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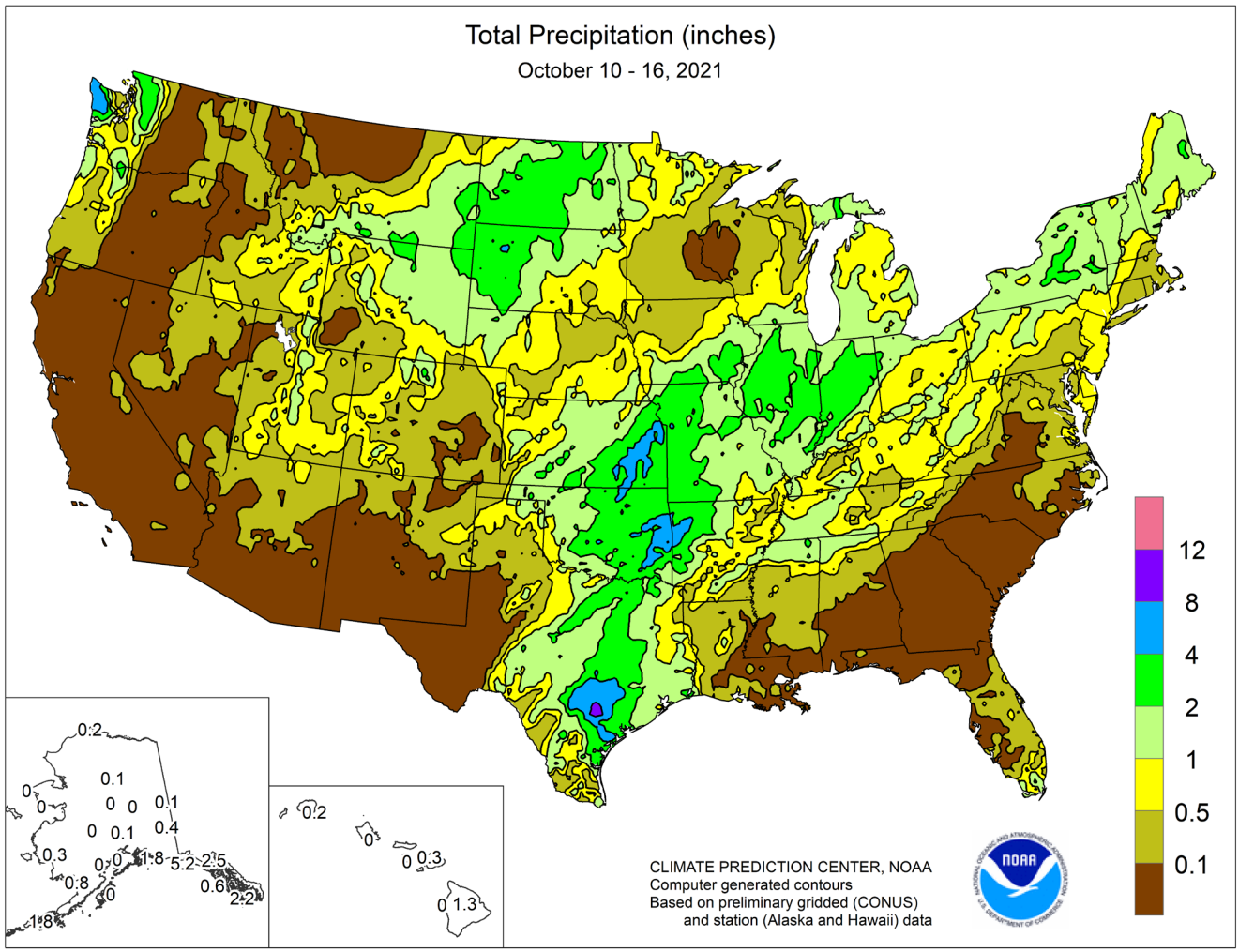
WEEKLY WEATHER AND CROP BULLETIN

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



HIGHLIGHTS
October 10 – 16, 2021

Highlights provided by USDA/WAOB

A winter-like storm system crossing the **West** and the **northern Plains** delivered substantial, drought-easing precipitation to some areas, including the **Dakotas**, **southern and eastern Montana**, and the **Intermountain region**. Early-season snow (locally 1 to 2 feet or more) blanketed portions of the **Intermountain West**, extending as far east as the **Black Hills**. Meanwhile, the storm's trailing cold front—interacting with remnant tropical moisture associated with former **eastern Pacific** Hurricane Pamela—contributed to heavy showers and locally severe

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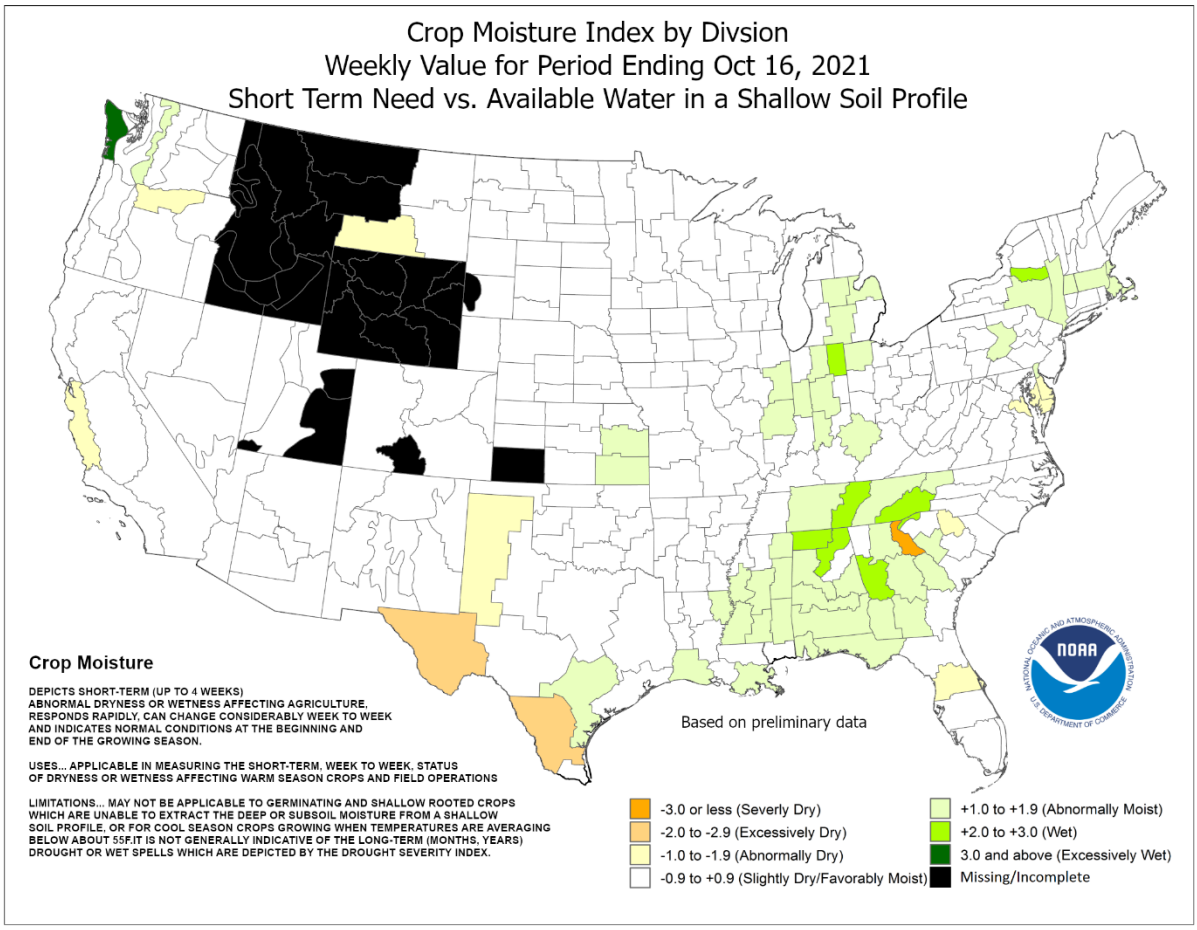
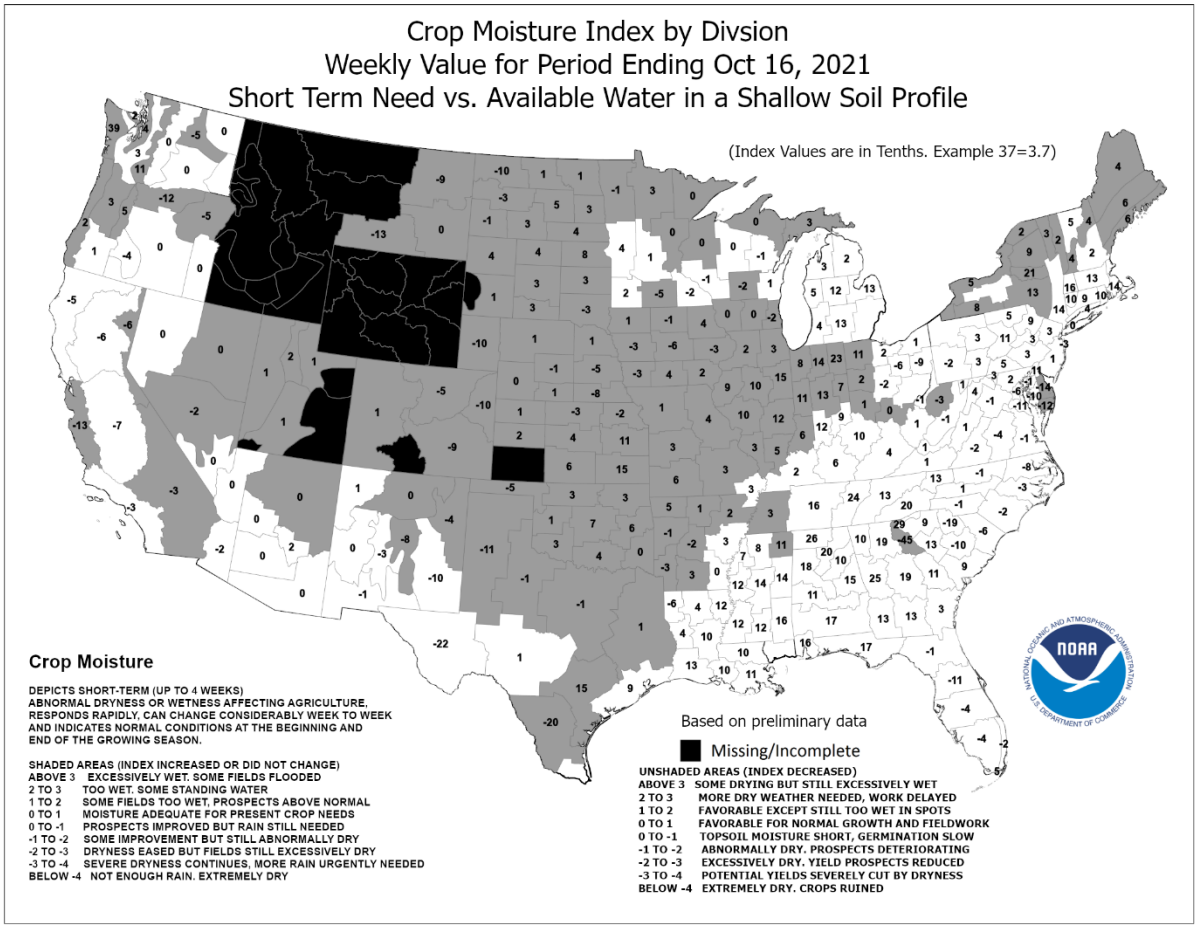
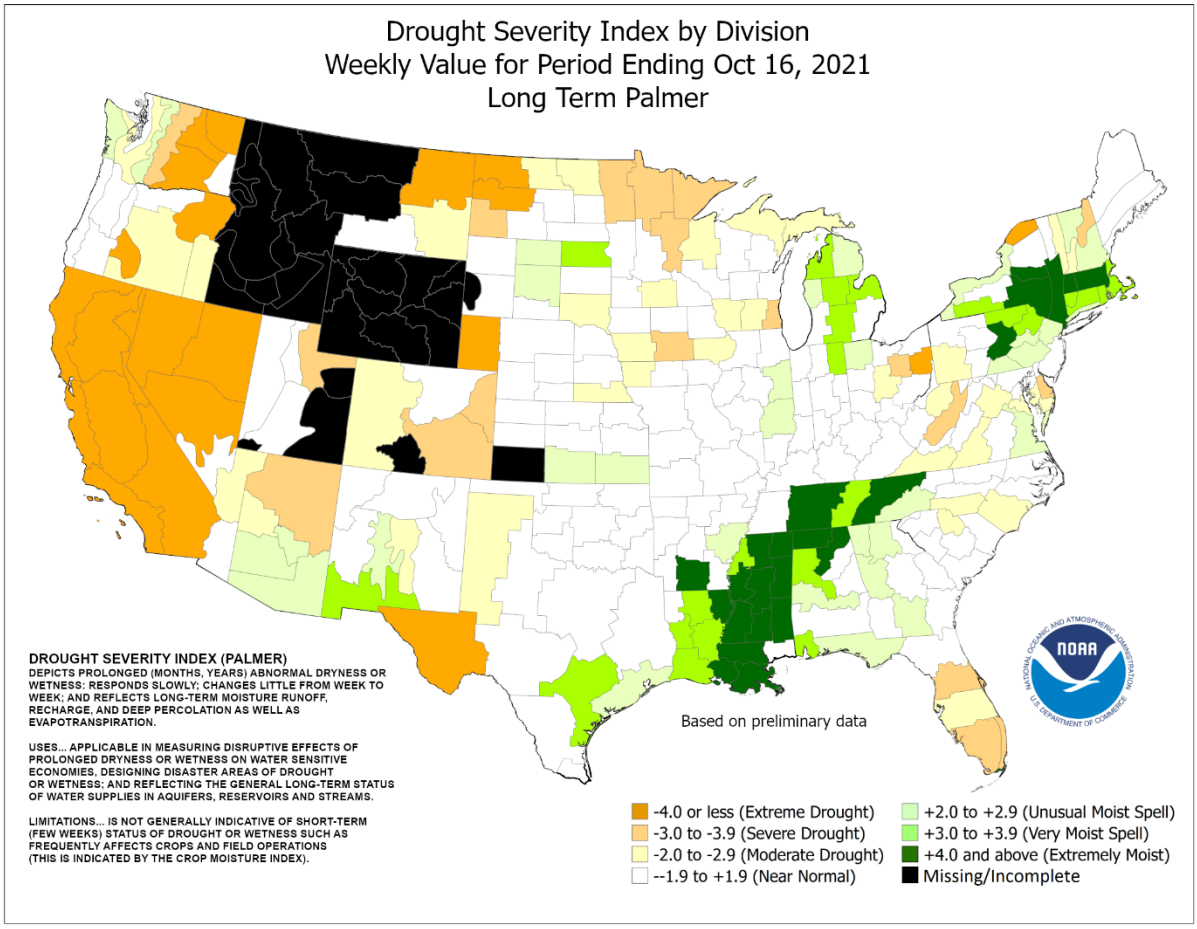
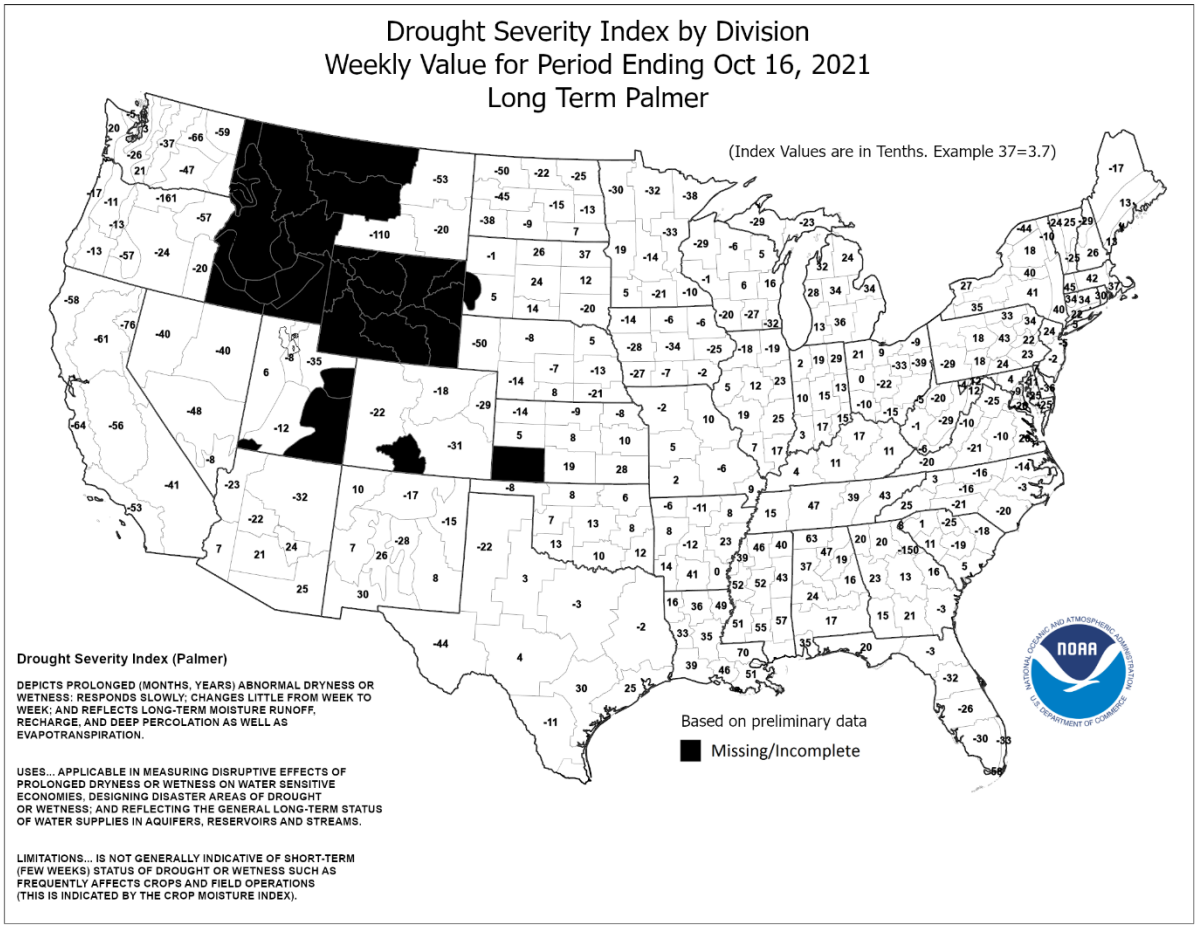

Crop Moisture Index by Divsion
Weekly Value for Period Ending Oct 16, 2021
Short Term Need vs. Available Water in a Shallow Soil Profile
Crop Moisture
DEPICTS SHORT-TERM (UP TO 4 WEEKS)
ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE.
RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK
AND INDICATES 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 SHALLOW
SOIL PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING
BELOW ABOUT 55F.IT IS NOT GENERALLY INDICATIVE OF THE LONG-TERM (MONTHS, YEARS)
DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.
Based on preliminary data
-3.0 or less (Severly Dry)
-2.0 to -2.9 (Excessively Dry)
-1.0 to -1.9 (Abnormally Dry)
-0.9 to +0.9 (Slightly Dry/Favorably Moist)
+1.0 to +1.9 (Abnormally Moist)
+2.0 to +3.0 (Wet)
3.0 and above (Excessively Wet)
Missing/Incomplete


Crop Moisture Index by Divsion
Weekly Value for Period Ending Oct 16, 2021
Short Term Need vs. Available Water in a Shallow Soil Profile
(Index Values are in Tenths. Example 37=3.7)
Crop Moisture
DEPICTS SHORT-TERM (UP TO 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.
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 SOME FIELDS TOO WET, PROSPECTS ABOVE NORMAL
0 TO 1 MOISTURE ADEQUATE FOR PRESENT CROP NEEDS
0 TO -1 PROSPECTS IMPROVED BUT RAIN STILL NEEDED
-1 TO -2 SOME IMPROVEMENT BUT STILL ABNORMALLY DRY
-2 TO -3 DRYNESS EASED BUT FIELDS STILL EXCESSIVELY DRY
-3 TO -4 SEVERE DRYNESS CONTINUES, MORE RAIN URGENTLY NEEDED
BELOW -4 NOT ENOUGH RAIN. EXTREMELY DRY
Based on preliminary data
Missing/Incomplete
UNSHADED AREAS (INDEX DECREASED)
ABOVE 3 SOME DRYING BUT STILL EXCESSIVELY WET
2 TO 3 MORE DRY WEATHER NEEDED, WORK DELAYED
1 TO 2 FAVORABLE EXCEPT STILL TOO WET IN SPOTS
0 TO 1 FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
0 TO -1 TOPSOIL MOISTURE SHORT, GERMINATION SLOW
-1 TO -2 ABNORMALLY DRY. PROSPECTS DETERIORATING
-2 TO -3 EXCESSIVELY DRY. YIELD PROSPECTS REDUCED
-3 TO -4 POTENTIAL YIELDS SEVERELY CUT BY DRYNESS
BELOW -4 EXTREMELY DRY. CROPS RUINED


Drought Severity Index by Division
Weekly Value for Period Ending Oct 16, 2021
Long Term Palmer
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, DESIGNING 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).
Based on preliminary data
-4.0 or less (Extreme Drought)
-3.0 to -3.9 (Severe Drought)
-2.0 to -2.9 (Moderate Drought)
--1.9 to +1.9 (Near Normal)
+2.0 to +2.9 (Unusual Moist Spell)
+3.0 to +3.9 (Very Moist Spell)
+4.0 and above (Extremely Moist)
Missing/Incomplete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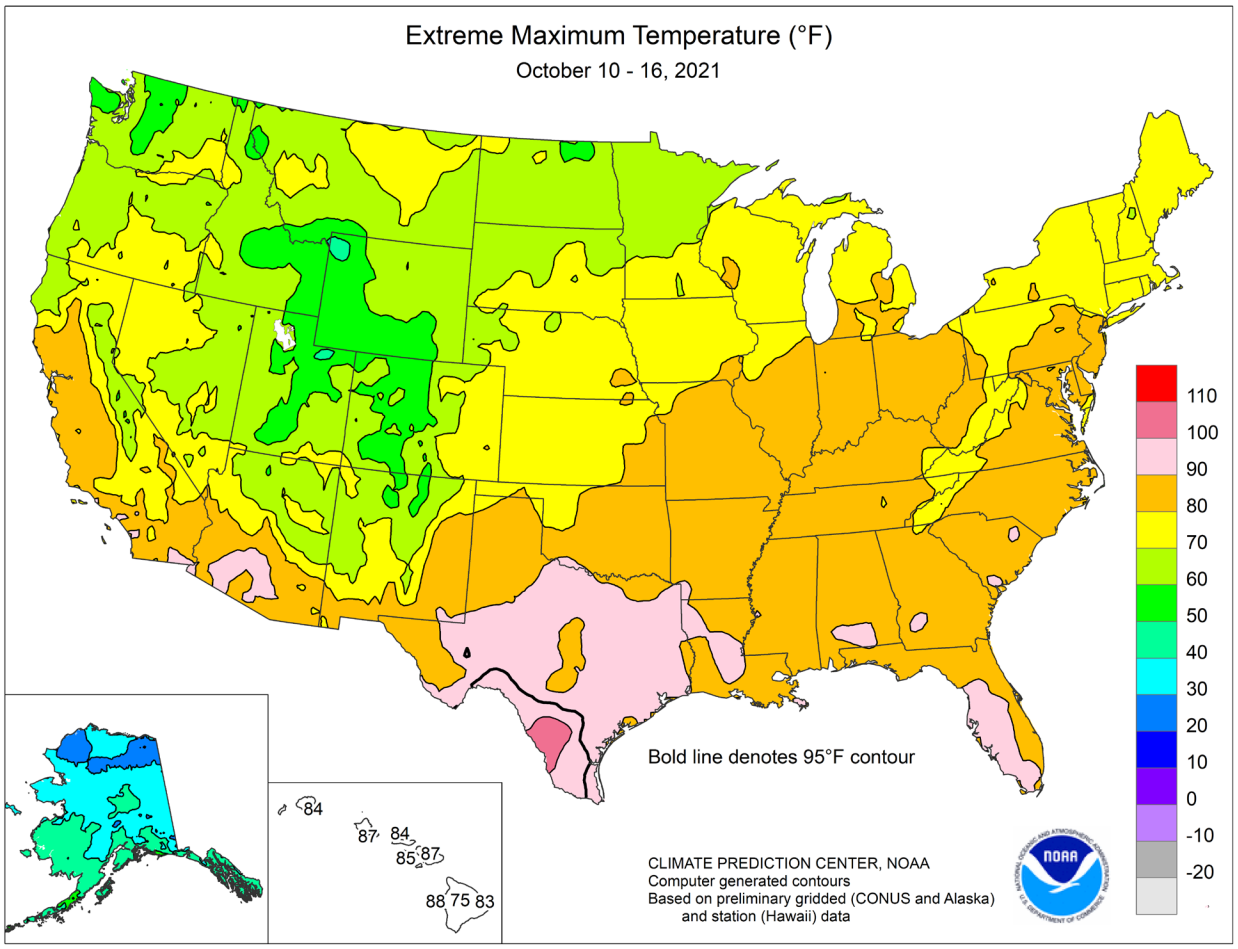
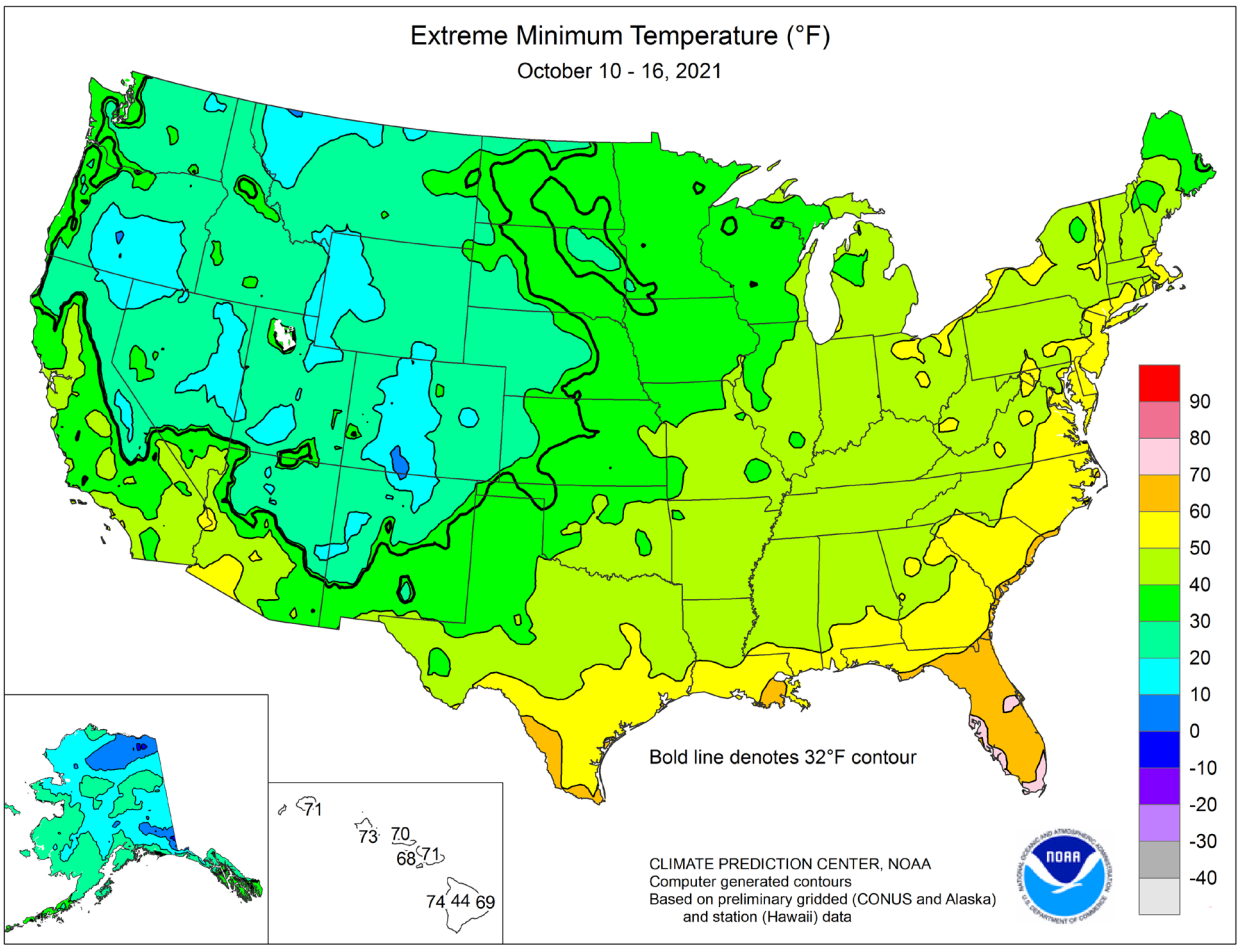
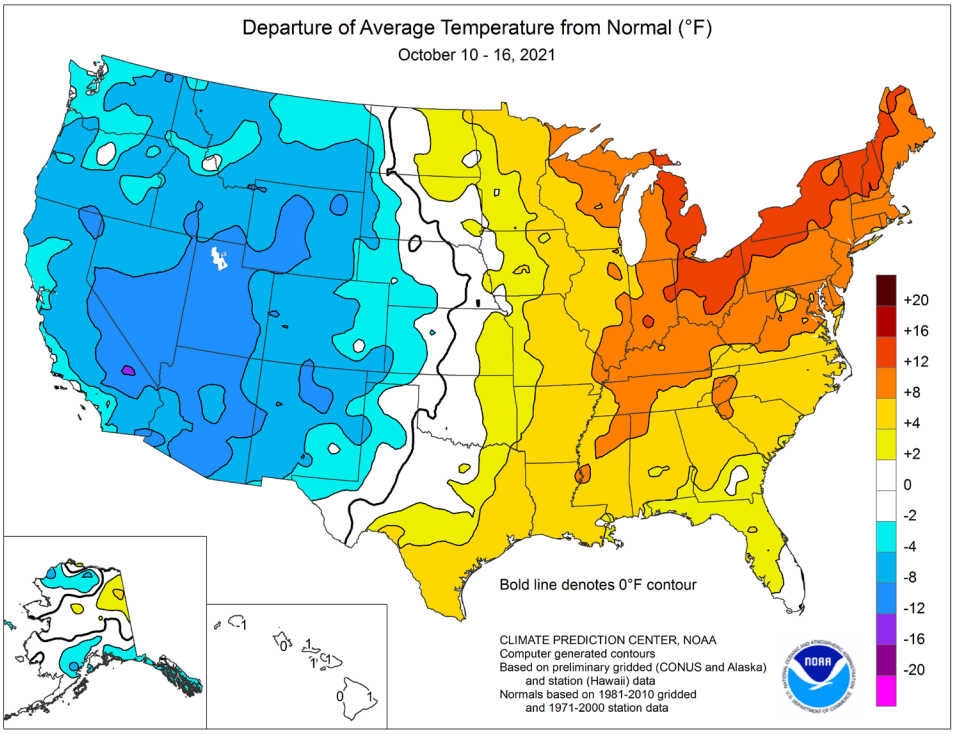

Extreme Maximum Temperature (°F)
October 10 - 16, 2021
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
84
87 84
85 87
88 75 83
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data


Extreme Minimum Temperature (°F)
October 10 - 16, 2021
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
71
73 70
68 71
74 44 69
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data

(Continued from front cover)



thunderstorms. Some of the heaviest rain, locally 2 to 4 inches or more, extended northward from the **western Gulf Coast region across the east-central Plains and southern Corn Belt**. In contrast, little or no precipitation fell in the **Southeast** and much of the **Far West**. **Southeastern** dryness was particularly beneficial for summer crop maturation and harvesting, following a protracted period of wetness ending in early October. In **California**, however, dry, windy weather fanned a few new wildfires, including the 17,000-acre Alisal Fire, ignited on October 11 between **Lompoc** and **Santa Barbara**. Chilly conditions gripped most areas from the **Pacific Coast to the High Plains**. Some of the coldest air, relative to normal, pushed across the **Great Basin** and **Southwest**, holding weekly temperatures as much as 10°F below normal. In stark contrast, significantly above-normal temperatures covered the **eastern half of the U.S.** Temperatures averaged at least 10 to 15°F above normal in many locations from the **Great Lakes region into the Northeast**. Despite a late-week **Midwestern** turn toward cooler weather, the 2021 growing season largely continued—more than 2 weeks after the normal first autumn freeze date in some places across the **northwestern Corn Belt**.

