

WEEKLY WEATHER AND CROP BULLETIN

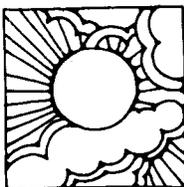
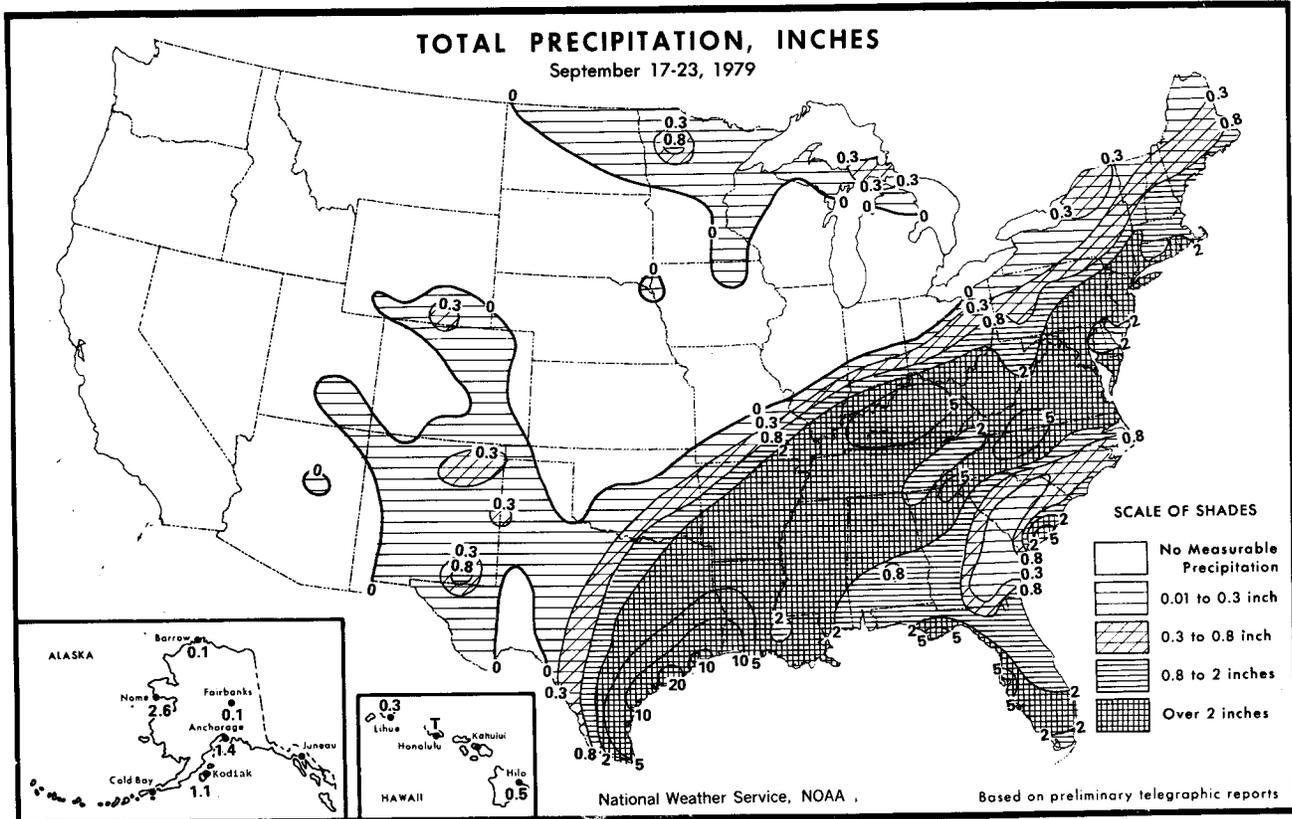
U.S. DEPARTMENT OF COMMERCE
National Weather Service, NOAA

U.S. DEPARTMENT OF AGRICULTURE
Economics, Statistics, and Cooperatives Service

Volume 66, No. 39

Washington, D.C.

Sept. 25, 1979



National Weather Summary

September 17 - 23

HIGHLIGHTS: A low pressure storm system forming along the Texas coast late Tuesday and moving through North Carolina on Saturday, triggered heavy rains over the southeastern third of the Nation. Torrential amounts fell along most of the Texas and Louisiana coasts. Freeport, Texas, just southwest of Galveston, had 27 inches. Sixteen inches fell just north of Houston, and 7 inches was dumped over parts of North Carolina and Virginia. Several areas had 5 inches from this late summer storm. The rest of the nation was dry except for light amounts in the southern Rockies and the northern Great Lakes region.

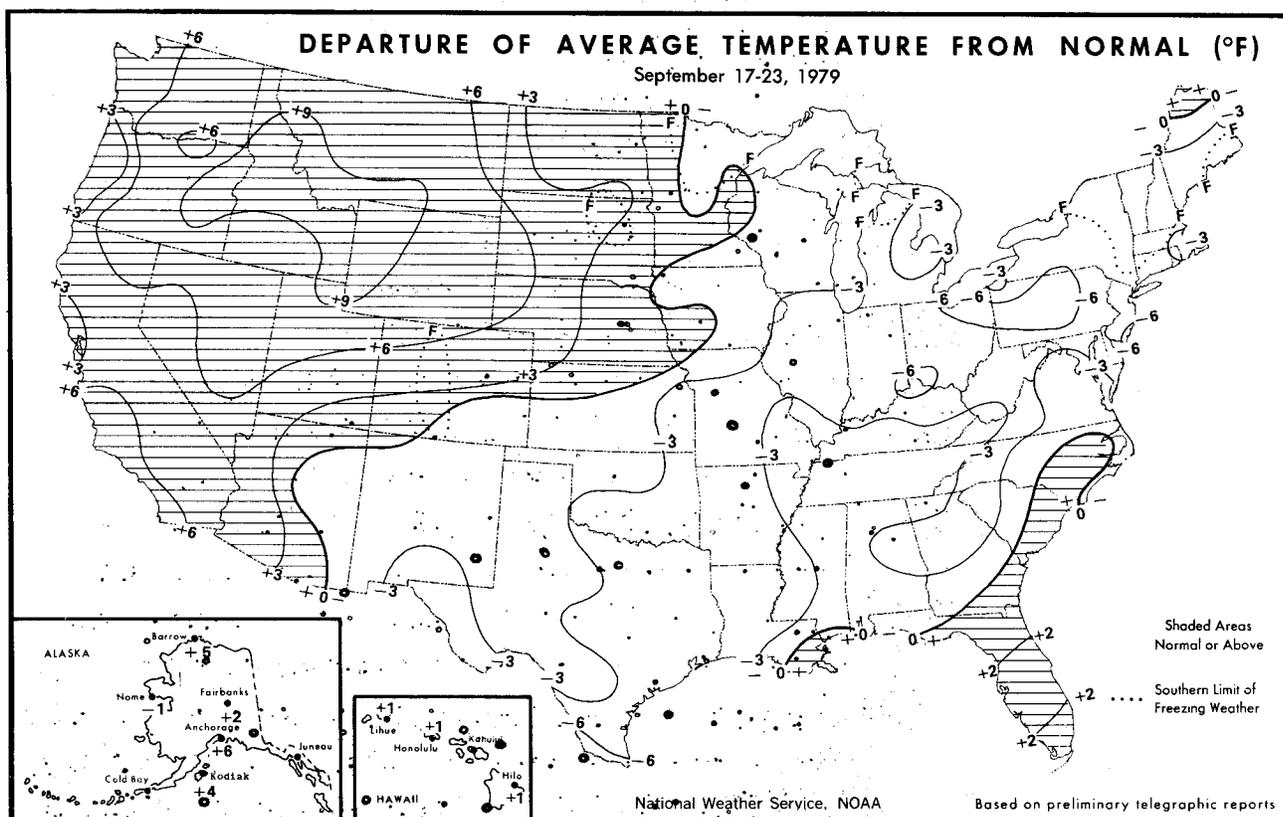
The heat wave abated some in the West by mid-week, but not before the Los Angeles Civic Center got to 98°. Most of the West averaged 6 to 8 degrees above normal, while the area from Texas to New England was 2 to 5 degrees subnormal.

On Monday, rain continued to fall along the Gulf Coast behind a stationary front. Appalachicola, in northwestern Florida, had the heaviest amount with almost 5 inches. Rains also spread northward into the Tennessee Valley and the Carolinas.

Warm, windy weather dominated the upper Great Lakes. Alpena, Mich., reached 81° ahead of a cool front to break its record daily high. Gusts of 30 to 40 mph behind the front whistled through several places in Wisconsin and Michigan.

The late-summer heat wave continued its grip on the West; the Los Angeles Civic Center got up to 98°. The rest of the country generally had mild, pleasant weather.

Hurricane Henri became stationary in the southwestern Gulf of Mexico, and showed some weakening.



Rains were scattered over the Gulf Coast on Tuesday. The heaviest amounts shifted into southern Texas where portions of the lower Rio Grande Valley had over 3 inches.

A tornado, touching down in northwestern Houston, Texas, damaged some property but no injuries were reported.

Cooler, drier air filtered into the northern Plains and Great Lakes region.

The West was hot during the afternoon with record highs being set or tied from Nevada to Wyoming. Los Angeles came in with 95°.

Henri degenerated into tropical storm status and remained stationary in the southwestern Gulf of Mexico.

By Wednesday morning, a strong low pressure had formed off the lower Texas Coast and triggered torrential rains northward into the Coastal Bend area. About a foot of rain fell during the night and morning at several points around Corpus Christi---people were evacuated because of high water. The system brought strong northeasterly winds of 25 to 40 mph which combined with the rain runoff, produced above normal tides.

Before the day was over, 15 inches had fallen at Freeport, Texas, between Corpus Christi and Houston. The rainy system moving slowly northward resulted in heavy rains and severe weather spreading into southeastern Texas and Louisiana. Several low-lying urban sections were evacuated.

Tornadoes touched down in Louisiana---near Cameron during the afternoon and just south of Lafayette in the evening---which damaged a trailer park.

Gale warnings remained over the upper Texas coast while heavy rains and high tides plagued the Galveston Bay area.

Record low temperatures occurred in parts of upper Michigan on Wednesday morning. The mercury plunged to 28° at Sault Sainte Marie. Readings

in the 30's covered much of Wisconsin and parts of the Rockies.

The heat wave had begun to abate some in the West on Thursday, torrential rains over southeastern Texas spread into Louisiana, but not before dropping a 3-day total of 27 inches at Freeport, Texas. Nearly 16 inches of rain fell overnight just north of Houston while Lake Charles, Louisiana, collected almost 10 inches in a 24-hour period. The Mississippi Delta picked up 2 to 4 inches while a couple of tornadoes touched down in the State.

The low pressure storm system, culprit of the rains, moved northeastward across Louisiana. Rains spread into the Ohio Valley and mid-Atlantic States while diminishing in East Texas.

New England woke up to a chilly morning. Record lows for the day were established at several points, including 28° at Concord, New Hampshire. The 30° at Hartford, Conn., equaled the lowest ever recorded there in September.

Cool weather moved into the northern Plains behind a front stretching from the Great Lakes through the central Plains.

Henri, still in the southwestern Gulf of Mexico, weakened further to a depression late in the day.

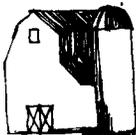
By Friday morning, temperature minima were in the 30's through much of the Dakotas and northern Minnesota. It even dipped to 28° at International Falls. A few readings in the 30's were also over northern New England and the central Rockies.

The low pressure system moving from Mississippi to Pennsylvania caused rains over much of the eastern United States. The heaviest amounts were 2 to 4 inches over northwestern Kentucky and parts of the Appalachians.

Hot temperatures in the 90's began to creep back into southern Texas by afternoon.

The tropical depression or low pressure system in the southwest Gulf began to drift northeastward.

(continued on page 23)



National Agricultural Summary

September 17 - 23

HIGHLIGHTS: Heavy rains from the Gulf Coast across the South and northward into southern New England delayed fieldwork. Farmers in the rain-drenched area had only 2 to 4 days suitable for fieldwork. Elsewhere farmers had a full week. Soil moisture rated short in the West, short to adequate in the north central States, and adequate to surplus elsewhere. Subnormal temperatures spread through most of the eastern half of the Nation bringing frost to most northern States. Row crops in major production areas escaped with minimal, if any, damage. Pastures generally rated good from the Rocky Mountains eastward but dried and deteriorated throughout most of the West. Small grain harvests were almost complete; spring wheat harvest advanced to 95%, equaling last year and 1 point less than average. Corn harvest advanced to 6%, lagging the 7% for last year and average. Soybean harvest was just getting started and stood at 3%, equaling last year but 2 points less than average. Cotton picking advanced to 6%, half the rate of last year and average. Grain sorghum harvest stood at 28%, lagging last year's 31% but equaling the average. Rice harvest advanced to 42%, shy of last year's 51% and the 48% average. Winter wheat planting reached 39%, surpassing last year's 31% but equaling the average. Fuel supplies improved slightly from the previous week. LP gas rated 6% tight, and 91% adequate. Diesel fuel scored 18% tight and 80% adequate. Gasoline stood at 14% tight and 85% adequate.

SMALL GRAINS: Small grain harvests neared completion with most activity along the Canadian border. Spring wheat harvest stood at 95%, the same as last year but 1 point less than average. Other small grain harvests exceeded 95% complete among major producing States.

Winter wheat planting advanced to 39%, surpassing last year's 31% but equaling the average. Planting was well advanced in the northern Plains. Dry soils on the southern Plains slowed seeding; recent plantings could use rain to speed germination. Dry soils also delayed planting in the Pacific Northwest.

CORN: Corn continued to rate mostly good as harvest began in nearly all States. Nationally, harvest advanced to 6%, slightly behind the 7% for last year and average.

In the eastern Corn Belt, corn harvest stood at 2%, lagging last year and the average by 3 points. Corn in extreme northern areas of this region needed about 2 weeks of frost-free weather to fully mature. The crop ranged from 18% mature in Michigan to 82% in Illinois. Maturity lagged most significantly in Michigan and Wisconsin.

In the western Corn Belt, harvest advanced to 2%, short of 1978's 3% and the 5% average. Most corn in this area should be safe from frost by the end of September. About 14% of the crop was mature in Minnesota and ranged up to 80% in South Dakota. Most States lagged the average stage of maturity; Minnesota lagged most significantly.

SOYBEANS: Soybeans generally rated good as harvest got underway in most major producing States. Harvest stood at 3%, equaling last year but 2 points less than average.

In eastern north central States harvest stood at 6%, the same as last year but 2 points less than average. Leaf shedding ranged from an unusually low 32% in Michigan to a near normal 60% in Illinois.

In the western north central States harvest stood at 3%, the same as last year but below the 7% average. Most acreage was yellowed; leaf drop ranged from 30% in Nebraska to 40% in Kansas, 48% in Minnesota and 59% in Iowa. Minnesota and Nebraska leaf shed lagged well behind average.

In the south central States soybean harvest stood at 1% for the current year, last year, and average.

COTTON: Cotton rated mostly fair. Frequent rains and subnormal temperatures slowed maturity and caused boll rot from the Delta States eastward. Dry stress forced Oklahoma bolls open early. New Mexico growers reported many small bolls. The California harvest began. The Arizona harvest gained momentum and defoliating activities increased.

OTHER CROPS: Grain sorghum harvest advanced into Kansas. Among the 7 major producing States, harvest stood at 28%, 3 points less than last year but equal to the average. Maturity ranged from 20% in Nebraska to 73% in Texas.

The rice harvest gained momentum in the Delta, wound down along the Gulf Coast and was just beginning in California. Among the 5 major producing States harvest stood at 42%, short of last year's 51% and the 48% average.

FRUITS & NUTS: The apple harvest continued with most volume coming from fall varieties. Apple picking neared completion in the South but was in full swing in the major northern production areas. Northern areas harvested early grapes. The California raisin lay was completed; temperatures and weather were favorable. Western nut growers harvested walnuts, filberts, and pistachios. Texas pecan growers reported a large crop which broke limbs in some areas. Elsewhere pecans rated mostly fair.

Florida citrus groves generally rated excellent although groves on the east and west coasts were wet. The first citrus of the new season was picked. Texas citrus developed well although wet soils prevented most grove activity. The Arizona lemon harvest increased. California growers picked summer grapefruit, Valencias and desert lemons.

VEGETABLES: Summer vegetable harvests were nearly complete in northern production areas; growers began picking fall crops. Northern growers continued to pick cucumbers, snap beans, sweet corn, tomatoes, and cabbage. Florida growers transplanted and seeded crops at an increasing rate as weather permitted. Light harvests of a variety of vegetables moved from south Florida. Wet fields continued to delay land preparation and planting in the eastern half of Texas. In California the processing tomato harvest stood at 85 to 90% complete.

PASTURES & LIVESTOCK: Pastures generally rated good in the eastern two-thirds of the Nation. Dry soils in the southern Plains and the West continued to deteriorate rangelands. Ranchers in some areas hauled water to livestock. Producers moved herds from summer pastures to lower-elevation grazing land. Montana had 30% of its cattle off summer ranges; almost all the California cattle were moved to winter pastures.

