

# WEEKLY WEATHER AND CROP BULLETIN

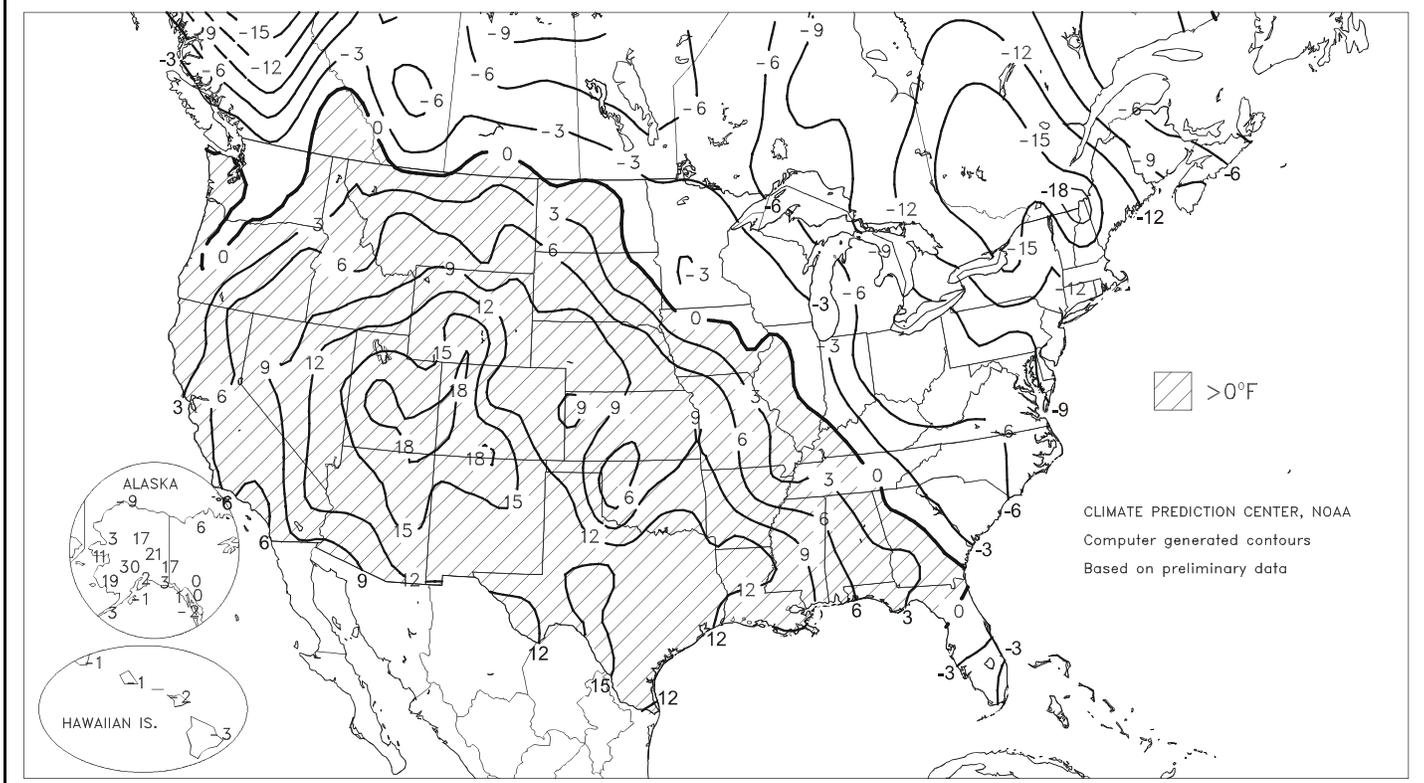


U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service

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

Departure of Average Temperature from Normal (°F)

JAN 16 - 22, 2000



## HIGHLIGHTS

January 16 - 22, 2000

**S**tormy weather continued along and near the **West Coast**, easing irrigation requirements and easing stress on dryland crops in **California's Central Valley**, and boosting high-elevation **Sierra Nevada** snow packs. Beneficial snow showers fell in the **Intermountain West** as far south as **Utah** and **western Colorado**, although a second consecutive week of record warmth in the **Southwest** exacerbated the region's 4-month dry spell. Weekly temperatures averaged 6 to 20°F above normal from the **Intermountain West** to the **central and southern Plains**. The **Plains'** persistently warm and often dry pattern has reduced winter wheat's cold-hardiness and

*(Continued on page 2)*

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(Continued from front cover)

raised concerns about a lack of moisture for fall-sown grains and the availability of moisture during the upcoming planting season. In contrast, sharply colder air invaded the **Great Lakes and Northeastern States**, where weekly readings averaged as much as 18°F below normal. As far south as the **Ohio Valley**, several snow-producing storm systems provided winter grains with protection from temperatures that occasionally fell below 0°F. Late in the week, a major winter storm--the second in 6 days--grazed eastern **New England** with heavy snow and high winds, while a weaker but more disruptive storm system crossed the **South**. The latter system glazed the **southern Appalachians** and adjacent piedmont areas with snow and ice, downing trees, hampering transportation, and causing widespread power outages.

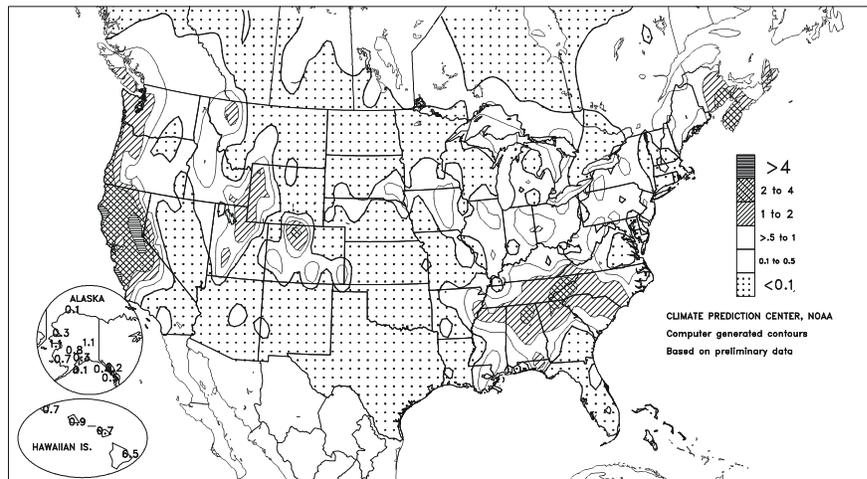
Early in the week, a powerful storm system swept across the **Pacific Northwest**, causing widespread wind damage. On Sunday, peak gusts were clocked to 115 mph at **Cannon Beach, OR** and 109 mph at **Cape Disappointment, WA**. Across inland areas of **northwestern Oregon**, gusts reached 60 mph in **Salem** and 59 mph in **Portland**. Farther south, heavy precipitation periodically spread inland across **northern and central California**, totaling more than 4 inches for the week in the **central Sierra Nevada**. The water equivalent of the high-elevation **Sierra Nevada** snow pack, which was 3 inches (about 20 percent of normal) as recently as January 10, increased to 8 inches (more than 45 percent of normal) by week's end.

Record warmth shifted southwestward as bitterly cold weather overtook the **Nation's northeastern quadrant**. Nevertheless, more than 100 daily-record highs were set or tied during the week, primarily across the **Southwestern and South-Central States**. In **Arizona**, **Winslow** noted four consecutive daily-record highs (72, 69, 70, and 66°F) from January 16-19. Warmth peaked on Wednesday across **southern Texas**, where **Del Rio** (90°F) recorded their earliest occurrence of 90-degree heat. **Del Rio's** previous record was set on January 30, 1911, with a high of 91°F. Elsewhere in **Texas** on January 19, highs soared to 87°F in **San Angelo**, **Abilene**, **Austin (Mabry)**, and **Corpus Christi**. Through the 22nd, **Brownsville, TX** tallied 15 January days with highs at or above 80°F, their most in January since 16 days in 1972, and approaching the record of 20 days in 1950.

In contrast, frigid conditions, accompanied by occasional snowfall and high winds, gripped the **Great Lakes and Northeastern States**. On Monday morning, **Tupper Lake, NY** recorded a low of -29°F following a 3-inch snowfall. Similarly, **East Albany, NY** posted a low of -21°F after Sunday's 5-inch total. In **eastern Maine**, early-week (January 16-17) snowfall reached 21 inches in **Orono** and 15 inches in **Bangor**. **Portland, ME** received 5.3 inches on January 16, marking their latest first measurable snowfall (formerly December 24, 1912). Following the snow storm, lows in **Enosburg Falls, VT** included -38°F on Tuesday and -34°F on Wednesday. Another batch of bitterly cold air overspread the **Nation's northern tier** late in the week. On Friday, **LaCrosse, WI** noted a low of -20°F, their lowest temperature since a -31°F reading on February 4, 1996. In **northeastern Minnesota**, minima on January 21 included -37°F in **Embarrass** and -38°F near **Tower**.

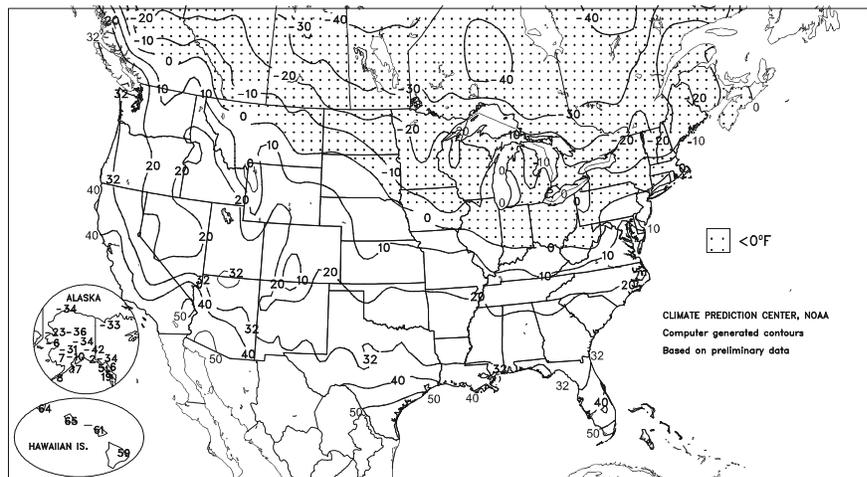
Total Precipitation (Inches)

JAN 16 - 22, 2000



Extreme Minimum Temperature (°F)

JAN 16 - 22, 2000



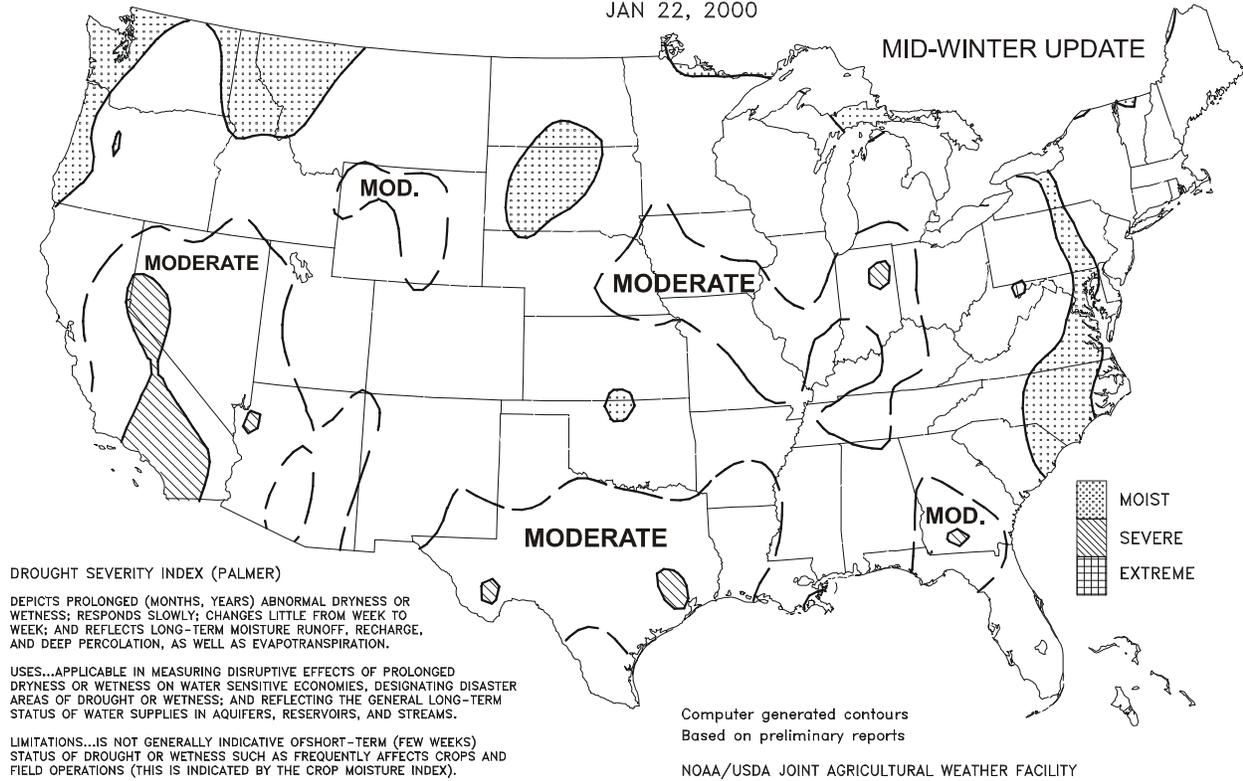
On Saturday, daily-record lows were reported in **Flint, MI** (-13°F) and **Zanesville, OH** (-10°F).