On October 10, **La Crosse, WI**, noted a high temperature of 81°F and a low of 63°F. This marked **La Crosse's** 109th day this year with a maximum reading of 80°F or greater, and the 101st day with a minimum of 60°F or higher. Previous records in **La Crosse** had been 108 days (in 1998) and 100 days (in 2018), respectively. Farther south, **Galveston, TX**, reported several daily-record highs, including a reading of 90°F on October 10. During the mid- to late-week period, warmth surged into the **East** in advance of a cold front. **Tampa, FL**, registered consecutive daily-record highs of 92°F on October 13-14. In **Maine**, record-setting highs for October 13 rose to 77°F in **Caribou** and 76°F in **Houlton**. October 14 featured daily-record highs in **Eastern** locations such as **Fort Myers, FL** (92°F); **Florence, SC** (88°F); and **Columbus, OH** (86°F). **Florence** posted another daily-record high on October 16, with a reading of 91°F. **Allentown, PA**, closed the week with consecutive daily-record highs (82 and 81°F, respectively) on October 15-16. Elsewhere in the **East**, daily-record highs for October 16 surged to 87°F in **Wilmington, NC**, and 72°F in **Saint Johnsbury, VT**. In contrast, chilly air settled across the **West**. By October 12, **Northwestern** daily-record lows dipped to 17°F in **Redmond, OR**, and 36°F in **Seattle, WA**. In **Montana**, record-setting lows for October 13 plunged to 9°F in **Cut Bank** and 13°F in **Kalispell**. On the same date in **southern California**, daily-record lows included 28°F in **Campo**, 33°F in **Ramona**, and 35°F in **Palmdale**. **Thermal, CA**, tallied consecutive daily-record lows (41 and 45°F, respectively) on October 13-14. By the morning of October 17, **Dalhart, TX**, logged a daily-record low of 28°F.

Early in the week, a non-tropical disturbance lurked near the **North Carolina coastline**, where **Cape Hatteras** received 5.69 inches of rain on October 9-10. However, the focus for stormy, windy weather soon turned to the **West**. By late October 11, several wind gusts above 60 mph were clocked in **southern California**, including 68 mph at the **Mount Laguna Observatory**. On October 12, gusts to 70 mph were recorded at **Fort Stanton, NM**, and **Sierra Vista, AZ**. By mid-week, high winds shifted to the **north-central U.S.**, where gusts in **South Dakota** reached 69 mph in **Philip** and 64 mph in **Rapid City**. Significant high-elevation snow accompanied the western storminess. **West Yellowstone, MT**, received 9.5 inches of snow in a 48-hour period on October 11-13. Calendar-day totals for October 12 in **Wyoming** included 8.2 inches in **Casper** and 7.3 inches in **Lander**. **Casper's** 3-day (October 11-13) snowfall was 12.7 inches. In **South Dakota's Black Hills**, storm-total snowfall exceeded 20 inches in **Deadwood** and several neighboring communities. Similar high-elevation snowfall totals were reported in parts of **Wyoming** and **southern Montana**. Meanwhile, rainfall totaled 2.15 inches in **Rapid City, SD**, on October 12-13, mainly due to a daily-record sum of 1.63 inches on the first day of the event. By October 13, daily-record amounts in **North Dakota** included 1.60 inches in **Minot**, 1.57 inches in **Dickinson**, and 1.47 inches in **Bismarck**. Farther south, the interaction between remnant tropical moisture and a cold front delivered daily-record amounts on the 13th to **Fort Smith, AR** (4.56 inches), and **San Antonio, TX** (2.64 inches). Over a 6-day period (October 10-15), **San Antonio** received 5.37 inches. Rain in the **western Gulf Coast region** lingered into October 14, when **Corpus Christi, TX**, collected a daily-record amount (2.28 inches). Late in the week, heavy showers swept into the **eastern one-third of the U.S.**; daily-record totals included 1.96 inches (on October 15) in **Fort Wayne, IN**; 1.80 inches (on October 15) in **Memphis, TN**; and 1.54 inches (on October 16) in **Saint Johnsbury, VT**. Late-week precipitation also arrived in the **Pacific Northwest**, where **Quillayute, WA**, measured a record-setting total (2.89 inches) for October 15.

Cool, damp weather in **southeastern Alaska** contrasted with drier conditions and near- or above-normal temperatures across much of the mainland. **Yakutat** received a weekly precipitation sum of 5.24 inches, aided by 1.94- and 1.21-inch totals, respectively, on October 11 and 12. In **Juneau**, month-to-date rainfall through October 16 totaled 8.06 inches (176 percent of normal). Farther south, significant **Hawaiian** shower activity was mostly limited to windward locations. On the **Big Island**, **Hilo's** October 1-16 rainfall reached 7.64 inches (155 percent of normal). A few **Big Island** locations, including **Hakalau** and **Saddle Quarry**, received more than 10 inches of rain in a 24-hour period on October 11-12. In contrast, October 1-16 rainfall in **Honolulu, Oahu**, totaled just 0.02 inch (3 percent of normal).

National Weather Data for Selected Cities

Weather Data for the Week Ending October 16, 2021

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. ˚F		NUMBER OF DAYS PRECIP	
		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 SEP 1	PCT. NORMAL SINCE SEP 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AK	ANCHORAGE	42	33	49	29	37	1	0.11	-0.38	0.10	2.78	65	12.20	89	88	65	0	4	2	0
	BARROW	28	24	31	22	26	7	0.24	0.13	0.06	2.15	217	5.62	132	85	72	0	7	7	0
	FAIRBANKS	36	28	46	24	32	5	0.04	-0.15	0.03	1.66	104	12.18	131	86	64	0	6	2	0
	JUNEAU	46	40	48	30	43	-1	3.14	1.11	0.94	17.60	131	63.02	135	91	74	0	1	7	3
	KODIAK	47	40	52	30	44	2	0.04	-1.84	0.04	3.33	28	47.72	81	78	49	0	1	1	0
	NOME	37	28	40	24	33	3	0.04	-0.34	0.02	2.89	85	18.20	130	87	63	0	7	3	0
AL	BIRMINGHAM	83	63	86	48	73	8	0.00	-0.76	0.00	9.18	161	61.73	144	93	52	0	0	0	0
	HUNTSVILLE	81	61	84	46	71	7	0.26	-0.52	0.25	8.56	156	55.73	133	96	56	0	0	2	0
	MOBILE	84	63	88	50	74	5	0.00	-0.76	0.00	8.60	122	71.92	132	100	49	0	0	0	0
	MONTGOMERY	85	61	90	50	73	6	0.00	-0.64	0.00	8.41	153	45.10	107	94	49	1	0	0	0
AR	FORT SMITH	76	57	89	47	67	3	6.97	6.01	4.53	9.43	151	41.17	115	95	57	0	0	6	3
	LITTLE ROCK	82	60	86	48	71	6	0.58	-0.52	0.31	3.77	68	34.63	93	94	49	0	0	3	0
AZ	FLAGSTAFF	53	26	61	21	39	-8	0.21	-0.17	0.13	2.47	75	20.10	115	86	33	0	7	2	0
	PHOENIX	82	57	92	52	70	-8	0.04	-0.08	0.04	1.07	113	5.29	83	45	13	1	0	1	0
	PRESCOTT	63	34	72	30	49	-9	0.22	0.01	0.20	2.85	139	11.37	96	78	23	0	4	2	0
	TUCSON	81	50	92	42	66	-6	0.00	-0.23	0.00	0.73	39	11.71	117	42	13	1	0	0	0
CA	BAKERSFIELD	75	50	87	45	62	-6	0.00	-0.06	0.00	0.00	0	1.97	41	48	19	0	0	0	0
	EUREKA	58	41	62	34	50	-5	0.01	-0.43	0.01	1.15	82	14.94	59	93	72	0	0	1	0
	FRESNO	75	51	84	47	63	-5	0.00	-0.11	0.00	0.39	90	5.50	65	65	18	0	0	0	0
	LOS ANGELES	76	56	88	53	66	0	0.00	-0.11	0.00	0.06	13	3.40	36	77	19	0	0	0	0
	REDDING	76	48	84	42	62	-3	0.00	-0.42	0.00	0.44	31	9.63	43	49	13	0	0	0	0
	SACRAMENTO	76	47	83	43	61	-4	0.00	-0.20	0.00	0.05	7	4.54	36	76	18	0	0	0	0
	SAN DIEGO	75	55	86	51	65	-2	0.00	-0.11	0.00	1.28	302	5.02	66	74	28	0	0	0	0
	SAN FRANCISCO	71	52	82	50	62	-1	0.00	-0.19	0.00	0.00	0	5.43	39	78	34	0	0	0	0
	STOCKTON	74	44	81	39	59	-6	0.00	-0.16	0.00	0.01	1	5.93	61	77	19	0	0	0	0
CO	ALAMOSA	57	18	65	10	38	-7	0.09	-0.07	0.05	0.61	47	5.46	85	90	22	0	7	2	0
	CO SPRINGS	61	34	67	28	48	-3	0.03	-0.18	0.03	0.98	59	14.17	91	69	22	0	3	1	0
	DENVER INTL	62	32	70	27	47	-5	0.05	-0.20	0.04	0.33	21	11.24	86	77	26	0	4	2	0
	GRAND JUNCTION	57	36	68	31	46	-8	0.48	0.23	0.23	2.59	146	6.75	86	90	39	0	1	3	0
	PUEBLO	68	35	75	24	51	-2	0.13	-0.04	0.11	1.08	91	16.03	138	70	20	0	2	2	0
CT	BRIDGEPORT	73	58	79	55	66	10	0.20	-0.64	0.16	9.05	168	37.29	109	92	64	0	0	2	0
	HARTFORD	73	52	79	49	62	10	0.33	-0.70	0.33	9.02	143	47.12	129	100	63	0	0	1	0
DC	WASHINGTON	76	63	81	54	69	9	0.40	-0.38	0.30	4.44	81	37.89	119	88	63	0	0	3	0
DE	WILMINGTON	75	59	81	52	67	10	0.20	-0.58	0.11	11.52	185	36.78	105	96	66	0	0	2	0
FL	DAYTONA BEACH	87	70	89	67	79	4	0.32	-0.69	0.15	4.74	49	35.59	83	94	59	0	0	3	0
	JACKSONVILLE	85	65	89	62	75	3	0.00	-0.98	0.00	7.12	65	44.33	96	100	61	0	0	0	0
	KEY WEST	86	76	89	74	82	1	1.28	0.05	0.98	3.97	41	23.81	71	90	65	0	0	4	1
	MIAMI	88	75	90	73	82	1	0.50	-1.05	0.16	13.36	96	47.83	88	92	59	1	0	5	0
	ORLANDO	90	72	91	70	81	5	0.31	-0.46	0.22	6.48	80	36.30	81	93	48	6	0	2	0
	PENSACOLA	84	68	87	58	76	6	0.00	-1.18	0.00	22.26	254	82.69	154	95	59	0	0	0	0
	TALLAHASSEE	87	63	90	59	75	5	0.00	-0.71	0.00	11.43	176	44.28	87	94	49	1	0	0	0
	TAMPA	91	75	93	73	83	6	0.01	-0.49	0.01	7.42	96	43.33	104	85	50	4	0	1	0
	WEST PALM BEACH	87	73	88	70	80	1	2.63	1.50	1.51	14.35	127	41.61	80	95	58	0	0	5	2
GA	ATHENS	84	61	88	51	72	8	0.00	-0.81	0.00	7.20	121	42.81	115	91	47	0	0	0	0
	ATLANTA	80	62	85	51	71	7	0.00	-0.74	0.00	6.54	102	45.52	113	91	50	0	0	0	0
	AUGUSTA	84	58	88	50	71	6	0.00	-0.77	0.00	7.34	144	47.86	133	96	47	0	0	0	0
	COLUMBUS	84	61	88	54	73	5	0.00	-0.56	0.00	13.82	314	50.74	136	92	45	0	0	0	0
	MACON	83	58	88	50	71	5	0.00	-0.62	0.00	10.26	201	44.29	119	97	51	0	0	0	0
	SAVANNAH	83	62	88	58	73	4	0.00	-0.92	0.00	10.63	154	43.28	105	99	57	0	0	0	0
HI	HILO	82	71	83	69	76	1	5.50	3.45	1.38	16.28	111	104.19	110	93	69	0	0	7	4
	HONOLULU	86	75	87	73	80	0	0.02	-0.36	0.01	0.15	9	9.75	93	74	49	0	0	2	0
	KAHULUI	85	73	87	71	80	1	0.32	0.07	0.25	0.63	67	15.18	129	85	55	0	0	4	0
	LIHUE	82	73	84	71	78	-1	0.23	-0.58	0.06	2.55	66	25.65	101	91	67	0	0	5	0
IA	BURLINGTON	71	52	82	41	61	5	1.67	0.98	1.35	4.56	88	34.14	105	90	51	0	0	3	1
	CEDAR RAPIDS	66	46	72	35	56	5	2.77	2.21	1.49	4.97	109	17.34	58	96	58	0	0	4	2
	DES MOINES	68	48	76	39	58	4	1.81	1.24	1.43	2.62	59	20.59	66	82	41	0	0	2	1
	DUBUQUE	64	49	72	34	57	6	1.55	0.98	0.65	3.24	67	24.40	79	94	62	0	0	4	1
	SIOUX CITY	68	39	75	33	53	1	0.41	-0.11	0.39	2.80	66	18.99	76	91	33	0	0	2	0
	WATERLOO	68	47	74	37	57	6	0.85	0.32	0.46	3.02	76	19.69	65	86	46	0	0	2	0
ID	BOISE	59	37	73	32	48	-6	0.04	-0.11	0.04	0.85	91	7.98	93	72	27	0	1	1	0
	LEWISTON	60	40	76	32	50	-3	0.02	-0.19	0.02	0.81	71	4.25	43	74	29	0	1	1	0
	POCATELLO	52	31	63	26	42	-6	0.54	0.33	0.44	1.67	124	8.06	85	84	41	0	6	3	0
IL	CHICAGO/O_HARE	69	55	79	44	62	9	1.30	0.62	0.74	3.37	70	22.37	75	89	56	0	0	6	1
	MOLINE	71	52	80	40	62	8	1.87	1.22	1.02	3.33	73	29.98	94	91	53	0	0	3	2
	PEORIA	72	55	83	42	64	9	2.42	1.81	0.94	5.09	112	35.78	121	89	53	0	0	4	3
	ROCKFORD	68	52	73	40	60	7	1.52	0.96	0.72	3.96	83	19.16	63	92	58	0	0	3	2
	SPRINGFIELD	73	54	87	40	64	8	2.01	1.32	1.31	6.33	142	39.26	130	92	53	0	0	4	2
IN	EVANSVILLE	79	58	86	43	69	10	0.99	0.30	0.82	5.74	123	36.78	103	95	52	0	0	2	1
	FORT WAYNE	74	56	84	46	65	12	2.74	2.09	1.84	8.01	186	35.11	112	97	62	0	0	6	2
	INDIANAPOLIS	75	57	82	41	66	10	1.80	1.11	1.00	9.36	197	40.09	117	94	60	0	0	4	2
	SOUTH BEND	72	56	83	46	64	11	1.26	0.50	0.84	4.34	82	32.59	107	90	58	0	0	4	1
KS	CONCORDIA	71	45	79	37	58	1	1.38	0.95	0.90	2.63	66	21.02	83	87	30	0	0	3	1
	DODGE CITY	68	43	76	34	56	-2	2.27	1.84	1.77	4.52	173	17.86	93	90	38	0	0	2	2
	GOODLAND	66	35	74	29	51	-2	0.24	-0.09	0.24	0.45	22	12.12	69	81	26	0	3	1	0
	TOPEKA	73	48	80	40	60	3	2.86	2.20	1.30	6.23	117	33.29	104	92	36	0	0	5	3

Based on 1981-2010 normals ***** Not Available**

Weather Data for the Week Ending October 16, 2021

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. ˚F		NUMBER OF DAYS PRECIP	
		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 SEP 1	PCT. NORMAL SINCE SEP 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	73	50	77	36	61	2	2.87	2.23	1.13	6.05	129	27.69	96	92	38	0	0	4	3
KY	LEXINGTON	76	58	80	43	67	9	1.22	0.54	1.02	7.91	178	48.19	133	96	61	0	0	3	1
	LOUISVILLE	78	61	86	47	70	9	0.60	-0.13	0.56	7.13	151	40.53	112	92	56	0	0	3	1
	PADUCAH	81	59	88	43	70	10	0.96	0.10	0.80	5.50	94	40.59	105	86	46	0	0	3	1
LA	BATON ROUGE	87	65	91	50	76	2	0.00	-0.97	0.00	8.54	108	71.54	144	98	53	2	0	0	0
	LAKE CHARLES	86	69	89	52	77	6	0.16	-0.89	0.12	9.33	123	65.17	142	97	53	0	0	2	0
	NEW ORLEANS	85	71	88	65	78	6	0.00	-0.74	0.00	10.82	160	78.04	152	93	55	0	0	0	0
	SHREVEPORT	87	64	92	50	75	8	0.11	-0.98	0.08	2.91	52	39.96	101	85	45	3	0	3	0
MA	BOSTON	73	60	78	57	66	11	0.19	-0.70	0.19	8.89	163	42.65	125	91	64	0	0	1	0
	WORCESTER	70	55	75	52	63	12	0.30	-0.79	0.29	10.31	159	47.58	125	96	66	0	0	2	0
MD	BALTIMORE	77	60	85	50	68	12	0.23	-0.50	0.21	6.26	108	33.17	99	93	62	0	0	3	0
ME	CARIBOU	67	48	77	37	58	13	0.42	-0.38	0.40	6.32	123	27.62	92	93	64	0	0	2	0
	PORTLAND	69	52	76	44	60	11	1.22	0.13	1.22	5.43	88	30.87	86	100	71	0	0	1	1
MI	ALPENA	71	52	80	41	62	14	1.12	0.52	0.65	4.41	101	22.47	97	96	64	0	0	4	1
	GRAND RAPIDS	69	56	80	45	63	11	1.44	0.74	0.77	6.72	112	29.69	97	98	69	0	0	6	1
	HOUGHTON LAKE	67	54	76	40	60	14	0.64	0.07	0.34	4.46	100	23.41	100	93	65	0	0	5	0
	LANSING	71	57	81	46	64	13	0.76	0.20	0.30	5.97	123	28.19	109	90	61	0	0	5	0
	MUSKEGON	70	58	79	47	64	12	0.72	0.05	0.24	3.55	64	24.94	96	89	62	0	0	6	0
	TRAVERSE CITY	69	55	80	40	62	13	0.40	-0.34	0.21	4.00	77	24.35	92	91	62	0	0	4	0
MN	DULUTH	59	47	69	36	53	8	0.46	-0.20	0.32	5.02	87	20.26	76	94	64	0	0	4	0
	INT_L FALLS	58	44	67	34	51	8	1.53	1.05	1.19	5.11	122	15.34	72	96	69	0	0	5	1
	MINNEAPOLIS	64	48	71	38	56	6	0.02	-0.55	0.01	1.78	39	21.35	80	87	47	0	0	2	0
	ROCHESTER	64	45	75	35	54	0	0.14	-0.35	0.14	2.45	52	23.17	80	90	47	0	0	1	0
	ST. CLOUD	60	43	68	35	51	4	0.25	-0.36	0.17	4.76	96	20.91	85	92	57	0	0	2	0
MO	COLUMBIA	73	54	83	43	63	6	2.20	1.48	0.96	7.67	135	45.44	128	91	55	0	0	4	2
	KANSAS CITY	71	49	82	40	60	3	2.81	2.10	1.54	5.02	78	36.49	108	93	61	0	0	5	2
	SAINT LOUIS	77	58	88	46	67	7	1.37	0.61	0.81	4.88	101	36.61	112	84	50	0	0	4	1
	SPRINGFIELD	72	53	84	41	62	4	1.06	0.31	0.65	4.41	68	40.08	109	95	55	0	0	4	1
MS	JACKSON	86	64	90	47	75	9	0.08	-0.80	0.08	2.37	47	43.14	101	92	49	1	0	1	0
	MERIDIAN	84	62	88	47	73	8	0.07	-0.75	0.07	8.11	154	62.20	140	93	51	0	0	1	0
	TUPELO	85	65	88	49	75	11	0.37	-0.57	0.35	4.17	74	62.02	147	90	48	0	0	2	0
MT	BILLINGS	53	35	68	31	44	-6	0.77	0.48	0.39	1.04	52	8.31	68	80	40	0	4	3	0
	BUTTE	47	29	66	28	38	-4	0.08	-0.11	0.08	0.33	22	5.25	46	85	39	0	7	1	0
	CUT BANK	52	25	66	9	38	-6	0.00	-0.11	0.00	0.13	8	4.77	46	76	29	0	6	0	0
	GLASGOW	55	33	72	27	44	-2	0.13	-0.06	0.12	0.19	12	4.83	45	86	42	0	2	2	0
	GREAT FALLS	53	32	72	20	43	-4	0.00	-0.21	0.00	0.24	12	9.93	74	71	28	0	4	0	0
	HAVRE	58	27	74	19	42	-3	0.00	-0.12	0.00	0.09	6	5.81	56	80	26	0	6	0	0
	MISSOULA	53	28	73	17	40	-6	0.11	-0.09	0.07	0.59	36	7.94	67	88	40	0	6	2	0
NC	ASHEVILLE	77	57	80	48	67	10	0.00	-0.64	0.00	7.29	136	51.76	140	98	51	0	0	0	0
	CHARLOTTE	83	58	87	50	70	9	0.00	-0.80	0.00	3.39	66	31.53	93	95	46	0	0	0	0
	GREENSBORO	78	59	83	50	68	8	0.00	-0.69	0.00	4.90	84	35.51	103	94	55	0	0	0	0
	HATTERAS	76	66	80	62	71	5	3.39	2.22	2.60	11.39	126	55.24	119	98	78	0	0	5	2
	RALEIGH	79	59	85	54	69	7	0.17	-0.57	0.17	8.42	138	39.32	110	100	60	0	0	1	0
	WILMINGTON	81	65	87	60	73	7	0.01	-0.88	0.01	11.07	108	56.19	114	94	59	0	0	1	0
ND	BISMARCK	58	39	69	31	49	2	1.71	1.43	1.45	3.99	175	10.61	65	86	44	0	1	3	1
	DICKINSON	53	36	66	32	44	-1	1.78	1.48	1.62	3.14	141	12.68	86	86	47	0	1	2	1
	FARGO	58	40	66	33	49	2	0.91	0.39	0.85	5.29	139	14.99	75	89	58	0	0	3	1
	GRAND FORKS	58	41	66	33	49	5	1.16	0.69	1.10	4.18	132	16.00	86	90	60	0	0	2	1
	JAMESTOWN	56	39	63	33	48	2	0.70	0.33	0.70	3.27	113	10.33	60	87	55	0	0	1	1
NE	GRAND ISLAND	68	39	78	32	53	0	0.85	0.41	0.83	2.33	70	24.87	103	86	28	0	1	3	1
	LINCOLN	70	42	81	34	56	2	0.89	0.44	0.85	1.53	37	22.11	86	84	29	0	0	2	1
	NORFOLK	68	40	77	35	54	2	0.35	-0.16	0.31	2.13	54	22.65	92	86	29	0	0	2	0
	NORTH PLATTE	64	32	73	24	48	-2	0.28	-0.09	0.26	2.50	109	21.26	114	92	34	0	3	2	0
	OMAHA	70	46	79	38	58	4	1.09	0.61	1.09	3.44	89	28.02	104	88	32	0	0	1	1
	SCOTTSBLUFF	60	32	70	27	46	-3	0.80	0.52	0.63	1.30	72	8.69	61	86	33	0	4	2	1
	VALENTINE	65	35	72	28	50	0	0.40	0.12	0.24	4.50	189	20.04	108	84	33	0	3	2	0
NH	CONCORD	74	51	78	47	62	14	0.44	-0.49	0.43	4.72	86	33.17	104	98	58	0	0	2	0
NJ	ATLANTIC_CITY	74	59	82	53	67	10	0.31	-0.46	0.23	4.48	91	39.62	120	99	68	0	0	4	0
	NEWARK	77	62	84	56	69	12	0.58	-0.24	0.35	10.57	185	46.91	126	86	56	0	0	2	0
NM	ALBUQUERQUE	66	40	73	34	53	-6	0.00	-0.26	0.00	1.16	68	5.03	62	53	17	0	0	0	0
NV	ELY	53	21	68	16	37	-9	0.14	-0.10	0.14	0.29	20	4.91	59	92	29	0	7	1	0
	LAS VEGAS	73	52	78	49	62	-8	0.00	-0.06	0.00	0.18	41	1.32	38	40	15	0	0	0	0
	RENO	62	33	73	31	47	-8	0.06	-0.06	0.06	0.28	42	2.02	36	70	21	0	3	1	0
	WINNEMUCCA	59	29	74	22	44	-6	0.07	-0.09	0.06	0.66	83	5.49	87	76	25	0	6	2	0
NY	ALBANY	73	53	77	50	63	12	2.16	1.29	1.26	9.28	178	36.31	116	97	62	0	0	2	2
	BINGHAMTON	69	53	76	45	61	12	1.25	0.50	1.21	5.23	106	39.79	128	98	71	0	0	3	1
	BUFFALO	74	60	81	52	67	15	1.17	0.37	0.75	8.39	144	28.68	93	89	61	0	0	2	1
	ROCHESTER	74	57	78	49	66	14	1.47	0.86	0.98	6.05	125	25.91	95	95	62	0	0	2	1
	SYRACUSE	77	57	79	52	67	16	1.37	0.60	1.09	4.76	87	34.77	116	98	64	0	0	3	1
OH	AKRON-CANTON	78	60	82	51	69	16	0.33	-0.30	0.33	4.02	82	32.67	102	88	54	0	0	1	0
	CINCINNATI	75	58	81	45	67	10	1.34	0.58	1.27	6.11	141	41.38	121	90	58	0	0	3	1
	CLEVELAND	76	60	82	50	68	13	0.30	-0.39	0.20	4.20	77	32.99	107	87	55	0	0	2	0
	COLUMBUS	79	60	86	51	69	13	0.56	-0.03	0.34	3.06	73	31.17	97	92	50	0	0	2	0
	DAYTON	76	58	82	45	67	12	0.32	-0.36	0.23	5.39	111	31.80	96	86	54	0	0	3	0
	MANSFIELD	76	58	82	49	67	14	0.46	-0.18	0.29	2.26	46	29.86	83	96	55	0	0	2	0