Weather Data for the Week Ending Sept. 23, 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 . . .	76	64	86	56	70	- 3	2.7	+ 1.9	2.3	5.4	208	96	78	0	0	2	1
Mobile	84	70	86	61	77	0	1.4	- .1	.7	10.3	210	93	59	0	0	4	1
Montgomery	79	67	88	60	73	- 2	.7	- .4	.5	2.3	70	87	66	0	0	2	1
ALASKA. Anchorage . .	56	50	63	47	53	+ 6	1.4	+ .8	.4	1.4	78	81	78	0	0	6	0
Barrow	37	31	39	24	34	+ 5	.1	0	T	.3	100	79	73	0	4	3	0
Fairbanks	55	34	63	24	44	+ 2	.1	- .1	T	.1	14	67	55	0	2	3	0
Kodiak	59	48	61	39	53	+ 4	1.1	- .4	.6	1.1	26	94	72	0	0	0	0
Nome	45	36	50	25	40	- 1	2.6	+ 2.1	.6	3.1	172	80	72	0	1	5	2
ARIZ. Flagstaff . . .	74	37	75	32	55	- 1	T	- .4	T	.1	8	87	23	0	1	1	0
Phoenix	101	74	107	72	88	+ 5	0	- .1	0	.1	25	45	17	7	0	0	0
Tucson	93	67	98	62	80	+ 1	0	- .3	0	0	0	45	15	5	0	0	0
Winslow	82	51	84	46	66	- 2	T	- .2	T	.1	17	--	--	0	0	1	0
Yuma	105	75	107	73	89	+ 3	0	0	0	0	0	34	21	7	0	0	0
ARK. Fort Smith . . .	78	57	80	48	68	- 3	.8	0	.7	.8	33	96	58	0	0	2	1
Little Rock	74	61	79	55	67	- 5	3.6	+ 2.8	2.8	3.6	144	92	71	0	0	3	2
CALIF. Bakersfield . .	98	66	105	62	82	+ 6	0	0	0	0	100	--	19	7	0	0	0
Eureka	66	56	68	54	61	+ 5	0	- .2	0	.2	50	94	72	0	0	0	0
Fresno	98	59	105	56	79	+ 6	0	0	0	0	100	59	15	7	0	0	0
Los Angeles	84	67	93	64	76	+ 7	0	0	0	0	0	81	50	2	0	0	0
Red Bluff	94	60	100	55	77	+ 3	0	- .1	0	0	0	56	19	6	0	0	0
San Diego	86	72	92	69	79	+ 9	0	- .1	0	0	0	76	54	3	0	0	0
San Francisco	74	55	76	51	65	+ 1	0	- .1	0	0	0	89	49	0	0	0	0
Stockton	93	59	96	57	76	+ 5	0	- .1	0	0	0	71	22	7	0	0	0
COLO. Denver	80	51	86	46	66	+ 5	T	- .3	T	.3	38	55	17	0	0	1	0
Grand Junction . . .	85	57	89	52	71	+ 5	0	- .2	0	0	0	35	16	0	0	0	0
Pueblo	82	46	90	40	64	- 1	0	- .1	0	.6	120	90	24	1	0	0	0
CONN. Bridgeport . . .	68	51	76	42	60	- 5	3.1	+ 2.5	2.3	4.0	200	93	61	0	0	2	2
Hartford	69	42	78	30	56	- 5	1.3	+ .5	.8	2.4	96	91	50	0	1	2	1
D. C. Washington . . .	75	60	80	54	68	- 1	2.5	+ 1.8	2.2	6.4	291	78	61	0	0	2	1
FLA. Apalachicola . .	84	73	86	67	78	0	7.0	+ 4.9	1.7	11.9	178	82	58	0	0	7	2
Daytona Beach	88	75	90	70	81	+ 2	1.8	+ .1	1.4	9.0	176	93	63	1	0	3	1
Ft. Myers	90	77	93	75	84	+ 3	2.2	+ .1	1.8	10.6	166	87	62	5	0	4	2
Jacksonville	85	74	88	70	79	+ 1	2.0	+ .2	1.6	11.2	196	93	64	0	0	3	1
Key West	88	81	89	79	84	+ 1	.2	- 1.6	.2	1.8	35	88	71	0	0	2	0
Miami	85	76	87	73	81	0	1.9	- .2	1.4	6.4	107	91	56	0	0	4	1
Orlando	89	74	91	71	82	+ 2	1.4	- .3	1.1	8.2	158	98	60	3	0	3	1
Tallahassee	84	69	88	63	77	0	1.8	+ .3	1.6	4.3	88	96	65	0	0	2	1
Tampa	88	76	89	75	82	+ 2	6.3	+ 4.9	3.7	11.7	249	89	64	0	0	3	2
W. Palm Beach	87	76	88	74	81	0	3.4	+ 1.0	2.3	16.6	244	91	66	0	0	4	2
GA. Atlanta	74	62	83	56	68	- 3	2.2	+ 1.5	1.1	2.7	117	95	74	0	0	3	2
Augusta	79	65	86	60	72	- 1	.3	- .4	.1	2.4	104	93	65	0	0	3	0
Macon	78	66	85	58	72	- 3	1.2	+ .5	1.0	1.8	78	91	71	0	0	2	1
Savannah	82	70	88	65	76	+ 1	.2	- 1.1	.1	8.6	210	91	65	0	0	3	0
HAWAII. Hilo	84	69	84	66	76	+ 1	.5	- 1.1	--	1.7	34	77	59	0	0	0	0
Honolulu	87	74	90	72	81	+ 1	T	- .1	T	.3	100	78	51	0	0	0	0
Kahului	90	70	91	--	80	+ 2	T	- .1	T	--	--	45	3	0	0	0	0
Lihue	87	78	88	73	80	+ 1	.3	- .1	--	.4	33	79	59	0	0	0	0
IDAHO. Boise	86	54	91	48	70	+ 8	0	- .1	0	0	0	39	16	1	0	0	0
Lewiston	88	55	92	49	71	+ 9	0	- .2	0	.2	33	51	20	3	0	0	0
Pocatello	87	45	92	39	66	+ 8	0	- .1	0	0	0	47	13	1	0	0	0
ILL. Cairo	76	61	83	54	69	- 2	2.7	+ 1.9	1.7	2.9	116	--	--	0	0	2	2
Chicago	79	52	78	45	61	- 4	0	- .7	0	0	0	75	42	0	0	0	0
Moline	75	43	80	36	59	- 4	0	- .9	0	0	0	81	40	0	0	0	0
Peoria	75	46	82	41	61	- 3	0	- .8	0	0	0	87	36	0	0	0	0
Rockford	73	44	79	37	58	- 4	0	- .9	0	0	0	89	40	0	0	0	0
Springfield	77	48	85	41	63	- 3	0	- .8	0	0	0	95	37	0	0	0	0
IND. Evansville	75	55	80	46	65	- 3	2.1	+ 1.5	1.6	2.6	130	85	50	0	0	3	1
Ft. Wayne	72	45	81	38	59	- 4	0	- .6	0	.4	22	88	41	0	0	0	0
Indianapolis	73	47	80	40	60	- 5	.2	- .5	.1	.4	19	91	44	0	0	1	0
South Bend	72	49	78	41	60	- 3	0	- .7	0	0	0	87	44	0	0	0	0
IOWA. Burlington . . .	75	49	80	41	62	- 2	0	- .9	0	0	0	--	--	0	0	0	0
Des Moines	77	49	84	41	63	0	0	- .7	0	.6	27	80	37	0	0	0	0
Dubuque	71	45	78	40	58	- 2	0	- 1.1	0	0	0	89	46	0	0	0	0
Sioux City	74	46	83	40	60	- 2	T	- .7	T	2.0	95	88	46	0	0	1	0
KANS. Concordia	83	51	89	46	67	+ 1	0	- .7	0	.8	35	73	28	0	0	0	0
Dodge City	79	53	86	50	66	- 1	0	- .4	0	.1	8	64	27	0	0	0	0
Goodland	82	48	92	43	65	+ 2	0	- .3	0	.1	10	70	22	1	0	0	0
Topeka	79	47	84	40	63	- 4	0	- .7	0	.8	35	92	43	0	0	0	0
Wichita	84	53	89	46	68	- 1	0	- .9	0	1.1	42	66	27	0	0	0	0
KY. Lexington	71	54	79	45	63	- 4	5.3	+ 4.7	4.0	8.3	437	89	59	0	0	3	2
Louisville	74	56	81	47	65	- 3	5.4	+ 4.7	4.4	9.8	467	95	57	0	0	3	2

Based on preliminary reports and 1941-70 normals

Weather Data for the Week Ending Sept. 23, 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	90 and above	32 and below	Temperature °F		Precipitation
																.01 inch or more	.50 inch or more	
LA. Baton Rouge . . .	81	68	84	59	74	-3	1.9	+1.0	1.4	2.9	104	94	69	0	0	3	2	
Lake Charles . . .	81	67	84	59	74	-4	12.5	+11.5	9.6	12.6	420	94	68	0	0	4	3	
New Orleans . . .	85	73	89	67	79	+2	2.5	+1.2	2.1	3.0	73	79	62	0	0	3	1	
Sireveport . . .	77	64	82	57	71	+5	3.6	+2.9	2.2	3.6	171	89	72	0	0	4	3	
MAINE. Caribou . . .	65	42	80	33	53	0	.3	-.2	2.2	4.6	192	70	41	0	0	2	0	
Portland . . .	65	40	77	29	52	0	1.3	+.5	1.0	2.8	127	87	54	0	2	3	1	
MD. Baltimore . . .	73	54	81	46	64	-3	1.8	+1.1	1.3	6.4	291	92	58	0	0	3	2	
MASS. Boston . . .	70	51	79	42	61	-2	1.7	+1.0	.9	3.0	130	83	47	0	0	2	2	
Chatham . . .	66	54	75	41	59	-	1.1	-	.9	1.4	61	89	61	0	0	2	1	
MICH. Alpena . . .	68	38	81	31	53	-2	.1	-.7	-.3	1.3	13	77	41	0	1	0	0	
Detroit . . .	69	46	81	40	57	-5	0	-.5	0	.9	60	87	45	0	0	0	0	
Flint . . .	70	45	77	36	57	-3	0	-.6	0	.3	17	91	39	0	0	1	0	
Grand Rapids . . .	72	43	78	36	58	-3	0	-.8	0	0	0	92	44	0	0	0	0	
Houghton Lake . . .	67	41	76	30	53	0	0	-.8	0	.2	9	91	42	0	2	0	0	
Lansing . . .	72	46	80	33	58	-2	0	-.6	0	0	0	88	36	0	0	0	0	
Marquette . . .	65	38	80	32	52	-1	.1	-.8	0	2.0	83	90	46	0	1	1	0	
Muskegon . . .	68	42	72	36	55	-5	0	-.5	0	0	0	89	47	0	0	0	0	
S. Ste. Marie . . .	64	36	74	28	50	+4	.4	-	-	1.6	57	96	48	0	3	-	0	
MINN. Duluth . . .	65	43	78	33	54	+1	.1	-.6	0	1.2	55	82	50	0	0	2	0	
Internat'l. Falls . . .	62	36	73	27	49	-2	.1	-.7	0	.6	25	81	51	0	3	2	0	
Minneapolis . . .	71	48	84	41	60	+2	0	-.6	0	2.0	105	76	41	0	0	0	0	
Rochester . . .	70	46	81	39	57	-1	.1	-.6	.1	.6	26	84	47	0	0	1	0	
St. Cloud . . .	68	45	81	33	55	-1	0	-.6	0	1.5	79	88	50	0	0	1	1	
MISS. Jackson . . .	78	65	81	55	71	-4	4.3	+3.6	4.1	5.8	264	95	73	0	0	3	4	
Meridian . . .	79	67	82	58	73	-1	3.0	+2.2	1.9	8.0	333	91	68	0	0	2	2	
MO. Columbia . . .	78	49	85	43	63	-4	0	-1.1	0	0	0	84	42	0	0	0	0	
Kansas City . . .	77	51	82	42	64	-3	0	-1.0	0	.4	13	76	37	0	0	0	0	
St. Louis . . .	78	55	89	47	67	-1	0	-.7	0	0	0	88	40	0	0	0	0	
Springfield . . .	78	50	84	42	64	-4	.2	-.3	.2	.3	10	85	47	0	0	1	1	
MONT. Billings . . .	81	51	88	46	66	+9	0	-.8	0	.3	9	50	22	0	0	1	0	
Glasgow . . .	77	46	86	41	61	+6	0	-.2	0	.2	29	62	28	0	0	1	0	
Great Falls . . .	78	45	89	41	62	+6	0	-.3	0	.3	33	62	22	0	0	0	0	
Havre . . .	79	44	88	38	62	+7	0	-.3	0	.7	78	72	26	0	0	0	0	
Helena . . .	80	43	87	41	62	+8	0	-.2	0	.1	14	61	19	0	0	0	0	
Kalispell . . .	79	39	83	33	59	+7	0	-.3	0	.4	44	96	27	0	0	0	0	
Miles City . . .	80	52	87	48	65	+7	0	-.3	0	0	0	56	23	0	0	0	0	
Missoula . . .	83	43	86	40	63	+9	0	-.2	0	0	0	70	20	0	0	0	0	
NEBR. Grand Island . . .	79	48	87	42	64	+1	0	-.6	0	2.0	111	73	32	0	0	0	0	
Lincoln . . .	81	48	88	40	64	0	0	-.7	0	.4	18	90	31	0	0	0	0	
Norfolk . . .	77	48	86	40	63	+2	0	-.6	0	1.8	100	79	34	0	0	0	0	
N. Platte . . .	83	46	90	37	64	+3	0	-.5	0	.4	27	72	27	1	0	0	0	
Omaha . . .	76	52	83	39	64	+1	0	-.7	0	2.1	91	85	36	0	0	0	0	
Valentine . . .	81	47	90	33	64	+4	0	-.3	0	1.4	127	67	22	1	0	0	0	
NEV. Ely . . .	82	41	86	36	61	+6	0	-.1	0	0	0	38	12	0	0	0	0	
Las Vegas . . .	100	69	103	66	84	+5	0	-.1	0	0	0	30	10	7	0	0	0	
Reno . . .	86	39	91	34	63	+4	0	-.1	0	0	0	62	11	1	0	0	0	
Winnemucca . . .	88	39	93	33	63	+5	0	-.1	0	0	0	43	8	3	0	0	0	
N.H. Concord . . .	69	38	81	28	54	-4	1.4	+1.7	.9	2.4	109	87	48	0	1	3	1	
N.J. Atlantic City . . .	72	47	76	34	60	-6	1.6	+1.0	1.1	3.1	148	85	45	0	0	3	2	
Trenton . . .	71	54	78	43	62	-4	2.7	+2.0	1.5	5.0	217	80	25	0	0	3	2	
N.MEX. Albuquerque . . .	80	54	88	51	67	-2	.2	+1.1	.2	.4	80	80	25	0	0	1	0	
Roswell . . .	79	54	91	51	67	-2	.1	-.3	.1	.1	9	77	44	1	0	2	0	
N.Y. Albany . . .	70	43	81	30	56	-5	.7	0	.5	3.2	145	93	44	0	1	3	1	
Binghamton . . .	65	44	74	34	55	-4	.5	-.2	.3	3.2	152	95	55	0	0	2	0	
Buffalo . . .	66	47	73	38	57	-3	.1	-.7	.1	5.3	221	89	49	0	0	1	0	
New York . . .	70	57	77	46	63	-4	2.0	+1.3	1.7	3.2	145	78	56	0	0	3	1	
Rochester . . .	67	46	77	36	56	-5	.2	-.3	.2	4.6	271	93	53	0	0	1	0	
Syracuse . . .	69	45	77	35	57	-5	.1	-.5	.1	3.8	200	94	47	0	0	2	0	
N.C. Asheville . . .	71	55	78	52	63	-3	2.1	+1.3	1.9	3.5	140	98	72	0	0	2	1	
Charlotte . . .	76	62	83	56	69	-2	.6	-.2	.5	3.3	138	90	67	0	0	3	1	
Greensboro . . .	76	57	84	51	67	-2	5.8	+5.0	5.1	10.4	416	92	62	0	0	3	2	
Hatteras . . .	78	68	83	62	73	0	.2	-1.1	.1	11.0	268	89	74	0	0	2	0	
Raleigh . . .	80	59	87	52	70	+1	1.9	+1.1	1.6	4.6	170	87	62	0	0	3	1	
Wilmington . . .	80	67	87	61	73	-1	1.7	+1.4	1.3	13.4	327	93	66	0	0	1	0	
N.DAK. Bismarck . . .	72	42	81	30	57	+1	0	-.3	0	.7	70	81	31	0	1	0	0	
Fargo . . .	72	46	85	35	59	+3	0	-.4	0	.2	15	73	33	0	0	1	0	
Williston . . .	74	43	79	37	58	+3	0	-.3	0	.3	33	72	30	0	0	1	0	
OHIO. Akron-Canton . . .	67	47	75	40	57	-5	.4	-.2	.3	7.0	389	86	51	0	0	3	2	
Cincinnati . . .	79	52	77	47	61	-6	2.4	+1.8	1.8	7.5	417	89	56	0	0	0	0	
Cleveland . . .	71	48	80	43	60	-3	0	-.6	0	2.4	120	84	54	0	0	0	0	
Columbus . . .	69	49	79	40	59	-5	.3	-.3	.3	5.2	289	88	57	0	0	2	0	
Dayton . . .	71	48	80	40	60	-5	.4	-.1	.3	2.8	165	90	48	0	0	2	0	
Toledo . . .	70	45	81	38	58	-5	0	-.6	0	2.4	133	93	44	0	0	0	0	
Youngstown . . .	67	44	76	37	56	-6	.4	-.2	.2	4.0	222	92	56	0	0	2	0	

