

WEEKLY WEATHER AND CROP BULLETIN

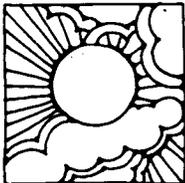
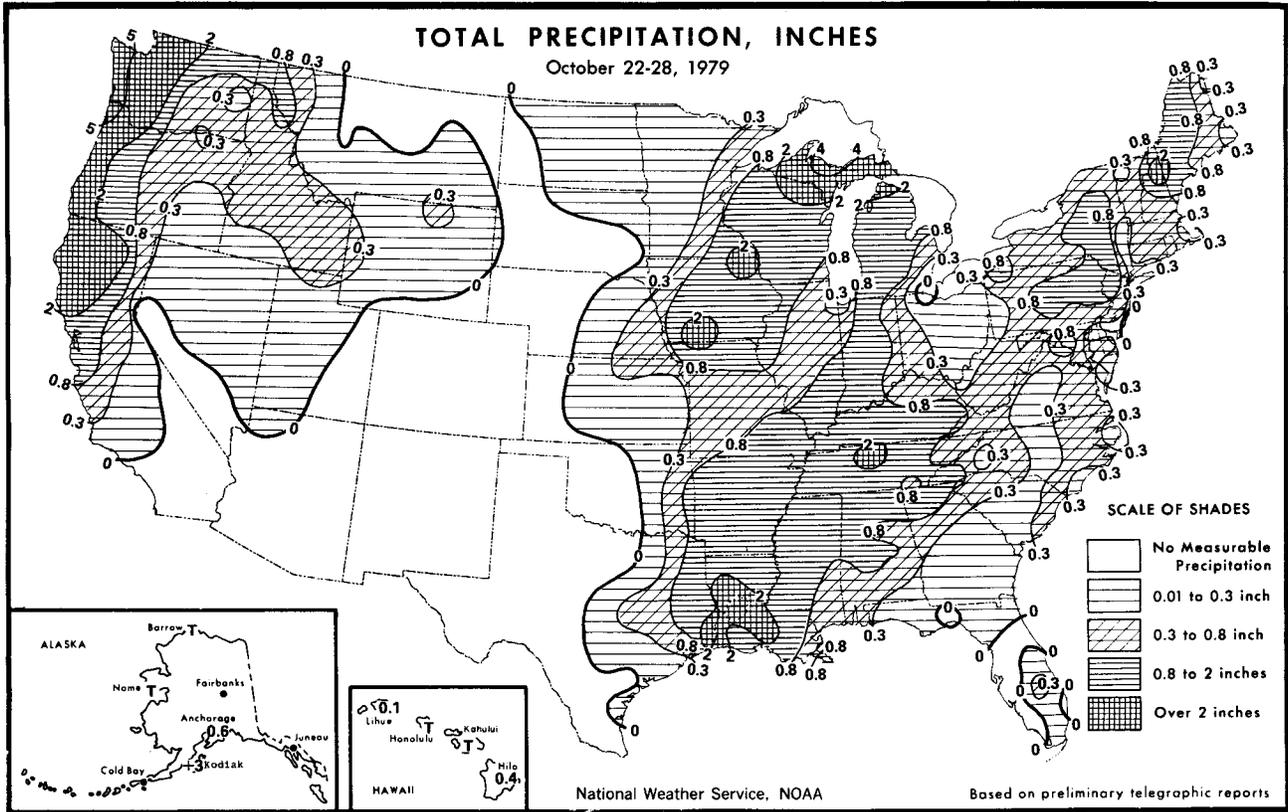
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National Weather Summary

October 22 - 28

HIGHLIGHTS: A succession of weather systems deepened in the Great Lakes area and moved northeastward. Rain from the systems extended southward to the Gulf Coast. Early in the week, 1 to 2 inches of rain soaked Iowa and the Lakes area, with some smaller amounts falling as the fronts moved eastward. An inch and more accumulated from Louisiana to the Ohio Valley and in New England.

Snow blanketed northern Michigan, while seasonally heavy rains fell from central California through Washington State. Snow whitened the high elevations of the Plateau Region and Rockies.

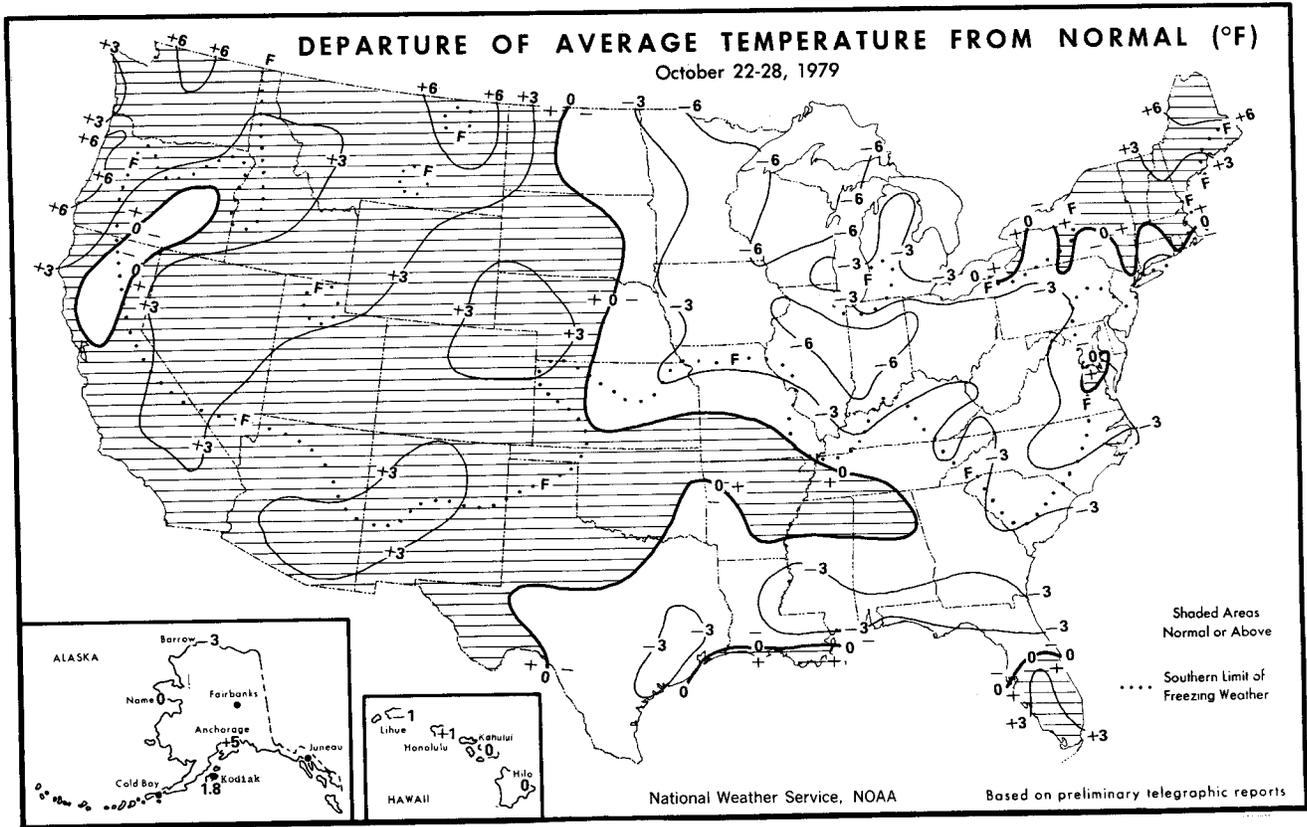
Cold air pushed into the East behind the weather systems carrying record low temperatures to the northern half of the Atlantic Coast. Western temperatures ranged a bit above normal.

On Monday, a cold front propelled severe weather through the Mississippi Valley and Delta Region.

Two inches of rain doused Beaumont, East Texas, and Shreveport, northwestern Louisiana. One-inch-plus rains soaked parts of Iowa, Missouri, and Arkansas. Tornadoes damaged sections of Texas, Louisiana, and Arkansas.

To the north, up to a half-foot of snow whitened towns in Nebraska, Iowa, and Minnesota. By day's end, rain reached the Ohio Valley, where London, southeastern Kentucky, scored nearly an inch.

Meantime, record-breaking warmth spanned an area from the Great Lakes to the upper half of the Atlantic Coast. A sampling of new marks included 80° at Flint, eastern Michigan, New York's 88°, and Boston's 83°. Brownsville, southern Texas, also noted a record high reading of 95°.



A strong low pressure system pushed snow into the upper Midwest and Great Lakes on Tuesday; up to 6 inches blanketed some points.

The day's heaviest rain fell over the middle Atlantic States, where Norfolk, southeastern Virginia, and Wilmington, Del., collected three-quarters inch.

Unseasonable warmth lingered over New England. Burlington, Vt., at 78°, and Caribou, northeastern Maine, at 77°, notched record-breaking readings.

On Wednesday, the storm that dumped several inches of snow on the Great Lakes moved northeastward bringing rain. Mt. Washington, northern New Hampshire, gathered 1.2 inches of rain.

A strong storm system edged over the Pacific Northwest and reached as far south as northern California. Rain totals showed 1.4 inches at Eureka, Calif., and 1.5 inches at Astoria, northwestern Oregon.

Cold air surged into the Gulf Coastal States dropping temperatures to record levels. Some new marks included 44° at Lake Charles, southwestern Louisiana, 38° at Tallahassee, Fla., and a record-equaling 42° at Port Arthur, eastern Texas.

Rain persisted in northern California on Thursday. Four inches drenched some isolated areas. San Francisco reported 1.2 inches.

Meantime, light snow in Michigan slowly moved eastward reaching Pennsylvania by nightfall.

Salt Lake City warmed to a record temperature of 78°.

Little precipitation dampened the Nation on Friday. Rain continued in the Northwest, however, where Quillayute, western Washington, measured nearly an inch.

While evening frost and freeze warnings were noted for the East, record heat warmed an area from the central Rockies to the west central Great Plains and southward to Texas. A sampling of records showed 80° at Colorado Springs, central Colorado, 90° at Lubbock and El Paso in Texas, and a record-tying 85° at North Platte, central Nebraska.

Scattered storms brought generally light rain to widely separated portions of the country on Saturday.

While up to three-quarters inch of rain kept the Pacific Northwest damp, light rain moistened the Great Lakes Region and parts of eastern Oklahoma and western Arkansas.

Chilly temperatures began the day in the East. Pittsburgh, at 22°, set a record low temperature, and Beckley, southern West Virginia, marked a new low of 23°. By contrast, San Angelo, west central Texas, posted a record-equaling warm reading of 89°.

On Sunday, a long frontal system stretched from New York to Texas spreading rain along its path.

The heaviest downpours left 1.6 inches of rain near Little Rock and about 2 inches at Nashville.

Light rain continued in the Pacific Northwest with one-quarter inch about the norm.

Brownsville, Tex., at 91°, tallied another record high temperature for the week.



National Agricultural Summary

October 22 - 28

HIGHLIGHTS: Precipitation fell in the West Coast States, through many of the central States and into New England. Elsewhere, little or no rain fell. The western rains improved some rangeland, and in the central States, slowed harvest activities. Most farmers had five days or more suitable for fieldwork, except in the north central States where only 4 to 5 days were available. Soil moisture rated mostly adequate with shortages showing up in the western north central States, scattered areas of the South, and many areas of the West. Surplus soil moisture was noted in parts of the Great Lakes States, the eastern Corn Belt, and along the Atlantic Coast. Fall plowing was on schedule; rains improved tillage condition in parts of the north central States. Cattle producers began feeding hay and forage to herds, although many farmers had animals on fall pastures and crop stubble. Winter wheat seeding advanced to 88%, slightly lagging last year's 96% and the 94% average. Cotton picking reached 34%, short of 1978's 40% and the 37% average. Corn harvest advanced to 44%, well behind last season's 69% and the 62% average. Soybean combining reached 70%, slightly behind last year's 72% but ahead of the 67% average. Grain sorghum harvest reached 76%, lagging last year's 81% but ahead of the 72% average. The rice harvest in the five major producing States reached 91%, short of the 93% last year. Farm fuel supplies showed some improvement from the previous week. LP gas rated 6% tight, 92% adequate, and 2% surplus. Diesel scored 17% tight, 82% adequate, and 1% surplus. Gasoline stood at 13% tight, 86% adequate, and 1% surplus.

SMALL GRAINS: Winter wheat seeding advanced to 88% complete, 8 points less than last year and 6 points below the average. Seeding was complete from Colorado and Nebraska northward. Kansas seeding reached 90%, slightly behind last year's 100% and the 95% average. Some stands were spotty because of dry conditions; growers replanted some fields. Oklahoma planting reached 90%; farmers continued to dust in the crop. Only 45% of the crop was emerged, compared with 70% last year and average; the crop needed moisture for germination and growth. Texas seeding struggled to 81%, a five-point increase for the week. Many farmers on the Plains waited for rain to alleviate the dry soils and improve germination. Winter wheat stands throughout the northern Great Plains needed moisture to promote growth before winter. The Colorado wheat crop rated good; development was earlier than normal. Pacific Northwest growers continued to seed, although rains slowed operations in Oregon. Greenbugs and grasshoppers fed on Washington wheat.

CORN: Corn harvest stood at 44%, well behind last year's 69% and the 62% average. High moisture content in the grain was a problem throughout northern areas of the Corn Belt. The Ohio crop showed more evidence of lodging. In the eastern Corn Belt, harvest stood at 41%, compared with 60% last year and the 52% average. All States in the region consistently lagged last year and average. In the western Corn Belt, harvest also stood at 41%, well behind last year's 74% and the 68% average. Only Missouri edged close to the progress of last year and average; other States ranged from 15 points behind last year's rates to as many as 64 points in Minnesota where progress stood at 17%.

SOYBEANS: Soybeans rated mostly good with most of the north central States' crop mature and the south central States' crop ranging from 75% to 94% mature. High moisture content in the soybeans also slowed harvest activity in some parts of the north central States. In the eastern north central States, harvest stood at 82%, one point less than last year and 4 points less than average. In the western north central States, combining advanced to 89%, exceeding last year's 84% and the 82% average. Harvest reached the halfway mark in the south central States, lagging last year by 9 points but ahead of the average by 6 points.

COTTON: Cotton acreage showing open bolls ranged from 79 to 100%. Subnormal temperatures continued to slow development. Harvest advanced to 34%, lagging last year's 40% and the 37% average. Harvest in the Delta States continued to falter significantly compared with other areas; this region needs drier weather to improve harvest conditions. In the Texas lower Rio Grande Valley, farmers shredded stalks following harvest; growers on the High Plains waited for a frost to defoliate stands. The busy California gins were unable to keep up with the harvest pace which ran ahead of last year; some cotton was stored in fields.

OTHER CROPS: The grain sorghum harvest reached 76%, falling between last year's 81% and the 72% average. Some Kansas sorghum was stored on the ground.

Rice harvest advanced to 91% in the five major producing States. Harvest in the Delta began slowing as farmers reached 94% complete. California rice had a high grain moisture content.

FRUITS & NUTS: Apple growers continued to pick late varieties. The pecan harvest ranged from 9% in Texas to 10% in Mississippi, 13% in Georgia, and 17% in Louisiana. The walnut harvest continued in Oregon. California growers harvested almonds and walnuts.