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***** Not Available**

Weather Data for the Week Ending October 16, 2021

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. ˚F		NUMBER OF DAYS PRECIP	
		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 SEP 1	PCT. NORMAL SINCE SEP 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	75	60	85	50	68	15	1.95	1.35	1.22	10.01	241	33.79	123	87	54	0	0	4	1
	YOUNGSTOWN	76	56	81	48	66	14	0.49	-0.13	0.47	4.44	85	36.46	116	94	60	0	0	2	0
OK	OKLAHOMA CITY	75	52	84	42	63	0	2.54	1.67	1.34	3.56	59	27.17	87	93	42	0	0	4	2
	TULSA	76	56	82	43	66	3	2.09	1.22	0.87	5.07	81	32.86	97	95	49	0	0	5	2
OR	ASTORIA	59	45	66	34	52	-1	0.63	-0.60	0.22	5.98	132	44.23	103	94	65	0	0	6	0
	BURNS	60	26	73	19	43	-2	0.04	-0.12	0.04	0.65	82	6.30	79	70	22	0	5	1	0
	EUGENE	62	41	70	33	52	-2	0.28	-0.31	0.12	3.10	126	17.50	61	96	51	0	0	4	0
	MEDFORD	64	38	76	30	51	-6	0.10	-0.11	0.08	1.72	173	8.09	71	91	31	0	1	3	0
	PENDLETON	61	38	70	27	50	-3	0.04	-0.18	0.04	0.68	67	4.93	53	81	33	0	1	1	0
	PORTLAND	60	45	68	38	52	-3	0.41	-0.17	0.16	4.63	174	19.26	83	89	56	0	0	4	0
	SALEM	60	43	68	35	52	-2	0.31	-0.28	0.18	3.37	138	22.42	91	94	57	0	0	4	0
PA	ALLENTOWN	73	54	82	49	63	10	0.32	-0.60	0.29	5.75	84	34.39	94	95	64	0	0	2	0
	ERIE	76	60	82	53	68	15	0.78	-0.15	0.48	5.79	84	30.18	92	85	57	0	0	2	0
	MIDDLETOWN	74	59	83	53	66	11	0.18	-0.55	0.15	11.69	198	41.24	126	89	63	0	0	2	0
	PHILADELPHIA	76	61	82	55	68	10	0.17	-0.55	0.16	7.10	129	38.94	116	93	64	0	0	2	0
	PITTSBURGH	75	56	80	48	65	12	0.81	0.33	0.54	4.89	114	31.08	100	96	58	0	0	2	1
	WILKES-BARRE	74	56	82	49	65	13	0.39	-0.39	0.39	10.37	201	37.49	124	94	63	0	0	1	0
	WILLIAMSPORT	73	57	79	50	65	12	0.70	-0.07	0.62	10.75	178	37.74	114	93	66	0	0	3	1
RI	PROVIDENCE	74	56	78	53	65	10	0.28	-0.57	0.28	7.08	119	38.54	105	98	63	0	0	1	0
SC	CHARLESTON	82	63	88	58	73	5	0.00	-0.87	0.00	10.20	122	51.94	118	97	56	0	0	0	0
	COLUMBIA	84	61	88	57	72	7	0.00	-0.73	0.00	4.95	94	42.69	115	93	50	0	0	0	0
	FLORENCE	83	61	91	55	72	7	0.00	-0.71	0.00	2.57	47	37.85	105	87	49	1	0	0	0
	GREENVILLE	81	57	85	50	69	6	0.00	-0.80	0.00	5.00	95	38.19	102	93	49	0	0	0	0
SD	ABERDEEN	63	38	70	30	50	4	1.03	0.54	0.91	4.30	128	15.76	80	88	45	0	1	2	1
	HURON	64	38	70	32	51	2	0.61	0.17	0.57	4.44	127	14.76	71	88	43	0	1	2	1
	RAPID CITY	56	33	68	27	45	-4	2.13	1.77	1.50	2.99	140	14.53	97	83	41	0	5	2	2
	SIOUX FALLS	65	41	74	34	53	4	0.30	-0.24	0.30	3.66	89	23.31	99	86	38	0	0	1	0
TN	BRISTOL	79	56	83	44	67	10	0.20	-0.25	0.20	4.13	102	35.55	106	95	47	0	0	1	0
	CHATTANOOGA	80	61	84	49	70	8	0.50	-0.20	0.28	9.80	170	55.46	135	96	55	0	0	2	0
	KNOXVILLE	79	59	83	46	69	8	0.27	-0.24	0.26	5.19	115	40.32	105	99	57	0	0	2	0
	MEMPHIS	82	62	87	48	72	7	1.85	0.98	1.79	4.99	100	43.87	108	92	53	0	0	3	1
	NASHVILLE	82	61	87	46	71	10	0.24	-0.41	0.20	7.18	146	51.30	138	86	46	0	0	3	0
TX	ABILENE	82	55	93	42	69	2	0.77	0.04	0.77	3.40	90	19.75	95	85	33	2	0	1	1
	AMARILLO	74	42	86	35	58	-1	0.06	-0.33	0.03	1.29	45	14.36	79	81	21	0	0	2	0
	AUSTIN	85	64	92	54	75	3	3.54	2.61	2.44	6.29	149	30.94	117	88	49	2	0	5	2
	BEAUMONT	86	68	91	51	77	6	2.46	1.22	2.11	13.85	157	59.75	124	98	62	1	0	2	1
	BROWNSVILLE	91	78	93	63	84	7	1.04	0.17	1.02	13.70	168	31.43	137	89	59	6	0	2	1
	CORPUS CHRISTI	86	74	91	58	80	5	2.31	1.49	2.28	11.98	174	42.01	160	95	67	1	0	3	1
	DEL RIO	90	69	99	58	80	7	0.02	-0.55	0.01	0.33	9	13.33	79	79	34	4	0	2	0
	EL PASO	79	53	88	50	66	0	0.00	-0.14	0.00	0.57	30	11.20	134	38	16	0	0	0	0
	FORT WORTH	83	61	92	51	72	3	1.63	0.65	0.83	3.43	76	28.75	100	87	44	1	0	3	2
	GALVESTON	87	77	90	66	82	7	0.84	0.00	0.84	9.68	0	38.07	0	78	60	1	0	1	1
	HOUSTON	87	69	92	55	78	6	0.69	-0.62	0.58	11.04	159	43.41	112	87	52	4	0	3	1
	LUBBOCK	79	45	88	35	62	-1	0.04	-0.45	0.04	1.20	33	19.54	117	73	17	0	0	1	0
	MIDLAND	82	49	92	39	65	-1	0.00	-0.45	0.00	0.16	5	13.59	107	73	15	2	0	0	0
	SAN ANGELO	83	54	95	40	69	2	1.01	0.35	1.01	2.50	64	21.41	118	91	34	1	0	1	1
	SAN ANTONIO	85	65	91	52	75	3	5.35	4.33	2.64	8.07	156	30.49	116	92	50	1	0	5	4
	VICTORIA	87	69	93	53	78	5	1.50	0.39	1.50	4.69	71	51.04	152	93	53	4	0	1	1
	WACO	85	60	94	46	73	3	2.85	1.89	2.01	3.89	77	26.78	98	93	49	1	0	4	1
	WICHITA FALLS	81	54	92	44	68	2	1.03	0.29	0.87	1.48	34	23.10	96	93	40	1	0	2	1
UT	SALT LAKE CITY	54	37	62	33	45	-9	0.45	0.10	0.23	1.36	68	10.61	84	87	38	0	0	3	0
VA	LYNCHBURG	79	56	88	47	68	11	0.03	-0.65	0.03	2.79	51	28.50	85	93	51	0	0	1	0
	NORFOLK	76	63	85	60	69	6	0.58	-0.19	0.30	3.00	45	32.46	84	100	69	0	0	4	0
	RICHMOND	78	61	84	53	69	9	0.15	-0.50	0.06	8.25	145	42.09	118	99	65	0	0	3	0
	ROANOKE	78	59	86	53	68	10	0.03	-0.61	0.03	6.00	112	33.88	101	92	55	0	0	1	0
	WASH/DULLES	76	58	83	50	67	10	0.49	-0.23	0.46	5.11	91	29.19	87	96	65	0	0	2	0
VT	BURLINGTON	73	56	77	51	64	15	1.22	0.39	1.18	5.00	90	25.41	86	92	61	0	0	2	1
WA	OLYMPIA	57	41	65	29	49	-2	0.44	-0.48	0.20	4.00	113	32.09	103	96	60	0	1	6	0
	QUILLAYUTE	54	42	56	33	48	-3	6.22	3.98	2.63	19.10	230	62.76	96	100	82	0	0	6	4
	SEATTLE-TACOMA	56	45	67	37	51	-3	0.76	0.07	0.48	4.14	143	23.95	102	94	61	0	0	6	0
	SPOKANE	54	36	68	31	45	-4	0.06	-0.18	0.06	1.27	111	6.17	54	83	36	0	3	1	0
	YAKIMA	62	35	68	26	49	-2	0.00	-0.11	0.00	0.24	37	2.98	53	95	35	0	2	0	0
WI	EAU CLAIRE	64	47	80	37	56	7	0.01	-0.52	0.01	2.93	58	20.55	75	91	50	0	0	1	0
	GREEN BAY	67	52	76	39	60	12	0.11	-0.44	0.09	1.94	45	25.50	103	91	58	0	0	2	0
	LA CROSSE	67	52	81	41	60	8	0.30	-0.17	0.16	2.00	42	32.04	111	85	47	0	0	2	0
	MADISON	65	52	73	40	59	9	0.69	0.17	0.45	3.58	82	19.93	68	93	60	0	0	4	0
	MILWAUKEE	69	57	76	46	63	11	0.33	-0.25	0.22	2.64	58	14.18	49	87	58	0	0	4	0
WV	BECKLEY	73	55	79	46	64	10	0.35	-0.20	0.35	3.07	71	32.92	97	100	66	0	0	1	0
	CHARLESTON	80	57	84	51	69	11	0.78	0.22	0.78	4.46	97	32.07	90	100	55	0	0	1	1
	ELKINS	77	50	81	48	64	12	0.35	-0.28	0.35	6.63	130	32.54	86	94	52	0	0	1	0
	HUNTINGTON	79	59	82	49	69	12	0.39	-0.22	0.39	3.59	86	41.57	121	95	53	0	0	1	0
WY	CASPER	50	31	62	27	40	-6	1.05	0.79	0.57	1.94	114	12.16	112	83	43	0	5	3	1
	CHEYENNE	54	32	66	26	43	-4	0.16	-0.07	0.13	0.37	18	9.69	66	77	34	0	4	2	0
	LANDER	48	25	64	16	37	-10	1.16	0.85	0.96	1.84	103	12.13	112	89	49	0	6	2	1
	SHERIDAN	51	31	68	28	41	-6	1.42	1.05	0.74	2.07	90	10.89	88	85	49	0	5	3	2

Based on 1981-2010 normals ***** Not Available**

National Agricultural Summary

October 11 – 17, 2021

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

More than twice the normal weekly amount of precipitation was recorded in large parts of the Great Plains, Midwest, and Rockies. Some locations in Arkansas, Kansas, Oklahoma, and Texas received weekly precipitation totaling 3 inches or more. Meanwhile, most of the eastern half of the nation was warmer than normal. Much of the Great Lakes, mid Atlantic, and Northeast recorded temperatures 9°F or more above normal. In contrast, most of the western half of the nation was cooler than normal. Parts of the Rockies and Southwest recorded temperatures 9°F or more below normal for the week.

Corn: Ninety-seven percent of the nation's corn acreage was mature by October 17, equal to last year but 4 percentage points ahead of the 5-year average. Fifty-two percent of the 2021 corn acreage was harvested by week's end, 5 percentage points behind last year but 11 points ahead of the average harvest pace. Harvest progress advanced 15 percentage points or more during the week in Minnesota and South Dakota. On October 17, sixty percent of the nation's corn acreage was rated in good to excellent condition, unchanged from the previous week but 1 percentage point below the same time last year.

Soybean: Nationally, leaf drop was 95 percent complete by October 17, one percentage point behind last year but equal to the 5-year average. Leaf dropping was complete or nearing completion in 14 of the 18 estimating states. Soybean harvest across the nation was 60 percent complete by week's end, 13 percentage points behind last year but 5 points ahead of average. Harvest progress advanced 15 percentage points or more during the week in Nebraska, Ohio, and South Dakota.

Winter Wheat: Nationwide, producers had sown 70 percent of the intended 2022 winter wheat acreage by October 17, six percentage points behind last year and 1 point behind the 5-year average. Planting progress advanced by 15 percentage points or more during the week in Illinois, Indiana, Missouri, Ohio, and Oregon. Nationwide, 44 percent of the winter wheat acreage had emerged by October 17, six percentage points behind last year and 3 points behind average. During the week, winter wheat emergence advanced by 15 percentage points or more in Illinois, Kansas, Michigan, Nebraska, and Ohio.

Cotton: By October 17, eighty-six percent of the nation's cotton had open bolls, 7 percentage points behind last year and 2 points behind the 5-year average. By October 17, twenty-eight percent of the nation's cotton acreage was harvested, 5 percentage points behind last year and 6 points behind average. Cotton harvest advanced 15 percentage points or more during the week in California, Louisiana, and Missouri. On October 17, sixty-four percent of the 2021 cotton acreage was rated in good to excellent condition, unchanged from the previous week but 24 percentage points above the same time last year.

Sorghum: By October 17, ninety-three percent of the nation's sorghum acreage was mature, 1 percentage point behind last year but 5 points ahead of the 5-year average. Fifty-nine percent of the 2021 sorghum acreage had been harvested by October 17, two percentage points behind last year but 9 points ahead of average. Ninety-two percent of Texas' sorghum acreage was harvested by October 17, equal to last year but 9 percentage points ahead of average.

Rice: Nationally, 92 percent of the rice acreage was harvested by October 17, two percentage points ahead of last year and 1 point ahead of the 5-year average. California showed a harvest increase of 30 percentage points from the previous week.

Other Crops: Thirty-eight percent of the nation's peanut acreage was harvested as of October 17, one percentage point behind last year and 14 points behind the 5-year average. On October 17, seventy-one percent of the nation's peanut acreage was rated in good to excellent condition, 1 percentage point above the previous week and 4 points above the same time last year.

By October 17, sugarbeet producers had harvested 40 percent of the nation's crop, 41 percentage points behind last year and 21 points behind the 5-year average. Sugarbeets harvested in Minnesota showed an increase from the previous week of 21 percentage points.

By October 17, twenty-nine percent of this year's sunflower crop was harvested, 6 percentage points behind last year but 8 points ahead of the 5-year average. Harvest progress advanced 10 percentage points or more during the week in three of the four estimating states.

Crop Progress and Condition

Week Ending October 17, 2021

Weekly U.S. Progress and Condition Data provided by USDA/NASS

Corn Percent Mature

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
CO	95	85	91	88
IL	98	96	98	95
IN	94	94	97	93
IA	99	95	97	94
KS	98	98	99	97
KY	99	95	99	98
MI	90	89	93	82
MN	99	97	99	93
MO	97	98	99	98
NE	98	93	95	95
NC	100	100	100	100
ND	96	93	97	85
OH	85	87	95	85
PA	94	79	89	90
SD	98	94	96	89
TN	100	99	100	100
TX	97	99	100	95
WI	95	91	96	83
18 Sts	97	94	97	93

These 18 States planted 92% of last year's corn acreage.

Corn Percent Harvested

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
CO	51	34	45	33
IL	63	55	62	59
IN	46	36	45	45
IA	62	30	43	29
KS	74	66	75	66
KY	79	61	69	82
MI	23	24	32	20
MN	59	36	53	27
MO	62	64	74	67
NE	55	29	41	33
NC	93	91	93	93
ND	51	29	42	21
OH	23	19	25	29
PA	32	14	23	36
SD	60	33	51	27
TN	82	67	78	91
TX	84	88	90	81
WI	25	24	32	18
18 Sts	57	41	52	41

These 18 States harvested 94% of last year's corn acreage.

Corn Condition by Percent

	VP	P	F	G	EX
CO	7	19	18	43	13
IL	2	5	23	50	20
IN	3	6	22	53	16
IA	2	7	28	51	12
KS	8	13	25	45	9
KY	1	3	16	65	15
MI	2	6	22	50	20
MN	8	17	38	31	6
MO	2	7	26	54	11
NE	5	7	19	40	29
NC	1	2	16	62	19
ND	15	31	39	14	1
OH	1	5	20	56	18
PA	0	0	9	67	24
SD	13	29	37	20	1
TN	0	2	16	59	23
TX	1	9	29	44	17
WI	2	5	25	46	22
18 Sts	4	10	26	45	15
Prev Wk	5	10	25	45	15
Prev Yr	5	9	25	46	15

Soybeans Percent Dropping Leaves

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
AR	93	87	92	94
IL	98	87	92	95
IN	99	94	97	96
IA	99	96	98	96
KS	94	84	90	91
KY	83	71	80	83
LA	100	89	95	100
MI	99	96	100	94
MN	99	98	99	99
MS	97	85	90	96
MO	90	78	88	86
NE	100	97	100	98
NC	74	77	86	80
ND	100	100	100	100
OH	96	90	95	94
SD	100	100	100	98
TN	88	77	87	92
WI	98	97	98	94
18 Sts	96	91	95	95

These 18 States planted 96% of last year's soybean acreage.

Soybeans Percent Harvested

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
AR	48	45	56	61
IL	77	43	51	62
IN	69	38	49	57
IA	88	56	70	51
KS	61	27	41	35
KY	41	30	36	43
LA	93	73	82	92
MI	61	36	39	44
MN	95	83	91	64
MS	71	54	65	79
MO	37	22	30	32
NE	91	60	76	58
NC	17	16	19	22
ND	91	73	81	63
OH	63	33	54	57
SD	89	69	86	57
TN	40	22	31	50
WI	68	47	59	44
18 Sts	73	49	60	55

These 18 States harvested 96% of last year's soybean acreage.

Sorghum Percent Mature

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
CO	91	84	95	83
KS	94	81	88	85
NE	98	90	94	95
OK	86	89	92	86
SD	100	96	98	83
TX	97	98	100	93
6 Sts	94	88	93	88

These 6 States planted 100% of last year's sorghum acreage.

Sorghum Percent Harvested

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
CO	40	35	42	29
KS	46	32	44	30
NE	56	38	58	38
OK	46	34	48	47
SD	80	55	72	39
TX	92	88	92	83
6 Sts	61	49	59	50

These 6 States harvested 100% of last year's sorghum acreage.

Crop Progress and Condition

Week Ending October 17, 2021

Weekly U.S. Progress and Condition Data provided by USDA/NASS

Cotton Percent Bolls Opening

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
AL	91	73	84	92
AZ	100	100	100	100
AR	100	99	100	100
CA	89	92	95	87
GA	90	82	87	94
KS	87	83	90	81
LA	100	100	100	100
MS	98	89	93	98
MO	100	87	96	98
NC	91	90	93	94
OK	90	85	90	89
SC	91	83	90	92
TN	94	75	85	97
TX	92	72	83	84
VA	96	92	97	97
15 Sts	93	78	86	88

These 15 States planted 99% of last year's cotton acreage.

Cotton Percent Harvested

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
AL	19	10	17	37
AZ	26	28	31	27
AR	45	20	34	61
CA	19	15	35	22
GA	18	8	15	30
KS	5	2	3	5
LA	71	36	54	77
MS	44	21	32	57
MO	24	10	32	47
NC	13	11	18	21
OK	15	7	14	16
SC	5	6	8	24
TN	30	2	15	44
TX	41	29	35	31
VA	13	10	18	23
15 Sts	33	20	28	34

These 15 States harvested 99% of last year's cotton acreage.

Cotton Condition by Percent

	VP	P	F	G	EX
AL	0	4	15	77	4
AZ	7	12	16	39	26
AR	1	3	8	43	45
CA	0	0	10	90	0
GA	1	7	33	51	8
KS	1	3	45	47	4
LA	0	4	45	45	6
MS	5	7	27	48	13
MO	0	7	26	67	0
NC	0	8	22	59	11
OK	1	3	25	70	1
SC	0	0	13	65	22
TN	1	10	20	63	6
TX	1	2	36	50	11
VA	0	3	28	66	3
15 Sts	1	4	31	53	11
Prev Wk	1	5	30	54	10
Prev Yr	10	23	27	31	9

Peanuts Percent Harvested

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
AL	41	29	39	61
FL	65	47	53	74
GA	40	26	37	56
NC	26	27	40	39
OK	30	12	18	29
SC	39	25	36	44
TX	23	19	24	22
VA	24	48	55	52
8 Sts	39	28	38	52

These 8 States harvested 96% of last year's peanut acreage.

Peanut Condition by Percent

	VP	P	F	G	EX
AL	0	6	16	63	15
FL	3	4	30	59	4
GA	0	4	32	54	10
NC	0	0	17	79	4
OK	0	0	9	91	0
SC	0	0	10	75	15
TX	0	1	23	58	18
VA	0	0	15	77	8
8 Sts	0	3	26	60	11
Prev Wk	1	4	25	57	13
Prev Yr	1	7	25	55	12

Sugarbeets Percent Harvested

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
ID	55	42	50	47
MI	46	42	44	34
MN	96	17	38	69
ND	96	19	31	74
4 Sts	81	26	40	61

These 4 States harvested 85% of last year's sugarbeet acreage.

Sunflowers Percent Harvested

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
CO	64	19	30	29
KS	36	27	40	23
ND	41	14	20	22
SD	25	23	35	19
4 Sts	35	19	29	21

These 4 States harvested 87% of last year's sunflower acreage.

Rice Percent Harvested

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
AR	88	81	89	94
CA	86	65	95	73
LA	99	98	100	100
MS	91	84	91	94
MO	80	68	76	89
TX	100	100	100	100
6 Sts	90	81	92	91

These 6 States harvested 100% of last year's rice acreage.

Crop Progress and Condition

Week Ending October 17, 2021

Weekly U.S. Progress and Condition Data provided by USDA/NASS

Winter Wheat Percent Planted

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
AR	32	22	34	33
CA	19	10	15	18
CO	97	88	92	93
ID	89	89	96	86
IL	69	21	51	54
IN	66	33	48	56
KS	83	63	75	68
MI	79	44	53	65
MO	40	20	35	33
MT	75	66	78	79
NE	93	88	93	94
NC	14	9	14	11
OH	81	42	59	69
OK	73	50	57	72
OR	60	41	57	69
SD	96	90	95	92
TX	63	54	64	64
WA	87	88	93	86
18 Sts	76	60	70	71

These 18 States planted 90% of last year's winter wheat acreage.

Winter Wheat Percent Emerged

	Prev Year	Prev Week	Oct 17 2021	5-Yr Avg
AR	16	5	12	18
CA	4	1	2	3
CO	66	47	58	67
ID	49	45	58	54
IL	24	7	34	21
IN	22	12	22	24
KS	59	31	47	46
MI	43	24	41	38
MO	16	7	15	16
MT	55	36	50	55
NE	70	60	76	77
NC	4	1	4	3
OH	34	9	29	36
OK	46	25	37	51
OR	20	15	20	30
SD	68	42	51	69
TX	39	30	39	39
WA	64	50	58	60
18 Sts	50	31	44	47

These 18 States planted 90% of last year's winter wheat acreage.

Pasture and Range Condition by Percent
Week Ending Oct 17, 2021

	VP	P	F	G	EX			VP	P	F	G	EX
AL	2	3	18	68	9		NH	0	27	54	19	0
AZ	1	4	34	45	16		NJ	0	0	10	89	1
AR	4	16	50	27	3		NM	12	15	46	19	8
CA	40	30	15	15	0		NY	1	6	10	60	23
CO	23	25	23	16	13		NC	0	5	47	47	1
CT	0	0	0	50	50		ND	53	27	16	4	0
DE	1	13	47	34	5		OH	1	4	28	60	7
FL	2	2	32	39	25		OK	8	17	42	32	1
GA	3	8	30	52	7		OR	60	21	13	6	0
ID	21	42	26	11	0		PA	0	0	23	72	5
IL	18	17	26	30	9		RI	0	0	0	50	50
IN	3	9	43	39	6		SC	0	3	35	60	2
IA	8	23	39	28	2		SD	44	35	18	3	0
KS	11	20	34	33	2		TN	1	5	26	54	14
KY	3	5	28	53	11		TX	9	23	34	27	7
LA	0	5	34	58	3		UT	15	48	36	1	0
ME	0	0	45	55	0		VT	0	0	50	50	0
MD	0	11	52	32	5		VA	2	16	43	34	5
MA	0	0	0	50	50		WA	75	15	6	4	0
MI	2	14	26	49	9		WV	6	7	13	62	12
MN	14	23	39	19	5		WI	3	6	21	44	26
MS	0	13	39	42	6		WY	31	39	27	3	0
MO	3	15	42	38	2		48 Sts	22	23	30	20	5
MT	65	30	5	0	0							
NE	13	17	55	14	1		Prev Wk	23	22	31	20	4
NV	35	30	35	0	0		Prev Yr	17	27	36	18	2

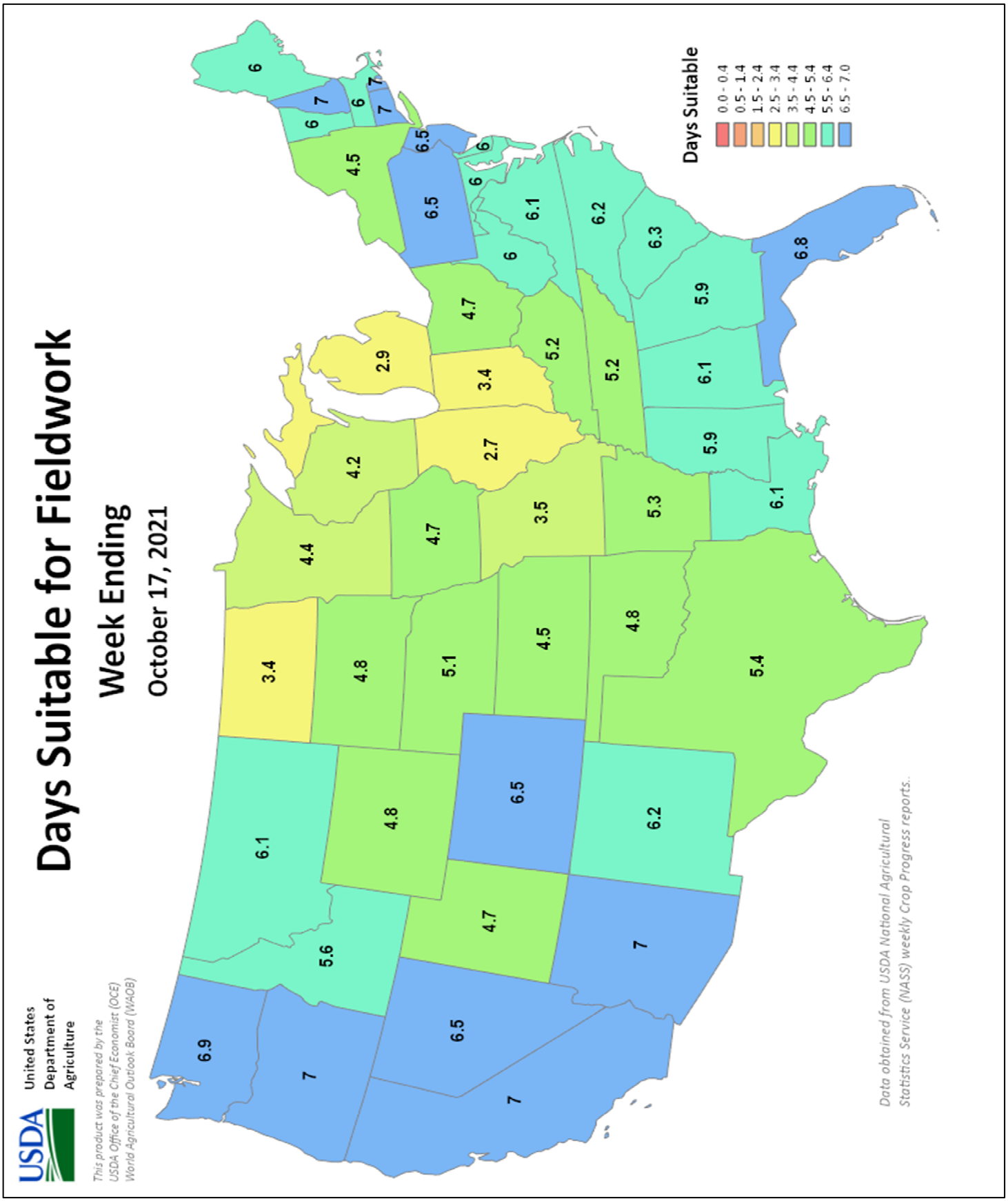
VP - Very Poor; P - Poor;
F - Fair;
G - Good; EX - Excellent

NA - Not Available
*** Revised**

Crop Progress and Condition

Week Ending October 17, 2021

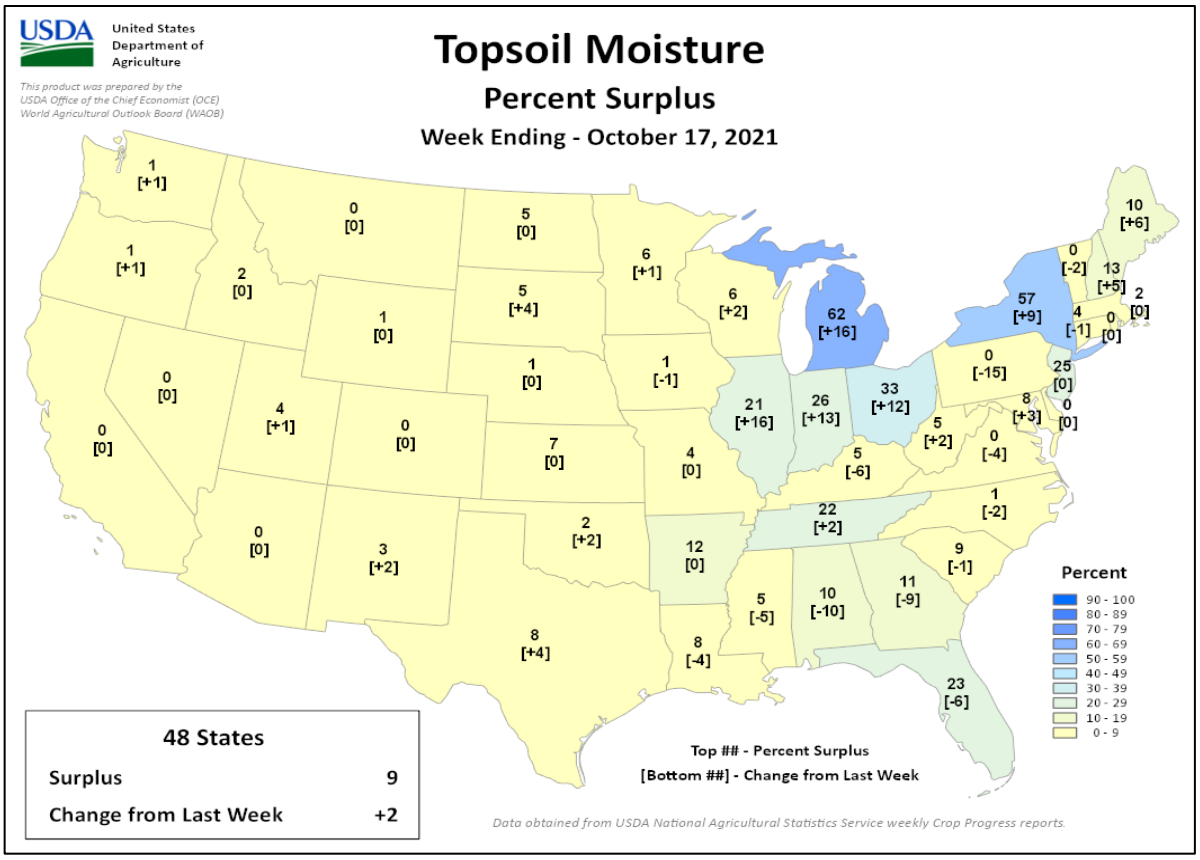
Weekly U.S. Progress and Condition Data provided by USDA/NASS