Based on preliminary reports and 1941-70 normals

Weather Data for the Week Ending Sept. 23, 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 . . .	81	57	87	52	69	- 3	.1	- .8	.1	.3	12	82	44	0	0	1	0	
Tulsa	83	56	87	50	70	- 2	T	- 1.0	T	.1	3	87	40	0	0	1	0	
OREG.Astoria	71	51	82	45	61	+ 3	T	- .7	0	3.6	200	96	69	0	0	0	0	
Burns	84	49	87	40	66	+ 9	T	- .1	0	0	0	61	15	0	0	1	0	
Medford	89	49	97	47	69	+ 6	0	- .2	0	.1	25	73	23	0	0	0	0	
Pendleton	83	52	89	46	67	+ 4	0	- .1	0	.2	67	--	27	0	0	1	0	
Portland	78	56	87	50	67	+ 6	0	- .4	0	.6	60	90	46	0	0	0	0	
Salem	77	49	86	42	62	+ 1	0	- .4	0	.4	44	96	46	0	0	0	0	
PA.Allentown	70	49	77	38	60	- 4	3.5	+ 2.7	3.2	7.0	269	85	44	0	0	3	1	
Erie	69	53	77	43	60	0	.1	+ .7	.1	1.0	42	--	--	0	0	1	0	
Harrisburg	69	52	76	40	60	- 6	2.9	+ 2.3	--	6.5	361	90	57	0	0	--	--	
Philadelphia	72	54	78	45	63	- 4	1.2	+ .5	.8	3.9	177	85	57	0	0	4	1	
Pittsburgh	68	47	75	38	58	- 5	1.0	+ .4	.9	1.6	89	87	54	0	0	1	1	
Scranton	67	47	76	36	57	- 5	2.1	+ 1.5	1.5	4.4	220	87	47	0	0	4	2	
R.I.Providence	69	49	77	38	59	- 3	2.1	+ 1.4	1.2	3.8	165	89	46	0	0	2	1	
S.C.Charleston	80	68	86	65	74	0	5.7	+ 4.5	5.2	13.7	361	72	71	0	0	5	1	
Columbia	80	64	88	60	72	- 1	.8	+ .2	--	6.1	191	93	64	0	0	3	--	
Greenville	75	61	83	59	68	- 3	1.5	+ .6	1.0	2.6	96	90	67	0	0	5	1	
S.DAK.Aberdeen	76	45	85	30	61	+ 4	0	- .4	0	0	0	72	27	0	1	0	0	
Huron	76	43	85	31	59	0	0	- .4	0	0	0	81	29	0	1	0	0	
Rapid City	82	48	89	40	65	+ 6	0	- .3	0	.1	11	58	22	0	0	0	0	
Sioux Falls	73	46	86	37	60	+ 1	0	- .7	0	4.1	195	82	45	0	0	0	0	
TENN.Chattanooga	75	64	81	62	70	- 1	1.5	+ .6	1.0	2.6	100	90	74	0	0	5	1	
Knoxville	75	62	80	58	69	- 1	1.2	+ .6	.9	1.3	65	91	72	0	0	5	1	
Memphis	76	65	82	57	70	- 2	2.4	+ 1.7	1.9	3.1	141	89	65	0	0	3	1	
Nashville	77	60	86	53	69	- 2	2.8	+ 2.1	2.2	9.5	413	96	65	0	0	2	2	
TEX.Abilene	87	60	94	53	74	- 1	T	- .6	T	--	--	56	25	2	0	1	0	
Amarillo	79	53	89	50	66	- 2	.1	- .3	.1	1.4	38	84	32	0	0	1	0	
Austin	83	65	89	60	74	- 4	1.3	+ .4	.8	1.4	54	84	53	0	0	2	2	
Beaumont	82	68	84	60	75	- 3	6.3	+ 5.1	--	6.4	168	91	68	0	0	--	--	
Brownsville	82	69	86	66	75	- 6	4.3	+ 3.0	2.4	8.7	229	88	67	0	0	3	2	
Corpus Christi	83	69	88	64	76	- 4	8.5	+ 7.3	6.6	12.9	358	87	62	0	0	2	2	
Del Rio	92	63	94	57	77	- 2	0	- .8	0	.7	32	75	27	6	0	0	0	
El Paso	84	56	94	51	70	- 3	.1	- .2	.1	.4	44	82	32	1	0	1	0	
Fort Worth	84	63	90	52	73	- 3	1.0	+ .2	.7	1.0	43	90	50	1	0	2	1	
Galveston	78	70	81	67	74	- 5	8.3	+ 7.0	5.1	10.1	246	81	75	0	0	4	3	
Houston	82	65	86	60	74	- 4	8.9	+ 7.8	6.4	9.1	276	94	76	0	0	3	3	
Lubbock	85	56	92	50	70	0	T	- .4	.1	.2	13	73	26	1	0	2	0	
Midland	85	59	93	55	72	- 2	T	- .4	T	0	0	72	26	1	0	1	0	
San Angelo	86	57	91	49	72	- 3	.1	- .6	.1	.1	5	79	27	1	0	2	0	
San Antonio	85	66	90	57	76	- 2	.8	- .1	.8	.8	31	80	46	1	0	2	1	
Victoria	82	66	86	58	74	- 5	6.9	+ 5.8	5.3	9.1	284	92	64	0	0	3	2	
Waco	82	62	89	51	72	- 6	2.5	+ 1.7	1.7	2.5	109	92	59	0	0	3	2	
Wichita Falls	86	57	96	52	71	- 4	T	- .8	T	0	0	79	40	2	0	1	0	
UTAH.Blanding	80	48	83	44	64	+ 2	.1	- .1	.1	.1	14	--	--	0	0	1	0	
Salt Lake City	89	56	90	46	72	+ 9	0	- .1	0	0	0	51	17	3	0	0	0	
VT.Burlington	64	42	75	30	54	- 4	.2	- .5	.2	4.1	186	92	52	0	1	2	0	
VA.Lynchburg	74	56	79	46	64	- 3	4.0	+ 3.3	3.6	7.1	309	87	--	0	0	2	1	
Norfolk	76	62	81	57	69	- 2	4.8	+ 3.9	2.8	9.8	327	91	55	0	0	3	2	
Richmond	76	57	82	53	67	- 2	3.6	+ 2.8	2.6	7.5	288	95	65	0	0	3	2	
Roanoke	74	55	81	44	64	- 3	4.5	+ 3.7	3.8	7.9	329	89	61	0	0	2	1	
WASH.Colville	82	46	87	43	64	+ 7	0	- .2	0	.4	80	--	--	0	0	0	0	
Omak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Quillayute	70	48	80	40	59	+ 3	T	- 1.3	T	5.6	170	95	58	0	0	1	0	
Seattle-Tacoma	70	54	77	49	62	+ 3	0	- .5	0	1.1	85	82	53	0	0	0	0	
Spokane	82	50	88	45	66	+ 8	0	- .2	0	.4	67	59	23	0	0	0	0	
Walla Walla	86	56	91	50	71	+ 7	0	- .2	0	.3	60	58	22	2	0	0	0	
Yakima	84	49	89	45	66	+ 6	0	- .1	0	.1	33	74	24	0	0	0	0	
W.VA.Beckley	68	50	72	45	60	- 2	2.6	+ 1.8	1.8	3.8	158	97	67	0	0	5	2	
Charleston	72	52	79	46	62	- 4	2.6	+ 1.9	1.8	3.5	167	92	64	0	0	3	2	
Huntington	72	53	81	49	63	- 4	3.1	+ 2.4	2.0	4.2	200	90	64	0	0	3	2	
Parkersburg	73	57	80	50	65	- 1	2.3	+ 1.7	1.6	3.0	150	82	55	0	0	4	1	
WISC.Green Bay	69	42	77	35	56	- 1	T	- .8	T	.7	29	91	45	0	0	1	0	
La Crosse	71	46	80	38	58	- 2	T	- .8	T	.4	17	95	47	0	0	1	0	
Madison	72	40	79	33	56	- 2	T	- .8	T	.1	4	95	45	0	0	1	0	
Milwaukee	71	49	79	43	60	0	0	- .7	0	0	0	86	49	0	0	0	0	
WYO.Casper	83	43	88	37	63	+ 6	T	- .2	T	.2	33	60	15	0	0	1	0	
Cheyenne	77	47	83	43	62	+ 5	.2	0	.2	.3	38	51	22	0	0	1	0	
Lander	81	50	85	45	65	+ 8	0	- .3	0	0	0	47	18	0	0	0	0	
Sheridan	82	46	88	39	63	+ 7	T	- .3	T	.4	44	71	21	0	0	1	0	
P.R.San Juan	89	76	93	75	83	+ 2	2.0	+ .6	.5	4.8	111	93	66	2	0	3	2	

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: Cloudy, cooler temperatures, average 3^o subnormal; lows in 50's on 22d. Most areas totaled 1.00 to 3.00 in. through 21st.

Fieldwork: 1.9 days suitable. Soil moisture ranged from surplus northwest to adequate southeast. Rainy weather slowed cotton, soybean maturing. Corn 60% harvested, 55% 1978, 34% average. Soybeans 48% turning yellow, 55% 1978, 52% average; 25% dropping leaves; 12% mature, 28% 1978, 22% average. Cotton 33% bolls open, 55% 1978, 36% average; 3% harvested, 9% 1978. Peanuts 32% dug, 37% 1978, 46% average; 20% combined, 24% 1978, 35% average. Crops, pastures mostly good condition.

ALASKA: Rainy week. Afternoon temperatures near normal; nighttime temperatures above normal.

Cloudy, rainy weather interrupted final stages of harvest throughout railbelt. Killing frosts touched few areas Tanana Valley. Wind and rain damage all areas railbelt; severe Matanuska Valley. Moisture content harvested barley 14 to 22%. Growers hoping for dry week to wind-up harvesting. Potato digging 75% complete. Vegetable crop slowing, mostly cabbage and carrots. Soil moisture short to surplus; subsoil short to adequate.

ARIZONA: Temperatures 2 to 6^o above normal west, 1 to 2^o below east. Widely scattered light thundershowers eastern mountains, southeast. Rainfall generally less than 0.10 in.

Cotton picking gaining momentum; 7% picked, 8% last year, average 5%. Defoliants being applied central. Insect counts relatively low. Sorghum harvest seasonal progress. Corn for grain good progress. Alfalfa haying full swing, some older fields renovated, new fields planted. Planting, fertilizing, irrigating, thinning, weeding lettuce, mixed vegetables, melons. Earlier fields fairly good stand, growing well. Hot weather caused spotty stands some areas. Lemon harvest increasing volume, other fruit good progress. Gasoline, diesel supplies mostly adequate north, west adequate, tight central, southwest. LP gas adequate. Cattle, calves generally good shape. Central, western ranges very dry, eastern ranges receiving spotty rains, reasonably good condition. Ranchers water hauling, supplemental feeding.

ARKANSAS: Highest normal 76^o; lowest normal 69^o. Highest temperature 85^o; lowest 40^o. Most rainfall 6.86 in.; least 0.71 in.

Fieldwork: 3.6 days suitable. Soil moisture adequate. Diesel 74% adequate, 22% tight; gasoline 84% adequate, 14% tight; LP gas 94% adequate. Soybeans, rains beneficial, crop good condition; harvest of earliest varieties began. Cotton fair to good condition, rain causing boll rot; open bolls 31%, 1978 65%, 49% average; harvest just underway, 4% 1978, 8% average. Wind, rain lodged some rice; condition good; 16% harvested, 35% 1978, 35% average. Corn 26% harvested, 31% 1978, 47% average. Sorghum 39% harvested, 67% 1978, 58% average. Wheat 6% planted, 11% 1978, 11% average. Early seeded wheat up to a stand. Oats 9% seeded, 7% 1978, 12% average. Apple harvest continued. Grape harvest virtually complete. Hay harvest nearing completion. Pastures average condition. Cattle good.

CALIFORNIA: During the week the 18,000 foot chart showed a trough moving inland followed by a zonal flow and then back to an off-shore low pressure area.

Temperatures above normal; much above normal along south coast.

Temperatures and weather favorable for grape growers. No precipitation. Draining rice fields continued. Rice harvest begun. Cotton harvest just getting started Riverside County. Defoliation main activity Imperial and San Joaquin Valleys. Blackeye beans being harvested throughout growing area. Baby lima harvest progressing normally Sacramento Valley. Dry and green bean harvest continued San Joaquin Valley. Corn for grain harvest underway. Silage cutting continued. Land preparation for winter grains continued. Digging sugarbeets begun in Central Valley as planting continued San Joaquin Valley. Alfalfa seed and safflower harvest nearing completion. Freestone peach, plum, nectarine harvests declined. Apples, avocados, dates, figs, olives harvested. Raisin lay completed. Wine grape harvest full swing, table grapes packed. Summer grapefruit, Valencia oranges, desert lemons packed. Almond harvest late varieties. Pistachios began. Walnut knocking increased. Brussels sprouts nearing peak harvest. Cauliflower supplies lighter following hot weather. Cantaloup harvest declining San Joaquin Valley, early fields at Blythe near maturity. Celery supplies fairly heavy, wide range quality. Lettuce good supply central coast and South Bay. Fall lettuce near maturity San Joaquin Valley. Desert lettuce planting to thinning. Summer potato harvest declining central and south. Fall potato digging increasing slowly Tulalake-Butte Valley. Harvest market tomatoes heavy coastal districts, additional supplies San Joaquin Valley. Processing tomato harvest active, 85 to 90% complete. Movement cattle from summer ranges nearing completion. Range feed, water supplies adequate lower elevations. Range fires caused some livestock loss. Sheep continue graze crop residues. Calving underway San Joaquin Valley. Propane, diesel, gasoline adequate.

COLORADO: Fair, warm, dry early week. Few rain showers west of Divide 19th. Strong winds east and scattered showers mountains 20th. Cloudy skies 21st morning followed by sunshine through 23d. Temperatures east of Divide averaged 2 to 4^o below normal, normal elsewhere.

Winter wheat seeded 86%, 80% 1978, 77% average; emerged 59%, 42% 1978, 46% average. Spring wheat harvested 89%, 100% 1978. Corn dough 96%, 100% 1978; dented 83%, 84% 1978; harvested silage 58%, 70% 1978, 72% average. Sorghum turned color 77%, 90% 1978; ripe 39%, 13% 1978. Dry beans cut 70%, 80% 1978, 82% average; threshed 41%, 55% 1978, 49% average. Alfalfa third cutting 65%, 91% 1978, 79% average. Fieldwork: 6 days suitable. Ranges and pastures good condition. Livestock very good condition. Fuel supplies mostly adequate.

FLORIDA: Rainfall averaged 1.00 to 2.00 in. with some places in excess of 4.00 in. mainly in Panhandle. Lows mostly in 70's except for 60's Panhandle, 23d. Highs mostly in 80's with a few low 90's, south.

Soil moisture variable, excessive along both coasts, central and scattered areas in north and Panhandle. Corn, peanut and hay harvests continue but interrupted frequently by showers. Some loss of peanuts expected. Soybeans good condition. Pests increasing as spray programs delayed by shower activity. Sugarcane mostly good condition. Cutting cane for seed active. Fuel supplies mostly adequate, however, a little tight in areas where crop harvest in full swing. Panhandle pastures mostly poor to fair; elsewhere, generally good to excellent, except mole, cricket and armyworm damage some areas. Heavy rains caused some decline, especially in low-lying pastures. Cattle mostly good to excellent condition. Citrus grove condition generally excellent, east and west coast continues wet. Moisture adequate central areas. First citrus of season packed late week. Vegetable crops progressing favorably. Damp-off continued to occur in low, wet spots. Fieldwork very active, weather permitting. Transplanting and seeding of most crops underway and gaining. Tomato, pole bean harvest active Gadsden County. Light squash, eggplant harvest underway Sumter County. Harvest of older cucumber, squash, okra, Everglades sweet corn crops gaining momentum. Quality generally good to very good.

GEORGIA: Temperatures 3 to 5° below normal north and central; near normal south. Range mid-60's mountains, around 70° north, mid and upper 70's central and south. Rainfall heavy northwest and west central, average 1.50 to 2.50 in. Rainfall generally less than 0.50 in. east and south. Mostly cloudy 22d and 23d with rain southeast.

Soil moisture mostly adequate to surplus. Rain, wet soils, cloudy days limited fieldwork to 3 days. Corn fair to good; 74% harvested, last year 71%, average 50%. Soybeans fair to mostly good; 1% harvested, 2% last year, 1% average. Peanuts fair to mostly good; 57% dug, 41% threshed, last year 66% dug and 54% threshed, average 60% dug and 46% threshed. Tobacco marketing continued. Cotton fair to good; 6% picked, 10% last year, 6% average. Pecans mostly fair to good, harvest just starting, last year 1% harvested. Apples fair to good; 90% harvested, 83% last year. Hay crops fair to mostly good. Pastures, hogs, cattle good. Wheat 8% planted, last year 4%. Rye 7% planted, 6% last year. Other small grains 11% seeded, last year 6%, average 9%. LP gas 98% adequate. Diesel fuel 91% adequate, 9% tight. Gasoline 95% adequate, 5% tight.

HAWAII: Hot, humid weather continued. Night temperatures slightly lower.

Some young plantings adversely affected by dry weather. Hand-watering necessary areas where no irrigation available. Bird damage young plantings affecting crop progress. Most plantings heavily irrigated. Supplies of semi-head lettuce, snap beans low. Tipburning, diseases, insects affecting crop progress. Head cabbage continues heavy. Banana supplies light. Papaya fruit set and ripening affected by dry weather; more rains needed. Pineapple harvesting low. Sugar harvesting steady. Pastures generally good. Some leeward areas dry. Fuel supplies adequate.

IDAHO: Warm and dry. Temperatures above normal; range 27 to 98°. No precipitation.

Small grain harvest nearly complete. Winter wheat 100% harvested, 95% last year and normal. Spring wheat and barley 95% harvested, 95% last year, 90% normal. Potato vines dying 90%, 5% dug. Dry beans 85% swathed, 45% threshed. Onions 45% dug, 60% last year. Winter wheat 35% seeded, 25%

last year, 30% normal. Ranges dry; poor to fair condition.

ILLINOIS: Temperatures 2 to 4° below normal. Precipitation light north, central areas; extreme south over 1.00 in.

