



# WEEKLY WEATHER AND CROP BULLETIN

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

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

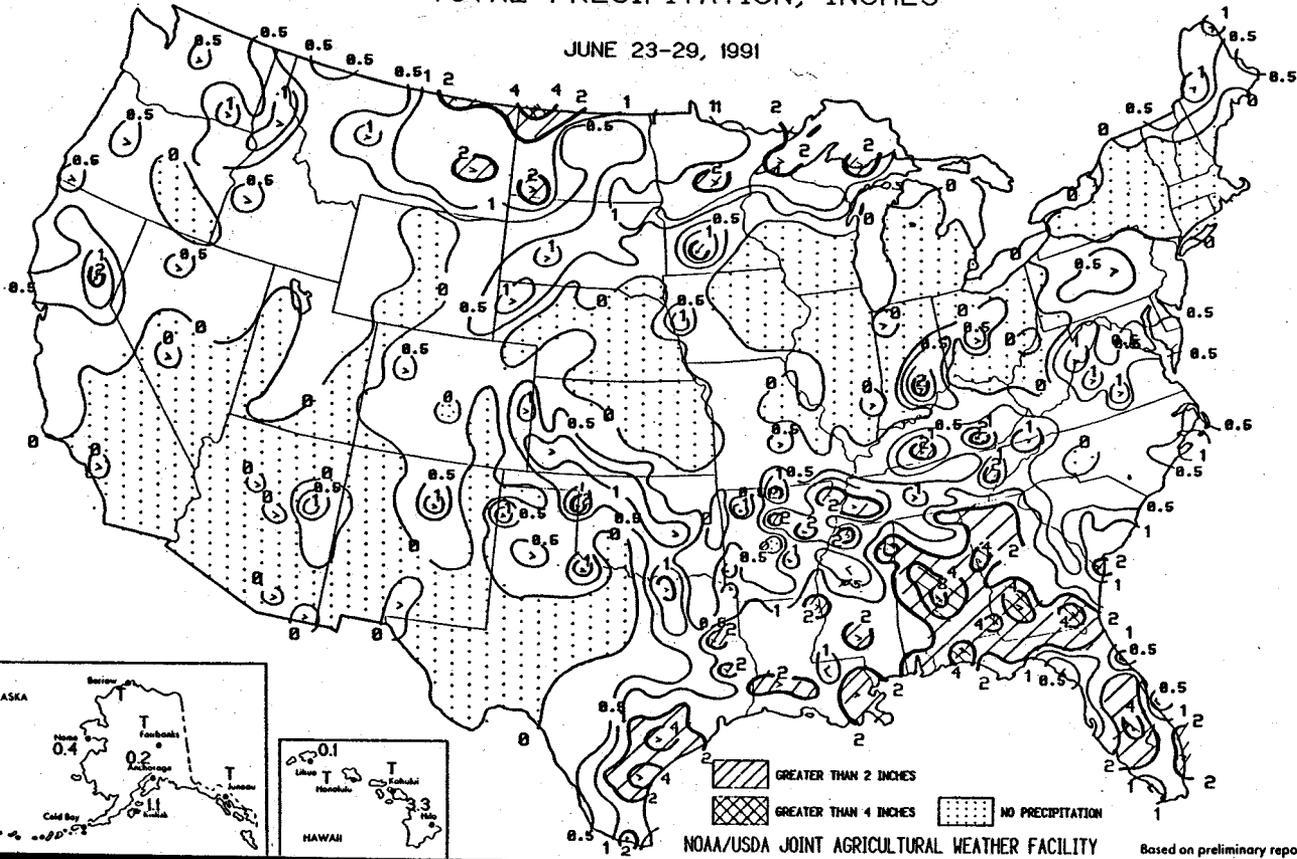
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## TOTAL PRECIPITATION, INCHES

JUNE 23-29, 1991



## HIGHLIGHTS

June 23-29, 1991

The Southeast and the Northwest remained wet, southern Texas became wet, and hot air spread from the Plains to the East coast. A broad band from New Mexico to New England received little or no rain in combination with temperature departures of +3° F or greater. Unseasonably cool air cloaked the West. Early-week deluges precipitated flash flooding in parts of Mississippi, Alabama, and eastern Washington State. Up to 8 inches of rain soaked central Alabama on Monday. In the Northwest, continual storminess brought the threat of flooding to the northern Rockies. By Tuesday, sun-baked air reached the central Plains, pushing the mercury to 100° F in Denver, CO. Hot air marched northeastward, rapidly displacing a pleasantly cool regime. Thursday's high soared to 94° F in Marquette, MI. Meanwhile, sporadic downpours plagued the Southeast. Local flooding was reported in southern Louisiana. From midweek onward, diurnal thunderstorms pounded the upper Mississippi Valley with rain and gusty winds. Isolated convection

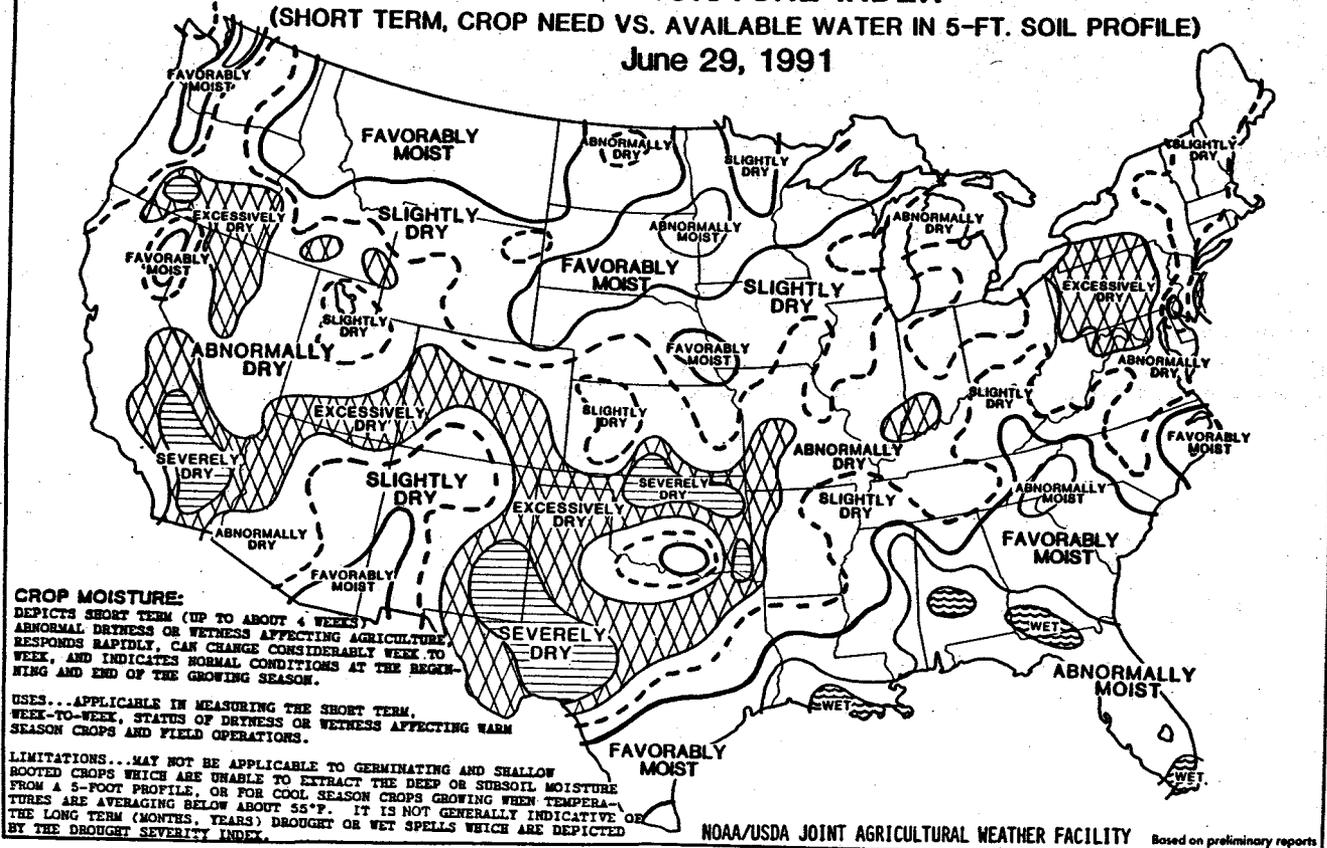
flared in the Plains. At week's end, heat moved into the East and subtropical moisture surged into southern Texas. Thermometers in Portland, ME, and Atlantic City, NJ, registered 98° F, while several localities along Texas' Gulf coast received more than 4 inches of rain.

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### CROP MOISTURE INDEX

(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)  
June 29, 1991



**CROP MOISTURE:**

DEPICTS SHORT TERM (UP TO ABOUT 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE. RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK, AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

USES... APPLICABLE IN MEASURING THE SHORT TERM, WEEK-TO-WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS.

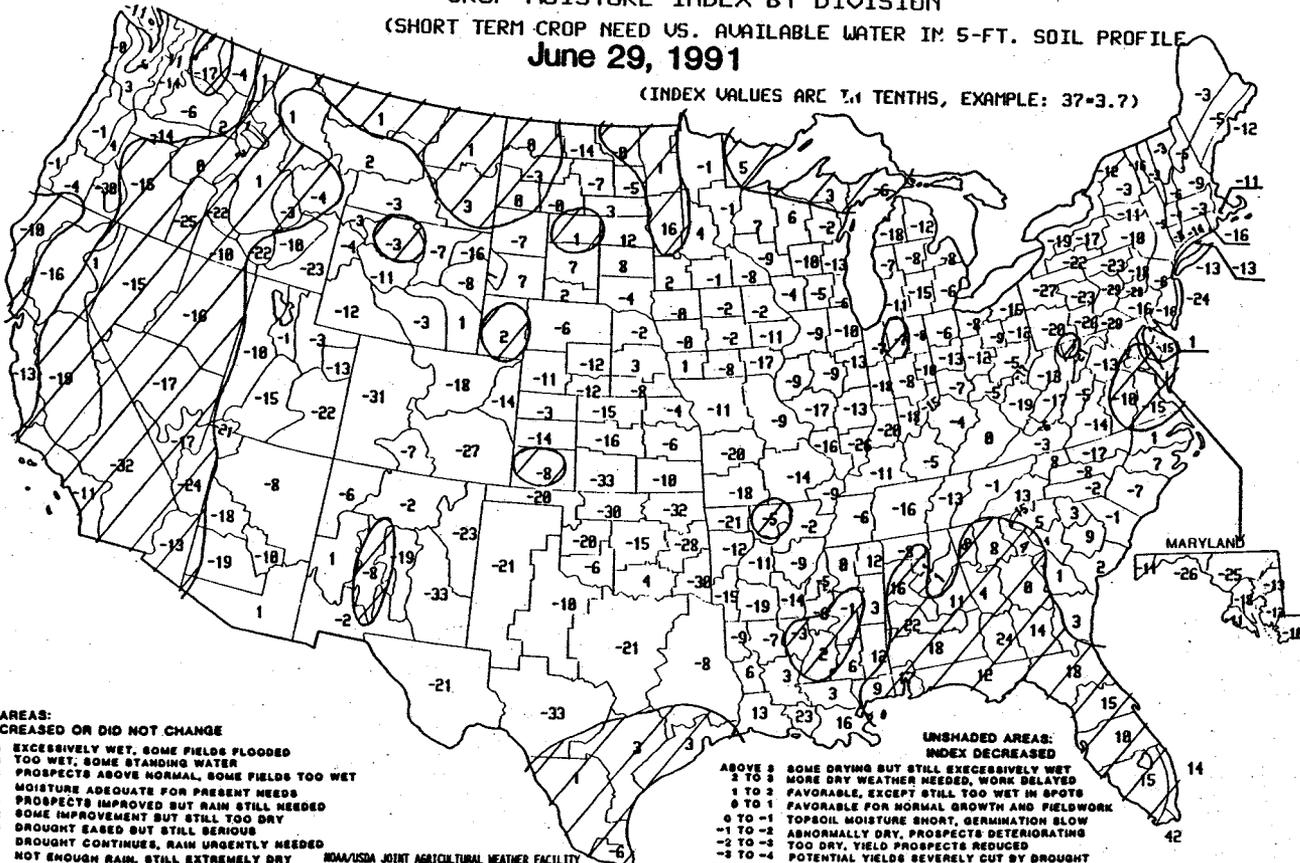
LIMITATIONS... MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A 5-FOOT PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55°F. IT IS NOT GENERALLY INDICATIVE OF THE LONG TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

### CROP MOISTURE INDEX BY DIVISION

(SHORT TERM CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)  
June 29, 1991

(INDEX VALUES ARE 1/10 TENTHS, EXAMPLE: 37-3.7)



**SHADED AREAS:**

- INDEX INCREASED OR DID NOT CHANGE
- ABOVE 3 EXCESSIVELY WET, SOME FIELDS FLOODED
- 2 TO 3 TOO WET, SOME STANDING WATER
- 1 TO 2 PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET
- 0 TO 1 MOISTURE ADEQUATE FOR PRESENT NEEDS
- 0 TO -1 PROSPECTS IMPROVED BUT RAIN STILL NEEDED
- 1 TO -2 SOME IMPROVEMENT BUT STILL TOO DRY
- 2 TO -3 DROUGHT EASED BUT STILL SERIOUS
- 3 TO -4 DROUGHT CONTINUES, RAIN URGENTLY NEEDED
- BELOW -4 NOT ENOUGH RAIN, STILL EXTREMELY DRY

**UNSHADED AREAS:**

- INDEX DECREASED
- ABOVE 3 SOME DRYING BUT STILL EXCESSIVELY WET
- 2 TO 3 FAVORABLE, EXCEPT STILL TOO WET IN SPOTS
- 1 TO 2 FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
- 0 TO 1 TOPSOIL MOISTURE SHORT, GERMINATION SLOW
- 1 TO -2 ABNORMALLY DRY, PROSPECTS DETERIORATING
- 2 TO -3 TOO DRY, FIELD PROSPECTS REDUCED
- 3 TO -4 POTENTIAL YIELDS SEVERELY CUT BY DROUGHT
- BELOW -4 EXTREMELY DRY, MOST CROPS RUINED

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

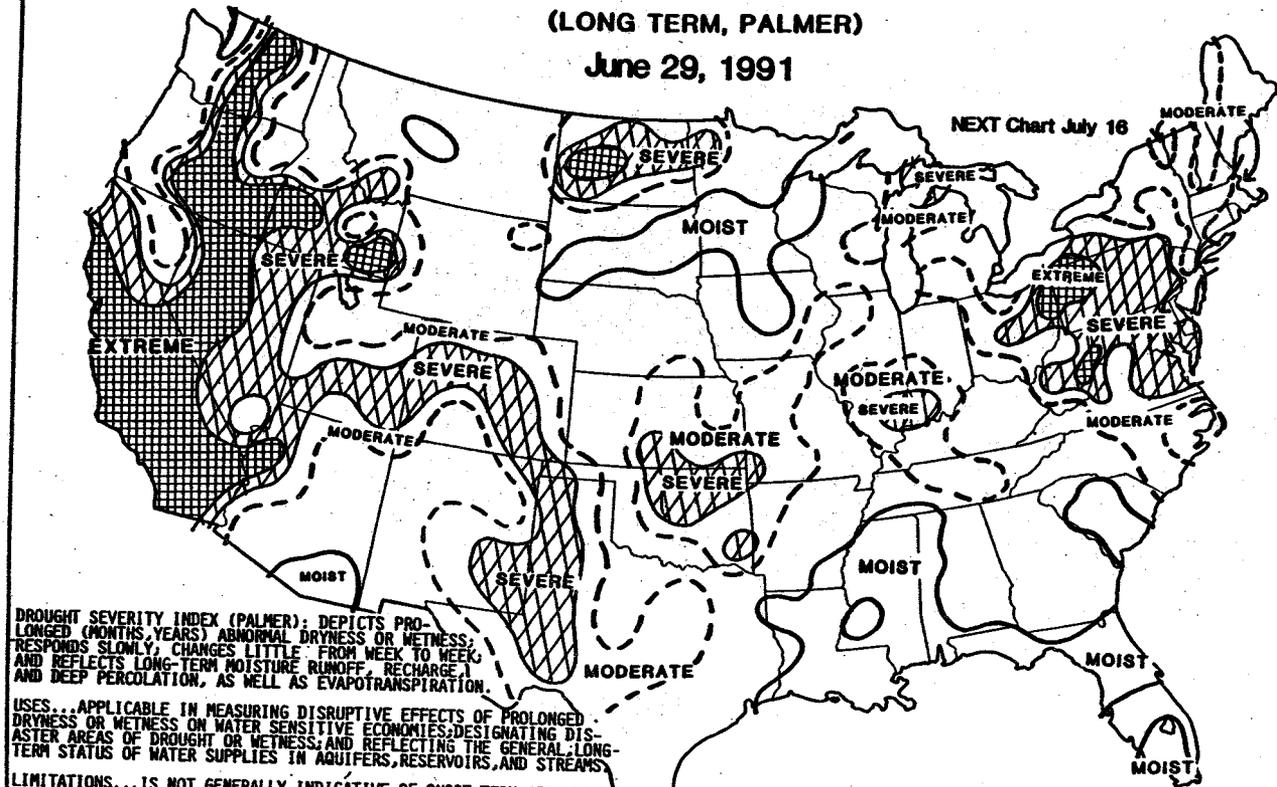
Based on preliminary reports

### DROUGHT SEVERITY

(LONG TERM, PALMER)

June 29, 1991

NEXT Chart July 16



DROUGHT SEVERITY INDEX (PALMER): DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS. RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK, AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.

USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES; DESIGNATING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS, AND STREAMS.

LIMITATIONS... IS NOT GENERALLY INDICATIVE OF SHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).

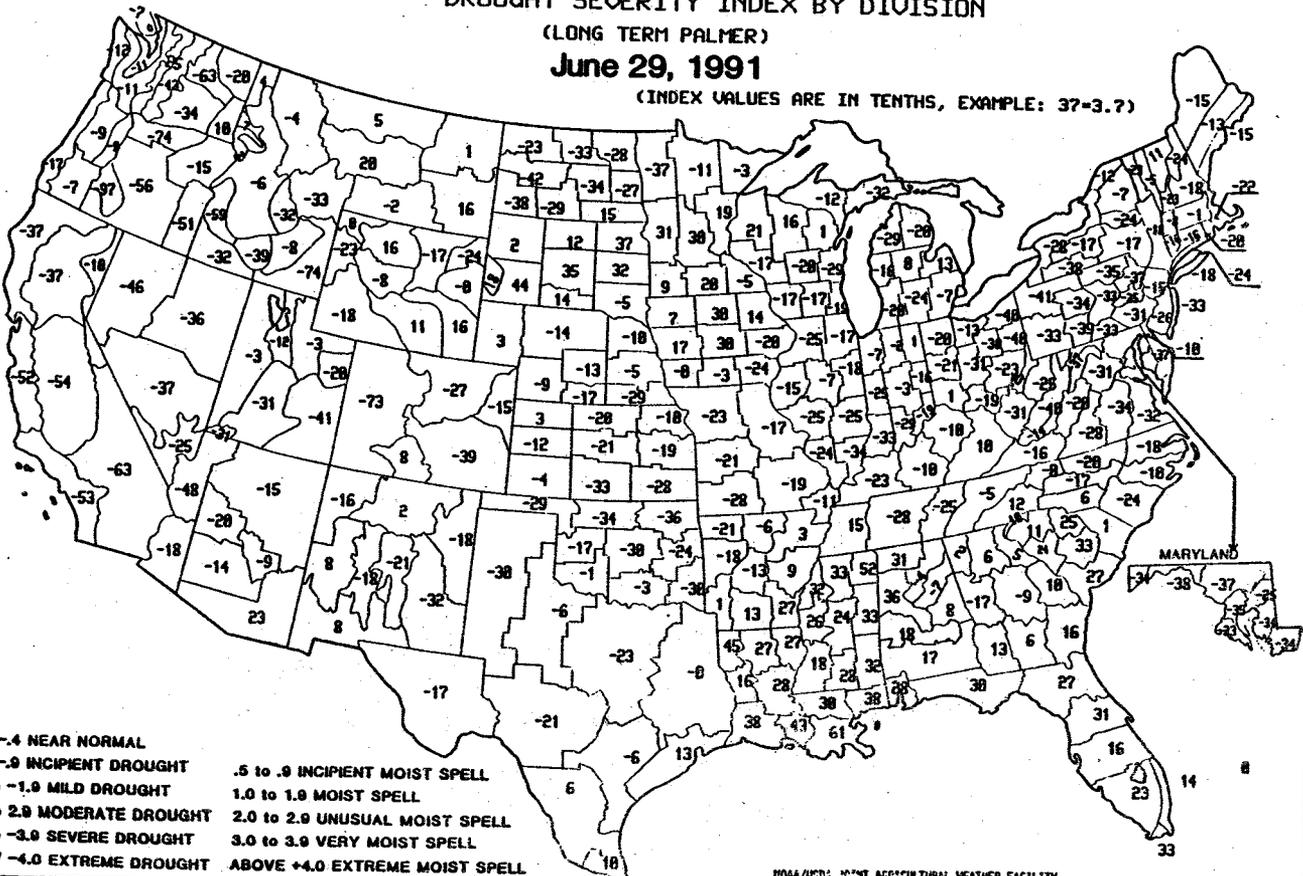
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

### DROUGHT SEVERITY INDEX BY DIVISION

(LONG TERM PALMER)

June 29, 1991

(INDEX VALUES ARE IN TENTHS, EXAMPLE: 37-3.7)

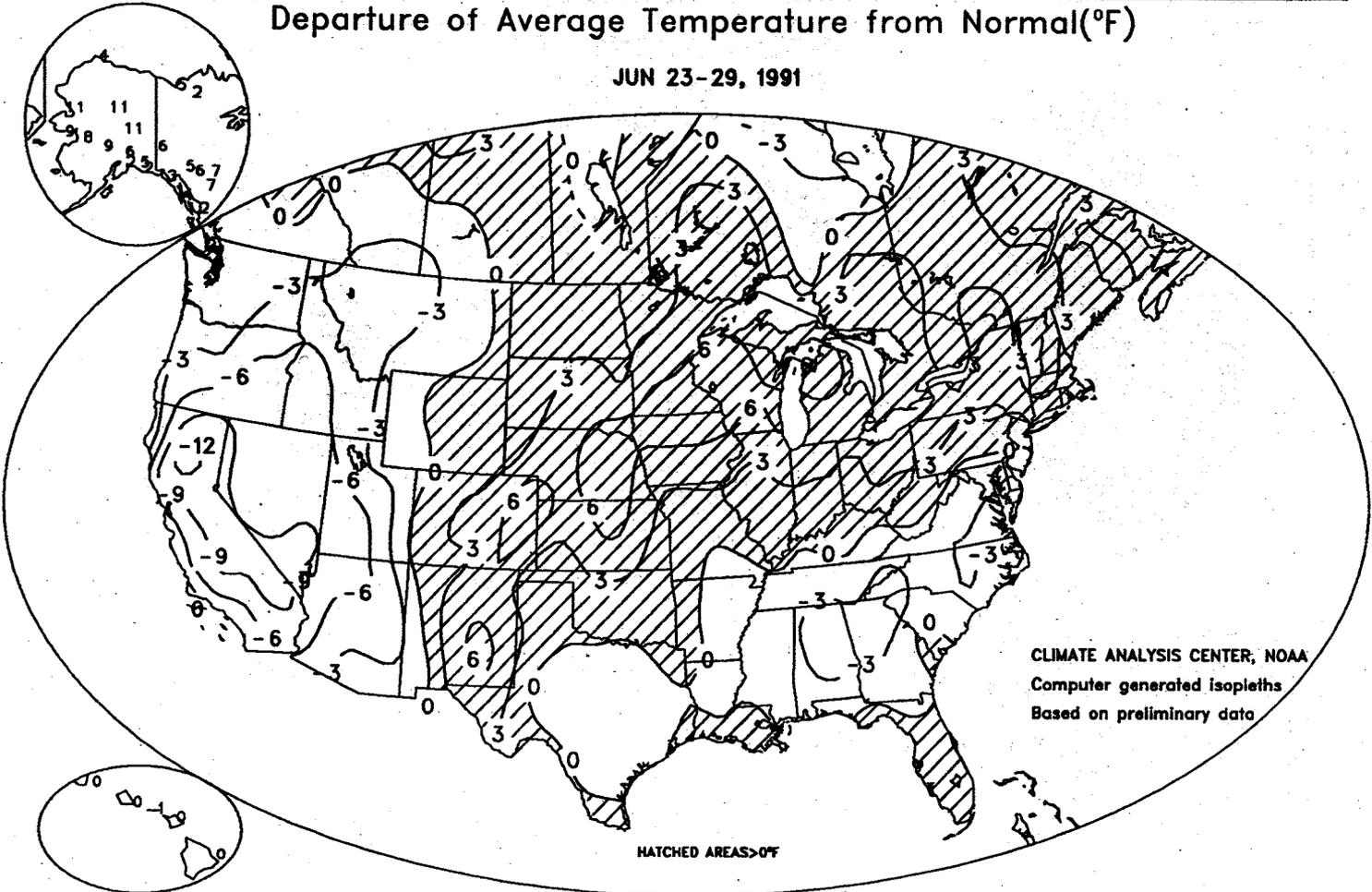


NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

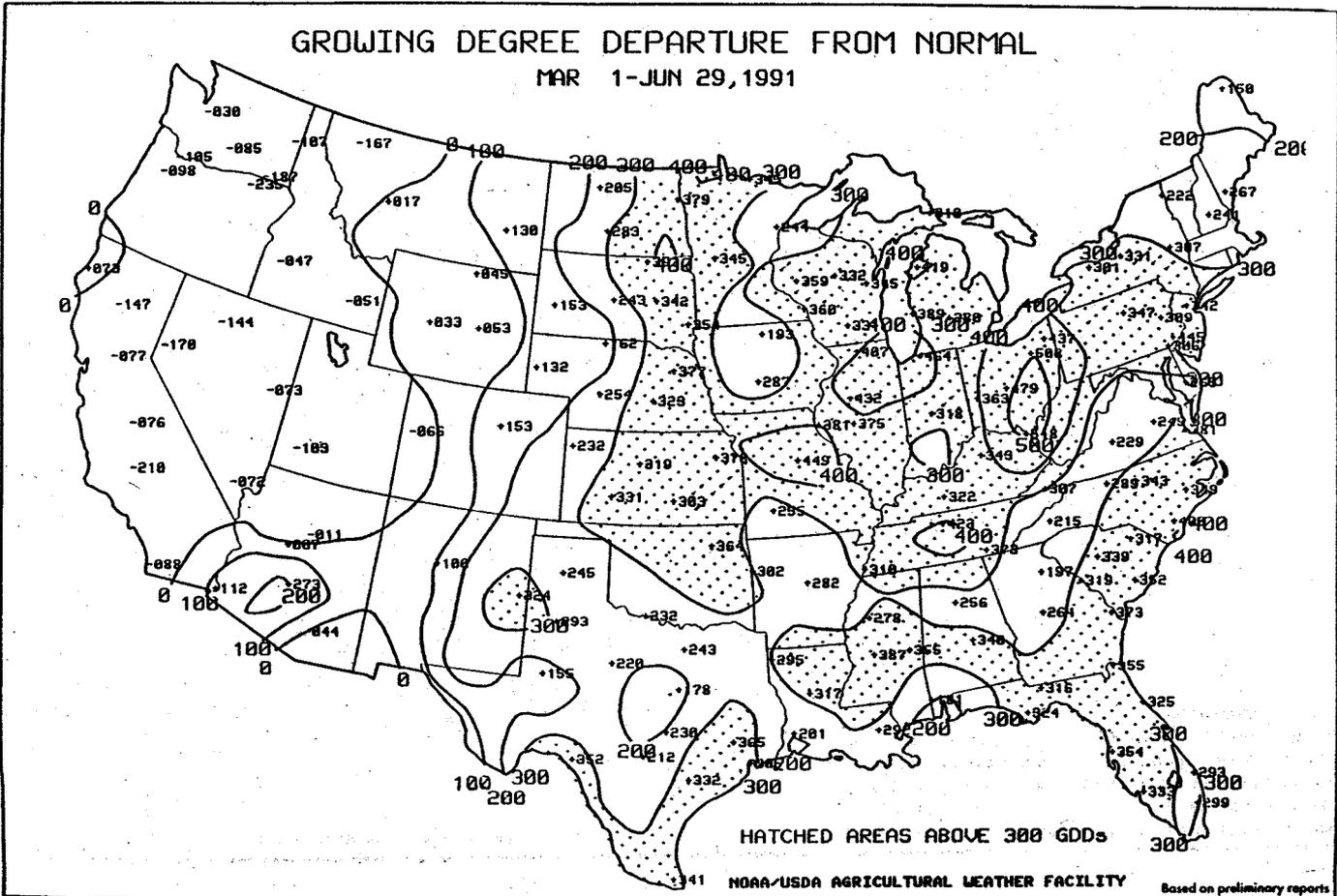
Departure of Average Temperature from Normal(°F)

