

# WEEKLY WEATHER AND CROP BULLETIN

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

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

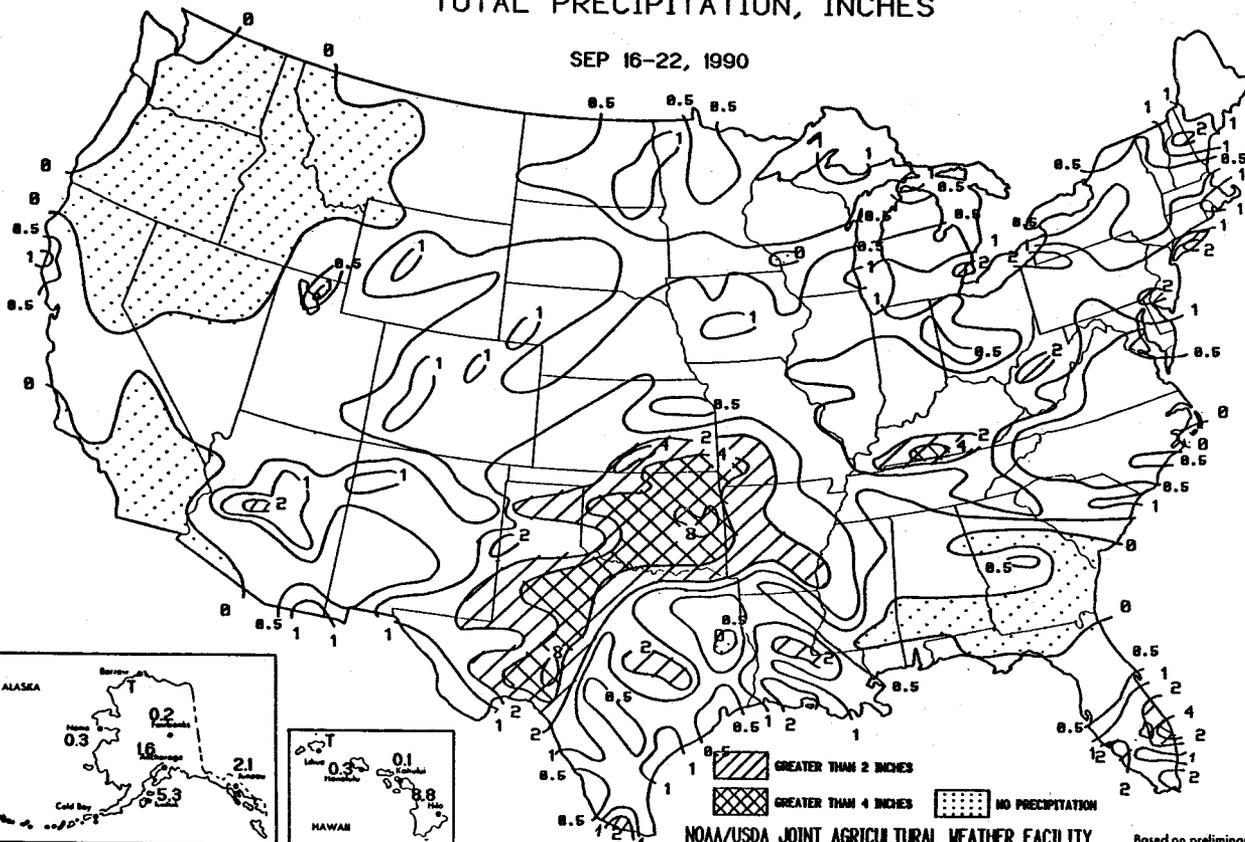
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September 25, 1990

## TOTAL PRECIPITATION, INCHES

SEP 16-22, 1990



## HIGHLIGHTS

September 16 - 22, 1990

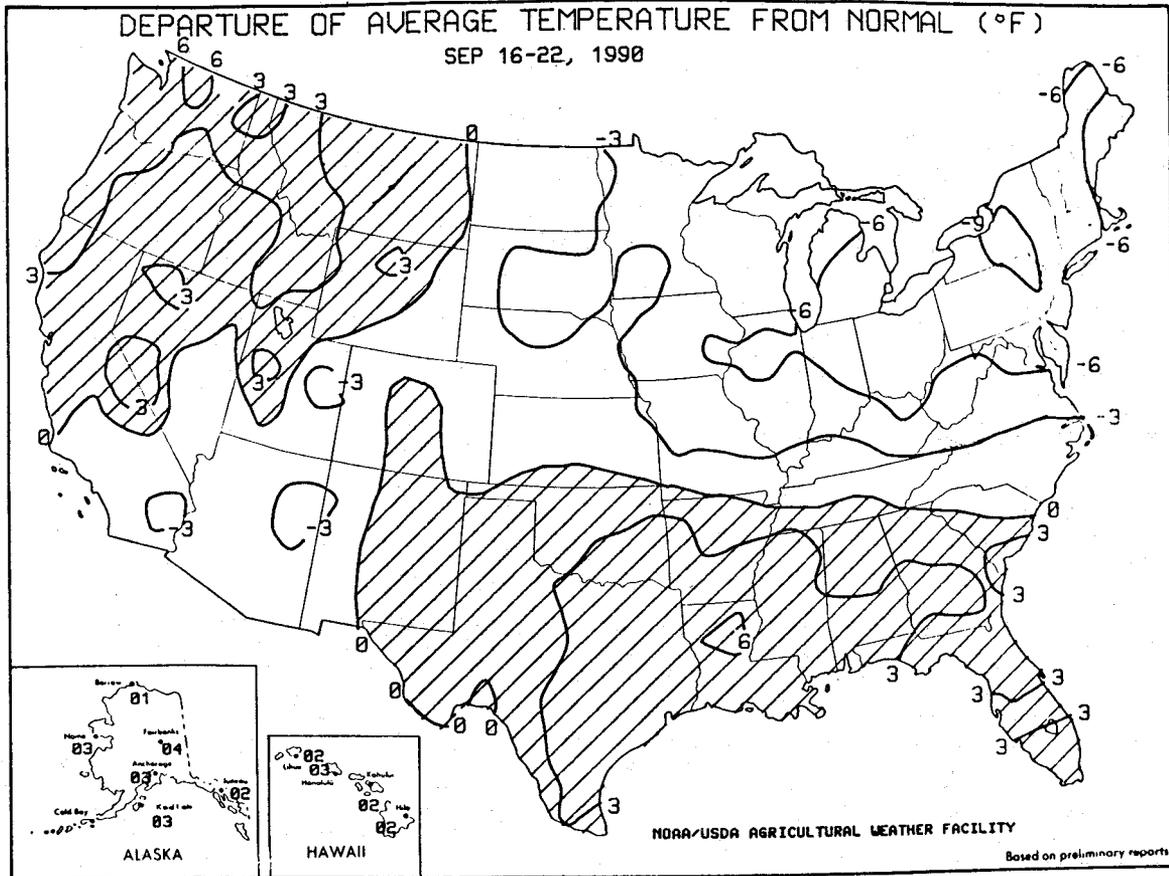
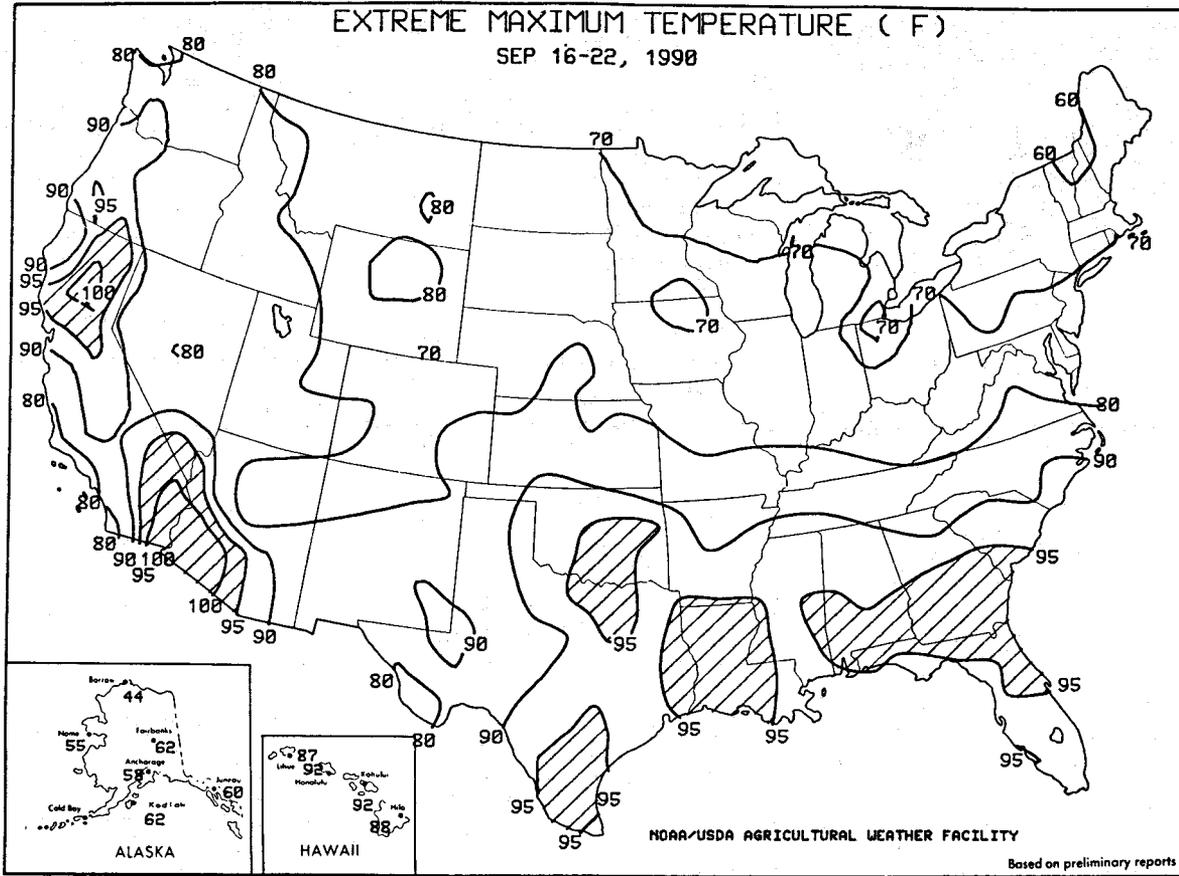
Slow moving thunderstorms deluged much of the **central and southern Plains** and parts of the **Delta** with heavy rain throughout the week. The rains relieved dryness, but torrential amounts caused widespread flooding in **western Texas** and **eastern Oklahoma**. A pair of frontal systems, at midweek and week's end, spread moderate to heavy rain from the **Great Plains** to the **northern and middle Atlantic coast**. Thunderstorms developed in the warm, humid air over **southern Florida** through the week, but dry weather prevailed over much of the remainder of the **Southeast**: Abnormally warm weather continued in the **Northwest** and from the **southern Plains** to the **southern Atlantic coast**. Unseasonably cool air remained over the **North Central** and **Northeastern States** as 24 low-temperature records on the 18th were broken or tied from **Michigan** to **southern New England** and **North Carolina**.

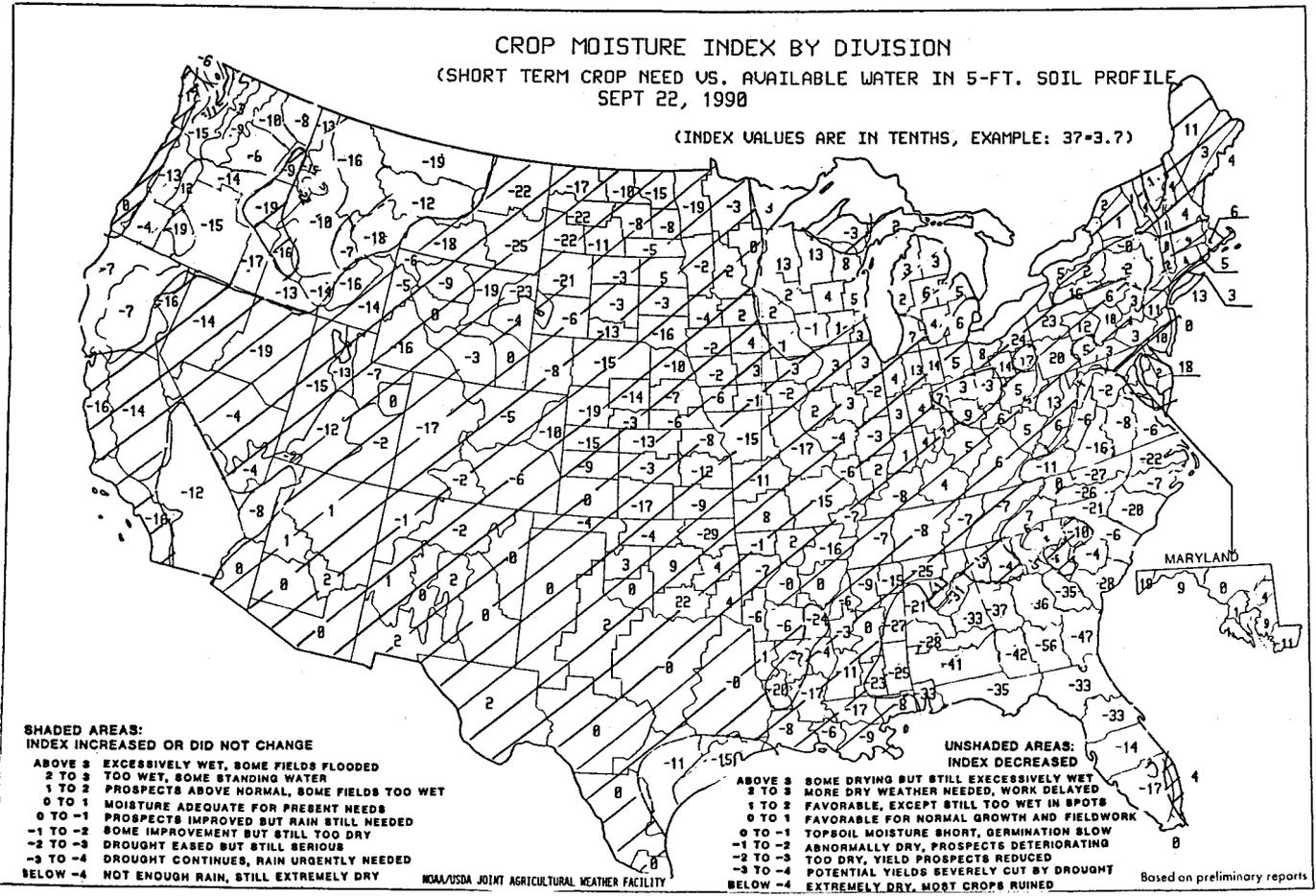
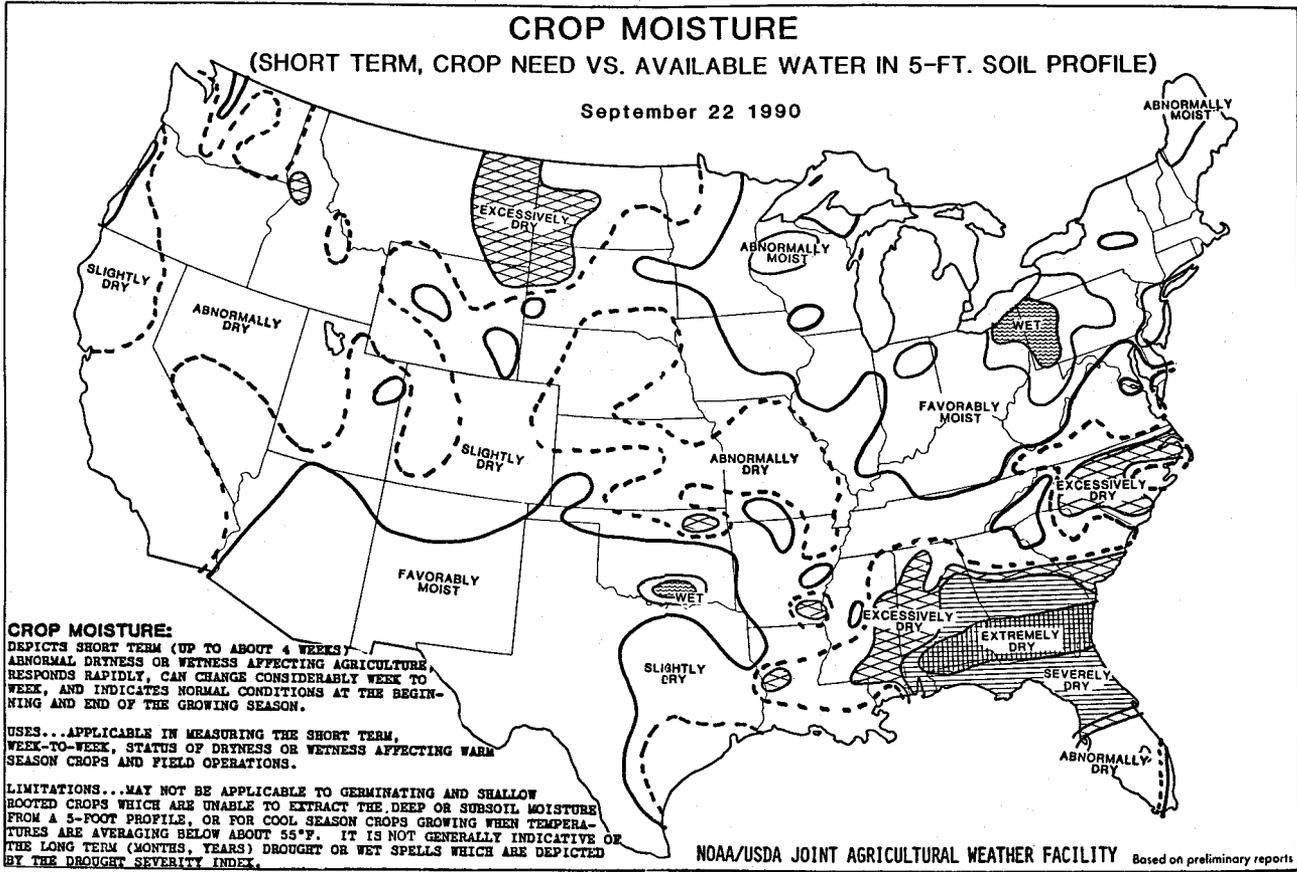
Freezing temperatures dropped into the middle **Missouri Valley** on Sunday morning, September 23.