Florida citrus groves appeared in excellent condition. Cold weather late in the week should help fruit coloring. Arizona growers harvested lemons and grapefruit. Texas citrus harvest increased for early oranges and grapefruit. California growers picked a light volume of desert grapefruit and lemons. The Navel harvest started, while the Valencias were nearly done.

VEGETABLES: Harvests in northern areas were virtually complete. South Carolina growers harvested cucumbers and snap beans. Florida vegetable shipments increased 65% from the previous week; large weekly increases should be expected as more crops are available for harvest early in the season. Snap bean, pepper, and tomato shipments increased substantially. Florida weather proved ideal for plant growth, fruit set, and sizing. Growers in southern Texas began harvesting some early crops and continued planting other vegetables. Light frosts in North Texas damaged some vegetables, while growers harvested some of the hardier crops. California rains slowed vegetable harvests particularly in the north.

PASTURES & LIVESTOCK: Northern pastures continued to decline seasonally providing very little forage. Producers began feeding hay and other forage supplies to supplement declining northern pastures and dry western ranges. The lack of rain in the Southwest may limit the availability of grazing from fall-seeded small grains.

Weather Data for the Week Ending Oct. 28, 1979

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. 3	Pct. normal since Sept. 3	Average maximum	Average minimum	Temperature °F		Precipitation	
														90 and above	32 and below	.01 inch or more	.50 inch or more
ALA. Birmingham.	74	46	83	39	60	0	.5	-.1	.5	11.2	196	89	44	0	0	1	0
Mobile.	75	49	82	42	62	-3	.6	-.2	.6	11.1	131	88	43	0	0	2	1
Montgomery.	75	46	84	41	61	-2	.3	-.1	.2	5.4	87	84	34	0	0	2	0
ALASKA. Anchorage.	38	33	40	30	35	5	.6	-.3	.3	3.3	92	85	83	0	2	2	0
Barrow.	11	6	22	1	8	-2	T	-.1	T	.4	50	90	76	0	7	5	0
Fairbanks.	28	18	32	10	23	4	.3	-.2	.1	.6	40	78	65	0	0	5	0
Kodiak.	47	35	49	28	41	2	1.8	-.4	1.2	11.1	97	80	65	0	2	3	1
Nome.	29	19	35	13	24	-1	T	-.3	T	4.0	111	76	63	0	7	0	0
ARIZ. Flagstaff.	62	26	68	20	44	0	0	-.3	0	1.4	48	85	24	0	7	0	0
Phoenix.	89	57	92	53	73	5	0	-.7	0	.2	22	45	13	3	0	0	0
Tucson.	86	54	91	46	70	4	0	-.1	0	.3	18	34	11	1	0	0	0
Winslow.	73	35	80	30	54	1	0	-.1	0	.3	23	--	49	0	2	0	0
Yuma.	91	57	93	55	74	2	0	-.1	0	0	0	--	13	5	0	0	0
ARK. Fort Smith.	74	42	81	36	58	-1	1.3	-.5	.8	2.7	42	93	29	0	0	3	1
Little Rock.	74	49	89	42	62	3	1.3	-.6	.7	5.0	85	88	43	0	0	2	2
CALIF. Bakersfield.	78	56	85	51	67	3	.1	0	-.7	.7	175	--	35	0	0	0	0
Eureka.	64	52	70	46	58	4	3.0	2.0	1.5	6.2	177	88	69	0	0	6	2
Fresno.	75	49	83	46	62	1	.2	.1	.2	.5	100	84	36	0	0	1	0
Los Angeles.	71	57	77	54	64	0	0	-.1	0	.4	133	84	60	0	0	0	0
Red Bluff.	67	51	74	47	59	-3	2.3	1.9	1.8	3.1	221	92	59	0	0	5	2
San Diego.	73	59	75	57	66	1	0	-.1	0	.7	140	87	66	0	0	0	0
San Francisco.	69	52	72	48	60	1	1.5	1.2	1.5	2.2	220	97	54	0	0	1	1
Stockton.	75	49	78	44	62	1	.7	.5	.7	1.4	175	82	38	0	0	1	1
COLO. Denver.	67	38	78	32	53	4	T	-.2	T	1.4	64	78	30	0	1	0	0
Grand Junction.	66	36	73	29	51	0	0	-.2	0	.2	13	69	24	0	1	0	0
Pueblo.	72	33	84	26	53	2	0	-.2	0	1.0	67	86	26	0	4	0	0
CONN. Bridgeport.	57	44	75	32	51	-3	.2	-.5	.2	7.2	141	76	54	0	1	2	0
Hartford.	58	40	85	27	49	-1	.5	-.2	.2	7.9	134	74	52	0	3	3	0
D.C. Washington.	63	47	84	36	55	-2	.5	-.1	.5	11.8	227	80	53	0	0	2	1
FLA. Apalachicola.	77	58	82	50	67	-1	.1	-.2	.1	17.1	153	71	49	0	0	1	0
Daytona Beach.	79	60	85	55	69	-3	0	-1.0	0	15.5	131	90	50	0	0	0	0
Ft. Myers.	87	67	91	61	77	3	0	-.7	0	14.9	119	82	45	1	0	0	0
Jacksonville.	78	53	86	47	66	-1	T	-.8	T	17.8	152	88	53	0	0	1	0
Key West.	84	75	87	74	80	1	T	-1.0	T	5.6	46	85	59	0	0	0	0
Miami.	85	72	88	68	78	2	.2	-1.4	.1	16.1	101	87	58	0	0	3	0
Orlando.	83	61	89	55	72	0	.2	-.5	.2	9.6	90	86	43	0	0	1	0
Tallahassee.	77	45	84	37	61	-5	T	-.5	T	10.5	118	97	41	0	0	0	0
Tampa.	82	63	87	54	72	0	T	-.4	T	14.2	171	82	47	0	0	0	0
W. Palm Beach.	84	68	87	63	76	0	T	-1.6	T	23.6	136	82	55	0	0	0	0
GA. Atlanta.	71	46	82	39	59	0	.3	-.3	.3	7.6	143	87	34	0	0	1	0
Augusta.	72	41	82	35	57	-4	.1	-.3	.1	5.6	112	96	43	0	0	1	0
Macon.	76	45	84	37	61	-2	T	-.5	T	6.1	117	90	35	0	0	1	0
Savannah.	76	50	84	43	63	-1	T	-.5	T	13.0	165	84	43	0	0	1	0
HAWAII. Hilo.	--	--	--	--	75	0	.4	-.3	--	7.9	48	--	--	0	0	--	0
Honolulu.	87	71	89	69	79	1	T	-.4	T	.9	50	85	50	0	0	0	0
Kahului.	--	--	--	--	77	0	T	-.3	T	--	--	--	--	0	0	--	0
Lihue.	--	--	--	--	76	-1	.1	-.9	--	2.2	43	--	--	0	0	--	0
IDAH. Boise.	59	41	70	37	50	2	.4	-.2	.2	1.5	150	73	51	0	0	5	0
Lewiston.	56	45	62	39	51	2	.4	.1	.4	1.8	100	89	79	0	0	2	0
Pocatello.	62	34	73	26	48	3	.4	-.2	.4	1.0	100	75	33	0	2	1	0
ILL. Cairo.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chicago.	57	38	76	30	47	-4	.2	-.4	.2	1.6	31	70	44	0	1	2	0
Moline.	55	33	69	25	44	-7	1.0	.5	1.0	2.2	35	87	45	0	4	1	1
Peoria.	56	33	73	25	45	-6	.5	0	.4	1.5	27	86	46	0	3	2	0
Rockford.	56	33	73	22	44	-5	.3	-.3	.3	1.3	20	88	48	0	3	2	0
Springfield.	61	36	75	30	48	-4	.6	0	.6	1.3	22	85	44	0	2	2	1
IND. Evansville.	61	35	79	30	48	-6	.8	-.2	.8	4.5	90	84	45	0	3	2	1
Ft. Wayne.	54	35	80	24	44	-6	.4	-.3	.4	2.6	53	79	56	0	3	2	0
Indianapolis.	57	34	78	25	46	-6	.9	-.3	.8	2.8	55	79	49	0	4	3	1
South Bend.	55	41	78	34	48	-1	1.1	.4	.7	4.7	82	78	65	0	0	3	1
IOWA. Burlington.	57	36	69	30	46	-5	1.3	.7	.9	2.2	35	--	--	0	2	2	1
Des Moines.	57	36	69	31	47	-4	1.2	.8	1.2	3.8	79	80	46	0	2	1	1
Dubuque.	53	35	66	24	44	-4	.9	-.3	.6	2.3	33	80	44	0	3	2	1
Sioux City.	58	32	73	26	45	-4	.2	-.1	.2	2.4	57	87	46	0	4	1	0
KANS. Concordia.	67	37	79	31	52	-1	.4	-.1	.4	1.2	25	86	36	0	2	1	0
Dodge City.	70	38	83	32	54	0	T	-.3	T	.5	16	70	23	0	1	1	0
Goodland.	67	36	77	33	52	3	T	-.2	T	.8	36	84	33	0	0	0	0
Topoka.	65	37	75	33	51	-3	.2	-.3	.2	3.8	69	82	43	0	0	1	0
Wichita.	71	42	80	35	56	0	T	-.5	T	2.5	44	81	31	0	0	1	0
KY. Lexington.	60	40	83	31	50	-4	.7	-.2	.5	12.7	295	79	51	0	1	2	0
Louisville.	62	40	84	34	51	-3	.7	-.1	.6	12.8	261	82	51	0	0	2	1

Based on preliminary reports and 1941-70 normals

Weather Data for the Week Ending Oct. 28, 1979

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-hours, in.	Total, in., since Sept. 3	Pct. normal since Sept. 3	Average maximum	Average minimum	Temperature °F		Precipitation		
														90 and above	32 and below	.01 inch or more	.50 inch or more	
LA. Baton Rouge . . .	76	51	82	42	63	- 2	.9	.3	.9	4.3	70	90	45	0	0	1	1	
Lake Charles . . .	77	52	82	44	64	- 3	1.5	.7	1.5	14.1	199	91	48	0	0	1	1	
New Orleans . . .	78	55	84	47	67	0	.6	.2	.6	3.6	50	74	44	0	0	1	1	
Shreveport . . .	77	49	81	41	63	- 2	1.4	.7	1.4	5.4	100	90	46	0	0	1	1	
MAINE. Caribou . . .	55	43	77	25	49	9	.2	.6	.2	6.3	102	83	58	0	3	1	0	
Portland . . .	57	38	81	27	47	1	.9	.1	.5	10.1	174	92	57	0	3	2	1	
MD. Baltimore . . .	62	42	85	33	52	- 2	.3	.3	.3	12.2	235	85	48	0	0	2	0	
MASS. Boston . . .	61	44	83	33	53	0	.2	.5	.2	6.7	120	78	50	0	0	2	0	
Chatham . . .	57	45	66	36	51	-	.3	.1	.1	5.7	102	73	61	0	0	2	0	
MICH. Alpena . . .	45	36	76	29	41	- 3	.9	.5	.3	3.0	63	-	-	0	4	4	0	
Detroit . . .	53	38	80	25	46	- 4	.1	.5	T	2.2	51	73	58	0	3	1	0	
Flint . . .	52	38	80	30	45	- 3	.5	0	.3	2.2	51	80	66	0	2	3	0	
Grand Rapids . . .	55	38	82	33	47	- 2	1.0	.4	.9	2.1	38	84	64	0	0	2	1	
Houghton Lake . . .	45	37	78	26	41	- 3	1.0	.4	.8	2.6	47	89	71	0	3	3	1	
Lansing . . .	52	41	80	28	46	- 2	.9	.4	.6	2.1	46	74	57	0	1	2	1	
Marquette . . .	36	30	45	27	33	-12	4.1	3.5	2.2	9.1	172	91	80	0	5	6	2	
Muskegon . . .	51	37	75	30	44	- 4	1.1	.5	.6	4.8	84	79	60	0	1	4	1	
S. Ste. Marie . . .	43	33	65	28	38	- 5	3.2	2.6	1.3	7.9	130	82	69	0	4	4	3	
MINN. Duluth . . .	43	32	53	25	37	- 4	.3	-	.2	.3	3.4	68	78	55	0	3	2	0
Internatl. Falls . . .	39	25	49	17	32	- 7	.1	-	.2	.1	1.4	30	86	57	0	6	1	0
Minneapolis . . .	50	33	66	29	42	- 4	.7	-	.3	.6	4.4	105	82	47	0	3	1	1
Rochester . . .	48	32	68	28	40	- 5	2.0	1.7	1.9	5.0	109	88	53	0	3	2	1	
St. Cloud . . .	50	30	66	22	40	- 4	.1	-	.3	.1	3.3	83	85	-	0	5	2	0
MISS. Jackson . . .	74	43	81	35	59	- 4	.8	.3	.6	6.7	140	94	44	0	0	2	1	
Meridian . . .	75	43	80	36	59	- 2	.4	-	.1	.3	8.6	169	90	45	0	0	2	0
MO. Columbia . . .	65	39	76	33	52	- 3	.4	-	.2	.3	2.8	39	73	41	0	0	1	0
Kansas City . . .	64	39	73	34	52	- 2	.5	-	.1	.5	2.8	40	75	35	0	0	1	0
St. Louis . . .	65	42	77	35	53	- 2	.5	-	.1	.5	1.7	33	85	44	0	0	1	0
Springfield . . .	72	42	77	33	57	- 2	.6	-	.1	.6	2.3	32	77	36	0	0	1	1
MONT. Billings . . .	61	40	72	32	50	5	.1	-	.1	.1	.8	35	73	36	0	1	1	0
Glasgow . . .	60	37	64	32	48	6	T	-	.1	T	.8	67	87	40	0	1	1	0
Great Falls . . .	58	38	70	30	48	3	T	-	.1	T	1.0	59	71	34	0	1	0	0
Havre . . .	60	36	65	27	48	6	0	-	.1	0	1.3	81	79	36	0	1	0	0
Helena . . .	57	34	63	24	45	3	T	-	.1	T	.5	38	85	38	0	3	0	0
Kalispell . . .	50	35	55	27	43	4	.4	-	.1	.3	1.9	83	91	73	0	3	5	0
Miles City . . .	63	41	76	26	52	7	T	-	.1	T	.3	17	69	31	0	1	0	0
Missoula . . .	50	37	55	30	44	3	T	-	.2	T	.9	50	90	73	0	2	3	0
NEBR. Grand Island . . .	64	33	74	26	49	- 1	.1	-	.1	.1	2.1	62	80	34	0	4	1	0
Lincoln . . .	63	34	75	29	49	- 2	.4	-	.1	.3	1.2	28	95	48	0	3	2	0
Norfolk . . .	61	32	73	26	47	- 2	.1	-	.1	.1	3.4	97	85	42	0	4	1	0
N. Platte . . .	70	32	85	28	51	- 4	0	-	.2	0	1.3	45	75	26	0	4	0	0
Omaha . . .	59	36	69	27	48	- 2	.6	-	.3	.6	3.9	87	89	54	0	2	1	1
Valentine . . .	66	32	81	22	49	3	0	-	.2	0	1.8	78	85	33	0	5	0	0
NEV. Ely . . .	63	29	70	21	46	3	0	-	.1	T	.8	89	61	22	0	5	1	0
Las Vegas . . .	79	51	88	47	65	2	0	-	.1	0	0	33	15	0	0	0	0	0
Reno . . .	68	31	76	25	49	2	T	-	.1	T	.3	43	69	18	0	5	0	0
Winnemucca . . .	66	31	75	22	48	3	T	-	.2	T	.6	67	77	25	0	5	1	0
N. H. Concord . . .	58	38	86	23	48	2	.4	-	.3	.3	6.9	128	79	37	0	2	2	0
N. J. Atlantic City . . .	62	43	83	33	52	- 1	0	-	.9	0	5.5	95	82	48	0	0	0	0
Trenton . . .	59	46	83	36	53	- 1	.2	-	.4	-	10.0	185	-	-	0	0	2	0
N. MEX. Albuquerque . . .	75	39	82	31	57	3	0	-	.1	0	.6	43	61	13	0	1	0	0
Roswell . . .	75	41	86	37	58	2	0	-	.2	0	.1	4	-	-	0	0	0	0
N. Y. Albany . . .	58	41	86	29	50	2	.2	-	.4	.2	7.4	140	74	45	0	1	3	0
Binghamton . . .	52	38	81	29	45	- 2	.6	-	.1	.4	6.7	120	83	58	0	3	3	0
Buffalo . . .	53	43	81	34	48	0	.6	-	.1	.3	9.3	160	73	49	0	0	4	0
New York . . .	60	49	83	37	55	0	.2	-	.5	.2	7.8	144	68	49	0	0	1	0
Rochester . . .	53	42	82	33	47	- 2	.5	-	.1	.3	7.5	163	85	58	0	0	5	0
Syracuse . . .	55	41	84	34	48	- 1	.8	-	.1	.5	7.2	138	83	60	0	0	4	1
N. C. Asheville . . .	67	39	77	28	53	- 1	.3	-	.4	.3	6.3	100	91	38	0	1	1	0
Charlotte . . .	68	43	79	35	55	- 3	.6	0	.6	11.8	211	90	42	0	0	1	1	0
Greensboro . . .	68	40	81	29	54	- 2	.3	-	.3	.3	15.5	263	90	38	0	1	1	0
Hatteras . . .	70	49	81	32	60	- 3	T	-	1.1	T	14.1	144	76	52	0	1	2	0
Raleigh . . .	69	42	83	30	55	- 2	.3	-	.1	.3	8.1	135	96	49	0	1	1	0
Wilmington . . .	71	47	82	37	59	- 3	T	-	.6	T	15.3	187	81	47	0	0	0	0
N. DAK. Bismarck . . .	54	27	65	16	41	- 2	T	-	.1	T	.8	40	85	44	0	5	1	0
Fargo . . .	50	31	62	19	41	- 2	.1	-	.1	T	.7	26	80	48	0	3	2	0
Williston . . .	58	33	63	27	46	- 4	T	-	.1	T	.5	31	80	43	0	4	0	0
OHIO. Akron-Canton . . .	53	38	78	25	46	- 4	.1	-	.5	.1	9.5	207	76	42	0	2	3	0
Cincinnati . . .	58	36	82	27	47	- 6	.5	-	0	.3	10.1	235	74	48	0	4	2	0
Cleveland . . .	55	41	79	27	48	- 3	.2	-	.4	.1	4.9	98	84	60	0	2	3	0
Columbus . . .	57	40	82	30	48	- 2	.1	-	.3	.1	8.2	210	84	58	0	2	4	0
Dayton . . .	56	36	80	29	46	- 6	.4	-	.1	.3	5.4	138	81	49	0	4	4	0
Toledo . . .	56	39	81	27	47	- 2	.2	-	.3	.2	4.8	111	83	56	0	2	2	0
Youngstown . . .	53	38	80	22	46	- 3	.2	-	.5	.1	6.8	136	83	54	0	2	3	0

