucumcari; light showers, thundershowers many areas. Negligible precipitation southeastern quarter.

Days suitable for fieldwork 7.0. Soil moisture 18% short, 82% adequate. Some severe hail damage. Cotton 13% fair, 87% good; light harvest activity; crop still behind. Barley 34% fair, 33% good, 33% excellent; planting continued. Irrigated, dryland wheat good to excellent; planting winding down major production areas; good emergence of crop. Irrigated grain sorghum 17% fair, 66% good, 17% excellent; good to excellent yields anticipated. Dryland sorghum 75% good, 25% excellent; good yields also anticipated. Corn 11% fair, 78% good, 11% excellent; harvest activity continued, good to excellent yields. Pecans 100% good; preparation for harvest began. Lettuce 100% good, cool nights favorable, light harvest activity continued. Chile harvest heavy, crop fair to good. Cattle 9% fair, 82% good, 9% excellent. Sheep 11% fair, 78% good, 11% excellent. Range 46% fair, 45% good, 9% excellent.

NEW YORK: Showers early week turned to thunderstorms midweek. Temperatures near normal while precipitation near to well above normal statewide.

Days suitable for fieldwork 4.0. Soil moisture surplus. Wet field conditions continued. Third cutting alfalfa 70%, 68% 1986, 76% avg. Corn silage 47%, 26% 1986, 45% avg. Grain corn 3% combined, 3% 1986, 5% avg. Dry beans 20% harvested. Some quality decrease seen in corn silage, dry beans from wet conditions. Apple harvest continued. Vegetable harvest neared completion.

NORTH CAROLINA: Temperatures averaged 6° below normal, mountain region; 1 to 3° below normal, Piedmont Region; near normal, coastal plain region. Temperature extremes 29°; 94°. Precipitation ranged 0.05 to 1.85 in. across State.

Days suitable for fieldwork 5.7. Soil moisture 2% very short, 17% short, 80% adequate, 1% surplus. Flue-cured tobacco 91% harvested, 91% 1986, 96% avg. Burley tobacco 94% harvested, 96% 1986, 93% avg. Peanuts 4% poor, 46% fair, 50% good; 15% dug, 49% 1986, 38% avg.; 10% threshed, 30% 1986, 22% avg. Sorghum 48% harvested, 40% 1986, 44% avg. Sweetpotatoes 4% poor, 41% fair, 50% good, 5% excellent; 32% harvested, 31% 1986, 37% avg. Corn for silage 97% harvested, 93% 1986, 93% avg. Apples 23% fair, 77% good; 70% harvested, 70% 1986, 71% avg. Oats 11% planted, 9% 1986, 12% avg. Barley 14% planted, 9% 1986, 9% avg. Rye 16% planted, 14% 1986, 15% avg. Pasture 7% poor, 38% fair, 54% good, 1% excellent. Major farm activities: Harvesting tobacco, corn for grain and silage, cotton, sweetpotatoes, hay, peanuts, apples, sorghum, vegetables; defoliating cotton; preparing pastures; seeding small grains; curing, marketing tobacco; conservation work; tending livestock; disking stalks; general farm maintenance.

NORTH DAKOTA: Seasonable temperatures. Extremes 19° southwest, 87° west. Light precipitation early, heaviest central 0.65 in.

Days suitable for fieldwork 6.7. Topsoil moisture near normal; 7% very short, 50% short, 43% adequate. Subsoil moisture near normal, 2% very short, 35% short, 63% adequate. Late season crops generally ahead of normal development. Sunflower 81% bracts brown and beyond, 54% 1986, 73% avg.; soybeans 72% combined, 10% 1986, 36% avg.; corn grain 14% harvested, 1% 1986, 15% avg.; corn silage 88% cut, 67% 1986, 85% avg.; potatoes 98% dug, 81% 1986, 76% avg.; flax 90% combined, 40% 1986, 73% avg.; dry beans 88% combined, 41% 1986, 64% avg.; sugarbeets 37% lifted, 37% 1986, 30% avg. Pastures mostly fair.

OHIO: Growing season for tender crops brought to close in most sections during past weekend. Minimum temperatures fell to upper 20s or lower 30s under clear skies morning of 4th at close of an otherwise cloudy, cool week. Average temperatures ranged 1 to 7° below normal. Soils picked up significant moisture east, but rain amounts light over western area.

Days suitable for fieldwork 5.4. Soil moisture 41% short, 53% adequate, 6% surplus. Corn, soybean harvest completion more than doubled averages. Winter wheat planting advanced. Potato digging 75%. Apple, grape harvest 57%, 55%.

OKLAHOMA: Temperatures averaged 4° below normal Panhandle to 11° below normal southeast. Precipitation averaged none Panhandle, north central to 0.46 in. south central.

Days suitable for fieldwork 4.5. Topsoil moisture 2% short, 60% adequate, 38% surplus. Subsoil moisture 2% short, 98% adequate. Wheat 20% fair, 75% good, 5% excellent; 60% planted, 55% 1986, 45% avg.; 35% emerged, 30% 1986, 15% avg. Recent heavy rains caused reworking, reseeding fields. Spraying unsown fields to control weeds. Sorghum 1% poor, 17% fair, 80% good, 2% excellent; 65% mature, 60% 1986, 75% avg.; 10% harvested, 10% 1986, 20% avg. Cotton 20% fair, 80% good; 35% open bolls, 35% 1986, 60% avg.; none harvested, none 1986, 3% avg. Late cotton needs warm weather through October for maturity. Pastures, livestock good. Cattle marketings steady, prices decreased slightly from preceding week.

OREGON: Temperatures averaged 5 to 8° above normal all areas except 2° above normal northeast. Record

breaking daytime highs 30th, 1st many western sites. Clear skies meant nighttime lows in teens, 20s east, upper 30s to 50s coast, western interior; up to 0.10 in. rainfall northeast (snow in high Wallowa Mountains). Precipitation traces along coast; rest of State dry.

Soil moisture 91% short, 9% adequate. Fall seeding, fieldwork progressed slowly, awaiting moisture. Barley 21% seeded. Fall grass seed, clover planting also slow Willamette Valley. Field corn harvest began Hermiston-Boardman area. Silage corn harvest neared completion Jackson County. Final hay cutting being taken east, southwest. Sugarbeet harvest began Malheur County. Turnips for fall pasture growing well Hermiston-Boardman. Apple harvest continued Hood River Valley, Milton-Freewater, Willamette Valley, Gilliam County; red varieties coloring poorly due to heat. Pear varieties completed Medford. Anjou pears nearly all off Hood River, large crop, excellent quality. Filbert harvest progressed rapidly under excellent weather conditions. Wine grape harvest continued Willamette Valley. Cranberry harvest proceeded slowly due to water shortage south coast; growers sprinkled for heat control early in week. Potatoes 70% harvested Malheur County; digging started central areas, quality excellent; digging in full swing Klamath Basin. Seed potatoes dug northeast. Onions about 90% harvested Malheur County; harvest neared completion Jackson County; storage crop in barn Willamette Valley. Other vegetable harvest activities Willamette Valley: processing sweet corn; fresh pack celery, broccoli; cauliflower for fresh, processing yields down slightly due to heat. Sowing fall onions west. Livestock good. Range, pasture mostly poor to fair. Fall pasture seeding, growth awaiting moisture west. Ranges extremely dry east, fire danger high. Lower areas show no growth, high areas limited regrowth. Some forest permits extended, cattle being gathered off remainder. Most yearlings now shipped.