Soil moisture short to adequate. Corn 82% mature, 87% 1978, 86% average; 2% harvested, 7% 1978, 6% average; condition excellent to good. Soybeans 88% turning yellow, 86% 1978, 85% average; 60% shedding leaves, 62% 1978, 64% average; 9% combined, 8% 1978, 12% average; condition good. Winter wheat 4% seeded, 6% 1978, 6% average. Pasture condition good to fair. Fieldwork: 6.8 days suitable.

INDIANA: Cool, dry, sunny, north. Cloudy and rainy on two days central and south as Hurricane Frederic brushed southeast. Rainfall zero north, 0.30 in. central, and 1.10 to 2.20 in. south. Temperatures averaged 3° below normal and ranged from 34 to 85°. Some light frost on low lands in north on 23d. Low humidities.

Fieldwork: 6 days suitable. Topsoil moisture short to mostly adequate; subsoil moisture adequate. Corn 55% mature, 1978 60%, average 65%; 5% harvested, 1978 5%, average 5%. Soybeans 5% combined, 1978 5%, average 5%; 15% mature, 1978 20%, average 35%; 50% shedding leaves, 1978 55%, average 75%. Wheat land 50% plowed, 1978 45%, average 65%. Wheat 5% seeded, 1978 5%, average 10%. Rye 20% seeded, 1978 15%, average 20%. Tobacco 80% harvested, 1978 70%, average 50%.

IOWA: Dry with low relative humidities, abundant sunshine, near-seasonal temperatures, and rainless weather until a scattering of shower activity began late 23d falling mostly over central and some northwest and north central areas.

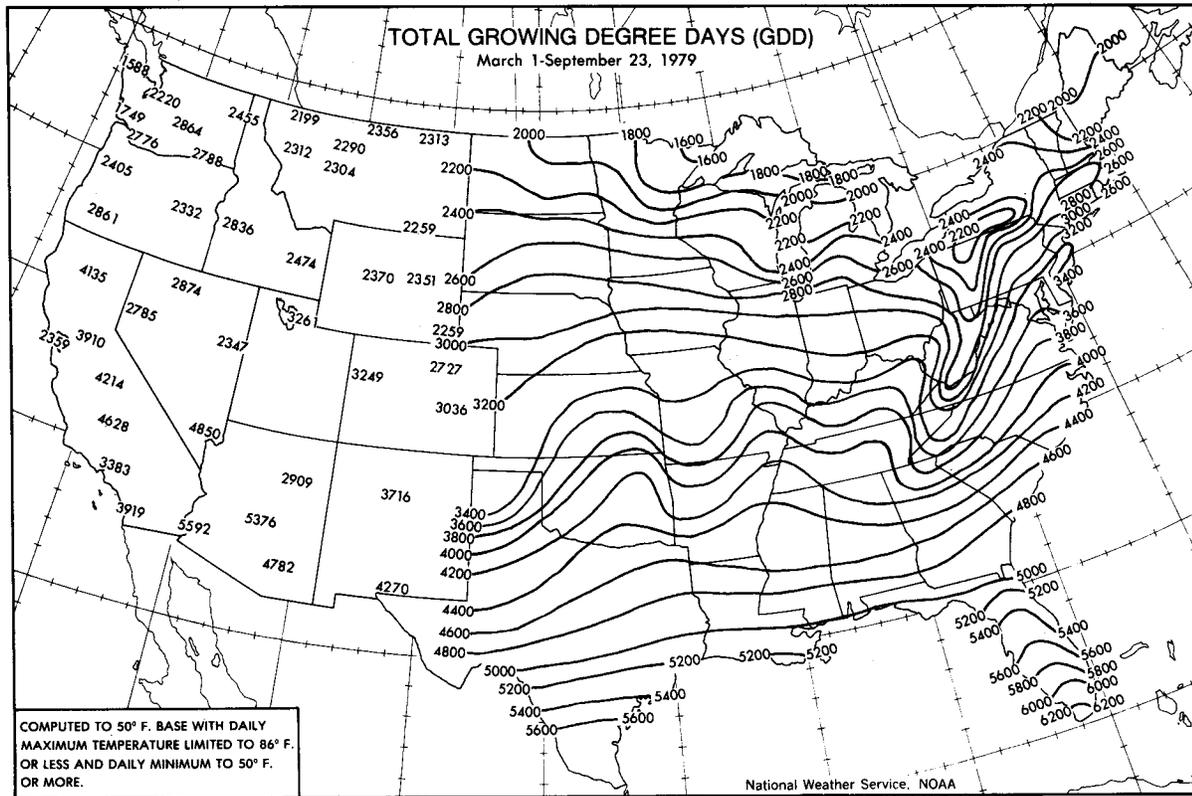
Fieldwork: 6.9 days favorable. Corn condition very good; in or past dent stage 96%, 1978 94%, normal 95%; mature 68%, 1978 88%, normal 83%; harvested 2%, 1978 4%, normal 4%. Soybean condition mostly good; acreage with leaves turning 94%, 1978 100%, normal 92%; acreage with leaves shedding 59%, 1978 63%, normal 73%; mature 29%, 1978 62%, normal 65%; acreage harvested 5%, 1978 4%, normal 8%. Topsoil and subsoil moisture adequate. Livestock market movement normal. Herd replacement slow. Pasture condition very good.

KANSAS: Precipitation mostly nonexistent; only trace up to 0.05 in. Temperatures ranged upper 60's or 4° above normal northwest and near normal elsewhere.

Corn mature 55%, last year 70%, average 70%; harvested 10%, last year 15%, average 15%. Sorghums mature 35%, last year 40%, average 35%; harvested 5%, last year and average 10%. Soybeans shedding leaves 40%; harvested 2%, last year 4%, average 0%. Wheat seeding 35% completed, last year 20%, average 30%. Fourth cutting alfalfa 65% complete, last year 50%, average 45%. Soil moisture short. Pastures deteriorating rapidly. Fieldwork: 6.5 days suitable.

KENTUCKY: Temperatures averaged several degrees below normal; with daytime highs averaging 4 to 6° below normal.

Heavy rain late 20th and 21st limited fieldwork to 4.5 days. Soils mostly saturated. Major activity before rain, cutting tobacco. Burley cutting 90% complete compared with 78% last year and 86% normal. Corn 7% harvested, 16% last year, 7% normal. Soybean harvest 3% complete, year ago 3%, average 4%. Winter hay stocks above average. Fuel supplies adequate.



LOUISIANA: Temperatures normal to 4° below normal. Extremes: 91 and 54°. Rain statewide.

Fieldwork: 3.0 days suitable. Soil moisture adequate to surplus. Soybeans fair to good; 50% leaves turning, 60% last year; 28% shed leaves, 37% last year. Rice 98% ripe; 93% harvested, 91% last year, 87% average. Cotton fair to good; 39% open bolls, 65% last year, 45% average. Corn 84% harvested, 88% last year, 71% average. Sorghum good; 96% turning color; 81% ripe, 92% last year; 43% harvested, 63% last year, 56% average. Sweet-potatoes 46% dug, 49% last year, 51% average. Sugarcane 41% planted, 33% last year, 39% average; good condition. Pecans fair. Hay fair to good. Pasture, cattle good.

MARYLAND & DELAWARE: Temperatures 4° below normal. Highs in mid-70's except near 70° in mountains; lows near 50° except low 40's in mountains. Precipitation light to moderate; about 1.00 in.

Fieldwork: 6.0 days suitable. Soil moisture mostly adequate to surplus. Fuel supplies adequate. Corn mature 70%, 79% last year, 78% normal. Harvest for corn silage 60%, 80% last year, 73% normal. Harvest for grain 20%, about equal to last year and the normal. Soybeans yellowed 30%, 45% last year, 37% normal; 10% shed leaves. Tobacco harvest 95% complete. Apple harvest in full swing.

MICHIGAN: Temperatures generally ranged from 1 to 4° below normal. Daytime highs reached into low 60's. Nighttime lows fell to high 20's and low 30's. Frost reported over much of State. Precipitation sparse.

Fieldwork: 6 days suitable. Soil moisture short. Pasture feed supplies below average. Corn 85% dented, 100% last year and normal. Corn 18% mature, 38% last year, 36% normal. Less than

1% corn harvested this year and last year, 1% normal. Soybeans shedding 32%, 100% last year, 92% normal; 4% mature, 11% last year, 17% normal; less than 1% soybeans harvested this year and last year, 1% normal. Winter wheat 25% planted, 10% last year, 15% normal. Dry bean harvest 65% complete, 65% last season, 45% normal. Potatoes 40% harvested, on pace with last year and normal. Third cut haymaking 70% finished, 60% last year, 55% normal. Grapes 10% picked. Apple harvest in full swing. Peach, pear, and plum harvests nearing completion. Onion, cabbage and tomato harvests 75% done. Cucumbers and sweet corn well above 90% harvested.

MINNESOTA: Temperatures averaged up to 9° below normal extreme north, up to 3° above normal west central, near normal elsewhere. Extremes: 92 and 27°. Precipitation averaged 0.50 to 0.75 in. below normal; totals 0.10 to 0.35 in. north, zero elsewhere except some local accumulations.

With good weather past 2 weeks, crops much closer to maturity, much less prone to frost damage. Another week dry sunny weather will push row crop development far enough so frost damage would be minimal except some low spots and very late planted fields. Corn 79% denting, 1978 99%, normal 97%; mature 14%, 1978 70%, normal 69%; silage cut 12%, 1978 45%, normal 68%. Soybeans shedding leaves 48%, 1978 88%, normal 90%; mature 11%, 1978 42%, normal 59%. Combined: Spring wheat 90%, 1978 99%, normal 95%; oats 97%, 1978 99%, normal 99%; flaxseed 48%, 1978 65%, normal 74%. Potatoes dug 30%, 1978 35%, normal 41%. Sweet corn harvested 85%, 1978 99%, normal 98%. Winter wheat seeded 70%, 1978 71%, normal 72%. Rye seeded 65%, 1978 68%, normal 70%.

MISSISSIPPI: Temperatures 2 to 10° below normal except coast near normal. Extremes: 46 and 95°. Heavy rains midweek. Weekend fair.

Soil moisture surplus to excessive. Fieldwork: 1.9 days suitable. Rain interrupted fieldwork. Crop damaged in some areas from standing water. Late beans improved by rain in some areas. Soybeans 39% shedding, 53% 1978, 47% average; 12% mature, 18% 1978, 19% average; harvested 1%, 4% 1978, 4% average; condition good. Cotton 66% open boll, 89% 1978, 67% average; only a few fields harvested, 6% 1978, 6% average; condition fair. Rice 73% mature, 93% 1978; 34% harvested, 54% 1978, 33% average; condition good to fair. Corn 47% harvested, 60% 1978, 35% average; condition good. Sorghum 75% ripe, 86% 1978; 30% harvested, 45% 1978, 47% average. Hay crops 85% harvested, 87% 1978, 83% average. Sweetpotatoes 27% harvested, 38% 1978, 39% average. Peanuts 51% harvested, 37% 1978, 52% average. Winter wheat 14% planted, 25% 1978, 21% average. Pecan condition mostly poor. Pasture condition good. Diesel and gasoline supplies adequate to tight; LP gas adequate.

Precipitation above normal.

Fieldwork: 5.2 days suitable. Soil moisture adequate. Condition of soybeans, corn, cotton, sorghum grain, pasture, sweetpotatoes and apples fair to mostly good. Peanuts fair to good.

MISSOURI: Temperatures cool, averaging 3° below normal. Precipitation only in south with over 3.00 in. Bootheel, less than 0.50 in. Ozarks.

Fieldwork: 6.0 days suitable. Corn 68% mature, last year 39%, normal 68%; 14% harvested, last year 13%, normal 20%. Soybeans 60% turned color, last year 56%; 20% mature, last year 12%, normal 23%; 3% harvested, last year 4%, normal 5%. Grain sorghum 58% mature, last year 53%, normal 62%; 13% harvested, last year 18%, normal 15%. Winter wheat seedings 11% seeded, last year 12%. Cotton 48% with open bolls, last year 84%, normal 43%. Condition of soybeans and pasture mostly fair to good, cotton mostly fair. Soil moisture short to adequate. Fuel supplies adequate.

MONTANA: Very warm, dry. No precipitation. Temperatures averaged 6 to 10° above normal.

Soil moisture short. Fieldwork: 7 days suitable. Winter wheat 60% planted, 45% 1978, normal 60%. Barley harvested 90%, 75% 1978, 85% average. Corn silage harvested 55%, 30% 1978, 55% average. Oats harvested 90%, 80% 1978, 90% average. Spring wheat harvested 90%, 80% 1978, 90% average. Dry beans harvested 45%, 30% 1978, 40% average. Potatoes harvested 10%, 10% 1978, 10% average. Second cutting alfalfa 90% complete. Fifteen percent of growers expecting 3d cutting alfalfa. Winter grazing prospects mostly adequate. Cattle and sheep 30% moved from summer ranges. Marketing of cattle and sheep slightly below normal.

NEBRASKA: Precipitation only traces Panhandle. Temperatures 3° above normal; warm days and cool nights.

Row crop maturity 10 days to 2 weeks behind normal. Corn mature 35%, year ago 60%, normal 70%; dent 90%, year ago 100%, normal 100%. Grain sorghum ripe 20%, year ago 55%, normal 50%; sorghum turning 90%, year ago 95%, normal 100%. Soybean leaves shed 30%, year ago 65%, normal 65%; soybean leaves turned 85%, year ago 95%, normal 95%. Winter wheat seeding 75%, year ago 70%, normal 65%. Diesel 90% adequate, 10% tight; gasoline 95% adequate, 5% tight; LP gas adequate. Fieldwork: 7.0 days suitable.

NEVADA: Warm, dry weather. Temperatures ranged 2 to 11° above normal. Extremes: 103 and 25°. Few light showers northwest.

Sixth cuttings alfalfa hay well along extreme south. Alfalfa seed harvest off to slow start. Dry weather ideal to date. Livestock moving off summer ranges.

NEW ENGLAND: Fine, mild weather 17th and 18th. Cold front night of 18th touched off showers north. Frost common night of 18th. Rain on 21st in south ranged 1.00 to 2.00 in. Clearing, cool weather returned by weekend.

Potato harvest in Maine began in earnest. Hard frost 19th terminated growing season for warm season crops. Many farmers busy cutting corn silage and putting up final cutting of hay. Apple harvest in full swing. Cranberry dry harvest in full swing with water harvest just beginning. Soil moisture adequate to surplus. Available grazing short to good. Fuel supplies tight to adequate.

NEW JERSEY: Temperatures 4 to 6° below normal. Extremes 31 and 81°. Rainfall averaged 2.74 in. north, 1.32 in. central and 2.03 in. south. Soil temperature averaged 59° north, 65° central and south. Total sunshine 66% of possible hours.

Fieldwork: 6.1 days suitable. Soil moisture generally adequate. Cool temperatures slowed growth of fall crops. Some light frost reported. Iceberg lettuce harvest begun. Harvest of summer vegetables about complete. Apple harvest active. Cranberry harvest becoming general, prospects very good. Field corn and soybeans maturing. Fall grain seeding active.

NEW MEXICO: Scattered light showers early week then again more numerous and heavier 21st. Very cool east and slightly cooler generally 21st, warming again weekend. Temperatures mostly averaged 2 to 4° subnormal.

Crops advancing seasonally and good condition though late. Cotton 15% open, many small bolls, no picking yet, light picking last year and average. Grain sorghum 95% dough, limited combining southeast corner. Corn ensilage 75%, light grain harvest. Winter wheat 75% seeded, most up good stands. Green chile harvest proceeding, other crops satisfactory progress. Ranges, livestock good condition.

NEW YORK: Widespread frost northeast, some local killing frosts. Above average rainfall southeast and most eastern areas.

Wet conditions slowed fieldwork. Grain corn drying slowly. Silage corn 15% cut, 25% 1978. Third cutting alfalfa 55% done, 50% 1978. L.I. cauliflower harvest started, potato harvest active. Orange County and central vegetable harvesting active. Some potato losses due to flooding expected in Orleans-Genesee area. McIntosh apple harvest peaking. Early variety grape harvest progressing. Peach harvest complete.

NORTH CAROLINA: Temperatures near normal. Precipitation above normal.

Fieldwork: 5.2 days suitable. Soil moisture adequate. Condition of soybeans, corn, cotton, sorghum grain, pasture, sweetpotatoes and apples fair to mostly good. Peanuts fair to good. Harvested: Burley tobacco 90%, 1978 70%, average 78%; peanuts dug less than 5%, 1978 7%, average 8%; sweetpotatoes 30%, 1978 28%, average 28%; corn for grain 53%, 1978 51%, average 49%; corn for silage 81%, 1978 80%; cotton 5%, 1978 and average less than 5%; apples 50%, 1978 52%, average 48%. Planted: Wheat 5%. Phenological stages:

Corn mature 94%; cotton open boll 35%; soybeans flowering 83%; soybeans pod set 86%.

NORTH DAKOTA: Dry mild weather prevailed. Temperatures averaged 3 to 6° above normal. Scattered frost on 21st but little damage. Extremes: 28 and 91°. Rainfall light; mainly northeast; maximum 0.42 in. northeast.

Combining of small grains nearing completion. Progress nearly caught up with average. Percents combined and swathed with last year and average: Hard red spring wheat 92 and 6, 95 and 4, 94 and 4; durum wheat 84 and 11, 91 and 6, 87 and 9; oats 98 and 2, 100 and 0, 97 and 2; barley 98 and 2, 100 and 0, 98 and 2. First sunflower combined; not general for 1 to 2 weeks south, 2 to 3 weeks north. Bracts of heads brown or beyond on 36%, last year 61%, average 42%. Corn picking two weeks away. Harvest of other crops underway. Fall moisture needed for tillage work and pastures.

OHIO: Generally precipitation less than normal and soils dried. In the south rain heavy with local amounts in excess of 4.00 in. Temperatures averaged below normal. Low was 33° northeast, high 60's in south.