Farther south, snow fell on Tuesday as far south as the **Carolinas**, totaling 4.5 inches in **Greensboro, NC**. Two days later, snow returned to the **Mid-Atlantic region**. Snowfall totaled 3.0 inches in **Norfolk, VA**, giving the city its first 1-inch, or greater, snow cover since February 16, 1996. **Norfolk** had never gone so long, almost 4 years, without a snow cover. Meanwhile, January 20-21 snowfall reached 10 inches in **eastern Massachusetts** at **Eastham**. At week's end, ice accumulations topped 1 inch as far south as **northern Georgia**, while more than 6 inches of snow blanketed higher elevations of the **southern Appalachians**.

Reversing a 3-month trend, significantly milder air overspread nearly all of **Alaska**, pushing weekly temperatures 3 to 30°F above normal in western and interior sections. Heavy snow accompanied the milder conditions in many areas. January 16-18 snowfall totaled 13.9 inches in **Fairbanks** and 22.0 inches in **Manley**. Meanwhile, showery, unusually cool weather (as much as 3°F below normal) prevailed in **Hawaii**. On Wednesday, maxima of 70°F in **Lihue** and **Kahului** were the locations' lowest high temperatures on record for January 19.

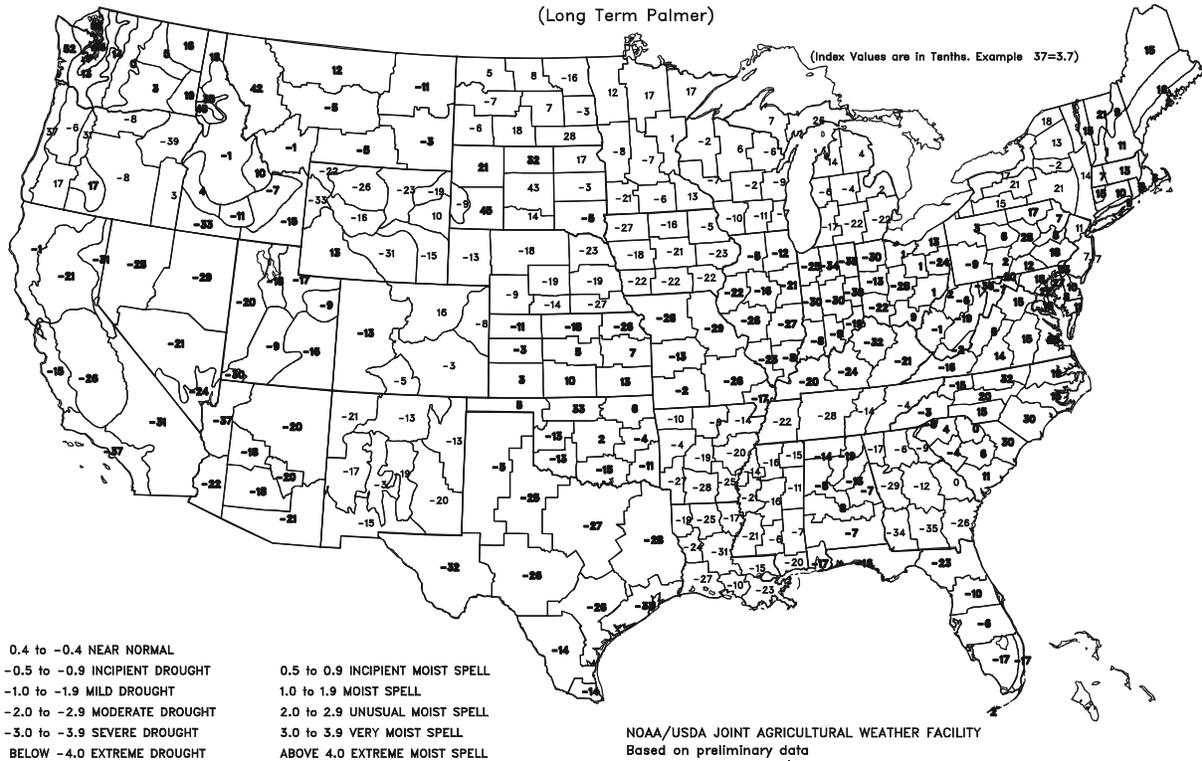
DROUGHT SEVERITY  
LONG TERM PALMER  
JAN 22, 2000

MID-WINTER UPDATE



Drought Severity Index by Division  
JAN 22, 2000  
(Long Term Palmer)

(Index Values are in Tenths. Example 37=3.7)



## Dry Conditions Cover Much of the United States

During the past 3½ months, many areas of the United States experienced subnormal precipitation, including less than 50% of normal across much of the Southwest, Great Basin, Rockies, northern and southern thirds of the Plains, along the western Gulf Coast, and in parts of the western and central Corn Belt (**Figure 1**). Unseasonably mild and windy weather has also accompanied the lack of precipitation since October, increasing the evaporation of moisture from the topsoil. In addition, parts of the Great Plains, eastern Corn Belt, mid-Atlantic, and New England also endured long-term drought earlier in 1999, depleting subsoil moisture reserves in those areas. East of the Rockies, although precipitation during the cold season (October-March) is normally much less than the growing season (April-September), it is important for recharge of soil moisture since there is typically minimal evaporation and runoff. In the West, however, the late fall to early spring months are critical for the region as the majority of their annual precipitation typically falls during November-March. In many Western locations, an adequate mountain snowpack replenished during the winter months provides water for reservoirs and rivers during the normally dry summer months.

Impacts of drought, whether based upon a short-time frame (i.e. meteorological or agricultural drought) or long-term dryness (i.e. hydrological drought), widely vary depending upon region affected and time of year. For example, in the Far West, hydrological drought is the main concern since it normally takes several years of below-normal precipitation to significantly impact reservoir storage, and hence, water usage. Short-term dryness in the West typically has little or no impacts, especially since most of the region normally experiences minimal rain during the warm months. In contrast, a relatively brief period of dryness, especially when combined with high temperatures, can have significant agricultural impacts in the Midwest and Great Plains during the growing season. Due to these differences, there are a number of products and indices that attempt to depict moisture conditions that utilize information from in-situ, remotely-sensed, or calculated data. Besides basic products, such as a simple precipitation deviation from normal, indices can utilize just one parameter, such as the Standardized Precipitation Index (SPI), can combine several different parameter inputs, such as the Palmer Drought Severity Index, the Keetch-Byrum Index, and experimental Soil Moisture maps, or use remotely-sensed information, such as the Relative Greenness maps. In response to dryness in portions of the Nation during the spring of 1999, an

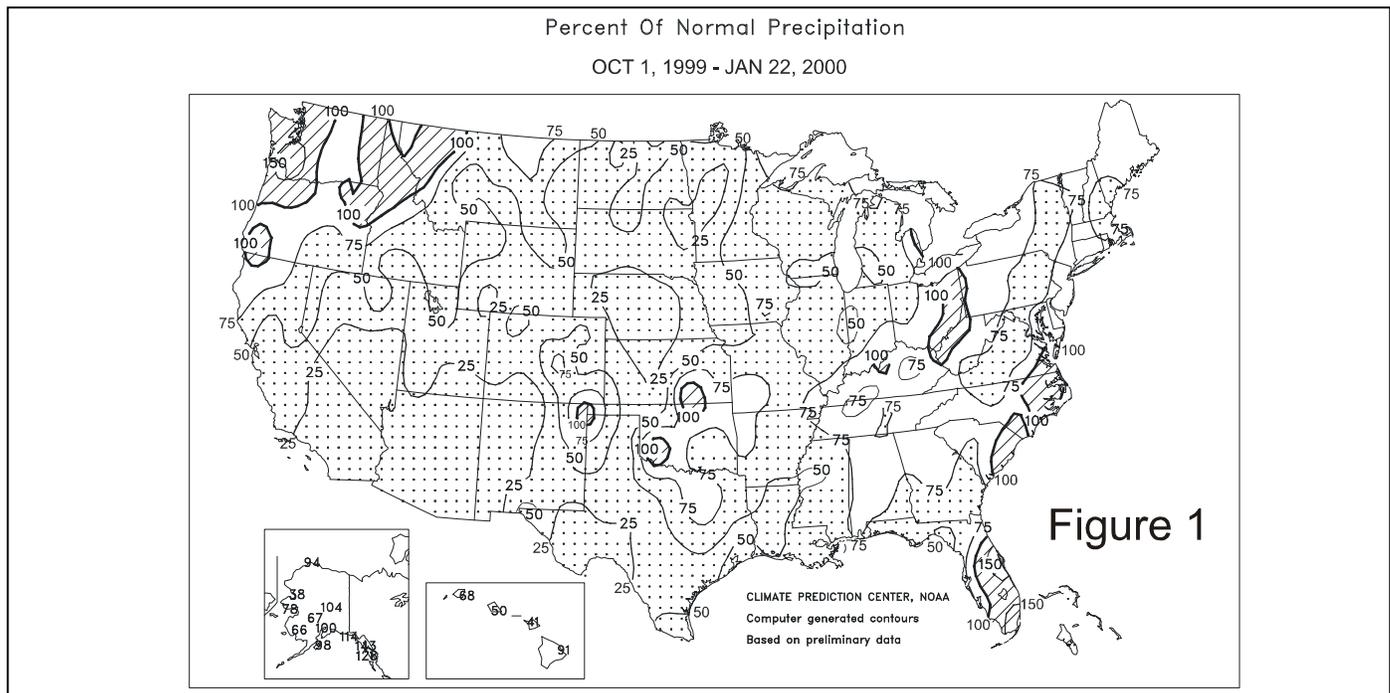
attempt to utilize all possible data, products, and indices that monitored drought and their potential impacts led to the creation of the **U.S. Drought Monitor**. Through the cooperation of numerous organizations, particularly the United States Department of Agriculture, the National Weather Service, and the National Drought Mitigation Center, the Drought Monitor became an official operational product in early September, and is now updated every Thursday.

The latest Drought Monitor depicts abnormally dry conditions covering much of the southern half of the Nation and most of the Plains and Midwest, with drought (first stage to severe) affecting much of the Corn Belt, southern Plains, sections of the Southeast, and the east-central Hawaiian Islands (**Figure 2**). The dryness across the contiguous U.S. includes both short and long-term impacts (i.e. agricultural, wildfire danger, and hydrological), but only non-hydrological impacts in Hawaii. The following information is taken from the *January 25, 2000, Drought Monitor* summary:

**Central and Eastern States:** Both of these regions saw a steady dose of winter as heavy snows fell and much colder air arrived late last week and over the weekend. These storms were chased out early this week by an unexpectedly powerful Noreaster that dumped anywhere from 6 inches to 2 feet of snow or more over the Mid-Atlantic states. In perhaps starting yet another year of extremes, the folks in North Carolina, Virginia, and Maryland (to name a few) have seen it all in just the last year while experiencing extreme drought, then flooding as a result of multiple hurricanes and now getting hit by one of the strongest winter storms on record. Not to be outdone, the Southeast saw plenty of ice, snow and rain as well. Some relief arrived in northern Mississippi, Alabama and Georgia and into most of Tennessee and the Carolinas. The system also brought with it a crippling ice storm over the weekend leaving hundreds of thousands without power in northern Georgia. Although any precipitation helps, it will take more than these recent storms alone to bring the affected areas out of first-stage (D1) or severe (D2) drought.