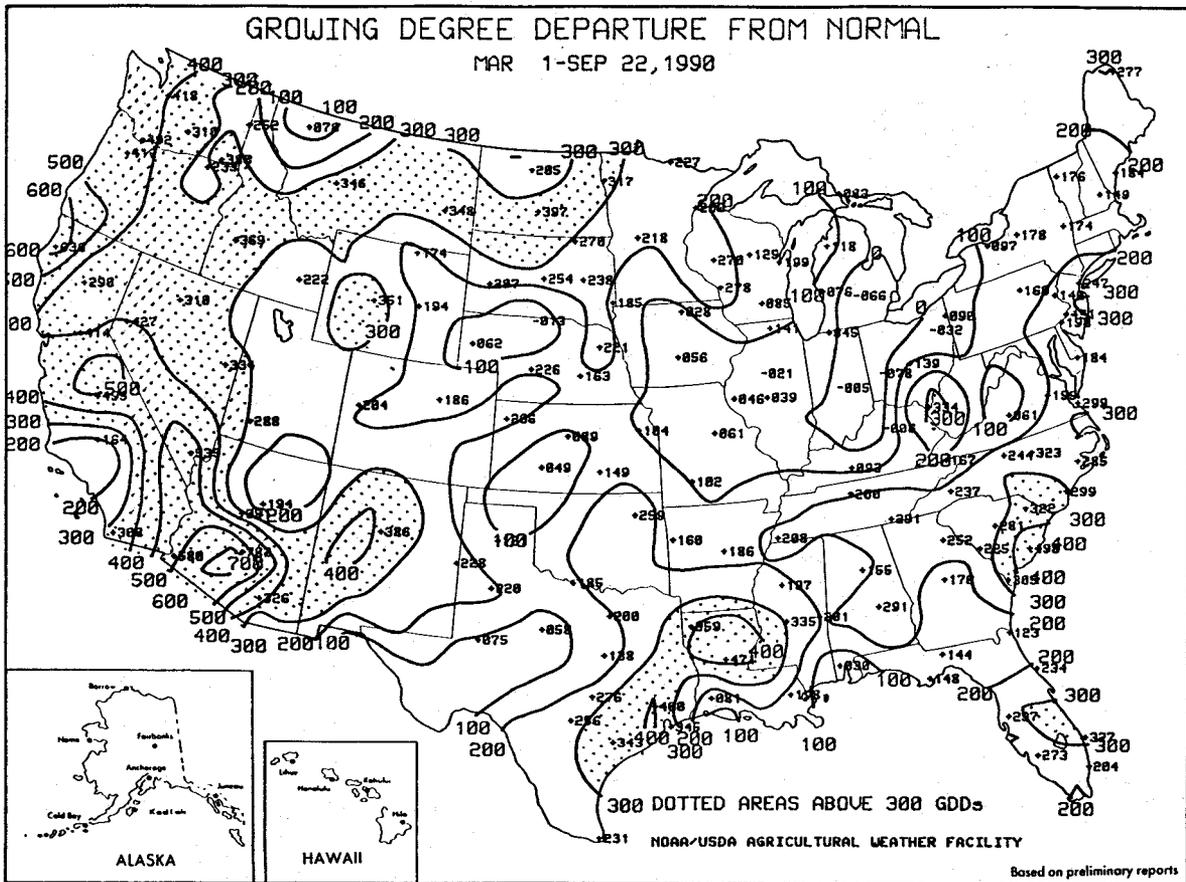
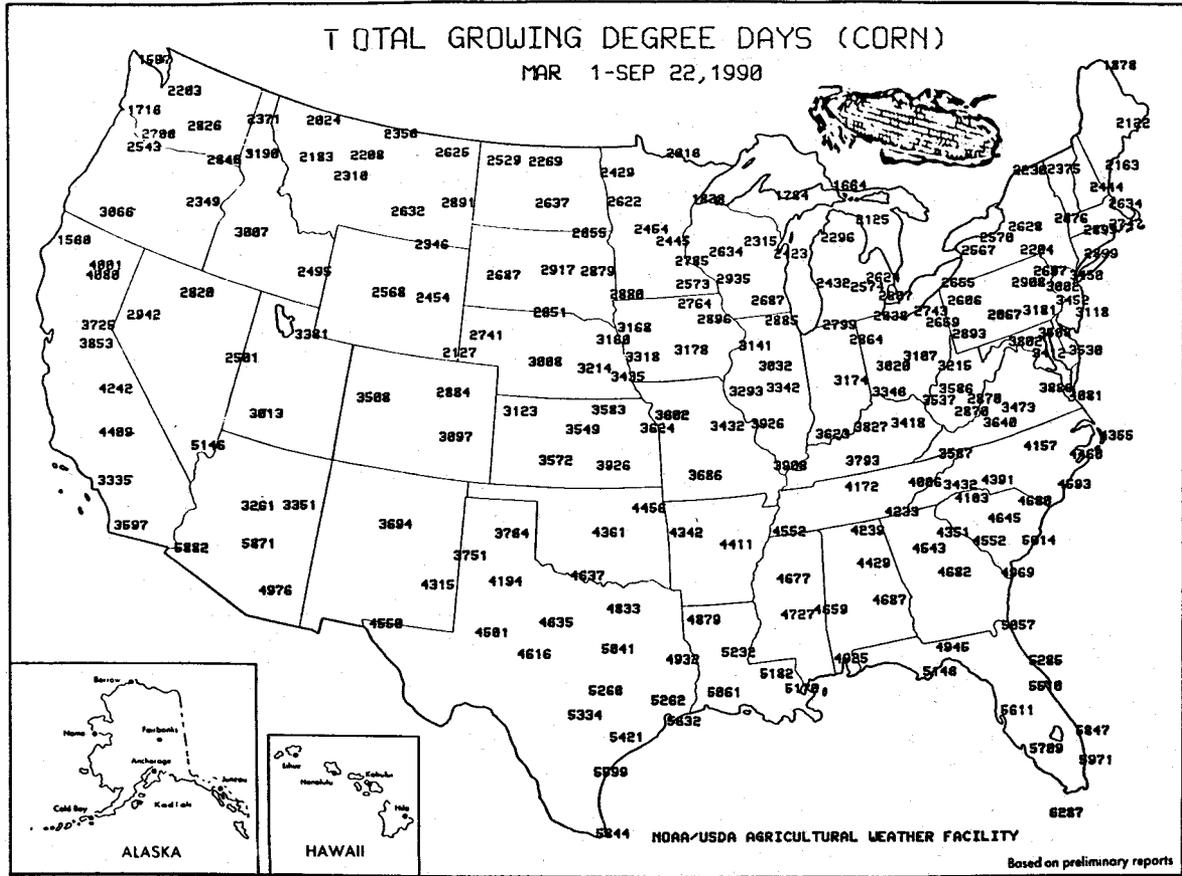
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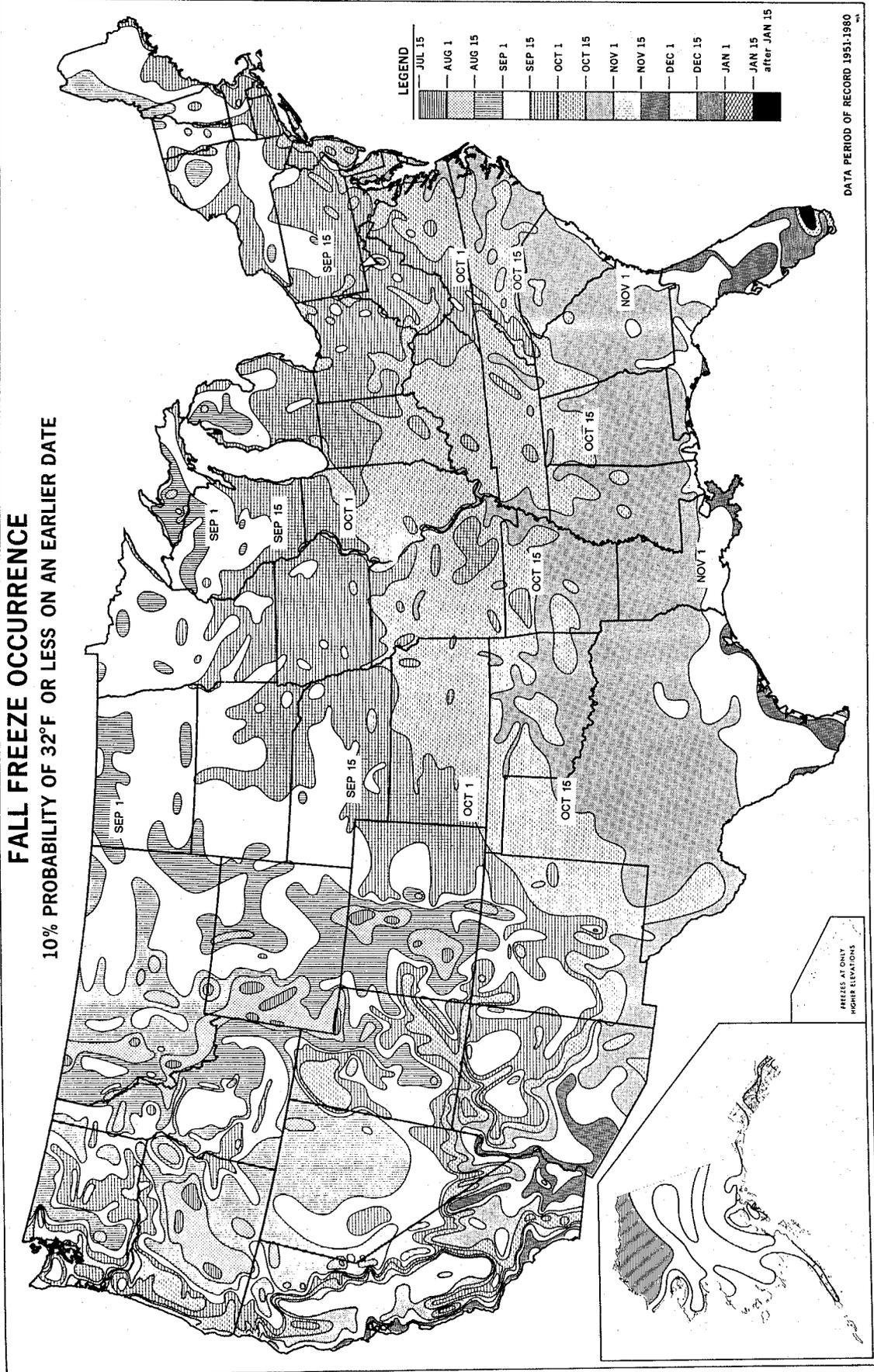
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**FALL FREEZE OCCURRENCE**  
10% PROBABILITY OF 32°F OR LESS ON AN EARLIER DATE