Corn and soybeans maturing slightly behind average; combining underway in central and west central. Harvest of hay, tomatoes and tobacco winding down. Winter wheat planting begun in north. Rye seeding nearly complete. Apple and grape picking making adequate progress. Livestock in excellent condition. Grass providing adequate roughage. Corn mature 65%, 65% 1978, 70% average. Corn harvested less than 1%, less than 5% 1978, 5% average. Soybeans mature 30%, 30% 1978, 40% average. Soybeans harvested 1%, 5% 1978, less than 5% average. Winter wheat planted 15%, 15% 1978, 15% average. Corn silage cut 45%, 55% 1978, 55% average. Alfalfa hay - 3d cut 85%, 90% 1978, 85% average. Fieldwork: 5 days favorable. Pasture condition very good. Soil moisture adequate to surplus.

OKLAHOMA: Temperatures ranged from 1° below normal Panhandle to 7° below normal southeast. No rain in Panhandle and northwest. Southeast averaged 1.73 in. tapering to near 0.59 in. east central and south central, with all other areas reporting 0.07 in. or less.

Dry weather hindered seeding. Additional moisture needed to continue seeding. Dry weather forcing some cotton bolls open prematurely. Wheat seedbed prepared 95%, 95% 1978, 90% average. Wheat planted 25%, 15% 1978, 25% average. Wheat up to stand 10%, 5% 1978, 10% average. Sorghum milk to soft 95%, 100% 1978, 100% average; mature 65%, 55% 1978, 60% average; harvested 10%, 10% 1978, 10% average. Cotton open bolls 15%, 50% 1978, 20% average. Fieldwork: 5.9 days suitable.

OREGON: Few light showers, no measurable amounts. Temperatures well above normal with some cooling near end of week. Lows mostly in 40's and 50's, some 30's in higher elevations.

Soil moisture mostly short except northwest quarter where supplies short to mostly adequate. Winter wheat 20% seeded. Harvesting of wheat in higher elevations finishing up. Land preparation for fall seeding continuing. Grass seeding well underway. Corn silage harvest continuing; good crop and excellent quality. Mint harvest finishing up; fields being prepared for new plantings. Second and third cutting alfalfa continuing. After harvest spraying and clean up in caneberries. Prune harvest should finish this week; quality good but many lost to wind, rain, and shortage of drier space. Anjou harvest continuing; apple harvest

to get in full swing next week. Filbert harvest underway; quality mostly good. Late beans, sweet corn, onion, beets, potato harvests continuing. Potato harvest in late areas starting or will be starting shortly. Livestock fair to mostly good condition. Pastures and ranges poor to good condition.

PENNSYLVANIA: Sunny, dry, and pleasant late summer weather prevailed through 20th. Daytime temperatures reached 60's and 70's. Major storm 21st brought heavy rain to south and east. Rainfall measured 2.00 to 4.00 in.; some small stream flooding occurred. Southwest and northeast amounts 1.00 to 2.00 in. decreasing to less than 0.25 in. over northwest. Clear and cool conditions returned 23d. Temperatures averaged 2 to 5° below normal.

Fieldwork: 6 days suitable. Soil moisture adequate to surplus. Activities: Haymaking; fall plowing; harvest potatoes, tobacco, corn, fruits and vegetables and ensilage corn; silo filling. Tobacco virtually complete, 88% last year. Potatoes 76% dug, last year 50%. Corn 21% in dough, 28% last year, average 19%; 60% dented, last year 60% dented, normal 56%. Fall plowing 71%, last year 58%. Wheat sown 20%, last year 35%, normal 34%. Barley sown 43%, last year 50%. Hay quality mostly fair to good. Feed from pastures average to above.

PUERTO RICO: Island average rainfall 0.72 in. or 1.08 in. below normal. Temperatures averaged about 81° on coasts and 76° interior. Extremes: 93 and 60°.

SOUTH CAROLINA: Temperature below normal. General showers beginning and end of period.

Soil moisture mostly adequate. Fieldwork: 4.6 days suitable. Corn harvest slowed by damp conditions; 73% harvested, 75% last year, 66% average. Cotton open bolls 77%, 86% last year, 69% average; 4% harvested, 8% last year, 6% average. Cool, rainy weather slowed maturity, boll rot increasing. Soybeans fair to good, improving; leaves turning color 12%, 32% last year, 28% average; shedding leaves 5%, 13% last year, 11% average. Some spraying necessary for stink bugs, velvet bean caterpillars; damage relatively light. Apples excellent condition, harvesting late varieties active; 81% harvested, 70% last year, 74% average. Fall cucumbers 3% harvested, snap beans 15%. Pasture conditions good, improving; winter grazing 38% planted.

SOUTH DAKOTA: Temperatures changed rapidly; averages 3° subnormal to 3° above. Extremes: 96 and 25°. Freezing temperatures and light frost in many areas. Very little precipitation.

Row crops matured rapidly. Row crop harvest began. Fieldwork: 6 days suitable. Main farmwork: Silage cutting, winter wheat and rye seeding. Topsoil moisture adequate southeast, east central and parts of north; short elsewhere. Grain transportation problems eased slightly, grain storage remains tight. Grasshoppers and greenbugs a problem for fall sown small grain. Blackbirds troublesome to sunflowers; armyworms to crops in northwest. Farm fuel supplies tightened but remained mostly adequate. Flax 91% harvested, 1978 100%, average 100%. Corn 92% dented and beyond, 1978 97%, average 100%; 80% mature, 1978 83%, average 86%. Soybeans 80% mature. Sunflowers 86% mature. Sorghum 89% showing color, 1978 89%, average 93%. Winter wheat 87% seeded, 1978 86%, average 79%. Rye 86% seeded, 1978 86%, average 75%. Winter wheat 46% emerged. Rye 39% emerged.

TENNESSEE: Cloudy most of week. Scattered light rain early week with rains of 2.00 to 4.00 in. 20th and 21st. Weekend free of rain. Temperatures 2° below normal.

Soil moisture surplus. Fieldwork: 3.4 days suitable. Corn mature 67%, 1978 93%, average 72%; harvested for grain 11%, 1978 25%, average 16%. Soybeans turning yellow 48%, 1978 62%; leaf drop 11%, 1978 24%; mature 2%, 1978 6%, average 17%. Cotton open bolls 20%, 1978 63%, average 42%; harvested 4%, 1978 6%, average 8%. Burley tobacco harvested 90%, 1978 81%, average 88%. Dark-fired tobacco harvested 80%, 1978 81%, average 79%. Air-cured tobacco harvested 88%, 1978 80%, average 83%. Lespedeza hay harvested 72%, 1978 77%, average 78%. Wheat seeded 12%, 1978 15%, average 22%. Farmers ready for harvest, need dry weather. Fuel supplies mostly adequate with a few tight. Pastures and livestock good condition.

TEXAS: Low pressure system over lower Texas coast early week moved northeastward through central east Texas producing extensive flooding. High pressure ridge brought fair skies throughout state by week-end. Temperatures 4 to 6° cooler over eastern half, western areas 2 to 4° cooler. Torrential rains along coast put areas up to 8.00 in. above normal; east Texas 7.00 in. plus, south coast plus 5.00 in.; elsewhere precipitation slightly above normal.

Heavy rains, coastal flooding occurred eastern section; warm days, cool nights prevalent western half where rain would be welcome for fall planted small grains. Insect activity light with bollworm waning on Plains cotton. Corn harvest well underway Panhandle. First bale High Plains cotton ginned. Major High Plains harvest activity several weeks away as only 10% bolls open. Cloudy days, cool nights slowed maturity of American Pima. Panhandle corn harvest well underway. Early maturing sorghum varieties cut High Plains. Harvest active Cross-Timbers, virtually complete elsewhere. Rain needed on peanuts throughout Cross-Timbers, both for production on late varieties and to facilitate digging. Soybeans making good progress. Major harvesting activities expected to commence several weeks. Wheat, oat plantings continue Panhandle although additional moisture would help germination.

Cotton open bolls 30%; harvested 11%, 19% 1978, 17% average. Rice harvested 100%, 100% 1978, 99% average. Sorghum turning color 90%; mature 73%; harvested for grain 69%, 71% 1978, 64% average. Wheat planted 38%, 33% 1978, 39% average. Emerged 13%. Corn harvested 53%, 55% 1978, 50% average. Peanuts harvested 29%, 24% 1978, 28% average. Soybeans harvested 0%, 1% 1978, 0% average. Sunflowers harvested 1%, 12% 1978, 29% average. Barley planted 13%, 0% 1978. Flax planted 2%, 0% 1978, 0% average. Oats planted 23%, 35% 1978, 29% average.

With soil moisture becoming short many areas western half pastures, ranges begun to show signs of moisture stress. Cattle being moved off summer pastures as cooler weather slowed growth. In eastern half, moisture adequate. Small grains germinating nicely. Livestock in good to excellent condition eastern half, good condition western half.

In eastern half wet fields continued to delay land preparation, planting fall vegetables. Cool temperatures benefitted most crops. Citrus fruit developed well, wet ground prevented most orchard activity. Some harvests delayed by rain. Large pecan crop evident by loaded trees with limbs breaking. Some early varieties have begun to split shucks and to hull. Droppage continued to be a problem.

UTAH: Few isolated afternoon and evening showers and thunderstorms principally south midweek. Amounts generally light. Temperatures continued mostly above normal with averages ranging from 3° below to 8° above. Soil moisture deficit continued to increase.

Fieldwork: 7 days suitable. Some frost in higher elevations. 3d crop alfalfa hay 75% cut. Dryland winter wheat 50% planted; irrigated about 45%. Some early plantings emerged. Some farmers planting in dust. Corn silage chopping about 25% complete. Early potato digging active, major late areas just started. Dry bean harvest started. Most onions lifted and dying. Peach harvest almost complete. Apple picking just underway. Hot, dry weather reducing color and causing sun scald. Livestock in generally good condition but fall and winter range prospects about 75% normal. Fuel supplies generally adequate.

VIRGINIA: Temperatures cool, averaging in low 60's, slightly below normal; Extremes: 89 and 36°. Rainfall ranged from less than 0.50 in. extreme southwest to over 7.00 in. Patrick County. Major flooding southern portions. Considerable flash flooding due to overflow of most streams and areas with poor drainage due to heavy rainfall.

Topsoil moisture mostly adequate. Fieldwork: 5.0 days suitable. Corn combining 30%, 30% 1978, 29% average; Tidewater and southeast progress 49%, 55% 1978. Tobacco harvest progress: Flue-cured 90%, 81% 1978, 84% usual; fire-cured 95%, 77% 1978, 84% average; burley 85%, 72% 1978, 77% average; sun-cured 95%, 66% 1978, 80% usual. Apples picked 33%, 33% 1978. Sweetpotato digging Eastern Shore 8%, 18% 1978. Small grain seedings: Wheat 2%, 3% 1978, 7% usual; barley 4%, 9% 1978, 14% average; winter oats 5%, 12% 1978, 17% usual. Peanut digging started southeast, expected to become general first week October. Few soybeans combined Eastern Shore. Cabbage cut southwest. Cucumbers, snap beans harvested Eastern Shore. Pastures good to excellent. Livestock marketings active. Fuel supplies for farm work mostly adequate.

WASHINGTON: West: Temperatures averaged 6° above normal. Precipitation averaged 0.30 to 1.30 in. below normal.

Harvesting activity in sweet corn, corn silage, grass silage, potatoes, carrots, lettuce, celery, and cauliflower. Berry and small grain harvests virtually complete. Planting of winter wheat, rye, and flower bulbs underway. Pastures good.

East: Temperatures to 10° above normal. Precipitation 0.10 to 0.30 in. below normal.

Harvests of Red and Golden Delicious apples, Anjou pears, Concord grapes, potatoes, sweet corn, green beans, and alfalfa seed continued. Niagara grape, hop, and mint harvests winding up. Third cutting alfalfa and second cutting timothy well along. Dry soils delaying planting of grains in some areas. Cattle movements to lowlands increased. Shortages of irrigation water reported. Winter wheat planted 41%, last year 39%.

WEST VIRGINIA: Temperature below normal, low 29°, high 84°. Frost in mountain valleys.

Precipitation well above normal, heavy and continuous showers 21st and 22d.

Fieldwork: 4.4 days suitable. Soil moisture adequate. Main farm activities: Haying, potato digging, chopping corn, preparing and seeding small grain fields. Harvest progress: 2d haying 80%, 87% average, 1978 89%; 3d haying 47%, 52% average, 55% 1978; potatoes 77% complete, 76% average, 84% 1978; tobacco 83% banded, 77% average, 69% 1978; corn for grain 10% complete, 15% average.

International Weather and Crop Summary

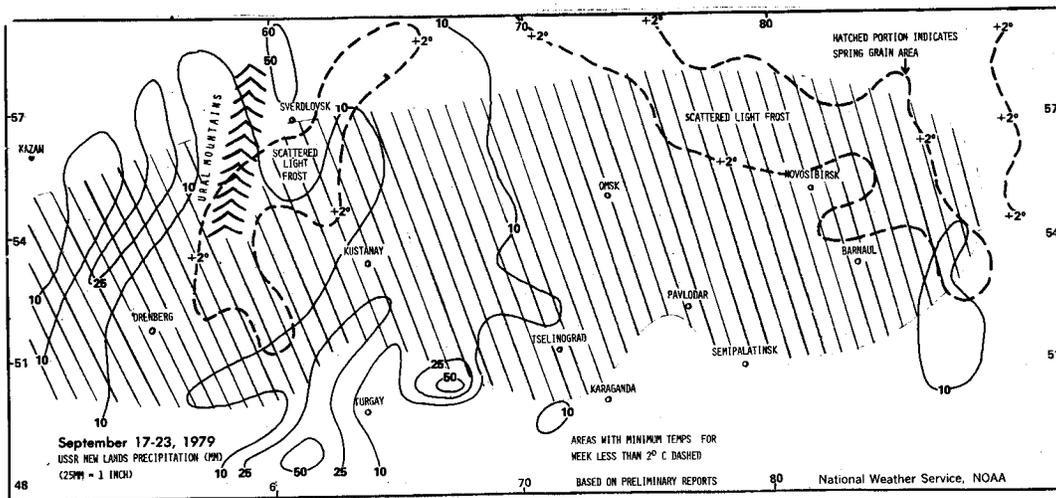
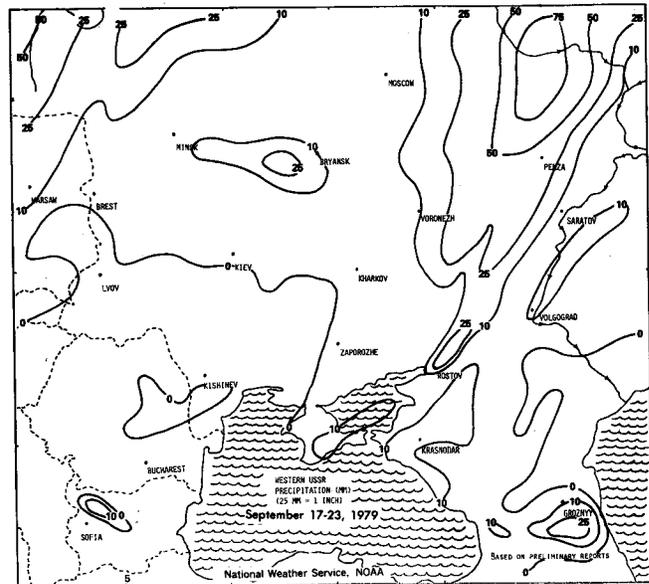
September 17 - 23

HIGHLIGHTS:

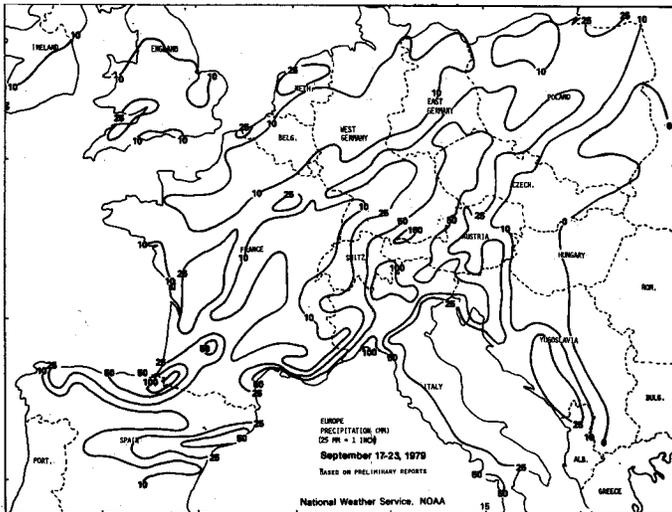
- USSR. Harvesting spring grains in northern New Lands...interference by rains. Sowing winter grains in southern Ukraine...conditions favorable.
- EUROPE. Sowing winter grains*...interference by rains. Harvesting maize*...interference by rains.
- CHINA. General harvesting of corn, cotton, and soybeans*...third consecutive week of excessive rains.
- INDIA. Rice heading in the south*...widespread, beneficial rains.
- AUSTRALIA. Small grains heading*...soil moisture inadequate in some areas.
- ARGENTINA. Small grains heading in north, jointing south*...soil moisture good.
- BRAZIL. Coffee trees flowering...good conditions.
- CANADA. Harvesting small grains in Prairie Provinces...interference by rains in the east.

*Based on normal crop calendar information.