Based on preliminary reports and 1941-70 normals

Weather Data for the Week Ending Oct. 28, 1979

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-hours, in.	Total, in., since Sept. 3	Pct. normal since Sept. 3	Average maximum	Average minimum	Temperature °F		Precipitation		
														90 and above	32 and below	.01 inch or more	.50 inch or more	
OKLA.Okla. City . . .	75	46	81	39	61	2	T	-.5	F	1.0	18	69	24	0	0	0	0	
Tulsa . . .	75	46	83	40	61	1	T	-.6	F	1.2	17	75	33	0	0	1	0	
OREG.Astoria . . .	60	48	63	41	54	3	5.3	3.5	1.6	11.8	136	93	74	0	0	6	3	
Burns . . .	50	33	57	25	41	3	1.7	0	.1	1.3	118	88	58	0	1	4	0	
Medford . . .	62	46	71	40	54	4	1.7	1.1	.7	3.9	163	85	59	0	0	6	1	
Pendleton . . .	58	44	63	39	51	2	.3	0	.2	1.9	127	80	59	0	0	3	0	
Portland . . .	63	51	67	45	57	6	2.1	1.1	.5	5.1	111	91	63	0	0	6	1	
Salem . . .	61	47	65	41	54	4	2.5	1.4	.7	6.1	124	94	67	0	0	7	2	
PA.Allentown . . .	58	43	84	34	50	0	1.1	.5	.7	11.6	200	78	56	0	0	3	1	
Erie . . .	56	45	84	34	51	1	1.1	.3	.7	9.1	147	77	56	0	0	2	1	
Harrisburg . . .	58	40	81	32	49	3	.8	.2	.5	10.5	219	83	50	0	1	1	1	
Philadelphia . . .	60	43	82	35	52	2	.4	.2	.2	8.8	169	82	57	0	0	3	0	
Pittsburgh . . .	54	38	79	22	46	4	.2	.4	.1	6.1	128	72	44	0	2	4	0	
Scranton . . .	56	41	83	30	48	1	.9	.3	.7	8.9	178	63	50	0	1	2	1	
R.I.Providence . . .	62	43	86	30	52	1	.3	.5	.2	8.1	137	85	43	0	1	2	0	
S.C.Charleston . . .	74	49	83	38	62	2	.3	.3	.3	20.0	256	93	50	0	0	1	0	
Columbia . . .	73	39	82	31	56	5	.1	.4	.1	10.0	154	88	44	0	1	1	0	
Greenville . . .	69	43	77	37	56	3	.3	.4	.3	8.7	136	83	45	0	0	1	0	
S.DAK.Aberdeen . . .	57	30	68	21	44	0	T	.2	T	.1	4	74	35	0	4	0	0	
Huron . . .	60	31	71	20	46	0	T	.3	T	.7	23	84	40	0	5	0	0	
Rapid City . . .	64	33	70	27	49	2	0	.2	0	.6	30	74	33	0	3	0	0	
Sioux Falls . . .	56	31	71	25	44	2	T	.3	T	4.6	110	90	48	0	5	0	0	
TENN.Chattanooga . . .	70	43	80	36	56	1	.7	0	.7	9.0	150	83	43	0	0	1	1	
Knoxville . . .	66	41	83	35	53	4	.5	.1	.3	4.4	88	92	43	0	0	2	0	
Memphis . . .	72	50	79	44	61	2	1.5	.9	1.0	5.1	98	75	36	0	0	2	2	
Nashville . . .	67	43	84	34	55	2	2.7	2.2	2.0	14.4	294	87	45	0	0	2	2	
TEX.Abilene . . .	79	50	85	40	64	2	0	.5	0	0	0	53	18	0	0	0	0	
Amarillo . . .	73	39	90	33	56	0	0	.4	0	.5	14	60	19	1	0	0	0	
Austin . . .	80	52	85	45	66	1	T	.6	T	1.4	22	74	32	0	0	1	0	
Beaumont . . .	78	52	83	42	65	2	2.1	1.3	2.0	8.5	101	96	47	0	0	2	1	
Brownsville . . .	86	59	95	51	72	1	T	.6	T	8.7	107	86	40	2	0	0	0	
Corpus Christi . . .	82	54	87	43	68	3	.2	.3	.2	13.1	177	88	42	0	0	1	0	
Del Rio . . .	83	54	87	45	68	0	0	.3	0	.7	15	56	25	0	0	0	0	
El Paso . . .	83	40	90	38	62	1	0	.1	0	.4	22	48	15	1	0	0	0	
Fort Worth . . .	78	51	83	45	64	0	T	.6	T	2.9	53	74	28	0	0	0	0	
Galveston . . .	75	64	80	55	69	1	.1	.4	.1	10.2	131	71	48	0	0	1	0	
Houston . . .	80	48	86	41	64	4	.5	.4	.5	9.6	120	97	47	0	0	1	0	
Lubbock . . .	76	42	88	36	59	1	0	.4	0	.2	5	50	16	0	0	0	0	
Midland . . .	77	45	87	42	61	1	0	.3	0	1.0	33	69	24	0	0	0	0	
San Angelo . . .	79	45	89	36	62	2	0	.3	0	1.0	23	69	20	0	0	0	0	
San Antonio . . .	81	51	85	42	66	1	T	.6	T	.8	13	74	29	0	0	1	0	
Victoria . . .	80	49	86	40	65	5	T	.7	T	9.1	118	95	40	0	0	0	0	
Waco . . .	78	49	84	41	63	2	.3	.2	.3	3.4	62	90	36	0	0	1	0	
Wichita Falls . . .	78	47	84	40	62	0	T	.5	T	1.0	19	74	23	0	0	0	0	
UTAH.Blanding . . .	63	33	69	28	48	0	0	.3	0	.8	35	79	24	0	3	0	0	
Salt Lake City . . .	65	39	78	33	52	4	T	.3	T	1.4	82	82	36	0	0	1	0	
VT.Burlington . . .	53	42	81	31	48	2	.3	.3	.2	6.6	127	70	53	0	3	2	0	
VA.Lynchburg . . .	64	37	82	24	50	5	.2	.4	.2	12.6	233	91	42	0	3	2	0	
Norfolk . . .	67	47	83	40	57	2	.8	.2	.8	15.4	233	78	44	0	0	1	1	
Richmond . . .	67	43	84	31	55	1	.4	.3	.4	13.0	217	94	52	0	1	2	0	
Roanoke . . .	62	39	83	25	51	4	.2	.5	.2	12.3	198	75	42	0	2	1	0	
WASH.Colville . . .	52	41	56	35	47	4	1.2	.8	.3	2.6	130	77	42	0	0	6	0	
Omak . . .	56	42	62	35	49	6	1.3	1.0	.5	2.7	225	77	42	0	0	6	1	
Quillayute . . .	57	45	60	40	51	3	6.4	3.5	1.4	15.3	100	97	82	0	0	7	6	
Seattle-Tacoma . . .	59	48	62	44	54	4	2.2	1.1	.6	4.5	83	78	60	0	0	7	1	
Spokane . . .	53	40	57	35	47	3	.3	.1	.2	1.6	76	84	67	0	0	5	0	
Walla Walla . . .	63	48	68	43	55	4	.6	.2	.3	2.9	132	80	61	0	0	4	0	
Yakima . . .	60	41	64	36	51	4	.5	.3	.4	.8	89	83	47	0	0	3	0	
W.VA.Beckley . . .	55	37	77	23	46	4	.5	.1	.4	7.2	133	99	54	0	2	2	0	
Charleston . . .	62	41	85	26	51	3	.3	.3	.2	7.5	150	82	45	0	2	3	0	
Huntington . . .	61	41	85	28	51	3	.3	.2	.1	8.0	178	78	45	0	2	4	0	
Parkersburg . . .	58	39	83	28	49	5	.2	.3	.2	6.9	153	76	45	0	2	2	0	
WISC.Green Bay . . .	44	34	54	31	39	6	1.4	1.0	.9	2.9	58	84	69	0	4	3	1	
La Crosse . . .	49	31	67	24	40	8	.9	.5	.9	4.1	82	91	56	0	4	2	1	
Madison . . .	54	31	71	19	42	4	1.7	1.3	1.5	2.8	55	93	56	0	3	2	1	
Milwaukee . . .	54	37	73	27	46	2	.5	.1	.5	1.7	37	86	57	0	1	2	0	
WYO.Casper . . .	61	30	70	21	45	2	.1	.1	.1	.5	31	57	23	0	5	1	0	
Cheyenne . . .	63	33	72	28	48	4	0	.2	0	.5	28	53	18	0	3	0	0	
Lander . . .	59	31	63	25	45	3	T	.3	T	.2	9	63	23	0	6	0	0	
Sheridan . . .	61	33	69	25	47	3	.3	.1	.1	2.1	100	80	34	0	4	2	0	
P.R.San Juan . . .	92	76	95	75	84	4	.1	1.2	1	10.5	97	93	59	6	0	2	0	

Based on preliminary reports and 1941-70 normals

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 ESCS State offices in cooperation with the National Weather Service.

ALABAMA: Cool midweek, scattered frost 24th. Warmer at end. Average 1° subnormal. Showers statewide 22d, again some locations 28th; heaviest total 1.60 in.

Fieldwork: 5.5 days suitable. Soil moisture mostly adequate. Crop harvest main activity. Corn 90% harvested, 91% 1978, 72% average. Soybeans 90% dropping leaves, 75% mature; 48% harvested, 57% 1978, 35% average. Cotton 86% bolls open; 36% harvested, 68% 1978, 38% average. Peanut harvest virtually complete. Wheat 58% seeded, 56% 1978, 61% average. Sorghum 68% harvested, 73% 1978. Condition of soybeans good to excellent; cotton mostly good; pastures mostly good; pecans poor to fair.

ARIZONA: Cool early, warmed up later. Average temperatures near normal mountains, 5° above normal southwest deserts. No precipitation.

Cotton harvest excellent progress. Defoliation still active. Picking about 46% complete, 36% last year, average 39%. Land preparation small grains excellent progress. Sorghum, corn harvests, seasonal progress. Sugarbeet planting nearing completion. Alfalfa haying active. Lettuce harvest underway Salt River Valley, Cochise County virtually complete. Melon harvest underway but winding down. Other mixed vegetables good progress. Lemon harvest full swing, grapefruit harvest underway. Other citrus fruit good progress. Diesel, gasoline mostly tight, LP gas adequate southeast, all other areas adequate supplies. Higher elevation ranges mostly good condition. Scattered rains too little, too late for winter browse. Cattle in fairly good condition. Water hauling, supplemental feeding increasing as conditions deteriorate.

ARKANSAS: Cooler than normal. Highest normal 64°, lowest 56°. Highest mean 66°, lowest 56°. Highest temperature 89°, lowest 31°. Most rainfall 1.37 in., least 0.06 in.