# National Weather Data for Selected Cities

## Weather Data for the Week Ending September 22, 1990

| STATES<br>AND<br>STATIONS | TEMPERATURE °F     |                    |                 |                |         |                          | PRECIPITATION        |                          |                             |                            |                            |                            |                            |                    | RELATIVE HUMIDITY PERCENT |              | NUMBER OF DAYS |                     |         |                     |   |
|---------------------------|--------------------|--------------------|-----------------|----------------|---------|--------------------------|----------------------|--------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------|---------------------------|--------------|----------------|---------------------|---------|---------------------|---|
|                           | AVERAGE<br>MAXIMUM | AVERAGE<br>MINIMUM | EXTREME<br>HIGH | EXTREME<br>LOW | AVERAGE | DEPARTURE<br>FROM NORMAL | WEEKLY<br>TOTAL, IN. | DEPARTURE<br>FROM NORMAL | GREATEST IN<br>24-HOUR, IN. | TOTAL, IN.,<br>SINCE Sep 1 | PCT. NORMAL<br>SINCE Sep 1 | TOTAL, IN.,<br>SINCE Jan 1 | PCT. NORMAL<br>SINCE Jan 1 | AVERAGE<br>MAXIMUM | AVERAGE<br>MINIMUM        | 90 AND ABOVE | 32 AND BELOW   | .01 INCH<br>OR MORE |         | .50 INCH<br>OR MORE |   |
|                           |                    |                    |                 |                |         |                          |                      |                          |                             |                            |                            |                            |                            |                    |                           |              |                | OR MORE             | OR MORE |                     |   |
| AL BIRMINGHAM             | 88                 | 63                 | 94              | 56             | 76      | 2                        | .1                   | -1.0                     | .1                          | 2.0                        | 63                         | 34.4                       | 82                         | 86                 | 38                        | 4            | 0              | 2                   | 0       | 0                   | 0 |
| MOBILE                    | 92                 | 71                 | 95              | 66             | 81      | 4                        | .3                   | -1.3                     | .3                          | 2.5                        | 48                         | 47.6                       | 93                         | 93                 | 42                        | 7            | 0              | 1                   | 0       | 0                   | 0 |
| MONTGOMERY                | 94                 | 63                 | 96              | 56             | 78      | 2                        | .3                   | -1.1                     | .3                          | 1.1                        | 30                         | 46.6                       | 123                        | 94                 | 36                        | 7            | 0              | 1                   | 0       | 0                   | 0 |
| AK ANCHORAGE              | 55                 | 45                 | 58              | 42             | 50      | 3                        | 1.6                  | 1.0                      | 1.1                         | 5.5                        | 303                        | 13.5                       | 130                        | 96                 | 60                        | 0            | 0              | 4                   | 1       | 0                   | 0 |
| BARROW                    | 34                 | 27                 | 44              | 22             | 30      | 1                        | T                    | -1                       | T                           | .4                         | 91                         | 3.8                        | 110                        | 95                 | 73                        | 0            | 7              | 1                   | 0       | 0                   | 0 |
| FAIRBANKS                 | 57                 | 38                 | 62              | 34             | 47      | 4                        | .2                   | -1                       | .2                          | 1.6                        | 190                        | 13.6                       | 171                        | 89                 | 47                        | 0            | 0              | 1                   | 0       | 0                   | 0 |
| JUNEAU                    | 54                 | 47                 | 60              | 41             | 51      | 2                        | 3.0                  | 1.4                      | 1.1                         | 7.5                        | 167                        | 39.3                       | 117                        | 99                 | 84                        | 0            | 0              | 6                   | 3       | 0                   | 0 |
| KODIAK                    | 57                 | 46                 | 62              | 42             | 52      | 3                        | 5.3                  | 3.8                      | 1.6                         | 7.2                        | 159                        | 51.5                       | 127                        | 97                 | 61                        | 0            | 0              | 7                   | 3       | 0                   | 0 |
| NOME                      | 49                 | 40                 | 55              | 34             | 45      | 3                        | .3                   | -2                       | .1                          | 1.9                        | 102                        | 17.2                       | 153                        | 90                 | 63                        | 0            | 0              | 6                   | 0       | 0                   | 0 |
| AZ PHOENIX                | 96                 | 73                 | 98              | 67             | 84      | 1                        | .4                   | .3                       | .4                          | 1.1                        | 231                        | 7.1                        | 147                        | 73                 | 30                        | 7            | 0              | 1                   | 0       | 0                   | 0 |
| PRESCOTT                  | 77                 | 51                 | 81              | 45             | 64      | 0                        | .6                   | .3                       | .4                          | 1.7                        | 138                        | 14.1                       | 98                         | 81                 | 31                        | 0            | 0              | 2                   | 0       | 0                   | 0 |
| TUCSON                    | 91                 | 69                 | 94              | 65             | 80      | 0                        | .1                   | -2                       | .1                          | 1.1                        | 111                        | 12.1                       | 144                        | 76                 | 29                        | 5            | 0              | 2                   | 0       | 0                   | 0 |
| YUMA                      | 97                 | 75                 | 104             | 70             | 86      | 0                        | .0                   | -1                       | .0                          | T                          | 0                          | 1.3                        | 78                         | 53                 | 19                        | 7            | 0              | 0                   | 0       | 0                   | 0 |
| AR FORT SMITH             | 87                 | 65                 | 95              | 60             | 76      | 3                        | 3.7                  | 3.0                      | 1.8                         | 4.6                        | 195                        | 48.8                       | 167                        | 97                 | 51                        | 2            | 0              | 6                   | 2       | 2                   | 0 |
| LITTLE ROCK               | 83                 | 68                 | 89              | 64             | 75      | 2                        | 1.7                  | .7                       | 1.0                         | 3.6                        | 113                        | 44.8                       | 123                        | 84                 | 60                        | 0            | 0              | 4                   | 2       | 2                   | 0 |
| CA BAKERSFIELD            | 88                 | 61                 | 91              | 58             | 74      | 2                        | .1                   | -1                       | .1                          | .1                         | 125                        | 2.7                        | 70                         | 75                 | 30                        | 2            | 0              | 1                   | 0       | 0                   | 0 |
| EUREKA                    | 68                 | 56                 | 72              | 53             | 62      | 5                        | T                    | -2                       | T                           | .6                         | 21.5                       | 92                         | 95                         | 73                 | 0                         | 0            | 0              | 0                   | 0       | 0                   | 0 |
| FRESNO                    | 87                 | 60                 | 92              | 56             | 74      | 0                        | .1                   | -1                       | .1                          | .1                         | 122                        | 7.5                        | 106                        | 76                 | 29                        | 1            | 0              | 1                   | 0       | 0                   | 0 |
| LOS ANGELES               | 76                 | 65                 | 78              | 62             | 70      | 1                        | T                    | .0                       | T                           | T                          | 0                          | 5.1                        | 60                         | 86                 | 59                        | 0            | 0              | 0                   | 0       | 0                   | 0 |
| REDDING                   | 93                 | 61                 | 100             | 55             | 77      | 1                        | T                    | -3                       | T                           | T                          | 0                          | 21.4                       | 82                         | 55                 | 17                        | 4            | 0              | 0                   | 0       | 0                   | 0 |
| SACRAMENTO                | 90                 | 59                 | 98              | 53             | 75      | 3                        | .0                   | -1                       | .0                          | .0                         | 0                          | 11.5                       | 106                        | 79                 | 24                        | 2            | 0              | 0                   | 0       | 0                   | 0 |
| SAN DIEGO                 | 74                 | 66                 | 77              | 65             | 70      | 1                        | .0                   | .0                       | .0                          | T                          | 0                          | 5.9                        | 90                         | 80                 | 57                        | 0            | 0              | 0                   | 0       | 0                   | 0 |
| SAN FRANCISCO             | 78                 | 57                 | 90              | 54             | 68      | 4                        | .2                   | -1                       | .2                          | .2                         | 243                        | 8.1                        | 65                         | 89                 | 46                        | 1            | 0              | 1                   | 0       | 0                   | 0 |
| CO DENVER                 | 72                 | 50                 | 78              | 45             | 61      | 0                        | 1.2                  | .9                       | .9                          | 1.3                        | 142                        | 14.0                       | 112                        | 88                 | 37                        | 0            | 0              | 5                   | 1       | 0                   | 0 |
| GRAND JUNCTION            | 74                 | 52                 | 82              | 47             | 63      | -3                       | .4                   | -2                       | .3                          | 1.1                        | 210                        | 5.8                        | 102                        | 84                 | 34                        | 0            | 0              | 4                   | 0       | 0                   | 0 |
| FUEBLO                    | 76                 | 52                 | 83              | 46             | 64      | -1                       | .5                   | .3                       | .2                          | .6                         | 92                         | 13.0                       | 143                        | 93                 | 37                        | 0            | 0              | 4                   | 0       | 0                   | 0 |
| CT BRIDGEPORT             | 66                 | 51                 | 71              | 42             | 59      | -6                       | .8                   | .0                       | .3                          | 1.7                        | 71                         | 32.6                       | 110                        | 87                 | 44                        | 0            | 0              | 5                   | 0       | 0                   | 0 |
| HARTFORD                  | 65                 | 45                 | 70              | 37             | 55      | -8                       | .7                   | -2                       | .4                          | 1.7                        | 59                         | 36.5                       | 116                        | 92                 | 52                        | 0            | 0              | 4                   | 0       | 0                   | 0 |
| DC WASHINGTON             | 72                 | 54                 | 77              | 46             | 63      | -7                       | .6                   | -1                       | .4                          | .8                         | 31                         | 30.5                       | 105                        | 88                 | 48                        | 0            | 0              | 3                   | 0       | 0                   | 0 |
| FL APALACHICOLA           | 89                 | 69                 | 92              | 66             | 79      | 1                        | .5                   | -1.6                     | .5                          | 1.4                        | 21                         | 29.1                       | 67                         | 96                 | 54                        | 3            | 0              | 1                   | 0       | 0                   | 0 |
| DAYTONA BEACH             | 91                 | 73                 | 96              | 68             | 82      | 3                        | .3                   | -1.2                     | .2                          | .7                         | 14                         | 28.1                       | 75                         | 91                 | 54                        | 4            | 0              | 2                   | 0       | 0                   | 0 |
| JACKSONVILLE              | 94                 | 68                 | 97              | 63             | 81      | 2                        | T                    | -1.5                     | T                           | 1.0                        | 19                         | 21.8                       | 52                         | 93                 | 40                        | 5            | 0              | 0                   | 0       | 0                   | 0 |
| KEY WEST                  | 92                 | 81                 | 92              | 77             | 86      | 3                        | .6                   | -9                       | .4                          | 3.5                        | 77                         | 25.3                       | 92                         | 84                 | 59                        | 7            | 0              | 3                   | 0       | 0                   | 0 |
| MIAMI                     | 92                 | 77                 | 94              | 75             | 84      | 3                        | .7                   | -1.2                     | .3                          | 1.8                        | 31                         | 42.5                       | 98                         | 93                 | 59                        | 6            | 0              | 6                   | 0       | 0                   | 0 |
| ORLANDO                   | 93                 | 74                 | 97              | 72             | 84      | 3                        | T                    | -1.4                     | T                           | .2                         | 4                          | 25.5                       | 62                         | 92                 | 48                        | 6            | 0              | 1                   | 0       | 0                   | 0 |
| TALLAHASSEE               | 94                 | 65                 | 97              | 63             | 80      | 2                        | T                    | -1.5                     | T                           | 3.2                        | 65                         | 36.6                       | 71                         | 98                 | 36                        | 7            | 0              | 0                   | 0       | 0                   | 0 |
| TAMPA                     | 92                 | 75                 | 95              | 74             | 84      | 3                        | T                    | -1.4                     | T                           | 1.0                        | 20                         | 29.5                       | 76                         | 93                 | 52                        | 6            | 0              | 1                   | 0       | 0                   | 0 |
| WEST PALM BEACH           | 91                 | 77                 | 95              | 75             | 84      | 3                        | 5.5                  | 3.3                      | 4.4                         | 8.0                        | 120                        | 45.5                       | 104                        | 97                 | 61                        | 7            | 0              | 4                   | 2       | 0                   | 0 |
| GA ATLANTA                | 85                 | 64                 | 91              | 60             | 75      | 2                        | .0                   | -7                       | .0                          | 3.0                        | 128                        | 47.1                       | 126                        | 87                 | 47                        | 2            | 0              | 0                   | 0       | 0                   | 0 |
| AUGUSTA                   | 90                 | 62                 | 95              | 55             | 76      | 2                        | T                    | -8                       | T                           | .4                         | 16                         | 20.6                       | 59                         | 98                 | 40                        | 4            | 0              | 0                   | 0       | 0                   | 0 |
| Macon                     | 92                 | 64                 | 97              | 56             | 78      | 3                        | .9                   | -1                       | .9                          | 1.6                        | 65                         | 24.6                       | 69                         | 94                 | 37                        | 6            | 0              | 2                   | 1       | 0                   | 0 |
| SAVANNAH                  | 91                 | 67                 | 97              | 59             | 79      | 3                        | .0                   | -1.2                     | .0                          | 1.2                        | 30                         | 25.9                       | 62                         | 87                 | 39                        | 4            | 0              | 0                   | 0       | 0                   | 0 |
| HI HILLO                  | 84                 | 72                 | 88              | 68             | 78      | 2                        | 8.8                  | 7.3                      | 2.8                         | 15.3                       | 317                        | 111.3                      | 126                        | 97                 | 68                        | 0            | 0              | 7                   | 4       | 0                   | 0 |
| HONOLULU                  | 90                 | 77                 | 92              | 75             | 83      | 3                        | .3                   | .2                       | .3                          | .6                         | 162                        | 11.0                       | 76                         | 80                 | 52                        | 3            | 0              | 1                   | 0       | 0                   | 0 |
| KAHULUI                   | 89                 | 72                 | 92              | 70             | 81      | 2                        | .1                   | .2                       | .1                          | .2                         | 106                        | 16.0                       | 129                        | 90                 | 56                        | 3            | 0              | 2                   | 0       | 0                   | 0 |
| LIHUE                     | 85                 | 76                 | 87              | 75             | 81      | 2                        | T                    | -5                       | T                           | .9                         | 64                         | 22.1                       | 80                         | 91                 | 68                        | 0            | 0              | 1                   | 0       | 0                   | 0 |
| ID BOISE                  | 79                 | 45                 | 89              | 42             | 62      | 0                        | .0                   | -1                       | .0                          | T                          | 0                          | 9.5                        | 119                        | 68                 | 21                        | 0            | 0              | 0                   | 0       | 0                   | 0 |
| LEWISTON                  | 82                 | 53                 | 89              | 49             | 67      | 5                        | .0                   | -2                       | .0                          | T                          | 4                          | 8.4                        | 92                         | 51                 | 22                        | 0            | 0              | 0                   | 0       | 0                   | 0 |
| POCATELLO                 | 75                 | 46                 | 84              | 37             | 61      | 3                        | T                    | -1                       | T                           | .3                         | 73                         | 7.8                        | 101                        | 71                 | 23                        | 0            | 0              | 1                   | 0       | 0                   | 0 |
| IL CHICAGO                | 66                 | 49                 | 72              | 47             | 58      | -6                       | .5                   | -4                       | .5                          | 1.0                        | 33                         | 31.1                       | 116                        | 91                 | 55                        | 0            | 0              | 2                   | 0       | 0                   | 0 |
| MOLINE                    | 67                 | 48                 | 73              | 42             | 57      | -6                       | .7                   | -2                       | .6                          | 1.0                        | 37                         | 42.1                       | 143                        | 96                 | 51                        | 0            | 0              | 2                   | 1       | 0                   | 0 |
| PERIA                     | 67                 | 48                 | 72              | 44             | 58      | -7                       | .6                   | -2                       | .3                          | .8                         | 30                         | 41.1                       | 150                        | 96                 | 54                        | 0            | 0              | 4                   | 0       | 0                   | 0 |
| QUINCY                    | 70                 | 52                 | 74              | 46             | 61      | -5                       | 1.6                  | .6                       | 1.0                         | 1.6                        | 52                         | 30.8                       | 104                        | 96                 | 54                        | 0            | 0              | 2                   | 2       | 0                   | 0 |
| ROCKFORD                  | 66                 | 48                 | 72              | 44             | 57      | -6                       | .6                   | -2                       | .6                          | .8                         | 29                         | 35.3                       | 124                        | 92                 | 51                        | 0            | 0              | 2                   | 1       | 0                   | 0 |
| SPRINGFIELD               | 70                 | 51                 | 75              | 44             | 61      | -6                       | 1.7                  | .9                       | 1.1                         | 1.7                        | 73                         | 39.0                       | 147                        | 98                 | 53                        | 0            | 0              | 3                   | 1       | 0                   | 0 |
| IN EVANSVILLE             | 75                 | 56                 | 77              | 50             | 65      | -3                       | 1.3                  | .7                       | 1.0                         | 2.5                        | 126                        | 37.4                       | 118                        | 95                 | 53                        | 0            | 0              | 3                   | 1       | 0                   | 0 |
| FORT WAYNE                | 65                 | 47                 | 71              | 43             | 56      | -7                       | .4                   | -2                       | .2                          | 1.3                        | 68                         | 38.1                       | 145                        | 98                 | 57                        | 0            | 0              | 3                   | 0       | 0                   | 0 |
| INDIANAPOLIS              | 69                 | 50                 | 73              | 45             | 60      | -6                       | 1.4                  | .8                       | .7                          | 2.6                        | 129                        | 34.9                       | 117                        | 97                 | 54                        | 0            | 0              | 4                   | 2       | 2                   | 0 |
| SOUTH BEND                | 65                 | 47                 | 71              | 42             | 56      | -7                       | 1.6                  | .9                       | .7                          | 3.4                        | 144                        | 36.3                       | 129                        | 96                 | 57                        | 0            | 0              | 5                   | 2       | 0                   | 0 |
| IA DES MOINES             | 68                 | 51                 | 72              | 47             | 59      | -4                       | 1.0                  | .4                       | .8                          | 1.4                        | 58                         | 37.4                       | 148                        | 94                 | 54                        | 0            | 0              | 3                   | 1       | 0                   | 0 |
| SIOUX CITY                | 69                 | 49                 | 75              | 41             | 59      | -3                       | .5                   | -1                       | .5                          | .8                         | 42                         | 21.5                       | 100                        | 92                 | 50                        | 0            | 0              | 3                   | 0       | 0                   | 0 |
| WATERLOO                  | 64                 | 47                 | 70              | 41             | 55      | -5                       | .7                   | -1                       | .6                          | 1.4                        | 56                         | 37.5                       | 140                        | 97                 | 54                        | 0            | 0              | 2                   | 1       | 0                   | 0 |
| KS CONCORDIA              | 73                 | 56                 | 76              | 46             | 65      | -2                       | 1.1                  | .4                       | .7                          | 1.1                        | 47                         | 22.6                       | 99                         | 85                 | 49                        | 0            | 0              | 3                   | 1       | 0                   | 0 |
| DODGE CITY                | 78                 | 58                 | 89              | 46             | 68      | 0                        | 1.2                  | .8                       | .4                          | 1.2                        | 84                         | 19.5                       | 112                        | 91                 | 41                        | 0            | 0              | 5                   | 0       | 0                   | 0 |
| GOODLAND                  | 70                 | 53                 | 79              | 42             | 62      | -2                       | .4                   | -1                       | .3                          | .9                         | 78                         | 16.3                       | 117                        | 91                 | 45                        | 0            | 0              | 2                   | 0       | 0                   | 0 |
| TOPKA                     | 76                 | 55                 | 83              | 46             | 66      | -2                       | .4                   | -4                       | .2                          | .7                         | 27                         | 27.8                       | 104                        | 93                 | 48                        | 0            | 0              | 3                   | 0       | 0                   | 0 |
| WICHITA                   | 79                 | 62                 | 87              | 54             | 70      | 1                        | .9                   | -1                       | .6                          | 1.8                        | 69                         | 15.7                       | 69                         | 89                 | 46                        | 0            | 0              | 4                   | 1       | 0                   | 0 |
| KY BOWLING GREEN          | 79                 | 57                 | 84              | 50             | 68      | -2                       | 3.4                  | 2.7                      | 2.9                         | 5.4                        | 228                        | 34.1                       | 92                         | 94                 | 49                        | 0            | 0              | 2                   | 1       | 0                   | 0 |
| LEXINGTON                 | 72                 | 53                 | 75              | 48             | 62      | -5                       | 1.2                  | .5                       | .5                          | 2.0                        | 78                         | 34.6                       | 97                         | 98                 | 58                        | 0            | 0              | 4                   | 2       | 1                   | 0 |
| LOUISVILLE                | 74                 | 57                 | 77              | 51             | 65      | -4                       | 1.4                  | .6                       | .7                          | 2.4                        | 98                         | 42.3                       | 128                        | 90                 | 48                        | 0            | 0              | 3                   | 1       | 0                   | 0 |
| LA ALEXANDRIA             | 92                 | 74                 | 97              | 69             | 83      | 6                        | 2.0                  | 1.3                      | 1.0                         | 3.5                        | 154                        | 45.0                       | 114                        | 96                 | 57                        | 6            | 0              | 5                   | 1       | 0                   | 0 |
| BAYON ROUGE               | 93                 | 73                 | 95              | 71             | 83      | 5                        | 1.3                  | .2                       | .8                          | 5.1                        | 149                        | 55.4                       | 128                        | 100                | 54                        | 7            | 0              | 2                   | 1       | 0                   | 0 |
| LAKE CHARLES              | 90                 | 74                 | 91              | 72             | 82      | 4                        | 3.8                  | 2.5                      | 3.1                         | 9.5                        | 220                        | 44.5                       | 112                        | 100                | 63                        | 4            | 0              | 5                   | 1       | 0                   | 0 |
| NEW ORLEANS               | 93                 | 73                 | 96              | 72             | 83      | 5                        | .7                   | -7                       | .7                          | 4.6                        | 101                        | 45.8                       | 99                         | 97                 | 52                        | 7            | 0              | 1                   | 0       | 0                   | 0 |