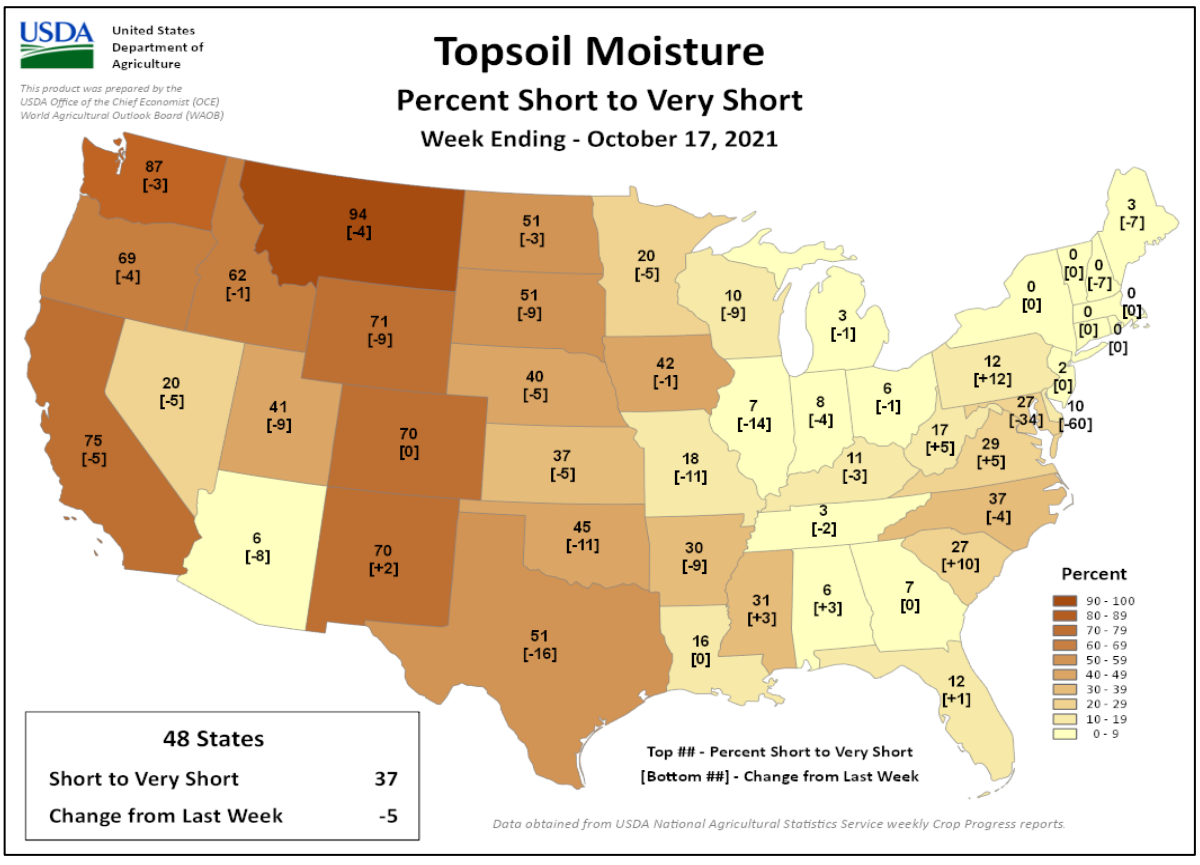


Crop Progress and Condition

Week Ending October 17, 2021

Weekly U.S. Progress and Condition Data provided by USDA/NASS

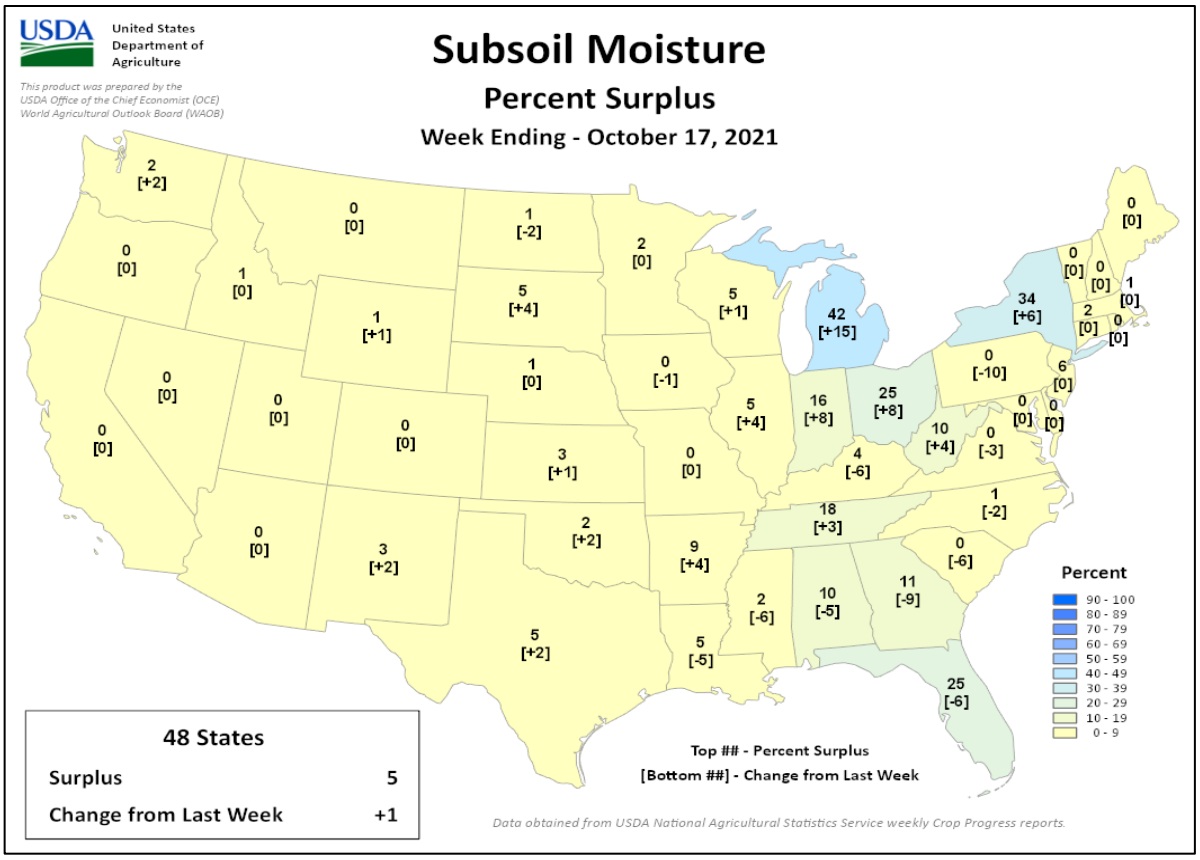


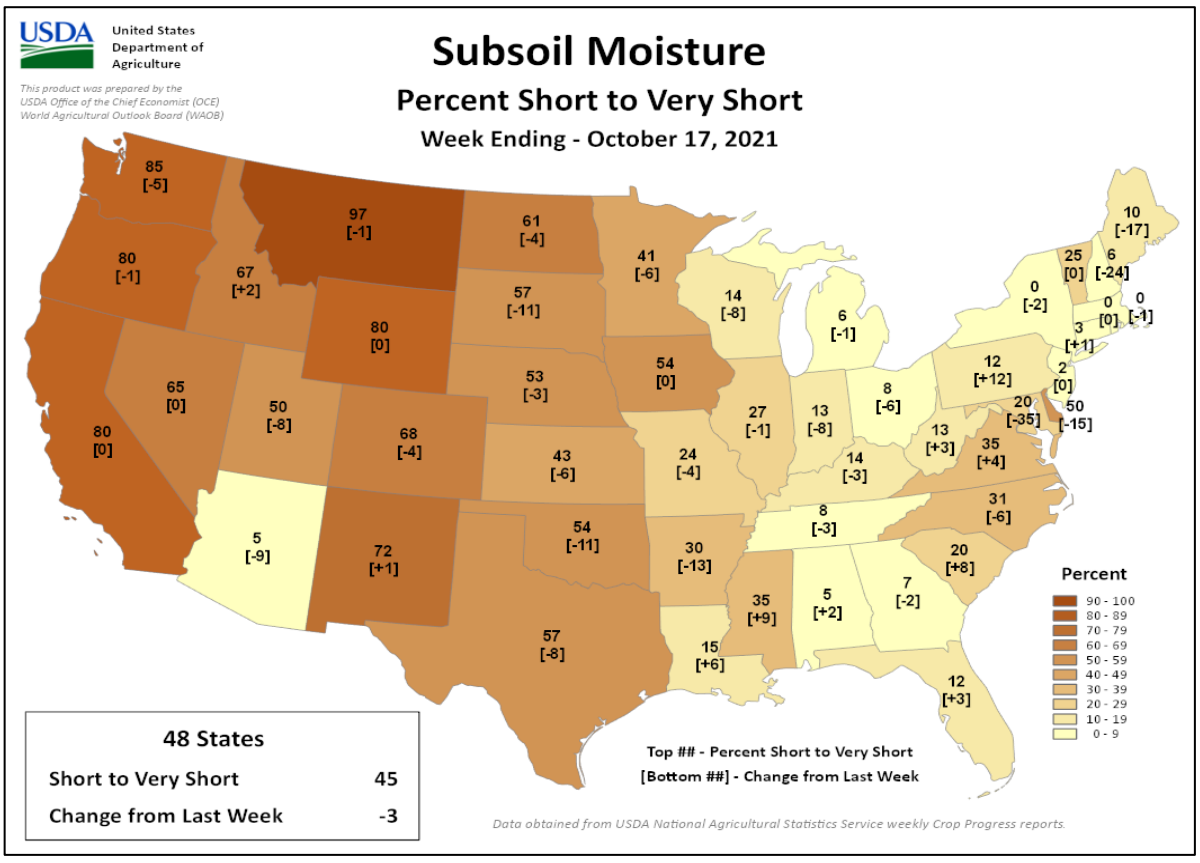


Crop Progress and Condition

Week Ending October 17, 2021

Weekly U.S. Progress and Condition Data provided by USDA/NASS





October 14 ENSO Diagnostic Discussion

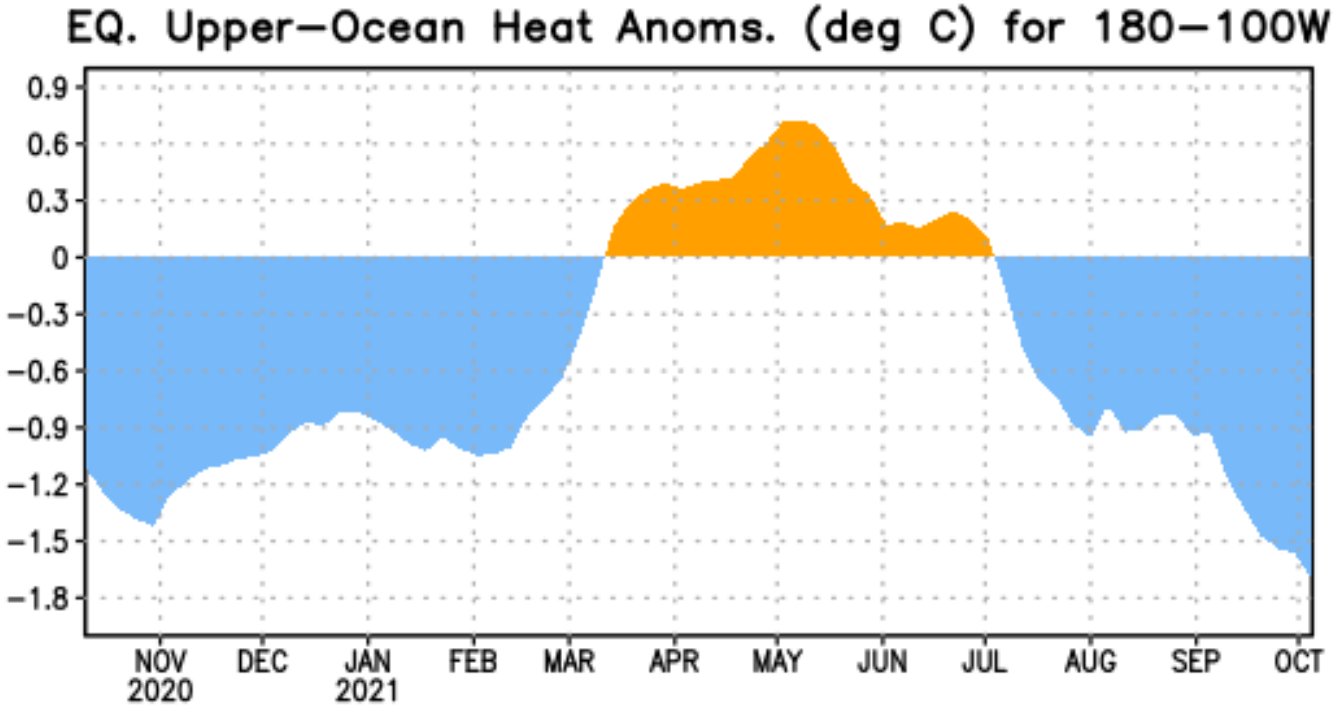


Figure 1: Area-averaged upper-ocean heat content anomaly (°C) in the equatorial Pacific (5°N-5°S, 180º-100ºW). The heat content anomaly is computed as the departure from the 1991-2020 base period pentad means.

ENSO Alert System Status: La Niña Advisory

Synopsis: La Niña conditions have developed and are expected to continue with an 87% chance of La Niña in December 2021- February 2022.

In the past month, La Niña conditions emerged, as indicated by below-average sea surface temperatures (SSTs) across the central and east-central equatorial Pacific. In the last week, the Niño-3.4 and Niño-4 index values were -0.6ºC and -0.7ºC, respectively. The Niño-3 and Niño-1+2 indices were not as cool, with values at -0.3ºC and 0.1ºC. Below-average subsurface temperatures (averaged from 180-100ºW) strengthened significantly in the past month (Fig. 1), as negative anomalies were observed at depth across most of the central and eastern Pacific Ocean. Low-level easterly wind anomalies and upper-level westerly wind anomalies were observed over most of the equatorial Pacific. Tropical convection was suppressed near and west of the Date Line and enhanced over Indonesia, while the Southern Oscillation Index and Equatorial Southern Oscillation Index were both positive. Overall, the coupled ocean-atmosphere system was consistent with La Niña conditions.

The IRI/CPC plume average of forecasts for the Niño-3.4 SST index favors La Niña to continue through the fall and winter 2021-22. The forecaster consensus also anticipates La Niña to continue through the winter, with ENSO-neutral predicted to return during March-May 2022. Because of the recent oceanic cooling and coupling to the atmosphere, forecasters now anticipate a 57% chance of one season (November-January) reaching -1.0ºC or less in the Niño-3.4 index. Thus, at its peak, a moderate-strength La Niña is favored. In summary, La Niña conditions have developed and are expected to continue with an 87% chance of La Niña in December 2021- February 2022 (click CPC/IRI consensus forecast for the chances in each 3-month period).

La Niña is anticipated to affect temperature and precipitation across the United States during the upcoming months (the 3-month seasonal temperature and precipitation outlooks will be updated on **Thurs. October 21st**).

This discussion is a consolidated effort of the National Oceanic and Atmospheric Administration (NOAA), NOAA's National Weather Service, and their funded institutions. Oceanic and atmospheric conditions are updated weekly on the Climate Prediction Center web site (El Niño/La Niña Current Conditions and Expert Discussions). Additional perspectives and analysis are also available in an ENSO blog. A probabilistic strength forecast is available here. The next ENSO Diagnostics Discussion is scheduled for **11 November 2021**. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: ncep.list.enso-update@noaa.gov.

International Weather and Crop Summary

October 10-16, 2021

International Weather and Crop Highlights and Summaries provided by USDA/WAOB

HIGHLIGHTS

EUROPE: A protracted heavy rain event was detrimental to unharvested cotton in Greece but alleviated lingering precipitation deficits in the southern Balkans.

WESTERN FSU: Showers renewed summer crop harvest delays in central Ukraine, while dry weather elsewhere favored a rapid pace of fieldwork.

MIDDLE EAST: Heavy rain in western Turkey was untimely for unharvested cotton, while dry weather elsewhere promoted early winter grain sowing.

SOUTH ASIA: The withdrawing monsoon ushered drier weather into northern India and Pakistan, aiding harvesting of cotton and rice sown early in the season.

EASTERN ASIA: Occasional showers in eastern and southern China increased soil moisture for newly-sown wheat and rapeseed.

SOUTHEAST ASIA: Typhoon Kompasu produced deluges across the northern Philippines and northern Vietnam, negatively impacting mature rice in both countries.

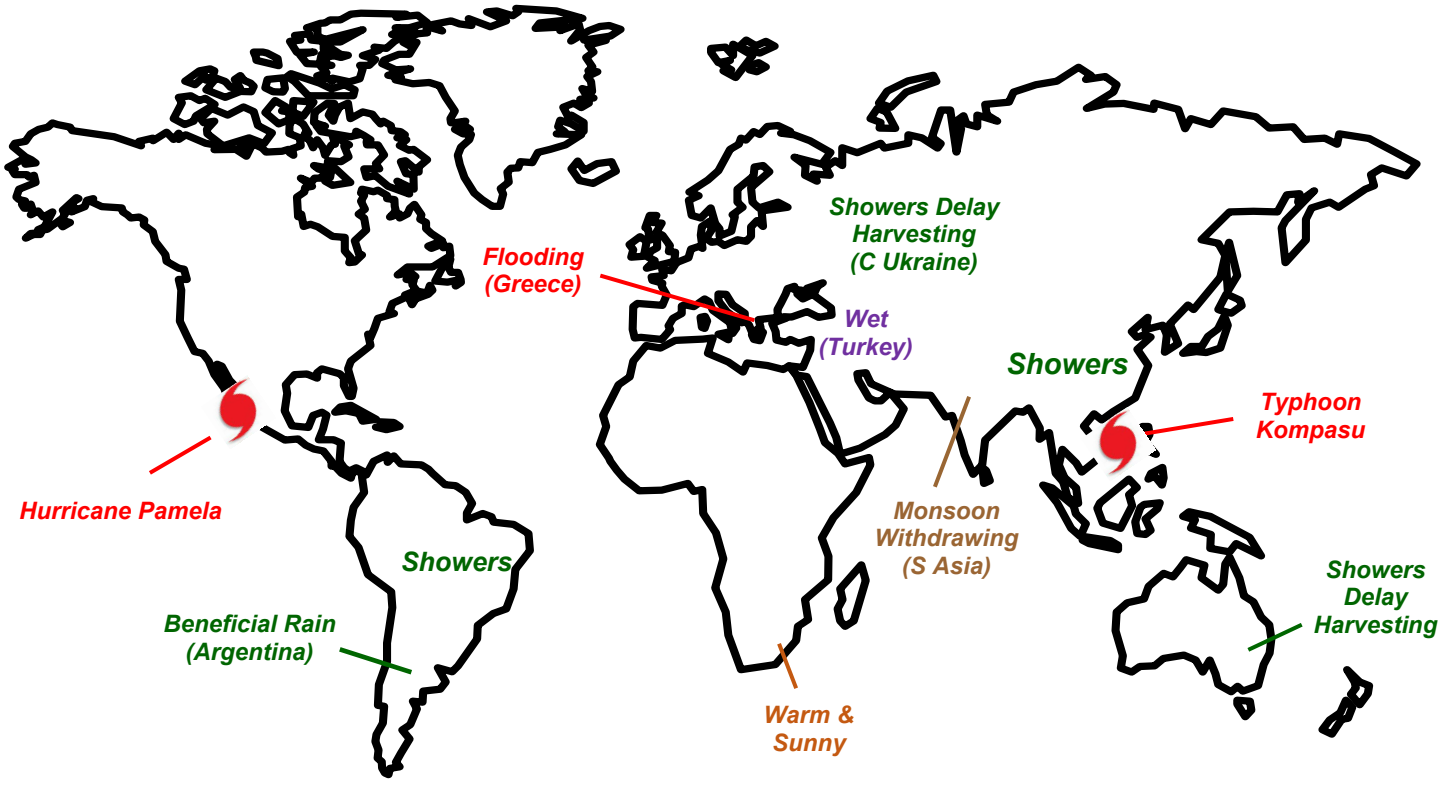
AUSTRALIA: Wet weather aided immature winter crops but slowed drydown and harvesting of the earliest maturing varieties.

SOUTH AFRICA: Warm, sunny weather spurred planting in eastern sections of the corn belt.

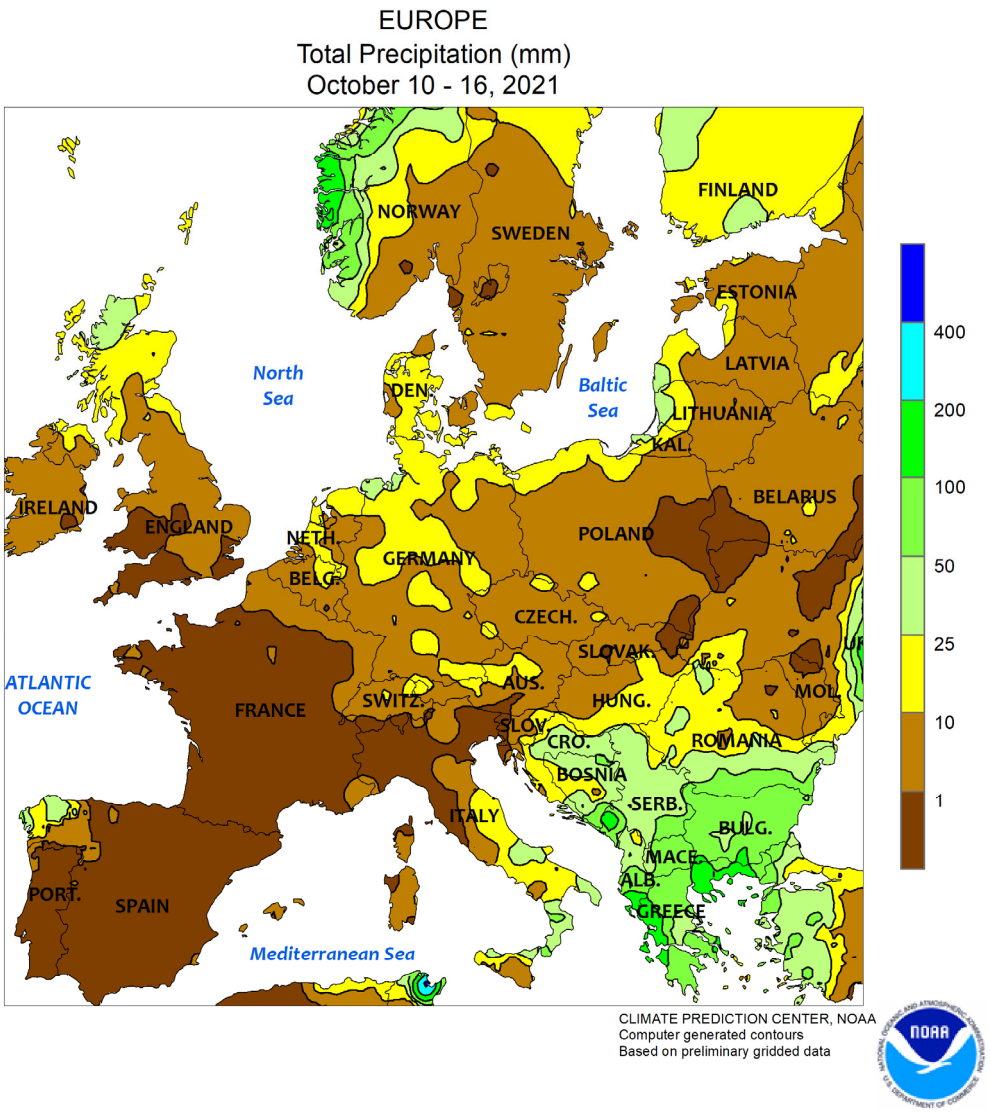
ARGENTINA: Rain benefited immature winter crops and newly sown summer crops in sections of central and northeastern Argentina.

BRAZIL: Widespread showers benefited emerging soybeans in key central and southern production areas.

MEXICO: Hurricane Pamela brought heavy rain and flooding to the Pacific Coast, but rainfall was generally widely scattered and light elsewhere.



For additional information contact: mark.brusberg@usda.gov

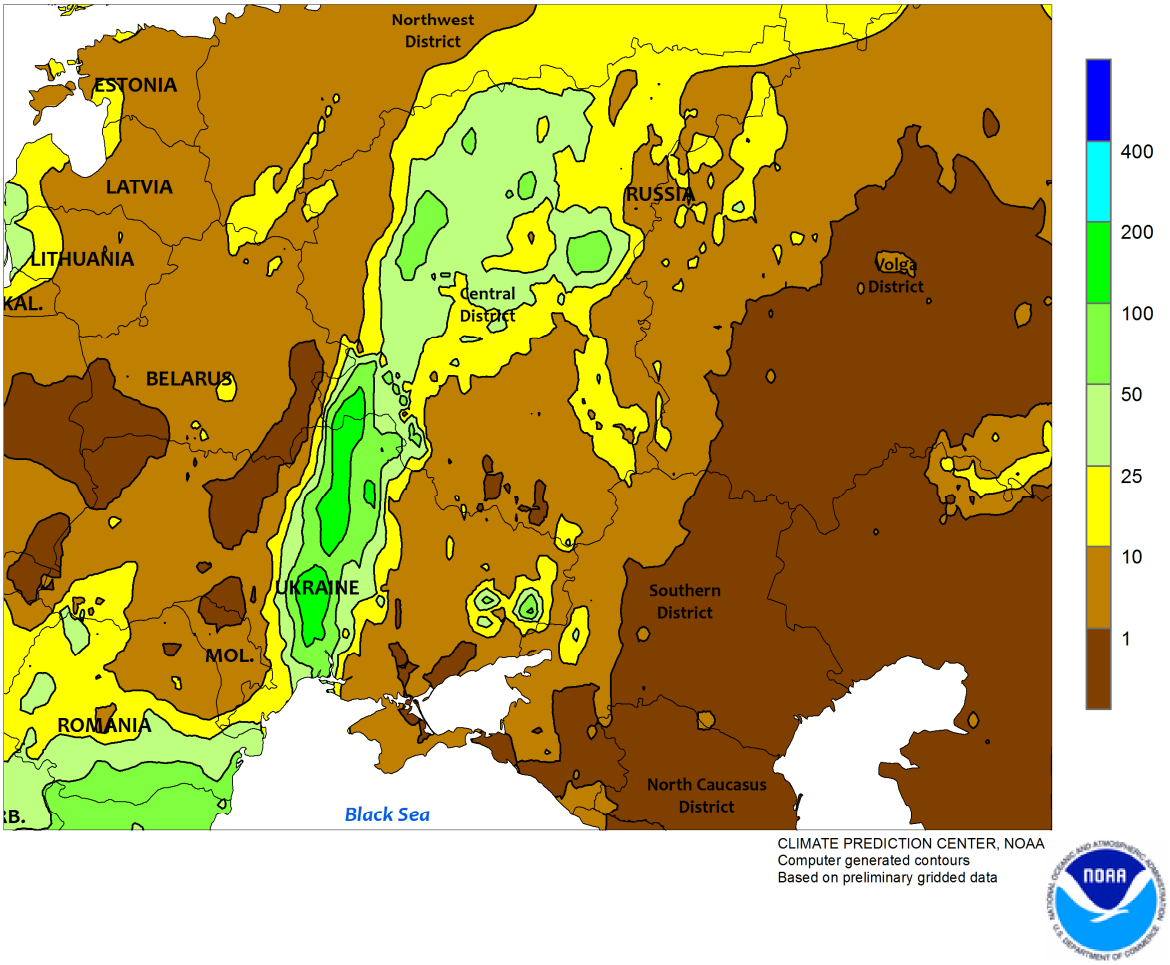


EUROPE

A slow-moving storm system produced heavy to excessive rainfall over southeastern Europe, while mostly dry conditions prevailed across the remainder of the continent. A sprawling, nearly stationary storm system coupled with abundant Mediterranean moisture fueled downpours in Greece and the Balkans. Weekly rainfall in Greece tallied 50 to 120 mm (locally as much as 277 mm on the southwestern coast), which added to already impressive event totals (October 7-16). The downpours began in Greece on October 7, with 10-day rainfall (as depicted by the Greece cooperative weather station network) in cotton areas totaling, from south to north: 65-115 mm in Central Greece; 90-225 mm in Thessaly; 120-240 mm in Macedonia. The rain adversely impacted the quality and yields of unharvested cotton and halted harvesting efforts. Lesser albeit still heavy showers (10-80 mm) in the Balkans alleviated lingering long-term deficits over the lower Danube River Valley and maintained good moisture supplies for winter crop establishment elsewhere. Conversely, mostly dry weather from Spain into central Poland favored summer crop harvesting and other seasonal fieldwork, though scattered moderate to heavy showers (10-25 mm) in central Germany and along the Baltic and North Sea Coasts slowed fieldwork locally. Below-normal temperatures (1-5°C below normal) slowed winter crop development over most growing areas, although warm conditions (1-3°C above normal) were noted in Portugal and southern Spain.