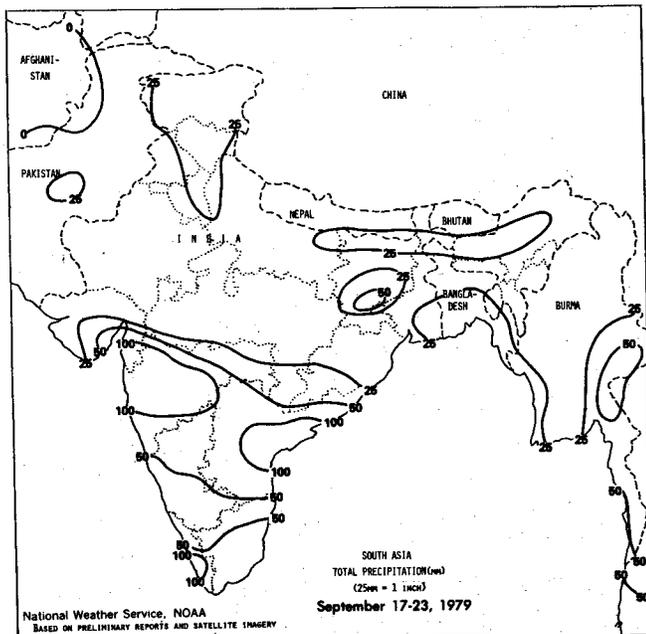
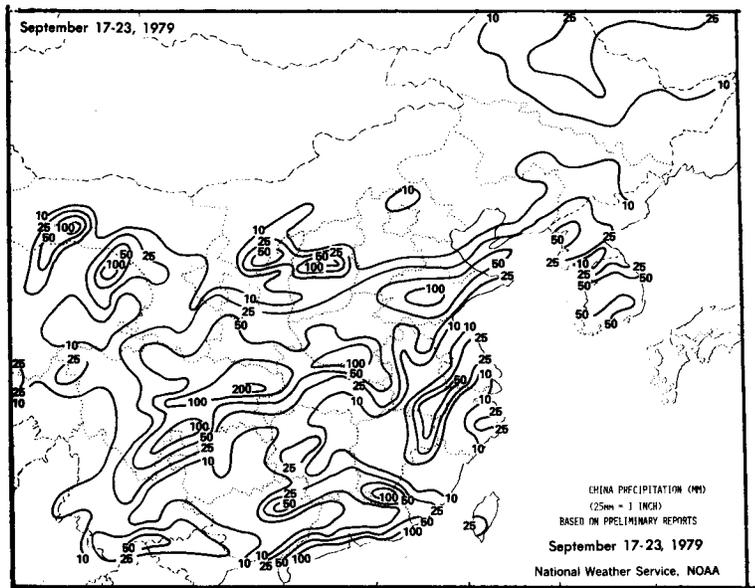
USSR. Winter grain sowing moved into the southern Ukraine under mostly fair weather. To the east, a storm moved up the west side of the Volga Valley, bringing moisture a little closer to dry areas, where totals remained light. Some interference of sowing operations in Krasnodar Krai by rains was probably welcome, and soil moisture should be adequate for grain germination. Harvest of spring-planted grains in the New Lands advanced rapidly during the week, but weekend rains brought operations to a temporary halt just east of the Urals. Fields from Kustanay south had nearly all been harvested.



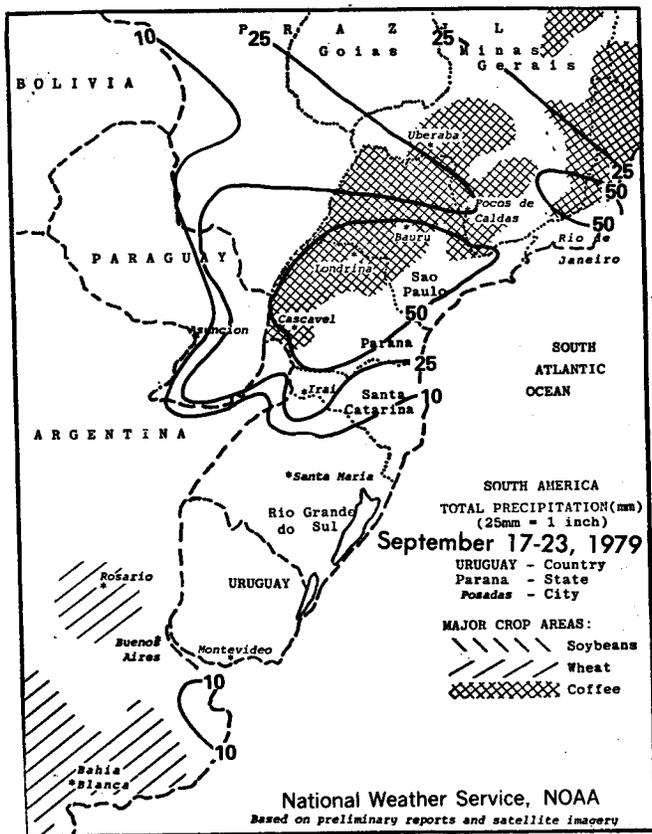
EUROPE. Above-normal rains fell over much of Europe, interfering with both sowing of winter grains and harvesting of spring-planted crops. Substantial totals were reported as far south as central Spain (for the second consecutive week) and southern Italy, replenishing soil moisture for the approaching planting season. More-favorable weather prevailed over the eastern half of East Europe.



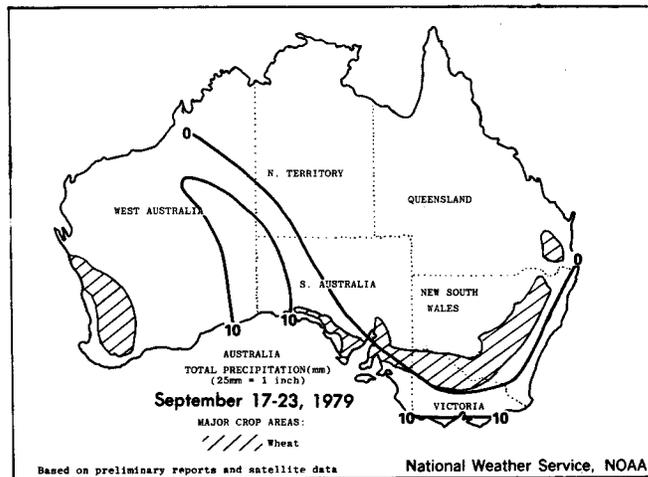
CHINA. Heavy rain continued to interfere with the fall harvest over much of the North China Plain and in the Sichuan Basin. Three-week totals exceeded 250 mm over extensive areas, and in many localities more than 400 mm had fallen. Southern coastal areas also received heavy amounts again, and although harvest of the second rice crop has not yet begun, drier conditions are needed.



INDIA. Widespread abundant rainfall in Peninsular India boosted irrigated rice crop prospects. Dry-land crops in Andhra Pradesh may have been beyond help due to the earlier dryness. Across the north, scattered showers early in the week replenished soil moisture slightly in some wheat-growing areas, though they probably came too late to benefit the rice crop. The showers actually resulted from a weather system moving through from the west; an indication that the monsoon has ended there. A summary of the 1979 monsoon appears elsewhere in this issue.

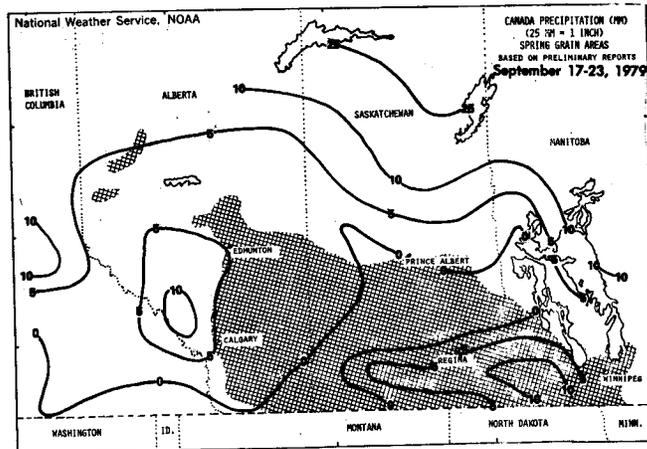


AUSTRALIA. Dry weather prevailed over most grain areas in southeastern Australia. A storm system moving in from the west apparently did not bring rain to parched crop areas in West Australia, where soil moisture is inadequate as the crop enters the heading stage. The storm may develop as it moves eastward, producing rain and maintaining favorable growing conditions. Grain areas in southeastern Queensland must receive substantial rain soon in order to produce any crop at all.

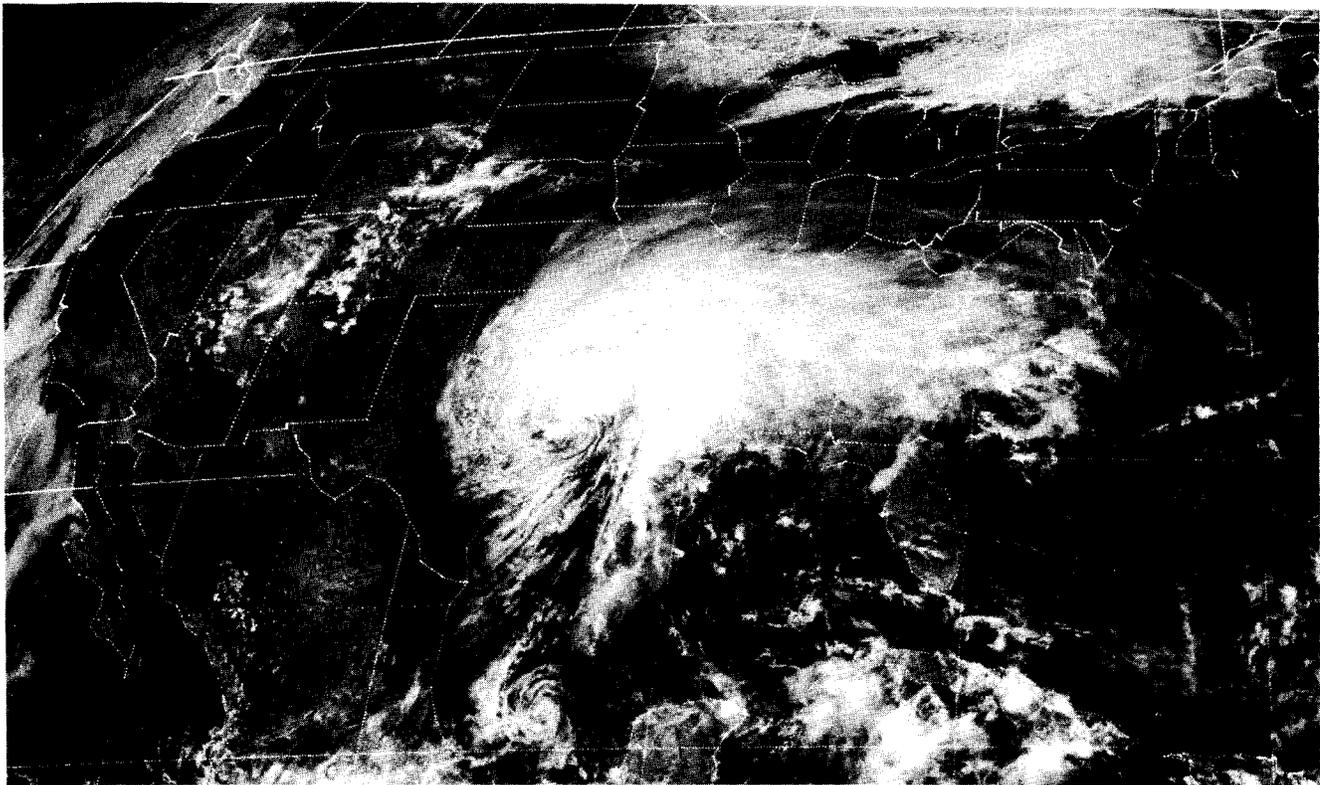
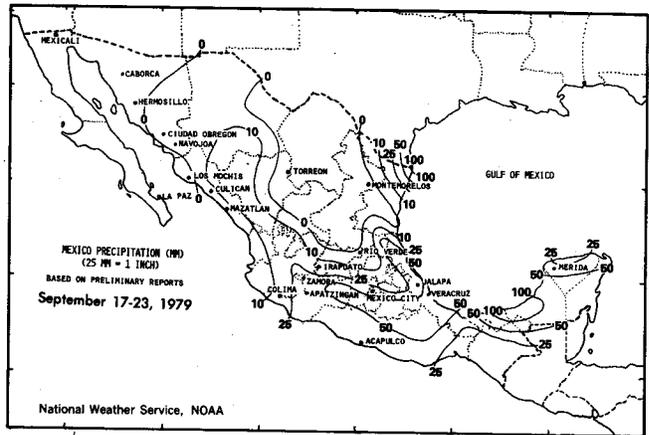


SOUTH AMERICA. Above-normal rainfall in southern coffee areas and northern soybean areas maintained good conditions as coffee flowering continued and the soybean planting season approached. Growing areas in Rio Grande do Sul became a little dry, after staying adequately wet through most of August. This drying trend benefited the maturing wheat crop. Most crop areas in Argentina turned drier too, but soil moisture remained quite adequate from previous weeks' rain.

CANADA. Threshing advanced rapidly in the western half of the grain belt under favorable weather, and the crop is more than three-fourths in. Delays due to rain have persisted in Manitoba and parts of eastern Saskatchewan.



MEXICO. Hurricane Henri, weakening in the southwest Gulf of Mexico, triggered heavy rains in some coastal sections. Veracruz and Jalapa citrus orchards received beneficial amounts while Rio Verde had very little. Rainy weather in the extreme northeast did not extend into the Montemorelos citrus region. Portions of the West Coast vegetable producing areas received light amounts. Culiacan collected 2 mm of rain; the temperature maxima averaged 34°C with relative humidity of 55 percent while overnight lows averaged 25°C with relative humidity of 90 percent.



NOAA/NESS satellite picture taken at 1:PM CDT Thursday, Sept. 20, shows the extensive cloud pattern associated with the major Gulf storm which drenched the Gulf States this week. The remains of Tropical Storm Henri are shown by the circular cloud pattern in Mexico's Bay of Campeche.

THE 1979 SOUTH ASIAN MONSOON AND ITS EFFECTS ON INDIAN AGRICULTURE

by Paul Llanso and Larason Lambert¹
 Joint Agricultural Weather Facility

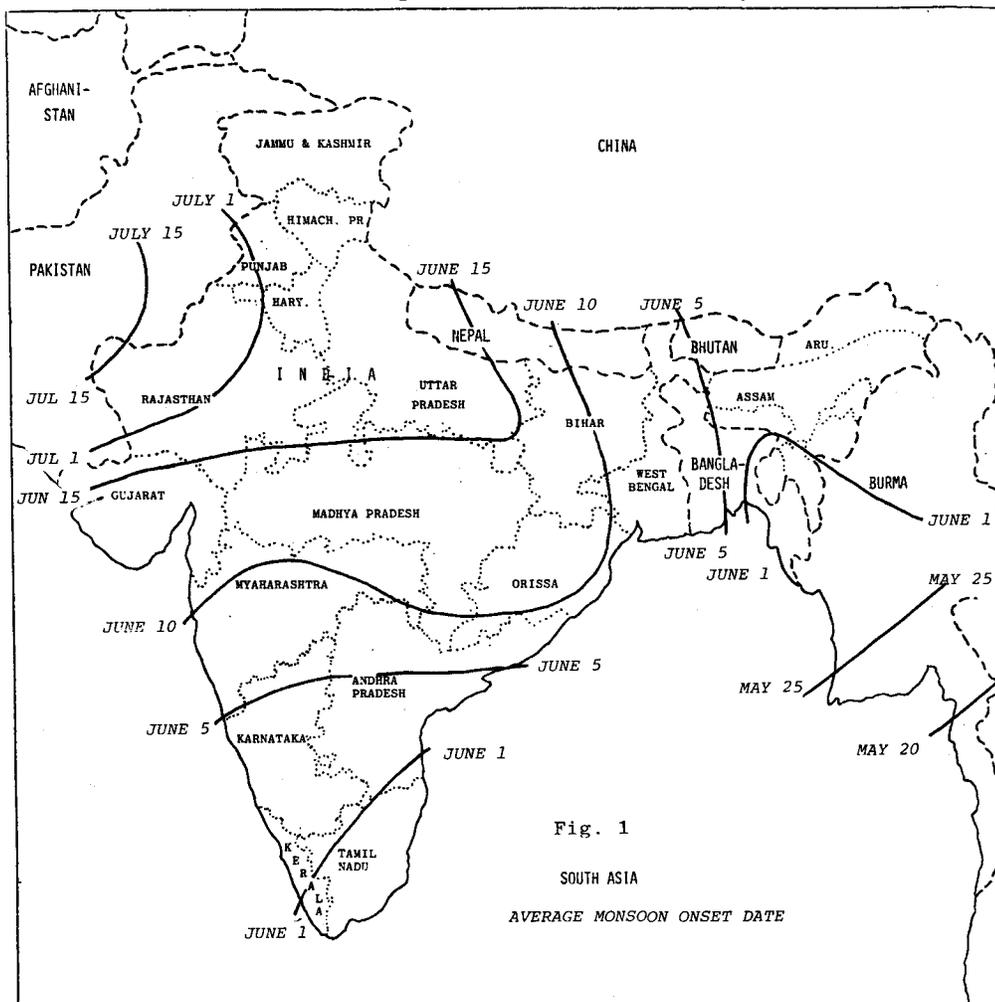


Fig. 1

SOUTH ASIA

AVERAGE MONSOON ONSET DATE

Over the past three-and-one-half months the Weekly Weather and Crop Bulletin has carried frequent references to the behavior of the Southwest Monsoon in the region of South Asia. What sort of weather phenomenon is a monsoon? Why is it so important to South Asian agriculture, and what has been its performance this year? And, finally, what are the prospects for the remainder of the season?