Based on 1951-80 normals

Weather Data for the Week Ending September 22, 1990

| STATES<br>AND<br>STATIONS | TEMPERATURE °F     |                    |                 |                |         |                             | PRECIPITATION        |                             |                             |                            |                            |                            | RELATIVE HUMIDITY PERCENT  |                    | NUMBER OF DAYS     |              |              |                     |                     |
|---------------------------|--------------------|--------------------|-----------------|----------------|---------|-----------------------------|----------------------|-----------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------|--------------------|--------------|--------------|---------------------|---------------------|
|                           | AVERAGE<br>MAXIMUM | AVERAGE<br>MINIMUM | EXTREME<br>HIGH | EXTREME<br>LOW | AVERAGE | DEPARTURE<br>FROM<br>NORMAL | WEEKLY<br>TOTAL, IN. | DEPARTURE<br>FROM<br>NORMAL | GREATEST IN<br>24-HOUR, IN. | TOTAL, IN.,<br>SINCE Sep 1 | PCT. NORMAL<br>SINCE Sep 1 | TOTAL, IN.,<br>SINCE Jan 1 | PCT. NORMAL<br>SINCE Jan 1 | AVERAGE<br>MAXIMUM | AVERAGE<br>MINIMUM | TEMP. °F     |              | PRECIP.             |                     |
|                           |                    |                    |                 |                |         |                             |                      |                             |                             |                            |                            |                            |                            |                    |                    | 90 AND ABOVE | 32 AND BELOW | .01 INCH<br>OR MORE | .50 INCH<br>OR MORE |
| SHREVEPORT                | 92                 | 72                 | 96              | 65             | 82      | 5                           | .4                   | -.4                         | .3                          | 2.9                        | 121                        | 48.6                       | 149                        | 97                 | 51                 | 6            | 0            | 3                   | 0                   |
| ME CARIBOU                | 55                 | 39                 | 63              | 33             | 47      | -4                          | .3                   | -.3                         | .2                          | 1.6                        | 62                         | 25.8                       | 99                         | 94                 | 62                 | 0            | 0            | 4                   | 0                   |
| PORTLAND                  | 62                 | 44                 | 66              | 35             | 53      | -5                          | 1.1                  | -.2                         | .6                          | 2.6                        | 113                        | 29.4                       | 100                        | 90                 | 51                 | 0            | 0            | 3                   | 0                   |
| MD BALTIMORE              | 71                 | 50                 | 76              | 41             | 60      | -7                          | 1.0                  | -.3                         | .6                          | 1.1                        | 40                         | 32.3                       | 104                        | 91                 | 46                 | 0            | 0            | 4                   | 0                   |
| SALISBURY                 | 71                 | 50                 | 76              | 40             | 60      | -7                          | .4                   | -.5                         | .2                          | 1.8                        | 61                         | 29.7                       | 87                         | 96                 | 50                 | 0            | 0            | 1                   | 0                   |
| MA BOSTON                 | 65                 | 51                 | 71              | 44             | 58      | -6                          | .9                   | -.1                         | .6                          | 1.4                        | 57                         | 34.4                       | 112                        | 83                 | 48                 | 0            | 0            | 3                   | 0                   |
| CHATHAM                   | 65                 | 52                 | 70              | 45             | 58      | -3                          | 1.7                  | -.8                         | 1.4                         | 2.1                        | 76                         | 33.7                       | 103                        | 82                 | 55                 | 0            | 0            | 4                   | 0                   |
| MI ALPENA                 | 61                 | 39                 | 67              | 27             | 50      | -6                          | .2                   | -.5                         | .1                          | 1.3                        | 56                         | 23.1                       | 106                        | 92                 | 52                 | 0            | 0            | 1                   | 0                   |
| DETROIT                   | 65                 | 47                 | 71              | 40             | 56      | -6                          | 1.9                  | 1.4                         | .8                          | 6.0                        | 354                        | 31.4                       | 135                        | 95                 | 50                 | 1            | 1            | 3                   | 0                   |
| FLINT                     | 63                 | 42                 | 70              | 35             | 53      | -8                          | .8                   | -.2                         | .3                          | 3.0                        | 167                        | 22.2                       | 101                        | 96                 | 51                 | 0            | 0            | 4                   | 0                   |
| GRAND RAPIDS              | 64                 | 44                 | 71              | 39             | 54      | -7                          | 1.1                  | -.4                         | .8                          | 3.9                        | 143                        | 27.2                       | 110                        | 98                 | 55                 | 0            | 0            | 5                   | 0                   |
| HOUGHTON LAKE             | 61                 | 42                 | 70              | 30             | 51      | -5                          | .4                   | -.2                         | .2                          | 1.8                        | 87                         | 22.4                       | 107                        | 95                 | 53                 | 0            | 0            | 4                   | 0                   |
| LANSING                   | 64                 | 42                 | 71              | 35             | 53      | -7                          | .5                   | -.2                         | .3                          | 4.0                        | 178                        | 23.9                       | 107                        | 95                 | 52                 | 0            | 0            | 3                   | 0                   |
| MARQUETTE                 | 56                 | 39                 | 63              | 34             | 48      | -5                          | 1.5                  | .6                          | .9                          | 4.4                        | 151                        | 24.4                       | 88                         | 95                 | 69                 | 0            | 0            | 1                   | 0                   |
| MUSKEGON                  | 65                 | 44                 | 70              | 36             | 54      | -6                          | 1.0                  | -.3                         | .6                          | 3.7                        | 171                        | 24.8                       | 111                        | 98                 | 50                 | 0            | 0            | 6                   | 0                   |
| SAULT ST. MARIE           | 58                 | 39                 | 62              | 27             | 48      | -5                          | .9                   | -.1                         | .4                          | 4.0                        | 136                        | 25.0                       | 105                        | 97                 | 57                 | 0            | 0            | 5                   | 0                   |
| MN ALEXANDRIA             | 59                 | 46                 | 70              | 40             | 52      | -4                          | .6                   | -.1                         | .5                          | 1.5                        | 85                         | 25.0                       | 92                         | 94                 | 55                 | 2            | 2            | 2                   | 1                   |
| DULUTH                    | 57                 | 42                 | 67              | 38             | 49      | -4                          | .6                   | -.1                         | .3                          | 6.2                        | 251                        | 28.5                       | 121                        | 98                 | 63                 | 0            | 0            | 3                   | 0                   |
| INT'L FALLS               | 58                 | 39                 | 65              | 33             | 48      | -3                          | .5                   | -.3                         | .2                          | 1.0                        | 43                         | 16.8                       | 86                         | 98                 | 59                 | 0            | 0            | 4                   | 0                   |
| MINNEAPOLIS               | 63                 | 48                 | 71              | 45             | 55      | -4                          | .9                   | -.4                         | .6                          | 1.9                        | 96                         | 30.1                       | 139                        | 92                 | 56                 | 0            | 0            | 5                   | 0                   |
| ROCHESTER                 | 61                 | 44                 | 68              | 39             | 52      | -6                          | .4                   | -.4                         | .4                          | 1.3                        | 52                         | 40.0                       | 175                        | 96                 | 62                 | 0            | 0            | 2                   | 0                   |
| MS GREENWOOD              | 90                 | 67                 | 93              | 60             | 79      | 4                           | 1.2                  | .4                          | 1.0                         | 4.0                        | 162                        | 38.5                       | 98                         | 91                 | 47                 | 6            | 6            | 0                   | 0                   |
| JACKSON                   | 92                 | 67                 | 94              | 62             | 80      | 4                           | 1.0                  | .2                          | .9                          | 4.8                        | 180                        | 43.0                       | 109                        | 97                 | 47                 | 0            | 0            | 2                   | 0                   |
| MERIDIAN                  | 93                 | 63                 | 95              | 57             | 78      | 3                           | T                    | -.8                         | T                           | 1.7                        | 64                         | 53.0                       | 130                        | 99                 | 48                 | 0            | 0            | 2                   | 0                   |
| MO CAPE GIRARDEAU         | 78                 | 59                 | 84              | 53             | 68      | -1                          | .9                   | .0                          | .9                          | 1.5                        | 52                         | 36.5                       | 108                        | 96                 | 55                 | 0            | 0            | 0                   | 0                   |
| COLUMBIA                  | 73                 | 54                 | 76              | 49             | 63      | -5                          | .9                   | .0                          | .6                          | 1.9                        | 32                         | 44.6                       | 158                        | 90                 | 53                 | 0            | 0            | 2                   | 0                   |
| KANSAS CITY               | 74                 | 55                 | 78              | 47             | 64      | -5                          | .7                   | -.4                         | .6                          | 1.2                        | 37                         | 33.9                       | 119                        | 88                 | 51                 | 0            | 0            | 4                   | 0                   |
| SAINT LOUIS               | 74                 | 57                 | 77              | 53             | 66      | -3                          | .8                   | -.1                         | .5                          | 1.2                        | 39                         | 30.3                       | 116                        | 86                 | 49                 | 0            | 0            | 3                   | 0                   |
| SPRINGFIELD               | 76                 | 58                 | 82              | 52             | 67      | -1                          | 3.4                  | 2.4                         | 2.3                         | 5.6                        | 181                        | 49.5                       | 167                        | 94                 | 58                 | 0            | 0            | 2                   | 0                   |
| MT BILLINGS               | 72                 | 48                 | 78              | 39             | 60      | 2                           | T                    | -.3                         | T                           | .1                         | 9                          | 9.4                        | 80                         | 69                 | 29                 | 0            | 0            | 1                   | 0                   |
| GLASGOW                   | 72                 | 44                 | 79              | 33             | 58      | 2                           | T                    | -.2                         | T                           | .1                         | 17                         | 5.7                        | 61                         | 67                 | 27                 | 0            | 0            | 2                   | 0                   |
| GREAT FALLS               | 73                 | 42                 | 77              | 37             | 58      | 1                           | T                    | -.2                         | T                           | .1                         | 13                         | 12.5                       | 100                        | 77                 | 26                 | 0            | 0            | 1                   | 0                   |
| HAVRE                     | 73                 | 40                 | 80              | 31             | 57      | 1                           | .0                   | -.2                         | .0                          | T                          | 3                          | 5.4                        | 55                         | 65                 | 24                 | 0            | 1            | 0                   | 0                   |
| HELENA                    | 75                 | 46                 | 78              | 39             | 60      | 6                           | .0                   | -.2                         | .0                          | T                          | 17                         | 7.5                        | 80                         | 69                 | 23                 | 0            | 0            | 0                   | 0                   |
| KALISPELL                 | 73                 | 39                 | 79              | 35             | 56      | 4                           | .0                   | -.2                         | .1                          | -.2                        | 1                          | 15.8                       | 136                        | 92                 | 30                 | 0            | 0            | 0                   | 0                   |
| MILES CITY                | 72                 | 50                 | 81              | 36             | 61      | 2                           | .1                   | -.2                         | .1                          | -.2                        | 27                         | 7.5                        | 64                         | 74                 | 30                 | 0            | 0            | 0                   | 0                   |
| MISSOULA                  | 76                 | 41                 | 82              | 37             | 59      | 4                           | .0                   | -.2                         | .0                          | -.1                        | 8                          | 10.7                       | 108                        | 84                 | 27                 | 0            | 0            | 1                   | 0                   |
| NE GRAND ISLAND           | 71                 | 50                 | 82              | 41             | 61      | -3                          | .6                   | .0                          | .4                          | .7                         | 38                         | 24.2                       | 121                        | 93                 | 46                 | 0            | 0            | 3                   | 0                   |
| LINCOLN                   | 73                 | 54                 | 78              | 44             | 63      | -1                          | .5                   | -.2                         | .0                          | .6                         | 25                         | 23.0                       | 100                        | 87                 | 51                 | 0            | 0            | 3                   | 0                   |
| NORFOLK                   | 70                 | 49                 | 80              | 41             | 59      | -3                          | .5                   | -.0                         | .3                          | 1.0                        | 64                         | 23.6                       | 115                        | 91                 | 46                 | 0            | 0            | 0                   | 0                   |
| NORTH PLATTE              | 70                 | 47                 | 78              | 37             | 59      | -2                          | .2                   | -.1                         | .2                          | .3                         | 25                         | 13.4                       | 79                         | 93                 | 43                 | 0            | 0            | 2                   | 0                   |
| OMAHA                     | 69                 | 52                 | 75              | 42             | 61      | -4                          | .8                   | .0                          | .4                          | .9                         | 34                         | 20.2                       | 80                         | 88                 | 56                 | 0            | 0            | 3                   | 0                   |
| SCOTTSSBLUFF              | 70                 | 48                 | 78              | 41             | 59      | -1                          | .9                   | .6                          | .6                          | 1.0                        | 123                        | 15.1                       | 120                        | 93                 | 41                 | 0            | 0            | 2                   | 0                   |
| VALENTINE                 | 67                 | 43                 | 74              | 34             | 55      | -5                          | .6                   | .3                          | .6                          | .6                         | 57                         | 15.6                       | 103                        | 89                 | 41                 | 0            | 0            | 3                   | 0                   |
| NV ELY                    | 75                 | 34                 | 82              | 31             | 55      | -1                          | T                    | -.2                         | T                           | .2                         | 37                         | 6.9                        | 102                        | 64                 | 19                 | 0            | 3            | 1                   | 0                   |
| LAS VEGAS                 | 90                 | 66                 | 95              | 62             | 78      | -1                          | .1                   | .0                          | .1                          | -.1                        | 42                         | 3.4                        | 114                        | 50                 | 17                 | 3            | 0            | 0                   | 0                   |
| RENO                      | 80                 | 45                 | 81              | 39             | 62      | 3                           | T                    | -.1                         | T                           | T                          | 0                          | 4.3                        | 85                         | 61                 | 17                 | 0            | 0            | 2                   | 0                   |
| WINNEMUCCA                | 80                 | 43                 | 85              | 36             | 62      | 4                           | T                    | -.1                         | T                           | T                          | 0                          | 5.3                        | 98                         | 48                 | 14                 | 0            | 0            | 0                   | 0                   |
| NH CONCORD                | 61                 | 41                 | 66              | 30             | 51      | -7                          | .4                   | -.3                         | .3                          | 2.1                        | 92                         | 28.8                       | 113                        | 96                 | 51                 | 0            | 1            | 2                   | 0                   |
| NJ ATLANTIC CITY          | 70                 | 44                 | 75              | 36             | 57      | -9                          | 1.5                  | .9                          | 1.0                         | 1.7                        | 76                         | 28.3                       | 92                         | 98                 | 47                 | 0            | 0            | 0                   | 0                   |
| NM ALBUQUERQUE            | 80                 | 58                 | 84              | 54             | 69      | 1                           | 1.5                  | .3                          | .3                          | .9                         | 139                        | 8.6                        | 143                        | 90                 | 35                 | 0            | 0            | 5                   | 0                   |
| CLOVIS                    | 77                 | 61                 | 85              | 59             | 69      | 1                           | 1.5                  | .7                          | .3                          | .5                         | 91                         | 6.1                        | 73                         | 91                 | 42                 | 1            | 0            | 2                   | 0                   |
| ROSWELL                   | 84                 | 66                 | 91              | 63             | 75      | 5                           | .7                   | -.3                         | .5                          | 1.2                        | 91                         | 6.1                        | 73                         | 91                 | 42                 | 1            | 0            | 4                   | 0                   |
| NY ALBANY                 | 63                 | 42                 | 67              | 35             | 53      | -7                          | .1                   | -.6                         | .1                          | 1.2                        | 50                         | 33.6                       | 131                        | 93                 | 45                 | 0            | 0            | 3                   | 0                   |
| BINGHAMTON                | 57                 | 42                 | 64              | 35             | 49      | -9                          | .4                   | -.4                         | .2                          | 1.5                        | 62                         | 29.1                       | 108                        | 98                 | 61                 | 0            | 0            | 3                   | 0                   |
| BUFFALO                   | 62                 | 46                 | 70              | 40             | 54      | -7                          | .3                   | -.4                         | .2                          | 2.6                        | 104                        | 34.0                       | 128                        | 93                 | 53                 | 0            | 0            | 4                   | 0                   |
| NEW YORK                  | 67                 | 55                 | 70              | 48             | 61      | -7                          | 1.5                  | .7                          | .9                          | 1.7                        | 63                         | 38.2                       | 123                        | 83                 | 46                 | 0            | 0            | 4                   | 0                   |
| ROCHESTER                 | 61                 | 43                 | 70              | 37             | 52      | -9                          | .2                   | -.4                         | .1                          | 2.5                        | 123                        | 28.5                       | 125                        | 96                 | 53                 | 0            | 0            | 4                   | 0                   |
| SYRACUSE                  | 62                 | 43                 | 68              | 36             | 52      | -9                          | .5                   | -.3                         | .3                          | 2.1                        | 86                         | 33.5                       | 119                        | 94                 | 52                 | 0            | 0            | 3                   | 0                   |
| NC ASHEVILLE              | 77                 | 52                 | 83              | 46             | 65      | -2                          | .4                   | -.5                         | .2                          | 1.4                        | 50                         | 41.0                       | 123                        | 100                | 52                 | 0            | 0            | 2                   | 0                   |
| CHARLOTTE                 | 80                 | 61                 | 89              | 53             | 71      | 0                           | .3                   | -.6                         | .3                          | 1.8                        | 65                         | 28.9                       | 88                         | 86                 | 45                 | 0            | 0            | 1                   | 0                   |
| GREENSBORO                | 77                 | 56                 | 84              | 45             | 66      | -3                          | .3                   | -.8                         | .1                          | 1.2                        | 43                         | 24.9                       | 77                         | 87                 | 47                 | 0            | 0            | 1                   | 0                   |
| HATTERAS                  | 80                 | 64                 | 88              | 50             | 72      | -1                          | .1                   | -.2                         | .1                          | .2                         | 4                          | 34.4                       | 86                         | 85                 | 48                 | 0            | 0            | 1                   | 0                   |
| NEW BERN                  | 81                 | 61                 | 90              | 51             | 71      | -2                          | .1                   | -.1                         | .1                          | .2                         | 4                          | 34.4                       | 86                         | 85                 | 48                 | 0            | 0            | 1                   | 0                   |
| RALPHIGH                  | 79                 | 59                 | 86              | 46             | 69      | -1                          | T                    | -.3                         | T                           | 1.5                        | 33                         | 39.8                       | 96                         | 91                 | 46                 | 1            | 0            | 2                   | 0                   |
| WILMINGTON                | 84                 | 62                 | 92              | 51             | 73      | -1                          | T                    | -.7                         | T                           | .3                         | 12                         | 27.3                       | 85                         | 87                 | 47                 | 0            | 0            | 1                   | 0                   |
| ND BISMARCK               | 65                 | 41                 | 73              | 32             | 53      | -3                          | .6                   | -.3                         | .2                          | 1.4                        | 32                         | 41.6                       | 98                         | 94                 | 47                 | 2            | 0            | 1                   | 0                   |
| FARGO                     | 63                 | 43                 | 73              | 33             | 53      | -4                          | .6                   | -.3                         | .2                          | 1.2                        | 113                        | 11.9                       | 91                         | 91                 | 38                 | 0            | 1            | 4                   | 0                   |
| GRAND FORKS               | 64                 | 42                 | 72              | 32             | 53      | -4                          | .6                   | -.4                         | .8                          | 1.7                        | 121                        | 14.9                       | 92                         | 91                 | 49                 | 0            | 0            | 2                   | 0                   |
| WILLISTON                 | 67                 | 41                 | 78              | 34             | 54      | -1                          | 1.3                  | .9                          | 1.1                         | 1.6                        | 101                        | 14.9                       | 97                         | 91                 | 44                 | 0            | 1            | 2                   | 0                   |
| OH AKRON-CANTON           | 65                 | 46                 | 71              | 40             | 56      | -7                          | .3                   | .0                          | .1                          | .3                         | 27                         | 8.7                        | 76                         | 90                 | 32                 | 0            | 0            | 4                   | 0                   |
| CINCINNATI                | 69                 | 53                 | 72              | 48             | 61      | -7                          | 1.8                  | 1.1                         | .8                          | 8.8                        | 397                        | 49.5                       | 180                        | 98                 | 57                 | 0            | 0            | 4                   | 2                   |
| CLEVELAND                 | 64                 | 48                 | 70              | 40             | 56      | -6                          | 1.0                  | .3                          | .7                          | 3.4                        | 159                        | 41.6                       | 136                        | 96                 | 56                 | 0            | 0            | 4                   | 0                   |
| COLUMBUS                  | 68                 | 48                 | 72              | 42             | 58      | -7                          | 1.0                  | .3                          | .6                          | 6.3                        | 288                        | 37.0                       | 139                        | 96                 | 54                 | 0            | 0            | 5                   | 0                   |
|                           |                    |                    |                 |                |         |                             | .6                   | .0                          | .3                          | 4.6                        | 217                        | 38.4                       | 132                        | 96                 | 52                 | 0            | 0            | 5                   | 0                   |