For additional information contact: mark.brusberg@usda.gov

WESTERN FSU
Total Precipitation (mm)
October 10 - 16, 2021

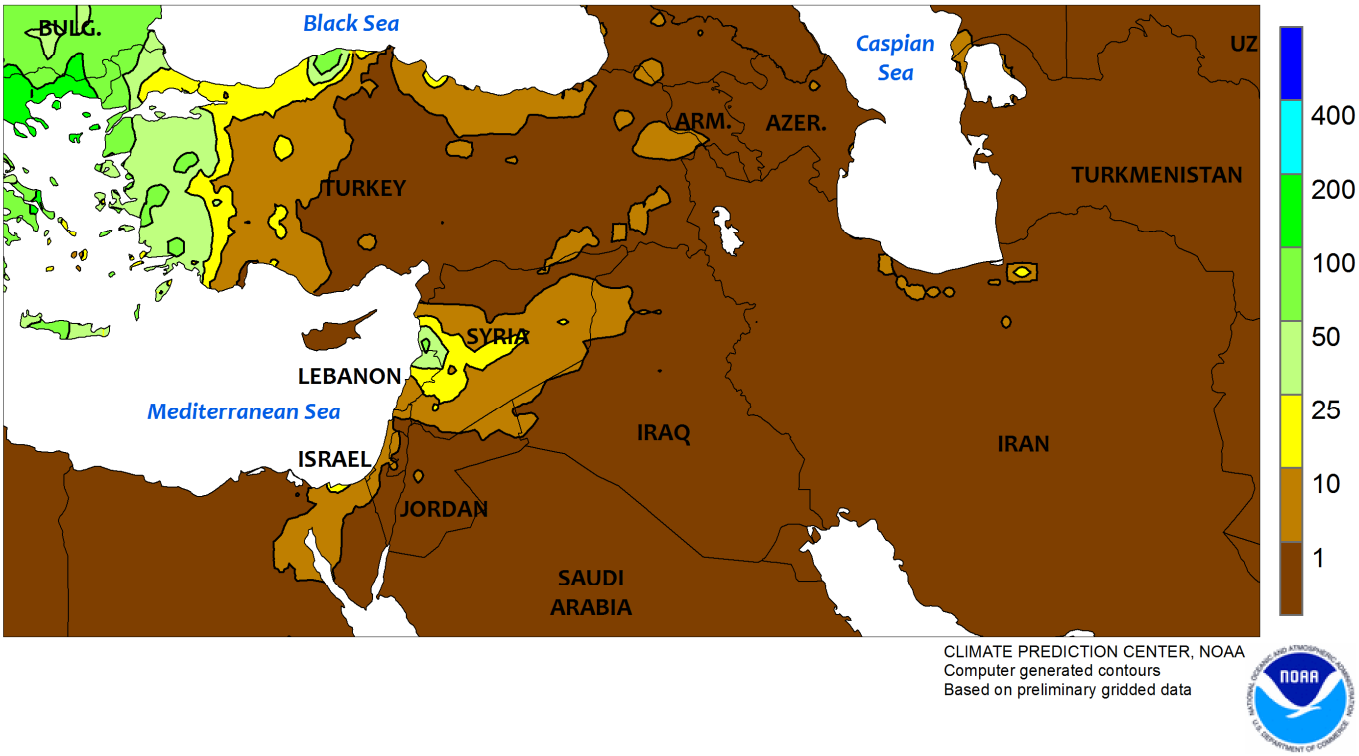


WESTERN FSU

Showers briefly delayed harvesting in central Ukraine, while dry weather elsewhere favored a rapid pace of fieldwork. A narrow band of moderate to heavy showers (10-35 mm) extending northward from southern Ukraine renewed corn and soybean harvest delays, though the rain — which fell primarily on October 12 — was followed by dry weather. Elsewhere, summer crop harvesting and other seasonal fieldwork progressed at a rapid pace under sunny skies and near-normal temperatures.

For additional information contact: mark.brusberg@usda.gov

MIDDLE EAST
Total Precipitation (mm)
October 10 - 16, 2021



MIDDLE EAST

Heavy rain over western Turkey contrasted with dry weather elsewhere. A slow-moving storm over southeastern Europe triggered moderate to heavy showers (10-80 mm) from Thrace (northwestern Turkey) into the Aegean Region, slowing or halting late summer crop harvesting in the former and adversely impacting any unharvested cotton in the latter. Meanwhile, sunny skies promoted seasonal fieldwork from central Turkey into Iran. Producers are likely awaiting the onset of seasonal rains — which typically arrive by the end of October — before sowing winter grains.

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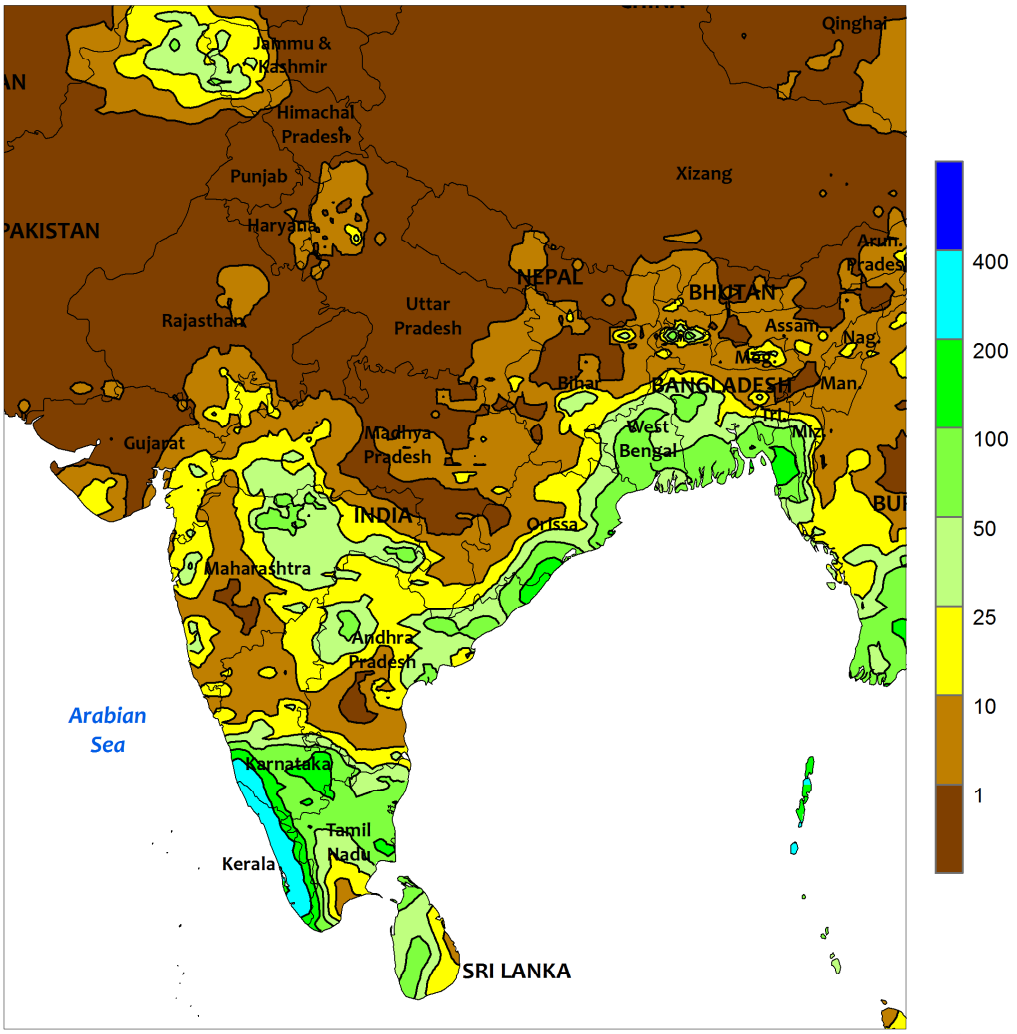
SOUTH ASIA
Total Precipitation (mm)
October 10 - 16, 2021

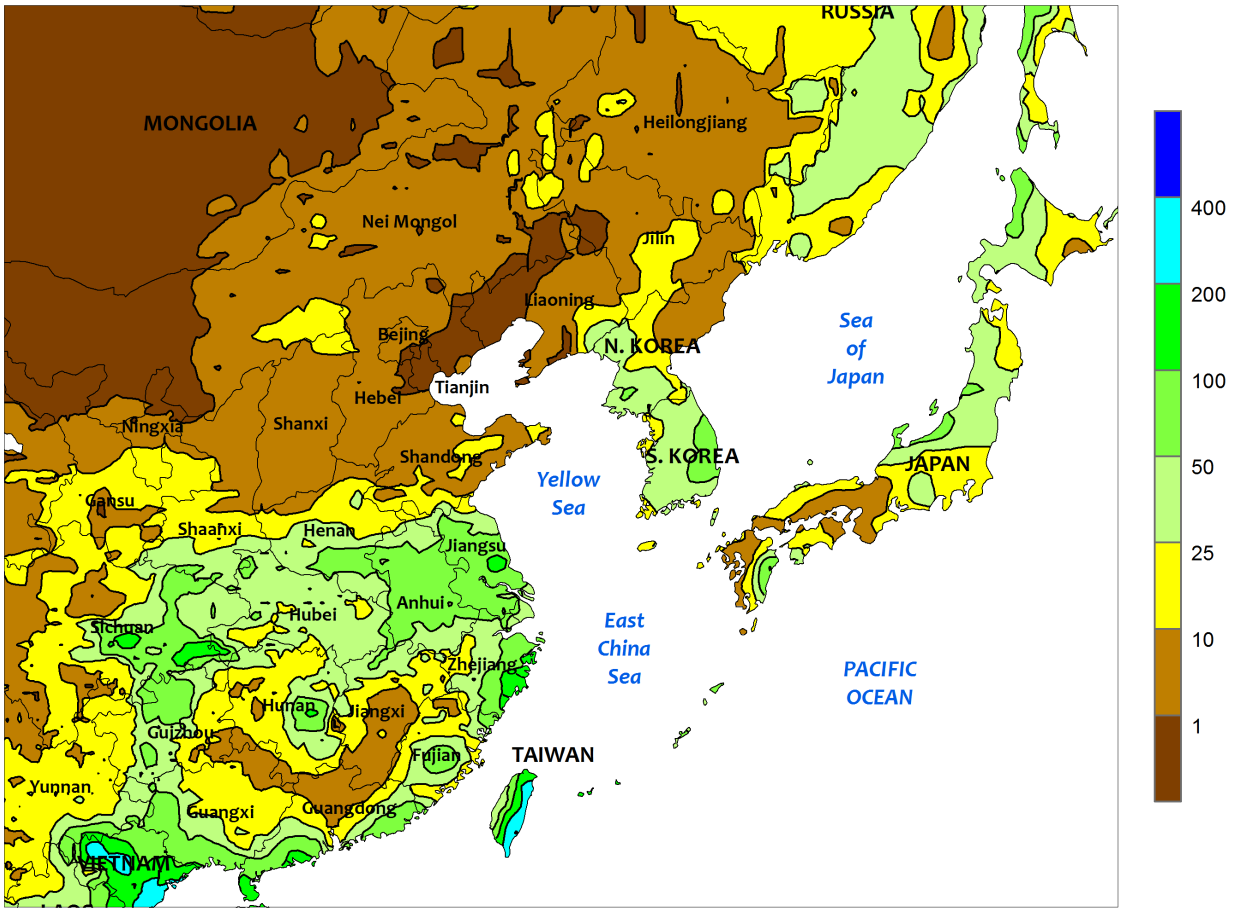


SOUTH ASIA

The southwest monsoon continued to withdraw from India at a near-normal pace. Drier weather across the north (and into Pakistan) supported harvesting of early-season kharif cotton and rice. Meanwhile, showers (25-100 mm or more) were limited to the southern peninsula and some coastal areas, providing continued moisture to late-season immature kharif crops including cotton and rice. Monsoon showers can linger into late October in southern India, providing moisture to later-planted kharif crops and boosting moisture reserves for rabi crop sowing beginning in November.

For additional information contact: mark.brusberg@usda.gov

EASTERN ASIA
Total Precipitation (mm)
October 10 - 16, 2021



CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

EASTERN ASIA

Occasional showers in southern China produced 10 to 50 mm (locally more), and along with cooler-than-normal weather (2-4°C below average), benefited recently sown rapeseed; planting typically lingers into November. Meanwhile, generally light rainfall (1-10 mm) on the North China Plain offered few interruptions of wheat sowing while aiding establishment of the crop.

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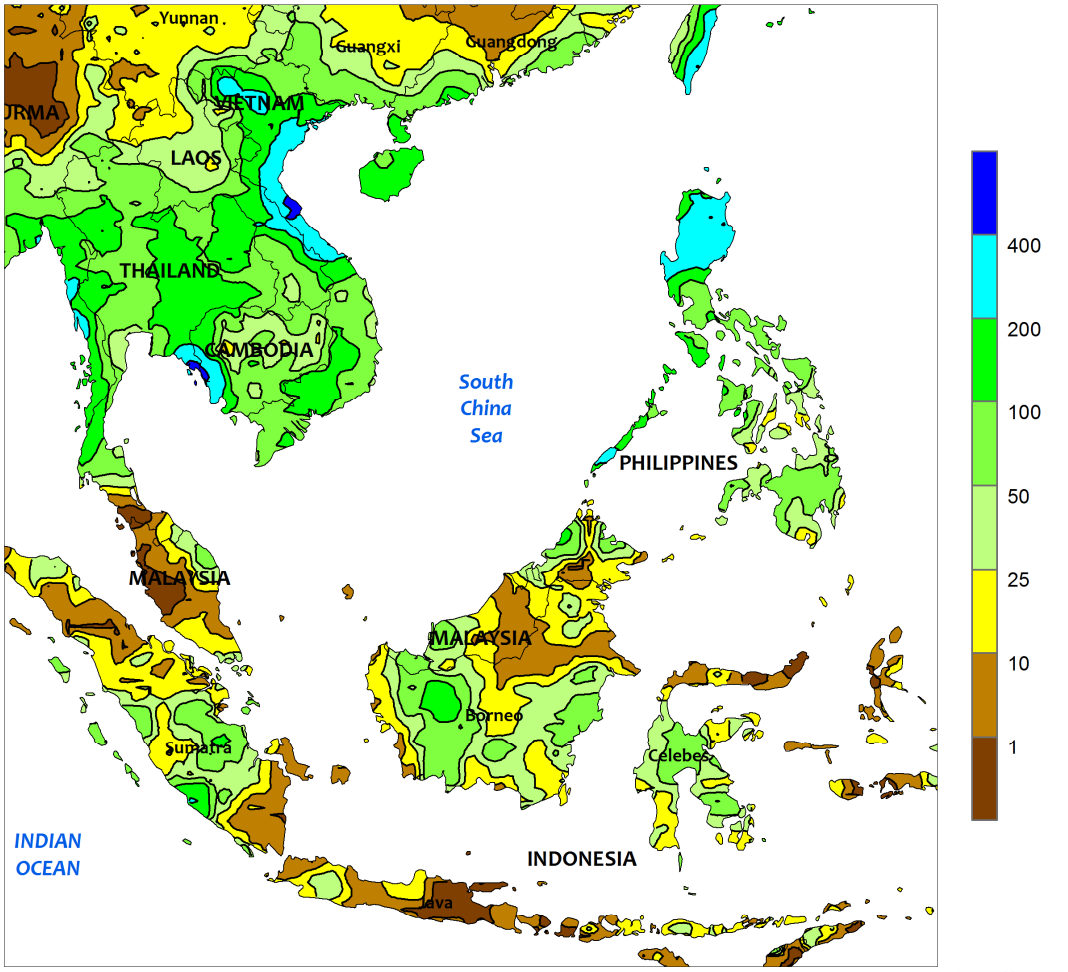
SOUTHEAST ASIA
Total Precipitation (mm)
October 10 - 16, 2021



CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

SOUTHEAST ASIA

Typhoon Kompasu skimmed the northern Philippines before making final landfall in northern Vietnam. The storm brought downpours (150-400 mm) to the aforementioned areas which were unwelcome for mature rice, likely reducing quality and yields somewhat. The remainder of the Philippines reported more seasonable rainfall amounts (25-100 mm or more), with enough dry periods for summer rice harvesting to proceed. Meanwhile, Thailand and the surrounding areas benefited from the remnants of Kompasu, as upwards of 200 mm increased reservoirs and aided immature rice. To the south, periods of dry weather supported oil palm harvesting in Malaysia and nearby sections of Indonesia, while somewhat lighter-than-normal showers (less than 25 mm) prevailed in southern Indonesia (Java) following a quick start to the wet season; the wet season typically begins in November.

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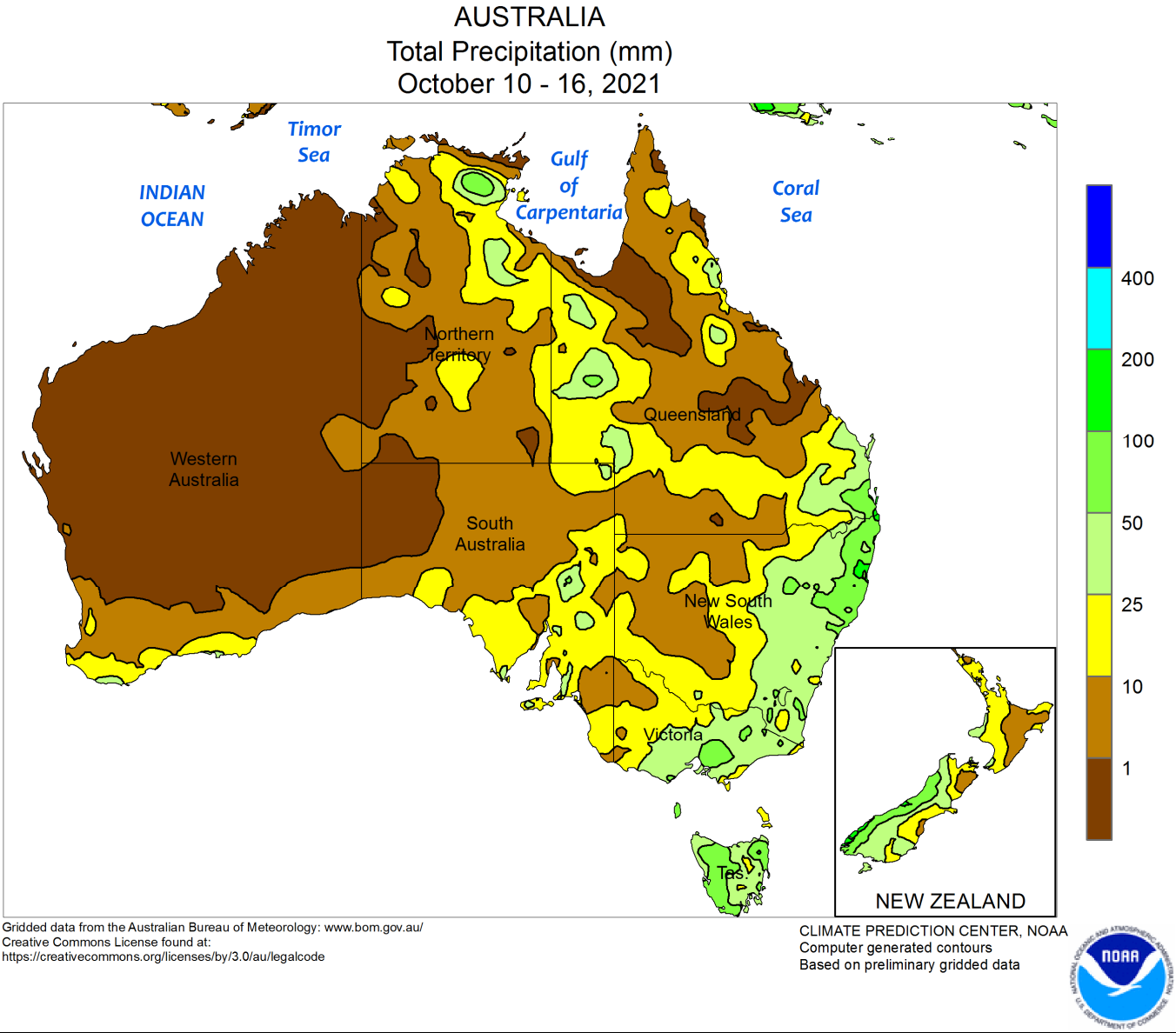

AUSTRALIA

Scattered showers (5-20 mm, locally more) in Western Australia and South Australia benefited filling winter crops but slowed drydown of maturing winter grains and oilseeds. Farther east, more widespread and heavier rain (20-50 mm) in Victoria, New South Wales, and southern Queensland soaked the eastern wheat belt. The wet weather kept recently sown summer crops well watered and likely triggered additional planting. The rain also promoted further development of immature winter crops in the south but slowed maturation and harvesting in the north. Winter crop prospects remained good to excellent in most areas, but the wet weather raised some concerns about crop quality, especially in the earlier-maturing varieties. Temperatures averaged 1 to 3ºC below normal throughout most of the wheat belt.

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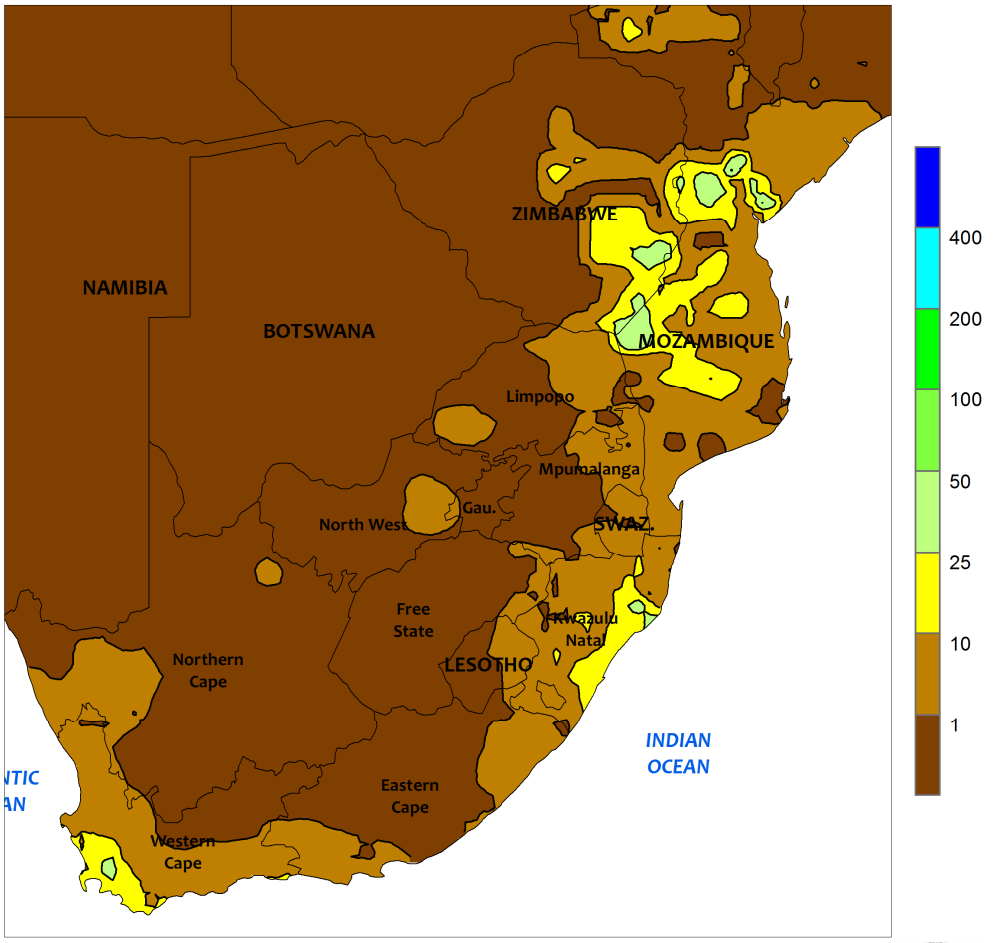
SOUTH AFRICA
Total Precipitation (mm)
October 10 - 16, 2021



CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

SOUTH AFRICA

Warm, sunny weather promoted rapid germination of early-sown summer crops, following recent periods of beneficial rainfall. Little to no rain fell in the corn belt (North West and Free State eastward) as only outlying production areas in Limpopo and KwaZulu-Natal reported measurable rainfall (1-10 mm). Weekly temperatures averaged 2°C above normal (daytime highs reaching the lower 30s degrees C) in and around Mpumalanga, where planting was underway and the summer warmth promoted rapid germination. Elsewhere, light rain (5-25 mm) fell along the coasts of KwaZulu-Natal and Western Cape, otherwise near complete dryness prevailed.

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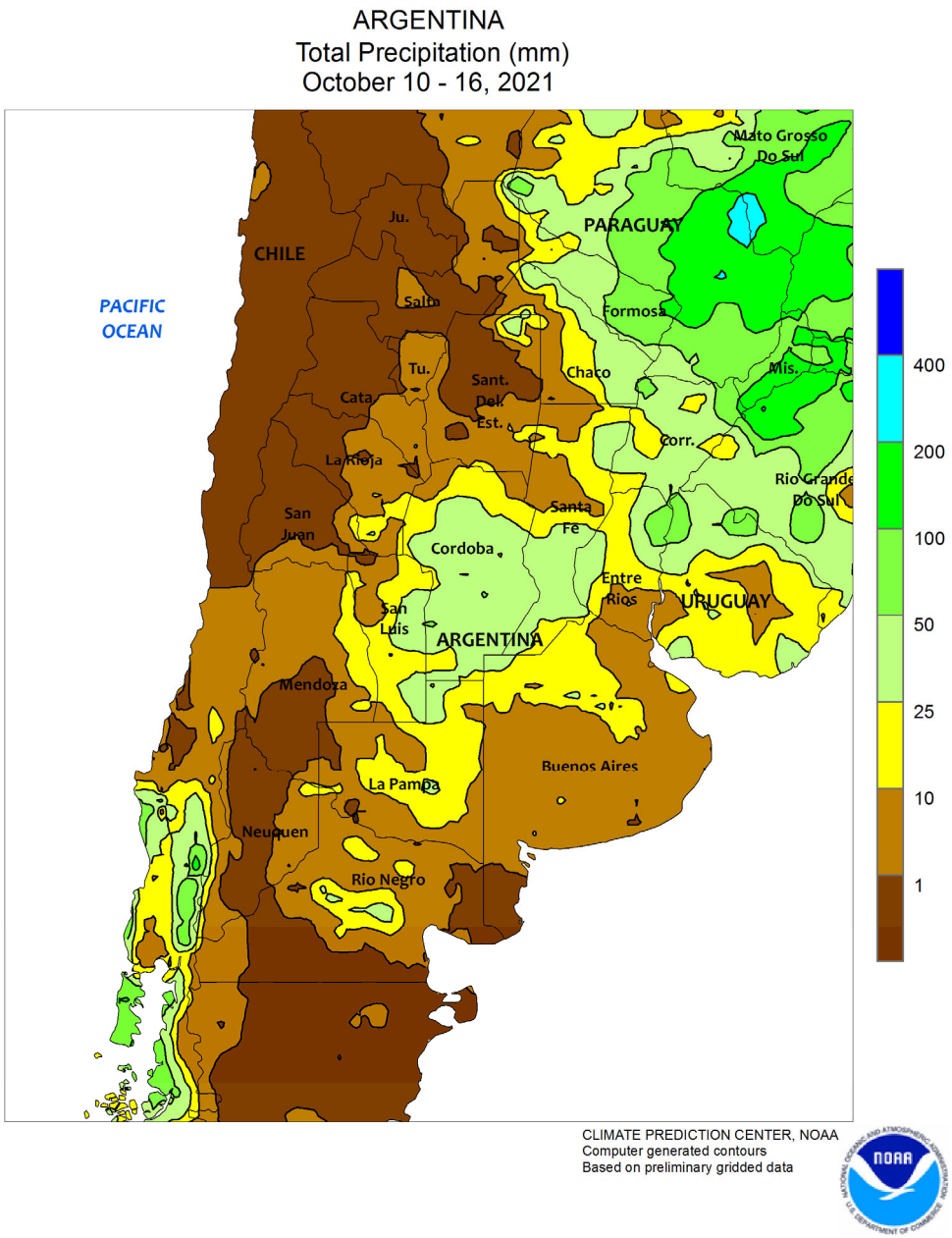

ARGENTINA

Showers provided timely moisture for winter grains and emerging summer crops in previously dry sections of central and northeastern Argentina. Rainfall totaled 10 to 50 mm from Cordoba to Entre Rios; lighter rain (3-25 mm) fell across most of La Pampa and Buenos Aires. Moderate to heavy rain (25-100 mm) fell in northeastern Argentina, including portions of the northern cotton belt (Santa Fe to eastern Formosa). Drier weather continued to dominate the northwest (notably Santiago del Estero and Salta), where seasonal rainfall should be on the rise, and moisture was limited for development of winter grains and germination of summer grains, oilseeds, and cotton. Weekly temperatures averaged near to slightly below normal throughout much of the region and freezes were again recorded in southern sections of Buenos Aires. In contrast, occasionally hot weather (daytime highs reaching the upper 30s and lower 40s degrees C) exacerbated the impacts of the dryness on crops in the far north. According to the government of Argentina, sunflowers were 27 percent planted as of October 14, lagging last year's pace by 5 points; corn was 28 percent planted versus 29 percent last year.