Rice and sorghum harvesting declining. Soybean and cotton harvests increasing. Rain aided small grains and pastures. Cool temperatures slowed development of bolls and late beans. Fieldwork: 5.5 days suitable. Diesel 74% adequate, 24% tight; gasoline 90% adequate, 6% tight; LP gas 95% adequate. Soybean harvest increasing; 40% combined, 46% 1978, 34% average. Cool weather hampered cotton boll development and hindered harvesting; open bolls 84%, 92% 1978, 87% average; gins operating 24 hours, harvesting 39% complete, 72% 1978, 49% average. Rice harvest slowing; combining 94% complete, 99% 1978, 95% average. Corn harvest moved slowly to halfway mark, 82% 1978, 95% average. Sorghum harvest nearing completion; combining 89% complete, 96% 1978, 93% average. Small grains seeding increased, rain aided stands, helped seed germination. Wheat 58% seeded, 56% 1978, 51% average. Oats 52% seeded, 58% 1978, 62% average. Livestock fair to good. Hay being fed.

CALIFORNIA: Significant precipitation to north and central 25th.

Rain hampered fieldwork. Rice harvest 75% complete, 79% last year; moisture content high. Cotton harvest 37% complete, 28% last year. Ginning activity high but large amount of cotton still being stored in field. Fall planting wheat, barley, oats

getting started. Sorghum harvest slowed. Dry bean harvest continued. Some damaged by rain. Fall planting of sugarbeets started. Date picking under-way desert. Table and wine grape harvests nearly finished. Rains slowed Cabernet harvest Napa valley. Kiwi harvest underway. Olives harvested widely. Persimmon, pomegranate quality good. Light desert grapefruit, lemon movement; good quality. Navel orange harvest started. Valencias nearly done. Almond, walnut harvests nearing completion. Harvest delayed by rain most areas. Broccoli, cauliflower harvest active coastal areas. Some processing cauliflower harvested San Joaquin Valley. Cantaloup harvest about at peak desert areas. Carrot movement slow Salinas, Kern districts. Celery heavy supply central coast. Lettuce near peak San Joaquin Valley; lighter central coast. Rains stopped onion, potato harvest Tulelake-Butte Valley. Market tomato harvest slowed. Rains beneficial germination, growth foothill range grass. Supplemental feeding active. Calving, lambing continued. Cattle, sheep grazing harvested fields. Farm fuels sufficient.

COLORADO: Only significant precipitation occurred early week in east. Temperatures averaged near normal in west, 2 to 4° above normal east.

Winter wheat good condition and development ahead of schedule. Corn grain harvest 46%, 70% 1978, 61% average. Sorghum grain harvest 50%, 49% 1978, 70% average. Frost in San Luis Valley delayed completion of fall potato harvest. Fieldwork: 5 days suitable. Ranges and pastures good condition. Livestock very good condition. Fuel supplies adequate.

FLORIDA: Warm and moist high pressure area dominated on 22d. Next day cold front entered Panhandle and became stationary across southern tip of State on 24th, bringing cool, dry air. Only light, scattered rainfall occurred. Highs in 80's until 24th when readings fell to 70's north around 80° central and low to mid-80's south. Lows occurred late week and were around 60°. Panhandle, except mid-30's and 40's interior Panhandle, to around 60° central, and low to middle 70's south.

Soil moisture mostly adequate south, central, northeast; short northwest Gulf Coast, Panhandle. Soybean harvest active. Peanut, late corn harvest nearing completion. Sugarcane harvest for sugar just beginning. Land preparation, planting small grains active. Fuel supplies mostly adequate, however, diesel fuel tight in few areas where harvest active. Pasture condition fair to good; cattle condition good. Citrus groves in excellent condition. The season's first cool weather late in week will be beneficial to fruit coloring. Soil moisture adequate with scattered irrigation on sandy soils. Few scattered showers early week vegetable growing areas but remainder clear and sunny. Rainfall generally light, some locally heavy showers. Daytime temperatures low to mid-80's, nighttime readings in 60's and 70's. Winds light to moderate. Crop conditions fair to very good, some excellent. Harvest increasing. Overall shipments up 65% from previous week. Seasonal increases expected next several weeks. Snap bean, pepper, tomato shipments increased substantially. Sweet corn, cucumber, radish, squash supplies also increased. Eggplant, okra supplies adv. Planting active. Weather

generally ideal for plant growth, progress fruit set, sizing. Strawberry transplanting very active west central area.

GEORGIA: Temperatures 1 to 5° above normal. Averages ranged from upper 50's mountains to near 70° southeast. Rainfall 24th and 25th; amounts approached 1.00 in. northwest to less than 0.25 in. southeast.

Soil moisture short to adequate. Fieldwork: 6 days suitable. Corn fair to good; 93% harvested, 91% last year, 80% average. Soybeans fair to mostly good; 24% harvested, 44% last year, 25% average. Peanuts 100% dug, 100% last year, 99% average; 99% threshed, 99% last year, 98% average. Cotton fair to good; 93% open, 96% last year; 43% harvested, 71% last year, 46% average. Pecans mostly fair to good; 13% harvested, 22% last year, 18% average. Apples 98% harvested, 95% last year. Wheat 34% planted, 30% last year. Rye 50% planted, 28% last year. Other small grains, 51% planted, 28% last year, 49% average. Pastures fair to good. Cattle and hogs good. LP gas 94% adequate, 5% tight. Diesel fuel 90% adequate, 10% tight. Gasoline 92% adequate, 6% tight.

HAWAII: Weather generally favorable. Isolated downpour and occasional gusty winds on windward Oahu caused light damage to leafy crops, banana orchards. Rains in some other parts of the Island Chain beneficial.

Spraying for insect and disease control active. Vegetable supplies: Snap beans, manoa lettuce production will be light. Insect and disease damage heavy. Heavy downpours affected green onion plantings in Waimanalo, Oahu. Banana supplies light; wind damage Waimanalo, Koolaupoko districts Island Oahu. Papaya supplies: Puna fields, Island of Hawaii active harvest. Production increasing. Pineapple harvesting slow. Sugar harvesting steady. Pastures generally good. Fuel supplies adequate.

IDAHO: Temperatures generally above average; range 17 to 73°. Precipitation at most stations; maximum 1.63 in.

Potato harvest and fall seeding virtually completed. Rains improved fall sown grain prospects. Sugarbeets 50% lifted. Apples 65% picked. Winter wheat and barley emerged on 67% of acreage. Range improvement limited by cool temperatures.

ILLINOIS: Temperatures 4 to 7° below normal northern two-thirds, near normal south. Precipitation 0.20 to 1.00 in.

Soil moisture short to adequate. Corn 55% harvested, 1978 74%, average 60%. Soybeans 95% combined, 1978 92%, average 91%. Grain sorghum harvest 70% completed. Winter wheat seeding 90% complete, 1978 91%, average 87%; 65% emerged; condition fair to good. Plowing 1980 corn and soybean acreage 30% complete, 37% 1978, 28% average. Pasture conditions fair to good. Fieldwork: 5.8 days suitable.

INDIANA: Cool, cloudy, and showers early. Temperatures ranged from 22 to 84°. General killing frost on 26th. Rainfall 0.80 to 1.40 in. southwest, 0.40 to 0.90 in. elsewhere. Sunshine 45 to 71% of possible.

Fieldwork: 5 days suitable. Topsoil and subsoil moisture adequate. Corn 40% harvested, 1978 50%, average 50%. Soybeans 80% combined, 1978 75%, average 80%. Winter wheat 80% seeded, 1978 85%, average 85%. Wheat 60% emerged; stands fair to mostly good. Spring cropland 20% plowed, 1978 25%, average 15%. Tobacco 10% stripped, 1978 10%.

IOWA: First snowfall 22d northwest half; up to 5 in. Early week precipitation above normal. Temperatures moderated during mid and late week to average slightly subnormal.

Fieldwork: 4.4 days favorable. Corn harvested 38%, 1978 74%, normal 67%. Soybean acreage harvested 99%, 1978 87%, normal 91%. Fall plowing 23%, 1978 19%, normal 23%. Topsoil and subsoil moisture adequate. Livestock good condition. Livestock market movement slower than normal, herd replacement slow. Pasture condition fair to good; poor to fair southwest, poor south central.

KANSAS: Precipitation averaged 0.20 to 0.40 in. west; 0.75 to 1.50 in. east. Temperatures averaged 52° northwest and north central to 53 to 56° elsewhere or 1 to 2° below normal northeast, 2 to 3° above normal west.

Corn harvest 75% complete, 90% last year, 65% average. Soybean harvest 80% complete, 75% last year, 55% average. Grain sorghum 70% complete, 80% last year, 55% average. Some milo being stored on ground. Wheat planting 90%, last year 100%, average 95%. Wheat stands spotty. Some replanting. Soil moisture short west, adequate to short east. Fieldwork: 4.5 days suitable.

KENTUCKY: Temperatures varied widely from near record highs early week to freezing temperatures by weekend. Overall temperatures averaged near normal. Precipitation ranged from 0.50 to 1.00 in. with most of that occurring early in period.

Fieldwork: 5.2 days favorable. Soil moisture adequate. Corn harvest 66% complete, 74% last year, 68% average. Soybean harvest increased significantly with 58% complete, 65% last year, 54% average. Burley stripping 16% complete. Wheat seeding only 58% complete. Local hay supplies adequate for winter feeding.

LOUISIANA: Temperatures 1° below to 1° above normal. Extremes: 84 and 38°. Showers statewide 22d.

Fieldwork: 5.6 days suitable. Soil moisture short to adequate. Soybeans 98% shed leaves, 98% last year; 75% harvested, 75% last year, 66% average. Cotton 93% bolls open; 56% harvested, 83% last year, 59% average. Sugarcane 97% planted, 97% last year; 15% harvested, 17% last year, 18% average; good condition. Sweetpotatoes 88% dug, 90% last year, 87% average. Sorghum 95% harvested. Oats and wheat 73% planted, 75% last year, 71% average. Pecans fair; 17% harvested, 16% last year. Hay fair to good; 85% last cutting. Pastures fair to good. Cattle good.

MARYLAND & DELAWARE: Temperatures averaged 4° above normal. Highs in mid-60's to low 70's except low 60's in mountains; lows in upper 40's to mid-50's except mid-30's in mountains. Precipitation light, averaging 0.50 in. occurring at midweek.

Fieldwork: 5.6 days suitable. Soil moisture adequate to surplus. Fuel supplies mostly adequate. Corn for grain 75% harvested, 83% last year, 78% normal. Harvesting of corn for silage complete. All soybean crop yellowed; 90% shed leaves, 98% last year, 97% normal; harvest 25% complete, 45% last year, 37% average.

MICHIGAN: Temperatures averaged 5 to 10° below normal over Upper and 1 to 5° below normal over Lower. Precipitation totaled 2.00 to 4.00 in. over Upper falling as rain and snow. Precipitation mainly as rain over Lower.

Fieldwork: 4 days suitable. Soil moisture adequate. Pasture feed supplies average. Corn

over 97% mature, 100% last year and normal; 15% harvested, 42% last year, 41% normal. Soybeans 100% mature, 100% last year and normal; 38% harvested, 57% last season, 70% normal. Winter wheat 97% seeded, 97% last fall, 92% normal. Sugarbeets 75% dug, 75% last year, 69% normal. Corn silage 96% chopped, 96% last year and normal. Potatoes 97% dug, 95% last year, 97% normal. Apple harvest over 90% complete. Fall vegetable harvest coming to close.

MINNESOTA: Temperatures averaged near normal to slightly above in west, 3 to 5° below normal east. Extremes: 71 and 16°. Precipitation averaged up to 1.00 in. above normal southeast half, near normal to slightly below elsewhere. Precipitation totals generally 0.50 in. or less except south central and southeast where totals greater than 1.00 in. Light snowfall several stations.

Harvest advanced slowly. Rains, snow halted row crop harvest in south; fair progress other areas. Corn moisture still high, 29%. Most sunflowers in northwest require artificial drying. All potatoes dug. Soil moisture surplus south; short northwest, north central, west central; adequate elsewhere. Harvested: corn 17%, 1978 81%, normal 82%; soybeans 86%, 1978 98%, normal 97%; sunflowers 69%, 1978 96%, normal 89%; sugarbeets 94%, 1978 99%, normal 98%.

MISSISSIPPI: Temperatures 1 to 6° above normal. Rainfall early week statewide; rainfall late week central. Some frosts early week. Maximum rainfall 1.20 in.

Soil moisture adequate to short. Fieldwork: 5.3 days suitable. Harvest advancing rapidly. Dry weather critical to complete harvesting late cotton. Rainfall helped winter grazing crops. Soybeans 100% shedding, 100% 1978, 95% average; 83% mature, 94% 1978, 85% average; 46% harvested, 62% 1978, 46% average; crop in good condition. Cotton 38% harvested, 86% 1978, 56% average; crop in fair to good condition. Rice 94% harvested, 99% 1978, 92% average. Corn 84% harvested, 87% 1978, 78% average. Sorghum 92% harvested, 97% 1978, 90% average. Hay crops 96% harvested, 97% 1978, 95% average. Sweetpotatoes 83% harvested, 84% 1978, 86% average. Peanuts 93% harvested, 96% 1978, 94% average. Winter wheat 56% planted, 63% 1978, 69% average. Pecans 10% harvested, 12% 1978; crop in poor condition. Pasture in fair to good condition. Diesel and gasoline supplies mostly adequate with scattered tight some areas. LP gas supplies adequate.

MISSOURI: Temperatures 1 to 2° above normal north and central; 5° above normal West Ozarks and Bootheel. Rainfall general, averaging 0.75 to 1.50 in., locally heavier northwest.

Fieldwork: 4.3 days suitable. Corn 60% harvested, last year 60%, normal 63%. Soybeans 95% mature, last year 100%, normal 95%; 77% harvested, last year 66%, normal 62%. Grain sorghum 72% harvested, last year 65%, normal 66%. Cotton 62% harvested, last year 78%, normal 56%. Winter wheat 69% seeded, last year 72%. Plowing for spring planted crops, 25%, last year 31%. Pastures mostly poor to fair. Soil moisture supplies mostly short. Fuel supplies for farmwork mostly tight to adequate.

MONTANA: Very mild, temperatures averaged 2 to 5° above normal. South central and southeast had warmest temperatures, with some maximums in 70's. Except for west and southwest, precipitation confined to early week and was light. Some areas

of west and southwest received moderate amounts of rain and snow.

Soil moisture short. Fieldwork: 6 days suitable. Winter wheat condition fair. Potatoes harvested 95%, 95% 1978, 95% average. Sugarbeets harvested 90%, 95% 1978, 90% average. Cattle 80%, sheep 85% moved from summer ranges. Livestock receiving supplemental feed 5%. Winter feed supplies adequate. Cattle, sheep in good condition.

NEBRASKA: Daytime temperatures above normal; nighttime below; average near normal. Precipitation widespread in central and east early week; none or trace in west.

Corn harvest 50% complete, year ago 70%, normal 60%. Sorghum harvest 75% complete, year ago 85%, normal 80%. Soybean harvest virtually complete; last year 95%, normal 85%. Wheat condition mostly fair. Diesel 90% adequate; 10% tight; gasoline 90% adequate, 10% tight; LP gas 100% adequate. Fieldwork: 5.3 days suitable.

NEVADA: Precipitation light; under 0.10 in. most areas. Temperatures above normal. Extremes: 88 and 19°.

Moving livestock to winter ranges. Potato and alfalfa seed harvest continuing. Seeding of winter grains nearing completion.