Based on 1951-80 normals

Weather Data for the Week Ending September 22, 1990

| STATES<br>AND<br>STATIONS | TEMPERATURE °F     |                    |                 |                |         |                          | PRECIPITATION        |                          |                             |                            |                            |                            | RELATIVE HUMIDITY PERCENT  |                    | NUMBER OF DAYS     |              |              |                     |                     |                     |                     |
|---------------------------|--------------------|--------------------|-----------------|----------------|---------|--------------------------|----------------------|--------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------|--------------------|--------------|--------------|---------------------|---------------------|---------------------|---------------------|
|                           | AVERAGE<br>MAXIMUM | AVERAGE<br>MINIMUM | EXTREME<br>HIGH | EXTREME<br>LOW | AVERAGE | DEPARTURE<br>FROM NORMAL | WEEKLY<br>TOTAL, IN. | DEPARTURE<br>FROM NORMAL | GREATEST IN<br>24-HOUR, IN. | TOTAL, IN.,<br>SINCE Sep 1 | PCT. NORMAL<br>SINCE Sep 1 | TOTAL, IN.,<br>SINCE Jan 1 | PCT. NORMAL<br>SINCE Jan 1 | AVERAGE<br>MAXIMUM | AVERAGE<br>MINIMUM | 90 AND ABOVE | 32 AND BELOW | TEMP. °F            |                     | PRECIP.             |                     |
|                           |                    |                    |                 |                |         |                          |                      |                          |                             |                            |                            |                            |                            |                    |                    |              |              | .01 INCH<br>OR MORE | .50 INCH<br>OR MORE | .01 INCH<br>OR MORE | .50 INCH<br>OR MORE |
| DAYTON                    | 66                 | 48                 | 70              | 41             | 57      | -6                       | .8                   | .2                       | .3                          | 2.0                        | 113                        | 40.7                       | 152                        | 97                 | 55                 | 0            | 0            | 4                   | 0                   |                     |                     |
| TOLEDO                    | 66                 | 45                 | 72              | 36             | 55      | -7                       | .8                   | .3                       | .4                          | 1.7                        | 87                         | 27.8                       | 116                        | 97                 | 52                 | 0            | 0            | 4                   | 0                   |                     |                     |
| YOUNGSTOWN                | 64                 | 44                 | 72              | 34             | 54      | -8                       | .7                   | -.1                      | .3                          | 4.9                        | 212                        | 33.4                       | 119                        | 98                 | 54                 | 0            | 0            | 3                   | 0                   |                     |                     |
| OK OKLAHOMA CITY          | 84                 | 68                 | 97              | 59             | 76      | 4                        | 7.3                  | 6.5                      | 3.8                         | 7.3                        | 292                        | 36.2                       | 148                        | 96                 | 57                 | 1            | 0            | 6                   | 4                   |                     |                     |
| TULSA                     | 84                 | 66                 | 95              | 58             | 75      | 2                        | 2.9                  | 1.9                      | 1.1                         | 2.9                        | 92                         | 30.1                       | 101                        | 90                 | 52                 | 1            | 0            | 5                   | 3                   |                     |                     |
| OR ASTORIA                | 72                 | 52                 | 85              | 45             | 62      | 4                        | .1                   | -.7                      | .1                          | .7                         | 32                         | 47.8                       | 118                        | 98                 | 60                 | 0            | 0            | 1                   | 0                   |                     |                     |
| BURNS                     | 75                 | 37                 | 83              | 32             | 56      | -2                       | .0                   | -.1                      | .0                          | .0                         | 0                          | 3.8                        | 59                         | 63                 | 18                 | 0            | 1            | 0                   | 0                   |                     |                     |
| MEDFORD                   | 88                 | 47                 | 98              | 44             | 67      | 3                        | .0                   | -.2                      | .0                          | T                          | 0                          | 9.4                        | 83                         | 81                 | 19                 | 3            | 0            | 0                   | 0                   |                     |                     |
| PENDLETON                 | 79                 | 50                 | 86              | 47             | 64      | 1                        | .0                   | -.1                      | .0                          | T                          | 0                          | 7.0                        | 89                         | 63                 | 24                 | 0            | 0            | 0                   | 0                   |                     |                     |
| PORTLAND                  | 81                 | 55                 | 93              | 51             | 68      | 6                        | T                    | -.4                      | T                           | .3                         | 31                         | 22.2                       | 100                        | 96                 | 39                 | 2            | 0            | 0                   | 0                   |                     |                     |
| SALEM                     | 83                 | 49                 | 95              | 44             | 66      | 5                        | T                    | -.4                      | T                           | .4                         | 41                         | 22.6                       | 96                         | 95                 | 37                 | 2            | 0            | 1                   | 0                   |                     |                     |
| PA ALLENTOWN              | 65                 | 44                 | 71              | 36             | 54      | -9                       | 1.4                  | .5                       | 1.0                         | 1.9                        | 62                         | 31.8                       | 97                         | 95                 | 54                 | 0            | 0            | 3                   | 1                   |                     |                     |
| ERIE                      | 63                 | 48                 | 71              | 40             | 56      | -6                       | 2.7                  | 1.8                      | 1.3                         | 7.0                        | 239                        | 37.4                       | 132                        | 91                 | 53                 | 0            | 0            | 4                   | 3                   |                     |                     |
| HARRISBURG                | 67                 | 47                 | 73              | 40             | 57      | -9                       | .6                   | -.3                      | .4                          | .9                         | 35                         | 29.7                       | 102                        | 95                 | 50                 | 0            | 0            | 2                   | 0                   |                     |                     |
| PHILADELPHIA              | 69                 | 51                 | 74              | 44             | 60      | -7                       | 1.4                  | .7                       | 1.3                         | 1.7                        | 66                         | 29.1                       | 95                         | 95                 | 52                 | 0            | 0            | 3                   | 1                   |                     |                     |
| PITTSBURGH                | 66                 | 46                 | 72              | 38             | 56      | -7                       | 1.1                  | .5                       | .6                          | 5.5                        | 269                        | 37.6                       | 134                        | 98                 | 55                 | 0            | 0            | 4                   | 1                   |                     |                     |
| SCRANTON                  | 62                 | 43                 | 68              | 36             | 52      | -9                       | .5                   | -.2                      | .2                          | 3.0                        | 125                        | 34.1                       | 133                        | 94                 | 52                 | 0            | 0            | 4                   | 0                   |                     |                     |
| RI PROVIDENCE             | 66                 | 45                 | 70              | 38             | 56      | -7                       | 1.6                  | .8                       | 1.2                         | 2.2                        | 85                         | 31.8                       | 100                        | 91                 | 46                 | 0            | 0            | 3                   | 1                   |                     |                     |
| SC CHARLESTON             | 90                 | 68                 | 96              | 62             | 79      | 4                        | .1                   | -1.0                     | .1                          | .1                         | 2                          | 30.0                       | 71                         | 91                 | 41                 | 4            | 0            | 1                   | 0                   |                     |                     |
| COLUMBIA                  | 87                 | 62                 | 93              | 55             | 74      | 0                        | .4                   | -.5                      | .4                          | 2.6                        | 79                         | 28.1                       | 71                         | 97                 | 45                 | 2            | 0            | 1                   | 0                   |                     |                     |
| FLORENCE                  | 83                 | 61                 | 88              | 52             | 72      | -2                       | T                    | -.9                      | T                           | .7                         | 24                         | 18.7                       | 53                         | 93                 | 49                 | 0            | 0            | 1                   | 0                   |                     |                     |
| GREENVILLE                | 81                 | 58                 | 88              | 51             | 70      | -2                       | .6                   | -.5                      | .3                          | 2.1                        | 62                         | 34.8                       | 89                         | 97                 | 53                 | 0            | 0            | 2                   | 0                   |                     |                     |
| SD ABERDEEN               | 66                 | 45                 | 72              | 35             | 56      | -2                       | 1.5                  | 1.1                      | .7                          | 3.0                        | 267                        | 20.0                       | 131                        | 90                 | 46                 | 0            | 0            | 3                   | 2                   |                     |                     |
| HURON                     | 68                 | 42                 | 72              | 33             | 55      | -4                       | .4                   | -.1                      | .3                          | .6                         | 55                         | 21.3                       | 137                        | 92                 | 44                 | 0            | 0            | 2                   | 0                   |                     |                     |
| RAPID CITY                | 69                 | 46                 | 75              | 38             | 57      | -2                       | .5                   | .3                       | .4                          | 2.5                        | 318                        | 15.1                       | 107                        | 89                 | 37                 | 0            | 0            | 2                   | 0                   |                     |                     |
| SIOUX FALLS               | 68                 | 46                 | 76              | 35             | 57      | -3                       | .2                   | -.4                      | .2                          | .3                         | 16                         | 16.0                       | 80                         | 93                 | 44                 | 0            | 0            | 2                   | 0                   |                     |                     |
| TN CHATTANOOGA            | 84                 | 59                 | 89              | 53             | 72      | 0                        | 1.9                  | .9                       | 1.6                         | 3.7                        | 114                        | 50.0                       | 127                        | 96                 | 46                 | 0            | 0            | 3                   | 1                   |                     |                     |
| KNOXVILLE                 | 80                 | 58                 | 85              | 52             | 69      | -2                       | .9                   | .2                       | .8                          | 2.6                        | 120                        | 40.7                       | 115                        | 93                 | 50                 | 0            | 0            | 3                   | 1                   |                     |                     |
| MEMPHIS                   | 86                 | 67                 | 90              | 62             | 77      | 3                        | 1.6                  | .8                       | 1.4                         | 5.2                        | 190                        | 41.3                       | 106                        | 85                 | 48                 | 1            | 0            | 3                   | 1                   |                     |                     |
| NASHVILLE                 | 82                 | 60                 | 85              | 53             | 71      | 0                        | 1.6                  | -.1                      | .8                          | 2.4                        | 87                         | 27.9                       | 76                         | 89                 | 44                 | 0            | 0            | 2                   | 1                   |                     |                     |
| TX ABILENE                | 83                 | 69                 | 90              | 66             | 76      | 1                        | 4.4                  | 3.7                      | 1.6                         | 4.8                        | 214                        | 26.6                       | 148                        | 95                 | 59                 | 1            | 0            | 5                   | 4                   |                     |                     |
| AMARILLO                  | 79                 | 61                 | 90              | 56             | 70      | 1                        | .3                   | -.1                      | .2                          | .3                         | 24                         | 13.9                       | 86                         | 95                 | 53                 | 1            | 0            | 4                   | 0                   |                     |                     |
| AUSTIN                    | 92                 | 74                 | 93              | 72             | 83      | 4                        | .7                   | -.2                      | .6                          | 1.8                        | 68                         | 20.5                       | 90                         | 98                 | 54                 | 6            | 0            | 2                   | 1                   |                     |                     |
| BEAUMONT                  | 92                 | 75                 | 94              | 74             | 84      | 5                        | .9                   | -.3                      | .5                          | 5.2                        | 129                        | 52.8                       | 129                        | 98                 | 60                 | 7            | 0            | 2                   | 0                   |                     |                     |
| BROWNSVILLE               | 90                 | 75                 | 93              | 74             | 83      | 1                        | .7                   | -.6                      | .5                          | 3.9                        | 102                        | 15.6                       | 88                         | 97                 | 62                 | 5            | 0            | 2                   | 0                   |                     |                     |
| CORPUS CHRISTI            | 92                 | 75                 | 95              | 74             | 84      | 3                        | 1.0                  | -.6                      | .4                          | 2.6                        | 52                         | 17.9                       | 75                         | 98                 | 58                 | 6            | 0            | 5                   | 0                   |                     |                     |
| DEL RIO                   | 85                 | 75                 | 90              | 71             | 80      | 0                        | 2.7                  | 2.0                      | 1.3                         | 3.6                        | 181                        | 20.1                       | 157                        | 75                 | 54                 | 1            | 0            | 4                   | 2                   |                     |                     |
| EL PASO                   | 87                 | 62                 | 91              | 57             | 74      | 0                        | 1.7                  | 1.4                      | .9                          | 1.9                        | 178                        | 9.0                        | 153                        | 97                 | 38                 | 2            | 0            | 6                   | 1                   |                     |                     |
| FORT WORTH                | 92                 | 72                 | 96              | 68             | 82      | 5                        | .7                   | -.2                      | .3                          | 1.2                        | 47                         | 37.2                       | 160                        | 95                 | 47                 | 5            | 0            | 2                   | 0                   |                     |                     |
| GALVESTON                 | 90                 | 80                 | 92              | 78             | 85      | 6                        | T                    | -1.4                     | T                           | 6.9                        | 149                        | 31.7                       | 107                        | 83                 | 62                 | 5            | 0            | 2                   | 0                   |                     |                     |
| HOUSTON                   | 93                 | 74                 | 95              | 73             | 84      | 5                        | T                    | -1.2                     | T                           | 1.6                        | 41                         | 31.8                       | 94                         | 96                 | 51                 | 6            | 0            | 2                   | 0                   |                     |                     |
| LUBBOCK                   | 82                 | 63                 | 88              | 60             | 73      | 2                        | .3                   | -.2                      | .3                          | .7                         | 44                         | 11.7                       | 82                         | 94                 | 53                 | 0            | 0            | 1                   | 0                   |                     |                     |
| MIDLAND                   | 82                 | 67                 | 89              | 63             | 75      | 2                        | .0                   | -.2                      | .3                          | 2.8                        | 182                        | 11.2                       | 106                        | 98                 | 61                 | 0            | 0            | 4                   | 0                   |                     |                     |
| SAN ANGELO                | 83                 | 67                 | 89              | 63             | 75      | 0                        | 5.5                  | 4.8                      | 1.8                         | 6.2                        | 280                        | 23.7                       | 175                        | 96                 | 61                 | 0            | 0            | 6                   | 5                   |                     |                     |
| SAN ANTONIO               | 91                 | 74                 | 94              | 72             | 83      | 4                        | .2                   | -.7                      | .2                          | 3.5                        | 129                        | 31.1                       | 146                        | 93                 | 50                 | 6            | 0            | 1                   | 0                   |                     |                     |
| VICTORIA                  | 93                 | 76                 | 96              | 75             | 85      | 6                        | 1.4                  | -.1                      | 1.3                         | 3.6                        | 78                         | 31.1                       | 113                        | 98                 | 50                 | 7            | 0            | 2                   | 1                   |                     |                     |
| WACO                      | 92                 | 74                 | 96              | 71             | 83      | 5                        | 1.6                  | .9                       | .8                          | 6.6                        | 291                        | 29.1                       | 128                        | 96                 | 54                 | 6            | 0            | 4                   | 2                   |                     |                     |
| WICHITA FALLS             | 87                 | 71                 | 97              | 64             | 79      | 4                        | 1.8                  | .9                       | 1.3                         | 1.8                        | 72                         | 33.0                       | 162                        | 93                 | 59                 | 2            | 0            | 5                   | 1                   |                     |                     |
| UT CEDAR CITY             | 76                 | 48                 | 82              | 43             | 62      | 0                        | .4                   | .2                       | .2                          | .9                         | 131                        | 7.5                        | 97                         | 73                 | 23                 | 0            | 0            | 3                   | 0                   |                     |                     |
| SALT LAKE CITY            | 77                 | 55                 | 85              | 48             | 66      | 2                        | .3                   | -.1                      | .2                          | .3                         | 52                         | 8.0                        | 71                         | 75                 | 30                 | 0            | 0            | 2                   | 0                   |                     |                     |
| VT BURLINGTON             | 59                 | 46                 | 63              | 37             | 53      | -5                       | .3                   | -.4                      | .3                          | 1.2                        | 50                         | 27.3                       | 110                        | 91                 | 56                 | 0            | 0            | 4                   | 0                   |                     |                     |
| VA NORFOLK                | 74                 | 59                 | 80              | 53             | 67      | .9                       | .1                   | -.9                      | .1                          | .9                         | 27                         | 37.3                       | 108                        | 87                 | 51                 | 0            | 0            | 1                   | 0                   |                     |                     |
| RICHMOND                  | 74                 | 54                 | 80              | 46             | 64      | -5                       | .2                   | -.6                      | .2                          | 1.9                        | 71                         | 33.7                       | 103                        | 91                 | 50                 | 0            | 0            | 2                   | 0                   |                     |                     |
| ROANOKE                   | 73                 | 52                 | 79              | 41             | 63      | -4                       | .5                   | -.3                      | .3                          | 1.9                        | 81                         | 28.9                       | 99                         | 98                 | 55                 | 0            | 0            | 3                   | 0                   |                     |                     |
| WA QUILLAYUTE             | 72                 | 49                 | 88              | 42             | 61      | 4                        | T                    | -1.5                     | T                           | .4                         | 9                          | 61.9                       | 98                         | 98                 | 59                 | 0            | 0            | 1                   | 0                   |                     |                     |
| SEATTLE-TACOMA            | 77                 | 55                 | 92              | 52             | 66      | 6                        | T                    | -.5                      | T                           | .1                         | 4                          | 24.7                       | 110                        | 96                 | 44                 | 1            | 0            | 1                   | 0                   |                     |                     |
| SPOKANE                   | 75                 | 45                 | 82              | 41             | 60      | 2                        | .0                   | -.2                      | .0                          | T                          | 0                          | 13.3                       | 124                        | 73                 | 26                 | 0            | 0            | 0                   | 0                   |                     |                     |
| YAKIMA                    | 81                 | 45                 | 85              | 42             | 63      | 3                        | .0                   | -.1                      | .0                          | T                          | 15                         | 5.5                        | 110                        | 86                 | 26                 | 0            | 0            | 0                   | 0                   |                     |                     |
| WV BECKLEY                | 66                 | 47                 | 70              | 35             | 57      | -5                       | .8                   | -.1                      | .4                          | 1.8                        | 66                         | 28.8                       | 88                         | 96                 | 59                 | 0            | 0            | 3                   | 0                   |                     |                     |
| CHARLESTON                | 73                 | 51                 | 78              | 42             | 62      | -5                       | 2.0                  | 1.4                      | 1.3                         | 3.9                        | 170                        | 31.1                       | 95                         | 98                 | 50                 | 0            | 0            | 4                   | 1                   |                     |                     |
| HUNTINGTON                | 71                 | 51                 | 75              | 45             | 61      | -7                       | 1.3                  | .7                       | .7                          | 5.2                        | 226                        | 37.7                       | 119                        | 96                 | 51                 | 0            | 0            | 3                   | 1                   |                     |                     |
| PARKERSBURG               | 69                 | 50                 | 73              | 43             | 59      | -7                       | 1.3                  | .7                       | .6                          | 2.7                        | 126                        | 37.0                       | 126                        | 98                 | 54                 | 0            | 0            | 4                   | 1                   |                     |                     |
| WI GREEN BAY              | 64                 | 45                 | 72              | 40             | 54      | -3                       | .3                   | -.4                      | .3                          | 5.0                        | 212                        | 30.5                       | 140                        | 96                 | 52                 | 0            | 0            | 4                   | 0                   |                     |                     |
| LACROSSE                  | 64                 | 49                 | 72              | 44             | 57      | -4                       | T                    | -.8                      | T                           | 1.4                        | 51                         | 32.6                       | 133                        | 96                 | 52                 | 0            | 0            | 1                   | 0                   |                     |                     |
| MADISON                   | 65                 | 46                 | 70              | 41             | 55      | -4                       | .5                   | -.2                      | .4                          | 1.6                        | 71                         | 29.2                       | 120                        | 96                 | 54                 | 0            | 0            | 2                   | 0                   |                     |                     |
| MILWAUKEE                 | 66                 | 51                 | 72              | 47             | 58      | -3                       | 1.0                  | .3                       | .4                          | 1.8                        | 84                         | 31.9                       | 134                        | 90                 | 49                 | 0            | 0            | 4                   | 0                   |                     |                     |
| WAUSAU                    | 60                 | 45                 | 68              | 40             | 52      | -4                       | .6                   | -.3                      | .4                          | 3.8                        | 129                        | 28.7                       | 113                        | 96                 | 56                 | 0            | 0            | 4                   | 0                   |                     |                     |
| WY CASPER                 | 69                 | 45                 | 81              | 37             | 57      | 0                        | .5                   | .3                       | .4                          | .5                         | 100                        | 9.8                        | 109                        | 80                 | 35                 | 0            | 0            | 2                   | 0                   |                     |                     |
| CHEYENNE                  | 65                 | 46                 | 70              | 38             | 56      | -1                       | .5                   | .3                       | .2                          | .7                         | 89                         | 17.1                       | 150                        | 85                 | 41                 | 0            | 0            | 4                   | 0                   |                     |                     |
| LANDER                    | 69                 | 47                 | 80              | 36             | 58      | 1                        | 1.4                  | 1.2                      | .8                          | 1.4                        | 249                        | 8.0                        | 79                         | 78                 | 41                 | 0            | 0            | 3                   | 2                   |                     |                     |
| SHERIDAN                  | 71                 | 46                 | 78              | 34             | 59      | 2                        | .2                   | -.1                      | .2                          | .3                         | 30                         | 10.2                       | 86                         | 81                 | 29                 | 0            | 0            | 1                   | 0                   |                     |                     |