JUN 23-29, 1991



GROWING DEGREE DEPARTURE FROM NORMAL

MAR 1-JUN 29, 1991





Weather Data for the Week Ending June 29, 1991

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 Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE Jun 1		PCT. NORMAL SINCE Jun 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE
													.50 INCH OR MORE						.01 INCH OR MORE
SENECA	92	71	95	68	82	0	1.0	.2	.9	2.5	76	50.8	212	97	53	6	0	2	1
ME CARIBOU	79	54	87	45	67	3	1.3	.5	.8	2.1	68	16.1	105	85	41	0	0	3	1
PORTLAND	85	57	98	47	71	6	1.1	.7	1.4	1.5	50	22.9	107	81	35	0	0	0	0
MD BALTIMORE	85	60	97	54	73	2	.1	.8	.1	1.1	30	13.9	70	90	43	2	0	1	0
SALISBURY	82	59	95	53	70	1	.8	.0	.8	4.1	119	21.7	104	99	51	1	0	1	1
MA BOSTON	85	66	97	59	76	5	1.0	.6	1.0	2.3	82	17.2	79	74	38	4	0	0	0
CHATHAM	75	62	89	57	68	4	.0	.6	1.0	1.7	64	17.0	75	85	69	0	0	0	0
MI ALPENA	83	54	96	43	69	4	.0	.7	1.0	.2	6	13.5	102	93	43	2	0	0	0
DETROIT	86	65	91	56	76	5	.0	.8	1.0	1.9	58	14.6	96	82	41	4	0	0	0
FLINT	85	61	90	50	73	5	.0	.7	1.0	2.9	94	15.2	109	86	44	1	0	0	0
GRAND RAPIDS	87	62	92	49	75	5	.0	.9	1.0	1.8	50	17.3	108	87	40	4	0	0	0
HOUGHTON LAKE	84	58	90	44	71	6	.0	.7	1.0	1.5	49	16.1	125	88	43	1	0	0	0
LANSING	86	60	90	46	73	4	.0	.9	1.0	2.6	68	14.6	101	93	44	1	0	0	0
MARQUETTE	80	54	94	39	67	5	1.3	.4	.8	3.1	81	15.6	86	88	53	1	0	0	0
MUSKEGON	83	61	87	49	72	4	.0	.6	1.0	3.9	160	17.4	120	89	45	0	0	0	0
SAULT ST. MARIE	81	53	89	42	67	6	.6	.2	.6	1.1	35	11.9	84	88	49	0	0	0	0
MN ALEXANDRIA	82	63	90	51	72	5	1.4	.4	.8	5.1	129	14.9	127	93	56	1	0	0	0
DULUTH	74	54	82	39	64	3	1.6	.6	1.0	4.6	122	16.9	131	94	63	0	0	0	0
INT'L FALLS	77	56	86	41	67	3	1.9	1.0	.8	4.1	118	13.5	133	94	56	0	0	0	0
MINNEAPOLIS	88	69	95	53	78	8	.1	.9	1.0	1.1	28	14.8	119	86	46	4	0	0	0
ROCHESTER	88	67	97	50	78	8	.0	.9	1.0	2.2	61	15.2	119	88	45	3	0	0	0
MS GREENWOOD	88	71	92	69	80	2	.0	.8	1.0	2.8	86	42.0	142	97	60	0	0	0	0
JACKSON	89	70	93	69	80	1	1.7	1.0	1.4	3.1	102	43.9	155	100	60	0	0	0	0
MERIDIAN	87	70	92	68	78	1	1.0	.1	1.0	3.6	107	44.1	151	95	58	0	0	0	0
MO CAPE GIRARDEAU	88	71	95	68	79	1	.0	.8	1.0	1.1	31	20.4	87	90	51	1	0	0	0
COLUMBIA	87	68	94	64	77	1	.0	.8	1.0	3.2	88	15.6	82	91	57	2	0	0	0
KANSAS CITY	89	71	94	64	80	3	.0	.8	1.0	3.1	68	15.7	91	91	55	0	0	0	0
SAINT LOUIS	89	72	95	68	81	4	.0	.9	1.0	3.1	68	15.7	91	91	55	0	0	0	0
SPRINGFIELD	88	67	92	65	78	2	.1	.0	1.1	.4	12	13.3	75	84	48	0	0	0	0
MT BILLINGS	76	53	86	50	65	3	1.4	1.0	1.0	5.6	281	13.7	153	88	44	0	0	0	0
GLASGOW	77	55	84	52	66	1	1.1	.5	.6	3.9	162	7.6	135	94	46	0	0	0	0
GREAT FALLS	70	48	75	44	59	4	1.1	.1	.2	4.1	153	9.3	100	97	53	0	0	0	0
HAVRE	72	51	78	48	62	4	.4	.1	.3	.9	44	7.3	111	96	58	0	0	0	0
HELENA	72	49	76	45	60	3	.6	.2	.2	3.2	163	6.8	105	92	40	0	0	0	0
KALISPELL	67	46	75	41	57	4	.5	.2	.2	3.0	140	9.1	108	100	56	0	0	0	0
MILES CITY	80	57	87	52	69	1	3.9	3.3	1.1	5.9	220	13.6	168	93	45	0	0	0	0
MISSOULA	71	48	76	43	59	3	.3	.0	.1	2.7	151	7.3	100	95	48	0	0	0	0
NE GRAND ISLAND	94	70	104	59	82	8	.0	.8	1.0	5.2	146	16.6	131	81	40	5	0	0	0
LINCOLN	92	70	99	62	81	6	.0	.9	1.0	4.8	129	14.1	101	86	44	5	0	0	0
NORFOLK	92	71	100	60	82	6	.0	.9	1.0	6.2	148	19.8	154	80	43	5	0	0	0
NORTH PLATTE	88	65	94	59	77	7	.4	.5	.2	2.8	77	12.7	118	85	46	5	0	0	0
OMAHA	88	71	96	61	80	4	.0	.9	1.0	6.5	162	21.3	144	85	56	5	0	0	0
SCOTTSBLOFF	87	57	94	50	72	1	1.6	1.0	1.6	4.0	139	10.8	124	95	36	2	0	0	0
VALENTINE	88	63	96	57	76	4	.0	.7	1.0	4.9	169	14.9	162	87	37	3	0	0	0
NV RLY	73	39	82	35	56	6	.1	.1	.1	.5	64	5.8	116	60	17	0	0	0	0
LAS VEGAS	90	67	96	62	79	0	.0	.0	.0	.2	333	2.0	113	34	12	6	0	0	0
RENO	71	44	77	39	57	8	.4	.3	.2	.4	125	3.0	69	74	30	0	0	0	0
WINNEMOCCA	74	47	82	36	60	3	.5	.4	.5	.5	61	4.5	98	70	26	0	0	0	0
NH CONCORD	86	54	97	46	70	3	.0	.7	1.0	1.5	54	12.9	76	90	31	2	0	0	0
NJ ATLANTIC CITY	84	56	98	50	70	2	.2	.5	.2	1.3	49	17.1	87	98	46	2	0	0	0
NM ALBUQUERQUE	98	65	101	58	81	4	.0	.1	1.0	.7	138	2.6	102	36	11	7	0	0	0
CLOVIS	97	68	101	66	82	6	.0	.6	1.0	1.8	70	3.7	54	73	19	7	0	0	0
ROSWELL	101	71	104	67	86	6	.0	.3	1.0	1.2	132	2.9	88	61	17	7	0	0	0
NY ALBANY	88	57	95	49	73	3	.0	.7	1.0	.8	25	14.0	83	88	35	3	0	0	0
BINGHAMTON	83	60	92	51	72	5	.0	.8	1.0	2.4	69	16.2	93	73	34	1	0	0	0
BUFFALO	84	62	88	50	73	4	.0	.6	1.0	.9	33	19.9	118	82	37	0	0	0	0
NEW YORK	87	69	95	62	78	4	.1	.6	.1	3.3	110	18.0	88	72	36	3	0	0	0
ROCHESTER	84	59	91	49	72	2	.0	.6	1.0	1.0	36	15.0	100	84	36	2	0	0	0
SYRACUSE	87	60	93	54	73	4	.0	.9	1.0	1.3	37	17.1	94	87	35	3	0	0	0
NC ASHEVILLE	75	62	87	59	68	3	.3	.6	.2	5.3	147	24.1	108	99	67	0	0	0	0
CHARLOTTE	86	69	94	66	78	1	.0	.8	1.0	2.4	69	25.3	112	82	44	2	0	0	0
GREENSBORO	84	64	94	62	74	1	.1	.9	.1	1.6	42	25.5	122	88	47	2	0	0	0
HATTERAS	84	70	88	66	77	1	.2	.8	.2	5.3	127	27.8	115	89	58	0	0	0	0
NEW BERN	86	68	95	62	77	1	.4	1.0	.4	3.7	75	22.4	94	91	56	2	0	0	0
RALEIGH	86	64	94	56	75	1	.1	.8	.1	2.0	58	15.4	74	94	45	2	0	0	0
WILMINGTON	86	69	91	63	77	1	.1	1.4	.1	2.6	47	26.0	110	92	58	0	0	0	0
ND BISMARCK	81	60	88	57	70	3	.8	.1	.6	2.6	89	8.6	105	95	54	2	0	0	0
FARGO	80	62	88	56	71	3	.6	.2	.6	3.9	134	12.0	137	88	55	0	0	0	0
GRAND FORKS	79	58	87	51	69	2	.7	.1	.4	2.0	72	10.3	128	93	57	0	0	0	0
WILLISTON	79	57	83	54	68	1	3.0	2.4	1.4	5.7	221	10.9	152	97	49	0	0	0	0
OH AKRON-CANTON	86	63	91	58	75	4	.0	.8	1.0	.8	26	12.4	69	92	44	2	0	0	0
CINCINNATI	86	67	91	63	77	3	.0	1.0	.0	1.4	35	21.5	102	92	50	1	0	0	0
CLEVELAND	85	63	90	54	74	3	.0	.8	1.0	1.4	41	17.0	97	84	45	1	0	0	0
COLUMBUS	87	65	90	62	76	4	.0	.9	.0	2.8	73	17.7	93	90	45	2	0	0	0

Based on 1951-80 normals

Weather Data for the Week Ending June 29, 1991

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 Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE Jan 1		PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP.
													90 AND ABOVE				32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	85	65	90	59	75	2	0.4	-1.9	0.4	2.5	69	21.9	119	91	51	1	0	0	0
TOLEDO	88	64	93	56	76	2	0.0	-1.8	0.0	15	13.9	89	91	46	0	0	0	0	
YOUNGSTOWN	85	59	91	48	72	3	0.0	-1.9	0.0	25	11.6	64	93	42	0	0	0	0	
OK OKLAHOMA CITY	91	70	93	66	81	1	0.7	-1.1	0.7	103	14.8	91	93	47	0	0	1	0	
TULSA	92	74	95	69	83	3	0.0	-1.0	0.0	83	14.2	71	87	48	0	0	1	0	
OR ASTORIA	63	51	70	45	57	-1	0.4	-1.5	0.4	1.9	76	35.0	98	95	69	0	0	0	
BURNS	69	43	75	38	56	-6	0.0	-1.1	0.0	6	4.1	75	84	31	0	0	0	0	
EMDFORD	76	54	79	48	65	-3	0.0	-1.1	0.0	7	9.3	91	87	38	0	0	0	0	
PENDLETON	74	53	80	48	64	-3	0.0	-1.1	0.0	106	8.5	130	74	34	0	0	2	1	
PORTLAND	69	55	78	50	62	-3	0.0	-1.1	0.0	2.1	2.3	163	92	61	0	0	1	0	
SALEM	69	52	77	43	61	-3	0.0	-1.1	0.0	1.6	130	21.2	99	94	57	0	0	2	0
PA ALLENTOWN	87	60	97	54	73	2	0.2	-1.6	0.2	1.0	30	14.6	70	92	37	0	0	1	0
ERIE	84	66	88	53	75	7	0.4	-1.9	0.4	7	18	12.5	70	73	41	0	0	1	0
HARRISBURG	87	62	97	57	74	1	0.5	-1.3	0.5	1.3	38	14.5	74	86	35	0	0	1	0
PHILADELPHIA	87	65	98	58	76	1	0.1	-1.8	0.1	2.9	76	16.5	82	86	38	0	0	1	0
PITTSBURGH	86	62	91	56	74	4	0.1	-1.8	0.1	1.6	48	14.8	78	88	40	0	0	1	0
SCRANTON	85	59	92	52	72	2	0.1	-1.8	0.1	1.7	51	13.0	79	84	35	0	0	1	0
RI PROVIDENCE	87	62	96	52	75	5	0.0	-1.6	0.0	9	35	21.4	97	81	34	0	0	0	0
SC CHARLESTON	85	72	92	69	79	0	1.8	-1.1	0.8	4.5	72	27.9	115	96	65	1	0	4	2
COLUMBIA	88	71	94	68	79	9	0.1	-1.0	0.1	3.6	83	30.2	119	94	49	0	0	2	0
FLORENCE	88	69	94	63	78	8	0.2	-1.0	0.2	3.5	79	20.7	95	93	49	0	0	2	0
GREENVILLE	82	66	91	63	74	-3	0.2	-1.9	0.2	1.7	41	26.6	98	93	59	1	0	3	0
SD ABERDEEN	84	63	94	56	73	4	1.2	-1.5	1.1	2.8	91	15.5	160	93	56	1	0	2	1
BURON	86	67	96	59	77	6	0.4	-1.4	0.3	4.9	153	15.8	155	91	50	2	0	2	0
RAPID CITY	83	58	95	50	71	2	0.3	-1.4	0.3	3.3	105	12.4	128	96	48	1	0	2	0
SIOUX FALLS	86	70	95	59	78	7	0.0	-1.8	0.0	6.3	176	16.2	134	87	54	3	0	1	0
TN CHATTANOOGA	81	68	93	64	75	-2	1.0	-1.2	0.5	4.1	128	32.9	118	99	68	1	0	5	0
KNOXVILLE	81	66	90	64	74	-2	1.5	-1.5	1.1	6.0	159	29.0	113	100	66	1	0	5	1
MEMPHIS	88	71	92	67	79	-1	0.2	-1.4	0.2	1.4	41	38.7	135	94	57	2	0	1	0
NASHVILLE	86	68	92	65	77	0	0.0	-1.8	0.0	1.3	35	22.2	84	94	56	1	0	0	0
TX ABILENE	92	70	93	68	81	-2	0.0	-1.5	0.0	6.5	268	12.6	114	83	39	6	0	0	0
AMARILLO	93	67	97	64	80	3	0.0	-1.8	0.0	2.5	74	6.9	76	79	27	6	0	1	0
AUSTIN	92	72	95	69	82	-1	1.0	-1.5	1.0	4.4	148	26.4	165	94	51	6	0	2	1
BEAUMONT	91	74	92	73	83	0	1.0	-1.2	0.5	7.3	156	49.0	195	96	59	5	0	4	0
BROWNSVILLE	92	76	95	74	84	1	1.0	-1.4	1.0	2.1	79	18.4	193	97	55	5	0	2	1
CORPUS CHRISTI	91	75	93	71	83	-1	4.7	-1.9	4.2	6.8	180	22.3	174	98	61	4	0	4	1
DEL RIO	96	74	98	72	85	0	0.2	-1.2	0.2	2.1	125	7.7	102	70	32	7	0	1	0
EL PASO	102	70	105	60	86	3	0.0	-1.2	0.0	2	1.6	79	45	13	7	0	1	0	
FORT WORTH	94	72	96	67	83	0	0.4	-1.0	0.4	4.3	188	21.5	130	93	46	7	0	1	0
GALVESTON	88	78	90	75	83	1	1.3	-1.6	0.2	5.7	166	37.3	221	83	62	1	0	3	0
HOUSTON	92	72	94	71	82	0	1.2	-1.3	0.5	7.7	179	37.1	167	96	53	7	0	4	1
LUBBOCK	95	68	97	65	81	2	0.0	-1.6	0.0	5.2	191	8.9	109	87	33	7	0	1	0
MIDLAND	94	68	97	66	81	-1	0.0	-1.3	0.0	3.5	255	6.1	108	84	30	6	0	0	0
SAN ANGELO	94	69	96	64	81	-2	0.0	-1.4	0.0	4.0	223	8.7	105	86	34	6	0	0	0
SAN ANTONIO	91	73	96	69	82	-2	0.5	-1.1	0.3	2.2	74	20.9	149	96	53	6	0	3	0
VICTORIA	89	73	95	71	81	-2	4.3	-1.3	2.2	5.8	131	33.1	196	99	60	4	0	5	3
WACO	95	72	97	69	83	-1	0.3	-1.2	0.3	3.2	126	17.3	104	95	47	7	0	1	0
WICHITA FALLS	96	71	97	68	84	0	0.0	-1.5	0.0	2.8	100	11.3	82	88	35	7	0	0	0
UT CEDAR CITY	78	48	83	36	63	-7	0.0	-1.1	0.0	0.3	74	4.3	90	39	13	0	0	0	0
SALT LAKE CITY	83	57	90	53	70	-2	0.0	-1.2	0.0	1.1	117	9.4	105	58	16	1	0	1	0
VT BURLINGTON	85	56	95	46	70	3	0.0	-1.9	0.0	1.3	36	12.6	84	92	35	2	0	0	0
VA NORFOLK	83	65	98	58	74	-3	0.2	-1.7	0.2	4.5	134	21.7	105	93	50	2	0	1	0
RICHMOND	84	62	96	55	73	-3	0.2	-1.7	0.2	5.3	154	17.7	90	94	47	2	0	1	0
ROANOKE	82	63	93	58	72	-2	0.1	-1.7	0.1	2.4	75	21.0	108	92	52	2	0	1	0
WA QUILLAYUTE	62	50	69	44	56	-1	0.1	-1.5	0.1	2.3	83	50.7	95	98	68	0	0	3	0
SEATTLE-TACOMA	71	53	77	53	62	0	0.0	-1.2	0.0	1.3	95	23.0	120	90	54	0	0	0	0
SPOKANE	72	49	79	46	61	-4	0.4	-1.2	0.4	1.1	90	8.9	98	91	44	0	0	4	0
YAKIMA	78	52	85	46	65	-2	0.1	-1.1	0.1	2.5	460	5.1	120	89	40	0	0	2	0
WV BECKLEY	78	60	87	57	69	1	0.0	-1.0	0.0	1.7	43	19.6	82	94	60	0	0	0	0
CHARLESTON	85	62	91	57	74	1	0.0	-1.9	0.0	2.5	79	19.2	82	97	49	1	0	0	0
HUNTINGTON	85	65	89	63	75	1	0.0	-1.9	0.0	1.6	50	20.1	97	94	48	0	0	0	0
PARKERSBURG	86	63	91	61	75	1	0.0	-1.9	0.0	3.9	106	20.2	103	93	48	2	0	1	0
W GREEN BAY	87	61	95	48	74	7	0.0	-1.7	0.0	1.1	35	10.1	78	86	45	4	0	0	0
LACROSSE	91	69	98	51	80	9	0.0	-1.0	0.0	7	18	17.1	120	83	44	4	0	0	0
MADISON	87	63	94	48	75	6	0.0	-1.9	0.0	3.8	101	16.7	116	87	49	4	0	0	0
MILWAUKEE	86	66	97	57	76	8	0.0	-1.9	0.0	2.1	61	16.1	108	85	43	4	0	0	0
WAUSAU	85	63	91	48	74	7	0.3	-1.7	0.3	4.9	130	18.5	131	86	46	3	0	1	0
WY CASPER	88	50	94	44	69	3	0.1	-1.1	0.1	2.0	166	9.5	141	81	13	2	0	2	0
CHEYENNE	82	53	91	50	68	3	0.6	-1.2	0.5	4.5	230	10.4	142	92	23	1	0	3	1
LANDER	82	50	90	46	66	0	0.0	-1.2	0.0	0.7	49	9.5	112	63	15	1	0	1	0
SHERIDAN	82	49	94	41	66	1	0.0	-1.4	0.0	0.9	42	9.9	108	90	35	1	0	0	0

Based on 1951-80 normals

## National Agricultural Summary

June 24 - 30, 1991

**HIGHLIGHTS:** Rain showers interrupted fieldwork along the Gulf Coast and in the northern Great Plains, but mostly dry weather across the rest of the Nation allowed growers to make good progress with late planting and early harvests. Hot, dry weather continued to parch the Northeast, stressing developing crops and heightening concerns over water and forage supplies.