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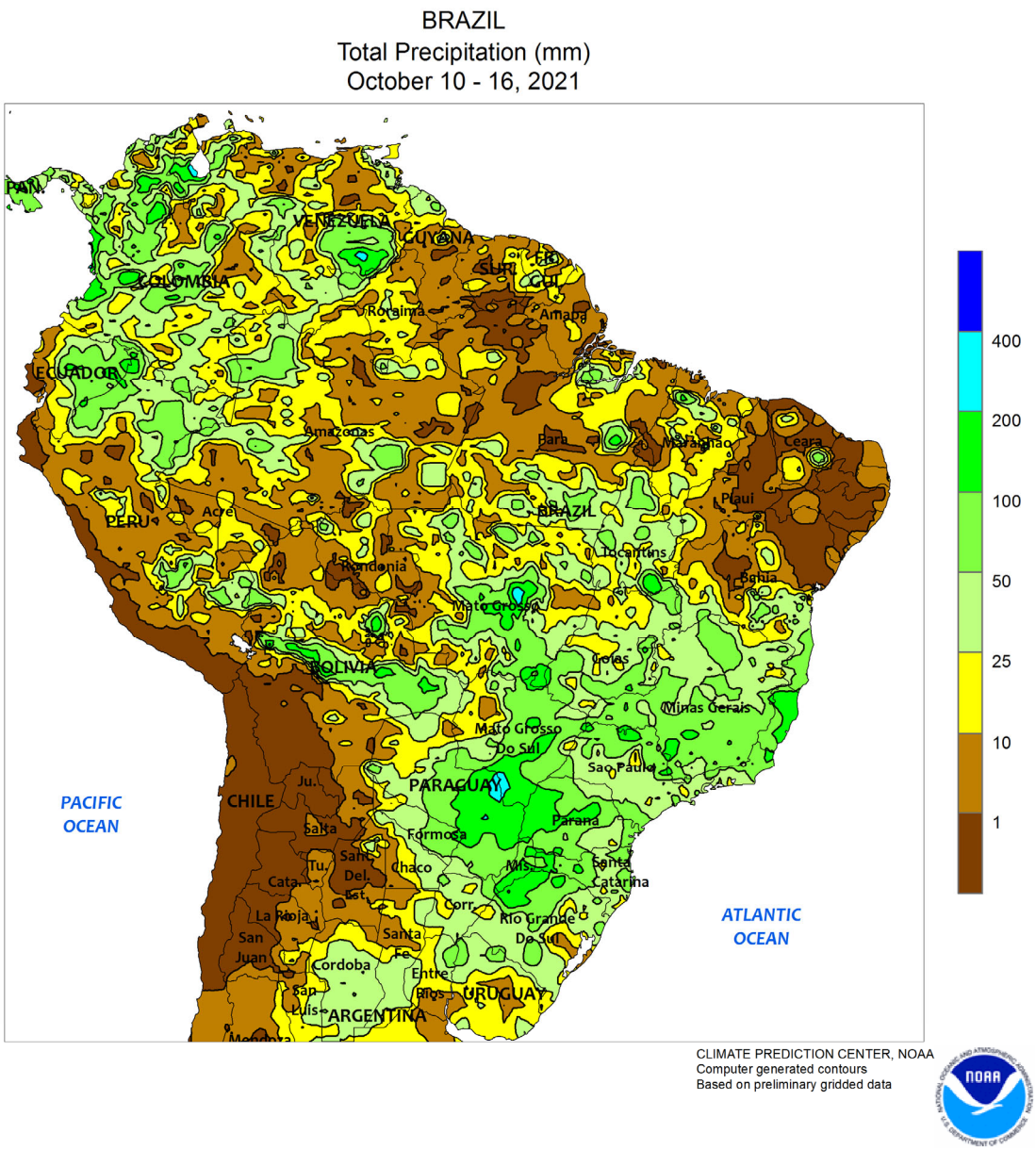

BRAZIL

Showers increased in both intensity and coverage, supplying soybeans and other recently planted summer crops with much-needed moisture. Moderate to heavy rain (25-50 mm) covered much of the Center West Region (Mato Grosso, Goias, and Mato Grosso do Sul); the rainfall extended eastward into the northeastern interior, enabling the start of soybean planting in areas with sufficient moisture. Highest daytime temperatures reached the middle and upper 30s (degrees C) in central and northeastern Brazil, maintaining high evaporative losses. According to the government of Mato Grosso, soybeans were 45 percent planted as of October 15, nearly 20 points ahead of the 5-year average. Farther south, moderate to heavy rain (25-50 mm, locally exceeding 100 mm) maintained adequate to abundant levels of moisture for immature wheat and emerging soybeans and corn from Parana southward, extending westward into Paraguay. According to the government of Rio Grande do Sul, wheat was 5 percent harvested as of October 14, with nearly 85 percent ranging from filling to maturing in development; meanwhile, corn was 65 percent planted. The moisture was also beneficial for coffee in and around Minas Gerais, but additional rain will be needed for sugarcane and other crops in Sao Paulo after an extended drought.

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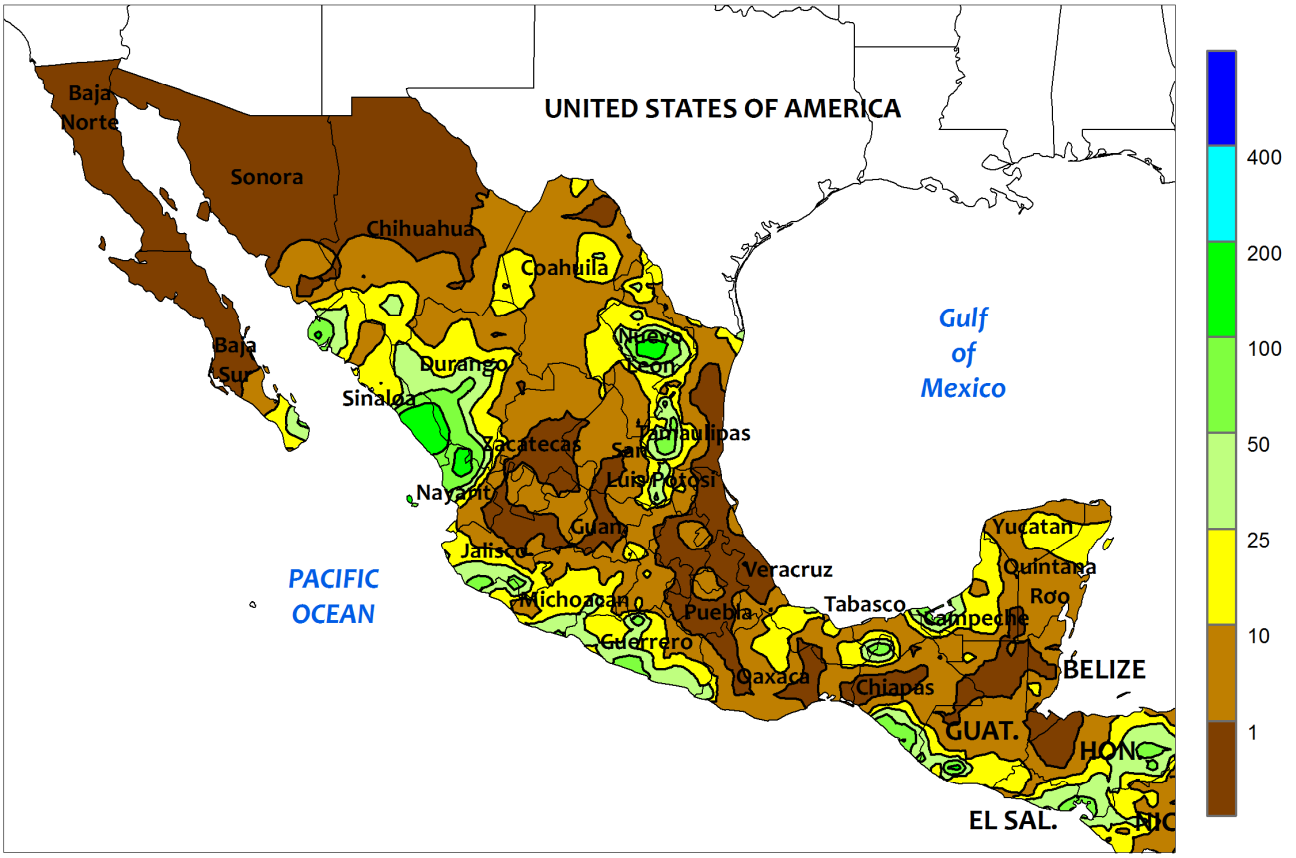
MEXICO
Total Precipitation (mm)
October 10 - 16, 2021



CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

MEXICO

Hurricane Pamela brought locally heavy showers to western farming areas, while other parts of the country were seasonably drier. Pamela struck the western Pacific Coast with maximum sustained winds of 65 knots on October 13 before rapidly moving inland and weakening over the northeast. Rainfall totaling 50 to 100 mm – locally higher – was recorded near the point of landfall (southern Sinaloa, northern Nayarit, and southern Durango), but only a few isolated locations in the path of the storm's remnants recorded similar amounts. Mostly dry weather prevailed elsewhere, including previously wet locations in southern Mexico. Except for the far northwest (Sonora and Baja Norte), the dryness was accompanied by above-normal temperatures, helping to hasten maturation of corn and other summer crops. However, daytime highs approaching 40°C maintained high water demands of livestock in the northeast (Coahuila to Tamaulipas).

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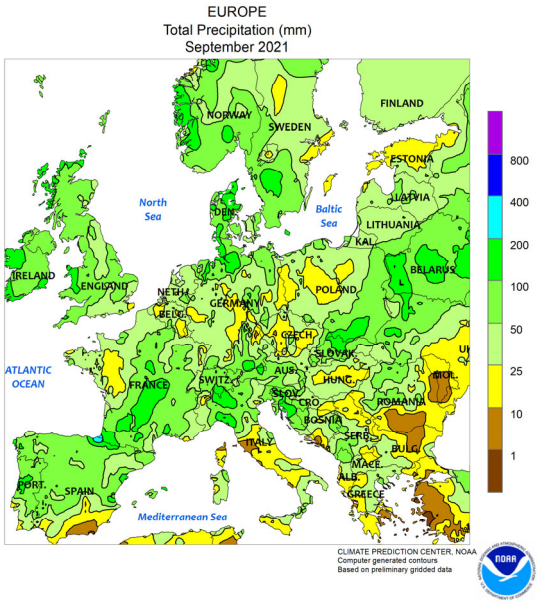
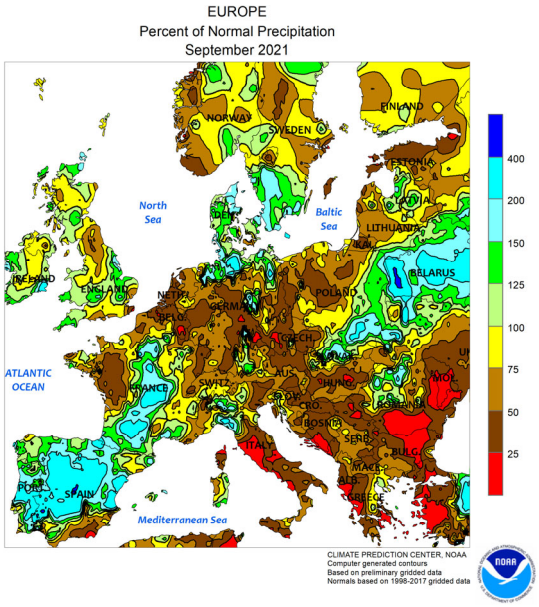
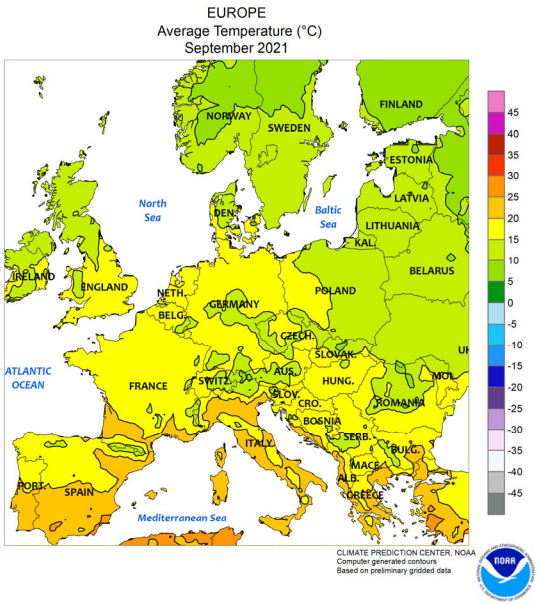
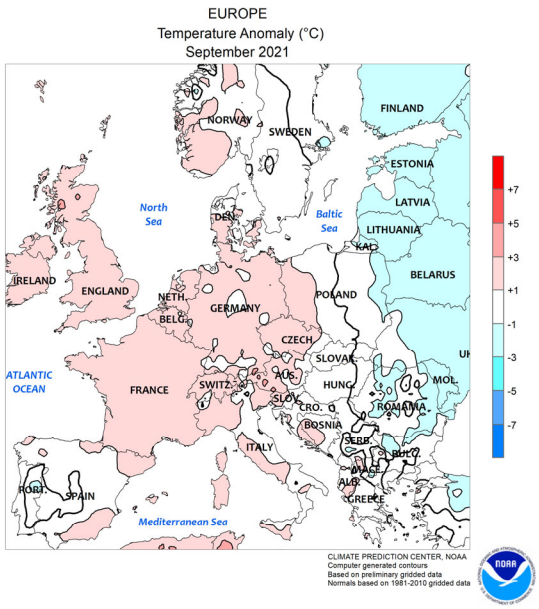
September International Temperature and Precipitation Maps









EUROPE

During September, dry weather across much of central and southeastern Europe contrasted with wet conditions in many western growing areas. Moderate to heavy rainfall (50-135 mm, locally more than 250 percent of normal) was reported from central France southwestward into Spain and Portugal, hampering fieldwork but providing good moisture for winter crop establishment. However, rain continued to bypass crop areas in western France, leaving soils unfavorably dry for winter wheat and rapeseed. Moderate to heavy showers (40-150 mm) likewise kept soils moist for winter crops from England into Scandinavia. Another ribbon of above-normal rainfall was noted from Slovakia into southern Poland. Conversely, drier-than-normal weather (25-75 percent of normal) from the Low Countries southward into much of Italy, Greece, and the Balkans promoted summer crop drydown and harvesting but left soil moisture in short supply for winter crop establishment in the lower Danube River Valley. September featured above-normal temperatures (up to 3°C above normal) across most of the continent, with cooler-than-normal weather (1-2°C below normal) confined to the Baltic States.

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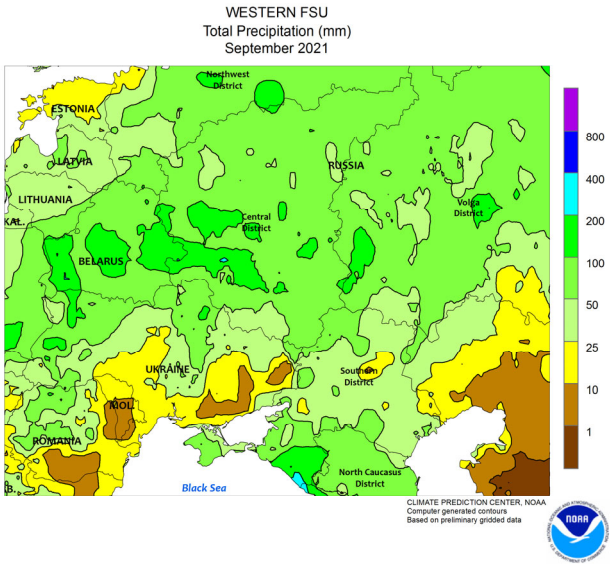

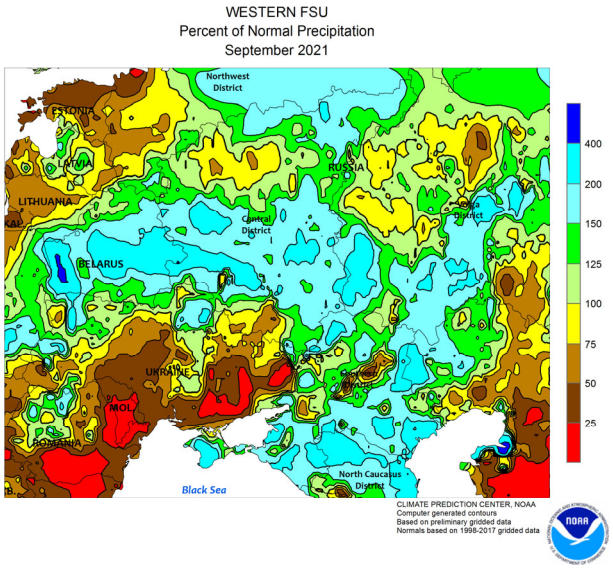

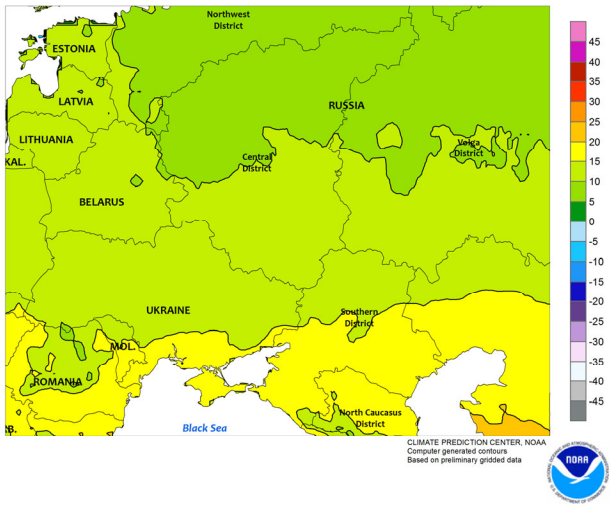

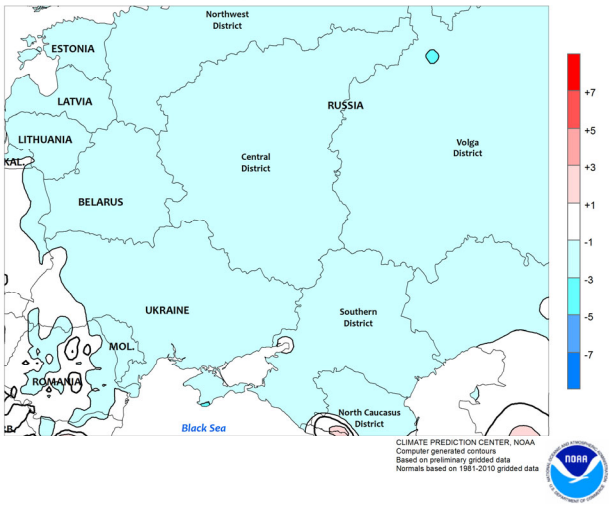

WESTERN FSU

Wet, chilly weather prevailed over much of the region during September, though dry conditions were noted in south-central Ukraine and environs. A dry month (less than 50 percent-of-normal rainfall) from Moldova into southeastern Ukraine allowed sunflower and soybean harvesting to gain momentum, while moderate to heavy rain (60-100 mm, 150-200 percent of normal) impeded corn harvesting in north-central Ukraine. The rest of the region experienced cool, wet weather (up to 3°C below normal, locally more than 200 percent-of-normal rainfall), hampering summer crop harvest efforts but maintaining good to excellent moisture supplies for winter crop establishment, especially in key wheat areas of southwestern Russia.

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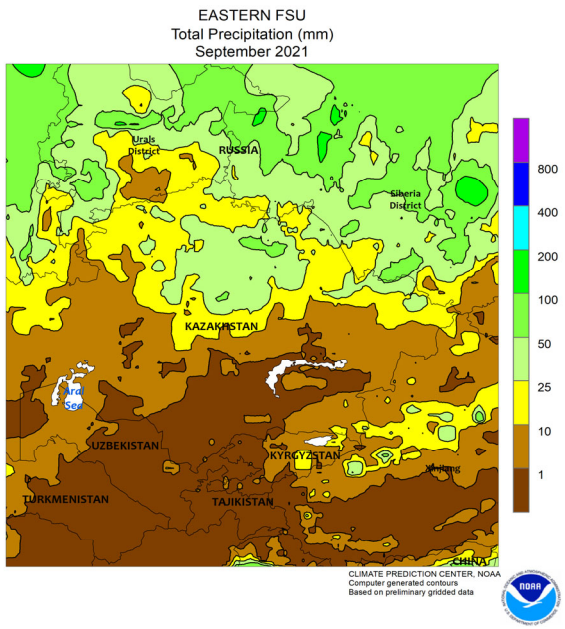
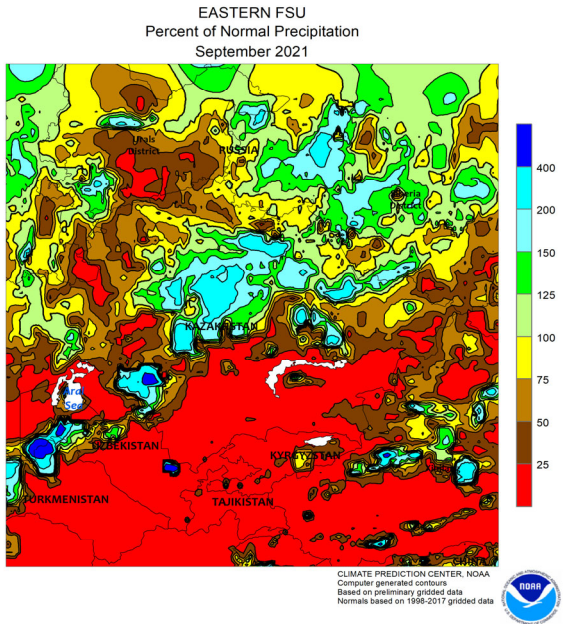
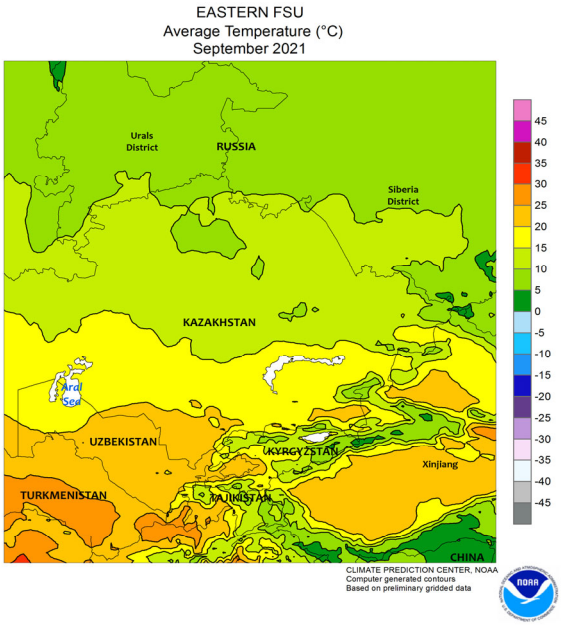
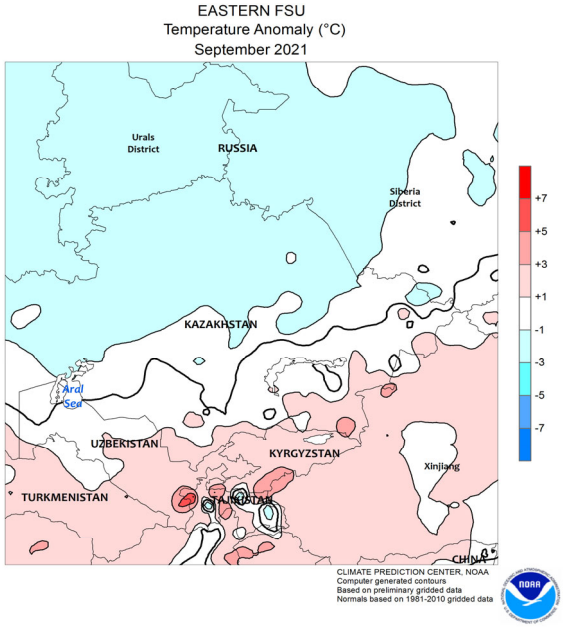




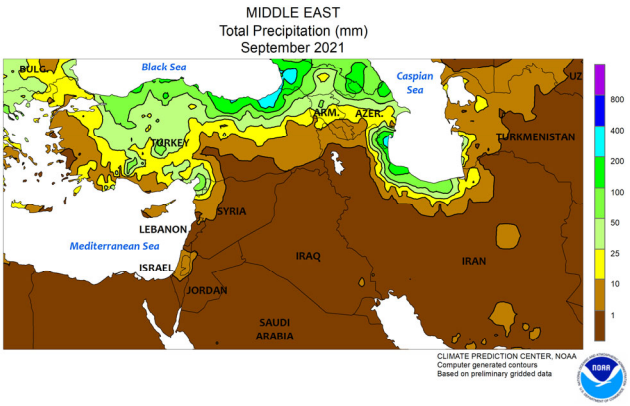


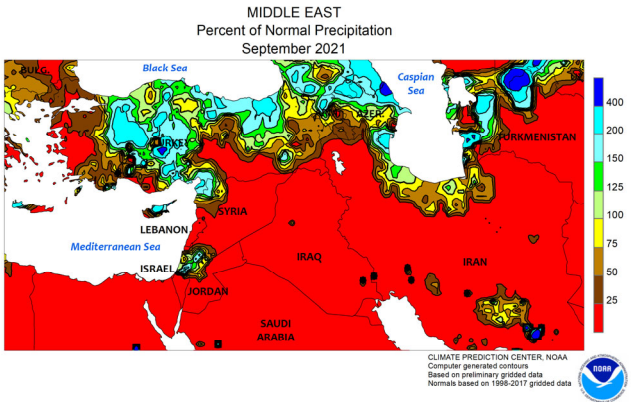


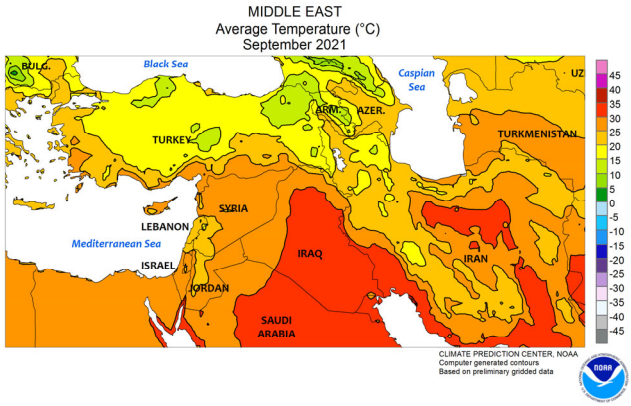
EASTERN FSU

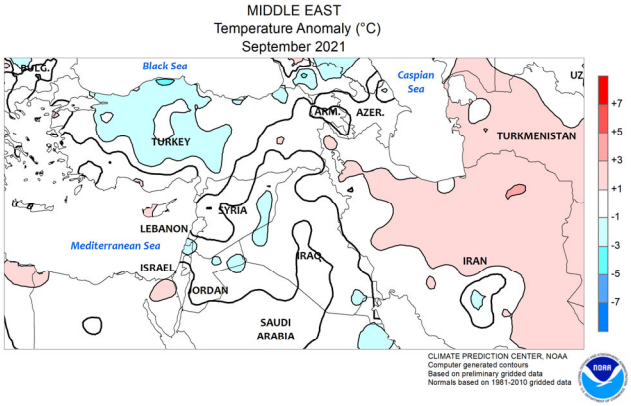
Cooler weather settled over the region, with continued dryness in the west contrasting with late-season rain in the east. During September, the wet end of the growing season continued from northeastern Kazakhstan into Russia's Siberia District, with most areas reporting 50 to 150 mm of rainfall (100-275 percent of normal). The rain likely impeded late harvesting efforts but was otherwise inconsequential to mature spring wheat and barley. Meanwhile, dryness prevailed over the western half of the region, maintaining drought but having little further deleterious impacts on mature wheat and barley. However, colder weather settled over the region's spring grain belt, with temperatures up to 2°C below normal in sharp contrast to this summer's blistering heat. Farther south, the cotton belt (Uzbekistan and neighboring environs) was seasonably dry; the bulk of the cotton region's cool-season precipitation — vital to irrigation supplies for summer crops — typically occurs from November through May.

For additional information contact: mark.brusberg@usda.gov





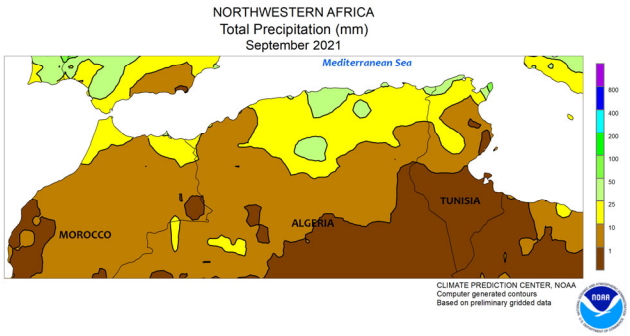


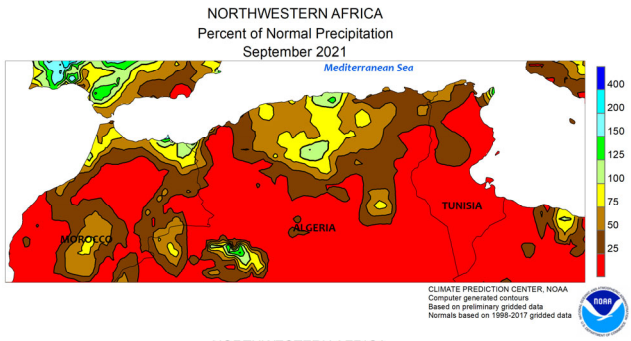


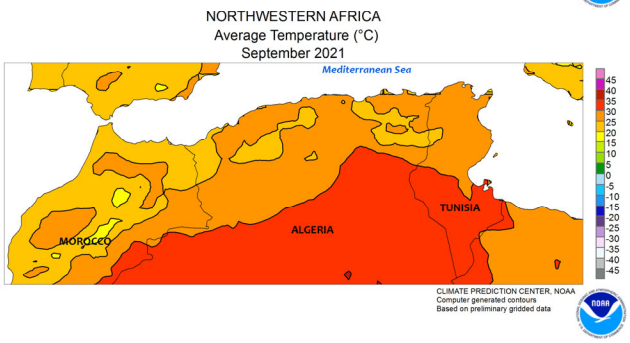
MIDDLE EAST

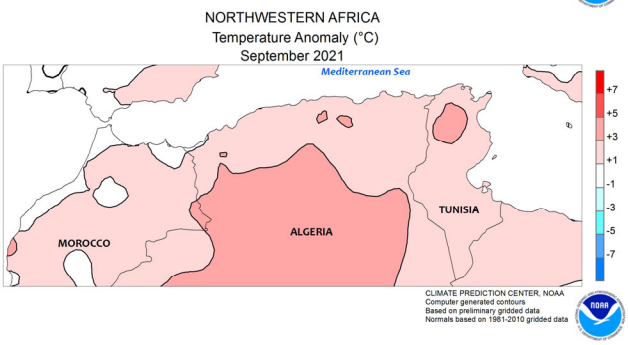
Rain in Turkey and along the northern coasts contrasted with seasonably dry weather elsewhere. Moderate to very heavy rainfall (50-200 mm, locally more) was reported along the Black and Caspian Sea Coasts, though these areas often report orographically enhanced rainfall totals as moisture from the adjacent water bodies encounters the nearby mountainous terrain. More notably, early-season showers (20-50 mm, locally more) over central Turkey's Anatolian Plateau as well as the southeastern Adana Region moistened topsoils and likely encouraged some early winter grain sowing. Dry weather prevailed elsewhere, with seasonal rains typically arriving by late October from the eastern Mediterranean Coast into Iran.