PENNSYLVANIA: Average temperature 57°, 1° below normal. Temperature extremes 28°, 84°. Average precipitation 1.01 in., 0.25 in. above normal.

Days suitable for fieldwork 4.0. Soil moisture 69% adequate, 31% surplus. Corn 100% dent, 100% 1986, 94% avg.; 69% mature, 66% 1986, 56% avg.; 9% harvested, 12% 1986, 7% avg. Corn 2% very poor, 10% poor, 26% fair, 41% good, 21% excellent. Ensilage corn 69% harvested, 67% 1986, 62% avg. Soybeans 2% very poor, 6% poor, 27% fair, 41% good, 24% excellent. Potatoes 70% harvested, 84% 1986. Third cutting alfalfa 77%, 96% 1986. Fourth cutting alfalfa 41%, 50% 1986. Second cutting clover-timothy 98%, 100% 1986. Quality of hay fair to good. Apples 57% harvested, 62% 1986. Grapes 64% harvested, 62% 1986. Fall plowing 67%, 80% 1986. Winter wheat 37% planted, 52% 1986. Barley 66% planted, 76% 1986. Activities: Harvesting hay, haylage, corn for grain and silage, soybeans, fruit, potatoes, other vegetables; seeding wheat, barley; hauling manure; spreading lime, fertilizer; installing conservation practices; machinery maintenance, caring for livestock.

PUERTO RICO: Island average rainfall 0.88 in., 0.96 in. below normal. Highest weekly total rainfall 5.73 in. Rio Blanco followed by 5.07 in. Pico Del Este-Luquillo, 2.80 in. Roosevelt Roads. Highest 24-hour total 2.35 in. Rio Blanco. San Juan mean temperature 85°, 3° above normal. Total rainfall 0.10 in., 1.23 in. below normal. Divisional temperature averaged about 82 to 84° on coasts, 67 to 78° interior. Mean station temperature ranged 66° Pico Del Este-Luquillo to 85° San Juan. Lowest minimum temperature 52° Pico Del Este-Luquillo. Highest maximum temperature 96° San Juan.

SOUTH CAROLINA: Temperature slightly below normal late week. Midweek showers statewide.

Days suitable for fieldwork 5.8. Soil moisture 6% very short, 37% short, 54% adequate, 3% surplus. Cotton 94% open bolls, 94% 1986, 91% avg.; 30% harvested, 17% 1986, 23% avg.; 3% very poor, 4% poor, 77% fair, 16% good. Soybeans 40% leaves turning, 55% 1986, 53% avg.; 14% leaves shedding, 27% 1986, 24% avg.; 20% mature, 17% 1986, 10% avg.; 2% very poor, 1% poor, 46% fair, 51% good. Corn 87% harvested, 93% 1986, 92% avg. Peanuts 26% harvested, 13% 1986, 39% avg.; fair to good. Pastures fair to good. Livestock good.

SOUTH DAKOTA: Average temperatures 2 to 5° above normal. Extremes 19°, 96°.

Days suitable for fieldwork 6.1. Topsoil moisture still short for much of State; 25% critically short, 46% short, 29% adequate. Subsoil moisture 13% critically short, 51% short, 36% adequate. Corn harvest 9 days ahead of normal, soybean harvest 15 days, sorghum harvest 10 days, sunflower harvest 3 days. Major activity: Harvesting soybeans.

TENNESSEE: Temperatures 4 to 11° below normal. Extremes 30°, 87°. Precipitation normal middle, otherwise below normal.

Days suitable for fieldwork 5.0. Soil moisture 7% very short, 51% short, 42% adequate. Corn grain 75% harvested, 55% 1986, 40% avg. Burley 10% stripped, none 1986, 5% avg. Winter wheat 8% seeded, 13% 1986, 14% avg. Cattle good, pastures mostly fair. Main activities: Harvesting, fall tillage, seeding, stripping tobacco.

TEXAS: Early week two weather systems responsible for rain, heavy amounts Rio Grande Valley. Massive high pressure brought mostly clear skies, mild days, cool nights. Rainfall below normal most State, close to normal southern east area, Upper Coast. Temperatures below normal statewide.

Crops: Corn harvest excellent progress Plains under open weather. Lodging still problem some fields hit by high winds, hail earlier this month. Most yields good. Grain sorghum harvest underway Plains under good weather. Producers would like 2 or 3 more weeks current temperatures to ensure good crop. Most harvest complete Cross-Timbers. Sorghum 99% turning color, 95% 1986, 97% avg. Cotton maturing well across State until cool front dropped temperatures. Harvest continued, winding down Blacklands, central, east. Some defoliating Low Plains. Light harvest underway Trans-Pecos. Warmer weather helped progress Plains. Small grain seeding increased most areas. Many fields emerged to good stands. Growth good over State. Additional rains would benefit fields south, portions Blacklands. Some early fields Plains ready for grazing soon. Soybean harvest continued Upper Coast at slow pace; late week rains held up progress. Late fields benefit from rains. Plains fields neared harvest. Peanut harvest underway many areas, expand soon. Early yields good. Some disease problems held some south yields down. Other field crops: Peanuts 15% harvested, 23% 1986, 20% avg. Pecans 2% harvested, 9% 1986, 2% avg. Soybeans 26% harvested, 34% 1986, 18% avg. Sugarbeets 1% harvested, 5% 1986, 5% avg. Sunflowers 24% harvested, 14% 1986, 28% avg. Oats 38% planted, 46% 1986, 35% avg.

Commercial Vegetables: Rio Grande Valley peppers, tomatoes good progress. Other vegetable planting continued. Rain delayed progress slightly. Harvest early variety oranges increased. Quality, sizes good. San Antonio-Winter Garden vegetable planting continued, prospects good. Carrots good growth. Cucumbers Coastal Bend could use some rain. East sweetpotato harvest intermittent because of rain. High Plains carrot,

cabbage harvest expanded. Pepper harvest continued. Trans-Pecos, pumpkin harvest underway. Bell pepper crop neared harvest. Pecans continued to open many areas. Harvest increased early varieties. Quality better than expected many groves.

Range and Pasture: Range, pasture conditions good. Isolated rain some areas further increased growth. Early small grains ready for grazing soon; producers expect good grazing. Many stockers continued to arrive Plains. Most livestock good.

UTAH: Precipitation very light south central, none elsewhere. Temperatures 2 to 5° above normal.

Days suitable for fieldwork 6.8. Soil moisture 79% short, 21% adequate. Winter wheat 89% seeded, 82% 1986, 74% avg. Alfalfa hay 3rd cutting 89%, 76% 1986, 74% avg. Fourth cutting continued. Corn 85% mature, 75% 1986, 72% avg. Corn silage 84% harvested, 59% 1986, 56% avg. Potatoes 81% harvested, 36% 1986, 37% avg. Onions 81% harvested, 58% 1986, 56% avg. Dry beans, apple harvests continued. Cattle 33% moved from summer range, 39% 1986, 30% avg. Sheep 24% moved from summer range, 48% 1986, 36% avg. Livestock good to excellent.

VIRGINIA: Comfortable, sunny beginning; warming to 80s mid period. Temperatures dropped sharply end period. Scattered frost end period. Temperature range 30s to 80s. Rainfall totals normal.