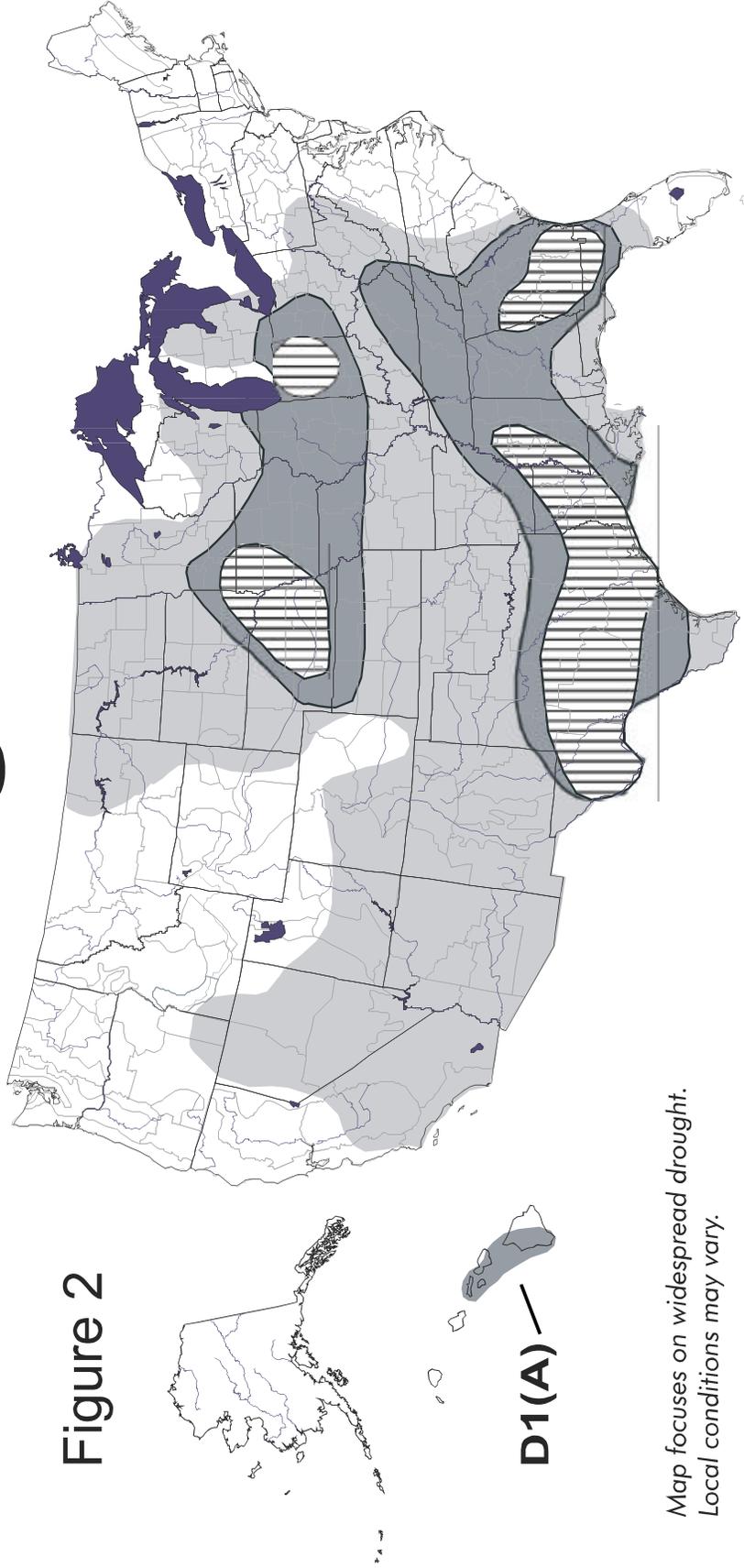
**Midwest, Plains, and the South:** Virtually all of this region saw little if any precipitation last week and well above normal temperatures were very common. Soil moisture conditions continue to worsen during this abnormally warm and dry winter. This has elevated Winter Wheat crop

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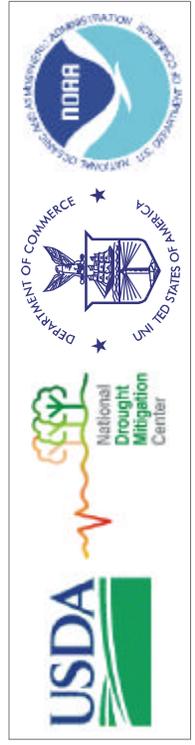
**January 25, 2000** Valid 7 a.m. EST  
**U.S. Drought Monitor**

Figure 2



Map focuses on widespread drought.  
 Local conditions may vary.

- D0 Abnormally Dry
  - ▨ D1 Drought-First Stage
  - ▩ D2 Drought-Severe
  - ▧ D3 Drought-Extreme
  - ▦ D4 Drought-Exceptional
  - ⌋ Delineates Overlapping Areas
- Drought type: used only when impacts differ  
 A = Agriculture  
 W = Water  
 F = Wildfire danger



Plus (+) = Forecast to intensify next two weeks  
 Minus (-) = Forecast to diminish next two weeks  
 No sign = No change in drought classification forecast

• Released Thursday, Jan. 27, 2000 •

(Continued from page 4)

and sub-soil moisture recharge concerns going into Spring. Pasture and range conditions are also feeling the brunt of this dryness. Drought (D1 and D2) conditions in the South show no sign of diminishing any time real soon across parts of Texas, Louisiana, southern Arkansas and western Mississippi. The core region of severe drought (D2) in southwestern Minnesota, northwestern Iowa, and eastern Nebraska remains entrenched, as many locations within these states are now seeing their fifth straight dry month. As a result of the continued dry winter experienced thus far across most of the northern states, two additional areas have also warranted keeping an eye on. Abnormal dryness (D0) has pushed its way into northeastern Montana. In addition, abnormally dry conditions (D0) have extended into all but the western shore areas of Michigan.

**The West:** A wetter pattern emerged across the mid-section of the western states last week bringing snowpack levels up considerably from where they were just a few weeks ago in and around northern California, western Nevada, northern Utah, northern Colorado and southern Wyoming. The Central Sierra around Lake Tahoe saw around 4-6 feet of snow fall in just two days time. It was heavier in the mountains to the tune of 10-12 feet in some ski areas. According to NRCS SNOTEL data (based on automated mountain observations) collected through January 25th, good gains were reported in the Sierra and in parts of Colorado, but snow water content remains below to well below average over much of the West, especially to the south. Values range from 1 to 6 percent in Arizona, generally 20 to 55 percent in New Mexico, 29-37 percent in southern Colorado, and 30 to 40 percent in the southern Sierra Nevada, the areas of greatest concern. Snowpack percentage gradually increases toward the north, typically 50-90 percent of average in Colorado, Utah, Nevada and the Central/Northern Sierra Nevada. The Northern Rockies show mostly 75-95 percent, and the Cascades 110-145 percent. As was mentioned last week in this report, reservoir levels are in great shape at this time across the West so this has somewhat tempered any immediate water supply fears. As a result, the abnormally dry (D0) area has receded south and now covers only the lower half of California.

**Hawaii, Alaska, and Puerto Rico:** The windward side of the Big Island continues to be the main beneficiary of rains within the Hawaiian Islands as generous rains fell in Hilo last week. Little precipitation fell elsewhere however. Long-term D1 (first stage drought) conditions continue to cause agricultural impacts across many parts of Maui, Lanai, Molokai and the Big Island (Hawaii County) but wildfire concerns have been eased recently. The western and interior parts of Alaska enjoyed a balmy week with temps ranging from 15 to 30 degrees above normal. Unfortunately, little precipitation accompanied the warmer air still leaving some winter snowfall deficits within parts of the west and north. Some parts of interior Alaska that have been dry for some time did report significant precipitation during the last week.

The latest monthly and seasonal temperature and precipitation outlook maps for February and February-April 2000 generally follow expected La Niña impacts, namely warmer and drier than normal conditions across the southern tier of states, and wetter than normal in the Northwest and the Ohio Valley (**Figure 3**). The forecasted wetness in the latter area would be extremely beneficial for recharging depleted soil moisture in the eastern Corn Belt, but continued dryness and warmth across the southern tier of states is not favorable for alleviating dryness in the Southwest, southern half of the Plains, and Southeast. If this forecast holds true, adequate precipitation during the spring months will be critical for the winter wheat crop in the Plains, and to a lesser extent for the soft red winter wheat crop in the Ohio and Tennessee Valleys. In addition, recharge of soil moisture in the Corn Belt may become critical for summer crops if the winter and spring months remain dry.

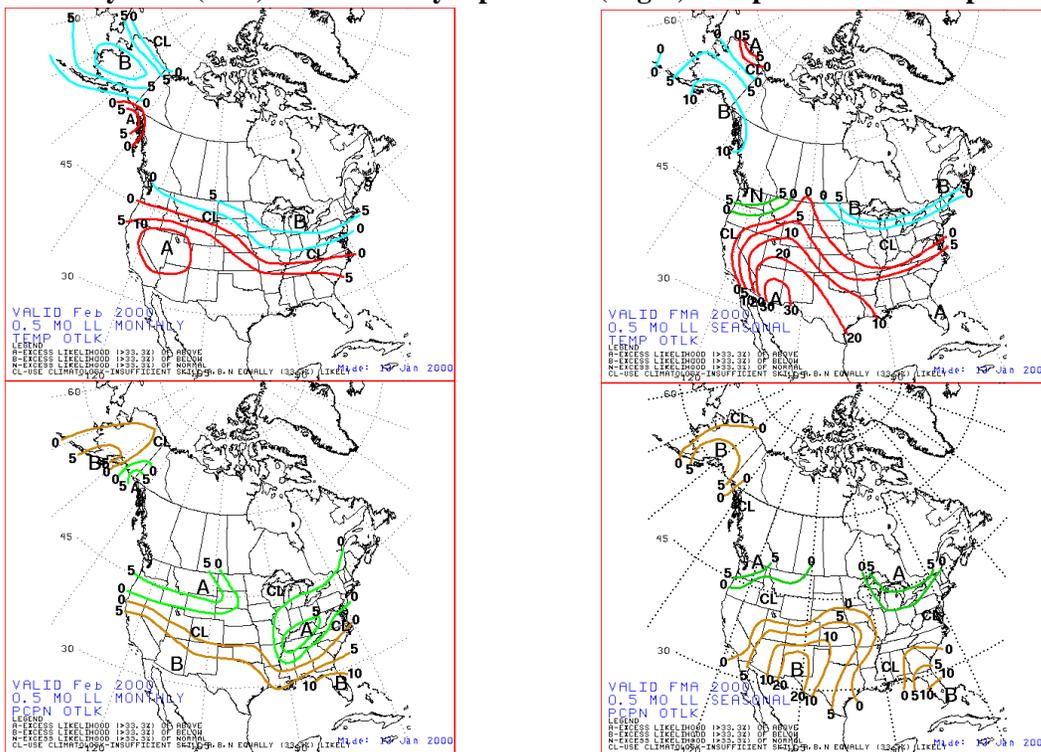
For the current Drought Monitor and associated drought products and indices, go to the National Drought Mitigation Center's web site at:

[enso.unl.edu/monitor/monitor.html](http://enso.unl.edu/monitor/monitor.html)

For a detailed summary of *Drought in the United States during 1999*, go to the NWS Climate Prediction Center's web site at:

[www.cpc.ncep.noaa.gov/products/predictions/experimental/drought/drus99.html](http://www.cpc.ncep.noaa.gov/products/predictions/experimental/drought/drus99.html)