For additional information contact: mark.brusberg@usda.gov



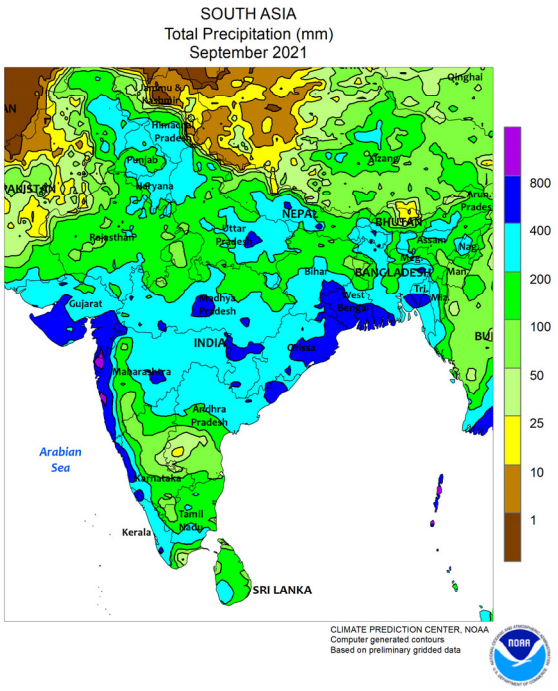


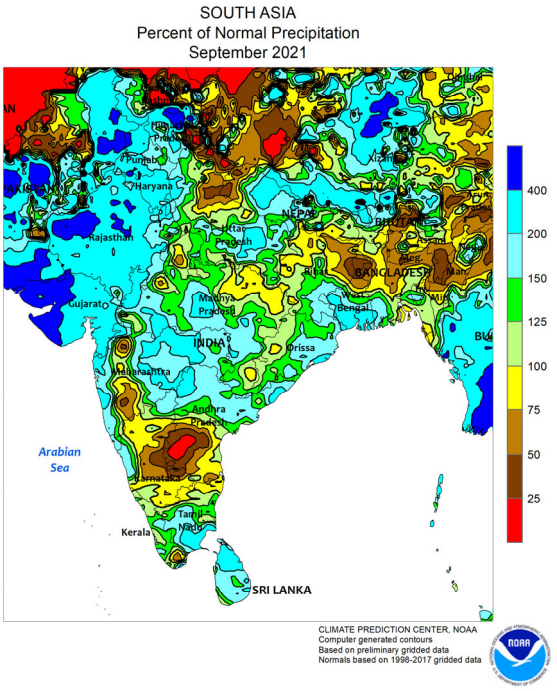


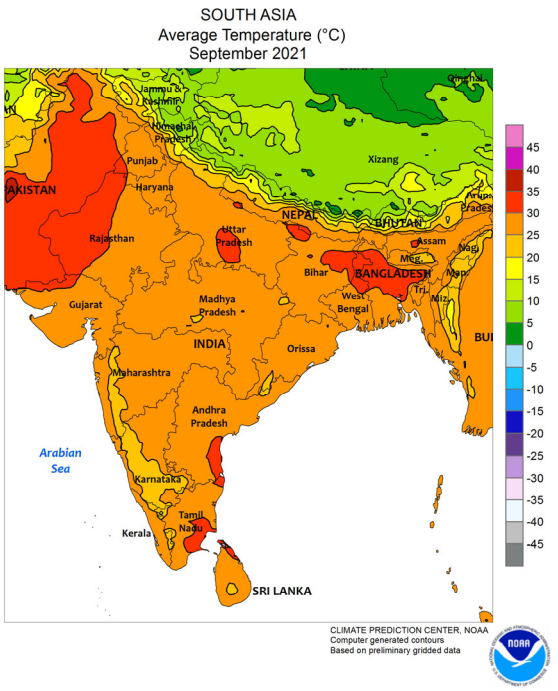


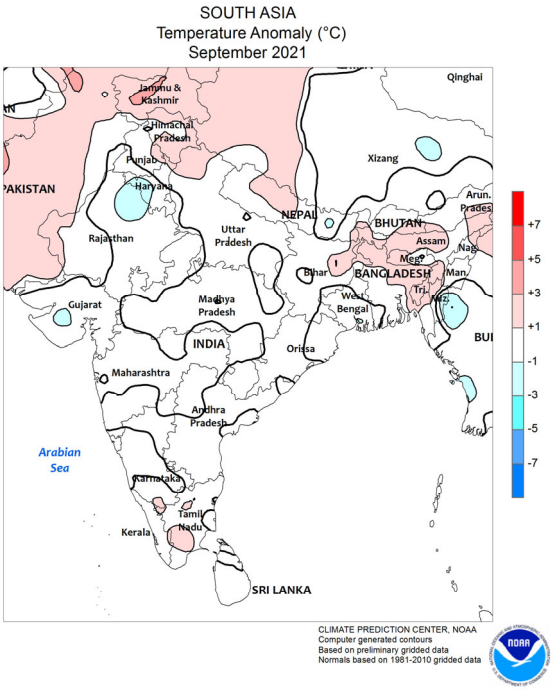
NORTHWESTERN AFRICA

During September, showers in central and northeastern growing areas contrasted with mostly dry weather elsewhere. Showers and thunderstorms (10-60 mm) were reported from the central Tell of Algeria eastward into northern-most Tunisia. Seasonal rains typically return in September to Tunisia and northeastern Algeria; as a result, these monthly rainfall totals were well short of normal (locally less than 25 percent of normal), though the bulk of the cool-season rainfall occurs from November through April. In north-central Algeria, however, September's rain was closer to normal. From western Algeria into Morocco, seasonably dry weather prevailed, with these western growing areas typically receiving their first rain in October. Winter grains are sown from October through December, pending the arrival of consistent, uniform rainfall.









SOUTH ASIA

Following poor rainfall in August, September rainfall was greatly improved across the region. A resurgent monsoon and a late-month tropical cyclone (Shaheen) produced widespread downpours in India with most areas recording well in excess of 150 mm of rain (100-250 percent of normal). The late-season moisture benefited western cotton and eastern rice as well as other kharif crops planted later in the season. However, the moisture was less welcome for maturing cotton and rice in northern India and Pakistan, which were planted early in the season. Monsoon showers can linger well into October, particularly in southern India where late-season kharif crops can still benefit from the extended wet weather.

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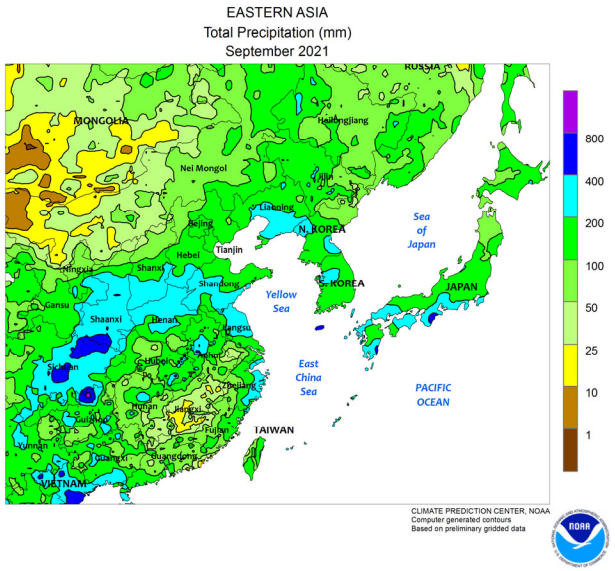
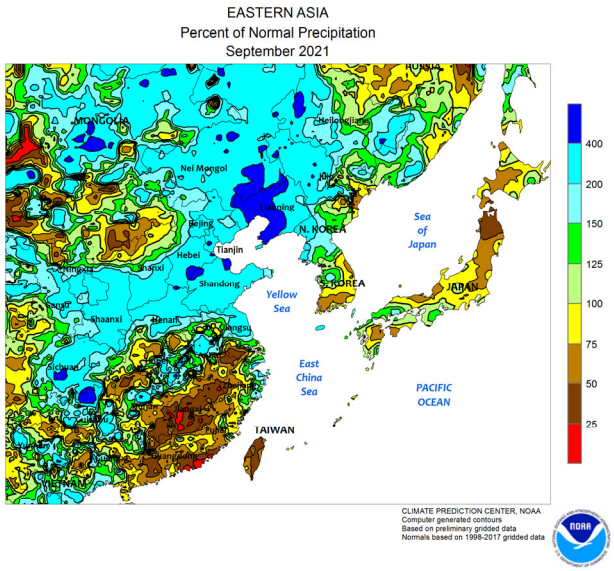
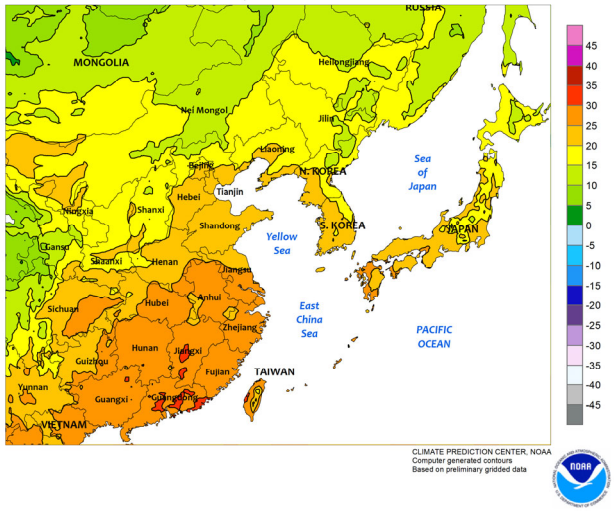
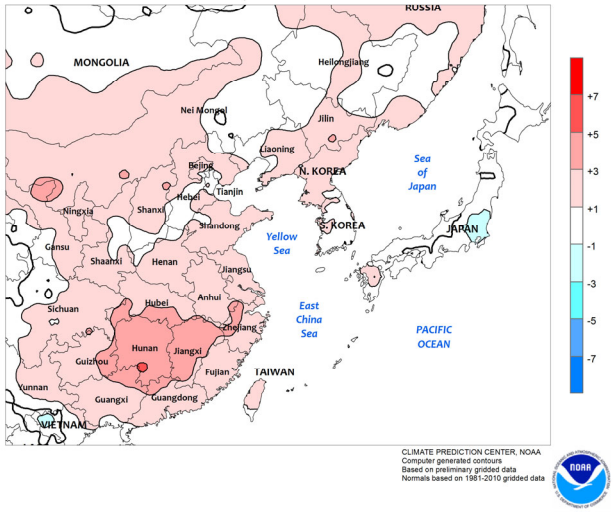


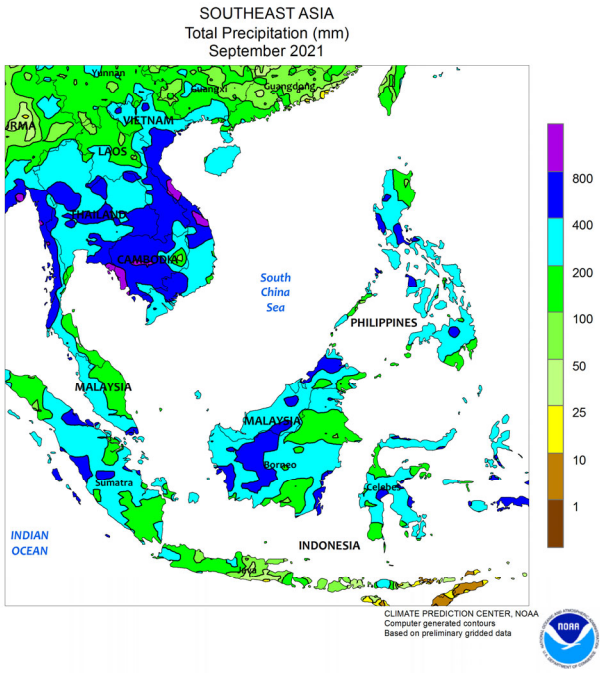


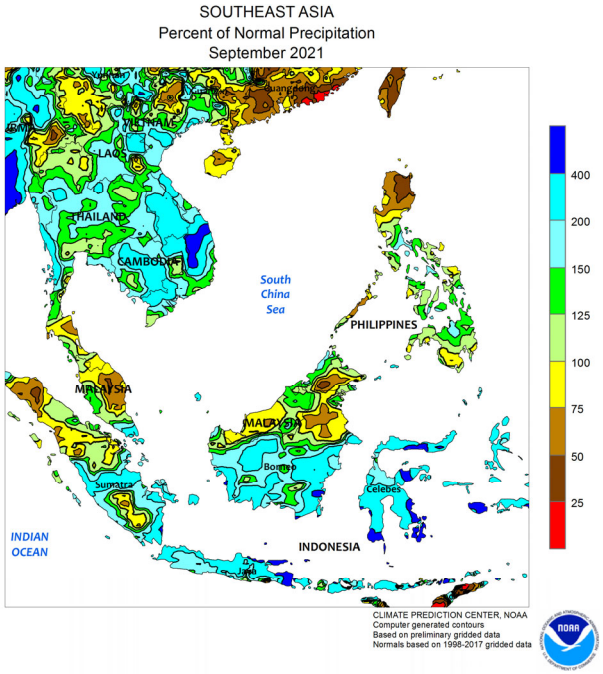


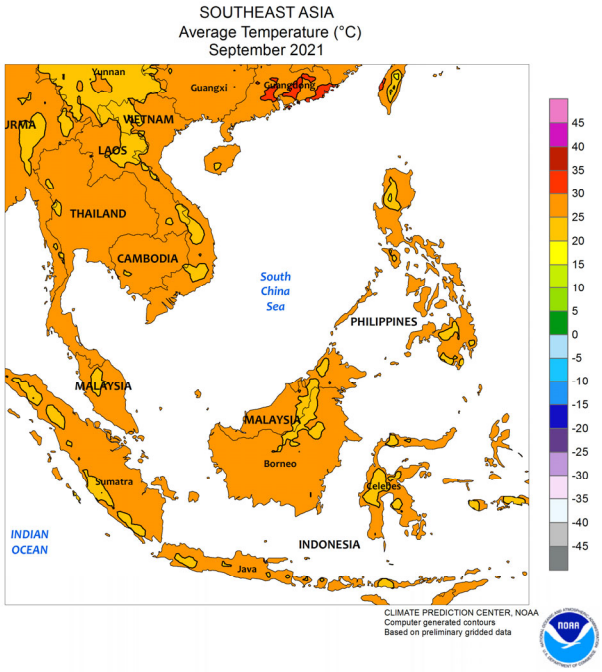


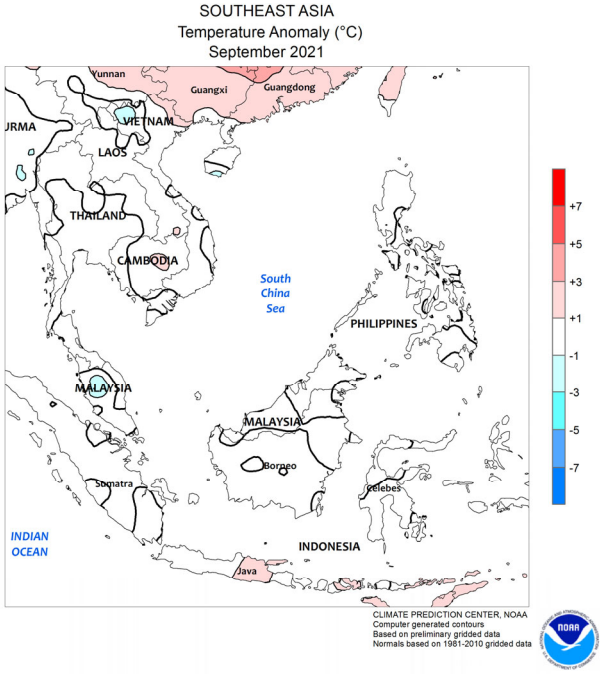
EASTERN ASIA

During September most summer crop areas in China recorded above-average rainfall, although below-average rainfall prevailed in the southeast. In northeastern China, most corn and soybean areas received 100 to 150 mm of rain (200-400 percent of normal), which came too late in the season to benefit maturing crops. Even higher rainfall totals (150-600 mm, 200-400 percent of normal) occurred in a band extending from the upper Yangtze Valley onto the North China Plain. As in the northeast, the wet weather did not benefit maturing summer crops but did increase moisture reserves for winter crops sown in the following months. Meanwhile, poor rainfall in the southeast (less than 70 percent of normal) limited moisture for the portion of late-crop rice that was in the reproductive stages of development; rice development varied from reproductive to maturing. Elsewhere, warm, dry weather in western China (Xinjiang) aided cotton maturation and harvesting, while heavier-than-normal showers (150-300 mm) on the Korean Peninsula and into southern Japan were generally unwelcome for maturing rice.





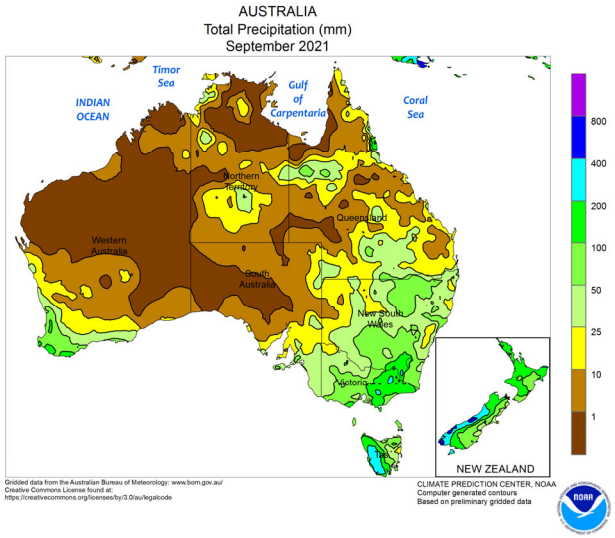


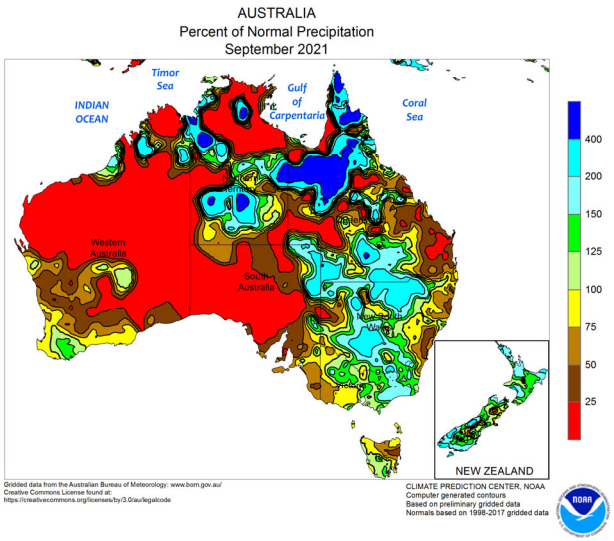


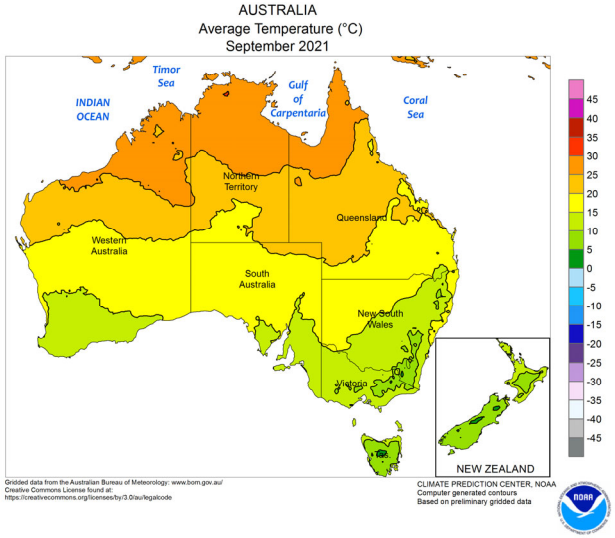
SOUTHEAST ASIA

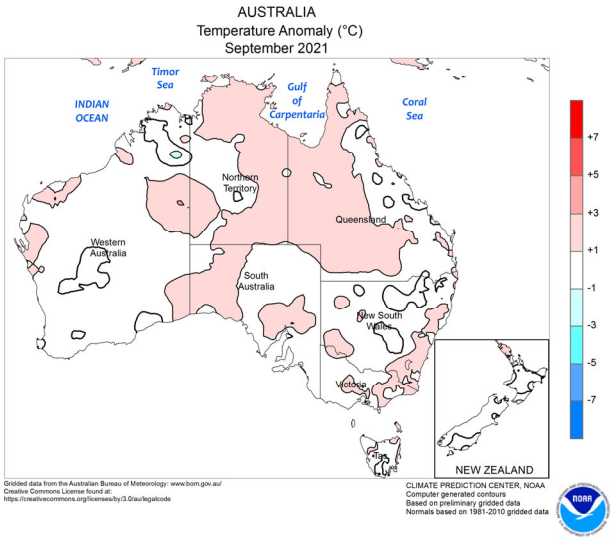
An active monsoon and a pair of tropical cyclones brought above-average rainfall to most of the region. In Thailand and environs, rainfall totals were in excess of 250 mm (125-200 percent of normal, locally over 400 percent of normal), providing ample moisture to reproductive rice and other seasonal crops. Some of the highest totals (over 600 mm) were recorded in the northern half of Vietnam, the result of two tropical cyclones (Conson and Dianmu) making landfall. Typhoon Chanthu produced downpours across a wide swath of the Philippines as it brushed the northeastern Philippines, though the main growing areas in the north reported below-average rainfall for the month (40-75 percent of normal). In other parts of the region, intermittent dry weather supported the main harvest period for oil palm in Malaysia and Indonesia. Meanwhile, the wet season in southern Indonesia (Java) was off to one of its earliest starts in the last 30 years, providing an early boost to moisture supplies ahead of the main growing season for rice.

For additional information contact: mark.brusberg@usda.gov



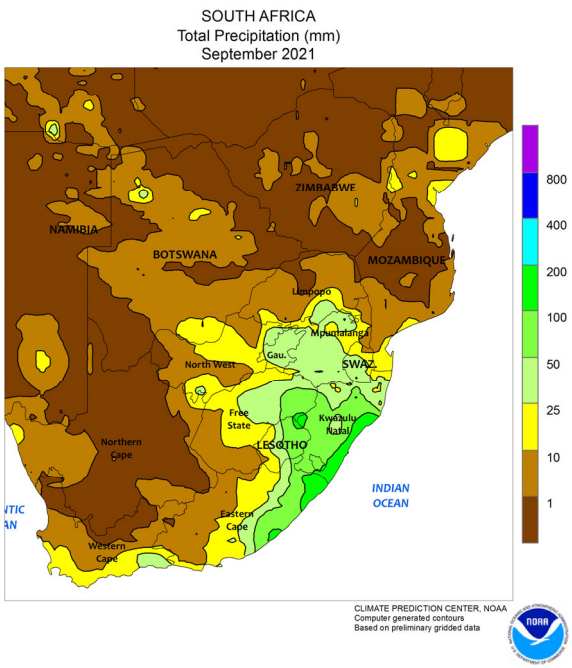


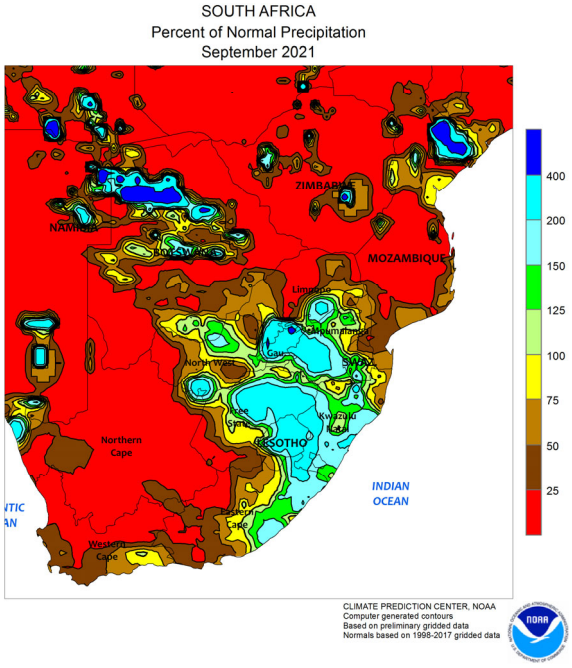


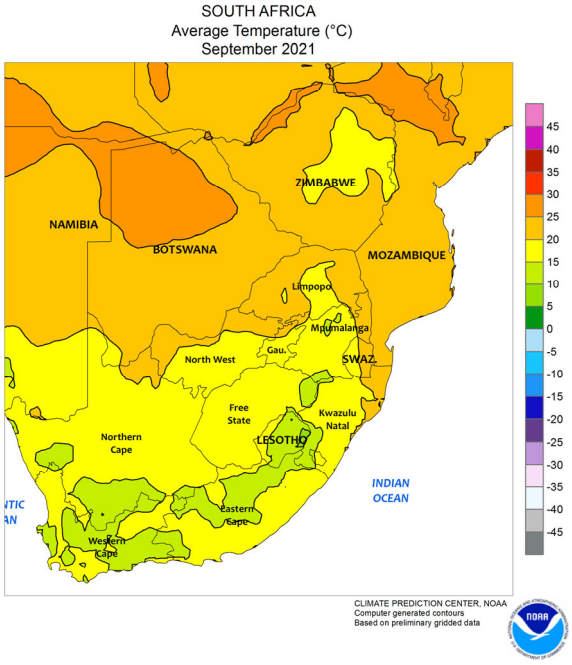


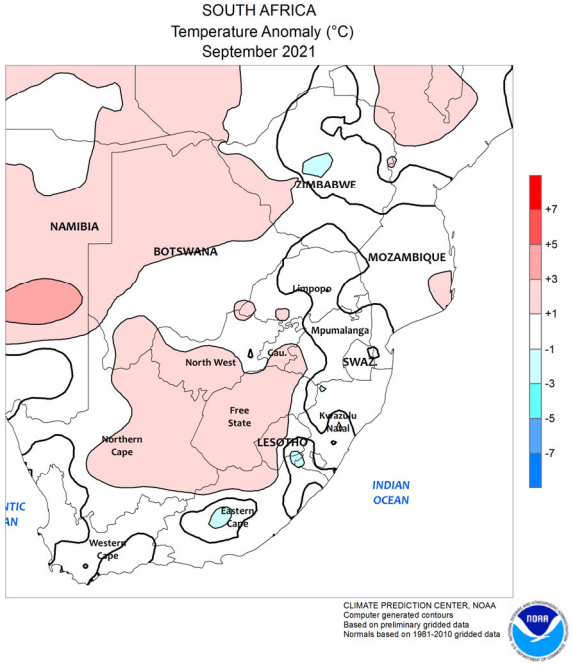
AUSTRALIA

During September, near- to above-normal rainfall in Western Australia, Victoria, and New South Wales maintained good to excellent yield prospects for reproductive to filling wheat, barley, and canola. In contrast, below-normal rainfall was measured across South Australia during September. However, timely rain during the first half of the growing season promoted winter grain and oilseed development in this state, helping to maintain good crop prospects despite the recent stretch of relatively dry weather. Elsewhere, mostly sunny skies in southern Queensland aided winter wheat maturation and helped maintain crop quality. The drier-than-normal weather favored fieldwork as well, including initial cotton, sorghum, and other summer crop planting. Although it was considerably wetter in New South Wales, summer crop planting also progressed, although likely at a somewhat slower pace. Temperatures averaged near normal throughout the wheat belt during September.