Days suitable for fieldwork 5.2. Topsoil moisture 14% short, 80% adequate, 6% surplus. Grain corn 67% harvested, 51% 1986, 53% avg. Silage 93% harvested, 78% 1986, 90% avg. Soybeans poor to fair, harvest just began. Peanuts good; 9% dug, 54% 1986, 50% avg. Peanuts 5% combined, 36% 1986, 38% avg. Flue-cured tobacco 71% harvested, 77% 1986, 90% avg. Burley tobacco 93% harvested, 91% 1986, 92% avg. Pastures good to excellent, much improved. Fall hay harvested. Apples 60% harvested, 69% 1986, 66% avg. Wheat 9% seeded, 5% 1986, 10% avg. Barley 28% seeded, 22% 1986, 30% avg. Oats 33% seeded, 33% 1986, 37% avg.

WASHINGTON: Mostly hot, dry conditions prevailed. Light rains brushed northeast area. Soil moisture conditions remained low. Temperatures west low 80s day, high 40s night, east mid 80s day, low 40s night.

Days suitable for fieldwork 6.9. Soil moisture 70% short, 30% adequate. Winter wheat 68% planted, 69% 1986, 68% avg. Winter wheat 49% emerged, 54% 1986, 49% avg. Dry soil moisture slowed seed emergence. Winter grain mostly fair to good. Corn silage, late alfalfa hay harvest continued. Potato harvest underway, crop good. Adams, Lincoln Counties austrian winter pea planting completed. Red delicious apple harvest accelerated, most of crop remained to be picked. Sunburn, poor color

remained problems. Grape harvest continued Benton County quality, quantity excellent. Growers King, Pierce Counties renovated raspberry, strawberry fields. Storage onion harvest continued Columbia Basin, quality variable due to high late summer temperatures. Frost ended growing season for some vegetables Klickitat County. West of Cascades weather continued warm during day frostless nights. Lettuce, celery, pumpkin, carrot, cucumber, bean harvest continued west. Range, pasture 70% short, 30% adequate. Cattle moved out of mountain ranges Klickitat County. Fall pastures dry, grass in short supply. Hay, other roughage feed supplies mostly adequate to surplus.

WEST VIRGINIA: Average temperature 55°. Extremes 27°, Greenbank, Flat Top; 88° Creston. Precipitation averaged 0.97 in.

Days suitable for fieldwork 4.3. Soil moisture 27% short, 73% adequate. Farm activities: Farm maintenance, harvesting corn, hay, tobacco; livestock care. Corn, hay fair to poor. Apples fair to good. Tobacco poor to fair. Fall seedings wheat 40%, barley 54%.

WISCONSIN: Temperatures averaged 53°, 1° below normal. Extremes 17°; 83°. Rainfall trace to 0.50 in. Killing frost on 3rd.

Days suitable for fieldwork 6.3. Soil moisture 15% short, 82% adequate, 3% surplus. Excellent week for harvest activities. Crops 2% poor, 12% fair, 75% good, 11% excellent. Corn 93% mature, 69% 1986, 85% avg. Corn for grain 19% harvested, 2% 1986, 5% avg. Yields very good. Corn silo filling 77%, 21% 1986, 39% avg. Many finished, corn getting too dry for silage. Soybeans 86% leaves shed, 67% 1986, 65% avg. Soybeans 25% harvested, 1% 1986, 6% avg. Yields very good. Hay, feed supply for winter 11% short, 71% adequate, 18% surplus. Winter wheat planting continued; some up, looks good. Fall plowing 18%, 9% 1986, 13% avg. Potato harvest nearly over. Cranberry harvest full swing. Tobacco curing well.

WYOMING: Warm weather 2 to 7° above normal. No measurable precipitation.

Days suitable for fieldwork 7.0. Topsoil moisture 74% short, 26% adequate. Oats most harvested, 95% 1986. Corn 5% dough, 5% 1986; 30% dented, 50% 1986; 60% mature, 45% 1986; 5% harvested, small amount 1986, 10% avg. Corn silage 90% harvested, 85% 1986, 90% avg. Sugarbeets 25% dug, 30% 1986 20% avg.; 16% sugar content. Dry beans 95% windrowed, 40% 1986, 85% avg.; 75% combined, 80% 1986, 80% avg. Potatoes 60% harvested, 65% 1986, 70% avg. Winter wheat 95% planted, 95% 1986, 95% avg.; 75% emerged, 75% 1986, 80% avg.; fair to good. Livestock movement from summer pastures continued. Prospects fall, winter grazing fair to good. Stockwater adequate most areas.

(Continued from p. 10)

percent completion, emergence was 15 points above normal. Heavy rains caused some reseeding.

Kansas wheat producers had sown 55 percent of their acreage compared with 60 percent in 1986 and 40 percent normally. Emergence had reached 20 percent completion. Weather conditions were ideal for seeding and emergence during the month.

International Weather and Crop Summary

SEPTEMBER 1987

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

September 27 - October 3, 1987

HIGHLIGHTS:

UNITED STATES ... Soybean and corn harvests leap toward completion as a result of near ideal weather. Cotton and sorghum harvests progress at a much slower pace. Dryness prolongs winter wheat seeding and slows germination in some Southeast, Delta, and Pacific Northwest States.

U.S.S.R. ... In Western U.S.S.R., winter grain planting progresses southward. Summer crop harvesting is in the early stages. In the New Lands, wet weather continues to delay spring grain harvesting.

EUROPE ... Moderate to heavy rains in the south delay harvest activities but help to recharge soil moisture. Drier weather in the north encourages resumption of late harvest and fall planting.

SOUTH ASIA ... Beneficial showers increase moisture levels for southern India's summer crops.

SOUTHEAST ASIA ... Scattered showers continue over Thai grain areas. Much needed rain falls over parts of Java.

EASTERN ASIA ... Unseasonably warm, dry weather over the North China Plain helps harvesting but reduces topsoil moisture to unfavorably low levels for winter grain planting.

CANADA ... Mostly dry weather promotes crop harvesting in its final stages.

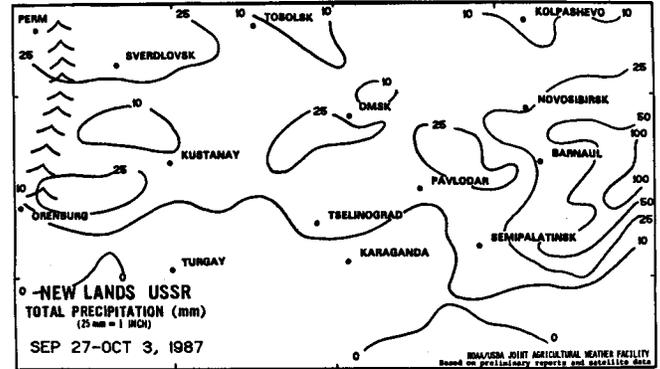
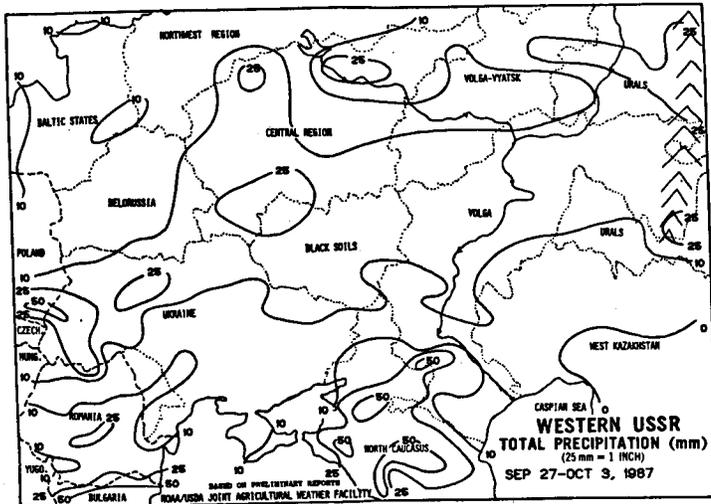
SOUTH AMERICA ... In Argentina, showers benefit some wheat, but major crop areas continue mostly dry. Heavy rain soaks maturing wheat in Rio Grande do Sul, Brazil.