NEW ENGLAND: Record high readings early week, rain midweek. Cold front brought more normal temperatures rest of week. Extremes: 86 and 23°.

NEW JERSEY: Temperatures averaged 2 to 4° below normal. Extremes: 21 and 88°. Rainfall averaged 0.63 in. north, 0.17 in. central, 0.16 in. south. Soil moisture in percent of field capacity, 90% north, 75% central, 72% south. Soil temperature 48° north and 53° central and south.

Fieldwork: 6.2 days suitable. Harvest of hardy fall vegetables continues. Apples and cranberry harvest in clean-up stage. Weather good for combining of field corn and soybeans. Sweetpotato digging well advanced. Seeding of cover crops and grains continues as fall crops are harvested.

NEW MEXICO: Dry. Very cold 22d warming rapidly by midweek. Subfreezing temperatures early week north.

Warm, dry weather favorable for harvest and maturing crops. All crops good condition. No killing freeze yet in major areas. Soil moisture supply short. Cotton 6% harvested. Combining grain sorghum in full swing, 45% harvested. Corn, red chile, apples, peanuts, sugarbeets, potatoes harvest continued seasonally. Lettuce full swing. Pecans good condition, hulls opening. Ranges fair, livestock good, active fall shipping.

NEW YORK: Near normal precipitation and temperatures. Record high temperatures on 22d and 23d.

Corn silage 85% chopped, over 90% last year. Grain corn 27% harvested, over 30% last year. Harvest of all vegetable crops and potatoes nearing completion. Late variety apple harvest continues. Grape harvest expected to finish this week.

NORTH CAROLINA: Temperatures averaged near normal. Precipitation light.

Fieldwork: 5.4 days suitable. Soil moisture adequate. Condition of soybeans and pasture fair to mostly good; peanuts and cotton fair to good. Harvested: Peanuts dug 82%, 1978 95%, average 93%; peanuts threshed 67%, 1978 94%, average 89%; sweetpotatoes 87%, 1978 90%,

average 86%; soybeans 17%, 1978 25%, average 15%; corn for grain 89%, 1978 94%, average 87%; apples 90%, 1978 95%, average 94%; sorghum grain 68%, 1978 80%, average 72%; cotton 39%, 1978 45%, average 37%. Planted: Wheat 40%, 1978 50%. Phenological stages: Cotton open bolls 89%; soybeans leaf drop 61%.

NORTH DAKOTA: Temperatures averaged near normal. Extremes: 12 and 68°. Precipitation light, 0.12 to 0.06 in.

Sunflower harvest delayed by high moisture content. Progress continues about 11 days behind last year. Combining 58% complete; last year 87%. Corn picking 60% complete, flax 97% combined. Soil moisture short. Pastures in poor condition. Supplemental grazing on crop stubble. Forage supplies low. Calf marketings heavy. Winter wheat needs more moisture for good fall growth.

OHIO: Temperatures cooler than normal. Extremes: 88° south, 21° northeast. Total rainfall light; 0.20 in. over most of state, 0.50 in. southwest. Soil temperatures decreased 5°.

Insect damage and stalk rot damage becoming more evident in corn. Additional lodging of both corn and soybeans occurred. Some lines evident at elevators. Producers stripping tobacco. Of wheat planted, 40% emerged; good condition. Corn harvested 35%, 55% 1978, 45% average. Soybeans harvested 65%, 75% 1978, 85% average. Wheat planted 80%, 90% 1978, 90% average. Apples harvested 85%, 85% 1978, 85% average. Potatoes harvested 95%, 100% 1978, 95% average. Popcorn harvested 50%, 65% 1978, 60% average. Fieldwork: 5 days favorable. Pasture condition very good. Soil moisture adequate to surplus.

OKLAHOMA: Temperatures over western half averaged 1 to 2° above normal while temperatures over south-east portion averaged 1 to 2° below normal. Temperatures elsewhere near normal. Precipitation very light. Largest average was 0.31 in. in east central.

Dry, open weather. Producers continued to dust in wheat as most operators waiting for additional rainfall to plant. Precipitation very critical for germination and promote pasture. Wheat planted 90%, 95% 1978, 95% average. Wheat up to stand 45%, 70% 1978 and average. Sorghum mature 100%, 90% 1978, 95% average; harvested 50%, 35% 1978, 50% average. Cotton open bolls 100%, 95% 1978, 80% average; harvested 10% 1979, 1978, and average. Fieldwork: 6.4 days suitable.

OREGON: Temperatures near seasonal normal. Rainfall 2.00 to 4.00 in. west, 1.00 to 2.00 in. east.

Soil moisture mostly adequate to surplus west, mostly adequate east. Winter wheat 76% planted, 52% emerged; seeding slowed by rains. Spraying of grass seed fields well along. Rains slowing harvesting and field preparation in most areas. Walnut harvest underway. Potato harvest continuing. Livestock condition good. Range and pasture condition variable. Recent rains improved range and pasture growth.

PENNSYLVANIA: Indian summer weather through 23d, much colder thereafter. Temperatures dropped as much as 40°. First flurries of season 26th and 27th mornings. Some moderation weekend. Extremes: 87 and 15°. Showers and a few thunder storms 23d night with additional showers weekend produced 0.25 to 0.75 in. rainfall most areas and up to 1.00 in. east central 25th night.

Fieldwork: 6 days suitable. Soil moisture adequate to surplus. Activities: Harvest of corn, soybeans, potatoes, fruit and vegetables,

hay and silo filling; seeding small grain. Corn 25% harvested; last year 45%, normal 44%. Potatoes 96% dug. Soybeans 29% harvested. Fall plowing 95%. Wheat sown 91%. Hay quality mostly fair to poor. Feed from pastures average to above.

PUERTO RICO: Island average rainfall 0.60 in. or 1.16 in. below normal. Temperatures averaged about 81° on coasts and 76° interior. Extremes: 106 and 56°.

SOUTH CAROLINA: Temperatures near normal, most areas above normal, later cooler than usual. Extremes: 31 and 83°. Light scattered showers early week.

Soil moisture adequate to short. Fieldwork: 6 days available. Finishing corn harvest. Cotton 57% harvested, 82% last year, 57% average. Soybeans rated fair to good; leaves turned color 93%; shedding leaves 72%, 90% last year; 37% mature, 64% year ago, 46% average; 8% harvested in good weather, behind 23% last year, 14% average. Peanuts 78% harvested, 92% year ago. Fall cucumbers fair, 85% harvested. Fall snap beans poor to fair; 77% harvested. Small grains mostly fair to good condition. Weather drying soils, renewed interest in planting. Wheat seeded 23%, 30% last year, 28% average; 14% emerged, 19% last year.

SOUTH DAKOTA: Average temperatures 3° subnormal to 6° above. Cold front early week dropped temperatures to below freezing but mild remainder week. Extremes: 81 and 14°. Rain most regions but only light.

Corn for grain and soybean harvest delayed. Poor drying conditions, moisture content high. Corn harvest one week behind. Other crops near average. Topsoil moisture supplies critically short in large portions of west and central; short all other areas except for most of east central and southeast. Moving hay, moving cattle, row crop harvesting main farm activities. Grain transportation and storage problems persisted. Farm fuel supplies mostly adequate. Winter wheat poor to fair condition. Rye in fair condition. Greenbugs, aphids, grasshoppers continue damage to winter wheat and rye. Corn for grain 58% harvested, 1978 73%, average 67%. Soybeans 93% harvested, 1978 92%, average 89%. Sunflowers 77% harvested, 1978 77%. Grain sorghum 77% harvested, 1978 77%, average 79%. Alfalfa seed 99% harvested, 1978 99%.

TENNESSEE: Cold front early week. Fair midweek. Cold front at weekend. Rain totaled 0.50 to 1.50 in. west, 0.50 in. east. Temperatures 2 to 3° above normal east, normal west.

Fieldwork: 4.8 days suitable. Soil moisture adequate. Pastures and livestock good condition. Corn harvested 66%, 1978 77%, average 58%. Cotton open bolls 79%, 1978 100%, average 87%; harvested 28%, 1978 81%, average 49%. Soybeans mature 94%, 1978 95%, average 85%; harvested 44%, 1978 66%, average 33%. Burley tobacco stripped 39%, 1978 28%, average 45%. Fall plowing completed 78%, 1978 76%, average 81%. Wheat seeded 68%, 1978 69%, average 67%. Oats seeded 88%, 1978 88%, average 88%. Barley seeded 87%, 1978 87%, average 87%.

TEXAS: Cooler temperatures, strong winds to Northwest Texas 27th. Temperatures average with no precipitation other than light amounts Northeast Texas.

Above normal temperatures, dry conditions dominated weather although scattered showers occurred over parts North Central, East Texas. Continued dry conditions promoted crop maturity,

harvest at expense of small grain planting, emergence. Plains cotton producers awaiting frost to defoliate cotton. Prospects for winter grazing small grains bleak unless rains received soon. Cotton harvest gained momentum Plains, Trans-Pecos. Plains freeze would be welcomed to desiccate crop, facilitate harvest. South Texas, Valley producers shredding stalks. Panhandle only region with significant sorghum acreage remaining. Corn harvest winding down northern High Plains. Soybean harvest Plains, Central, East Texas gaining momentum. Coastal areas began harvesting early maturing beans. Grazing prospects on East Texas oat, wheat fields enhanced by scattered showers but most of State critically needs moisture. Most producers with remaining acreage to be seeded awaiting rains. Sugarbeet harvest on High Plains 33% complete. Sugarcane harvest commenced Lower Rio Grande Valley.

Cotton open bolls 84%; harvested 31%, 30% 1978, 32% average. Sorghum mature 97%; harvested 88%, 87% 1978, 88% average. Wheat planted 81%, 91% 1978, 87% average; emerged 54%, 0% 1978. Corn harvested 98%, 98% 1978, 92% average. Peanuts harvested 89%, 72% 1978, 71% average. Soybeans harvested 37%, 50% 1978, 49% average. Sugarbeets harvested 33%, 42% 1978, 40% average. Pecans harvested 9%, 8% 1978, 9% average. Sunflowers 84%, 70% 1978, 73% average. Barley planted 42%, 14% 1978. Flax planted 10%, 39% 1978, 11% average. Oats planted 72%, 89% 1978, 82% average.

Except for few areas North Central Texas that received scattered showers, most ranges, pastures continued to deteriorate lack of moisture. Forage growth limited, most areas with existing forage short, required need for some supplemental feeding. Livestock being moved onto stubble fields following harvest corn, milo. Some movement of cattle onto irrigated wheat fields. Fall lambing continued Edwards Plateau.

Lower Rio Grande Valley, harvest cucumbers, bell peppers, squash continued good volume. Cabbage, carrots, lettuce, onions making good growth, however, poor onion stands in some fields. Seeding cabbage, carrots continued. Citrus harvest continued to gain momentum with good movement early oranges and grapefruit. In Coastal Bend cabbage being planted. Late planted cucumbers in need of moisture. San Antonio-Winter Garden harvest cucumbers, cherry tomatoes, cabbage continue good volume. With irrigation, fall vegetables continue to progress well. Some cabbage continued to be planted. In East Texas, harvest sweetpotatoes nearing completion. Harvest fall vegetables picked up, however, moisture needed. North Texas light movement of collards, turnips, spinach, beets, parsley. Some areas received light frost which damaged some vegetables. Trans-Pecos, harvest chili peppers, pumpkins, acorn squash continued at El Paso. Pecos harvest bell peppers continued. High Plains lettuce harvest continued light volume. Light frost damaged some vegetables. Pecans continued to mature at fast pace. Windy days caused droppage and harvest gaining momentum. Quality of some early harvested pecans disappointing.

UTAH: Fair and mild early week. Rising trend temperatures marked improvement soil moisture. Increasing cloudiness weekend with scattered areas rain or snow and cooling trend in temperatures. Average temperatures range between 6° below normal and 3° above.

Fieldwork: 7 days suitable. Winter wheat planted virtually complete. Harvest of field crops drawing to close. Fruit harvest nearly complete. Livestock mostly on lower range. Some movement to fall market.

VIRGINIA: Temperature averaged a little below normal with frost, freezing temperatures, numerous locations, 25th and 26th. Showers mid-week with rainfall averaging about 0.33 in.

Mostly open weather speeded fieldwork. Topsoil moisture adequate to surplus. Fieldwork: 5.3 days available. Pastures good to excellent, limited hay feeding north. Small grain seeding: Wheat 35%, 43% 1978, 52% average; barley 55%, 68% 1978, 75% usual; oats 70%, 80% 1978, 81% average. Corn combining 70%, 73% 1978, 69% usual; Tidewater, southeast corn 95% combined, 95% 1978. Soybeans 15% combined, 38% 1978, 21% average; Tidewater, southeast progress 15%, 40% 1978. Grain sorghum 15% harvested, 29% 1978. No cotton picked, 75% 1978, 19% average. Peanut digging 90%, 98% 1978, 91% usual; combining 75%, 93% 1978, 76% average; no frost damage reported from freeze 27th. Farm fuel supplies mostly adequate.

WASHINGTON: West: Temperatures averaged 2 to 4° above normal. Precipitation normal to 1.70 in. above.

Celery, carrot, pumpkin harvests active. Grape harvest about finished. Fresh market cauliflower, brussels sprouts harvests continue. Field corn harvest nearly complete. Other activities: Flower bulb planting, raspberry pruning, liming, clean up. Beef cattle still on fall pastures, dairy herds on winter ration.

East: Temperatures normal to 2° above. Precipitation 0.30 to 0.60 in. above normal.

Fall seeded grains improved but condition still below average. Potato harvest ending. Field corn harvest well along. Red Delicious picking over, Winesaps nearing completion. Late grain planting, fall plowing ongoing. Most cattle on fall range. Forage, hay supplies short most areas. Greenbug, grasshopper problems reported. Wheat planted 92%, 1978 96%.

WEST VIRGINIA: Temperatures averaged slightly above normal; well below normal at end of period. Extremes: 11 and 88°. Precipitation well below normal.

Fieldwork: 4.2 days suitable. Soil moisture mostly adequate. Chopping corn, haying, tending livestock and seeding small grains main farm activities. Harvesting progress: Corn for grain 58%, 72% 1978; 3d haying 87%, average and 1978 virtually complete; potatoes virtually complete, same average, 1978. Seeding progress: Wheat 68%, 77% 1978; barley 79%, 84% 1978. Hay supplies adequate to surplus. Pasture condition good to fair. Fuel supplies mostly adequate.

WISCONSIN: Temperatures averaged 4° below normal. Week began with rain, snow, and falling temperatures. Highs in 30's and 40's 23d to 26th but warmed to 50's and 60's weekend. Precipitation substantial 22d to 23d, ranging from about 0.50 in. southeast to nearly 2.00 in. central. Several inches snow north. Low temperatures fell to teens and a few single digits morning 26th.