Based on 1951-80 normals

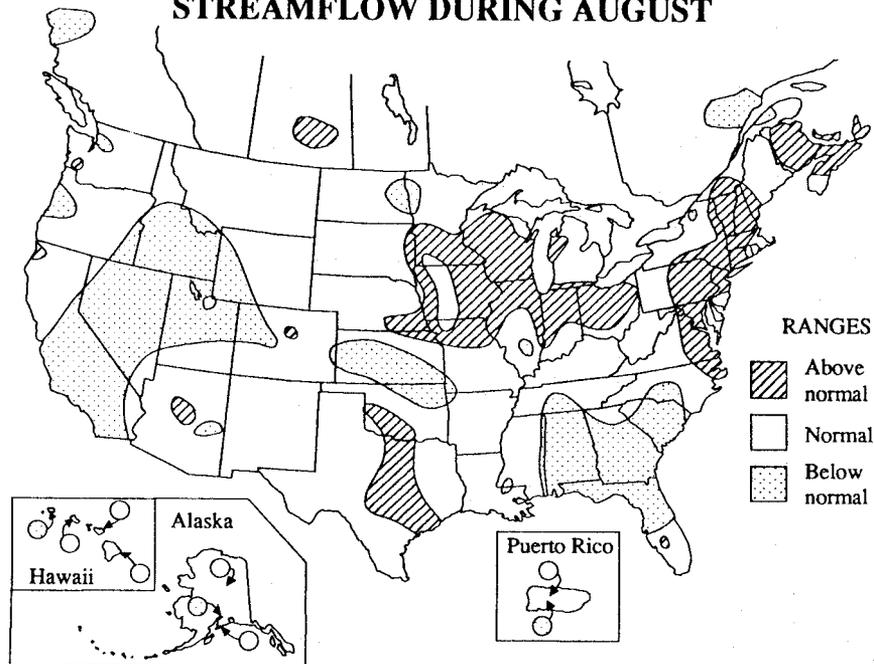
# National Water Conditions

UNITED STATES  
Department of the Interior  
Geological Survey

CANADA  
Department of the Environment  
Water Resources Branch

## AUGUST 1990

### STREAMFLOW DURING AUGUST



Heavy rains on August 24-25 caused flooding in the Wapsipinicon and Turkey River basins in northeastern Iowa. Ten counties were declared Federal disaster areas because of floods during the month.

Streamflow was in the normal to above-normal range at 77 percent of the index stations in southern Canada, the United States, and Puerto Rico during August, compared with 80 percent of stations in those ranges during July. Below-normal range streamflow occurred in 18 percent of the area of southern Canada and the conterminous United States during August. Total flow for the index stations in the conterminous United States and southern Canada was 18 percent above median despite a 30 percent decrease in streamflow from July to August.

The combined flow of the Mississippi, St. Lawrence, and Columbia Rivers averaged 14 percent above median and in the above-normal range during August, but 28 percent less than during July. Mean elevations at the four master gages on the Great Lakes (provisional National Ocean Service data) were in the below-normal range on Lake Superior and in the normal range on Lake Huron, Lake Erie, and Lake Ontario. Levels rose from those for July only on Lake Superior. Utah's Great Salt Lake fell 0.50 foot to 4,203 feet above National Geodetic Vertical Datum of 1929 during August as the lake level continued to decline seasonally.

## National Agricultural Summary

September 17-23, 1990

**HIGHLIGHTS:** General rains in the South Central, Central Plains, East Central, and the Northeast States slowed harvest but were beneficial to growing crops and pastures. Areas in the southern High Plains of Texas and east-central Oklahoma received 8 inches of rain, causing flooding. The Southeast States continued dry, causing deteriorating crop condition.

Winter wheat seeding advanced 10 percentage points from last week to 24 percent (%) complete, 9 points behind the 5-year average. Corn harvest was 8% complete, 5 points below normal. The percentage of soybeans dropping leaves, at 41, was 16 points behind average. Cotton bolls opening were 66%, 4 points ahead of average. Sorghum was good to fair with 23% of the crop harvested, 5 points behind average.

**SMALL GRAINS:** Winter wheat seeding was 24% complete, 9 points behind normal. Colorado, Kansas, Nebraska, and Oklahoma continued to lag normal planting progress. Arkansas and California had not begun planting. Oregon seeding progressed rapidly to take advantage of favorable soil moisture. In Nebraska, heavy rain will cause some replanting in the Panhandle.

**CORN:** Corn was mostly good to fair with 53% of the crop in the mature stage but behind the normal 76% mature by this date. Illinois was 45% mature compared to 90% for the average. Indiana corn was 33% mature, 47 points behind normal. Maturity in Georgia was 100% due to the dry weather. Corn harvest progressed to 8% complete, 5 points behind normal. Rain slowed corn harvest in the Texas Panhandle, but yields were favorable.

**SOYBEANS:** The soybean crop was mostly good to fair. Forty-one percent of the crop was dropping leaves, 16 points behind normal. Illinois and Indiana were at 35% and 32% dropping leaves, respectively, 38% or more behind normal. Georgia conditions continued to decline due to drought and insects and some acres have been abandoned. Soybean harvest was at 2%, 5 points behind average. Louisiana had 13% harvested, 8 points above average. Illinois was 2% harvested, 15 points behind normal.

**COTTON:** Cotton was mostly fair to good. Boll opening was reported in 66% of the crop, 4 points ahead of normal. Fifteen percent of the crop was harvested, compared to 14% for normal. Arizona had 100% bolls opened, 9 points ahead of normal. Texas harvest in the Blackland and High Plains was slow in starting due to cool, wet conditions. Arkansas harvest was 3% complete, 13 points below average. Georgia was 27% harvested compared to 11% average. Louisiana had the most harvested at 45%, 18 points ahead of normal.

**SORGHUM:** Sorghum was mostly fair to good with 54% in the mature stage, 2 points behind normal. Twenty-three percent of the crop was harvested, 5 points behind the average. Missouri had 28% mature, 41 points behind normal. Louisiana had 92% of the crop mature, 6 points behind normal. Texas was 90% mature, 18 points ahead of normal. Nebraska had some lodging in the east and southeast due to chinch bug damage and heat stress.