**SMALL GRAINS:** Harvest of winter wheat harvest continued to progress ahead of normal throughout the Midwest and Ohio Valley as dry, hot weather prevailed. Cooler temperatures in the West, however, kept wheat maturity behind schedule. Harvest reached 63 percent (%) complete in the 19 major producing States, 16 percentage points ahead of last year and 11 points ahead of the 5-year average. Harvest activity was frenzied in the Ohio Valley with the Ohio harvest advancing 48 points, Indiana advancing 40 points, and Illinois moving ahead 29 points. Harvest neared completion in Oklahoma and the Southeast, while growers in Colorado were just beginning to harvest. California's harvest, at 50% complete, was 21 points behind normal. Condition ratings for winter wheat showed little change from the previous week, remaining poor to very poor in the Mississippi Valley and fair to good elsewhere. Spring wheat was 67% headed in the five major producing States, compared with 57% last year and 56% average. Progress continued to be ahead of normal in Minnesota and the Dakota's, but behind normal in Idaho and Montana. Condition ratings for spring wheat were good to excellent in the northern Great Plains and fair to good in Idaho and Minnesota. Harvests of barley, oats, and rye were well along in the Atlantic Coast States and getting underway in the Ohio Valley. The crops were turning color in Iowa and Missouri, and heading was advancing in the Northwest.

**CORN:** Warm weather in the central and eastern parts of the Nation developed corn faster than normal with 11% of the acreage silking, compared with 4% last year and 5% normal. Crop condition continued to deteriorate in Pennsylvania as the State received little relief from drought. Corn condition rated mostly fair in Indiana and generally good in other major producing States. Troublesome corn borer infestations were reported in Ohio.

**SOYBEANS:** Planting was complete or near completion in most areas but continued to lag in the Tennessee Valley and Delta due to extensive rains. Nationwide, 95% of the crop was planted, matching the historic average. Louisiana planting progress, at 70% complete, was 19 points behind normal. Planting progress was 10 points behind normal in Mississippi and 9 points behind in Tennessee. Nearly half of Illinois' soybean acreage was in bloom, as was 40% of the Ohio acreage -- both well ahead of normal.

**COTTON:** Cotton development continued to track behind normal due to late planting in many States. Forty-four percent of the acreage was squaring, compared with 61% last year and 53% average. Eight percent of the acreage was setting bolls, 4 points behind last year and 3 points behind normal. Crop condition was good

in the Southwest and Southeast and fair elsewhere. Crop conditions improved with the hotter, drier weather in Missouri and New Mexico but showed little change elsewhere. Cotton fields across Texas enjoyed ideal growing weather for a change, but insect and disease problems concerned some producers. Harvest in Texas' Lower Valley increased.

**GRAIN SORGHUM:** Planting progress exceeded 90% complete in each of the 12 major producing States, with 95% of the U.S. crop planted. Forty percent of Louisiana's crop was rated poor and most acreage throughout the Mississippi Valley rated fair. Elsewhere, the crop was in generally good shape. Harvest of dryland sorghum continued in Texas.

**RICE:** Crop emergence reached 98% complete nationwide, matching last year's progress and lagging the average by just 1 point. Mississippi's crop was 86% emerged, compared with 98% average. Texas' rice was 42% headed, as was 22% of the Louisiana rice. Crop condition rated mostly fair in Mississippi and mostly good in the other producing States. Cool weather slowed crop development in California. Sheath blight, blast, and armyworm problems continued in southwest Louisiana.

**OTHER FIELD CROPS:** Alfalfa second cut haying progressed in the eastern valleys, while first cutting advanced in the Northwest. Showers hampered haying in the Gulf States. Potatoes had completed emergence in Maine and were blooming in North Dakota. Peanuts were pegging on nearly half of the acreage in Georgia with crop condition rated good. Peanut planting was 74% complete in Texas and 93% complete in Oklahoma. Canola harvest was underway in Michigan. Flax was beginning to bloom in North Dakota. South Dakota sunflowers were in mostly good condition. Seeding of second crop dry beans increased in California. Diseases and insects were prevalent in Kentucky tobacco. Borer populations increased rapidly in Louisiana sugarcane and spraying was underway.

**FRUIT AND NUTS:** Apricot harvest progressed and cherry harvest was completed in California. Table grapes were being harvested in the California desert. Kiwifruit set was reportedly light in the San Joaquin Valley. Freestone peach, nectarine, and plum harvests continued. California citrus harvests included Valencia oranges, grapefruit, and lemons. Rain accentuated walnut blight problems in the State. Citrus grove condition in Florida remained good to excellent. New crop fruit was developing well. Florida Valencia orange harvest was almost complete and grapefruit picking continued.

(Continued to back cover)

**CROP PROGRESS**  
FOR WEEK ENDING JUNE 30, 1991

**SOYBEANS  
% PLANTED**

	1991	1990	AVG.
AL	84	95	87
AR	88	88	87
GA	95	93	91
IL	100	95	99
IN	100	98	99
IA	100	100	100
KS	97	90	90
KY	91	82	87
LA	70	92	89
MI	100	100	98
MN	99	100	100
MS	74	92	84
MO	94	76	91
NE	100	100	100
NC	95	90	84
OH	100	97	96
SC	91	91	88
SD	100	100	96
TN	78	84	87

19 STATES 95 94 95

THESE 19 STATES PRODUCED 95% OF THE 1990 SOYBEANS CROP.

**SOYBEANS  
% BLOOM**

	1991	1990	AVG.
AL	2	6	5
AR	2	7	0
GA	6	7	6
IL	48	1	20
IN	15	0	0
IA	0	0	10
KS	20	5	5
KY	1	0	1
LA	0	2	4
MI	0	0	0
MN	0	6	9
MS	0	8	0
MO	6	0	7
NE	7	0	4
NC	2	0	0
OH	40	0	0
SC	0	3	0
SD	10	3	5
TN	2	2	1

19 STATES 14 2 7

THESE 19 STATES PRODUCED 95% OF THE 1990 SOYBEANS CROP.

**WINTER WHEAT  
% HARVESTED**

	1991	1990	AVG.
AR	96	97	93
CA	50	65	71
CO	0	7	12
GA	98	100	98
ID	0	0	0
IL	86	34	64
IN	70	22	33
KS	90	60	70
MI	2	0	0
MO	93	31	67
MT	0	0	0
NE	23	11	20
NC	98	93	81
OH	60	0	8
OK	99	94	92
OR	0	0	0
SD	0	0	0
TX	79	82	77
WA	0	0	0

19 STATES 63 47 52

THESE 19 STATES PRODUCED 91% OF THE 1990 WINTER WHEAT CROP.

**RICE  
% HEADED**

	1991	1990	AVG.
AR	0	0	0
CA	0	0	0
LA	22	25	20
MS	0	0	0
TX	42	24	25

5 STATES 10 8 7

THESE 5 STATES PRODUCED 98% OF THE 1990 RICE CROP.

**CORN  
% SILKING**

	1991	1990	AVG.
CO	0	0	0
GA	94	93	92
IL	21	1	8
IN	20	0	0
IA	0	0	0
KS	20	5	10
KY	27	1	12
MI	0	0	0
MN	0	0	0
MO	24	0	13
NE	0	0	2
NC	67	46	35
OH	4	0	0
PA	1	0	0
SD	0	0	0
TX	70	64	65
WI	0	0	0

17 STATES 11 4 5

THESE 17 STATES PRODUCED 95% OF THE 1990 CORN CROP.

**SPRING WHEAT  
% HEADED**

	1991	1990	AVG.
ID	28	62	58
MN	93	68	68
MT	32	40	41
ND	64	51	51
SD	95	85	79

5 STATES 67 57 56

THESE 5 STATES PRODUCED 97% OF THE 1990 SPRING WHEAT CROP.

**GRAIN SORGHUM  
% PLANTED**

	1991	1990	AVG.
AR	99	96	99
CO	93	95	96
IL	100	81	96
KS	97	95	95
LA	92	100	100
MS	91	100	100
MO	98	85	96
NE	100	100	100
NM	92	78	NA
OK	95	95	91
SD	94	95	91
TX	96	99	96

12 STATES 97 96 NA

EXCL. STATES WITH NA 97 96 96

THESE 12 STATES PRODUCED 98% OF THE 1990 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

**COTTON  
% SQUARING**

	1991	1990	AVG.
AL	72	84	79
AZ	80	98	96
AR	75	68	74
CA	60	75	80
GA	78	88	80
LA	73	86	70
MS	43	79	75
MO	59	59	70
NM	59	47	56
NC	75	60	48
OK	7	16	10
SC	76	55	56
TN	32	42	61
TX	27	48	33

14 STATES 44 61 53

THESE 14 STATES PRODUCED 99% OF THE 1990 COTTON CROP.

**COTTON  
% SETTING BOLLS**

	1991	1990	AVG.
AL	6	14	13
AZ	22	67	55
AR	5	0	5
CA	0	1	4
GA	17	34	21
LA	5	19	13
MS	0	19	8
MO	0	0	6
NM	5	0	0
NC	6	0	0
OK	0	0	0
SC	23	13	12
TN	0	0	3
TX	11	10	11

14 STATES 8 12 11

THESE 14 STATES PRODUCED 99% OF THE 1990 COTTON CROP.

**CROP CONDITION**  
PERCENT

FOR WEEK ENDING JUNE 30, 1991

SOYBEANS

STATE	VP	P	F	G	EX
AL	0	0	29	67	4
AR	0	2	37	61	0
GA	0	0	12	81	7
IL	0	1	16	76	7
IN	0	6	46	48	0
IA	2	3	31	53	11
KS	0	0	6	57	37
KY	0	0	18	68	14
LA	21	17	32	30	0
MI	3	7	25	45	20
MN	1	7	27	61	4
MS	0	1	55	43	1
MO	0	2	53	44	1
NE	0	0	10	82	8
NC	0	3	14	83	0
OH	2	8	26	52	12
SC	0	0	35	65	0
SD	0	2	9	52	37
TN	0	4	30	59	7
19 STATE	1	3	28	60	8
PREV WEEK	0	4	26	62	8
PREV YEAR	1	6	39	49	5

SPRING WHEAT

STATE	VP	P	F	G	EX
ID	0	1	22	64	13
MN	1	11	30	53	5
MT	1	3	16	57	23
ND	0	1	7	77	15
SD	0	0	10	55	35
5 STATE	0	3	13	67	17
PREV WEEK	1	1	11	67	20
PREV YEAR	2	5	16	55	22

WINTER WHEAT

STATE	VP	P	F	G	EX
AR	66	33	1	0	0
CA	0	0	10	85	5
CO	1	8	31	47	13
GA	13	35	36	16	0
ID	3	4	38	41	14
IL	37	29	29	5	0
IN	17	27	40	16	0
KS	0	2	42	48	8
MI	1	9	25	45	20
MO	33	38	23	6	0
MT	1	6	27	50	16
NE	0	5	48	45	2
NC	0	1	38	58	3
OH	2	9	32	49	8
OK	0	22	60	17	1
OR	5	6	24	54	11
SD	0	1	16	61	22
TX	5	26	51	14	4
WA	0	0	76	24	0
19 STATE	6	13	42	33	6
PREV WEEK	6	13	42	33	6
PREV YEAR	2	5	26	54	13

RICE

STATE	VP	P	F	G	EX
AR	0	0	28	66	6
CA	0	0	15	75	10
LA	0	0	32	68	0
MS	12	1	66	20	1
TX	0	0	11	89	0
5 STATE	1	0	28	67	4
PREV WEEK	0	3	40	52	5
PREV YEAR	0	0	32	64	4

COTTON

STATE	VP	P	F	G	EX
AL	0	3	32	65	0
AZ	0	0	10	80	10
AR	0	6	62	27	5
CA	0	0	10	85	5
GA	0	0	9	75	16
LA	6	5	10	79	0
MS	8	3	63	26	0
MO	0	10	50	40	0
NM	0	0	27	73	0
NC	0	0	6	84	10
OK	0	0	68	25	7
SC	0	0	52	48	0
TN	5	7	54	29	5
TX	0	8	56	34	2
14 STATE	1	5	46	45	3
PREV WEEK	0	9	43	45	3
PREV YEAR	0	9	28	58	5

SORGHUM

STATE	VP	P	F	G	EX
AR	0	2	64	34	0
CO	1	4	33	56	6
IL	0	0	18	74	8
KS	0	0	14	57	29
LA	0	40	26	34	0
MS	0	10	74	16	0
MO	0	6	51	43	0
NE	0	0	18	77	5
NM	0	0	20	70	10
OK	0	0	18	82	0
SD	0	0	17	71	12
TX	0	1	22	63	14
12 STATE	0	1	22	62	15
PREV WEEK	0	2	24	60	14
PREV YEAR	2	7	34	46	11

CORN

STATE	VP	P	F	G	EX
CO	0	7	16	47	30
GA	0	0	4	65	31
IL	0	4	10	72	14
IN	2	7	50	39	2
IA	0	5	25	49	21
KS	0	0	8	50	42
KY	0	1	14	66	19
MI	2	5	20	45	28
MN	0	4	28	57	11
MO	0	3	37	57	3
NE	0	0	6	80	14
NC	0	1	32	63	4
OH	1	7	27	53	12
PA	8	22	30	32	8
SD	0	0	13	44	43
TX	0	1	24	52	23
WI	0	2	7	55	36
17 STATE	0	4	21	57	18
PREV WEEK	0	2	19	60	19
PREV YEAR	1	4	30	57	8

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

## State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service.

**ALABAMA:** Rainfall 2.00 to 8.00 in. central, south; under 1.00 in. north. Temperatures 2 to 5° below normal north; 0 to 3° below normal south.

Days suitable for fieldwork 3.1. Soil moisture 3% short, 44% adequate, 53% surplus. Corn 72% silked, 80% 1990, 76% avg.; 13% dented, 11% 1990, 12% avg.; 19% fair, 70% good, 11% excellent. Sorghum 89% planted, 98% 1990, 89% avg.; 10% fair, 86% good, 4% excellent. Cotton 72% squaring, 84% 1990, 79% avg.; 6% setting bolls, 14% 1990, 13% avg.; 3% poor, 32% fair, 65% good. Peanuts 35% pegging, 56% 1990, 44% avg.; 1% poor, 2% fair, 96% good, 1% excellent. Soybeans 84% planted, 95% 1990, 87% avg.; 2% blooming, 6% 1990, 5% avg.; 29% fair, 67% good, 4% excellent. Winter wheat 93% harvested, 95% 1990, 88% avg. First hay 93% harvested, 96% 1990, 91% avg. Pastures 6% fair, 71% good, 23% excellent. Livestock 4% fair, 79% good, 17% excellent.

**ALASKA:** Railbelt wide, above normal season growing degree days combined with precipitation in several areas to boost crop growth. Highs 1 to 14° above normal. Lows 1 to 10° above normal. Seasonal precipitation 0.41 to 2.25 in. drier than normal. Homer continued 0.82 in. wetter than normal.