**Figure 3. February 2000 (Left) and February-April 2000 (Right) Temperature & Precipitation Outlooks**



National Weather Data for Selected Cities

Weather Data for the Week Ending January 22, 2000

Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

STATES AND STATIONS	TEMPERATURE EF						PRECIPITATION						RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. EF		PRECIP		
																90 AND ABOVE	32 AND BELOW	0.1 INCH OR MORE	5.0 INCH OR MORE	
AL	BIRMINGHAM	52	36	63	21	44	3	1.52	0.37	0.86	7.37	84	4.44	121	89	51	0	3	5	1
	HUNTSVILLE	48	33	58	20	41	2	1.50	0.35	1.11	7.14	74	3.74	100	96	59	0	3	5	1
	MOBILE	69	46	75	30	57	7	0.40	-0.65	0.39	5.60	65	2.17	64	93	46	0	1	2	0
	MONTGOMERY	62	40	70	26	51	5	0.65	-0.40	0.53	6.51	76	3.13	95	87	45	0	2	3	1
AK	ANCHORAGE	23	11	36	-10	17	2	0.28	0.11	0.17	1.96	116	0.41	72	96	79	0	7	5	0
	BARROW	-17	-27	-14	-34	-22	-8	0.07	0.04	0.04	0.42	168	0.29	322	80	72	0	7	2	0
	FAIRBANKS	18	4	29	-34	11	21	1.10	1.01	0.55	1.53	128	1.18	337	92	80	0	7	6	1
	JUNEAU	29	19	35	6	24	0	0.21	-0.82	0.09	11.27	146	0.97	30	97	76	0	7	4	0
	KODIAK	35	22	41	17	29	-1	0.12	-1.55	0.06	7.89	65	0.88	16	88	63	0	7	3	0
	NOME	27	8	32	-6	18	11	1.15	0.98	0.33	2.00	141	1.79	303	99	79	0	7	6	0
AZ	FLAGSTAFF	56	27	61	24	41	12	0.00	-0.44	0.00	0.13	3	0.13	9	82	27	0	7	0	0
	PHOENIX	76	54	79	49	65	11	0.00	-0.14	0.00	0.01	1	0.01	2	47	22	0	0	0	0
	TUCSON	78	47	84	43	63	12	0.00	-0.19	0.00	0.10	6	0.10	15	37	16	0	0	0	0
	YUMA	76	55	82	49	66	9	0.00	-0.08	0.00	0.00	0	0.00	0	66	34	0	0	0	0
AR	FORT SMITH	56	41	72	27	49	12	0.00	-0.41	0.00	6.37	145	1.36	99	85	49	0	2	0	0
	LITTLE ROCK	53	39	66	24	46	7	0.11	-0.63	0.10	5.54	76	0.30	12	90	55	0	2	2	0
CA	BAKERSFIELD	64	49	72	40	56	8	0.28	0.09	0.28	0.41	34	0.28	49	89	48	0	0	1	0
	EUREKA	55	43	58	39	49	1	1.55	0.20	0.79	9.55	92	6.53	150	88	66	0	0	5	1
	FRESNO	62	49	68	39	56	10	0.77	0.31	0.34	0.80	29	0.77	56	10	68	0	0	4	0
	LOS ANGELES	67	57	76	52	62	5	0.02	-0.54	0.01	0.42	13	0.02	1	93	62	0	0	2	0
	REDDING	54	44	57	34	49	3	1.36	-0.01	0.91	4.19	42	3.56	81	92	46	0	0	4	1
	SACRAMENTO	56	45	60	40	51	6	1.17	0.30	0.61	1.58	31	1.55	59	99	72	0	0	6	1
	SAN DIEGO	70	57	77	53	63	5	0.03	-0.38	0.03	0.51	18	0.19	15	86	55	0	0	1	0
	SAN FRANCISCO	59	50	63	46	55	6	1.66	0.65	0.73	2.69	43	2.22	71	96	71	0	0	5	2
CO	ALAMOSA	53	13	60	8	33	18	0.00	-0.06	0.00	0.03	5	0.00	0	80	26	0	7	0	0
	CO SPRINGS	54	28	62	20	41	12	0.00	-0.06	0.00	0.26	39	0.06	29	65	24	0	5	0	0
	DENVER	54	25	64	19	40	10	0.00	-0.11	0.00	0.35	35	0.07	20	75	24	0	6	0	0
	GRAND JUNCTION	52	34	57	30	43	18	0.39	0.26	0.17	0.79	77	0.53	126	88	53	0	4	4	0
	PUEBLO	61	20	70	16	41	11	0.00	-0.07	0.00	0.14	21	0.09	36	75	20	0	7	0	0
CT	BRIDGEPORT	24	9	43	1	16	-13	0.03	-0.69	0.03	3.72	64	1.34	58	78	37	0	7	1	0
	HARTFORD	20	1	40	-4	11	-13	0.01	-0.75	0.01	4.06	64	1.79	73	71	36	0	7	1	0
DC	WASHINGTON	34	20	62	14	27	-7	0.20	-0.41	0.20	3.94	78	1.45	74	66	31	0	7	1	0
DE	WILMINGTON	30	14	52	7	22	-8	0.14	-0.53	0.14	3.24	57	1.39	63	74	39	0	7	1	0
FL	DAYTONA BEACH	68	44	78	34	56	-1	0.02	-0.61	0.02	1.78	40	0.22	12	92	41	0	0	1	0
	JACKSONVILLE	64	39	74	27	52	0	0.01	-0.75	0.01	1.41	28	0.52	23	91	44	0	2	1	0
	KEY WEST	74	60	79	55	67	-3	0.01	-0.45	0.01	1.22	35	0.57	39	86	56	0	0	1	0
	MIAMI	74	57	78	52	65	-2	0.01	-0.46	0.01	2.95	91	0.27	19	84	47	0	0	1	0
	ORLANDO	70	46	76	37	58	-2	0.03	-0.50	0.03	2.70	73	0.05	3	92	40	0	0	1	0
	PENSACOLA	68	46	74	31	57	7	0.05	-1.01	0.03	4.62	61	0.71	22	90	48	0	1	3	0
	TALLAHASSEE	66	39	76	27	53	3	0.04	-1.03	0.03	3.27	39	0.72	21	94	42	0	3	2	0
	TAMPA	70	48	74	39	59	-1	0.00	-0.45	0.00	1.18	34	0.16	12	92	50	0	0	0	0
	WEST PALM	73	52	80	47	63	-2	0.00	-0.63	0.00	1.46	33	0.01	1	87	45	0	0	0	0
GA	ATHENS	49	31	60	21	40	-2	0.76	-0.29	0.46	6.36	86	4.12	126	93	40	0	4	4	0
	ATLANTA	49	33	62	21	41	0	0.86	-0.21	0.42	6.55	85	4.34	130	92	45	0	3	5	0
	AUGUSTA	49	31	54	21	40	-4	0.53	-0.40	0.34	3.95	63	2.98	105	87	44	0	3	5	0
	COLUMBUS	57	39	68	27	48	2	0.25	-0.77	0.07	3.60	44	1.88	57	80	44	0	3	5	0
	MACON	58	36	68	26	47	2	0.37	-0.65	0.22	4.72	63	2.92	91	84	42	0	3	4	0
	SAVANNAH	58	34	67	23	46	-3	0.11	-0.72	0.09	2.88	52	0.94	37	92	43	0	3	2	0
HI	HILO	74	62	75	59	68	-4	6.54	4.35	2.87	27.80	145	13.00	183	98	71	0	0	7	4
	HONOLULU	76	67	79	65	72	-1	0.89	0.10	0.75	3.60	56	0.95	36	86	62	0	0	3	1
	KAHULUI	74	64	78	61	69	-2	0.70	-0.25	0.24	3.55	57	1.00	33	91	60	0	0	6	0
	LIHUE	74	67	75	64	70	-2	0.71	-0.63	0.41	5.88	62	1.79	41	87	63	0	0	4	0
ID	BOISE	44	31	57	29	38	9	0.06	-0.27	0.03	2.05	85	1.15	111	93	62	0	5	3	0
	LEWISTON	40	31	51	29	36	2	0.09	-0.20	0.04	1.54	72	0.40	43	95	74	0	5	3	0
	POCATELLO	40	29	52	24	34	11	0.68	0.45	0.29	1.52	81	1.25	164	96	65	0	7	5	0
IL	CHICAGO/O'HARE	26	12	37	-3	19	-2	0.44	0.12	0.31	3.75	103	0.98	84	92	57	0	7	3	0
	MOLINE	27	14	40	-2	21	1	0.44	0.11	0.39	3.11	91	0.84	72	90	60	0	7	3	0
	PEORIA	29	15	38	-4	22	1	0.38	0.06	0.37	3.22	90	0.67	59	90	59	0	7	2	0
	ROCKFORD	24	9	38	-13	17	-1	0.02	-0.25	0.02	2.33	77	0.39	40	95	58	0	7	1	0
	SPRINGFIELD	33	16	44	0	24	0	0.09	-0.22	0.07	2.62	68	0.42	37	90	63	0	7	2	0
IN	EVANSVILLE	37	24	55	10	31	1	0.43	-0.15	0.29	7.94	142	2.81	146	92	57	0	6	3	0
	FORT WAYNE	25	5	40	-10	15	-7	0.38	-0.02	0.23	2.51	59	0.56	40	93	65	0	7	5	0
	INDIANAPOLIS	31	12	49	-8	22	-3	0.21	-0.29	0.13	3.72	74	1.11	65	91	60	0	7	2	0
	SOUTH BEND	28	11	39	0	20	-3	0.31	-0.17	0.18	3.61	73	0.95	57	89	62	0	7	5	0
IA	BURLINGTON	29	15	41	-3	22	1	0.32	0.06	0.23	2.89	99	0.37	40	93	62	0	7	3	0
	CEDAR RAPIDS	23	9	37	-13	16	-1	0.25	0.03	0.24	1.22	52	0.47	62	95	60	0	7	2	0
	DES MOINES	31	13	43	-1	22	3	0.12	-0.09	0.12	0.61	30	0.26	37	90	56	0	7	1	0
	DUBUQUE	22	9	37	-6	16	0	0.24	-0.03	0.16	1.36	47	0.50	53	92	55	0	7	5	0
	SIoux CITY	32	10	45	-1	21	3	0.22	0.11	0.22	0.67	57	0.32	80	91	61	0	7	1	0
	WATERLOO	23	5	34	-14	14	0	0.28	0.11	0.27	1.26	67	0.68	117	89	59	0	7	2	0
KS	CONCORDIA	47	20	57	11	34	8	0.00	-0.12	0.00	0.43	34	0.00	0	84	36	0	7	0	0
	DODGE CITY	52	23	63	14	38	8	0.00	-0.11	0.00	0.43	43	0.12	34	86	36	0	7	0	0
	GOODLAND	50	22	64	17	36	8	0.00	-0.08	0.00	0.41	60	0.10	37	85	37	0	7	0	0
	TOPEKA	47	22	59	12	35	8	0.00	-0.20	0.00	1.79	84	0.03	4	84	39	0	7	0	0