**OTHER FIELD CROPS:** Rice was mostly good to fair with 42% harvested, 17 points behind normal. Texas and Louisiana reported over 90% harvested. Rice harvest is lagging more than 20 points behind last

year in Arkansas and Mississippi. Arkansas had some rice lodging because of strong winds and rain. Peanuts in South Carolina were in fair condition, with 13% of the crop harvested, the same as average. Georgia peanuts were in poor condition with 56% dug and 42% thrashed, both stages were 2 points ahead of average. Alabama had 62% combined, 25 points below average. Ninety-eight percent of the crop is rated poor. Burley tobacco cutting was active in Kentucky, Maryland, Tennessee, and Virginia. Florida and Louisiana had active sugarcane planting, with the crop rated fair to good.

**FRUIT AND NUTS:** Many hot and dry citrus groves were being irrigated in Florida. Fresh fruit harvest was very active for September with fruit size good and maturity advanced. Arizona lemon harvest and vegetable planting continued westward, and apple harvest was active. In California, soft dates were harvested with no weather damage. Wine grape harvest was well along. Peach, plum, and nectarine harvests were complete. In New York's Hudson Valley, McIntosh apple harvest neared completion. Pennsylvania's apple harvest was 35% complete and the peach harvest was 94% complete. New England had 100% of the blueberries harvested. Arkansas pecan yield prospects were fair. Texas pecan harvest began in parts of the south; the central and east report shucks splitting.

**VEGETABLES:** Maine potatoes were in good condition with 18% harvested, 11 points behind average. In central Arizona, fall cantaloupes, honeydews, and mixed melons were being harvested. Pumpkins, white corn, winter squash, pinto beans, chile, and cabbage were harvested in the west. Florida reported the first Zellwood corn picked. California reported broccoli harvest moderate to light with variable quality. Salinas and Santa Maria areas had heavy celery supplies and light lettuce movement with variable quality. Pepper harvest continued. Peppers, cucumbers, and tomatoes progressed well in the Texas Rio Grande Valley. East Texas sweetpotato harvest continued with good yields. High Plains cucumber, carrot, and pepper harvests experienced some rain delays. Trans-Pecos chile harvest continued.

**PASTURES AND LIVESTOCK:** Pasture conditions were generally fair to good in the Mountain States and westward. Most of the Central and Southeastern States report conditions poor to fair. Livestock were in mostly fair to good condition. North Dakota reported short stock water. Some cattle producers in southwestern Nebraska were moving cattle into dry lots and selling calves.

### Production Highlights

Corn for grain production, as of September 1, is forecast at 8.12 billion bushels, up 3 percent from last month and 8 percent above the 1989 crop. The U.S. average yield per acre is forecast at a record-high 121.7 bushels, up 4 bushels from last month and 5.5 bushels above the 1989 yield. Above-normal temperatures the last of August accelerated development, but progress still lagged normal in most major States.

Soybean production is forecast at 1.83 billion bushels, down 5 percent from last year and essentially unchanged from August 1. Yield is estimated at 32.4 bushels per acre, unchanged from 1989 and 0.1 of a bushel below last month. By month's end, approximately 90 percent of the soybean acreage was setting pods and 13 percent was dropping leaves, 3 and 6 percent behind normal, respectively.

Sorghum for grain production is forecast at 572 million bushels, down 7 percent from 1989 but up 5 percent from August 1. The U.S. average yield is forecast at 61.8 bushels per acre, up 6.4 bushels from last season and up 2.7 bushels from August 1. As of September 2, the crop was 98 percent headed and 46 percent of the acreage was turning color.

All wheat production is forecast at 2.76 billion bushels, up 35 percent from last year and up 2 percent from August 1. Yield is 39.4 bushels per acre equaling the record high of 1983. Area for grain is expected to total 69.9 million acres, up 12 percent from a year ago.

All cotton production is forecast at 14.7 million bales, down 1 percent from August, but up 21 percent from 1989. Prospects improved in Texas and Oklahoma but declined in all other regions, especially the Southeast.

Crop Progress

FOR WEEK ENDING SEPTEMBER 23, 1990

RICE  
% HARVESTED

|          | 1990 | 1989 | AVG. |
|----------|------|------|------|
| AR       | 16   | 40   | 52   |
| CA       | 10   | 2    | 8    |
| LA       | 90   | 84   | 88   |
| MS       | 40   | 37   | 64   |
| TX       | 98   | 98   | 98   |
| 5 STATES | 42   | 49   | 59   |

THESE 5 STATES PRODUCED 97% OF THE 1989 RICE CROP.

COTTON  
% BOLLS OPENING

|           | 1990 | 1989 | AVG. |
|-----------|------|------|------|
| AL        | 89   | 58   | 81   |
| AZ        | 100  | 90   | 91   |
| AR        | 73   | 53   | 80   |
| CA        | 95   | 95   | 95   |
| GA        | 82   | 56   | 68   |
| LA        | 98   | 81   | 90   |
| MS        | 95   | 62   | 90   |
| MO        | 79   | 67   | 71   |
| NM        | 84   | 87   | 75   |
| NC        | 78   | 74   | 86   |
| OK        | 35   | 30   | 35   |
| SC        | 79   | 58   | 75   |
| TN        | 80   | 65   | 82   |
| TX        | 42   | 34   | 36   |
| 14 STATES | 66   | 54   | 62   |

THESE 14 STATES PRODUCED 99% OF THE 1989 COTTON CROP.

COTTON  
% HARVESTED

|           | 1990 | 1989 | AVG. |
|-----------|------|------|------|
| AL        | 26   | 7    | 17   |
| AZ        | 9    | 8    | 5    |
| AR        | 3    | 0    | 16   |
| CA        | 0    | 1    | 1    |
| GA        | 27   | 4    | 11   |
| LA        | 45   | 11   | 27   |
| MS        | 24   | 1    | 21   |
| MO        | 5    | 4    | 15   |
| NM        | 0    | 0    | 0    |
| NC        | 0    | 0    | 0    |
| OK        | 1    | 3    | 3    |
| SC        | 13   | 2    | 6    |
| TN        | 8    | 4    | 15   |
| TX        | 17   | 14   | 16   |
| 14 STATES | 15   | 8    | 14   |

THESE 14 STATES PRODUCED 99% OF THE 1989 COTTON CROP.

WINTER WHEAT  
% PLANTED

|           | 1990 | 1989 | AVG. |
|-----------|------|------|------|
| AR        | 0    | 0    | 1    |
| CA        | 0    | 0    | 0    |
| CO        | 58   | 51   | 73   |
| GA        | 1    | 1    | 3    |
| ID        | 22   | 25   | 28   |
| IL        | 2    | 3    | 4    |
| IN        | 8    | 7    | 8    |
| KS        | 10   | 25   | 35   |
| MI        | 20   | 20   | 10   |
| MO        | 4    | 5    | 9    |
| MT        | 40   | 48   | 35   |
| NE        | 55   | 55   | 66   |
| NC        | 0    | 0    | 0    |
| OH        | 3    | 8    | 6    |
| OK        | 15   | 25   | 25   |
| OR        | 45   | 12   | 11   |
| SD        | 77   | 77   | 77   |
| TX        | 32   | 42   | 40   |
| WA        | 60   | 46   | 53   |
| 19 STATES | 24   | 30   | 33   |

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

SOYBEANS  
% DROPPING LEAVES

|           | 1990 | 1989 | AVG. |
|-----------|------|------|------|
| AL        | 41   | 25   | 30   |
| AR        | 6    | 6    | 12   |
| GA        | 44   | 22   | 29   |
| IL        | 35   | 54   | 73   |
| IN        | 32   | 35   | 73   |
| IA        | 48   | 68   | 75   |
| KS        | 60   | 35   | 60   |
| KY        | 20   | 28   | 36   |
| LA        | 35   | 35   | 29   |
| MI        | 35   | 35   | 55   |
| MN        | 77   | 90   | 78   |
| MS        | 28   | 27   | 32   |
| MO        | 28   | 30   | 43   |
| NE        | 65   | 44   | 57   |
| NC        | 13   | 10   | 8    |
| OH        | 40   | 22   | 62   |
| SC        | 2    | 7    | 6    |
| SD        | 82   | 88   | 78   |
| TN        | 28   | 34   | 32   |
| 19 STATES | 41   | 45   | 57   |

THESE 19 STATES PRODUCED 95% OF THE 1989 SOYBEANS CROP.

SOYBEANS  
% HARVESTED

|           | 1990 | 1989 | AVG. |
|-----------|------|------|------|
| AL        | 6    | 5    | 5    |
| AR        | 0    | 0    | 1    |
| GA        | 1    | 0    | 1    |
| IL        | 2    | 5    | 17   |
| IN        | 0    | 3    | 11   |
| IA        | 0    | 3    | 8    |
| KS        | 5    | 1    | 5    |
| KY        | 0    | 1    | 1    |
| LA        | 13   | 8    | 5    |
| MI        | 0    | 0    | 1    |
| MN        | 4    | 4    | 11   |
| MS        | 6    | 4    | 4    |
| MO        | 1    | 1    | 4    |
| NE        | 5    | 1    | 5    |
| NC        | 0    | 0    | 0    |
| OH        | 0    | 0    | 4    |
| SC        | 0    | 0    | 0    |
| SD        | 4    | 2    | 6    |
| TN        | 0    | 0    | 0    |
| 19 STATES | 2    | 3    | 7    |

THESE 19 STATES PRODUCED 95% OF THE 1989 SOYBEANS CROP.

CORN  
% DENT

|           | 1990 | 1989 | AVG. |
|-----------|------|------|------|
| CO        | 94   | 92   | 94   |
| GA        | 100  | 100  | 100  |
| IL        | 92   | 99   | 100  |
| IN        | 90   | 93   | 98   |
| IA        | 99   | 100  | 100  |
| KS        | 100  | 95   | 98   |
| KY        | 99   | 100  | 100  |
| MI        | 75   | 80   | 90   |
| MN        | 98   | 98   | 98   |
| MO        | 94   | 100  | 100  |
| NE        | 98   | 98   | 100  |
| NC        | 100  | 100  | 100  |
| OH        | 80   | 79   | 95   |
| PA        | 56   | 42   | 73   |
| SD        | 95   | 100  | 90   |
| TX        | 100  | 100  | 100  |
| WI        | 78   | 88   | 87   |
| 17 STATES | 93   | 95   | 97   |

THESE 17 STATES PRODUCED 95% OF THE 1989 CORN CROP.

CORN  
% HARVESTED

|           | 1990 | 1989 | AVG. |
|-----------|------|------|------|
| CO        | 2    | 4    | 4    |
| GA        | 91   | 81   | 87   |
| IL        | 4    | 6    | 17   |
| IN        | 1    | 3    | 10   |
| IA        | 6    | 10   | 12   |
| KS        | 35   | 15   | 30   |
| KY        | 11   | 16   | 25   |
| MI        | 0    | 1    | 3    |
| MN        | 2    | 2    | 6    |
| MO        | 15   | 18   | 29   |
| NE        | 7    | 4    | 6    |
| NC        | 55   | 42   | 42   |
| OH        | 0    | 0    | 2    |
| PA        | 1    | 0    | 2    |
| SD        | 3    | 6    | 3    |
| TX        | 81   | 73   | 75   |
| WI        | 0    | 1    | 3    |
| 17 STATES | 8    | 9    | 13   |

THESE 17 STATES PRODUCED 95% OF THE 1989 CORN CROP.

CORN  
% MATURE

|           | 1990 | 1989 | AVG. |
|-----------|------|------|------|
| CO        | 59   | 50   | 47   |
| GA        | 100  | 100  | 100  |
| IL        | 45   | 76   | 90   |
| IN        | 33   | 47   | 80   |
| IA        | 80   | 90   | 90   |
| KS        | 85   | 75   | 85   |
| KY        | 55   | 71   | 79   |
| MI        | 10   | 20   | 40   |
| MN        | 33   | 61   | 62   |
| MO        | 64   | 87   | 93   |
| NE        | 70   | 59   | 71   |
| NC        | 98   | 95   | 97   |
| OH        | 17   | 12   | 56   |
| PA        | 9    | 6    | 24   |
| SD        | 55   | 79   | 70   |
| TX        | 96   | 96   | 95   |
| WI        | 26   | 32   | 50   |
| 17 STATES | 53   | 65   | 76   |

THESE 17 STATES PRODUCED 95% OF THE 1989 CORN CROP.

GRAIN SORGHUM  
% COLORING

|    | 1990 | 1989 | AVG. |
|----|------|------|------|
| AR | 91   | 93   | NA   |
| CO | 80   | 78   | 85   |
| IL | 68   | 92   | NA   |
| KS | 90   | 65   | 85   |
| LA | 99   | 100  | 100  |
| MS | 96   | 96   | 98   |
| MO | 77   | 89   | 94   |
| NE | 97   | 87   | 94   |
| NM | 88   | NA   | NA   |
| OK | 95   | 100  | 95   |
| SD | 92   | 100  | 88   |
| TX | 98   | 88   | 92   |

|                      |    |    |    |
|----------------------|----|----|----|
| 12 STATES            | 92 | NA | NA |
| EXCL. STATES WITH NA | 93 | 80 | 90 |

THESE 12 STATES PRODUCED 98% OF THE 1989 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

GRAIN SORGHUM  
% MATURE

|    | 1990 | 1989 | AVG. |
|----|------|------|------|
| AR | 67   | 84   | NA   |
| CO | 26   | 40   | 30   |
| IL | 23   | 66   | NA   |
| KS | 30   | 20   | 40   |
| LA | 92   | 99   | 98   |
| MS | 86   | 81   | 92   |
| MO | 28   | 58   | 69   |
| NE | 55   | 45   | 62   |
| NM | 65   | NA   | NA   |
| OK | 25   | 25   | 35   |
| SD | 47   | 75   | 51   |
| TX | 90   | 74   | 72   |

|                      |    |    |    |
|----------------------|----|----|----|
| 12 STATES            | 54 | NA | NA |
| EXCL. STATES WITH NA | 54 | 47 | 56 |

THESE 12 STATES PRODUCED 98% OF THE 1989 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

GRAIN SORGHUM  
% HARVESTED

|    | 1990 | 1989 | AVG. |
|----|------|------|------|
| AR | 34   | 63   | 72   |
| CO | 7    | 5    | 5    |
| IL | 1    | 6    | 18   |
| KS | 5    | 4    | 10   |
| LA | 84   | 84   | 87   |
| MS | 61   | 51   | 71   |
| MO | 9    | 23   | 28   |
| NE | 2    | 2    | 5    |
| NM | 3    | NA   | NA   |
| OK | 4    | 5    | 5    |
| SD | 14   | 7    | 5    |
| TX | 61   | 62   | 61   |

|                      |    |    |    |
|----------------------|----|----|----|
| 12 STATES            | 23 | NA | NA |
| EXCL. STATES WITH NA | 23 | 25 | 28 |

THESE 12 STATES PRODUCED 98% OF THE 1989 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

GRAIN SORGHUM

| STATE     | VP | P  | F  | G  | EX |
|-----------|----|----|----|----|----|
| AR        | 1  | 6  | 70 | 23 | 0  |
| CO        | 2  | 5  | 32 | 50 | 11 |
| IL        | 0  | 6  | 27 | 67 | 0  |
| KS        | 0  | 5  | 32 | 50 | 13 |
| LA        | 0  | 13 | 31 | 56 | 0  |
| MS        | 3  | 14 | 56 | 27 | 0  |
| MO        | 0  | 0  | 72 | 28 | 0  |
| NE        | 2  | 13 | 45 | 36 | 4  |
| NM        | 0  | 0  | 23 | 77 | 0  |
| OK        | 0  | 10 | 75 | 15 | 0  |
| SD        | 5  | 6  | 10 | 66 | 13 |
| TX        | 0  | 8  | 42 | 47 | 3  |
| 12 STATE  | 1  | 7  | 40 | 45 | 7  |
| PREV WEEK | 0  | 8  | 38 | 46 | 8  |
| PREV YEAR | 1  | 10 | 33 | 41 | 15 |