A monsoon climate is one in which a region is dominated by winds from a particular direction during a portion of the year, with winds from nearly the opposite direction occurring throughout the remainder of the year. Over the Indian subcontinent and surrounding countries, the Southwest Monsoon develops northward in the late spring, sending southwesterly winds from the African coast all the way to Burma and beyond. The very moist air off the Indian Ocean and the Bay of Bengal progressively invades the area, replacing the hot dryness

of spring with the incessant torrential downpours of summer. While the onset of the monsoon (Fig. 1) is measured by the swing of the winds from northeast to southwest, the heavy rains are the most important feature to agriculture. The rich northern rice lands of Uttar Pradesh, Bihar, and West Bengal receive nearly 1000 mm of rain in a normal season (June thru September), but record an average of less than 150 mm for the eight remaining months of the year (25 millimeters is roughly equivalent to one inch). In the agriculturally insignificant Khasi Hills south of Assam, the station at Cherrapunji recorded 5689 mm---more than 18 feet---of rain for the month of June, 1956! Because of such strong seasonal differences, agricultural activities in South Asia must be closely timed to the onset and behavior of the monsoon.

In 1979 the Southwest Monsoon came late, delayed by as much as three weeks in the northwestern states of India, holding up the transplanting of rice. That would not have been a problem had the monsoon then become well established, but instead, the monsoon performed erratically.

¹National Weather Service, Satellite Meteorologist, and U.S. Department of Agriculture, Crop Weather Analyst.

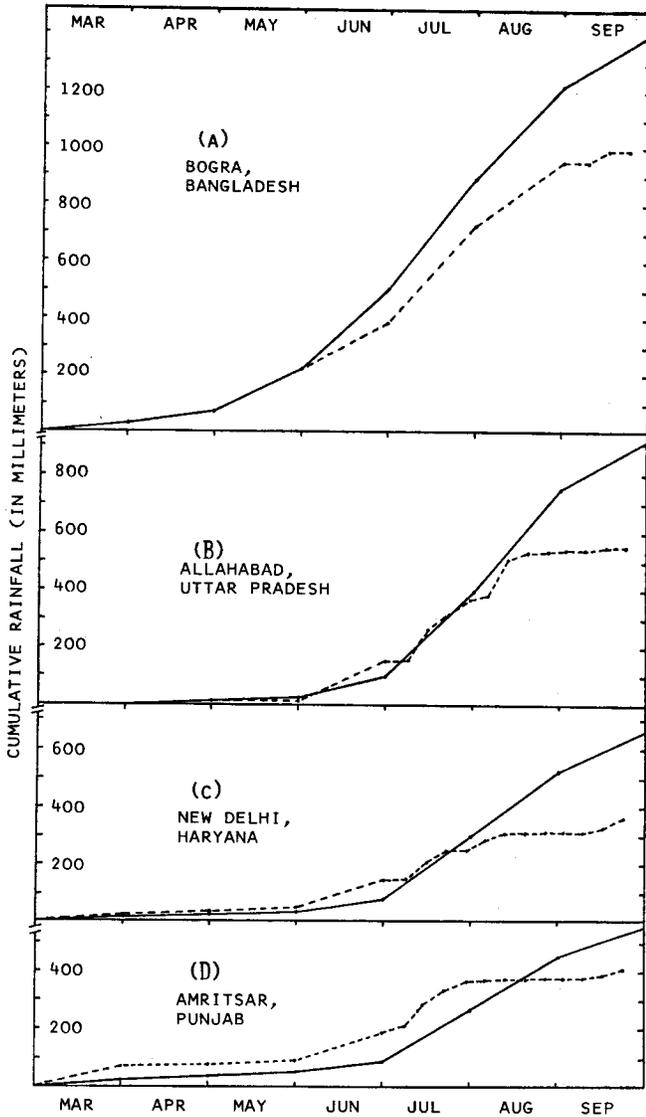
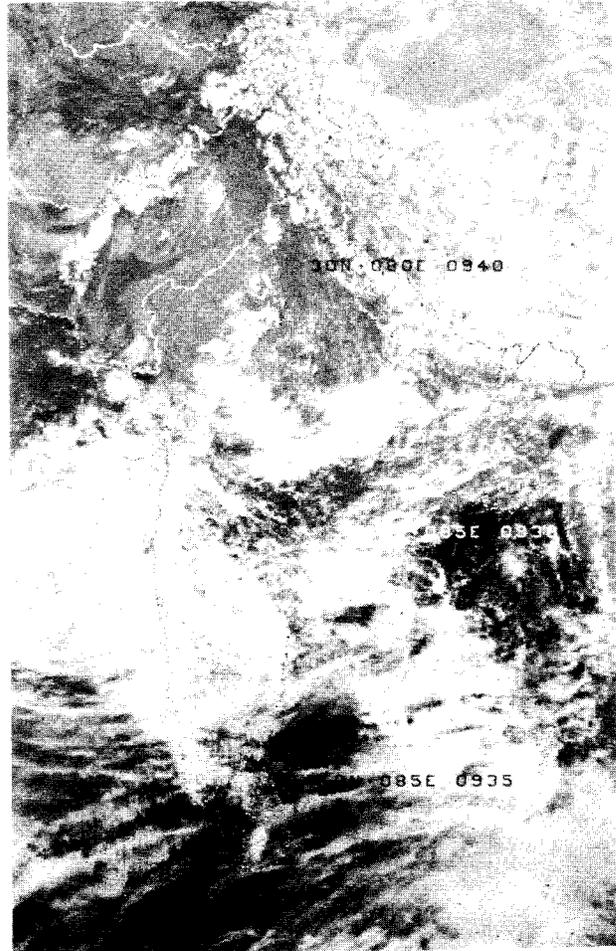


Figure 2: Seasonal accumulations of normal (—) and 1979 (---) rainfall for selected stations in northern India and Bangladesh.

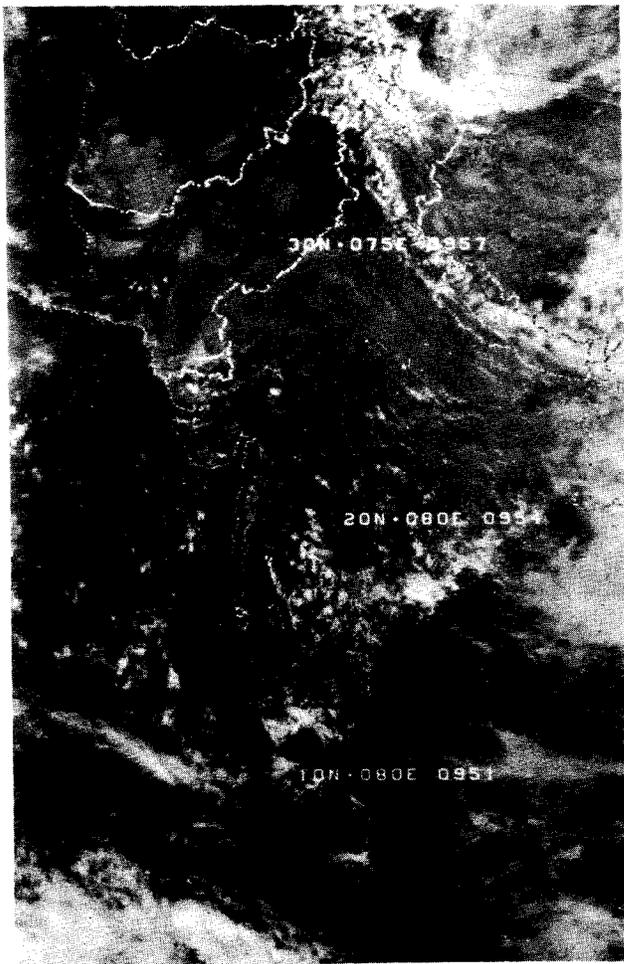
Roughly a fourth of India's rice grows in the states of Andhra Pradesh and Tamil Nadu. Conditions in coastal Andhra Pradesh became quite poor, as precipitation was less than half of normal from May through mid-September (Fig. 3e). Tamil Nadu received near-normal totals (Fig. 3f). Impact on the irrigated rice crop was lessened by extensive rains over the watershed hills of Karnataka, Myaharashtra, and western Andhra Pradesh (Fig. 3d) which began in early August, but dryland crop production suffered substantial losses. Precipitation was consistently good over most of Orissa (Fig. 3a), leading to favorable assessments of the rice crop there. Although the monsoon got off to a slow start over Bangladesh, Assam, and West Bengal, the pace quickened sufficiently to provide near-normal rainfall through August, which was adequate for the rice crop.

In eastern Uttar Pradesh and western Bihar the slow start was also offset by a sufficient moisture build-up through mid-August. However, the remaining dry weeks commenced just as the rice entered the critical heading stage (Fig. 2b). The dryness began even earlier to the west near Haryana (Fig. 2c), but that area is on the fringe of the major rice region. The dryness there is of greater importance to winter wheat prospects, as the moisture build-up has been insufficient for sowing which begins in October.



This NOAA/NESS satellite picture, taken on July 29, 1979, shows the typical cloudiness of an active Southwest Monsoon.

In the northern state of Punjab, early rains in March coupled with normal weather through July benefited the major cotton crop there (Fig. 2d). However, rainfall diminished considerably thereafter, causing concern about boll formation and development in August. Cotton and coarse grains of southern Rajasthan and Gujarat suffered through half-normal rainfalls of May, June, and July, only to be drenched by up to 400 percent of normal precipitation by two successive tropical depressions in a two-week period. These rains were of less benefit to crops than would appear from August precipitation totals, because they were so concentrated in a short time and followed by only light precipitation for the rest of the month (Fig. 3c). The second tropical depression---formed by the redevelopment of the remains of Typhoon Hope, which had earlier skirted Hong Kong and crossed 12,000 foot mountains in China and Burma---produced the rain that broke an earthen dam above the town of Morvi in Gujarat, killing thousands. A similar, though less severe pattern occurred in Myaharashtra and Madhya Pradesh (Fig. 3b), and groundnuts, rice, and cotton crops there probably avoided serious damage by either excessive or deficient moisture.



On August 25, 1979, the monsoon-associated cloudiness had virtually disappeared, as moisture-laden winds slackened.

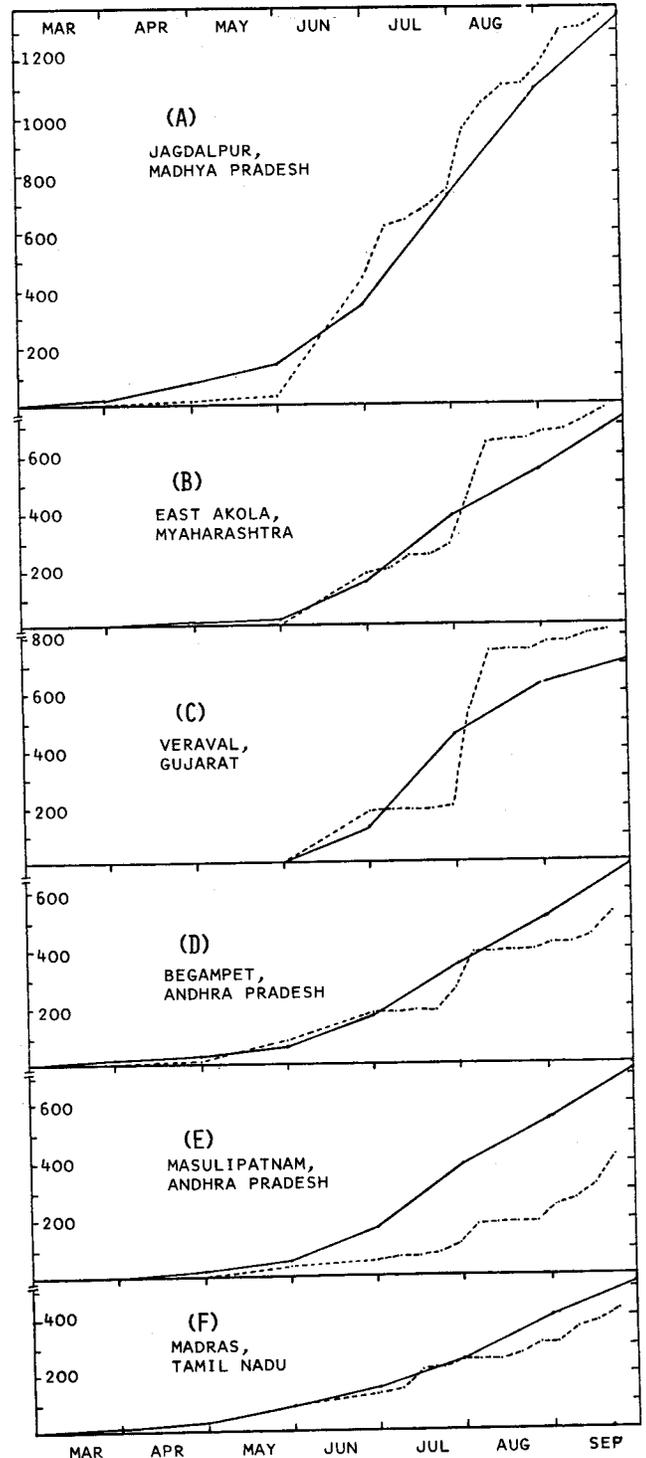
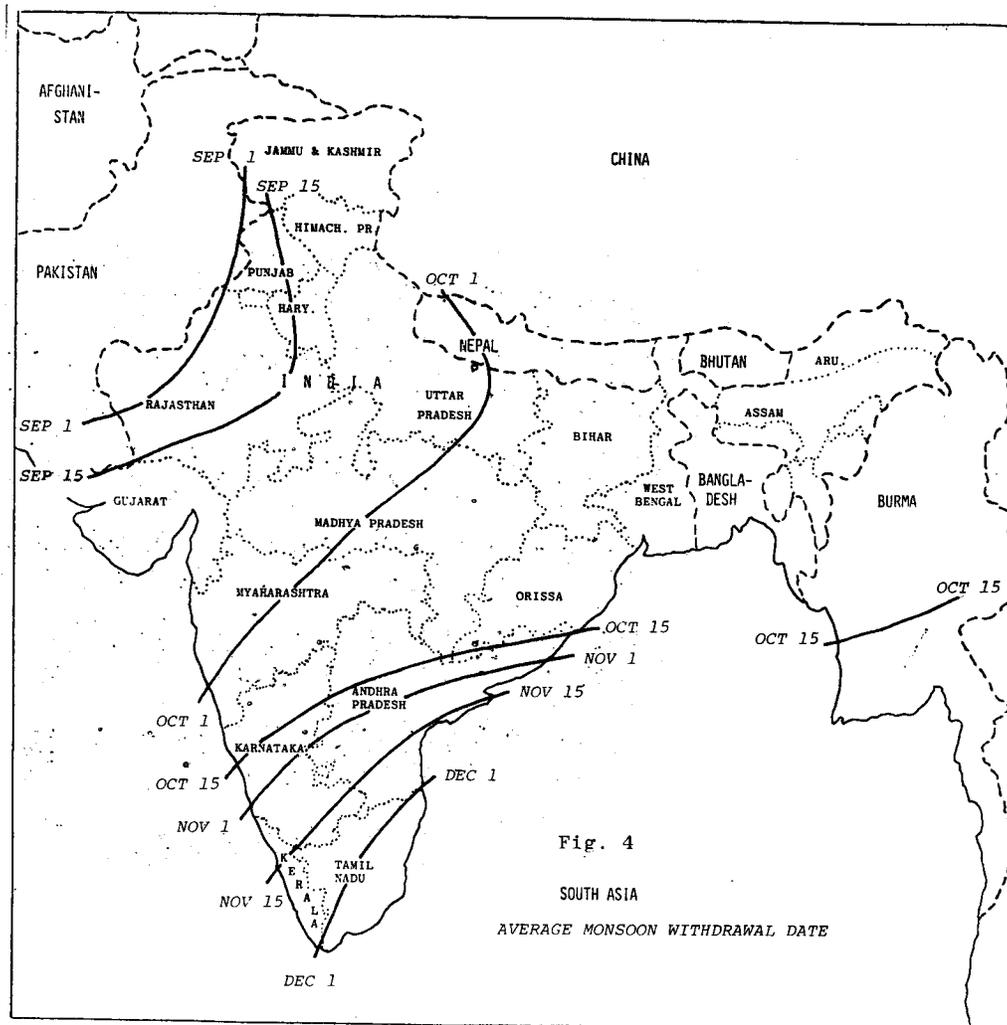
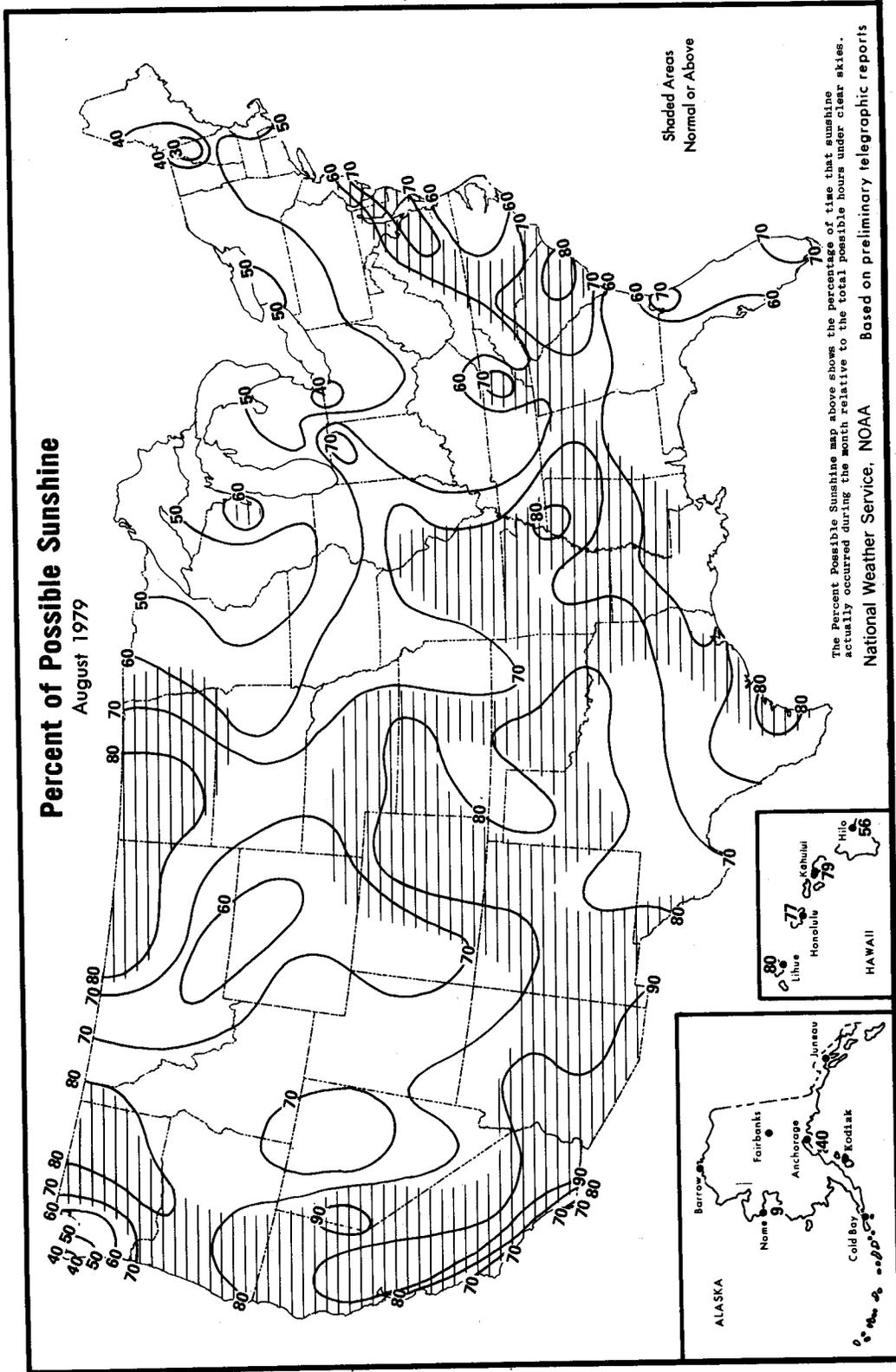


Figure 3: Seasonal accumulations of normal (————) and 1979 (-----) rainfall for selected stations in central and southern India.