Days suitable for fieldwork 5.0. Topsoil 59% short, 41% adequate. Subsoil 40% short, 60% adequate. Small grains 30% pre boot, 70% in boot, heights averaged 12 in. Crop growth; 42% slow, 38% moderate, 20% rapid. First crop hay harvest over 25% complete. Barley varied poor to excellent depending on area, soil moisture. Commercial potato heights 5 in.

**ARIZONA:** Sunny, seasonably warm 23rd, 24th; sunny with below normal temperatures 25th to 29th; few thunderstorms over far southeast. Temperatures normal to 10° below normal. Extremes 32°; 103° higher elevations, 79°; 107° deserts. Rainfall 0.02 to 0.08 in. far southeast.

Alfalfa harvest active; good. Cotton squaring, further advanced 80%, 98% 1990, 96% avg.; setting bolls 22%, 67% 1990, 55% avg.; cotton 10% fair, 80% good, 10% excellent. Small grains harvested 90%, 100% 1990, 96% avg.; small grains good to excellent. Dry onions harvested east, central. Spring lettuce, cabbage harvested east.

**ARKANSAS:** Temperatures normal with scattered showers the first part of the week. Extremes 62°; 102°. Rainfall none to 3.91 in.

Days suitable for fieldwork 6. Soil moisture 32% short, 62% adequate, 6% surplus. Oats harvested 99%, 96% 1990, 93% avg. Corn planted 100%, 100% 1990, 100% avg. Pasture 25% fair, 74% good, 1% excellent. Livestock good.

**CALIFORNIA:** Cold low pressure trough brought cooler temperatures. Several frontal systems moved through, bringing some rainfall to central valley late week.

Field work good progress. General rain northern half end of weekend interrupted activities. Cool weather slowed crop

development. Rice seeding virtually completed. Cotton thinning active. Small grain harvest peak activity. Seeding second crop corn, dry beans increased. Alfalfa, sudangrass harvests seasonally normal. Irrigation, weed control measures continued. Apricot harvest progressed, cherry harvest completed. Avocados setting new crop. Grapes thinned, sprayed. Dates dusted, bagged. Desert table grapes harvested. Kiwifruit set light, San Joaquin Valley. Freestone peach, nectarine, plum harvests continued. Citrus June drop continued. Sunburn protection, pruning, replacing freeze damaged citrus trees continued. Valencia orange, grapefruit packing proceeded. Coastal lemons picked. Broccoli heavy supply, generally good quality. Cauliflower heavy supply, variable quality. Celery supply seasonally increasing Salinas area, generally good quality. Iceberg lettuce supply heavy, variable quality. Dry onion harvest continued. Fresh market tomato harvest increased San Joaquin Valley. Tululake area potato fields frost protected with sprinklers. Strawberries, fairly heavy supply, central coast, variable quality. Pasture conditions excellent to good north, north coast. Conditions good to poor south, higher elevations better. Water supplies adequate. Some cattle movement to summer pasture.

**COLORADO:** Warm southwesterly winds brought above normal temperatures to the State. Scattered showers on the 27th in the east central area brought up to 1.21 in. of rain. Temperatures east 3 to 6° above normal, 1 to 3° above normal over the rest of State.

Days suitable for fieldwork 6.5. Soil moisture 11% very short, 47% short, 39% adequate, 3% surplus. First cutting alfalfa 72% complete, 75% 1990, 85% avg. Sorghum 93% planted, 95% 1990, 96% avg. Dry beans 88% emerged, 91% 1990, 97% avg. Winter wheat 10% ripe; 2% 1990, 34% avg. Harvest just underway. Winter wheat condition 1% very poor, 8% poor, 31% fair, 47% good, 13% excellent; corn 7% poor, 16% fair, 47% good, 30% excellent; spring barley 6% poor, 23% fair, 63% good, 8% excellent. Livestock mostly good. Pasture, range feed mostly good.

**FLORIDA:** Panhandle average temperatures 1° below normal, central, south areas mostly 1 to 2° above normal. Most of State 2.00 to 3.00 in., rain several locations 5.00 to 7.00 in., few less than 0.50 in.

Soil moisture adequate to surplus. Soybean planting virtually complete. Tobacco, hay harvest active. Corn, cotton, peanuts, sugarcane making good progress. States pastures mostly good to excellent. Pasture ratings, 40% good, 60% excellent. States herds mostly good to excellent. Citrus grove good to excellent. New crop fruit progressing well, good fruit sizes. Valencia harvest almost complete, some grapefruit going for fresh, processing. Caretakers cutting cover crops, spraying, fertilizing, pruning productive trees. Summer like weather prevailed over vegetable producing areas. Harvest almost complete. Decreasing supply watermelons, sweet corn available. Growers preparing for fall plantings.

**GEORGIA:** Thunderstorms numerous across all, east central. Rainfall of 2.00 to 8.00 in. High 8.24 in. near Albany. Temperatures 2 to 5° below normal north; 0 to 2° below normal south. Warmest in upper 80s mountains, coast to low, mid 90s elsewhere. Coolest upper 50s mountains to near 70 south.

Days suitable for fieldwork 3.2 Soil moisture 4% short, 50% adequate, 46% surplus. Corn 79% dough, 74% 1990, 62% avg.; 46% dent, 38% 1990, 26 avg.; 9% mature, 3% 1990, 3% avg. Sorghum 8% fair, 81% good, 11% excellent; 96% planted, 95% 1990, 94% avg. Peanuts 10% fair, 87% good, 3% excellent; 86% blooming, 90% 1990, 84% avg.; 48% pegging, 54% 1990, 47% avg. Tobacco 66% fair, 34% good; 23% harvested, 17% 1990, 12% avg. Watermelons 26% poor, 54% fair, 20% good; 50% harvested, 58% 1990, 41% avg.; disease problems increasing. Wheat harvest slowed by rain, wet fields. Rye, other small grain harvest nearing completion. Apples 5% fair, 95% good. Peaches 10% very poor, 7% poor, 4% fair, 79% good; 75% harvested, 84% 1990, 72% avg. Hay harvest slowed by rains. Pastures continue to improve. Cattle, hogs good.

**HAWAII:** Typical summer trade wind weather, mostly sunny, some passing showers windward, mountain areas. Persistent dry weather Maui island raised concerns about future irrigation water restrictions. Winds 10 to 25 mph, diminishing over weekend. Temperatures warm high 60s to high 80s. Rainfall none to 3.50 in. Days suitable for fieldwork 7.0. Most crops made good progress aided by sunny skies, some showers. Irrigation essential several major crop areas. Watermelon harvesting heavy. Sugar harvesting, planting normal.

**IDAHO:** Temperatures 2 to 9° below normal. Entire State received precipitation with selected areas of north receiving over an inch.

Days suitable for fieldwork 6.0. Soil moisture 1% very short, 21% short, 75% adequate, 3% surplus. Winter wheat fair to good; 4% turning color. Spring wheat good. Potatoes 97% emerged, 98% 1990, 98% avg.; 34% over 12 in. high, 4% closing middles. Spring barley 25% headed, 62% 1990, 55% avg. Alfalfa 1st cutting 77% harvested, 72% 1990, 81% avg. Dry beans 99% emerged, 98% 1990, 96% avg. Cherry picking has begun. Livestock good to excellent. Range, pasture 90% of normal.

**ILLINOIS:** Temperatures 4 to 6° above normal north, 1 to 4° above normal south. Precipitation virtually none, few scattered showers.

Days suitable for fieldwork 6.25. Soil moisture 72% short, 28% adequate. Corn height 56 in., most advanced 74 in. Soybeans setting pods 10%, 1% 1990, avg. 1%. Winter wheat ripe 100%, 76% 1990, 91% avg. Oats 4% poor, 28% fair, 67% good, 1% excellent; filled 99%, 57% 1990, 83% avg.; turning yellow 80%, 11% 1990, 45% avg.; ripe 36%, 2% 1990, 15% avg., harvested 10%, 1% 1990, 4% avg. Pasture as a % of normal, where 100% = normal, was 82%. Alfalfa second cutting 55%, 16% 1990, 33% avg.; 2% poor, 18% fair, 77% good, 3% excellent. Red clover cut 90%, 67% 1990, 83% avg.

**INDIANA:** Temperatures 1 to 8° above normal. Lows mid 60s to near 70, highs upper 80s to near 90°. Precipitation none to 1.75 in. isolated thunderstorms.

Days suitable for fieldwork 6.6. Topsoil 86% short, 14% adequate. Subsoil 61% short, 39%

adequate. Corn 53 in. high, 24 in. 1990, 38 in. avg. Soybeans 13 in. high, 6 in. 1990, 9 in. avg. Wheat ripe 97%, 49% 1990, 67% avg. Rye combined 42%, 12% 1990, 22% avg. Alfalfa hay 2nd cutting 21%. Pasture 77% of normal.

**IOWA:** Temperatures 7 to 10° above normal. Extremes 57°; 98°. Precipitation none to 2.22 in.; average 0.14 in.

Days suitable for fieldwork 6.6. Topsoil 43% short, 54% adequate, 3% surplus. Subsoil 15% short, 68% adequate, 17% surplus. Winter wheat mostly fair. Hay 1% very poor, 4% poor, 23% fair, 58% good, 14% excellent. Pasture 93% of normal. Oats 99% headed, 92% 1990, 97% avg. Oats 50% turning color, 12% 1990, 40% avg. Oats 11% poor, 14% fair, 43% good, 6% excellent. Corn height 38 in.; tallest 56 in.; 85% cultivated first time, 71% 1990, 93% avg. Soybeans 95% emerged, 100% 1990 and avg.; 60% cultivated first time, 36% 1990, 74% avg. First cutting alfalfa 98% harvested, 86% 1990, 97% avg.; second cutting 10% harvested, 0% 1990, 9% avg. First cutting clover hay 85% harvested, 46% 1990, 79% avg. Winter wheat 35% harvested, 1% 1990, 8% avg. Livestock good. Hot, humid stressed livestock.

**KANSAS:** Temperatures above normal 5° west, 4° central, 3° east. Rainfall 0.03 in. north central, central to 0.90 in. southwest.

Days suitable for fieldwork 6.0. Surface 14% very short, 48% short, 38% adequate. Subsurface 7% very short, 44% short, 49% adequate. Wheat harvest near completion. Corn good; 92% good to excellent. Sorghum, soybean planting 97% complete; good to excellent. Range, pasture fair to good; forage adequate. Stockwater short central one third of State. Rains needed in many areas. Second cutting alfalfa about 50% complete.

**KENTUCKY:** High temperatures 85 to 96°, just above normal. Low temperatures 60 to 70°, 3 to 5° above normal. Rainfall widely scattered. Most locations little or no rain. Isolated spots south 1.00 to 3.00 in.

Days suitable fieldwork 4.9. Soil moisture 5% very short, 34% short, 54% adequate, 7% surplus. Tobacco 42% fair, 54% good, 4% excellent. Hay harvesting very active. Wheat 89% harvested, 67% 1990, 71% avg. Soybeans 91% planted, beginning to show blooms. Corn 27% silking.

**LOUISIANA:** Temperatures 1.5° below normal to 0.4° above normal. Extremes 66°; 96°. Rainfall 0.86 in., northwest, to 2.41 in., south central.

Days suitable for fieldwork 3.4. Soil moisture 2% short, 54% adequate, 44% surplus. Spring plowing 92%, 98% 1990, 100% avg. Corn 12% very poor, 29% poor, 33% fair, 26% good; 98% silked, 97% 1990, 90% avg.; 64% dough stage, 62% 1990; 54% avg.; 4% mature, 2% 1990, 4% avg. Cotton 100% emerged, 100% 1990, 100% avg. Hay 55% first cutting, 90% 1990, 85% avg. Peaches 55% fair, 45% good; 44% harvested, 56% 1990, 50% avg. Rice 100% planted, 100% 1990, 100% avg.; 98% emerged, 100% 1990, 100% avg. Sheath blight, blast, armyworm problems continued, southwest. Sorghum 89% emerged, 98% 1990, 98% avg.; 38% headed, 34% 1990, 27% avg. Soybeans 60% emerged, 90% 1990, 82% avg. Armyworms a concern, south. Sweet potatoes 5% poor, 94% fair, 1% good; 83% planted, 87% 1990, 89% avg. Sugarcane 2% poor, 43% fair, 55% good. Borer populations increased rapidly, spraying underway. Wheat 98% harvested, 96% 1990, 97% avg. Vegetables 11% very poor, 26% poor, 39% fair, 24% good. Pastures 8% poor, 23% fair, 39% good, 30% excellent. Livestock 22% fair, 73% good, 5% excellent.

**MARYLAND & DELAWARE:** MARYLAND: Precipitation 0.57 in. Temperature 71.5°, normal 73.7°. Extremes 46°; 96°.

Days suitable for fieldwork 6.2. Topsoil 27% very short, 41% short, 32% adequate. Subsoil 14% very short, 54% short, 32% adequate. Small grains fair to good. Winter wheat 71% harvested, 44% 1990, 42% avg. Barley 97% harvested, 87% 1990, 85% avg. Rye 69% harvested, 38% 1990, 41% avg. Oats 61% turning, 26% 1990, 36% avg.; 9% harvested, 15% 1990, 7% avg. Soybeans 86% planted, 82% 1990, 78% avg. Potatoes 33% harvested, N/A 1990, N/A avg. Cucumbers 15% harvested, 9% 1990, 13% avg. Lima beans 10% harvested, 0% 1990, N/A avg. Snap Beans 88% planted, 98% 1990, 98% avg.; 45% harvested, 27% 1990, 17% avg. Green peas 92% harvested, 85% 1990, 94% avg. Other hay second cut 25% complete, 9% 1990, 12% avg. Alfalfa hay second cut 57% complete, 38% 1990, 41% avg.

DELAWARE: Precipitation 0.85 in. Temperature 71.7°, normal 74.3°. Extremes 51°; 93°.

Days suitable for fieldwork 6.9. Topsoil 14% very short, 57% short, 29% adequate. Subsoil 14% very short, 14% short, 72% adequate. Wheat, oats fair. Barley, rye fair to good. Rye 62% harvested, 19% 1990, N/A avg. Oats 24% harvested, N/A 1990, N/A avg. Soybeans 87% planted, 94% 1990, 81% avg. Sweet corn 93% planted, 100% 1990, 100% avg. Potatoes 25% harvested, N/A 1990, N/A avg. Cucumbers 75% planted, 100% 1990, 100% avg.; 5% harvested, 9% 1990, N/A avg. Lima beans 82% planted, 100% 1990, 100% avg.; 0% harvested, 0% 1990, N/A avg. Snap beans 93% planted, 100% 1990, 97% avg.; 18% harvested, 12% 1990, N/A avg. Green peas 77% harvested, 88% 1990, 81% avg. Other hay second cut 11% complete, 7% 1990, N/A avg. Alfalfa second cutting 85% complete, 35% 1990, 56% avg. Hay supplies adequate. Pasture poor to fair. Peaches, apples good. Peaches fruit set average. Apples fruit set above average.

**MICHIGAN:** Temperatures 1 to 9° above normal. Extremes 44°; 97°. Precipitation none to 1.15 in. across State.

Days suitable for fieldwork 6.5. Soil 67% short, 33% adequate. Corn 5% silked, 0% 1990, 0% avg.; 2% very poor, 5% poor, 20% fair, 45% good, 28% excellent. Soybeans 100% planted, 100% 1990, 98% avg.; 0% blooming, 0% 1990, 0% avg.; 3% very poor, 7% poor, 25% fair, 45% good, 20% excellent. Winter wheat 80% turning, 25% 1990, 40% avg.; 2% harvested, 0% 1990, 0% avg.; 1% very poor, 9% poor, 25% fair, 45% good, 20% excellent. Pasture condition 80% of normal.

**MINNESOTA:** Temperatures 0.3 to 10.5° above normal. Extremes 44°; 98°. Precipitation 0.05 to 2.22 in. Greatest weekly total 4.05.