AUSTRALIA ... Light to moderate showers benefit reproductive winter grains.

MEXICO ... Rain slows harvesting but benefits immature crops in the south.

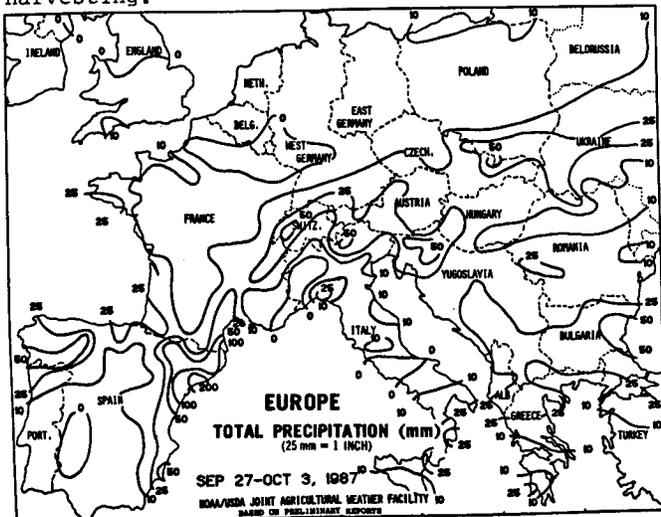
COUNTRY	CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
		AVG MAX	AVG MIN	HI	LO	AVG	DPART F/NRM	DPART F/NRM	
NORWAY	OSLO	14	3	19	-3	8	-1.0	133.7	41.8
SWEDEN	STOCKHOLM	14	7	19	-1	11	-1.3	57.7	5.0
FINLND	HELSINKI	13	6	17	-2	9	-1.1	145.9	76.7
U KING	GLASGOW	16	9	21	2	12	-0.9	136.0	38.2
	EDINBURGH	16	8	21	1	12	-0.3	47.6	-10.6
	BIRMINGHAM	18	9	23	0	13	0.2	51.6	-4.4
	LONDON	19	10	26	1	15	0.9	43.4	-31.9
IRELND	DUBLIN	17	10	20	3	13	0.2	89.1	15.7
ICELND	REYKJAVIK	10	6	14	1	8	0.2	29.8	-37.6
DENMRK	COPENHAGEN	16	9	20	3	13	-1.2	56.4	-5.6
LUXEMB	LUXEMBOURG	19	12	28	4	16	1.7	88.1	27.6
SWITZL	ZURICH	22	13	28	3	18	3.6	159.9	69.5
	GENEVA	24	12	32	4	18	3.3	50.5	-39.6
FRANCE	PARIS	22	13	29	5	17	2.1	40.3	-9.1
	STRASBOURG	23	14	30	4	19	3.6	70.4	20.3
	BOURGES	24	13	34	4	19	2.7	59.0	-5.0
	BORDEAUX	27	15	37	4	21	3.8	74.6	-7.7
	TOULOUSE	28	15	35	5	22	4.0	24.7	-31.3
	MARSEILLE	27	17	31	8	22	2.3	12.3	-45.0
SPAIN	VALLADOLID	28	14	36	9	21	3.8	46.7	16.9
	MADRID	31	15	37	10	23	2.9	8.9	-24.3
	SEVILLE	34	19	40	17	27	2.6	20.7	2.8
E GRMY	LEIPZIG	20	11	27	1	16	1.6	53.0	7.8
	DRESDEN	20	12	27	3	16	1.6	50.4	2.4
W GRMY	HAMBURG	18	10	24	2	14	0.6	122.1	54.0
	BERLIN	19	11	25	4	15	0.5	61.2	11.0
	DUSSELDORF	21	12	28	4	17	1.5	48.3	-13.7
	STUTTGART	22	12	31	1	17	2.6	65.9	6.2
	NURNBERG	21	12	28	-1	17	2.9	59.2	10.8
	MUNICH	22	12	30	1	17	3.5	127.9	54.8
AUSTRI	VIENNA	23	13	32	4	18	2.8	30.1	-22.0
	INNSBRUCK	23	11	29	4	17	2.8	112.7	32.4
CZECH	PRAGUE	20	11	28	2	15	2.0	72.8	32.7
POLAND	WARSAW	18	8	23	3	13	-0.2	30.9	-10.2
	LODZ	18	9	23	5	14	0.7	54.5	1.4
	KATOWICE	20	10	28	3	15	1.9	48.4	-3.7
	PRZEMYSL	19	10	25	2	15	1.0	106.0	50.4
HUNGAR	BUDAPEST	25	13	33	4	19	2.5	24.1	-12.6
YUGOSL	SARAJEVO	28	11	33	5	20	5.4	49.2	-52.9
ROMANI	BUCHAREST	28	13	37	5	20	2.8	18.5	-19.0
BULGAR	SOFIA	27	14	33	7	20	3.9	35.2	-2.4
ITALY	MILAN	27	17	30	9	22	3.6	116.6	47.9
	VERONA	26	17	31	10	22	3.2	43.2	-21.8
	VENICE	26	17	29	8	22	2.6	57.6	-4.8
	GENOA	27	21	31	12	24	1.6	87.0	-27.8
	ROME	28	19	31	16	24	2.6	0.1	-67.2
	NAPLES	30	18	33	15	24	3.9	1.2	-86.1
GREECE	THESSALONIKA	29	17	36	16	23	1.2	18.0	-14.5
	LARISSA	31	16	38	13	23	1.2	7.7	-31.0
	ATHENS	31	21	37	17	26	1.3	0.1	-14.3
TURKEY	ISTANBUL	26	17	31	12	22	2.0	3.1	-37.9
	ANKARA	26	8	31	1	17	-1.0	0.9	-36.1
CYPRUS	LARNACA	31	20	37	17	26	0.5	0.1	-5.0
USSR	TALLINN	13	7	19	0	10	-0.9	176.9	106.1
	LENINGRAD	13	8	16	4	10	-0.9	82.1	22.9
	KAUNAS	16	7	21	0	11	-0.7	66.4	12.0
	MINSK	15	7	21	2	11	-0.5	57.7	8.6
	KAZAN	13	7	19	-3	10	-1.3	74.5	32.5
	MOSCOW	13	6	18	3	10	-1.4	60.4	-2.9
	SVERDLOVSK	11	6	19	-1	9	-0.9	217.4	181.6
	OMSK	15	7	21	1	11	0.2	12.4	-12.4
	KUSTANAY	17	8	23	-1	13	0.5	70.3	43.8
	KRASNOYARSK	15	5	20	-4	10	1.1	72.6	30.7
	NOVOSIBIRSK	14	7	22	3	11	0.6	86.8	53.8
	BARNAUL	16	7	23	2	12	0.3	63.0	35.0
	KHABAROVSK	16	8	26	1	12	-1.0	106.0	8.9
	VLADIVOSTOK	18	12	22	2	15	-0.5	88.0	-45.9
	KIEV	18	8	24	2	13	-0.8	61.3	13.3
	LVOV	19	8	24	1	13	0.5	99.9	45.6
	KIROVOGRAD	20	9	30	1	15	0.6	24.2	-11.8