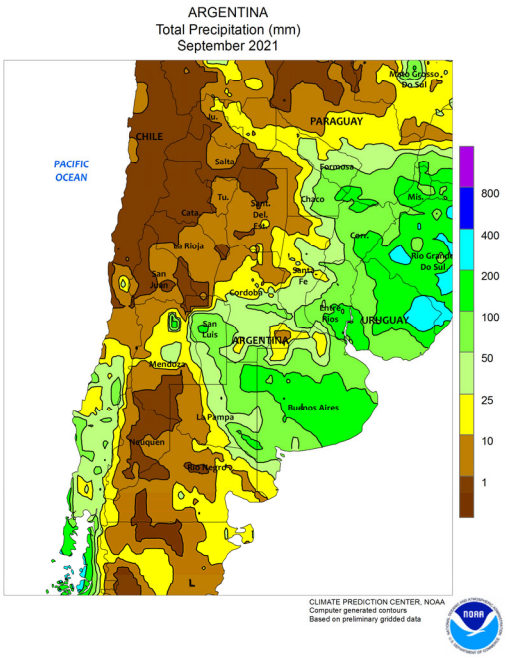


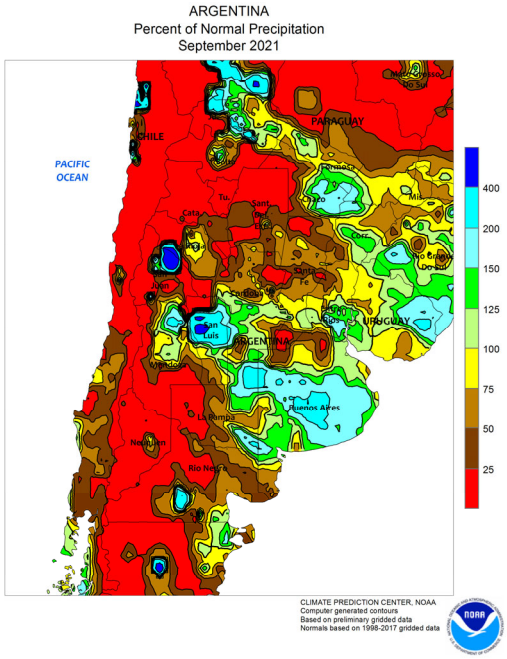


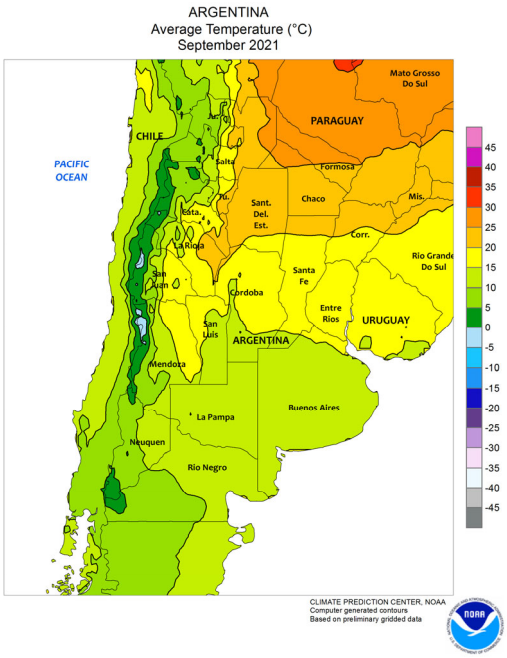
SOUTH AFRICA

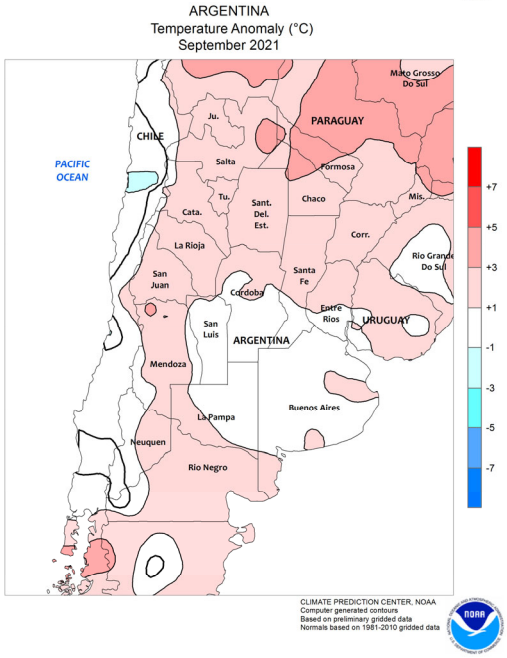
September showers helped to condition fields for planting in eastern sections of the corn belt. Much of the rain fell at month's end, providing timely moisture for germination and establishment of summer crops in and around Mpumalanga, where planting is typically underway in October. Rainfall was lighter in western portions of the corn belt (North West and western sections of Free State), although planting was months away and time remains to gain needed moisture. Elsewhere, locally heavy rain (monthly accumulations totaling more than 100 mm) along the southeastern coast benefited sugarcane and other summer crops in KwaZulu-Natal and eastern farming areas of Eastern Cape. Farther west, rainfall continued along the southern coast of Western Cape, with mostly dry weather in northwestern wheat areas. Monthly temperatures averaged near to slightly above normal in nearly all major farming areas, with lingering freezes confined to agricultural areas well inland and away from most sugarcane and wheat areas. The warm, sunny weather in Western Cape fostered rapid development of the generally well-watered wheat crop while aiding spring growth of tree and vine crops.

For additional information contact: mark.brusberg@usda.gov



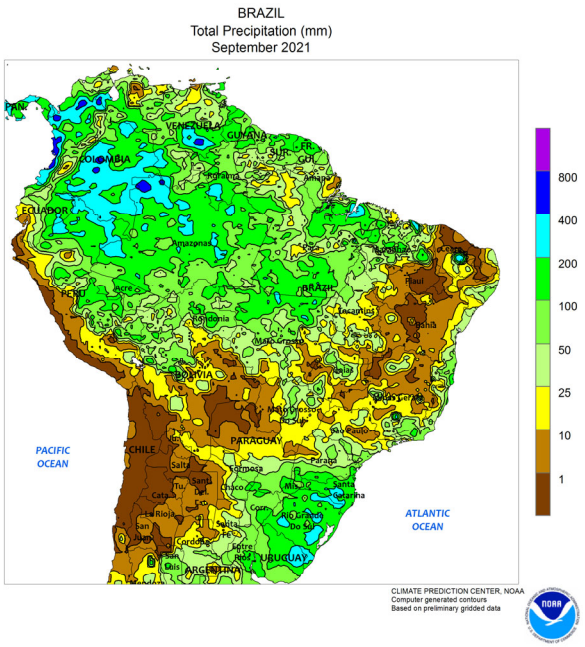


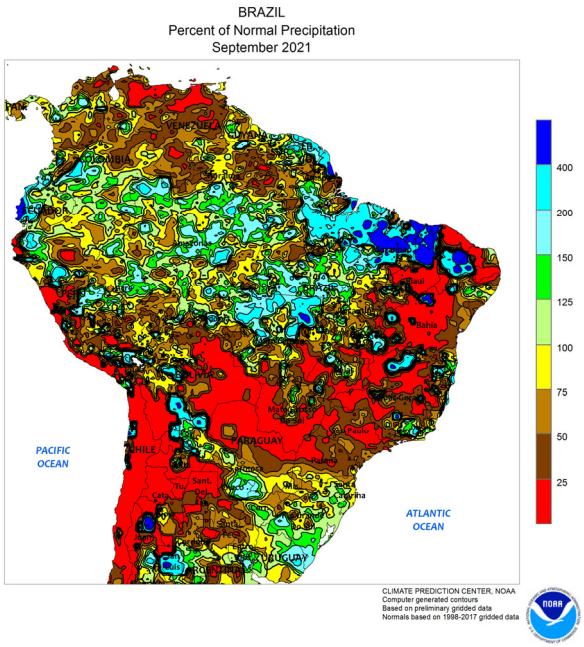


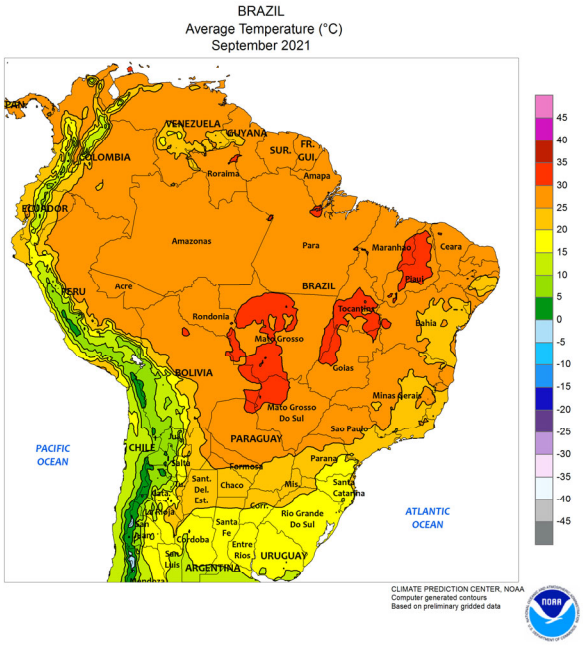


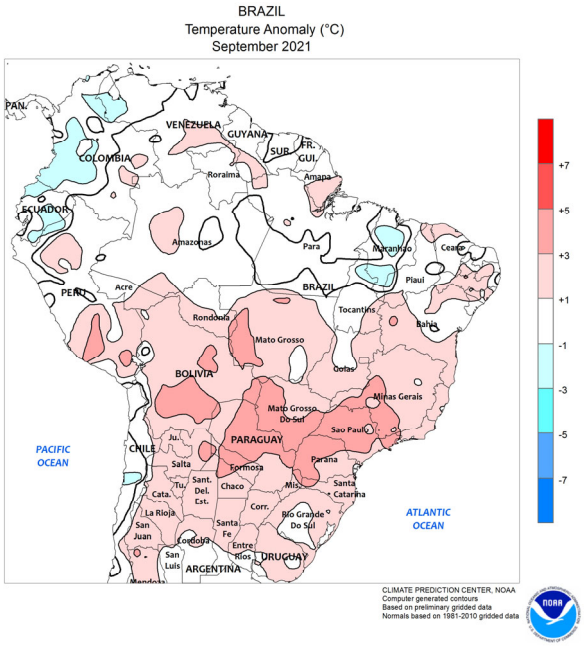
ARGENTINA

During September, periods of unseasonably heavy rain provided timely moisture for immature winter grains as well as germination of early-sown summer crops. In central Argentina (La Pampa, Buenos Aires, and farmlands stretching from central Cordoba through Entre Rios), much of the rain came early in the month, with drier conditions supporting seasonal fieldwork afterwards. Showers were more evenly distributed in the northeast during the month but were generally too early in the season to promote cotton planting. Meanwhile, dry weather continued to dominate the northwest (Santiago del Estero and environs), which typically experiences a seasonal rise in rainfall this time of year. Temperatures averaged 1 to 4°C above normal for the month, as highest daytime temperatures ranged from the middle 20s (degrees C) in Buenos Aires to more than 40°C in the far north (including Formosa and Chaco). Despite the trend toward seasonal warming, frost was common throughout September in the traditionally cooler farming areas of southern Buenos Aires.









BRAZIL

In September, the arrival of seasonal rainfall helped to condition fields for planting soybeans and other main-season summer crops in key production areas of central Brazil. While patchy in nature, portions of Mato Grosso, Goias, and Mato Grosso do Sul recorded more than 50 mm, which was sufficient for planting and germination. However, summer warmth (daytime highs reaching 40°C, which are typical before the full onset of seasonal rains) maintained high evaporative losses. Less frequent, generally lighter rain (monthly accumulations of less than 25 mm) fell in the northeastern interior but came too early in the season to spur planting of rain-fed soybeans. Elsewhere, scattered showers provided a local boost in moisture for sugarcane and coffee in Sao Paulo and Minas Gerais, while heavier rain (monthly accumulations from 25 to more than 200 mm locally) increased moisture for germination of corn and soybeans, as well as immature wheat, from Parana southward. The heavy rain extended southward through the rice areas of southern Rio Grande do Sul, helping to build irrigation reserves for the upcoming crop. Monthly temperatures averaged 1 to 3°C above normal in the more southerly farming areas, with daytime highs reaching the upper 30s and lower 40s (degrees C) in and around Sao Paulo and no freezes were recorded.

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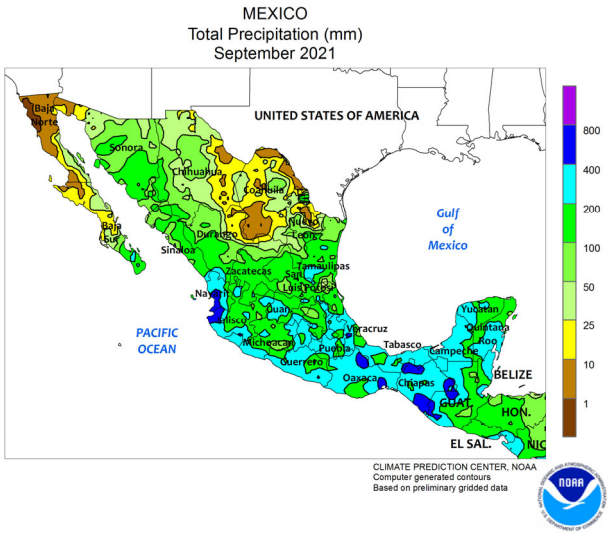
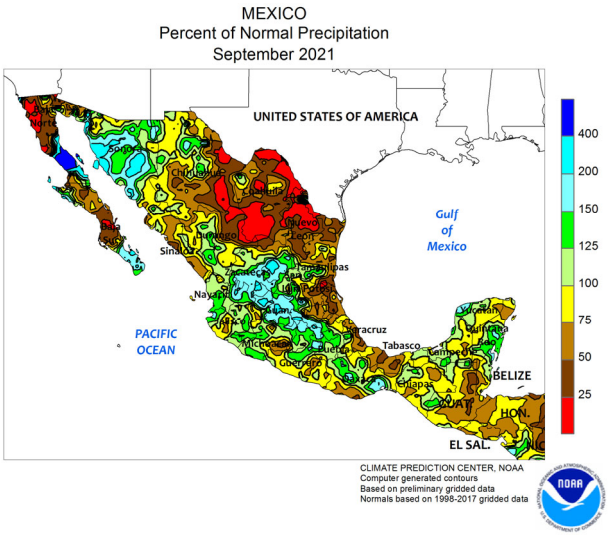
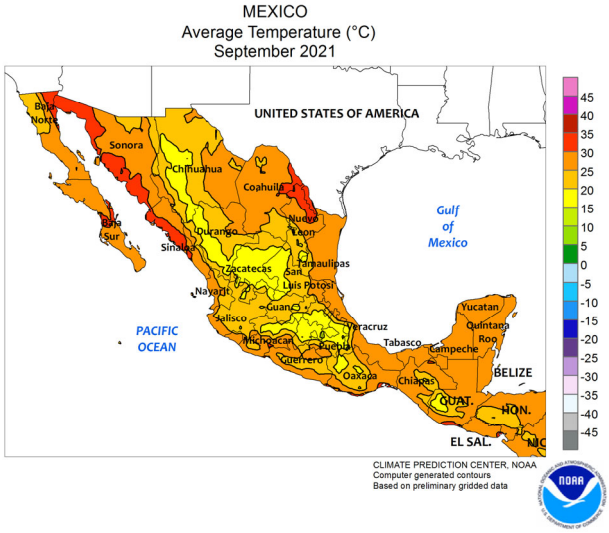
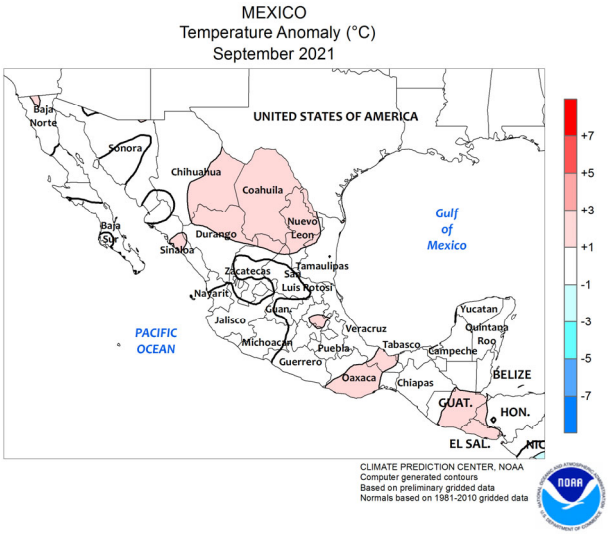




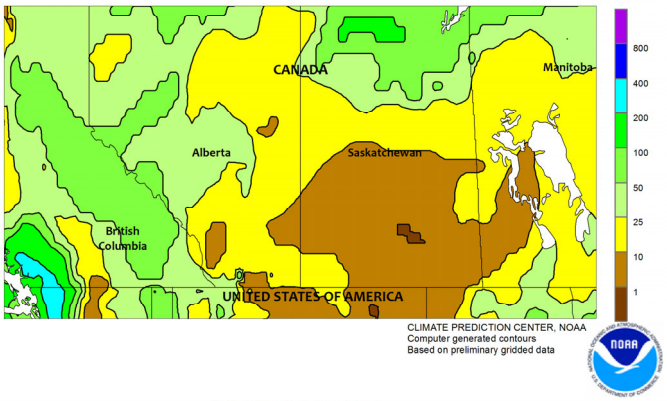




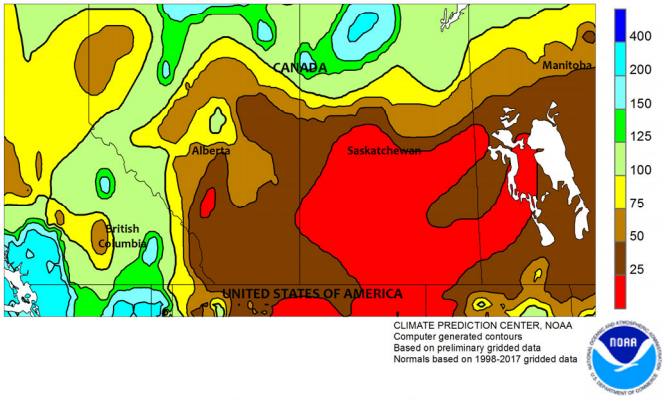
MEXICO

During September, ample showers maintained overall favorable levels of moisture for rain-fed summer crops in southern and eastern Mexico. Monthly accumulations were near to above normal from the southern plateau south and eastward due to the frequent, occasionally heavy showers. Elsewhere, less frequent, though still unseasonably heavy rain also fell in the northeast (Tamaulipas and environs), increasing moisture for summer crops that included soybeans and – southward into Veracruz – sugarcane. Meanwhile, monsoon showers became less frequent in the northwest, although monthly accumulations exceeded 50 mm in many areas. According to the government of Mexico, national reservoir capacity rose to 68 percent as of September 30, an increase of 9 points over last month and slightly higher than in 2020 (65 percent). Northwestern reservoir capacity also rose 9 points from month to month, reaching 53 percent as the monsoon season was coming to a close. As of September 30, reservoirs were at 41 percent capacity in Chihuahua, 50 percent in Sonora, and 57 percent in Sinaloa.

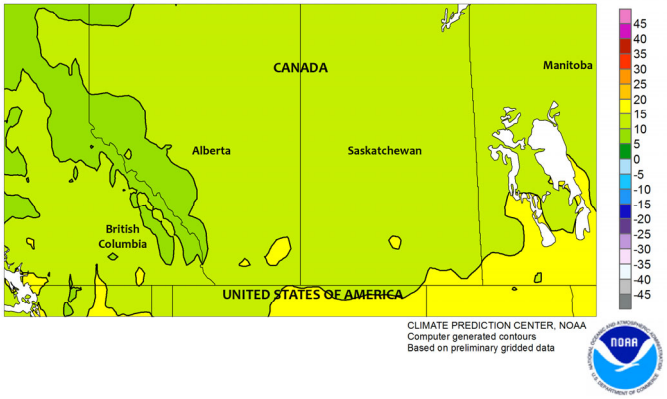
CANADIAN PRAIRIES
Total Precipitation (mm)
September 2021



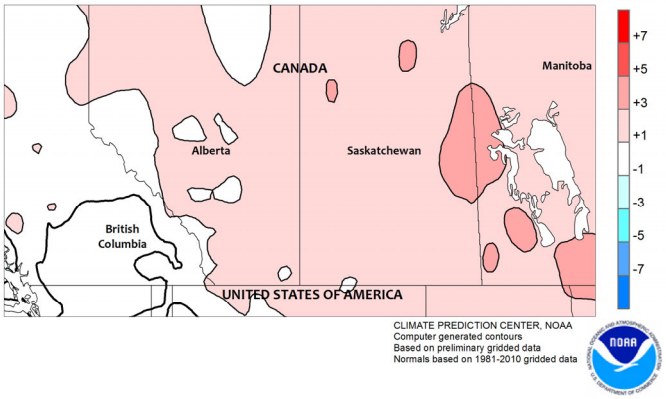
CANADIAN PRAIRIES
Percent of Normal Precipitation
September 2021



CANADIAN PRAIRIES
Average Temperature (°C)
September 2021



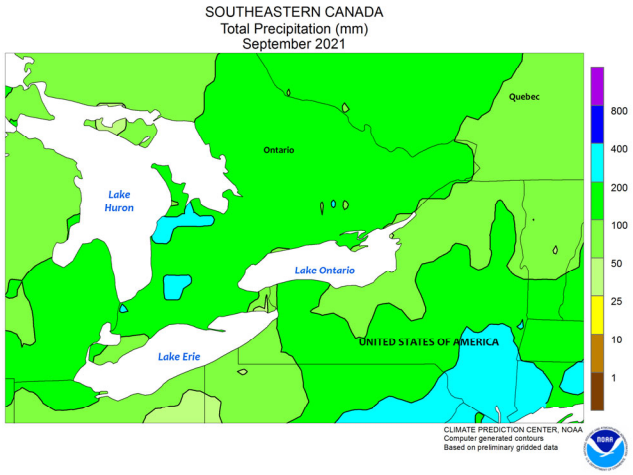
CANADIAN PRAIRIES
Temperature Anomaly (°C)
September 2021

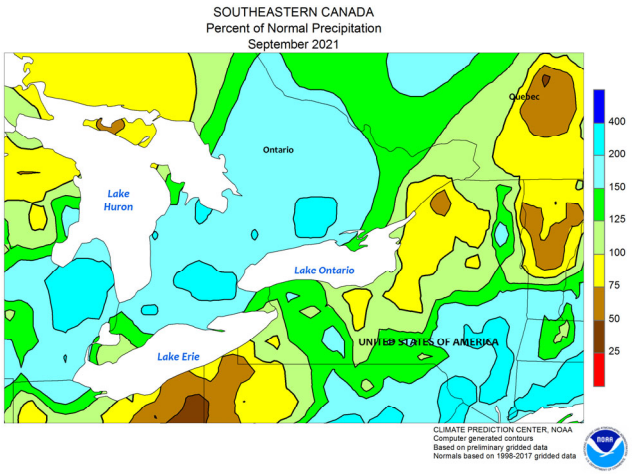


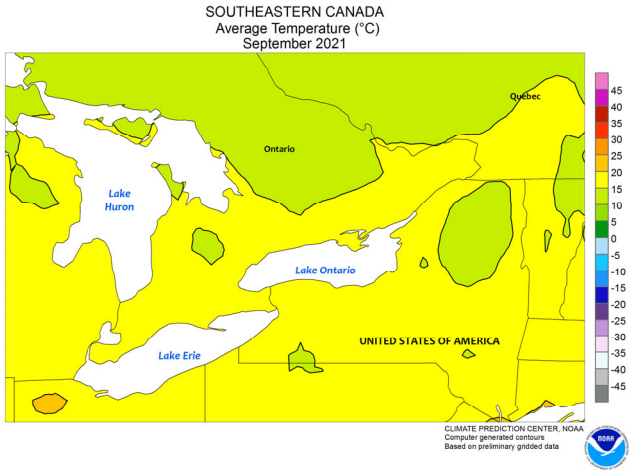
CANADIAN PRAIRIES

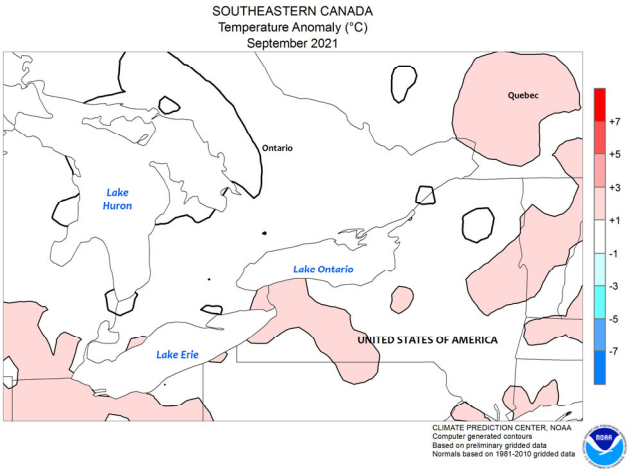
During September, warmer- and drier-than-normal weather fostered rapid rates of drydown and harvesting of crops in nearly all agricultural districts. Except for Alberta's Peace River Valley, precipitation was below normal throughout the Prairies, with most locations reporting monthly accumulations below 25 mm. Temperatures averaged 1 to 3°C above normal and – despite seasonal cooling – daytime highs exceeded 30°C on several days. Nighttime lows dropped below freezing throughout much of Alberta and Saskatchewan, while large sections of Manitoba remained without a freeze, extending the growing season for later-developing summer crops.

For additional information contact: mark.brusberg@usda.gov









SOUTHEASTERN CANADA

While causing some disruptions to autumn fieldwork, September rainfall provided a timely boost in moisture for winter wheat establishment. Monthly accumulations were near to above normal throughout the main agricultural districts of both Ontario and Quebec. Temperatures averaged near to slightly above normal, with highest daytime temperatures reaching the upper 20s (degrees C) regionwide. Despite the advent of seasonal cooling, the region lacked a season-ending freeze, allowing late summer crop development and rapid emergence of winter wheat, the bulk of which is ideally planted by the end of September. According to the Canadian Drought Monitor, portions of southern Quebec were still experiencing Moderate Drought (D1) as of September 30, but Ontario was entering the winter drought-free.

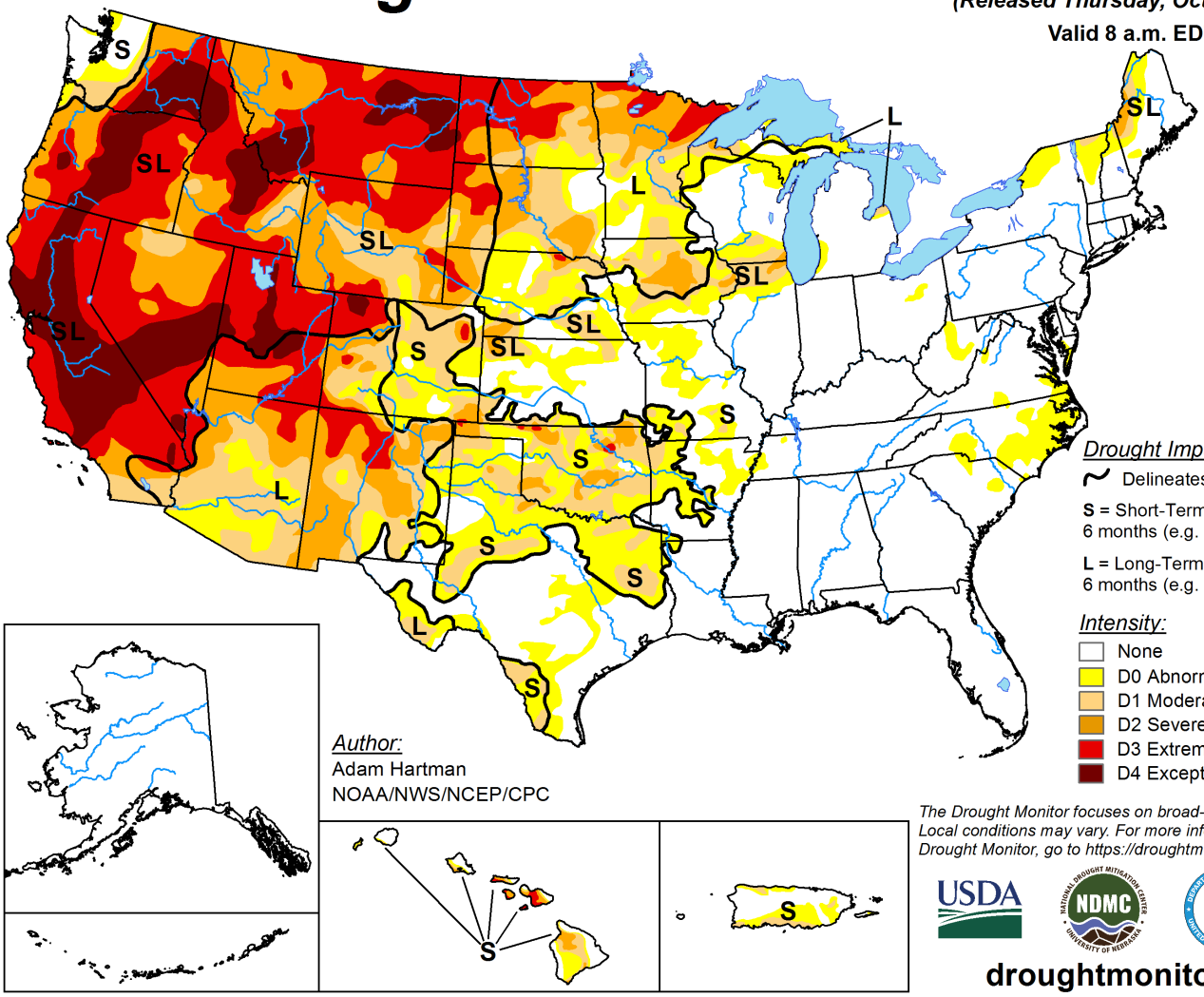
For additional information contact: mark.brusberg@usda.gov

U.S. Drought Monitor

October 12, 2021

(Released Thursday, Oct. 14, 2021)

Valid 8 a.m. EDT



Drought Impact Types:

Delineates dominant impacts

S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Author:
Adam Hartman
NOAA/NWS/NCEP/CPC

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

droughtmonitor.unl.edu

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Correspondence to the meteorologists should be directed to:
***Weekly Weather and Crop Bulletin*, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 4443B, Washington, DC 20250.**
Internet URL: **www.usda.gov/oce/weather-drought-monitor**
E-mail address: ***brad.rippey@usda.gov***

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U.S. DEPARTMENT OF AGRICULTURE
World Agricultural Outlook Board
Managing Editor..... ***Brad Rippey*** (202) 720-2397
Production Editor..... ***Brian Morris*** (202) 720-3062
International Editor..... ***Mark Brusberg*** (202) 720-2012
Agricultural Weather Analysts..... ***Harlan Shannon and Eric Luebehusen***

National Agricultural Statistics Service
Agricultural Statistician and State Summaries Editor.....
Irwin Anolik (202) 720-7621

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Climate Prediction Center
Meteorologists.....***Brad Pugh, Adam Allgood, and Rich Tinker***