Days suitable for fieldwork 5.0. Topsoil 1% very short, 18% short, 56% adequate, 25% surplus. Spring wheat 93% heading, 68% 1990, 68% avg.; oats 89% heading, 78% 1990, 82% avg. Barley 99% heading, 71% 1990, 67% avg. Field corn 71% cultivated once, 81% 1990, 91% avg.; 31 in. height, 20 in. 1990, 30 in. avg. Soybeans 90% emerged, 98% 1990, 99% avg.; 50% cultivated once, 59% 1990, 72% avg.; 8 in. height, 7 in. 1990, 10 in. avg. Alfalfa hay 94% cut, 76% 1990, 91% avg. Field corn 4% poor, 28% fair, 57% good, 11% excellent. Soybeans 1% very poor, 7% poor, 27% fair, 61% good, 4% excellent. Spring wheat 1% very poor, 11% poor, 30% fair, 53% good, 5% excellent. Barley 3% poor, 5% very poor, 25% fair, 61% good, 6% excellent. Oats 4% very poor, 11% poor, 35% fair, 46% good, 4% excellent.

**MISSISSIPPI:** Temperatures 79°, 1.5° below normal. Extreme 60°; 99°. Rainfall 1.00 in., 0.07 in. above normal. Soil temperature 84°. Mostly dry statewide with scattered thunderstorms.

Days suitable for fieldwork 4.0, 6.1 1990, 5.0 avg. Soil moisture 3% very short, 9% short, 50% adequate, 38% surplus. Corn 100% planted, 100% 1990, 100% avg.; 99% emerged, 100% 1990, 100% avg.; silking 55%, 62% 1990, 60% avg.; 8% very poor, 13% poor, 57% fair, 21% good, 1% excellent. Cotton 99% emerged, 100% 1990, 100% avg.; 43% squaring, 79% 1990, 75% avg.; 8% very poor, 3% poor, 63% fair, 26% good. Rice 96% planted, 100% 1990, 100% avg.; 91% emerged, 100% 1990, 100% avg.; 12% very poor, 1% poor, 66% fair, 20% good, 1% excellent. Sorghum 91% planted, 100% 1990, 100% avg.; 89% emerged, 100% 1990, 100% avg.; 10% poor, 74% fair, 16% good. Soybeans 74% planted, 92% 1990, 84% avg.; 62% emerged, 84% 1990, 73% avg.; 1% poor, 55% fair, 43% good, 1% excellent. Sweet potatoes 90% planted, 98% 1990, 95% avg. Wheat 93% harvested, 97% 1990, 93% avg.; 54% very poor, 34% poor, 3% fair, 8% good, 1% excellent. Hay harvested 44%, 49% 1990, 43% avg. Peaches harvested 41%; 58% 1990, 47% 5 yr avg.; 7% poor, 41% fair, 45% good, 7% excellent. Pecans 17% very poor, 35% poor, 8% fair, 40% good. Livestock 10% fair, 73% good, 17% excellent. Pasture 91% of normal.

**MISSOURI:** Temperatures 3° above normal. Virtually no rainfall except Bootheel 0.34 in.

Days suitable for fieldwork 6.2. Topsoil 54% short, 45% adequate, 1% surplus. Subsoil 26% short, 72% adequate, 2% surplus. Single crop soybean planting least advanced southeastern district, 89%, other districts virtually complete. Double crop soybean planting 79%, 44% 1990, 59% avg. Wheat harvest 81% northwest to complete southeast. Oat harvest 41%, 2% 1990, 29% avg. Alfalfa hay second cutting 43%, 17% 1990, 46% avg. Other hay cut 77%, 55% 1990, 73% avg. Pasture 5% very poor, 4% poor, 45% fair, 43% good, 3% excellent.

**MONTANA:** Stormy, wet. Tornadoes, severe thunderstorms common over eastern half of State. Heavy rains, large hail some areas.

Days suitable for fieldwork 3.8. Topsoil 12% short, 73% adequate, 15% surplus. Subsoil 17% short, 81% adequate, 2% surplus. Winter wheat headed 82%, 90% 1990, 90% avg. Barley headed 26%, 30% 1990, 37% avg. Barley 4% poor, 14% fair, 60% good 22% excellent. Oats headed 31%, 34% 1990, 38% avg.; 1% very poor, 2% poor, 12% fair, 66% good, 19% excellent. Sugarbeets 1% very poor, 2% poor, 15% fair, 71% good, 11% excellent. First cutting alfalfa 30%, 40% 1990, 60% avg. Other hay cut 22%, 28% 1990, 34% avg. Pasture, range feed condition 96%.

**NEBRASKA:** Temperatures 2° above normal northwest to 11° above normal central. Precipitation latter half of the week varying less than 0.10 in. east central to 1.60 in. northwest.

Days suitable for fieldwork 6.2. Topsoil 39% short, 58% adequate, 3% surplus. Subsoil 15% short, 82% adequate, 3% surplus. Wheat 5% poor, 48% fair, 45% good, 2% excellent; 94% turning, 87% 1990, 94% avg.; 41% ripe, 37% 1990, 49% avg.; 23% harvested, 11% 1990, 20% avg. Corn 6% poor, 80% good, 14% excellent. Sorghum 18% fair, 77% good, 5% excellent. Soybeans 10% fair, 82% good, 8% excellent; 7% blooming, 0% 1990, 4% avg. Alfalfa 1% poor, 22% fair, 64% good, 14% excellent; 7% second cutting, 6% 1990, 14% avg. Pasture, range 94% of normal.

**NEVADA:** Temperatures 6 to 12° below normal. Extremes 30°; 99°. Precipitation trace to 1.30.

Unseasonably cool wet weather north, central areas. Dry, windy south. Crops improved with cool, wet conditions. Alfalfa harvest 2 weeks behind normal.

**NEW ENGLAND:** Precipitation none to 0.85 in. south; none to 0.50 in. north, up to 1.30 in. northern Maine. Temperatures mid 60s to low 70s north, high 60s to mid 70s south; 2 to 7° above normal. Maximum temperatures mid 80s to high 90s; minimum temperatures low 40s to mid 50s.

Days suitable for fieldwork 6.7. Soil moisture 16% very short, 68% short, 6% adequate, 10% surplus. Grazing availability 4% very short, 62% short, 31% adequate, 3% surplus. Fieldwork 7.6 days ahead of schedule. Maine potatoes 100% emerged, 99% 1990, 100% avg.; excellent. Rhode Island, Connecticut Valley potatoes good. Maine oats good to excellent. Field corn 99% emerged, 95% 1990, 100% avg.; good. Sweet corn 98% planted, 93% 1990, 100% avg.; 96% emerged, 89% 1990, 100% avg.; good. First cut hay 87% complete, 67% 1990, 73% avg.; adequate to good. Second cut hay underway. Connecticut Valley outdoor tobacco 100% transplanted. Apples fruit set average, scab light. Peaches, pears average to heavy fruit set. Cranberry plants peak bloom. Strawberry harvest 92% complete. Blueberry, raspberry harvest beginning.

**NEW JERSEY:** Temperatures much above normal. Extremes 47°; 100°. Rainfall 0.19 in. north, 0.19 central, 0.16 south. Heaviest 24 hour total 0.60 in. on 30th, 1st. Estimated soil moisture percent field capacity, averaged 66% north, 46% central, 34% south. Four inch soil temperature averaged 70° north, 71° central, 72° south.

Hot weather again dried topsoil. Weekend showers beneficial, many areas could use good soaking rain. Summer vegetable harvest active. Blueberry harvest near peak. Apples, peaches continued to size. Prospects good. Barley combining well advanced. Wheat harvest general. Soybeans going in following grain harvest. Second cutting of hay active as conditions permitted. Pasture growth aided by timely showers.

**NEW MEXICO:** Warm temperatures remained the trend for State. Readings 5 to 8° above normal across all of the eastern plains to 2 to 6° above normal elsewhere. Rainfall was scarce the first half of week, storms gradually increased over the central, northern mountains during late week with scattered rains reaching the southern desert and southwestern mountains.

Days suitable for fieldwork 6.9. Soil moisture 80% short, 20% adequate. Alfalfa 4% poor, 30% fair, 66% good. Corn 20% fair, 80% good. Irrigated sorghum 20% fair, 70% good, 10% excellent. Irrigated wheat 8% very poor, 46% fair, 46% good. Dryland wheat, 40% very poor, 30% poor, 20% fair, 10% good. Onion conditions good. Chile 30% fair 70% good. Pecans 20% fair, 80% good. Apples very poor to good. Wheat harvest 86% complete. Onion harvest progressing with good yields. Cattle, sheep, poor to good. Range, pasture 64% of normal, 25% to 110%.

**NEW YORK:** After a relatively cool start to the week, temperatures soared by mid week, remained high throughout weekend. Extremes 35°; 97°. Precipitation occurred at the weekend.

Days suitable for fieldwork 7.0. Soil moisture very short to short. Pasture 62% of

normal. Hay fair. Wheat mostly good. Alfalfa first cutting 94% finished, 60% in 1990, 64% avg. Clo tim harvest 82% complete, 56% 1990, 53% avg. Grass silage 95% harvested, 44% 1990, 52% avg. Champlain Valley McIntosh apple June drop moderate, average to above average size. Sweet cherry harvest in Lake Ontario region well underway. Fruit size reduced by dry weather. Vegetable planting winding down. Strawberry harvest peaked with good yield, quality, sales.

**NORTH CAROLINA:** Temperatures above normal. Extremes 52°; 95°. Precipitation none to 2.07 in.

Days suitable for fieldwork 5.0. Soil moisture 1% very short, 15% short, 71% adequate, 13% surplus. Crop condition: Tobacco 1% poor, 15% fair, 77% good, 7% excellent; corn 1% poor, 32% fair, 63% good, 4% excellent; cotton 6% fair, 84% good, 10% excellent; peanuts 21% fair, 79% good; soybeans 3% poor, 14% fair, 83% good; hay 1% very poor, 1% poor, 27% fair, 68% good, 3% excellent; Irish potatoes 32% fair, 64% good, 4% excellent; sweet potatoes 18% fair, 73% good, 9% excellent; apples 4% poor, 9% fair, 87% good; peaches 9% fair, 78% good, 13% excellent; truck crops 2% poor, 24% fair, 67% good, 7% excellent; pasture 1% very poor, 1% poor, 30% fair, 62% good, 6% excellent. Planted: soybeans 95%. Harvested: Wheat 98%; oats 97%; barley 98%; rye 97%; peaches 41%; Irish potatoes 72%. Cotton squared 75%. Corn silked 67%.

**NORTH DAKOTA:** Temperatures 3 to 5° above normal across State. Extremes 49° south west, northeast; 93° south central. Precipitation 0.25 in. north central to 1.76 in. northwest.

Days suitable for fieldwork 4.1. Soil moisture above 1990 and average. Topsoil 6% short, 81% adequate, 13% surplus. Subsoil 4% very short, 34% short, 62% adequate. Crop conditions mostly good to excellent. Spring wheat 19% milk to dough stage and beyond, 4% 1990, 14% 1986-90 avg.; durum wheat 8% milk to dough stage and beyond, 2% 1990, 8% avg.; oats 20% milk to dough stage and beyond, 9% 1990, 17% avg.; barley 33% milk to dough stage and beyond, 9% 1990, 20% avg.; winter wheat 11% turning, 2% 1990, 22% avg.; corn 28 in. avg. height, 16 in. 1990, 20 in. avg.; sunflower 14 in. avg. height, 12 in. 1990, 12 in. avg.; flax 16% bloom, 5% 1990, 8% avg.; 9 in. avg. height, 8 in. 1990, 8 in. avg.; potatoes 41% bloom, 10% 1990, 17% avg.; 11 in. avg. height, 11 in. 1990, 11 in. avg.; soybeans 9% bloom, 0% 1990, 3% avg.; 11 in. avg. height, 8 in. 1990, 9 in. avg.; dry edible beans 12% bloom, 0% 1990, 4% avg.; 11 in. avg. height; 8 in. 1990, 8 in. avg. Sugarbeets 12 in. avg. height. Pasture 88% of normal, furnished 100% roughage requirements. Alfalfa hay first cutting 55% complete, other hay 33%. Stockwater supplies 3% very short, 30% short, 66% adequate, 1% surplus.

**OHIO:** Temperatures 2 to 8° warmer than normal with average highs in the mid to high 80s. Precipitation was almost non existent.

Days suitable for fieldwork 6.6. Soil moisture 79% short, 20% adequate, 1% surplus. Corn development 12% emerged, 4% silking. Soybeans good; 40% blooming, 6% setting pods. Winter wheat good, 60% harvested. Yields seem lower than normal. Oats 25% ripe, 6% harvested. Second cutting of alfalfa was 40% complete compared to 10% 1990, 20% avg. Second cuttings of other hay 26% complete, 0% 1990, 2% avg.

**OKLAHOMA:** Temperatures 2° above normal southeast to 6° above normal northeast. Precipitation none most districts to 0.04 in. southeast.

Days suitable for fieldwork 6.1. Topsoil 22% short, 75% adequate, 3% surplus. Subsoil 26% short, 74% adequate. Wheat 99% harvested, 94% 1990, 92% avg.; 63% ground plowed, 56% 1990, 43% avg. Cotton 99% planted, 95% 1990, 93% avg.; 90% up to stand, 89% 1990, 80% avg.; 7% squaring, 16% 1990, 10% avg. Sorghum 95% planted, 95% 1990, 91% avg.; 89% emerged, 88% 1990, 74% avg. 1% headed, 0% 1990, 2% avg. Soybeans 87% planted, 81% 1990, 89% avg. Peanuts 93% planted, 95% 1990, 96% avg. Corn 28% tasseling, 13% 1990, 38% avg. Pasture 98%. Cattle good; marketings average, prices steady to lower than previous week.

**OREGON:** Unseasonably cool across State. Temperatures near normal, coast; nearly 3° below normal, western valleys; 5° below normal, Cascades east; 12° below normal, south central area. Precipitation 0.10 in., coast, 0.40 in., Willamette Valley. Heavy rain, Cascades east; thunderstorms northeast, southeast corners of State; 1.83 in. fell in 45 minutes., Condon, rainfall 0.25 to 0.75 in., east.

Soil moisture 20% short, 73% adequate, 7% surplus. Cool, wet weather hampered haying, delayed crop development. Early grass seed harvest underway; strawberry harvest continued, red raspberry picking started; blueberries ripening; Willamette Valley. Fresh market Bing, Royal Anne cherry harvest continued, The Dalles, Hood River. pear crop looking better, apple conditions vary, Hood River, irrigating started, Peach leaf curl, scab problems cause medium to light peach, apple crop, Willamette Valley. Cranberry bloom period, cool, cloudy, south coast. Harvested fresh market vegetables; snap bean harvest three weeks away; onions 4th leaf, west. Cool weather delayed onions, Malheur Co.; seed potatoes good to excellent, all area; first lamb pool shipped, Coos Co. Stockwater supplies improved, Lake Co. Range 4% poor, 9% fair, 66% good, 21% excellent.

**PENNSYLVANIA:** Above normal temperatures, below normal rainfall. Temperature 72°, 5° above normal. Extremes 45°; 98°. Precipitation 0.09 in., 0.85 in. below normal.

Days suitable for fieldwork 6. Soil moisture 94% short, 6% adequate, 0% surplus. Corn 100% planted, 99% 1990, 98% avg. Corn 1% silk, 0% 1990, 0% avg.; height 26 in., 16 in. 1990, 19 in. avg.; 8% very poor, 22% poor, 30% fair, 32% good, 8% excellent. Tobacco 98% transplanted, 94% 1990, 92% avg. Soybeans 95% planted, 91% 1990, 88% avg.; 7% very poor, 24% poor, 37% fair, 29% good, 3% excellent. Barley 2% heading or headed, 21% 1990; 19% turning yellow, 33% 1990; 21% ripe, 25% 1990; 58% harvested, 21% 1990. Wheat 11% heading or headed, 38% 1990; 33% turning yellow, 58% 1990; 34% ripe, 3% 1990; 22% harvested, 1% 1990; 7% poor, 35% fair, 46% good, 12% excellent. Oats 61% heading or headed, 95% 1990; 34% turning yellow, 5% 1990; 4% ripe, 0% 1990; 1% harvested, 0% 1990; 7% very poor, 25% poor, 37% fair, 26% good, 5% excellent. Alfalfa first cutting 99% complete, 84% 1990. Second cutting alfalfa 40% complete, 11% 1990. First cutting clover timothy 94% complete, 68% 1990. Feed from pastures 63% very poor, 30% poor, 7% fair, 0% good. Peach 31% below avg., 55% avg., 14% above avg. Apple 24% below avg., 60% avg., 16% above avg.