COUNTRY CITY	TEMPERATURE (C)						PRECIPITATION (MM)			COUNTRY CITY	TEMPERATURE (C)						PRECIPITATION (MM)			
	SEPTEMBER 1987		AVG	AVG	HI	LO	DPART	TOTAL	DPART		SEPTEMBER 1987		AVG	AVG	HI	LO	DPART	TOTAL	DPART	
	MAX	MIN	MAX	MIN	AVG	F/NRM	MAX				MIN	MAX	MIN	AVG	F/NRM	MAX	MIN			AVG
USSR	ODESSA	22	11	32	4	17	-0.2	4.0	-35.8	ETHIOP	ADDIS ABABA	23	11	24	8	17	0.6	67.1	-108.2	
	YALTA	22	14	33	11	18	-0.7	13.2	-20.8	KENYA	NAIROBI	28	13	30	9	20	1.5	8.7	-14.6	
	VORONEZH	15	7	21	3	11	-2.0	84.0	40.5	TANZAN	DAR ES SALAAM	31	18	32	13	25	0.3	2.0	-28.4	
	SARATOV	15	9	19	1	12	-0.7	66.8	38.1	GABON	LIBREVILLE	28	23	29	23	26	0.3	1.0	-105.1	
	KHARKOV	17	8	25	1	13	-1.4	52.5	15.5	TOGO	LOME	29	24	30	22	27	1.0	371.4	323.5	
	VOLGOGRAD	17	9	25	4	13	-2.2	63.6	42.3	B' FASO	OUAGADOUGOU	33	24	37	21	29	1.9	134.9	-21.7	
	ROSTOV	20	11	26	5	15	-1.4	39.2	5.1	IVRY C	ABIDJAN	29	24	31	21	26	1.8	395.9	331.5	
	ASTRAKHAN	22	10	29	1	16	-1.0	9.8	-10.4	MOZAMB	MAPUTO	26	18	36	13	22	0.8	104.1	57.2	
	KRASNODAR	23	10	30	3	16	-1.0	41.0	12.0	ZAMBIA	KABWE	30	15	32	14	22	-0.2	0.1	-0.7	
	ORENBURG	16	8	23	-2	12	-1.2	65.4	37.0	S AFRI	PRETORIA	23	12	29	6	17	-0.5	76.8	54.3	
	TSELINOGRAD	18	8	30	1	13	1.7	29.6	5.3		JOHANNESBURG	20	9	27	4	15	-0.7	174.3	148.7	
	KARAGANDA	18	8	29	3	13	1.0	64.5	46.7		BETHAL	20	8	27	2	14	-0.6	130.3	106.4	
	TBILISI	24	14	31	7	19	-0.3	4.8	-40.1		DURBAN	23	17	30	13	20	0.9	407.9	338.4	
	TASHKENT	29	12	37	1	21	0.7	7.8	5.7	CANADA	CAPE TOWN	19	10	25	2	14	0.7	47.3	9.8	
	ASHKHABAD	30	15	36	8	22	-1.0	3.0	-2.5		TORONTO	21	10	27	3	16	0.1	108.6	45.1	
SYRIA	DAMASCUS	34	13	37	10	24	-0.1	0.1	0.1		MONTREAL	20	10	27	1	15	0.2	107.3	18.9	
ISRAEL	JERUSALEM	28	17	34	14	23	0.3	0.1	0.1		WINNIPEG	21	8	29	-2	14	1.8	20.3	-33.0	
PAKIST	KARACHI	33	26	38	24	29	0.7	0.1	-31.4		REGINA	22	6	34	0	14	2.1	19.4	-17.3	
INDIA	AMRITSAR	37	22	39	18	30	1.0	0.1	-94.5		SASKATOON	22	6	34	1	14	2.7	13.1	-18.3	
	NEW DELHI	37	26	39	24	32	2.3	26.0	-99.6		LETHBRIDGE	23	6	31	1	15	2.0	35.3	-1.9	
	AHMEDABAD	37	27	40	26	32	3.1	1.0	-176.0		CALGARY	21	6	30	1	14	3.1	29.0	-9.2	
	INDORE	32	21	37	20	27	1.4	9.3	-202.4		EDMONTON	20	8	28	3	14	2.9	66.8	27.6	
	CALCUTTA	33	27	34	24	30	0.8	138.3	-166.0		VANCOUVER	20	12	29	7	16	1.6	28.6	-38.5	
	VERAVAL	32	25	36	20	28	1.0	1.4	-105.5	MEXICO	GUADALAJARA	28	16	30	13	22	1.7	135.9	-23.8	
	BOMBAY	32	26	33	24	29	2.0	43.5	-265.8		MEXICO CITY	26	14	29	11	20	3.5	118.2	1.1	
	POONA	31	22	35	16	26	1.2	23.3	-94.4		ACAPULCO	34	25	36	23	29	1.7	19.6	-406.0	
	BEGAMPET	33	23	36	21	28	2.0	64.0	-118.6		BERMUD	ST. GEORGES	29	25	32	23	27	1.7	63.9	-98.3
	MADRAS	36	26	38	24	31	1.2	27.3	-91.5		BAHAMA	NASSAU	33	24	34	22	28	1.3	98.3	-77.1
	MANGALORE	31	24	32	22	27	1.2	90.6	-176.4		CUBA	HAVANA	32	25	35	21	29	1.6	72.6	-71.8
H KONG	HONG KONG	29	26	32	22	28	0.1	160.8	-159.7		JAMAIC	KINGSTON	34	26	36	25	30	2.1	12.7	-99.7
N KREA	PYONGYANG	23	11	27	-1	17	-1.9	76.1	-74.0		P RICO	SAN JUAN	33	25	36	23	29	1.1	44.1	-108.1
S KREA	SEOUL	25	16	28	6	21	0.2	60.9	-81.1		GUADEL	RAIZET	32	25	33	23	28	1.8	21.9	-140.2
JAPAN	SAPPORO	22	14	26	7	18	1.2	57.8	-84.7		MARTNQ	LAMENTIN	31	25	32	24	28	2.2	47.8	-164.0
	NAGOYA	28	20	33	13	24	1.4	206.4	-2.8		BARBAD	BRIDGETOWN	31	25	36	23	28	0.5	56.4	-89.3
	TOKYO	26	21	35	16	24	0.6	219.3	26.3		TRINID	PORT OF SPAIN	32	24	34	23	28	1.6	68.9	-117.2
	YOKOHAMA	26	20	33	16	23	0.5	251.3	52.2		COLOMB	BOGOTA	20	7	31	0	14	0.6	76.4	16.9
	KYOTO	29	20	34	11	24	1.5	132.9	-68.7		VENEZU	CARACAS	33	25	35	20	29	1.8	50.1	0.1
	OSAKA	29	21	35	13	25	1.2	114.7	-48.2		F GUIA	CAYENNE	32	23	34	20	28	1.3	35.8	-29.7
THAILN	PHETCHABUN	32	24	35	23	28	0.8	330.6	52.7		BRAZIL	FORTALEZA	31	24	33	22	27	0.4	8.5	-17.5
	BANGKOK	32	25	35	23	29	0.7	462.5	120.7		RECIFE	29	21	30	19	25	0.2	78.9	-7.2	
MALAYS	KUALA LUMPUR	31	24	33	23	28	1.2	232.6	47.2		BELO HORIZONTE	27	18	34	15	22	1.2	72.6	36.9	
VIETNM	HANOI	31	25	34	20	28	0.4	121.8	-132.2		CAMPO GRANDE	29	18	36	11	23	0.5	33.5	-28.5	
CHINA	HARBIN	20	8	27	-3	14	-0.2	145.4	79.1		FRANCA	27	17	32	12	22	1.4	114.8	49.8	
	HAMI	29	12	34	4	20	1.8	0.1	-3.1		RIO DE JANEIRO	24	19	32	16	22	-0.6	98.3	45.3	
	LANCHOW	24	11	31	7	17	1.7	51.2	5.5		LONDRINA	26	15	34	9	20	0.3	83.2	-21.0	
	BEIJING	27	16	31	9	21	1.9	42.1	-15.0		SANTA MARIA	20	10	30	3	15	-1.9	118.6	-32.3	
	TIENTSIN	27	18	33	11	23	1.8	33.9	-9.5		PORTO ALEGRE	21	12	28	7	17	-0.3	123.7	-0.3	
	LHASA	20	8	22	6	14	0.1	66.8	2.3	PERU	LIMA	21	16	24	14	18	2.2	0.1	-0.9	
	KUNMING	22	15	27	12	18	1.1	139.5	19.9		BOLIVI	LA PAZ	15	-1	18	-9	7	-1.5	29.0	-2.1
	CHENGCHOW	29	17	38	8	23	2.2	34.3	-36.8	CHILE	SANTIAGO	18	6	26	-1	12	0.4	1.8	-22.0	
	YEHCHANG	28	20	33	14	24	0.5	180.9	70.4	ARGENT	IGUAZU	24	13	35	5	19	***	8.3	****	
	HANKOW	29	20	34	11	25	1.3	3.8	-77.0		FORMOSA	25	13	39	4	19	-0.9	1.9	-80.1	
	CHIHKIANG	27	19	34	14	23	0.2	116.7	58.0		CERES	23	9	31	1	16	-0.5	2.8	-38.7	
	SHANGHAI	26	20	32	12	23	-0.5	117.5	-33.1		CORDOBA	22	7	32	-1	15	-0.3	14.5	-19.9	
	NANCHANG	28	22	35	14	25	-0.2	77.1	1.1		RIO CUARTO	20	7	29	3	14	0.0	17.0	-14.7	
	TAIPEI	29	24	35	20	26	-0.1	413.4	192.4		ROSARIO	20	6	26	-3	13	-0.6	14.1	-39.6	
	CANTON	31	24	34	20	27	0.4	215.1	33.3		BUENOS AIRES	18	6	24	-1	12	-0.8	24.3	-38.2	
	NANNING	31	24	33	21	27	0.7	146.7	27.8		SANTA ROSA	17	4	29	-3	11	-1.2	19.5	-16.4	
CNRY I	LAS PALMAS	30	23	39	20	26	2.9	4.3	-1.5		TRES ARROYOS	15	4	23	-3	10	-0.5	62.9	-4.4	
MOROCC	CASABLANCA	28	21	39	19	24	2.8	5.0	-1.6	MIDW I	MIDWAY ISLAND	30	25	32	22	27	1.5	63.8	-52.9	
	MARRAKECH	35	22	43	16	29	4.1	6.9	1.5	N CALD	NOUMEA	24	18	26	16	21	0.3	19.7	-27.5	
ALGERI	ALGER	32	20	39	16	26	3.1	8.1	-22.6	FIJI	NAUSORI	25	19	28	16	22	-1.4	14.2	-171.5	
	BATNA	31	16	35	13	23	2.8	11.4	-9.7	SAMOA	PAGO PAGO	29	24	30	21	26	0.1	18.1	-151.7	
TUNISI	TUNIS	33	20	41	17	27	3.1	1.0	-36.2	TAHITI	PAPEETE	29	22	31	18	26	1.2	39.6	-16.9	
NIGER	NIAMEY	36	25	41	21	31	2.5	58.6	-35.6	N ZEAL	AUCKLAND	16	11	19	7	13	0.1	159.8	61.4	
MALI	TIMBUKTU	39	26	43	20	32	1.5	23.8	-7.4		WELLINGTON	14	8	18	4	11	0.8	36.6	-67.0	
	BAMAKO	33	23	36	20	28	1.5	118.4	-99.4		MOREE	23	10	28	2	16	0.9	4.0	-30.2	
MAURIT	NOUAKHOTT	37	27	44	24	32	2.4	7.2	-30.1		BRISBANE	23	13	29	7	18	-0.2	0.5	-34.7	
SENEGL	DAKAR	30	25	32	22	28	0.3	108.2	-48.3		PERTH	22	10	29	4	16	1.6	36.3	-28.9	
CHAG A	DIEGO GARCIA	30	25	31	23	28	1.4	168.0	-69.9		CEDUNA	20	9	37	3	15	0.4	9.0	-21.2	
LIBYA	TRIPOLI	35	20	44	17	28	1.7	2.9	-13.9		ADELAIDE	18	10	31	5	14	0.5	15.3	-44.2	
	BENGHAZI	30	21	35	18	26	0.5	11.1	8.8		MELBOURNE	17	9	29	3	13	0.9	40.2	-15.5	
EGYPT	CAIRO	33	21	35	19	27	0.8	0.1	0.1		WAGGA	17	7	28	0	12	1.3	24.6	-29.5	
	ASWAN	38	24	39	22	31	-0.6	0.1	0.1		CANBERRA	17	3	25	-3	10	0.6	24.0	-31.1	
										PHILIP	MANILA	32	25	35	21	28	0.7	278.5	-18.2	