Weather Data for the Week Ending January 22, 2000

STATES AND STATIONS	TEMPERATURE EF						PRECIPITATION								RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. EF		PRECIP		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
KY WICHITA	47	26	62	18	37	8	0.00	-0.17	0.00	4.45	250	0.39	67	87	42	0	6	0	0	
KY JACKSON	33	19	53	7	26	-6	0.62	-0.21	0.32	4.23	60	1.67	62	89	46	0	7	5	0	
KY LEXINGTON	33	18	54	4	25	-5	0.35	-0.26	0.21	4.61	76	1.91	92	88	54	0	7	5	0	
KY LOUISVILLE	36	21	57	7	28	-3	0.68	0.05	0.33	10.36	182	4.72	229	88	52	0	6	3	0	
LA PADUCAH	42	27	63	11	35	3	0.25	-0.45	0.20	7.06	100	3.02	128	90	52	0	4	3	0	
LA BATON ROUGE	71	48	78	32	60	10	0.29	-0.81	0.29	6.40	71	1.13	32	93	39	0	1	1	0	
LA LAKE CHARLES	71	48	78	34	60	10	0.04	-0.96	0.01	4.63	55	0.15	5	95	49	0	0	4	0	
LA NEW ORLEANS	71	50	78	38	60	9	0.31	-0.82	0.31	4.52	48	0.66	18	92	43	0	0	1	0	
LA SHREVEPORT	70	47	78	31	58	13	0.00	-0.88	0.00	5.08	74	1.26	45	89	41	0	1	0	0	
ME CARIBOU	7	-9	12	-19	-1	-10	0.67	0.14	0.47	4.59	91	1.79	99	91	63	0	7	3	0	
ME PORTLAND	19	-1	33	-7	9	-11	0.16	-0.62	0.16	3.85	54	1.85	72	74	45	0	7	1	0	
MD BALTIMORE	32	15	59	9	24	-8	0.26	-0.43	0.26	4.88	87	1.92	88	71	36	0	7	1	0	
MA BOSTON	22	6	41	1	14	-14	0.01	-0.79	0.00	2.81	43	1.29	50	75	37	0	7	1	0	
MA WORCESTER	17	1	36	-4	9	-14	0.02	-0.81	0.02	3.75	56	1.20	45	82	44	0	7	1	0	
MI ALPENA	20	2	35	-11	11	-6	0.01	-0.35	0.01	2.22	68	0.66	54	90	57	0	7	1	0	
MI GRAND RAPIDS	25	9	38	2	17	-4	0.00	-0.39	0.00	2.88	68	0.57	41	90	55	0	7	0	0	
MI HOUGHTON LAKE	19	-2	33	-15	8	-8	0.08	-0.25	0.04	2.39	78	0.76	68	93	59	0	7	2	0	
MI LANSING	23	0	35	-15	12	-8	0.11	-0.20	0.04	2.77	81	0.93	84	92	65	0	7	4	0	
MI MUSKEGON	27	13	40	9	20	-3	0.16	-0.35	0.13	3.28	68	0.92	52	88	58	0	7	3	0	
MI TRAVERSE CITY	22	6	36	-3	14	-5	0.40	-0.06	0.18	2.84	77	1.00	66	87	60	0	7	5	0	
MN DULUTH	13	-4	25	-17	4	-3	0.01	-0.27	0.01	0.39	18	0.16	18	88	52	0	7	1	0	
MN INT'L FALLS	9	-14	26	-31	-2	-3	0.01	-0.18	0.01	0.28	19	0.10	15	82	57	0	7	1	0	
MN MINNEAPOLIS	18	1	29	-13	10	-1	0.26	0.04	0.24	1.29	73	0.96	139	86	58	0	7	3	0	
MN ROCHESTER	17	1	27	-19	9	-2	0.22	0.05	0.22	0.85	53	0.36	63	92	68	0	7	1	0	
MN ST. CLOUD	16	-5	27	-22	6	-2	0.13	-0.04	0.13	0.64	47	0.42	79	90	59	0	7	1	0	
MS JACKSON	66	44	76	28	55	11	0.17	-0.99	0.17	3.61	37	0.85	22	92	42	0	2	1	0	
MS MERIDIAN	63	40	73	26	51	6	0.21	-0.92	0.16	5.42	55	1.84	50	94	48	0	2	2	0	
MS TUPELO	53	36	64	20	45	5	1.16	0.09	0.73	5.50	57	2.47	69	97	55	0	2	4	1	
MO COLUMBIA	39	23	49	10	31	4	0.16	-0.14	0.13	3.94	112	0.57	54	94	52	0	6	2	0	
MO KANSAS CITY	44	23	54	9	34	9	0.00	-0.23	0.00	2.36	99	0.18	22	82	45	0	7	0	0	
MO SAINT LOUIS	39	25	56	13	32	3	0.23	-0.15	0.21	2.77	63	0.93	69	95	60	0	7	3	0	
MO SPRINGFIELD	46	30	58	15	38	7	0.01	-0.36	0.01	7.86	175	0.87	66	92	51	0	4	1	0	
MT BILLINGS	40	20	50	17	30	7	0.01	-0.19	0.01	0.43	29	0.23	34	85	44	0	7	1	0	
MT BUTTE	38	14	47	8	26	9	0.00	-0.13	0.00	0.90	103	0.36	84	86	52	0	7	0	0	
MT GLASGOW	27	4	42	-7	15	5	0.02	-0.06	0.02	0.35	55	0.15	58	86	60	0	7	1	0	
MT GREAT FALLS	39	14	55	-2	27	6	0.18	-0.02	0.09	0.25	17	0.22	34	90	47	0	7	3	0	
MT KALISPELL	31	10	39	-3	21	1	0.40	0.06	0.19	2.52	88	1.43	127	96	72	0	7	3	0	
MT MILES CITY	38	13	53	-1	25	9	0.00	-0.11	0.00	0.26	25	0.02	5	88	46	0	7	0	0	
MT MISSOULA	34	18	39	13	26	3	0.31	0.03	0.28	1.20	58	0.72	78	96	71	0	7	3	0	
NE GRAND ISLAND	44	16	53	6	30	8	0.01	-0.10	0.01	0.29	27	0.02	6	82	39	0	7	1	0	
NE LINCOLN	43	16	52	6	29	8	0.01	-0.10	0.01	0.59	46	0.02	5	90	44	0	7	1	0	
NE NORFOLK	39	15	49	7	27	8	0.05	-0.06	0.05	0.25	23	0.05	14	87	43	0	7	1	0	
NE NORTH PLATTE	48	17	62	7	33	11	0.01	-0.07	0.01	0.08	11	0.03	12	91	33	0	7	1	0	
NE OMAHA	39	17	47	5	28	7	0.08	-0.09	0.08	0.66	42	0.09	16	86	48	0	7	1	0	
NE SCOTTSBLUFF	45	23	62	14	34	9	0.26	0.15	0.16	0.47	52	0.34	97	89	44	0	7	3	0	
NE VALENTINE	45	14	54	6	30	10	0.03	-0.03	0.03	0.19	35	0.08	44	89	36	0	7	1	0	
NV ELY	51	31	55	16	41	16	0.03	-0.14	0.02	0.09	7	0.04	8	85	40	0	4	2	0	
NV LAS VEGAS	67	50	70	45	59	13	0.00	-0.11	0.00	0.00	0	0.00	0	67	38	0	0	0	0	
NV RENO	51	31	55	24	41	8	0.72	0.47	0.36	1.17	66	1.10	141	84	41	0	4	4	0	
NV WINNEMUCCA	48	25	54	20	37	7	0.23	0.06	0.20	0.59	42	0.51	94	95	45	0	7	4	0	
NH CONCORD	16	-4	30	-10	6	-12	0.10	-0.45	0.08	2.71	55	1.36	75	75	43	0	7	2	0	
NJ NEWARK	28	11	48	4	19	-11	0.19	-0.58	0.19	4.78	81	1.83	75	65	35	0	7	1	0	
NM ALBUQUERQUE	62	36	67	32	49	15	0.00	-0.11	0.00	0.19	22	0.16	46	59	23	0	1	0	0	
NY ALBANY	16	-1	37	-8	7	-13	0.03	-0.49	0.03	2.97	64	1.55	90	74	47	0	7	1	0	
NY BINGHAMTON	15	0	33	-9	7	-14	0.25	-0.27	0.25	3.27	69	1.62	93	92	62	0	7	1	0	
NY BUFFALO	20	3	40	0	12	-11	0.16	-0.43	0.08	4.24	75	2.04	102	89	56	0	7	3	0	
NY ROCHESTER	20	3	41	-3	11	-12	0.60	0.15	0.39	3.81	90	1.75	117	91	62	0	7	5	0	
NY SYRACUSE	17	-2	36	-10	7	-15	0.40	-0.11	0.27	3.35	68	2.00	116	86	56	0	7	5	0	
NC ASHEVILLE	40	25	52	14	32	-3	0.72	0.00	0.21	5.50	95	3.52	155	89	33	0	6	5	0	
NC CHARLOTTE	45	28	63	18	36	-3	0.81	-0.04	0.24	4.45	73	2.71	103	91	30	0	5	5	0	
NC GREENSBORO	41	24	61	15	33	-3	0.78	0.06	0.24	4.41	78	2.36	104	84	32	0	6	5	0	
NC HATTERAS	41	31	56	27	36	-8	0.44	-0.77	0.39	5.44	65	0.87	23	77	41	0	5	3	0	
NC RALEIGH	42	25	63	17	34	-5	0.76	-0.04	0.26	5.08	89	2.76	113	76	31	0	6	5	0	
NC WILMINGTON	48	29	65	23	39	-6	1.04	0.16	0.41	3.21	50	1.80	65	81	29	0	5	5	0	
ND BISMARCK	25	0	46	-8	13	4	0.07	-0.04	0.07	0.63	73	0.40	114	87	64	0	7	1	0	
ND DICKINSON	31	7	47	-2	19	6	0.07	-0.01	0.07	0.35	54	0.14	54	88	56	0	7	1	0	
ND FARGO	13	-4	27	-14	4	-2	0.00	-0.15	0.00	0.46	40	0.01	2	85	60	0	7	0	0	
ND GRAND FORKS	13	-7	29	-16	3	-1	0.00	-0.17	0.00	0.35	31	0.00	0	84	61	0	7	0	0	
ND JAMESTOWN	17	-5	38	-15	6	-1	0.05	-0.09	0.02	0.36	40	0.31	72	91	67	0	7	3	0	
ND WILLISTON	23	-3	41	-13	10	1	0.01	-0.10	0.01	0.58	60	0.28	72	88	63	0	7	1	0	
OH AKRON-CANTON	23	9	41	-5	16	-8	0.25	-0.22	0.15	3.42	75	1.55	98	92	65	0	7	4	0	
OH CINCINNATI	31	13	53	-5	22	-6	0.30	-0.27	0.16	6.37	127	2.77	148	89	57	0	7	4	0	
OH CLEVELAND	25	11	43	-2	18	-6	0.40	-0.04	0.31	4.03	88	1.33	89	86	55	0	7	4	0	
OH COLUMBUS	27	12	48	-2	19	-7	0.35	-0.12	0.14	4.91	111	2.23	141	84	49	0	7	3	0	
OH DAYTON	26	7	48	-7	17	-9	0.33	-0.13	0.20	4.13	92	1.57	101	88	56	0	7	4	0	
OH MANSFIELD	23	8	43	-8	15	-9	0.24	-0.18	0.13	3.44	76	0.74	50	90	53	0	7	4	0	