**PUERTO RICO:** No Data Available.

**SOUTH CAROLINA:** Temperatures 2° below normal upstate to near normal in the coastal plains. Rainfall 0.20 in. northeast to 0.90 in. south.

Days suitable for fieldwork 5.2. Soil moisture 46% short, 54% adequate. Cotton 52% fair, 48% good; 76% squaring, 55% 1990, 56% avg.; 23% setting bolls, 13% 1990, 12% avg. Sweet potatoes fair to good; 92% planted, 95% 1990, 85% avg. Watermelons fair to good; 55% harvested, 39% 1990, 28% avg. Cantaloupes fair; 56% harvested, 44% 1990, 31% avg. Peaches fair to good; 31% harvested, 44% 1990, 35% avg. Cucumbers fair to good; 67% harvested, 0% 1990, 0% avg. Snap beans fair to good; 95% planted, 100% 1990, 100% avg.; 35% harvested, 0% 1990, 0% avg. Sorghum fair to good; 78% planted, 87% 1990, 77% avg. Soybeans 35% fair, 65% good; 91% planted, 91% 1990, 88% avg. Barley fair to good; 89% harvested, 93% 1990, 84% avg. Oats fair to good; 95% harvested, 100% 1990, 89% avg. Rye fair to good; 86% harvested, 91% 1990, 86% avg. Wheat fair; 97% harvested, 98% 1990, 92% avg. Tobacco fair to good; 68% topped, 68% 1990, 47% avg.; 8% harvested, 6% 1990, 1% avg. Corn fair to good; 88% silked, 77% 1990, 66% avg.; 50% dough stage, 33% 1990, 18% avg.; 3% matured, 2% 1990, 0% avg. Grain hay good; 95% harvested, 99% 1990, 97% avg. Pastures fair to good.

**SOUTH DAKOTA:** Temperatures above normal statewide. Hottest area southeast. Extremes 38°; 98°. Precipitation generally located along line southwest corner to northeast corner; up to 3.58 in.

Days suitable for fieldwork 5.2. Topsoil 1% very short, 20% short, 66% adequate, 13% surplus. Subsoil 1% very short, 15% short, 74% adequate, 10% surplus. All crops mostly good to excellent. Rye 8% fair, 54% good, 38% excellent. Oats 2% poor, 11% fair, 60% good, 27% excellent. Barley 1% poor, 10% fair, 62% good, 27% excellent. Flax 11% fair, 54% good, 35% excellent. Sunflowers 7% fair, 78% good, 15% excellent. Pasture 102% of normal. Corn height 29 in.; 17 in. 1990, 19 in. avg.

**TENNESSEE:** Scattered thunderstorms statewide. Normal amounts most locations. Temperatures normal to slightly above normal.

Days suitable for fieldwork 3.9. Soil moisture 6% short, 65% adequate, 29% surplus. Corn 32% tasseling, 14% 1990, 32% avg.; 3% very poor, 26% fair, 61% good, 10% excellent. Cotton 32% squaring, 42% 1990, 61% avg.; 5% very poor, 7% poor, 54% fair, 29% good, 5% excellent. Sorghum 1% very poor, 2% poor, 21% fair, 75% good, 1% excellent. Soybeans 78% planted, 84% 1990, 87% avg.; 4% poor, 30% fair, 59% good, 7% excellent. Tobacco 2% very poor, 1% poor, 39% fair, 55% good, 3% excellent. Wheat 98% ripe, 100% 1990, 99% avg., 82% harvested, 82% 1990, 79% avg.; 35% very poor, 25% poor, 25% fair, 14% good, 1% excellent. Alfalfa 50% 2nd cutting, 68% 1990, 61% avg.; hay 3% poor, 13% fair, 72% good, 12% excellent. Pastures 2% fair, 64% good, 34% excellent. Cattle 1% poor, 3% fair, 80% good, 16% excellent.

**TEXAS:** Upper level high pressure produced hot, dry weather for much of week for west Texas, most of north Texas. Upper air disturbances triggered thunderstorms over east, Coastal areas at mid week. Late in week a tropical disturbance moved onshore bringing heavy rains, strong winds to mid, lower coast. Cuero two day rainfall total of 7.00 in. For week, rainfall ran much above normal in Coastal Bend, south Texas areas. Near to above normal over rest of southern third of State. No rain Plains areas. Temperatures within few degrees of normal except for above normal Northern High Plains. Cooler than usual for Cross Timbers.

**Crops:** Small grain harvest quickly wrapping up in Blacklands, Central Texas. Corn fields continued excellent progress; 70% silked 64% 1990, 65% avg.; 52% doughed, 48% 1990, 53% avg.; 10% dented, 12% 1990, 23% avg.; 0% mature, 1% 1990, 5% avg. Sorghum harvest continued in Valley, moving northward into Coastal Bend, southern portions of central Texas. Sorghum 53% headed, 46% 1990, 52% avg.; 37% turning color, 33% 1990, 35% avg.; 12% mature, 13% 1990, 13% avg.; 2% harvested, 5% 1990, 2% avg. Cotton fields across State enjoyed ideal growing weather for a change. Harvest in Valley increasing. Cotton 11% setting bolls, 10% 1990, 11% avg.; 1% open bolls, 1% 1990, 1% avg. Rice fields continued good progress. Some producers along Upper Coast sprayed for army worms. Soybean fields excellent shape across State. Wet weather delayed planting along Upper Coast. Fields in Blacklands could use rain. Peanut stands continued another week of good progress. South Texas fields need more moisture. Peach harvest continued to progress. Other Field Crops: Oats 74% harvested, 81% 1990, 75% avg. Peanuts 74% planted, 72% 1990, 77% avg. Soybeans 89% planted, 94% 1990, 88% avg. Sunflowers 78% planted, 83% 1990, 72% avg.

**Commercial Vegetables:** Rio Grande Valley, land preparation for fall planting continued full swing. Some early tomato, pepper planting started. San Antonio Winter Garden, onion harvest made good progress. Watermelon harvest continued, yields down slightly. High temperatures remained stress factor for most crops. East Texas, watermelon, cantaloupe harvest active. Insect, disease problems increasing. High Plains, irrigation on onion fields heavy. Potato plants continued to bloom with some early harvest occurring. Trans-Pecos, onion harvest continued full swing with good yields.

**Range and Livestock:** Range, pasture conditions continued good, excellent shape with all the recent rains. Livestock showing good weight gains. Haying operations continued in full swing, hot, humid conditions good for curing. Range, pasture 8% poor, 27% fair, 47% good 18% excellent

**UTAH:** Maximum temperatures 3° less than normal throughout the State, minimums 2° less than normal. Light precipitation.

Days suitable for fieldwork 6.9. Soil moisture 68% short, 32% adequate. Winter wheat heading nearing completion; 18% turning color, 52% 1990, 69% avg. Spring wheat 82% booted; 66% headed, 73% 1990, 78% avg.; 6% turning color, 28% 1990, 32% avg. Barley 94% booted; 73% headed, 80% 1990, 84% avg.; 12% turning color, 40% 1990, 44% avg. Oats 86% jointed; 65% booted, 70% 1990, 70% avg.; 38% headed, 62% 1990, 62% avg. Corn avg. height 12.9 in., 20 in. 1990, 25.4 in. avg. Alfalfa first cutting 87% complete, 93% 1990, 94% avg. Alfalfa second cutting just getting underway. Other hay 31% cut. Cattle movement to summer range nearing completion. Sheep movement to summer range nearing completion. Pasture, range mostly fair to good.

**VIRGINIA:** Temperatures below normal beginning of week to a below normal weekend. Extremes 48°; 96°. Precipitation was above normal at beginning of week, below normal for the rest of the week. Days suitable for fieldwork 4.7. Topsoil 2% very short, 27% short, 61% adequate, 10% surplus. Corn 16% poor, 41% fair, 37% good, 6% excellent; silked 10%, 8% 1990, 5% avg. Soybeans 83% planted, 86% 1990, 77% avg. Wheat

77% harvested, 67% 1990, 49% average. Barley 99% harvested, 95% 1990, 83% avg. Oats 75% harvested, 53% 1990, 42% avg. Soybean 19% poor, 61% fair, 20% good. Tobacco 1% poor, 25% fair, 74% good. Cultivating, laying by tobacco. Apples mostly good. Peanut 33% fair, 50% good, 17% excellent. Other hay 4% very poor, 12% poor, 32% fair, 44% good, 8% excellent. Alfalfa hay 8% poor, 27% fair, 51% good, 14% excellent. Livestock mostly fair to good. Pasture 6% very poor, 15% poor, 35% fair, 38% good, 6% excellent. Potato harvest 25% complete. Harvesting hay, cabbage, cucumbers.

**WASHINGTON:** Temperatures normal to 6° below normal east; 3° above normal to 3° below normal west. Precipitation 0.02 to 0.95 in. east; none to 0.23 in. west.

Days suitable for fieldwork 4.8. Soil moisture 23% short, 77% adequate. Hay, other roughage 4% short, 96% adequate. Range, pasture 31% poor, 48% fair, 13% good, 8% excellent. Wheat 76% fair, 24% good. Barley 74% fair, 26% good. Potatoes 100% good. Dry beans 100% good. Corn 9% fair, 91% good. Spring wheat 99% headed. Barley 90% headed. Alfalfa hay, 1st cutting 90%. Alfalfa hay 2nd cutting 9%. Grains doing well. Recent rains helped fill kernels in head. Wheat in southern counties turning color. Russian wheat aphids were present in Garfield county. Strip rust, footrot detected in Whitman county. Most field crops two weeks behind normal. Cherry harvest continued at a rapid pace in Yakima area. Yakima cherries hurt by cracking with recent rains. Benton, Chelan cherries by lesser amounts. Strawberry harvest at peak. Recent rains helped range, pastures. Livestock doing well.

**WEST VIRGINIA:** Temperature 72°. Extremes 49°; 99°. Precipitation 0.01 in.

Days suitable for fieldwork 6.1. Soil moisture 35% very short, 48% short, 17% adequate. Wheat good; 90% ripe, 45% harvested. Corn fair; 100% emerged. Oats good. Gardens, 5% very poor, 5% poor, 55% fair, 35% good; 84% emerged. Tobacco, poor; 100% set. Hay, 8% very poor, 17% poor, 75% fair; 86% first cutting. Apples, peaches good. Pastures, 33% very poor, 25% poor, 33% fair, 9% good; 52% of normal. Cattle, good. Sheep, good.

**WISCONSIN:** Temperature 75°, 6° above normal. Extremes 41°; 100°. Precipitation none to 1.80 in.

Days suitable for fieldwork 6.4. Soil moisture 26% short, 64% adequate, 10% surplus. Pasture condition 82% of normal, 90% 1990, 70% avg. General condition of crops 1% poor, 5% fair, 75% good, 19% excellent. Winter wheat 2% very poor, 3% poor, 19% fair, 58% good, 18% excellent. Corn 2% poor, 7% fair, 55% good, 36% excellent. Corn height 40 in., 15 in. 1990, 25 in. avg. Soybean 1% very poor, 1% poor, 4% fair, 78% good, 16% excellent. First crop hay 90% harvested, 69% 1990, 83% avg. Oats 68% headed, 59% 1990, 75% avg.

**WYOMING:** Temperatures above normal. Precipitation below normal.

Days suitable for fieldwork 6.0. Topsoil 19% short, 81% adequate. Winter wheat 5% jointed, 0% 1990; 15% booted, 15% 1990; 75% headed, 65% 1990; 5% turning color, 20% 1990; 0% mature, 0% 1990. Barley 15% not yet jointed, 10% 1990, 10% avg.; 10% jointed, 5% 1990, 15% avg.; 25% booted, 15% 1990, 20% avg.; 50% headed, 65% 1990, 55% avg.; 0% turning color, 5% 1990, 0% avg.; 0% mature, 0% 1990, 0% avg. Spring wheat 15% not yet jointed, 5% 1990, 5% avg.; 15% jointed, 20% 1990, 25% avg.;

(Continued to back cover)

## International Weather and Crop Summary

### HIGHLIGHTS

June 23 - 29, 1991

**USSR** ... In Western USSR, hot, dry weather intensifies over the Volga Valley and spreads into the Volga Vyatsk and Black Soils Regions. In the New Lands, hot, dry weather returns to the Urals and Kazakhstan, causing further declines in crop conditions.

**EUROPE** ... Rain continues in the north. Warm and dry weather prevails in the south, where the winter grain harvest is underway.

**EASTERN ASIA** ... Rains delay winter wheat harvesting in the North China Plain. Dry weather aids harvesting of early season rice along the Yangtze Valley and heavy rains continue along the southern coast and Taiwan.

**SOUTHEAST ASIA** ... Unfavorably dry weather dominates Thailand's primary rice and corn areas.

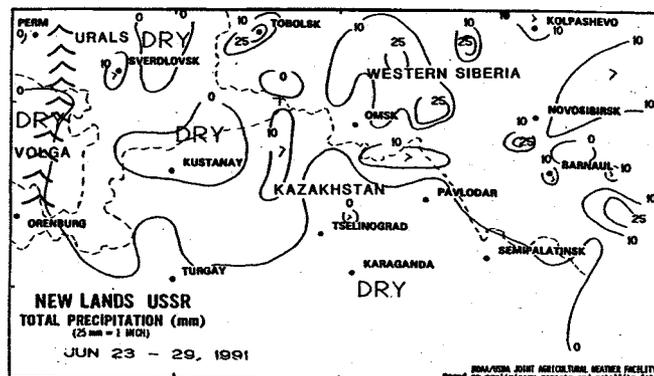
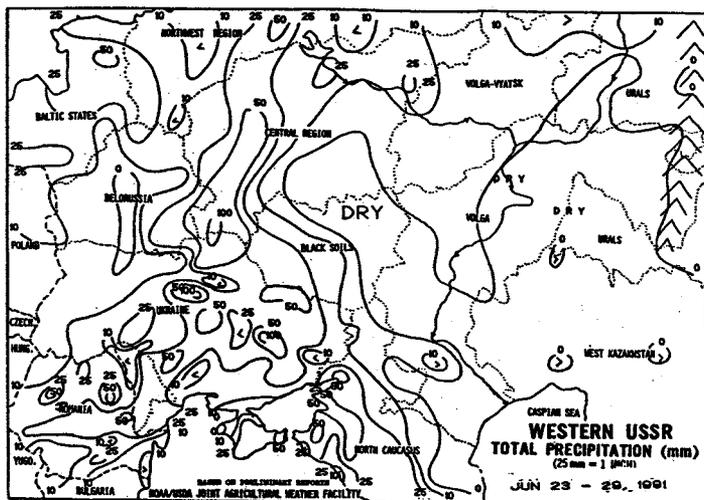
**SOUTH ASIA** ... Rain benefits newly planted crops in the south and east.

**SOUTH AMERICA** ... Favorable soybean harvest weather prevails in Argentina, with some fieldwork delays in southern Brazil.

**AUSTRALIA** ... Favorable moisture for winter grain continues throughout most areas, except for southern Queensland, where dryness persists.

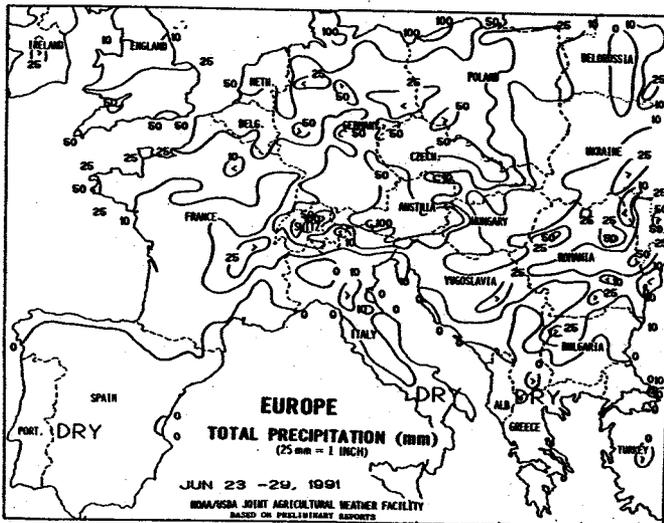
**CANADA** ... Widespread showers maintain adequate moisture levels for vegetative grains and oilseeds, but produce unfavorably wet growing conditions in the west and southeast.