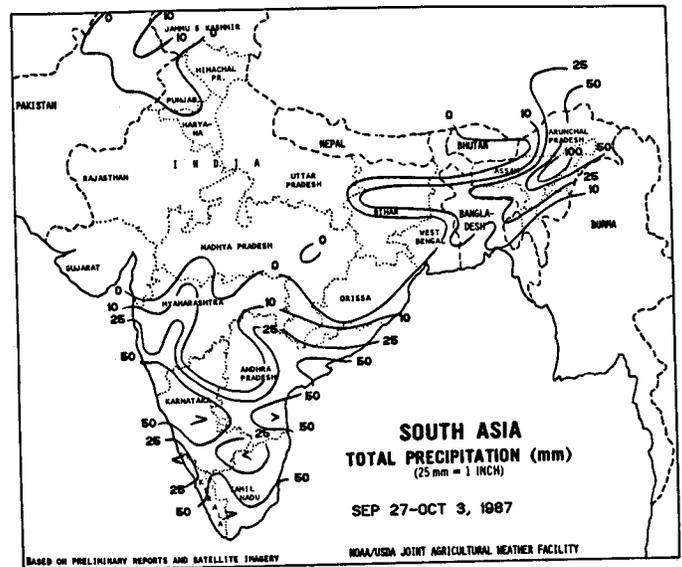


In the New Lands, wet weather continued over the Urals, western Siberia, northern Kazakhstan, and eastern Siberia, continuing a trend of abnormally wet weather which has persisted since early September. Historically, spring wheat in these areas accounts for about 40 percent of total spring wheat production, while spring barley accounts for about 5 percent of total spring barley production. Wet weather in these areas has resulted in significant harvest delays and a deterioration in grain quality.