Harvesting slowed by wet weather early week but conditions improved about midweek. Fieldwork: 4 days suitable. Corn for grain 20% harvested, 1978 45%, normal 45%. Moisture content of corn still too high for general harvesting. High moisture corn going into silos. Most regular silo filling completed. Soybeans 40% combined, 1978 45%, normal 50%. Precipitation improved germination and growth of winter wheat. Plowing

(continued on page 19)

**HARVEST PROGRESS
FOR WEEK ENDING OCT 28**

SOYBEANS			
	1979	1978	AVG.
ALA	48	57	35
ARK	40	46	34
GA	24	44	25
ILL	95	92	91
IND	80	75	80
IOWA	99	87	91
KANS	80	75	55
KY	59	65	54
LA	75	75	66
MICH	38	57	70
MINN	85	96	97
MISS	46	62	46
MO	77	66	62
NEBR	100	95	85
N C	17	25	15
OHIO	65	75	95
S C	9	23	14
TENN	44	56	33
18 STATES	70	72	67

THESE 18 STATES PRODUCED 95% OF THE 1978 SOYBEAN CROP.

CORN			
	1979	1978	AVG.
COLO	46	70	61
GA	93	91	80
ILL	55	74	60
IND	40	50	50
IOWA	38	74	67
KANS	75	90	65
KY	66	74	68
MICH	15	42	41
MINN	17	81	82
MO	60	60	63
NEBR	50	70	60
N C	89	94	87
OHIO	35	55	45
PA	25	45	44
S DAK	50	73	67
VA	70	73	59
WIS	20	45	45
17 STATES	44	69	62

THESE 17 STATES PRODUCED 93% OF THE 1978 CORN CROP.

COTTON			
	1979	1978	AVG.
ALA	36	68	38
ARIZ	46	36	39
ARK	39	72	49
CALIF	37	28	VA
GA	43	71	46
LA	56	83	59
MISS	38	86	56
MO	62	78	56
N MEX	5	8	20
N C	39	45	37
OKLA	10	10	10
S C	57	82	57
TENN	28	81	49
TEX	31	30	32
14 STATES	34	40	37

THESE 14 STATES PRODUCED 99% OF THE 1978 COTTON CROP.

GRAIN SORGHUM			
	1979	1978	AVG.
COLO	50	49	70
KANS	70	85	55
MO	72	85	66
NEBR	75	85	80
OKLA	50	35	50
S DAK	77	77	79
TEX	88	87	88
7 STATES	76	81	72

THESE 7 STATES PRODUCED 92% OF THE 1978 GRAIN SORGHUM CROP.

RICE			
	1979	1978	AVG.
ARK	94	99	95
CALIF	75	79	NA
LA	100	100	100
MISS	94	99	92
TEX	100	100	100
5 STATES	91	93	NA
EXCL CALIF	94	97	94

THESE 5 STATES PRODUCED 99% OF THE 1978 RICE CROP.

**PLANTING PROGRESS
FOR WEEK ENDING OCT 28, 1979**

WINTER WHEAT			
	1979	1978	AVG.
CALIF	3	NA	NA
COLO	100	100	100
IDAHO	98	95	95
ILL	90	91	87
IND	80	85	85
KANS	90	100	95
MO	69	72	VA
MONT	100	100	100
NEBR	100	100	100
OHIO	80	90	90
OKLA	90	95	95
OREG	76	NA	VA
S DAK	100	100	100
TEX	81	91	87
WASH	97	96	NA
15 STATES	88	96	94

THESE 15 STATES PRODUCED 90% OF THE 1979 WINTER WHEAT CROP.

CORRECTIONS FOR W/E OCT 21			
	1979	1978	AVG.
GRAIN SORGHUM HARVESTED			
7 STATES	63	68	60
SOYBEANS HARVESTED			
ARK	23	29	22
18 STATES	89	56	55
COTTON HARVESTED			
ARK	25	37	44
14 STATES	25	35	30

NA NOT AVAILABLE

International Weather and Crop Summary

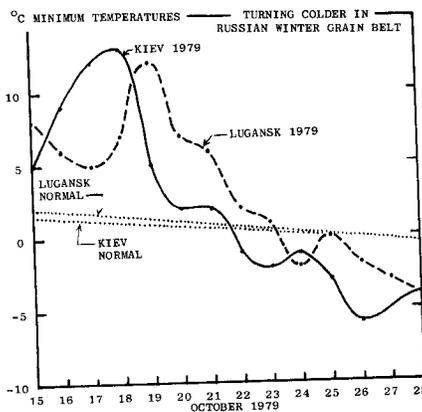
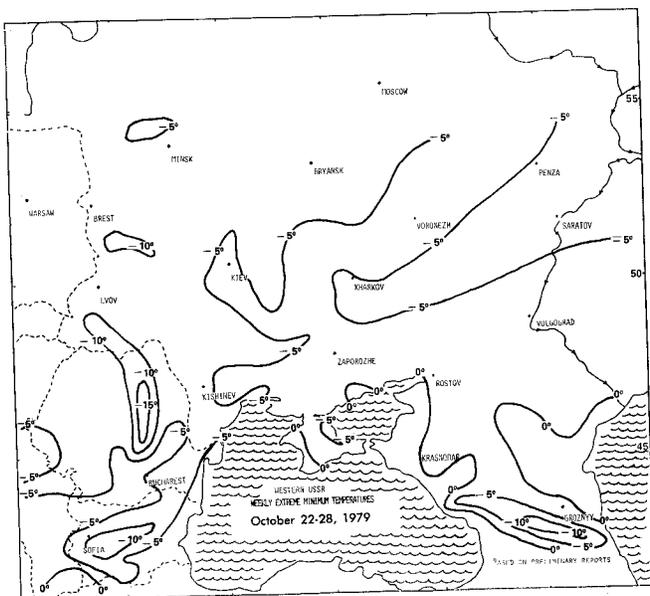
October 22 - 28

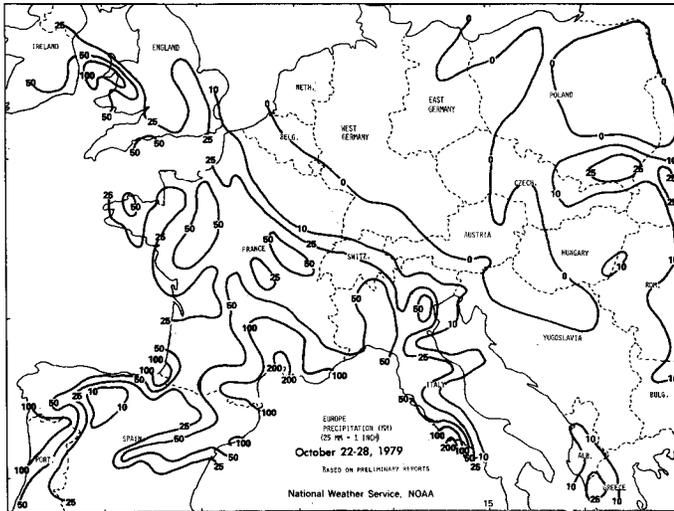
HIGHLIGHTS:

- USSR: Winter grains sown...much lower temperatures.
- EUROPE: Maize harvest nearly complete*...renewed rain in northern France. Sowing winter grains*...continued heavy rains in some Mediterranean areas.
- CHINA: Harvesting late rice...excellent harvest weather. Winter wheat sown in the north*...adequate irrigation supplies.
- INDIA: Wheat sowing season*...dry weather persists.
- AUSTRALIA: Wheat harvest near in Queensland*...unfavorably wet.
- SOUTH AFRICA: Planting maize*...continued rain in northeast.
- ARGENTINA: Wheat heading in the south*...adequate soil moisture. Corn planted*...adequate soil moisture.
- BRAZIL: Planting soybeans...adequate rain in Parana; excessive in Rio Grande do Sul.

*Based on normal crop calendar information.

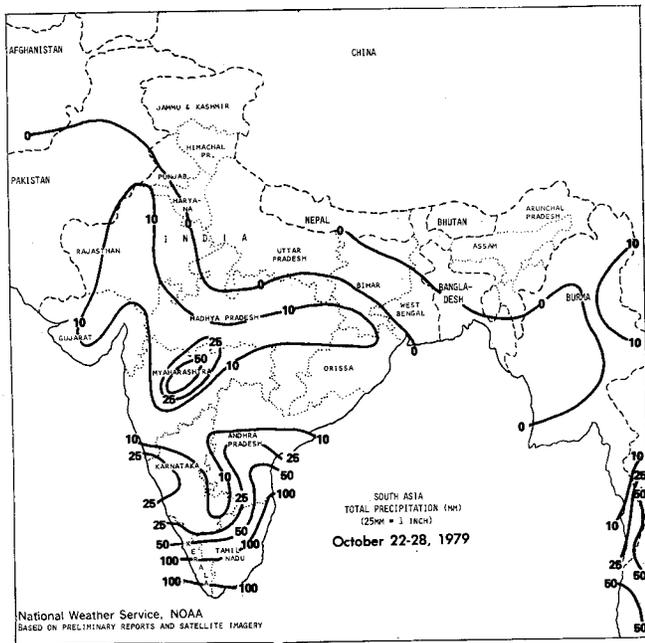
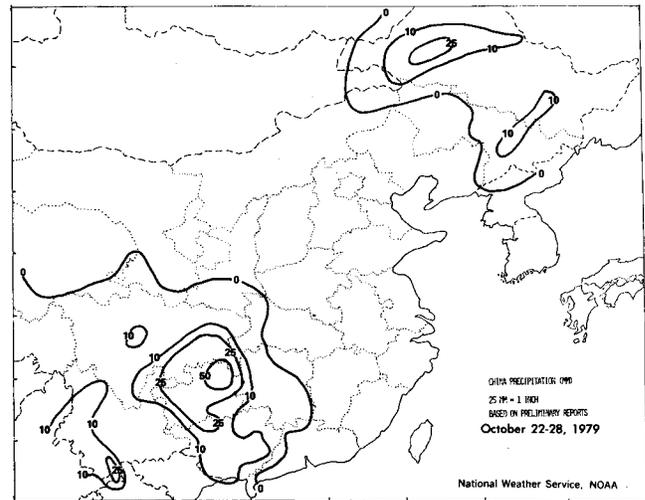
USSR. Light precipitation continued in the Ukraine this week, however, it was mostly in the form of snow, for temperatures plunged much below normal early in the week. Sub-freezing temperatures occurred over most of the Ukraine and North Caucasus with extremes of -10°C in the relatively dry western Ukraine. Maximum daytime temperatures stayed below freezing for several days in northern parts of the belt. Gradual warming should bring renewed germination prospects, especially in the North Caucasus, where much-above-normal precipitation fell over an extensive area. A cold airmass pushed southeastward producing light rainfall in cotton harvesting areas but not enough to cause any problems with harvest activities. Near-freezing temperatures occurred just south of the Aral Sea, where frost normally strikes before this time; cotton should be completely safe from any damage.



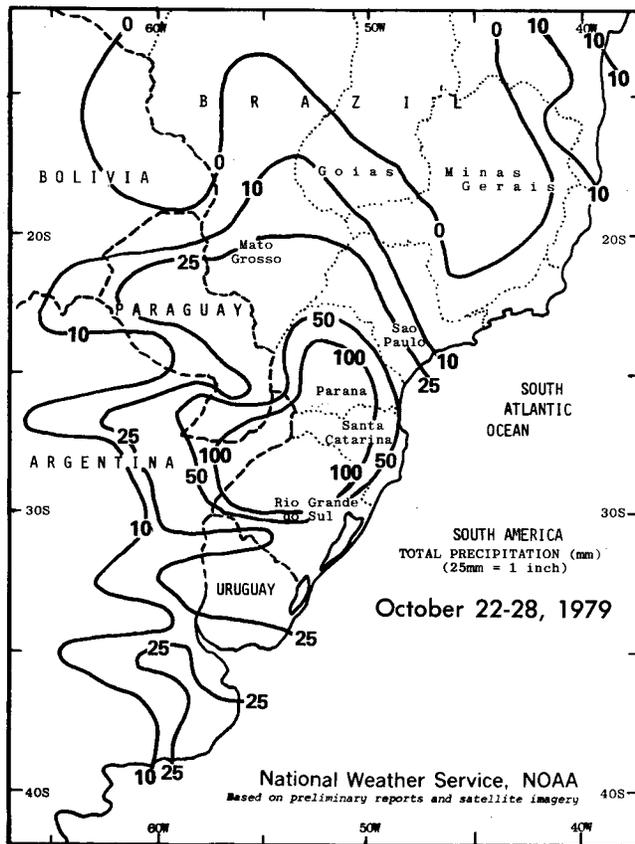


EUROPE. Wet weather continued over most southwestern areas, while northeastern portions saw a return to relatively dry weather. In three Mediterranean areas (northern Portugal, southeastern France, and northern Italy), above-normal rains fell for the fourth consecutive week. Four-week totals must be considered excessive in many locations, either delaying winter grain sowing or necessitating resowing. In the north of France, above-normal rains disrupted final maize harvest activities.

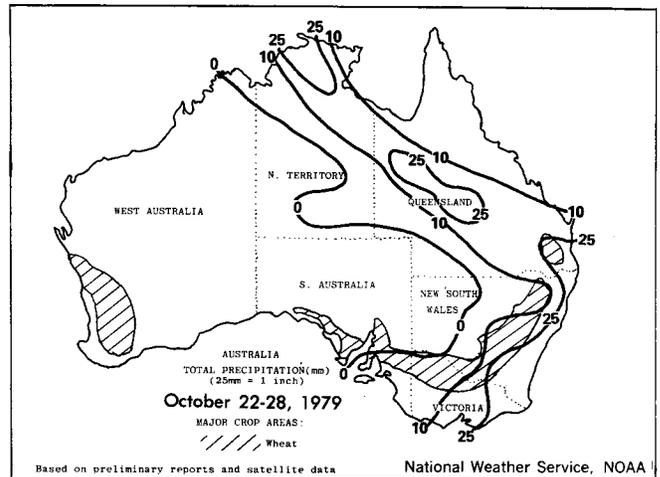
CHINA. Dry weather persisted over the southeastern third of China for the fourth consecutive week. In fact, precipitation fell only in the extreme northeast and southwest. Conditions remain favorable for harvest of the late rice crop in the southern provinces. Lack of rainfall would cause problems for newly sown wheat in the North China Plain, but irrigation supplies should be quite adequate in all areas. Temperatures remained high enough for normal fall crop development, as cold conditions stayed north of Beijing.



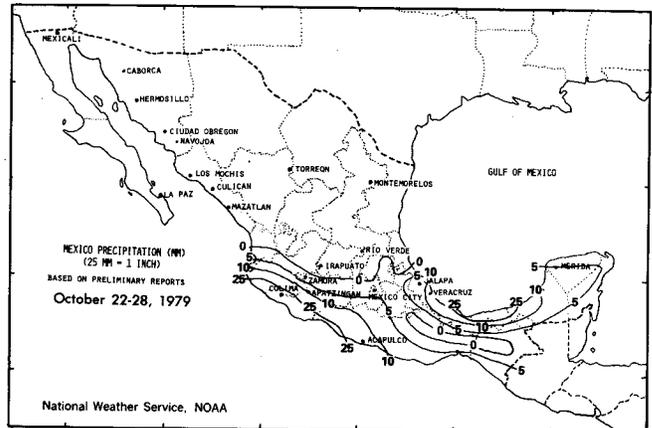
INDIA. Moderate rainfall (for this season) fell across central India but left parched winter wheat areas in the north still dry. Substantial rains were restricted to the southern tip of the peninsula---normal for this time of year.