Based on 1961-90 normals

\*\*\* Not Available

Weather Data for the Week Ending January 22, 2000

STATES AND STATIONS	TEMPERATURE EF						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. EF		PRECIP	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
OK TOLEDO	24	7	38	-5	16	-6	0.33	-0.04	0.16	2.59	61	0.77	59	88	57	0	7	5	0
OK YOUNGSTOWN	23	8	40	-3	15	-8	0.30	-0.16	0.19	4.46	99	2.09	133	87	52	0	7	5	0
OK OKLAHOMA CITY	54	36	65	24	45	9	0.00	-0.25	0.00	3.99	183	0.28	36	88	50	0	2	0	0
OR TULSA	54	34	63	20	44	9	0.00	-0.33	0.00	5.43	167	0.32	29	84	49	0	3	0	0
OR ASTORIA	49	38	51	34	44	2	1.91	-0.33	0.56	22.60	127	9.74	133	92	73	0	0	5	1
OR BURNS	38	23	42	17	31	8	0.03	-0.19	0.02	1.70	90	1.13	155	95	67	0	7	2	0
OR EUGENE	45	33	51	27	39	-2	0.75	-1.01	0.31	11.77	82	8.12	140	98	79	0	2	6	0
OR MEDFORD	44	34	51	30	39	1	0.60	0.01	0.17	5.90	111	5.01	251	10	76	0	2	5	0
OR PENDLETON	39	28	53	25	33	-1	0.21	-0.12	0.11	2.63	96	1.62	147	98	72	0	7	4	0
OR PORTLAND	46	33	51	26	40	0	0.79	-0.40	0.24	8.87	88	5.25	133	97	65	0	3	5	0
PA SALEM	47	33	54	26	40	0	0.79	-0.52	0.35	11.41	102	6.03	139	99	74	0	3	5	0
PA ALLENTOWN	26	10	48	4	18	-8	0.05	-0.66	0.05	3.42	59	0.97	43	70	36	0	7	1	0
PA ERIE	24	13	42	7	19	-6	0.17	-0.30	0.11	5.04	96	1.20	73	84	49	0	7	3	0
PA MIDDLETOWN	30	13	54	7	22	-6	0.21	-0.42	0.18	3.75	71	1.18	58	72	38	0	7	3	0
PA PHILADELPHIA	30	13	53	7	21	-9	0.21	-0.51	0.21	4.44	78	1.45	63	67	35	0	7	1	0
PA PITTSBURGH	26	12	46	1	19	-7	0.17	-0.39	0.13	3.65	77	1.41	77	80	46	0	7	3	0
PA WILKES-BARRE	21	5	39	-2	13	-11	0.03	-0.44	0.03	2.39	59	1.15	76	77	47	0	7	1	0
PA WILLIAMSPORT	25	7	48	0	16	-9	0.12	-0.44	0.12	3.42	71	1.06	59	73	43	0	7	1	0
RI PROVIDENCE	23	5	42	2	14	-14	0.00	-0.86	0.00	4.05	56	1.66	59	65	35	0	7	0	0
SC BEAUFORT	54	36	65	27	45	-4	0.24	-0.61	0.09	3.55	61	1.08	41	88	42	0	2	3	0
SC CHARLESTON	54	33	67	25	44	-4	0.35	-0.42	0.17	3.27	58	0.73	30	93	41	0	2	3	0
SC COLUMBIA	49	31	60	21	40	-3	0.70	-0.32	0.35	4.16	62	2.74	87	91	33	0	3	4	0
SC GREENVILLE	47	31	60	22	39	-1	0.55	-0.36	0.23	4.12	59	1.50	52	86	28	0	5	5	0
SD ABERDEEN	21	-3	28	-11	9	-1	0.04	-0.04	0.04	0.37	55	0.22	85	90	68	0	7	1	0
SD HURON	29	3	40	-2	16	3	0.12	0.04	0.12	0.24	33	0.14	54	91	61	0	7	1	0
SD RAPID CITY	41	16	51	7	29	7	0.01	-0.07	0.01	0.22	30	0.05	19	81	38	0	7	1	0
SD SIOUX FALLS	27	2	41	-7	15	1	0.64	0.53	0.64	0.83	78	0.66	178	91	62	0	7	1	1
TN BRISTOL	37	22	47	11	29	-5	1.14	0.42	0.38	3.67	65	2.22	97	92	42	0	7	5	0
TN CHATTANOOGA	48	30	59	20	39	2	0.62	-0.47	0.36	5.33	61	3.50	100	92	43	0	4	4	0
TN KNOXVILLE	41	28	49	14	34	-2	0.78	-0.15	0.32	5.78	77	4.08	136	96	42	0	5	5	0
TN MEMPHIS	52	37	66	23	45	5	1.04	0.25	0.67	6.03	71	1.30	48	94	51	0	2	4	1
TX NASHVILLE	45	30	56	16	38	2	0.39	-0.39	0.15	5.71	79	3.21	124	92	50	0	4	5	0
TX ABILENE	71	44	87	33	58	15	0.00	-0.24	0.00	0.42	24	0.07	10	79	31	0	0	0	0
TX AMARILLO	64	32	73	22	48	13	0.00	-0.11	0.00	0.96	123	0.03	9	64	24	0	3	0	0
TX AUSTIN	75	45	86	32	60	11	0.00	-0.39	0.00	2.60	85	1.91	162	90	39	0	1	0	0
TX BEAUMONT	73	52	80	41	63	12	0.00	-1.07	0.00	4.43	53	0.40	11	93	47	0	0	0	0
TX BROWNSVILLE	81	59	83	57	70	11	0.03	-0.33	0.01	0.67	28	0.35	31	99	48	0	0	3	0
TX CORPUS CHRISTI	81	56	87	53	68	13	0.00	-0.40	0.00	0.40	17	0.15	13	98	45	0	0	0	0
TX DEL RIO	78	51	90	43	64	14	0.00	-0.13	0.00	0.02	2	0.01	3	82	34	1	0	0	0
TX EL PASO	71	39	74	34	55	12	0.00	-0.08	0.00	0.63	73	0.00	0	60	25	0	0	0	0
TX FORT WORTH	68	47	78	34	58	15	0.00	-0.41	0.00	3.36	108	0.81	63	82	40	0	0	0	0
TX GALVESTON	71	58	75	52	65	13	0.02	-0.71	0.01	6.85	116	1.04	43	95	61	0	0	2	0
TX HOUSTON	74	51	81	41	63	13	0.00	-0.74	0.00	2.61	45	0.41	17	94	43	0	0	0	0
TX LUBBOCK	68	35	80	26	52	13	0.00	-0.08	0.00	1.05	133	0.00	0	71	23	0	2	0	0
TX MIDLAND	74	42	83	37	58	16	0.01	-0.07	0.01	0.62	76	0.62	238	81	20	0	0	1	0
TX SAN ANGELO	75	44	87	30	60	16	0.00	-0.19	0.00	0.10	8	0.01	2	82	28	0	1	0	0
TX SAN ANTONIO	75	50	85	43	63	14	0.00	-0.39	0.00	0.90	33	0.38	32	88	39	0	0	0	0
TX VICTORIA	78	54	84	50	66	13	0.05	-0.45	0.02	2.86	80	1.84	119	97	37	0	0	4	0
TX WACO	73	46	82	30	59	14	0.00	-0.37	0.00	4.20	140	1.39	123	90	44	0	1	0	0
TX WICHITA FALLS	63	36	77	26	50	10	0.00	-0.22	0.00	1.18	59	0.46	65	91	44	0	2	0	0
UT SALT LAKE CITY	52	35	59	30	43	15	0.71	0.46	0.25	3.55	161	1.71	211	82	42	0	1	4	0
VT BURLINGTON	12	-6	31	-10	3	-13	0.08	-0.32	0.03	2.21	59	1.09	82	78	48	0	7	3	0
VA LYNCHBURG	37	19	61	11	28	-6	0.36	-0.27	0.17	4.00	76	1.64	81	75	32	0	7	3	0
VA NORFOLK	39	26	58	20	32	-7	0.25	-0.60	0.24	3.83	65	2.12	79	73	32	0	6	2	0
VA RICHMOND	37	21	57	9	29	-6	0.17	-0.56	0.17	3.39	61	1.67	72	71	29	0	6	1	0
VA ROANOKE	38	23	57	14	30	-4	0.36	-0.22	0.13	3.54	74	1.08	59	70	30	0	7	4	0
WA WASH/DULLES	33	16	62	7	24	-6	0.16	-0.45	0.16	3.59	70	0.92	47	68	33	0	7	1	0
WA OLYMPIA	46	31	49	23	39	1	1.47	-0.33	0.63	17.18	123	7.23	124	10	68	0	3	7	1
WA QUILLAYUTE	47	32	49	24	39	-1	1.92	-1.30	0.61	32.61	126	10.98	106	98	70	0	3	7	1
WA SEATTLE-TACOMA	46	35	50	29	41	1	1.00	-0.20	0.31	9.02	92	3.96	101	99	64	0	2	6	0
WA SPOKANE	31	23	39	12	27	0	0.71	0.28	0.31	4.92	127	2.66	182	98	76	0	7	4	0
WA YAKIMA	35	20	44	8	27	-3	0.43	0.16	0.41	1.41	61	1.13	126	96	67	0	7	3	0
WV BECKLEY	29	14	48	2	22	-7	0.17	-0.49	0.05	3.00	56	1.19	57	94	54	0	7	4	0
WV CHARLESTON	33	17	56	4	25	-7	0.17	-0.47	0.09	3.56	65	1.01	49	90	45	0	7	5	0
WV ELKINS	28	8	49	-17	18	-9	0.29	-0.40	0.20	4.51	79	1.23	55	83	46	0	7	4	0
WV HUNTINGTON	33	17	56	5	25	-7	0.14	-0.49	0.07	4.34	80	1.61	79	82	42	0	7	3	0
WI EAU CLAIRE	18	1	28	-17	10	0	0.13	-0.09	0.13	1.83	100	1.46	200	89	62	0	7	1	0
WI GREEN BAY	20	0	30	-12	10	-4	0.21	-0.04	0.15	1.47	62	0.64	75	86	56	0	7	3	0
WI LA CROSSE	22	5	31	-20	13	-1	0.00	-0.20	0.00	0.65	33	0.00	0	87	55	0	7	0	0
WI MADISON	23	8	36	-7	16	0	0.17	-0.05	0.15	1.33	50	0.47	59	89	51	0	7	3	0
WI MILWAUKEE	25	12	38	-3	19	0	0.15	-0.19	0.12	1.80	51	0.54	45	89	54	0	7	2	0
WY CASPER	48	22	56	12	35	12	0.00	-0.11	0.00	0.14	13	0.04	10	83	39	0	6	0	0
WY CHEYENNE	47	27	57	20	37	11	0.16	0.08	0.09	0.38	56	0.19	73	82	37	0	6	3	0
WY LANDER	48	23	53	16	36	16	0.01	-0.10	0.01	0.16	17	0.01	3	77	31	0	7	1	0
WY SHERIDAN	38	14	46	4	26	5	0.00	-0.17	0.00	1.06	87	0.43	83	88	54	0	7	0	0

Based on 1961-90 normals

\*\*\* Not Available

NOTE: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations have been incomplete.

# National Agricultural Summary

January 16 - 22, 2000

## HIGHLIGHTS

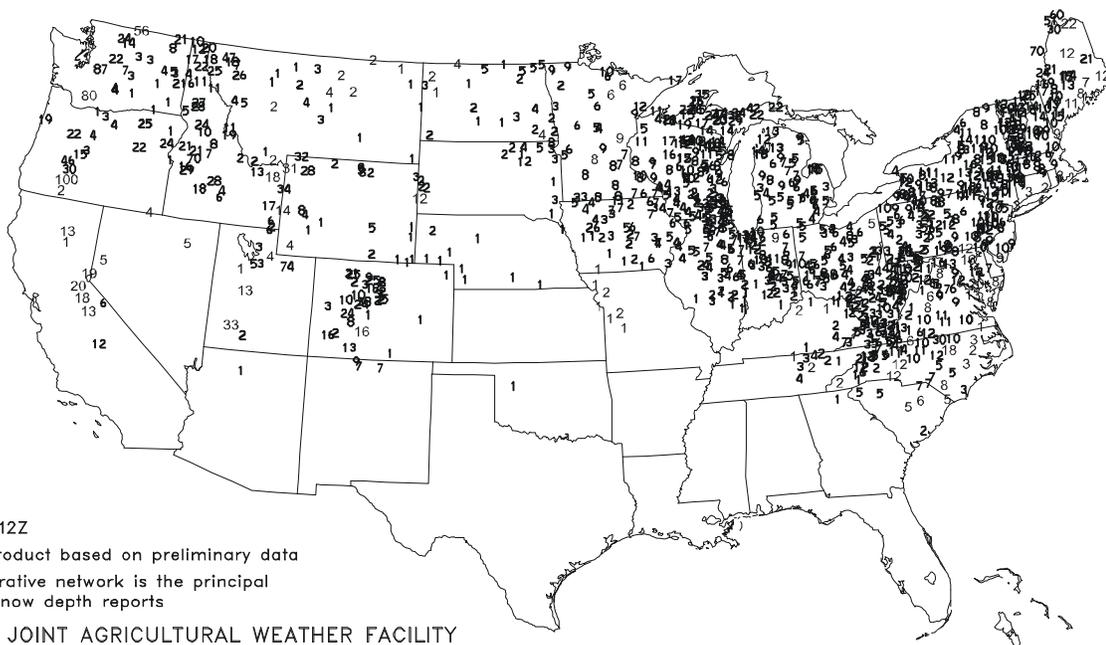
A blast of cold, arctic air pushed southeastward through the western Great Lakes region and into the eastern Corn Belt and Atlantic Coast States. Snow covered most winter wheat fields in the eastern Corn Belt and protected plants from sub-zero temperatures and strong winds. Dry weather and record warmth continued in the Great Plains and Southwest. Wheat and oat fields remained green in Texas, although growth slowed as moisture supplies rapidly diminished due to unseasonably warm weather. Light to moderate precipitation increased topsoil moisture in the southern Appalachians and Piedmont, with lesser amounts building soil

moisture supplies in surrounding areas of the Southeast and Atlantic Coastal Plains. Rain also continued along the coast in the Pacific Northwest and extended southward into central and northern California, where most fieldwork and orchard activities were halted after mid-week. The rain and mild weather stimulated forage growth, especially in northern California. Mostly dry weather continued in Florida, and soil moisture remained mostly short and very short. A mid-week cold front pushed overnight temperatures below freezing in many northern and central areas, but frost and freeze damage were minimal.

*(Commodity-specific information will resume during the first week of April 2000.)*

Snow Depth (Inches)

Jan 26, 2000



Snow Depth at 12Z

Experimental product based on preliminary data

The NWS cooperative network is the principal source of the snow depth reports

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Supplemental values from the U.S. Air Force Snow Depth Analysis, 00Z Jan. 26

# International Weather and Crop Summary

January 16 - 22, 2000

## HIGHLIGHTS

**FSU-WESTERN:** Widespread, light to moderate snow increased protective snow cover as far south as the Black Sea coast.

**EUROPE:** Freezing temperatures in Greece and Italy possibly damaged citrus.

**EASTERN ASIA:** In the North China Plain, light snow protected dormant winter wheat from cold weather.

**SOUTHEAST ASIA:** Heavier showers returned to Java, Indonesia and the eastern Philippines, increasing moisture supplies for grains.

**AUSTRALIA:** Mostly dry, warm weather spurred summer crop growth in the east.

**SOUTH AMERICA:** In southern Brazil and central Argentina, scattered showers brought some additional relief to summer crops, but more widespread showers are still needed to eliminate pockets of dry weather.

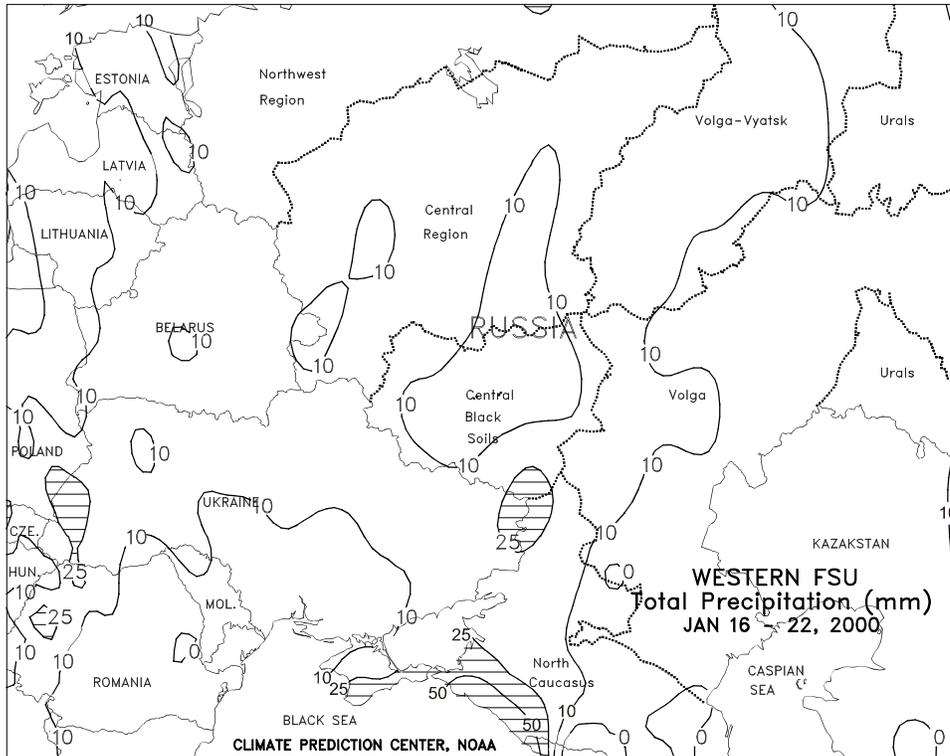
**NORTHWESTERN AFRICA:** Meager rains fell in Morocco, while more substantial showers were confined to northeastern Algeria and northern Tunisia.