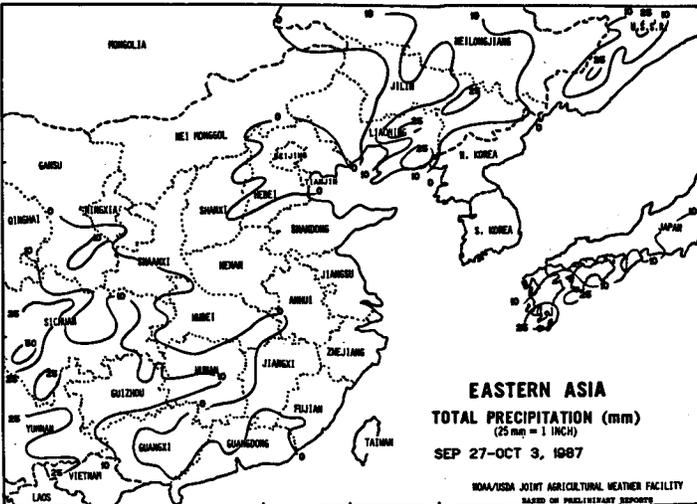
U.S.S.R. ... In Western U.S.S.R., winter grain planting progressed southward. Continued unseasonably cold weather, during most of the growing season, has slowed sunflower, corn, and sugarbeet maturation, resulting in harvest delays. Harvests of these crops were in the early stages this past week. Significant rainfall (25-50mm) over the central North Caucasus and the western Ukraine likely caused fieldwork delays, but provided abundant topsoil moisture for winter grain emergence. Generally dry weather helped fieldwork in the central Ukraine, where rain is needed for uniform winter grain emergence. Temperatures turned unseasonably cool during the week, slowing the early growth of winter grains. The south's cold weather further aggravated delays in harvesting.



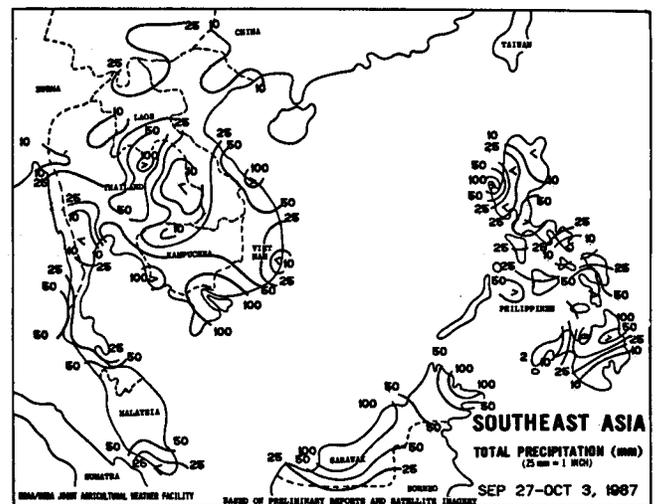
EUROPE ... Moderate to heavy rain (25-217mm) fell over many areas of southern Europe from Spain eastward to the Balkans, delaying fall harvest and planting activities, but helping to recharge low soil moisture supplies. The rainfall was the first substantial moisture in northern Spain and the Balkans in over a month. Much drier weather developed over northern Europe, where only light rain (less than 10mm) fell early in the period. The break in a persistent pattern of above-normal rainfall since August allowed for a resumption of late harvesting and planting of winter grains. Harvest activity was further hampered over areas of eastern Europe from East Germany to Romania, where scattered frost and freezing temperatures occurred in the middle of the period.



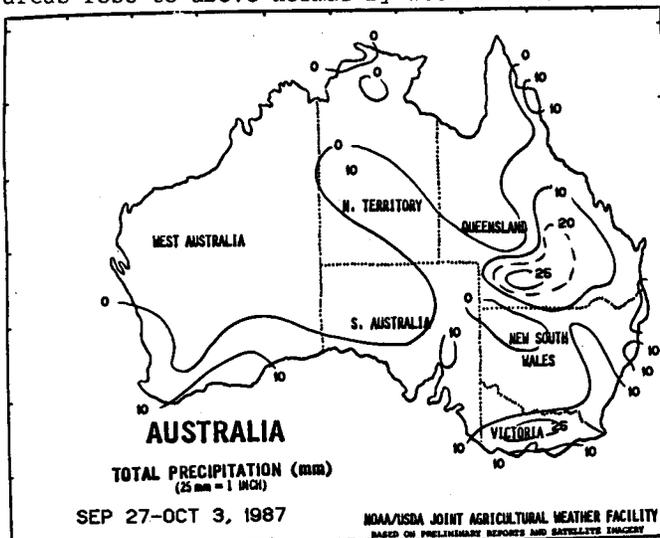
SOUTH ASIA ... Beneficial showers (10-92mm) continued in southern India's summer crop regions from western Maharashtra southward. The rainfall improved moisture conditions for growth of cotton, rice, and groundnuts in stages of development ranging from flowering to filling but delayed some rice harvesting. India's northern half was mostly dry, with heavy rain (100mm or more) persisting to the east over flooded areas of Assam. The dry weather in recently wet areas from eastern Uttar Pradesh to West Bengal helped dry fields in preparation for wheat planting. Light rain (10mm) brought some relief to hot, dry regions of northern Pakistan, where wheat planting is normally starting. The southwest monsoon is normally withdrawn from northwestern India in early October and pulls out of India's southern tip by December (see *Weekly Weather and Crop Bulletin*, Vol. 74, No. 22).



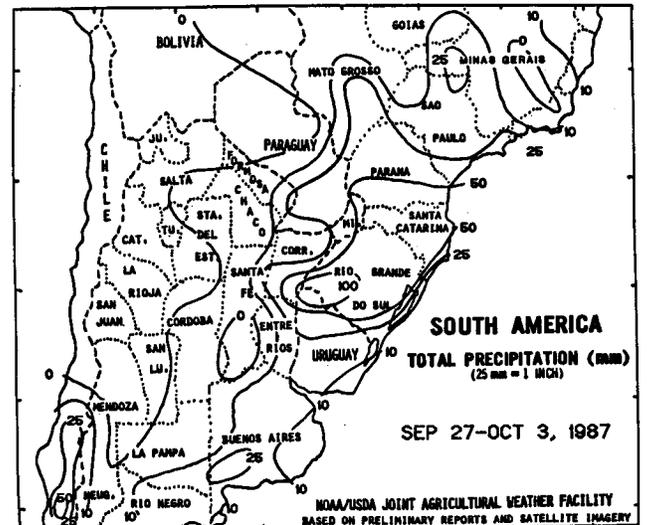
EASTERN ASIA ... Dry weather covered most agricultural areas in China and Korea. The dry weather over North China Plain crop areas in Hebei, Shanxi, Henan, Shandong, Jiangsu, and Anhui continued a trend of abnormally dry weather which has lasted since early September. The persistent dryness in these areas favored summer crop maturation and helped harvesting. However, the dry weather has reduced topsoil moisture to unfavorable low levels for winter wheat planting, and rain is needed for uniform crop emergence and early growth. Weekly temperatures over the North China Plain were much above normal, further depleting topsoil moisture. In the Manchurian Valley, several days of dry weather helped corn and soybean harvests. In addition, temperatures in these areas rose to above normal by week's end.



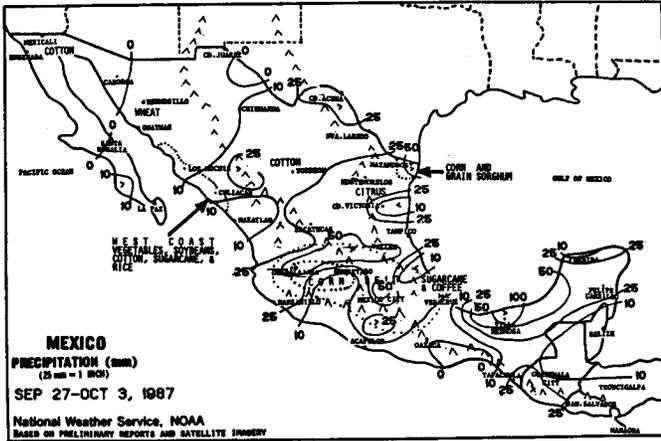
SOUTHEAST ASIA ... Moderate to heavy showers (25-100mm or more) continued in rice areas of central Thailand, maintaining favorable moisture levels for vegetative to reproductive late-planted rice. Drier weather in eastern Thailand, southern Laos, and Thailand's Northern Hills region brought some relief to areas too wet from persistent, heavy rain. Moderate to heavy showers (25-100mm or more) fell in western Kampuchea, northern Laos, and parts of Vietnam and continued in Malaysia and Indonesia, extending into chronically dry rice areas of western Java. Rainfall averaged less than 10mm in Philippine grain areas in northern Luzon and southern Mindanao, but heavier, variable showers covered all other crop areas.