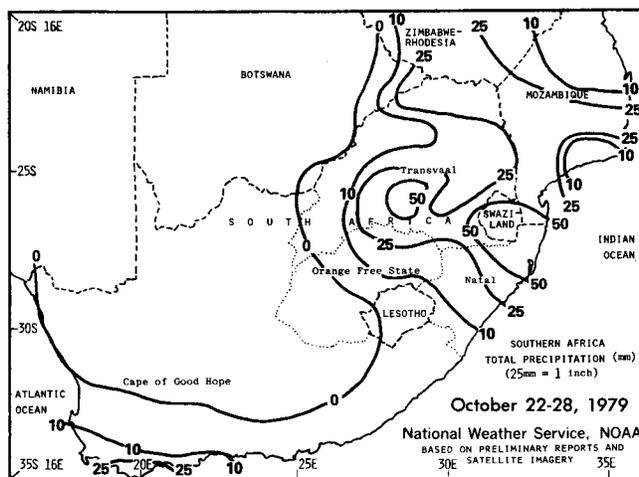
SOUTH AMERICA. Rainfall in southern Argentina wheat areas remained somewhat below normal. Soil moisture for the crop probably remained generally adequate, though some locations may have become a little dry. In Brazil, heavy rainfall returned to Santa Catarina and northern Rio Grande do Sul, disrupting early soybean-planting activities and further aggravating problems with the winter grain harvest. These rains extended north into Parana where they maintained good conditions for soybean planting and early growth.



AUSTRALIA. The only winter grain areas to receive substantial rainfall were the eastern portions along the Great Dividing Range. Minimum impacts resulted, as fields in New South Wales did not need moisture, and harvest was near in Queensland. A band of rainfall extended from northern portions of the North Territory through central Queensland--the first moisture of the season in that area. Rainfall should continue to increase and become quite general across the north.

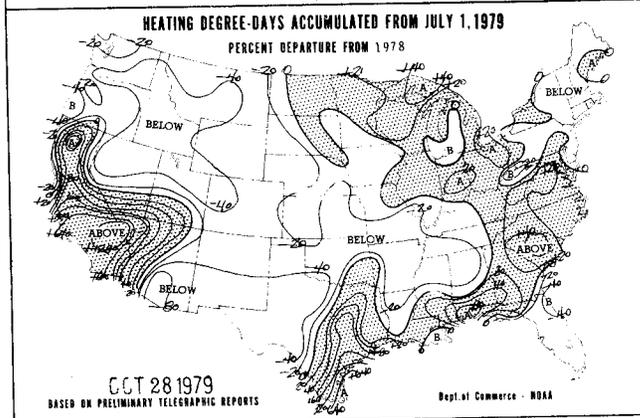
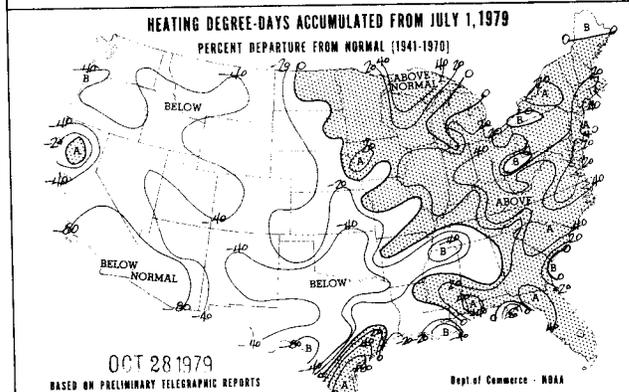
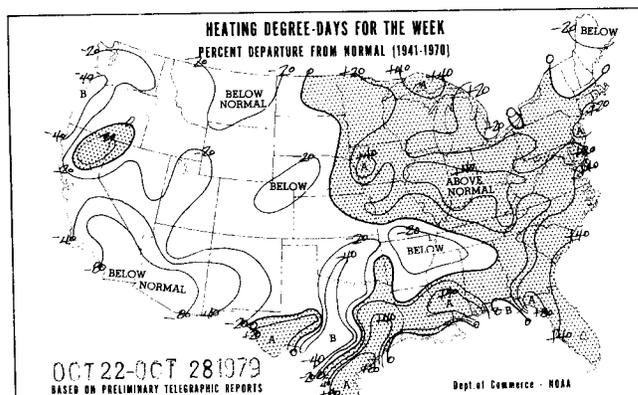
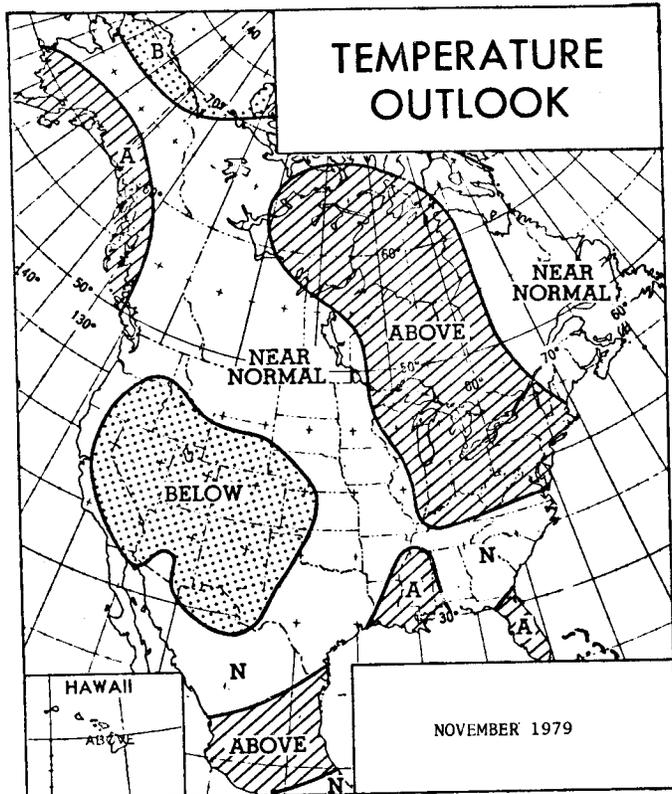
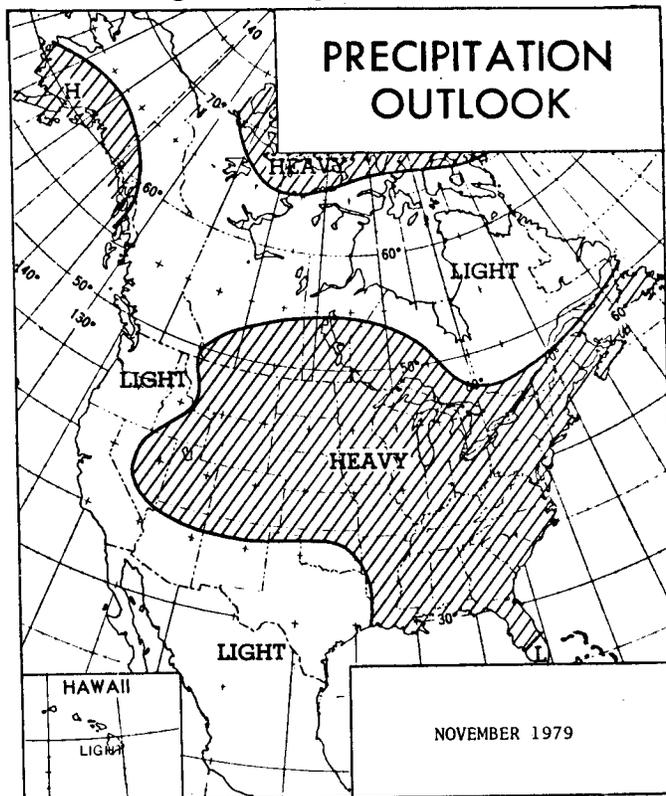


MEXICO. Dry weather continued over the major agricultural exporting areas. Rain, primarily triggered by Tropical Storm Ignacio, was limited to the southern third of the country. The storm began forming about 300 miles off the southern coast on Monday, the 22d, and slowly moved west-northwestward during the week. Temperatures decreased as the first-of-the-season cool snap moved over northern and central portions. Weather was generally favorable for crop development and harvest as well as control of diseases, insects, and weeds. Culiacan's afternoon temperatures averaged 32°C with a relative humidity of 55 percent, while overnight lows were 20°C with a humidity of 91 percent.



SOUTH AFRICA. The northeastern portion of the Maize Triangle received more rainfall, raising two-week totals there much above the norm for October. This has created good conditions for corn planting, which should now be in full swing. Drier weather returned to southwestern portions of the Triangle, perhaps giving farmers second thoughts about continuing planting.

Average Monthly Weather Outlook

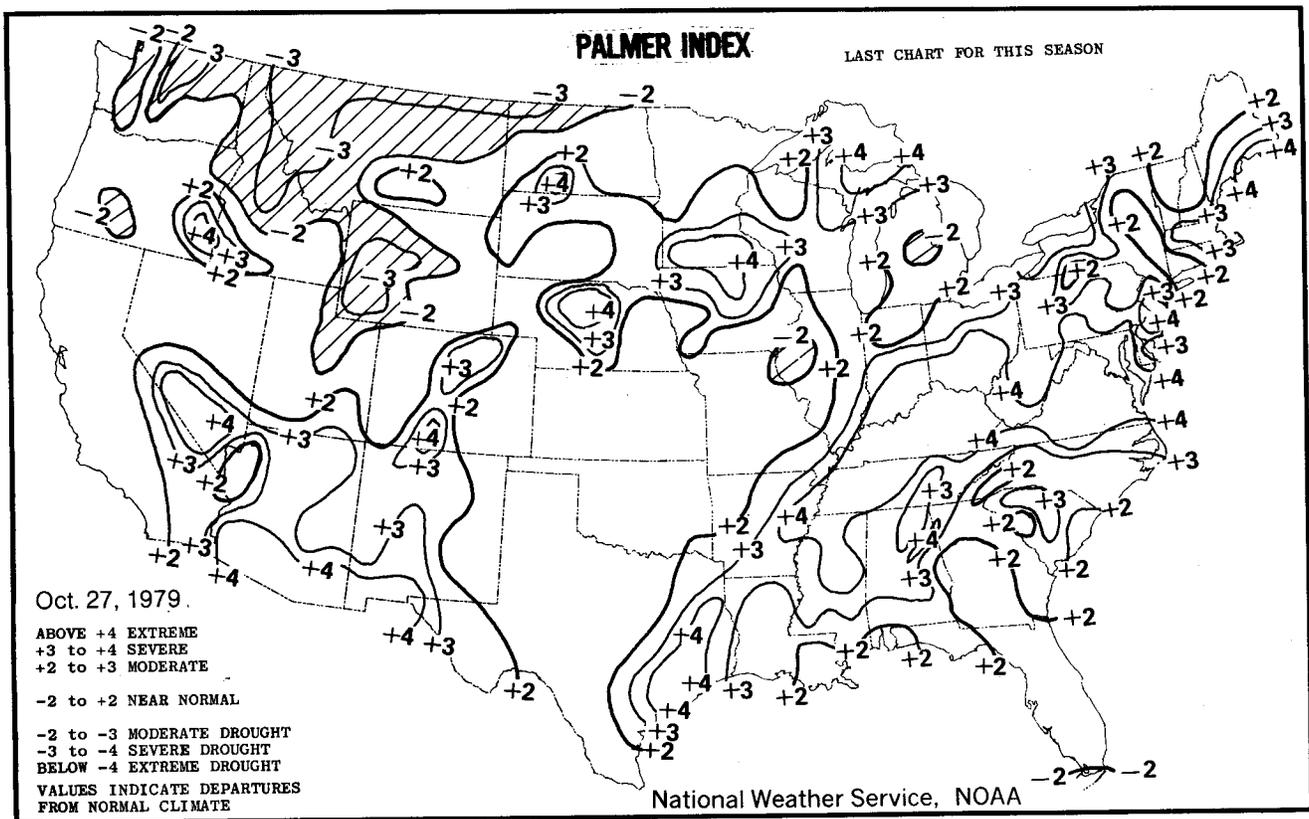


HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING OCT. 28, 1979.

STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +		
	TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1978-79		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1978-79		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1978-79
ALA. BIRMINGHAM.....	101	1	49	1	49	MAINE CARIBOU.....	117	53	994	117	202	YOUNGSTOWN.....	139	28	619	136	103
MOBILE.....	72	0	299	0	299	PORTLAND.....	125	82	827	113	82	OKLA. OKLAHOMA CITY.....	30	20	65	67	21
MONTGOMERY.....	72	0	299	0	299	DETROIT.....	141	19	141	19	58	TULSA.....	30	16	74	52	37
ARIZ. FLAGSTAFF.....	14	4	82	4	88	FLINT.....	141	19	141	19	58	OREG. ASTORIA.....	74	25	527	320	180
PHOENIX.....	14	4	82	4	88	GRAND RAPIDS.....	130	19	130	19	58	BURNS.....	141	25	527	320	180
TUCSON.....	14	4	82	4	88	HOUGHTON LAKE.....	130	19	130	19	58	WEDFORD.....	141	25	527	320	180
WINSTON.....	14	4	82	4	88	LANSING.....	130	19	130	19	58	PENDELTON.....	141	25	527	320	180
YUMA.....	14	4	82	4	88	MARQUETTE.....	130	19	130	19	58	PORTLAND.....	141	25	527	320	180
ARK. FORT SMITH.....	47	5	118	5	123	MUSKOGEE.....	130	19	130	19	58	SALEM.....	141	25	527	320	180
LITTLE ROCK.....	25	7	77	7	84	S. STE. MARIE.....	130	19	130	19	58	PA. ALLENTOWN.....	106	6	439	52	18
CALIF. BAKERSFIELD.....	4	0	660	0	660	MINN. DULUTH.....	192	27	1030	10	51	ERTS.....	111	9	462	100	99
EUREKA.....	4	0	660	0	660	INTERNATL FALLS.....	226	26	1335	219	146	HARRISBURG.....	111	9	462	100	99
FRESNO.....	19	1	111	1	112	MINNEAPOLIS.....	161	24	676	152	146	PHILADELPHIA.....	136	9	506	66	1
LOS ANGELES.....	19	1	111	1	112	ROCHESTER.....	171	24	676	152	146	PITTSBURGH.....	136	9	506	66	1
RED BLUFF.....	4	0	660	0	660	ST. CLOUD.....	175	24	676	152	146	SCRANTON.....	122	12	540	55	24
SAN DIEGO.....	23	1	184	1	185	MISS. JACKSON.....	47	15	98	25	6	R. I. PROVIDENCE.....	99	9	452	46	96
SAN FRANCISCO.....	30	1	170	1	171	MERIDIAN.....	43	5	93	13	6	S. C. CHARLESTON.....	35	9	70	11	14
STOCKTON.....	23	1	184	1	185	MO. COLUMBIA.....	91	13	282	33	4	COLUMBIA.....	66	6	144	50	60
COLD DENVER.....	86	31	328	31	359	KANSAS CITY.....	92	10	271	12	12	GREENVILLE.....	62	14	187	58	43
GRAND JUNCTION.....	19	13	137	13	150	ST. LOUIS.....	81	9	221	0	0	S. DAK. ABERDEEN.....	146	4	645	46	2
PUEBLO.....	84	19	270	19	289	SPRINGFIELD.....	55	17	192	42	73	HURON.....	134	4	653	49	9
CONN. BRIDGEPORT.....	102	25	420	25	445	NEBR. GRAND ISLAND.....	113	6	371	44	49	RAPID CITY.....	114	14	433	197	131
HARTFORD.....	116	8	577	8	585	LINCOLN.....	112	11	360	60	126	SIoux FALLS.....	148	14	593	2	11
DEL. MILINGTON.....	93	15	291	15	306	MONT. BILLINGS.....	103	32	313	347	347	TENN. CHATTANOOGA.....	63	4	161	1	11
D. C. WASHINGTON.....	79	18	212	18	230	GLASGOW.....	111	26	553	270	270	KNOXVILLE.....	69	27	219	56	31
FLA. APALACHICOLA.....	1	0	10	0	10	GREAT FALLS.....	116	26	553	270	270	MEMPHIS.....	69	17	71	55	41
DAYTONA BEACH.....	1	0	10	0	10	HAVRE.....	116	26	553	270	270	NASHVILLE.....	69	17	18	23	38
FORT MYERS.....	1	0	10	0	10	HELENA.....	116	26	553	270	270	TEXAS ABILENE.....	17	15	22	49	35
JACKSONVILLE.....	1	0	10	0	10	KELESPELL.....	116	26	553	270	270	AMARILLO.....	64	1	159	32	50
KEY WEST.....	1	0	10	0	10	SALES CITY.....	116	26	553	270	270	AUSTIN.....	11	1	18	8	3
LAKELAND.....	1	0	10	0	10	MISSOULA.....	116	26	553	270	270	BEAUMONT.....	11	1	18	8	3
MIAMI.....	1	0	10	0	10	NEBR. GRAND ISLAND.....	113	6	371	44	49	CORPUS CHRISTI.....	11	1	18	8	3
ORLANDO.....	1	0	10	0	10	LINCOLN.....	112	11	360	60	126	DEL RIO.....	4	1	9	2	2
TALLAHASSEE.....	3	0	3	0	3	MONT. BILLINGS.....	103	32	313	347	347	EL PASO.....	2	1	4	4	5
TAMPA.....	3	0	3	0	3	GLASGOW.....	111	26	553	270	270	FORT WORTH.....	15	2	23	2	1
N. EST PALM BEACH.....	3	0	3	0	3	GREAT FALLS.....	116	26	553	270	270	GALVESTON.....	15	2	23	2	1
GA. ATLANTA.....	4	0	12	0	12	HAVRE.....	116	26	553	270	270	HOUSTON.....	15	2	23	2	1
AUGUSTA.....	4	0	12	0	12	HELENA.....	116	26	553	270	270	LUBBOCK.....	15	2	23	2	1
Macon.....	4	0	12	0	12	KELESPELL.....	116	26	553	270	270	MIAMI.....	15	2	23	2	1
SAVANNAH.....	4	0	12	0	12	MISSOULA.....	116	26	553	270	270	SAN ANGELO.....	15	2	23	2	1
IDAHO BOISE.....	102	14	228	14	242	NEBR. GRAND ISLAND.....	113	6	371	44	49	SAN ANTONIO.....	15	2	23	2	1
LEWISTON.....	101	14	228	14	242	LINCOLN.....	112	11	360	60	126	VICTORIA.....	18	11	11	15	15
POCATELLO.....	118	26	409	26	435	MONT. BILLINGS.....	103	32	313	347	347	MACO.....	22	12	4	3	16
ILL. CAIRO.....	66	8	160	8	168	GLASGOW.....	111	26	553	270	270	NICHITA FALLS.....	22	12	3	3	38
CHICAGO.....	122	26	420	26	446	TRENTON.....	98	19	334	81	14	UTAH SALT LAKE CITY.....	85	32	204	252	185
MOLINE.....	114	26	361	26	387	N. MEX. ALBUQUERQUE.....	56	20	110	75	50	VT. BURLINGTON.....	132	3	771	72	107
PEORIA.....	113	26	354	26	380	ROSMELL.....	49	15	86	92	115	VA. LYNCHBURG.....	97	25	346	119	64
ROCKFORD.....	113	26	354	26	380	N. Y. ALBANY.....	114	4	618	79	133	NORFOLK.....	85	23	174	48	23
SPRINGFIELD.....	114	26	361	26	387	BINGHAMTON.....	147	22	776	133	30	RICHMOND.....	85	23	174	48	23
IND. EVANSVILLE.....	117	42	463	42	505	BUFFALO.....	129	12	588	73	33	ROANOKE.....	101	28	361	131	39
FORT WAYNE.....	114	42	463	42	505	NEW YORK.....	84	14	292	49	73	WASH. GULLAYUTE.....	93	22	749	276	184
INDIANAPOLIS.....	134	41	472	41	513	ROCHESTER.....	131	19	611	104	97	SEATTLE-TACOMA.....	73	19	422	257	108
SOUTH BEND.....	117	42	463	42	505	SYRACUSE.....	123	13	597	112	8	SPOKANE.....	129	19	478	249	108
IOWA BURLINGTON.....	141	43	462	43	505	N. C. ASHEVILLE.....	85	6	324	45	62	HALLA HALLA.....	101	19	189	189	176
DES MOINES.....	142	43	462	43	505	CHARLOTTE.....	69	20	198	62	52	YAKIMA.....	101	19	391	219	248
DUBUQUE.....	142	43	462	43	505	GREENSBORO.....	78	13	253	53	27	W. VA. BECKLEY.....	133	26	604	129	162
SIoux CITY.....	137	24	504	24	528	HATTERAS.....	46	20	101	101	11	CHARLESTON.....	115	23	119	65	65
KANS. CONCORDIA.....	89	22	75	22	97	RALEIGH.....	71	13	198	29	26	HUNTINGTON.....	103	23	77	77	35
DODGE CITY.....	93	21	78	21	99	WILMINGTON.....	46	18	97	46	9	PARKERSBURG.....	89	23	268	6	6
GOODLAND.....	93	21	78	21	99	N. DAK. BISMARCK.....	170	13	807	15	24	WIS. GREEN BAY.....	178	42	759	69	65
TOPEKA.....	93	21	78	21	99	FARGO.....	169	13	797	15	24	LACROSSE.....	178	42	759	69	65
NICHITA.....	61	16	136	16	152	HILLSTON.....	133	32	666	182	106	MADISON.....	134	28	511	99	12
KY. LEXINGTON.....	108	31	347	31	378	OHIO AKRON-CANTON.....	138	32	590	150	116	WYO. CASPER.....	135	14	563	161	183
LOUISVILLE.....	100	24	249	24	273	CINCINNATI.....	122	43	424	152	58	CHEYENNE.....	135	14	563	161	183
LA. BATON ROUGE.....	24	4	38	4	42	CLEVELAND.....	122	43	424	152	58	LANDER.....	135	14	563	161	183
LAKE CHARLES.....	17	6	26	6	32	COLUMBUS.....	122	43	424	152	58	SHERIDAN.....	135	14	563	161	183
NEW ORLEANS.....	6	1	13	1	14	DAYTON.....	122	43	424	152	58						
SHREVEPORT.....	21	1	13	1	14	TOLEDO.....	122	43	424	152	58						

BASED ON 1941-70 NORMALS.

+ ACCUMULATION FROM JULY 1, 1979.



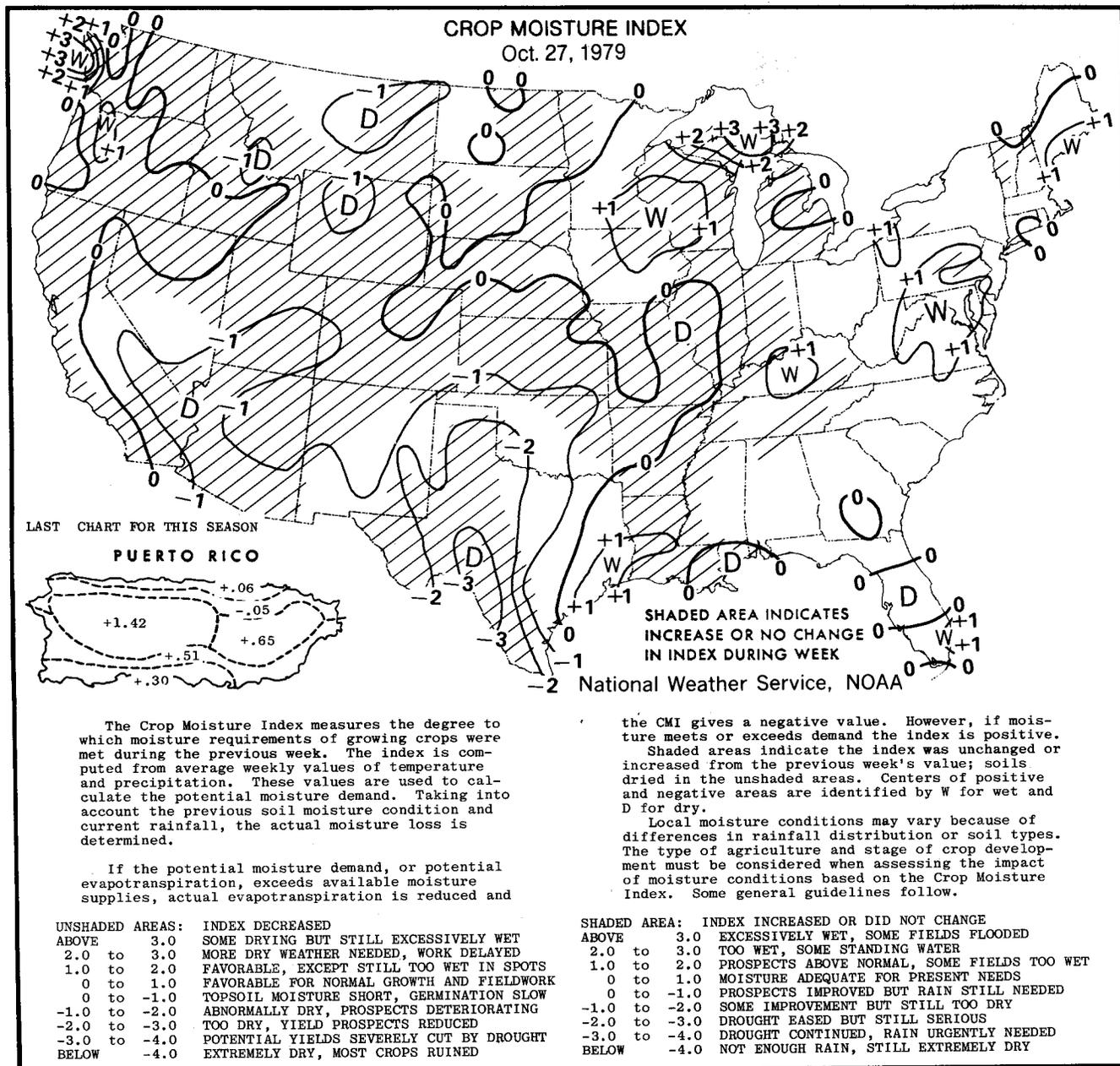
The Palmer Index

The Palmer Index is an index of meteorological drought, which may be defined as a prolonged and abnormal moisture deficiency. The general concept is one of supply and demand. Supply is represented by precipitation and stored soil moisture. Demand is the combination of potential evapotranspiration, the amount needed to recharge the soil moisture, and the runoff needed to keep the rivers, lakes, and reservoirs at a normal level. The results of this water balance accounting produce a positive or negative anomaly which is then weighted by a climate factor. The final product is an index that expresses the abnormality for that particular place for the period of time being computed. This manipulation allows the index to have a reasonably comparable local significance in space and time, that is, a certain index value obtained for a division in New York would have the same local significance as a like value in the more arid areas of western Kansas. This monthly increment is added to a portion of the previous month's index to include the duration of the anomaly in the final index.

The Palmer Index was designed as a climatological indicator of the scope and severity of past droughts. Using the Palmer Index on a real-time basis presents difficulties. A day or so of normal or better rainfall is certainly welcome in an area that has experienced a long drought, but one cannot know whether it indicates the end of the drought or just a brief respite. In order to

make the program have some real-time value, a system of computing a "probability" that a weather spell has ended was devised. This is not entirely satisfactory, but does allow one to assign a definite index value at times when there may be some doubt as to whether it should be positive (wet) or negative (dry).

Another aspect of using the Palmer Index is that one must remember that the demand part of the computations includes three parameters---potential evapotranspiration, recharge of soil moisture, and runoff, any one of which may produce a negative index. For instance if only enough rain fell to satisfy most of the expected evapotranspiration, but not enough to supply the expected recharge and runoff, then a negative index would result. If such a situation continued then one might find that agriculture was progressing at a near normal pace but the Palmer Index would be indicating a worsening drought. In this situation the drought would cause shallow wells and springs to go dry and the levels of rivers, lakes and reservoirs to fall below normal and, if this odd situation continued long enough, would cause serious economic stress to the livestock industry and eventually to other industries and cities. Then if rainfall fell below the minimum needed for agriculture, crops would suffer drastic and rapid decline because there would be no reserve water in the soil. Such a situation, to some extent, occurred during the Northeast drought in the 1960's when New York City almost ran out of water.



SEASONAL RAIN AND COOLER TEMPERATURES IN THE WEST ARE IMPROVING THE CROP MOISTURE SITUATION THERE. SOME AREAS, SUCH AS PARTS OF MONTANA, STILL NEED MORE CROP MOISTURE. ELSEWHERE, ADDITIONAL MODERATE RAIN FALLING IN THE WESTERN GREAT LAKES AREA HAS BROUGHT TOO MUCH CROP MOISTURE, ESPECIALLY IN NORTHERN MICHIGAN WHERE IT IS EXCESSIVE. CONSIDERABLE DRYING HAS OCCURRED IN THE EAST, BUT SOME OF THE MID-ATLANTIC AREAS NEED MORE DRY WEATHER.

(continued from page 11)

conditions helped by moisture. Fall plowing 27% done, 1978 35%, normal 33%. Haying completed, storage facilities full from large crops. Fall pastures normal. Cranberry harvest going well, some growers finished. Late vegetable crops such as beets, carrots, cabbage still being harvested. Picking of later apple varieties continued. Excellent fall curing weather for tobacco; little stripping started. Topsoil moisture supplies mostly adequate to surplus.

WYOMING: Temperatures to 4° above normal. Maximum temperature readings ranged mainly from mid-60's to upper 70's; minimums generally mid-teens to mid-20's. Precipitation generally below normal but few stations reported above normal departures. Largest amounts of moisture Snake, Green and Bear and Upper Platte drainages. Only Big Horn drainage area failed to receive any precipitation.

Topsoil and subsoil moisture short to adequate. Fieldwork: 6 days suitable. Most potatoes dug. Sugarbeet harvest in wind up stage, 92% harvested. Corn for grain 49% harvested. Winter wheat fair to good condition. Livestock sold or delivered: Yearlings 69%; calves 50%; lambs 78%. Livestock mostly average condition.

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