**SOUTH AFRICA:** Unseasonably cool weather slowed growth of reproductive corn and other summer crops.



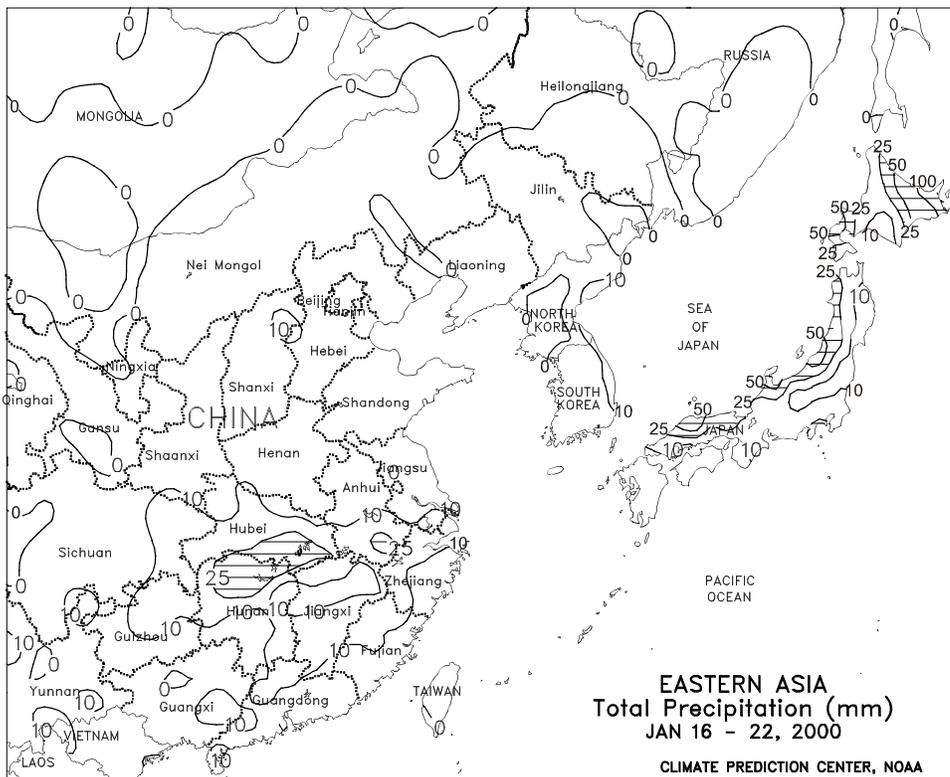
## EUROPE

In northeastern Europe, light to moderate snow (5-27 mm liquid equivalent) blanketed Germany, Poland, Austria, the Czech Republic, and Slovakia. The fresh snow cover benefited dormant winter grains across much of Germany and Poland, where a protective snow cover had been absent in recent weeks. Farther south, scattered snow showers (15-55 mm liquid equivalent) fell across Hungary, Romania, Serbia, and Bulgaria, however, the majority of this precipitation was confined to the higher elevations. In western Europe, dry weather prevailed in major winter grain producing areas. Winter grains are dormant across all but extreme southern Spain and Portugal, hence, the dryness had little if any impact on crops in western Europe. Unseasonably cold weather (temperatures 1-3 degrees C below normal) prevailed across the Iberian peninsula, southern France, southern Italy, and extreme southeastern Europe. In northern and central Greece, extreme minimum temperatures in citrus producing areas fell to between -3 and -5 degrees C, possibly causing crop damage. Similarly, in central Italy, extreme minimum temperatures dropped to near -3 degrees C in citrus producing areas, potentially causing isolated crop damage. Elsewhere across Europe, unseasonably mild weather (temperatures 1-3 degrees C above normal) continued, maintaining favorable overwintering conditions for dormant winter grains.



**FSU-WESTERN**

Widespread, light to moderate snow (8-30 mm liquid equivalent) fell as far south as the Black Sea coast, increasing protective snow cover. In most areas, unseasonably mild weather early in the week was followed by sharply colder weather at week's end. Lowest temperatures were observed on January 22, ranging from -15 to -25 degrees C in northern Russia and the northern tip of Ukraine, and -7 to -15 degrees C in southern Ukraine and southern Russia. In areas that experienced extreme cold (minimum temperatures less than -15 degrees C) an adequate snow cover protected winter grains from potential winterkill. Weekly temperatures averaged 1 to 5 degrees C above normal in Russia, Belarus, and the Baltics and near normal in Ukraine.

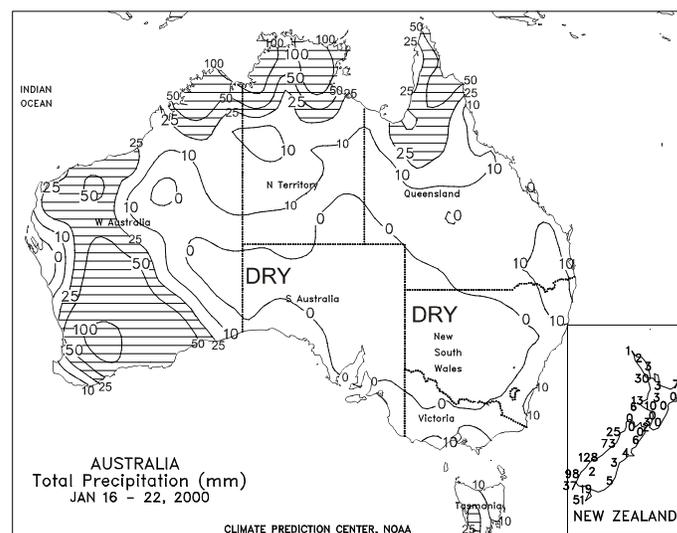
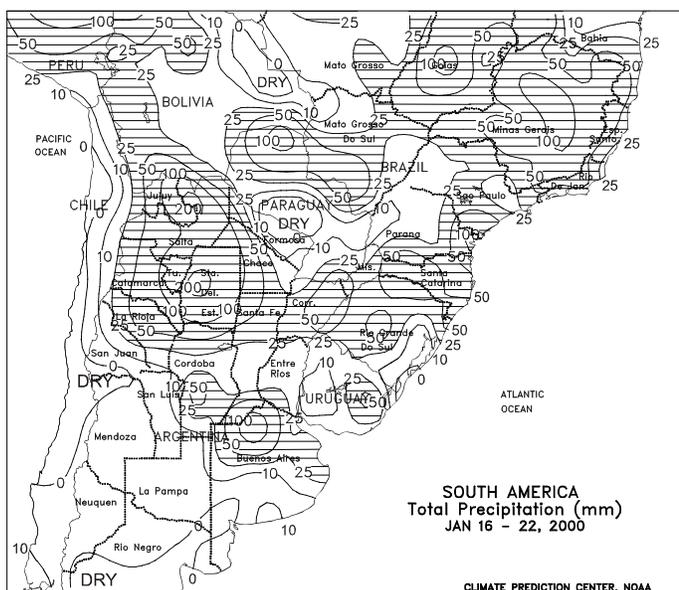
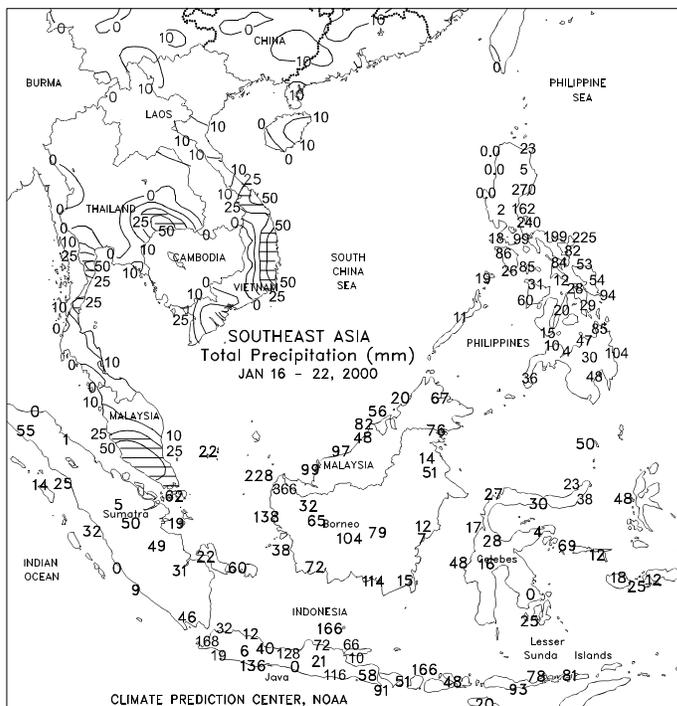


**EASTERN ASIA**

In the North China Plain, light snow protected dormant winter wheat from cold weather. The lowest temperatures ranged from -10 to -14 degrees C across the winter wheat areas. Light precipitation (less than 5 mm of liquid equivalent) fell across the North China Plain. Across the Yangtze Valley, heavier amounts of rain (10-45 mm) increased moisture supplies for winter rapeseed. Temperatures averaged 1 to 2 degrees C below normal across most of eastern China.

**SOUTHEAST ASIA**

Seasonably heavy showers (15-90 mm) returned to Java, Indonesia, increasing moisture supplies for main-season rice. Showers (10-50 mm) maintained moisture supplies for oil palm across peninsular Malaysia. Seasonably dry, warm weather continued to aid rice fieldwork across most of Indochina. Moderate showers (10-60 mm) fell across south-central Vietnam boosting irrigation supplies but slowing fieldwork. Moderate to heavy showers (50-200 mm or more) returned to the eastern Philippines, boosting moisture supplies for second-season crops.

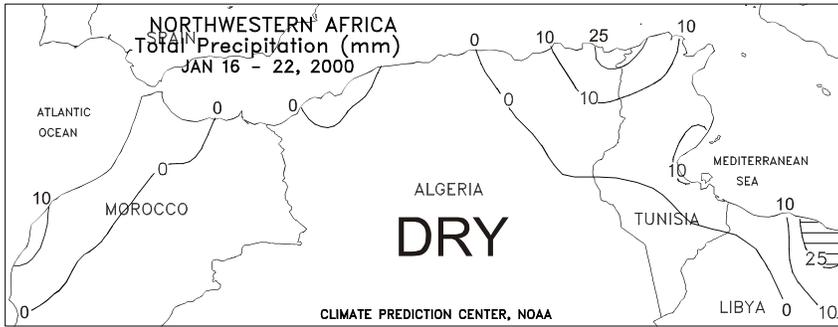


**SOUTH AMERICA**

In southern Brazil, showers (20-60 mm or more) increased soil moisture across the main soybean areas of northwestern Rio Grande do Sul, western Santa Catarina and southern Mato Grosso do Sul. However, drier weather (5-30 mm) prevailed across northern and western Parana and southern Mato Grosso, reducing soil moisture for vegetative to reproductive soybeans and reproductive to filling corn. Southern Paraguay also received sparse amounts (5-25 mm). Hot weather (highest temperatures ranged from 35 to 38 degrees C) increased crop water demands across the crop areas of Rio Grande do Sul, western Parana, and southern Mato Grosso do Sul. Temperatures averaged 2 to 4 degrees C above normal. In northern Argentina, drier weather (5-20 mm) reduced moisture supplies for cotton. In the northwest provinces of Salta, Santiago del Estero, and Tucuman, isolated heavy showers (100-300 mm) likely caused flooding and raised concerns for sugarcane and citrus. In central Argentina, scattered heavy showers (50-200 mm) fell across southern Cordoba and northern Buenos Aires, boosting soil moisture for summer crops. However, drier weather (5-20 mm) was common elsewhere across the main summer crop growing areas, reducing soil moisture for vegetative to reproductive summer crops. Temperatures averaged near normal across central Argentina and 1 to 2 degrees C above normal across northern Argentina. According to reports as of January 21, Argentine soybeans were 97 percent planted and corn was 94 percent planted. Wheat harvesting was nearly complete. Sunflowerseed was 7 percent harvested, with harvesting confined to the northern portion of the country.