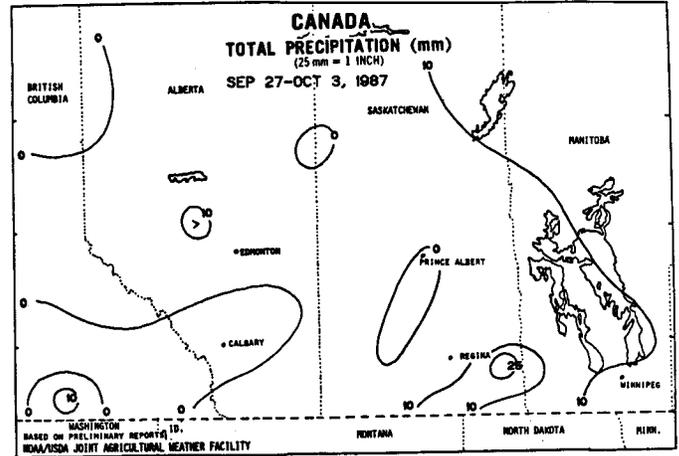
AUSTRALIA ... Light to moderate rain (10-39mm) spread over areas of southern Western Australia, South Australia, Victoria, New South Wales, and Queensland, benefiting winter grains mainly in the reproductive phase. Rainfall over interior production areas of Western Australia, southeastern Queensland, and northeastern New South Wales continues to be below normal, however, as has been the case for most of the growing season thus far. While seasonal temperatures there helped to limit evapotranspiration losses and effects of moisture stress, more rain is needed for normal crop development. Elsewhere, light to moderate showers (5-18mm) fell over northeast coastal Queensland, temporarily delaying late sugar harvesting activities.



SOUTH AMERICA ... In Argentina, substantial showers (10-30mm) covered an area extending from extreme southeastern La Pampa through much of Buenos Aires northeastward into Uruguay. The moisture benefited heading wheat and early summer crop planting. However, rain missed northeastern Buenos Aires, Santa Fe, and Cordoba, the major summer crop areas where topsoils are becoming dry for summer crop planting and heading wheat. Light showers fell in northern cotton areas. In Brazil, heavy rain (50-100mm) covered Rio Grande do Sul, with an isolated inundating downpour (180mm) in the southwest. The rain soaked maturing wheat. Widespread showers (10-50mm) covered much of Parana, southern Mato Grosso do Sul, Sao Paulo, and southern Minas Gerais, providing additional moisture for early corn emergence, but slowing the wheat harvest, and cotton and corn planting.

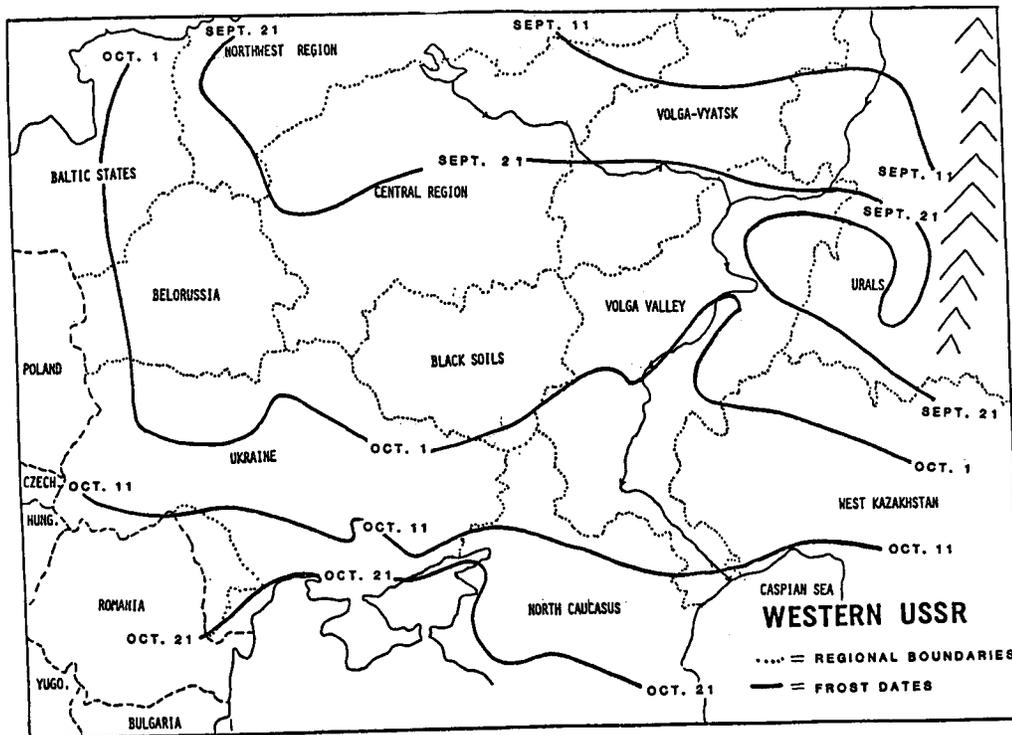


MEXICO ... Mostly light rain (1-6mm) fell in the northwest wheat area and the northern half of the west coast farming region. Heavier showers (10-27mm) covered much of the southern half of the west coast farming area extending into the north-central rangelands and cotton area, where harvesting is mostly in its final stages. Highly variable rainfall slowed corn harvesting in the Southern Plateau corn belt but benefited immature corn in southern Mexico. Weekly rainfall generally averaged near to below normal, except from northern portions of the Southern Plateau extending into north-central cotton areas and isolated areas scattered throughout the south.



CANADA ... Mostly dry weather prevailed over much of the Prairie's grain belt, favoring the harvest near completion. Substantial showers (8-31mm) were confined to extreme southeastern Saskatchewan and southern Manitoba. Weekly rainfall averaged 5mm or less over the remainder of the region. Mostly dry weather promoted fieldwork in northern grain areas where much of the remaining harvest work is underway. Harvest progress was far ahead of last year's pace as well as the average.

AVERAGE DATES OF FIRST AUTUMN FROST



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DENNY RETIRES

Lyle Denny, Managing Editor of the Weekly Weather and Crop Bulletin, retired on October 3, 1987, with 47 years of Federal Service. After 4 years working for the District of Columbia, Office of Engineering, Lyle served 21 years in the U.S. Air Force and Army Air Corps (including a tour in Europe during World War II). During the war, Lyle began his career in meteorology as a weather observer. His employment with the National Weather Service began in 1965, and he worked on the Weekly Weather and Crop Bulletin since 1972. He became a leading expert on the Palmer Drought and Crop Moisture Indices, having taken over the drought program when its originator Wayne Palmer retired. Lyle derived the product "Additional Precipitation Needed to Bring the Drought Severity Index to Near Zero," a regular feature in the Bulletin. He has received outstanding awards and has given numerous press interviews. Lyle plans to continue living in the Washington, D.C. area and devote time to his hobbies of photography and gardening.

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