What are the prospects for the rest of the season? From a climatological standpoint, quite good for southern India (including the stricken state of Andhra Pradesh); increasingly poor for northern India. The Southwest Monsoon normally withdraws rapidly from northern India from late September through October (Fig. 4). Although rains still will occur after the withdrawal, they are usually spotty and much less intense. The pattern just described actually set in by early September this year. Conversely, the increased rains of the last several weeks over southern India are quite typical, and promise much-needed relief for the later-planted rice grown there.



**CROP DEVELOPMENT
FOR WEEK ENDING SEPTEMBER 23**

	CORN MATURE		
	1979	1978	AVG.
COLO	NA	NA	NA
GA	NA	NA	NA
ILL	82	87	86
IND	55	60	65
IOWA	68	88	83
KANS	55	70	70
KY	NA	NA	NA
MICH	18	38	36
MINN	14	70	69
MO	68	39	68
NEBR	35	60	70
NC	94	NA	NA
OHIO	65	65	70
PA	NA	NA	NA
S DAK	80	83	86
VA	NA	NA	NA
WISC	50	95	80

SOYBEANS DROPPING LEAVES

	SOYBEANS DROPPING LEAVES		
	1979	1978	AVG.
ALA	25	NA	NA
ARK	NA	NA	NA
GA	NA	NA	NA
ILL	60	62	64
IND	50	55	75
IOWA	59	63	73
KANS	40	NA	NA
KY	NA	NA	NA
LA	28	37	NA
MICH	32	100	92
MINN	48	88	90
MISS	39	53	47
MO	NA	NA	NA
NEBR	30	65	65
NC	NA	NA	NA
OHIO	NA	NA	NA
SC	5	13	11
TENN	11	24	NA

COTTON BOLLS OPEN

	COTTON BOLLS OPEN		
	1979	1978	AVG.
ALA	33	55	36
ARIZ	NA	NA	NA
ARK	31	65	49
CALIF	NA	NA	NA
GA	NA	NA	NA
LA	39	65	45
MISS	66	89	67
MO	48	84	43
N MEX	15	NA	NA
NC	35	NA	NA
OKLA	15	50	20
SC	77	86	69
TENN	20	63	42
TEX	30	NA	NA

GRAIN SORGHUM MATURE

	GRAIN SORGHUM MATURE		
	1979	1978	AVG.
COLO	39	13	NA
KANS	35	40	35
MO	58	53	62
NEBR	20	55	50
OKLA	65	55	60
S DAK	NA	NA	NA
TEX	73	NA	NA

1/ LESS THAN 5%

NA NOT AVAILABLE

**HARVEST PROGRESS
FOR WEEK ENDING SEPTEMBER 23**

	CORN		
	1979	1978	AVG.
COLO	NA	0	0
GA	74	71	50
ILL	2	7	6
IND	5	5	5
IOWA	2	4	4
KANS	10	15	15
KY	7	16	7
MICH	0	0	1
MINN	0	1	4
MO	14	13	20
NEBR	0	0	0
N C	53	51	49
OHIO	1	5	5
PA	1	1	1
S DAK	0	0	1
VA	30	30	29
WIS	0	0	0

17 STATES 6 7 7

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

SOYBEANS

	SOYBEANS		
	1979	1978	AVG.
ALA	0	0	0
ARK	1	1	1
GA	1	2	1
ILL	9	8	12
IND	5	5	5
IOWA	5	4	8
KANS	2	4	0
KY	3	3	4
LA	0	0	0
MICH	0	0	1
MINN	0	2	12
MISS	1	4	4
MO	3	4	5
NEBR	0	0	0
N C	0	0	0
OHIO	1	5	5
S C	0	0	0
TENN	0	0	0

18 STATES 3 3 5

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

COTTON

	COTTON		
	1979	1978	AVG.
ALA	3	9	NA
ARIZ	7	8	5
ARK	0	4	8
CALIF	0	0	NA
GA	6	10	6
LA	0	5	4
MISS	0	8	6
MO	0	5	4
N MEX	0	0	0
NC	5	4	1
OKLA	0	0	0
S C	4	9	6
TENN	4	6	8
TEX	11	10	17

14 STATES 6 12 12

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

SPRING WHEAT

	SPRING WHEAT		
	1979	1978	AVG.
IDAHO	95	95	90
MINN	90	99	95
MONT	90	80	90
N DAK	98	99	98
S DAK	100	100	100
5 STATES	95	95	96

THESE 5 STATES PRODUCED 95% OF THE 1978 SPRING WHEAT CROP EXCLUDING DURUM.

RICE

	RICE		
	1979	1978	AVG.
ARK	16	35	35
CALIF	17	NA	NA
LA	93	91	87
MISS	34	54	33
TEX	100	100	99
5 STATES	42	51	48

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

GRAIN SORGHUM

	GRAIN SORGHUM		
	1979	1978	AVG.
COLO	0	0	0
KANS	5	10	10
MO	13	18	15
NEBR	0	0	0
OKLA	10	10	10
S DAK	0	0	0
TEX	69	74	64
7 STATES	28	31	28

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

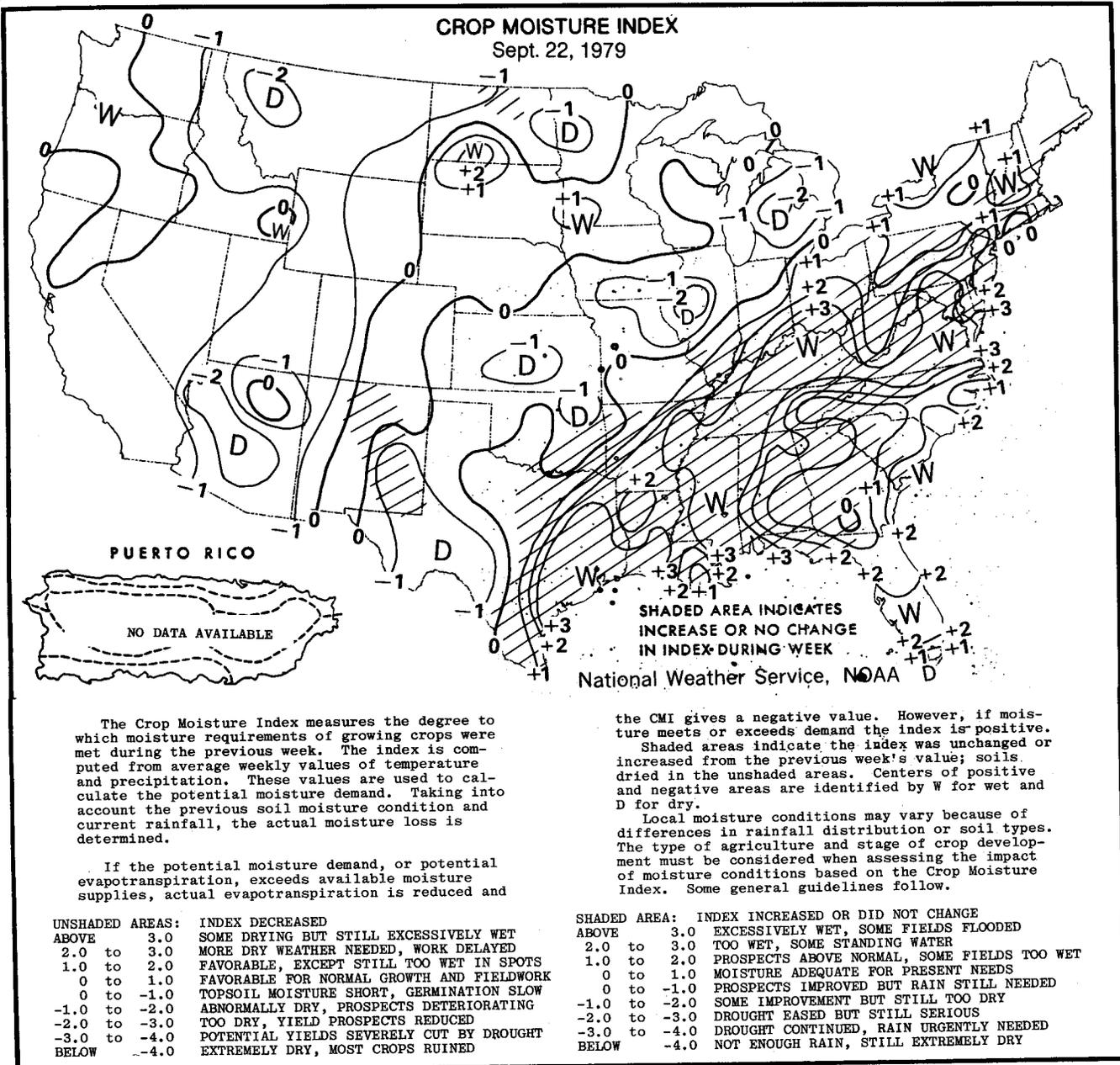
**PLANTING PROGRESS
FOR WEEK ENDING SEP 23, 1979**

WINTER WHEAT

	WINTER WHEAT		
	1979	1978	AVG.
CALIF	0	0	NA
COLO	86	80	77
IDAHO	35	25	30
ILL	4	6	6
IND	5	5	10
KANS	35	20	30
MO	11	12	NA
MONT	60	45	60
NEBR	75	70	65
OHIO	15	15	15
OKLA	25	15	25
OREG	20	NA	NA
S DAK	87	86	81
TEX	38	33	39
WASH	41	39	NA

15 STATES 89 31 39

THESE 15 STATES PRODUCED 90% OF THE 1978 WINTER WHEAT CROP.



The Crop Moisture Index measures the degree to which moisture requirements of growing crops were met during the previous week. The index is computed from average weekly values of temperature and precipitation. These values are used to calculate the potential moisture demand. Taking into account the previous soil moisture condition and current rainfall, the actual moisture loss is determined.

If the potential moisture demand, or potential evapotranspiration, exceeds available moisture supplies, actual evapotranspiration is reduced and

the CMI gives a negative value. However, if moisture meets or exceeds demand the index is positive. Shaded areas indicate the index was unchanged or increased from the previous week's value; soils dried in the unshaded areas. Centers of positive and negative areas are identified by W for wet and D for dry.

Local moisture conditions may vary because of differences in rainfall distribution or soil types. The type of agriculture and stage of crop development must be considered when assessing the impact of moisture conditions based on the Crop Moisture Index. Some general guidelines follow.

SOIL MOISTURE INCREASED RAPIDLY IN A BROAD BAND FROM SOUTH TEXAS THROUGH SOUTHERN NEW ENGLAND. SOME FIELDS ARE FLOODED, ESPECIALLY FROM THE TEXAS COASTAL BEND INTO LOUISIANA, FROM MISSISSIPPI AND ALABAMA INTO KENTUCKY, AND OVER PORTIONS OF NORTH CAROLINA AND VIRGINIA. MOISTURE DECREASED IN MOST OTHER AREAS. AND WAS SIGNIFICANTLY SUBNORMAL OVER MUCH OF ARIZONA.

(continued from page 2)

On Saturday, the weakening storm and cool frontal system continued to spread rain from the central Appalachians and middle Atlantic Coast northward into New England. Rainfall decreased significantly following up to 7 inches falling overnight in parts of northern North Carolina and southern Virginia. Severe flooding occurred in some places with roads blocked by water, fallen trees, and mud slides. Much of Virginia collected 3 to 4 inches.

Cool temperatures in the 30's dipped into the northern sections of the Mississippi Valley and the Great Lakes.

Plentiful sunshine in the West kept afternoon temperatures in the 80's over most areas. However,

the 90's pushed into north central Texas while the California and Arizona deserts got into the 100's.

Scattered rains continued to linger over the southeast on Sunday, behind a stationary front across central Florida. Also, the remnants of former Hurricane Henri, now just a low pressure system with a rain area, moved northeastward into the central Gulf of Mexico.

Morning lows dropped into the 30's over much of Michigan, northern Indiana, and northern New England. A few 30's were also in the Rockies and northern sections of Montana and North Dakota.

Another cool front, the third one during the week, began moving through the northern Plains. A few showers developed ahead of the front from Nebraska into Wisconsin.



FIRST CLASS MAIL

210

(continued from page 12)

Small grains seeded: Wheat 12%, 14% average, 17% 1978; barley 16%, 23% average, 24% 1978. Pasture good condition. Fuel supply slightly improving, supplies adequate. All remaining crops for harvest mostly good.

WISCONSIN: Sunny, dry. Very little measurable rainfall except extreme north 18th. Temperatures averaged 3° below normal. Highs 60's and 70's, a few 80's. Low 30's and 40's. Extremes: 81 and 30°. Light frost 19th north and east, scattered frost low areas south central 22d.

Fieldwork: 7 days suitable. Corn silo filling 10% done, 1978 20%, normal 40%. Some corn too green yet for silage, frost in northern areas will increase pace of silo filling. Corn 50% mature, 1978 95%, normal 80%. Early planted corn safe from frost damage, later varieties need couple weeks yet. Soybeans 60% with leaves yellowing, 1978 75%, normal 70%; 10% shedding leaves, 1978 45%, normal 35%. Nice weather for making third crop hay and finishing last of oats. Fall pastures in good condition. Rain needed for winter wheat germination and fall plowing. Potato and vegetable harvest proceeding rapidly. Most tobacco harvested and a good crop curing in sheds. Harvesting of early cranberries to begin soon. Apple picking continued. Soil moisture short to adequate.

WYOMING: Temperature up to 5° above normal. Maximum temperatures in upper 70's and lower 80's to mid-90's. Minimum temperatures in mid-20's to low 40's. Precipitation below normal mainly confined to upper and lower Platte Drainage areas.

Topsoil moisture short. Fieldwork: 7 days suitable. Winter wheat planted 86%, 52% emerged. Most spring planted small grains harvested. Sugarbeet harvest started last week. Acreage harvested: Potatoes 33%, corn silage 58%. Corn for grain 56% dented, 26% mature, 9% harvested. Dry beans 84% windrowed, 60% combined. Hay supplies for wintering livestock mostly adequate. Good quality hay for sale in most areas. Livestock contracted: Cattle 20%; calves 37%; sheep 47%, lambs 55%.

Publication of the Weekly Weather and Crop Bulletin began in 1872 as the Weekly Weather Chronicle. It is issued under general authority of the Act of January 12, 1895 (44USC 213), 53d Congress, 3d Session. Contents of the Bulletin may be reprinted freely, with proper credit.

Standard copy for the Bulletin is prepared by Donald J. Haddock, Lyle Denny, and O. W. Byrd, Climate Analysis Center, National Weather Service,

CONTENTS

	PAGE
NATIONAL WEATHER SUMMARY	1
NATIONAL AGRICULTURAL SUMMARY	3
WEATHER DATA FOR SELECTED CITIES	4
STATE SUMMARIES OF WEATHER AND AGRICULTURE	7
GROWING DEGREE DAYS MAP	9
INTERNATIONAL WEATHER AND CROP SUMMARY	13
THE 1979 SOUTH ASIAN MONSOON AND ITS EFFECTS ON INDIAN AGRICULTURE	17
AUGUST PERCENT OF POSSIBLE SUNSHINE	21
CROP DEVELOPMENT AND HARVEST PROGRESS	22
CROP MOISTURE INDEX	23

National Oceanic and Atmospheric Administration; Harry DeLong and Jim Carlin, Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture.

Yearly subscription rate: \$13.00 domestic and \$18.00 foreign airmail. Order from the Agricultural Weather Facility, USDA South Building, Room 1248, Washington, D.C. 20250. Make checks payable to Department of Commerce, NOAA.