**MEXICO** ... Tropical activity brings beneficial rains to the southern corn areas and the northeastern grain regions.

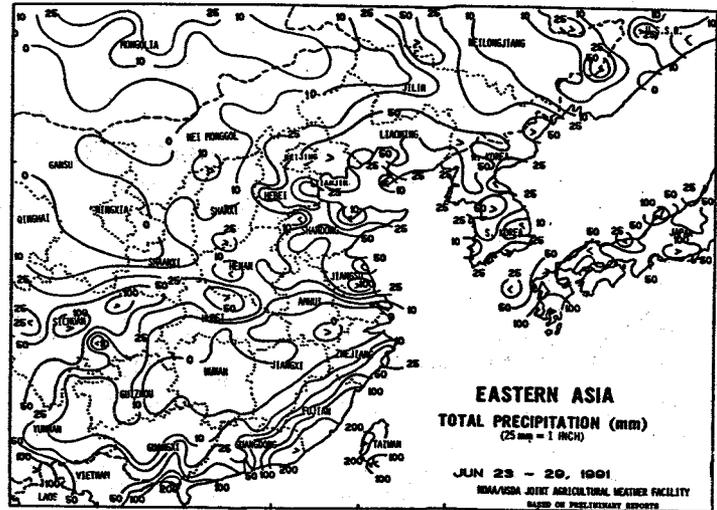


**USSR** ... In Western USSR, moderate to heavy rain (30-50mm, with local amounts in excess of 100mm) covered most of the Baltic States, the western portion of the Central Region, the central Ukraine, and the western North Caucasus. While the precipitation in these areas was overall beneficial for crop growth, some crop lodging was possible in areas which experienced locally heavy amounts of rain. Further east, hot, dry weather continued over the Urals and the Volga, and crept westward into the Volga Vyatsk and Black Soils Regions. By week's end, maximum temperatures ranged from 34 to 38 degrees Celsius (C) at most locations in these areas, stressing winter grains in the filling stage and spring grains in or nearing reproduction. Weekly average temperatures over the region were 1-2 degrees C above normal in the west and south and 4-6 degrees C above normal in the east.

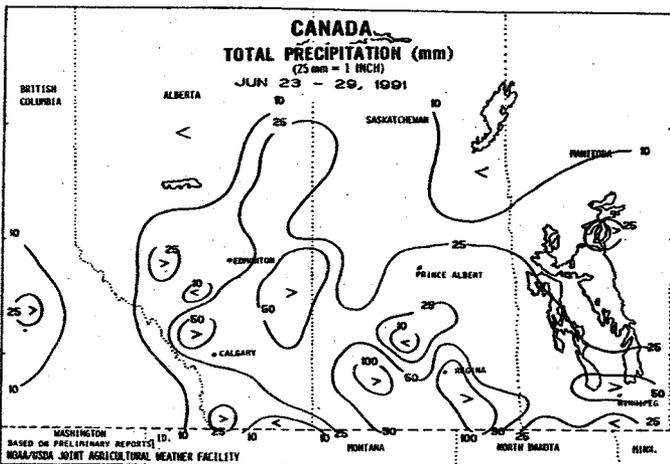
In the New Lands, hot, dry weather returned to spring grain areas in the Urals and Kazakhstan. Highest weekly temperatures in these areas ranged from 34 to 38 degrees C, placing moderate to extreme stress on spring grains in or nearing reproduction. The persistent hot, dry weather pattern has likely caused spotty seed emergence, and reduced plant tillering and plant height. Rain is needed soon to prevent further declines in yield potential. Further east, light showers and cool weather covered spring grain areas from Omsk through Barnaul.



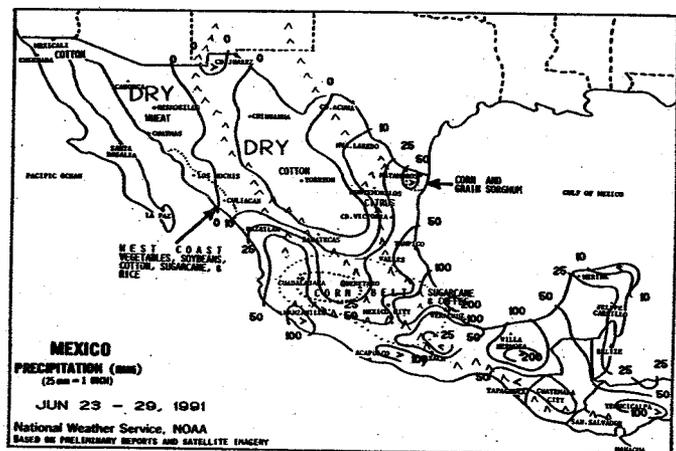
**EUROPE** ... Substantial rain (generally 25-50mm, with scattered heavier amounts in excess of 100mm) favored crop development across northern and central portions of the continent. Frequent showers have provided adequate to abundant soil moisture from the United Kingdom across the Benelux countries and Germany to much of eastern Europe. However, cloudy, damp conditions contributed to persistent cool weather, which has slowed crop growth rates over northern and central Europe. In contrast, little or no rain fell across southern Europe, from western and southern France across Italy to Greece. The dryness benefited harvesting of winter grain crops in the south, but warm, dry weather hampered immature crop development, especially in the Iberian peninsula. Weekly temperatures averaged several degrees above normal in Spain, continuing the unfavorable hot and dry pattern.



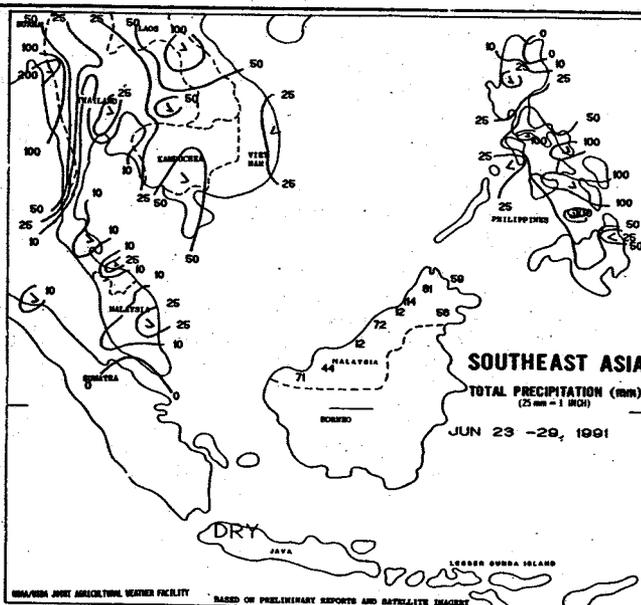
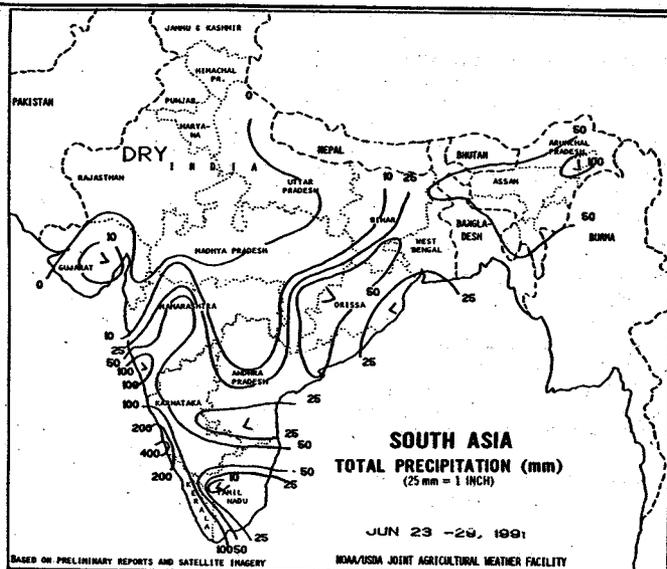
**EASTERN ASIA** ... Portions of Manchuria received moderate rains (17-67mm), aiding germination of spring wheat. Most of Hebei, southern Shandong, northern Anhui, and northern Jiangsu received moderate to heavy rains (33-116mm), causing some local flooding and delaying winter wheat harvesting. Heavy rains (69-181mm) fell across eastern Sichuan, delaying harvesting and possibly damaging winter wheat, but favoring vegetative single-crop rice. Dry weather prevailed south of the Yangtze Valley, generally favorable for harvesting early double-crop rice, but portions of Jiangxi have been too dry. Further south along the coast, monsoonal moisture continued to produce heavy rains (88-387mm) in Guangxi, Guangdong, Fujian, and Taiwan, causing flooding.



**CANADA** ... Moderate to heavy rain (25-50mm or more) covered Canada's Prairie Provinces, maintaining adequate to abundant moisture reserves for vegetative spring crops. The rainfall in eastern Saskatchewan and Manitoba was welcome following a drying trend that had lasted for much of the early part of June, although local severe thunderstorms and heavy showers (exceeding 100mm) in southeastern Saskatchewan possibly caused some damage to vegetative spring wheat. In the west, the continued wetter- and cooler-than-normal weather maintained unfavorably wet growing conditions, slowing crop growth and increasing the risk of disease and pest damage.

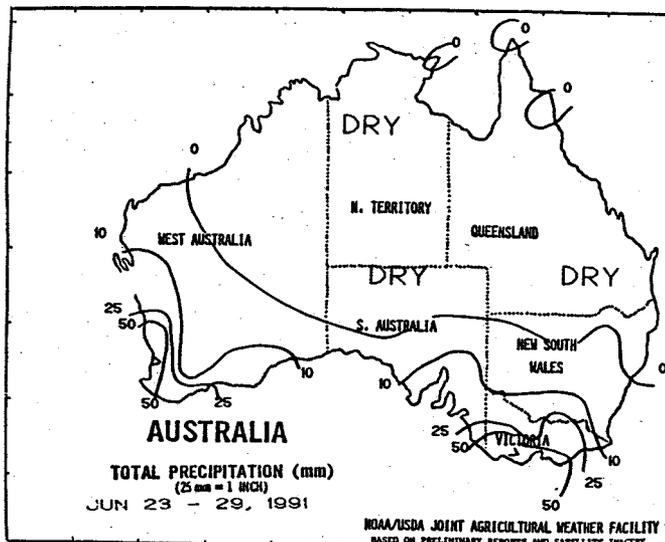
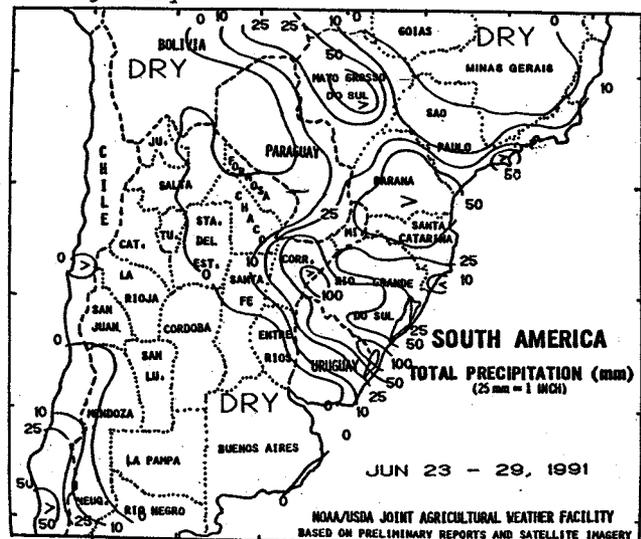


**MEXICO** ... Hurricane Delores brushed the southwest coast near Manzanillo, before heading out to sea, causing heavy rains (50-100mm) and local flooding. However, moisture from the storm swept inland, producing widespread showers (40-70mm) across the western corn areas. Two weak tropical disturbances came ashore along the eastern coast, one near Veracruz and the other between Tampico and Matamoros, bringing beneficial rains, some locally heavy, for corn and sorghum.



**SOUTH ASIA** ... Beneficial rain (15-93mm) fell over India's southern interior, improving conditions for newly planted summer crops. Seasonably heavy showers (100-200mm or more) continued along the southwest coast. However, pockets of light rain (10mm or less) persisted in northern Andhra Pradesh and eastern Maharashtra, necessitating more rain for normal crop establishment. Moderate to heavy showers (25-50mm or more) covered many rice areas from southeastern Madhya Pradesh and eastern Andhra Pradesh to Assam, increasing irrigation reserves for vegetative growth. Drier and hotter weather returned to northern India and Pakistan. The southwest monsoon, usually established in northwest India by early July, has been erratic in north-central India, likely resulting in some early planting delays.

**SOUTHEAST ASIA** ... Drier-than-normal weather dominated primary rice and corn areas from Thailand's northern regions southward to Bangkok, with only local reports exceeding 25mm. Seasonably warm weather accompanied the dryness, further stressing vegetative to reproductive crops. In contrast, moderate to heavy showers (25-101mm) over Thailand's eastern rainfed rice areas brought some relief from the dryness. In the Philippines, moderate to heavy showers (25-50mm or more) fell from southern Luzon southward. The rain was especially beneficial in central and southern grain areas, bringing some relief to main season grains stressed by this season's chronic dryness. Further north, drier weather covered northern and central Luzon's corn and rice areas following last week's beneficial rain.



**SOUTH AMERICA** ... In Argentina, little or no rain fell across most of the country with favorable drying conditions for soybean harvesting in Santa Fe and northern Buenos Aires. At least three-quarters of the soybean crop has been harvested. The dry weather also aided winter wheat planting. Early- and late-week moderate to heavy rains (33-89mm) fell across southern Brazil, causing some planting delays, but most areas had 3-4 days of dry weather for fieldwork. Coastal areas of Sao Paulo and Rio de Janeiro received light to moderate rains (19-68mm), delaying citrus and coffee harvesting, while dry conditions prevailed inland.

**AUSTRALIA** ... The winter grain regions of South Australia, Victoria, and central and southern New South Wales received 3-23mm of rain, favoring germination and pre-planting moisture. Western Australia received 6-25mm of rain, keeping moisture conditions favorable. However, the wheat areas of southern Queensland need moisture for planting and germination as dry conditions continue.

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(Continued from p. 8)

Georgia peach harvest was 75% complete. Cherry picking began in Idaho. Cranberry plants were in peak bloom in New England, and blueberry and raspberry picking was beginning. Blueberry harvest was near its peak in New Jersey. Sweet cherry harvest continued in New York's Lake Ontario region with smaller fruit size due to dry weather. South Carolina peaches were in fair to good condition with harvest 31% complete. Cherry harvest continued at a rapid pace in Washington's Yakima area, with some cracking due to recent rains.

**VEGETABLES:** Arizona harvests included onions, lettuce, cabbage, sweet corn, honeydews, watermelons, and cantaloupes. Broccoli, cauliflower celery, and Iceberg lettuce supplies were heavy in California and onion harvest continued. Fresh market tomato harvest increased in the San Joaquin Valley. Maryland producers were picking cucumbers, lima beans, snap beans, and green peas. Summer vegetable harvests were also active in New Jersey. Onion harvest progressed with good yields in New Mexico. Onion harvest also progressed well in Texas.

**PASTURES AND LIVESTOCK:** Lack of rainfall caused deterioration of Ohio Valley and northeastern pastures, and stock water supplies began to tighten in the Great Plains. Pastures remained in good condition in the Southeast. Livestock movement to summer ranges was nearing completion in the Rocky Mountains.

(Continued from p. 16)

35% booted, 30% 1990, 35% avg.; 35% headed, 45% 1990, 35% avg.; 0% turning color, 0% 1990, 0% avg.; 0% mature, 0% 1990, 0% avg. Oats 15% not yet jointed, 15% 1990, 15% avg.; 25% jointed, 20% 1990, 30% avg.; 40% booted, 30% 1990, 35% avg.; 20% headed, 35% 1990, 20% avg.; 0% turning color, 0% 1990, 0% avg.; 0% mature, 0% 1990, 0% avg. Sugarbeets 90% thinned, 90% 1990, 90% avg. Alfalfa first cutting 40% complete, 45% 1990, 50% avg. Other hay 10% harvested, 15% 1990, 15% avg. Hail damage to crops 45% none, 35% light, 15% moderate, 5% severe. Livestock mostly good to excellent. Ranges, pasture good to excellent. Stockwater 4% short, 96% adequate.

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