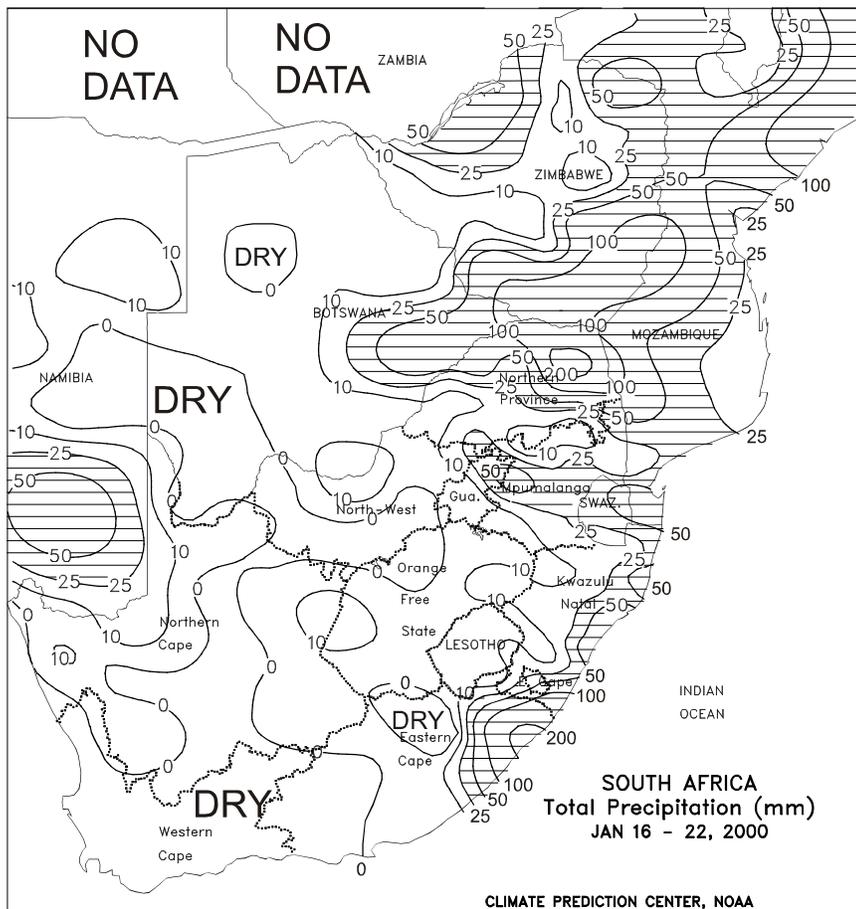
**AUSTRALIA**

Mostly dry, warm weather dominated the east, favoring summer crop development. Above-normal temperatures (averaging 1-3 degrees C above normal with highs from 38-42 degrees C) were especially welcome in the primary cotton and sorghum areas following months of below normal temperatures. Showers were generally scattered and light, with the heaviest amounts (10 mm or more) concentrated east of the Darling Downs. This included the coastal sugarcane areas of northern New South Wales, where inundating rain has fallen in recent weeks. In the southeast, the warmth and dryness increased moisture demands on livestock and grazing lands. In contrast, heavy showers (25-50 mm or more) developed late in the week over Western Australia as tropical moisture streaked southward from the Indian Ocean. The rain provided abundant moisture for pastures and grazing but may have caused isolated flooding. In New Zealand, mostly dry weather covered primary small grain and pasture lands.



**NORTHWESTERN AFRICA**

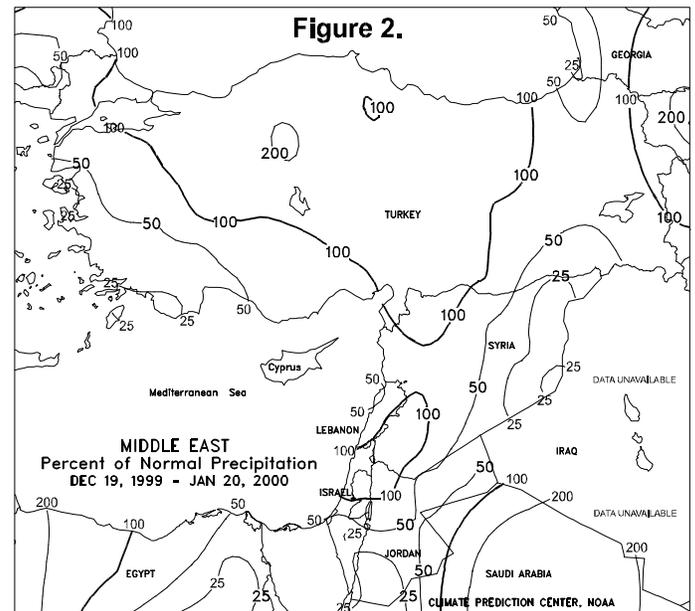
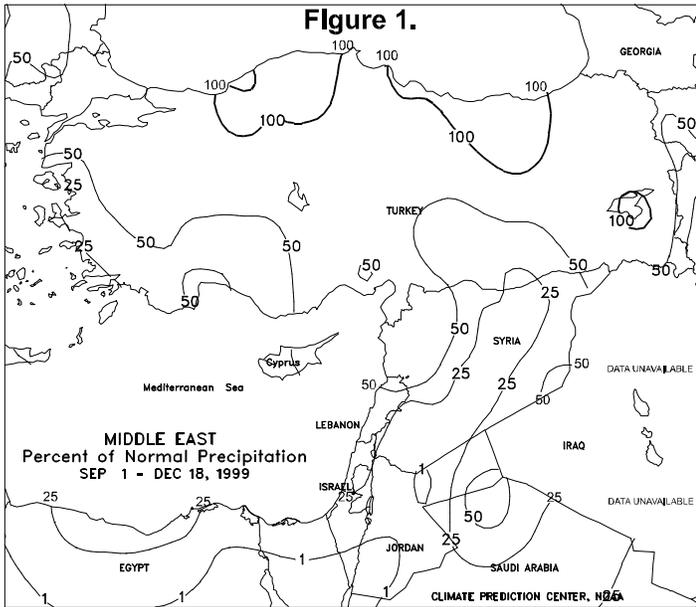
Drier weather returned to (0-6 mm) Morocco after last week's weather system brought considerable moisture. Dryness spread across the region with precipitation (1-36 mm) being confined to the eastern winter grain region. Morocco is still in need of regular rainfall to alleviate possible stress on winter grains. Four of the last five weeks have seen no appreciable precipitation. The dryness experienced in Morocco has begun spreading eastward into western and central Algeria. These crop areas have been without significant rainfall for three consecutive weeks and winter grains are now relying heavily on moisture reserves. Eastern crop areas of northeastern Algeria and northern Tunisia have seen more continuous weekly precipitation, however, amounts have been relatively small lately. Winter grains in the eastern areas are well established and are generally receiving enough rainfall to sustain growth.



**SOUTH AFRICA**

Dry weather returned to the corn belt, with sunnier skies helping to dry excessively wet fields. Rainfall totaled less than 5 mm over broad sections of North West and Free State. However, temperatures were well below normal (4-5 degrees C below normal with lows falling below 10 degrees C), slowing growth of reproductive corn and other summer crops. Elsewhere, heavy rain (50 mm or greater) was confined to coastal sugarcane areas of KwaZulu-Natal and nearby sections of Eastern Cape. In Western Cape, hot, dry weather (highs in the 40's degrees C) resulted in high irrigation requirements of vineyards and pastures.

Middle East Drought Update



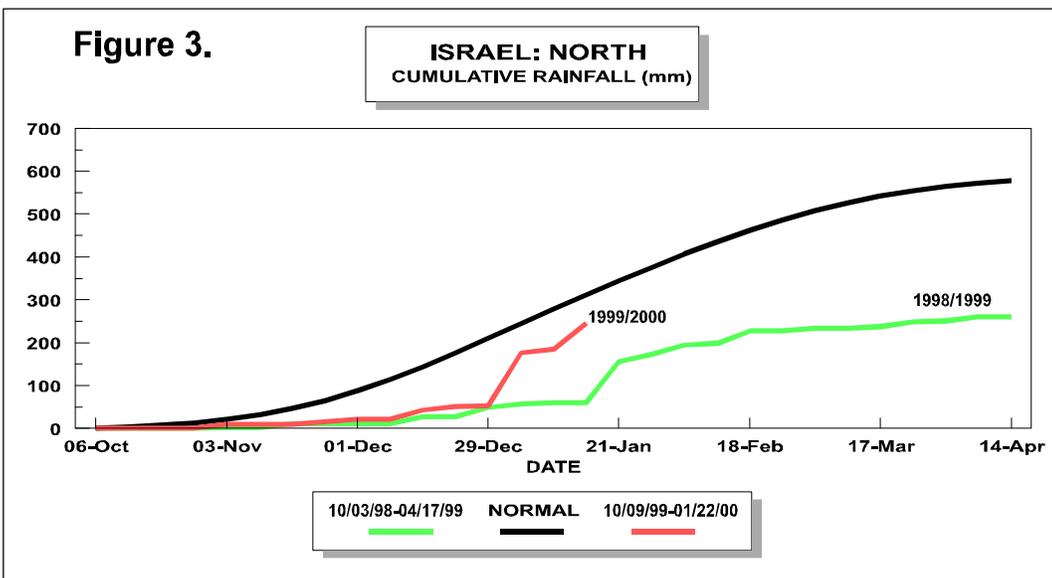
At the beginning of the 1999/2000 winter growing season, much of the Middle East appeared to be facing a second year of serious drought. Rain-producing storm systems had passed north of the region for much of the autumn planting season (September-November). As a result, precipitation totaled less than 50% of normal throughout the region from September 1 through December 18, with little or no precipitation falling south and east of Turkey (Figure 1).

In mid-December, the jet stream finally shifted southward into a more normal position, bringing much-needed precipitation to parts of Turkey, Lebanon, Israel, Syria, and northern Iran (Figure 2). Rainfall totals in excess of 100 millimeters (4 inches) were recorded from December 19, 1999 through January 20, 2000 across the Mediterranean coast from Israel to central Turkey.

The recent return to a more seasonable rainy pattern over

Turkey has improved prospects for the 1999/2000 winter wheat crop and increased available moisture along the Euphrates and Tigris Rivers, which flow from eastern Turkey into Syria and Iraq. Last year's dryness significantly cut agricultural production throughout the Middle East, with winter wheat production in Syria and Iran down 39 and 21 percent, respectively, from the previous year. In Turkey, the 1998/99 winter wheat crop dropped nearly 11 percent from the previous year due to untimely spring dryness.

Despite the recent marked improvement in rainfall accumulation in the eastern Mediterranean, fresh water supplies are still well below normal following last year's severe drought (Figure 3). According to local press reports, the Israeli government cut irrigation allocations by an average of 40 percent to compensate for the drought's effects. Allotments to plantations were only reduced by 20 percent to ensure tree survival, but reports from USDA's Foreign Agricultural Service dated November 1999 indicated that the uprooting of marginal groves of fruit-bearing trees had taken place due to water shortages and the search for more viable cropping alternatives.



With the jet stream firmly still entrenched over the area, wet, fast-moving storm systems continue to sweep across central and northern sections of the region. However, the south and east remain unfavorably dry, and, at this point in the rainy season, a shift to a much-wetter-than-normal weather pattern would be needed over the next few months to significantly improve long-term moisture reserves.

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**Weather Data for Selected Locations in the Delta**

**Weather Data for the Week Ending January 22, 2000**

Data provided by the Mississippi State Delta Research and Extension Center (DREC) and the Southern Regional Climate Center (SRCC).

STATES AND STATIONS	TEMPERATURE EF						PRECIPITATION								4-INCH SOIL TEMP, °F		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. EF				
																30 AND ABOVE	32 AND BELOW	01 INCH OR MORE	50 INCH OR MORE	
MS BATESVILLE *	56	41	71	23	49	9	1.31	0.26	1.21	--	--	1.75	52	--	--	0	1	2	1	
BELZONI *	61	43	73	25	52	9	0.24	-1.05	0.23	--	--	1.01	24	--	--	0	2	2	0	
CLARKSDALE *	55	39	72	21	47	7	0.58	-0.47	0.58	--	--	1.44	44	--	--	0	2	1	1	
CLEVELAND *	58	34	73	23	46	3	0.35	-0.98	0.17	--	--	1.37	41	--	--	0	4	4	0	
GREENVILLE *	61	44	74	29	53	9	0.40	-0.65	0.40	--	--	2.43	70	--	--	0	2	1	0	
GREENWOOD *	60	42	71	25	51	7	0.23	-0.82	0.12	--	--	1.67	46	--	--	0	2	3	0	
INDIANOLA 1S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
INVERNESS SE	61	43	73	27	52	--	0.24	--	0.24	3.89	--	1.17	--	55	50	0	2	2	0	
LYON	55	38	74	21	47	--	0.35	--	0.34	4.54	--	1.26	--	--	--	0	2	2	0	
MOORHEAD *	61	43	73	28	52	8	0.18	-0.94	0.16	--	--	1.13	32	--	--	0	2	2	0	
ONWARD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
ROLLING FORK *	65	41	75	28	53	10	0.02	-1.16	0.02	--	--	0.85	22	--	--	0	2	1	0	
SIDON	64	45	75	27	55	--	0.24	--	0.18	3.85	--	1.50	--	56	52	0	2	2	0	
TUNICA *	54	38	65	23	46	6	0.09	-0.87	0.07	--	--	0.21	6	--	--	0	2	2	0	
VICKSBURG *	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
YAZOO CITY *	62	42	73	28	52	6	0.07	-1.25	0.07	--	--	1.00	24	--	--	0	2	1	0	
STONEVILLE *	61	39	74	26	50	8	0.40	-0.54	0.40	5.13	143	1.69	18	57	47	0	3	1	0	

Compiled by USDA/OCE/WAOB's Stoneville Field Office.  
\* Based on 1964-93 normals.  
x Based on 1961-90 normals.

**Delta Weather and Crop Summary:** The Mississippi Delta experienced another week of above-normal temperatures and below-normal rainfall. Soil moisture improved slightly, however, in the northern Delta, where more significant precipitation fell. Despite the soil moisture shortages, winter wheat appears to be in mostly good condition.

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