SOYBEANS

| STATE     | VP | P  | F  | G  | EX |
|-----------|----|----|----|----|----|
| AL        | 18 | 45 | 32 | 5  | 0  |
| AR        | 2  | 25 | 55 | 18 | 0  |
| GA        | 29 | 39 | 29 | 3  | 0  |
| IL        | 0  | 3  | 14 | 77 | 6  |
| IN        | 0  | 1  | 27 | 69 | 3  |
| IA        | 0  | 1  | 27 | 64 | 8  |
| KS        | 11 | 21 | 35 | 23 | 10 |
| KY        | 3  | 9  | 47 | 38 | 3  |
| LA        | 0  | 14 | 52 | 31 | 3  |
| MI        | 0  | 3  | 17 | 50 | 30 |
| MN        | 3  | 6  | 43 | 40 | 8  |
| MS        | 17 | 37 | 42 | 4  | 0  |
| MO        | 0  | 10 | 68 | 22 | 0  |
| NE        | 0  | 23 | 55 | 22 | 0  |
| NC        | 2  | 17 | 47 | 33 | 1  |
| OH        | 2  | 8  | 27 | 50 | 13 |
| SC        | 0  | 12 | 56 | 32 | 0  |
| SD        | 0  | 3  | 31 | 60 | 6  |
| TN        | 1  | 34 | 48 | 17 | 0  |
| 19 STATE  | 2  | 11 | 36 | 46 | 5  |
| PREV WEEK | 2  | 10 | 37 | 46 | 5  |
| PREV YEAR | 1  | 6  | 36 | 51 | 6  |

Crop Condition  
PERCENT

FOR WEEK ENDING SEPTEMBER 23, 1990

RICE

| STATE     | VP | P | F  | G  | EX |
|-----------|----|---|----|----|----|
| AR        | 0  | 0 | 43 | 57 | 0  |
| CA        | 0  | 0 | 15 | 75 | 10 |
| LA        | 0  | 0 | 22 | 78 | 0  |
| MS        | 0  | 3 | 45 | 50 | 2  |
| TX        | 0  | 0 | 37 | 63 | 0  |
| 5 STATE   | 0  | 0 | 34 | 64 | 2  |
| PREV WEEK | 0  | 0 | 34 | 64 | 2  |
| PREV YEAR | 0  | 0 | 24 | 63 | 13 |

CORN

| STATE     | VP | P  | F  | G  | EX |
|-----------|----|----|----|----|----|
| CO        | 0  | 2  | 12 | 62 | 24 |
| GA        | 18 | 27 | 41 | 10 | 4  |
| IL        | 0  | 2  | 10 | 76 | 12 |
| IN        | 0  | 3  | 19 | 71 | 7  |
| IA        | 0  | 0  | 8  | 77 | 15 |
| KS        | 0  | 3  | 19 | 50 | 28 |
| KY        | 2  | 14 | 42 | 41 | 1  |
| MI        | 0  | 5  | 15 | 50 | 30 |
| MN        | 4  | 8  | 34 | 45 | 9  |
| MO        | 0  | 0  | 50 | 45 | 5  |
| NE        | 2  | 4  | 28 | 56 | 10 |
| NC        | 9  | 31 | 39 | 21 | 0  |
| OH        | 2  | 7  | 26 | 52 | 13 |
| PA        | 1  | 5  | 19 | 49 | 26 |
| SD        | 1  | 6  | 25 | 55 | 13 |
| TX        | 0  | 2  | 22 | 63 | 13 |
| WI        | 0  | 0  | 11 | 77 | 12 |
| 17 STATE  | 1  | 4  | 20 | 63 | 12 |
| PREV WEEK | 1  | 3  | 20 | 62 | 14 |
| PREV YEAR | 2  | 6  | 25 | 53 | 14 |

COTTON

| STATE     | VP | P  | F  | G  | EX |
|-----------|----|----|----|----|----|
| AL        | 1  | 27 | 71 | 1  | 0  |
| AZ        | 0  | 0  | 22 | 78 | 0  |
| AR        | 0  | 4  | 40 | 47 | 9  |
| CA        | 0  | 0  | 10 | 85 | 5  |
| GA        | 17 | 25 | 46 | 12 | 0  |
| LA        | 0  | 12 | 37 | 38 | 13 |
| MS        | 7  | 6  | 55 | 30 | 2  |
| MO        | 0  | 9  | 82 | 9  | 0  |
| NM        | 3  | 3  | 35 | 53 | 6  |
| NC        | 0  | 5  | 51 | 42 | 2  |
| OK        | 0  | 0  | 50 | 42 | 8  |
| SC        | 1  | 61 | 38 | 0  | 0  |
| TN        | 5  | 29 | 66 | 0  | 0  |
| TX        | 0  | 4  | 43 | 51 | 2  |
| 14 STATE  | 1  | 7  | 42 | 47 | 3  |
| PREV WEEK | 2  | 6  | 41 | 48 | 3  |
| PREV YEAR | 1  | 12 | 49 | 34 | 4  |

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

## State Summaries of Weather and Agriculture

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

**ALABAMA:** Rainfall under 0.67 in. Temperatures within 1° of normal.

Days suitable for fieldwork 6.3. Soil moisture 46% very short, 49% short, 5% adequate. Drought conditions continued most areas. Corn 84% harvested, 61% 1989, 73% avg. Sorghum 69% harvested, 54% 1989, 55% avg.; 8% very poor, 18% poor, 72% fair, 2% good. Cotton 89% bolls opened, 58% 1989, 81% avg.; 26% harvested, 7% 1989, 17% avg.; 1% very poor, 27% poor, 71% fair, 1% good. Peanuts 74% dug, 69% 1989, 40% avg.; 62% combined, 55% 1989, 27% avg.; 98% poor, 2% fair. Soybeans 97% setting pods, 89% 1989, 96% avg.; 62% turning color, 50% 1989, 48% avg.; 41% dropping leaves, 25% 1989, 30% avg.; 25% mature, 15% 1989, 14% avg.; 6% harvested, 5% 1989, 5% avg.; 18% very poor, 45% poor, 32% fair, 5% good. Winter wheat 13% seeded, 18% 1989, 12% avg. Pastures 25% very poor, 52% poor, 23% fair. Livestock 4% very poor, 7% poor, 64% fair, 25% good. Primary activities: Harvesting corn, sorghum, hay, peanuts, sweetpotatoes; defoliating, harvesting cotton; irrigating vegetables; mowing pastures; preparing land, seeding winter annuals; providing supplemental feed, water to cattle; routine care of livestock, poultry, catfish.

**ALASKA:** Rain continued to dominate in the central, southern portions of the Railbelt, while the upper regions had mostly dry, cool week. Highs 1° below normal at Homer to 8° above normal at Big Delta. Lows 4 to 8° warmer than normal. Seasonal precipitation 0.74 in. drier than normal at PMC Butte to 5.03 in. wetter than normal at Fairbanks.

Days suitable for harvested grass hay, grain 3 days. Days suitable for harvested potatoes 5 days. Topsoil 93% adequate, 7% surplus. Subsoil supplies adequate. Barley harvested 95%, 2nd crop hay harvested 30% commercial potato digging, 70% complete versus 75% a year ago. Winter straw availability mostly short to adequate. Livestock, mostly good to excellent.

**ARIZONA:** Scattered thunderstorms east 16th; strong thunderstorms across State 17th, heavy rain, hail, gusty winds central; showers, thunderstorms north central, northeast 18th; clear statewide 19th; showers, thunderstorms statewide 21st to 22nd; precipitation none extreme southwest to 3.30 in. north central. Temperatures from normal to 6° below normal. Extremes 61°; 105° deserts, 39°; 88° higher elevations.

Cotton harvested 9%, 8% 1989, 5% avg.; defoliation active central, west, light elsewhere; weeds, insects moderate; 78% good, 22% fair. Alfalfa harvest moderate; rain damage light southeast, moderate central; new stand establishment normal. Lemon harvest, fall vegetables planting continued west; fall cantaloupe, honeydews, mixed melons harvested central; apple harvest active, pumpkins, white corn, winter squash, pinto beans, chilies, cabbage harvested east.

**ARKANSAS:** Cooler weather. Widespread rain first, middle part of week. Temperatures near to slightly above normal. Extremes 41°; 93°. Rainfall 0.04 to 5.61 in.

Days suitable for fieldwork 5.0. Soil moisture 24% short, 65% adequate, 11% surplus. Main activities: Picking cotton; combining cotton, rice, grain sorghum; draining rice fields;

preparing land for small grains; seeding winter pastures; baling hay; mowing pastures; marketing cattle. Corn 67% harvested, 88% 1989, 89% avg.; 8% poor, 35% fair, 57% good. Soybeans 100% blooming, 100% 1989, 100% avg.; yellowing 18%, 24% 1989, 37% avg.; mature 2%, 2% 1989, 5% avg.; 2% very poor, 25% poor, 55% fair, 18% good. Sorghum 1% very poor, 6% poor, 70% fair, 23% good. Some cotton boll rot due to wet conditions. Some rice lodging because of strong winds, rains. Wet conditions aided soybean pod development, set. Sorghum yields average. Corn yields good. Pecan yield prospects fair. Pasture 11% very poor, 49% poor, 36% fair, 4% good. Livestock good.

**CALIFORNIA:** Strong high pressure built over State bringing hot temperatures to much of area. Cut off low pressure area formed southwest of southern areas with high pressure to north allowing gusty north winds effecting much of State mid week. Thunderstorms, cooling accompanied the low as it tracked northward late in week. Measurable rainfall was spotty.

Clear, open weather, rapid progress field activities. Early variety rice harvest gained momentum. Cotton defoliation increased; harvest active southern, began central. Dry bean harvest limas, blackeyes, began kidneys. Corn grain harvest increased. Silage corn, sugarbeets, safflower harvests continued. Field preparations small grains progressed. Alfalfa, other hay seasonally normal. Granny Smith apple harvest gained momentum. Soft dates harvested, no weather damage. Grape harvest continued, over 95% raisin lay completed, majority rolled. Wine grape harvest well along. Harvested vineyards treated for nematodes some pulled. Asian pears, pomegranates harvested, packed. Peaches, plums, nectarines harvested. Predormant spraying for control of scale plum orchards began. Prune harvest complete. Almond, pistachio harvests continued. Almond stock piles fumigated to control Navel orangeworm. Walnut harvest moved along early varieties. Valencia orange harvest continued; low volume. Grapefruit picking sluggish; desert lemon harvest picked up steam. Artichoke volume Salinas seasonally low, good quality. Snap bean, lima bean fields being picked westside, desert. Broccoli harvest moderate Salinas, fairly light Santa Maria, variable quality. Westside growers treating field for worm infestation. Planting active desert. Cauliflower movement moderate Salinas, fairly light Santa Maria, variable quality. Aphid sprays applied Westside, planting active desert. Celery supplies heavy Salinas fairly heavy Santa Maria, variable quality. Sweet corn harvest continued Delta, westside. Lettuce movement fairly light Salinas, light Santa Maria, variable quality. Cantaloupe, honeydew, watermelon, mixed melon harvests started to wind down, westside. Picking continued Sacramento Valley, desert. Onions harvested for dehydration westside. Pepper harvest on going Sacramento Valley, Delta, westside areas. Fall potato fields growing well PerrisHemet. Strawberry plantings blossoming westside, limited picking started. Westside tomatoes for fresh market near fall harvest. Processing tomato harvest started to wind down some Sacramento Valley, westside areas. Livestock good, statewide. Generally range poor, some fair in northern districts. Water supplies remained short. Range sheep, cattle aftermath grazing northern, southern areas.

**COLORADO:** Cool wet weather across State brought needed moisture to some areas. Precipitation 0.50 to 0.75 in. Most locations temperatures 1 to 2° above normal.

Days suitable for fieldwork 4.4. Soil moisture 1% very short, 40% short, 53% adequate, 6% surplus. Alfalfa 3rd cutting 56% complete; 4th cutting 8% complete. Spring wheat harvest 82% complete. Dry beans 75% cut, 47% threshed. Corn 94% dent, 59% mature, 2% harvested. Corn silage harvest 67% complete. Sorghum 26% mature, 7% harvested. Dry onions 82% harvested. Summer potatoes 74% harvested. Fall potatoes 10% harvested. Winter wheat 58% seeded, 23% emerged. Pasture, range feed 2% very poor, 9% poor, 42% fair, 38% good, 9% excellent. Livestock in mostly good to excellent.

**FLORIDA:** Little if any rain fell across northern area. Rain also very scant central, west central; mostly under 0.50 in. Heaviest rains east central, south; local totals exceeded 2.00 in. Heaviest rain totals including 5.87 in. West Palm Beach, 5.31 in. near Stuart. Temperatures 2 to 4° above normal most of State. Hottest readings generally mid to upper 90s, except low 90s along coasts. Strong cold front moved across State late weekend. Much cooler air prevailed behind front with temperatures dropping well into 50s north by sunrise, 24th. Coolest temperature 48° Monticello. Elsewhere, lows upper 50s to low 60s extreme northern Peninsula to low, mid 70s extreme south.

Soil moisture short Panhandle; short to adequate central, northern Peninsula; mostly adequate southern Peninsula. Cotton harvest progressing. Corn, peanut harvests active. Haying, sugarcane planting active. Sugarcane good progress. Pastures 20% poor, 42% fair, 23% good, 15% excellent. Cattle, Panhandle through lower central Peninsula fair to good; elsewhere, remain good to excellent. Most citrus groves hot, dry; rain needed all areas except lower east coast. Many growers irrigating. Fresh fruit harvest very active for month. Fruit sizes good, maturity advanced. Caretakers active all areas cutting cover crops, spraying, irrigating. Hot temperatures, limited rainfall, vegetable producing areas. Field preparation, planting active central, southern areas. Limited volume cucumbers, squash available. First Zellwood sweet corn picked.

**GEORGIA:** Temperatures unseasonably hot most of period, well below normal over weekend. For week, temperatures 1 to 2° below normal north, 2 to 3° above normal central, south. Extremes 39°; 99. Rain mainly northern third, no rain extreme south. Rainfall 1.00 in. north, under 1.00 in. elsewhere. Greatest total 2.50 in. at Chatsworth. Rain only 1 or 2 days.

Days suitable for fieldwork 6.2. Soil moisture 36% very short, 40% short, 23% adequate, 1% surplus. Cotton some improvement, harvest active. Sorghum 9% very poor, 32% poor, 41% fair, 18% good; 50% harvested for grain, 51% 1989, 48% avg. Peanuts 31% very poor, 40% poor, 24% fair, 5% good; 56% dug, 79% 1989, 54% avg.; 42% threshed, 61% 1989, 40% avg.; yields, quality disappointing. Soybeans continue to decline, drought, insects, some acreage abandoned. Rye, other small grains seeding active north, near avg. Apples 13% very poor, 7% poor, 5% fair, 75% good; 69% harvested, 56% 1989, 71% avg. Pecans 13% very poor, 32% poor, 55% fair. Hay 13% very poor, 16% poor, 42% fair, 28% good, 1% excellent; pasture 13% very poor, 19% poor, 42% fair, 25% good, 1% excellent. Cattle, hogs fair to good. Main activities: Peanut, cotton, corn, sorghum harvests, insect control in peanuts, soybeans, land preparation for small grain.

**HAWAII:** Hot, humid weather continued over islands. Skies mostly sunny with isolated thundershowers brought by Tropical Depression Marie. Winds gusty up to 30 mph with temperatures low 70s to low 90s. Rainfall none to 8.70 in.

Days suitable for farm work 7.0. Papaya harvest active. Sugar, pineapple harvest continuous. Heavy irrigation necessary many areas.

**IDAHO:** Temperatures 1 to 6° above normal, precipitation below normal.

Days suitable for fieldwork 7.0. Soil moisture 24% very short, 25% short, 50% adequate, 1% surplus. Winter wheat 22% planted, 25% 1989, 28% avg. Spring wheat 99% harvested, 100% 1989, 96% avg. Spring barley 98% harvested, 98% 1989, 96% avg. Potatoes 25% harvested, 18% 1989, 17% avg. Oats 94% harvested, 95% 1989, 98% avg. Sugarbeets 15% harvested, 6% 1989, 3% avg. Alfalfa 3rd cutting 60% harvested, 72% 1989, 61% avg. Dry beans 74% harvested, 66% 1989, 61% avg. Onions 62% harvested, 57% 1989, 60% avg. Field corn silage 45% harvested. Sweet corn for processing 95% harvested. Hops 53% harvested, 92% 1989, 88% avg. Apples 25% harvested, 17% 1989, 18% avg. Livestock good to excellent, off ranges. Other activities: Pregnancy testing; fall vaccinations; shipping yearling cattle, lambs. Range, pasture 6% very poor, 18% poor, 37% fair, 39% good.

**ILLINOIS:** Temperatures 5 to 9° below normal north, central; 3 to 7° south. Precipitation 0.60 in. north; 0.60 to 2.00 in. central, south.

Days suitable for fieldwork 4.50. Soil moisture 13% short, 84% adequate, 3% surplus. Soybeans turning yellow 70%, 88% 1989, 93% avg. Alfalfa 1% poor, 15% fair, 73% good, 11% excellent. Alfalfa hay third cutting 90%, 94% 1989, 98% avg. Pasture 5% poor, 21% fair, 65% good, 9% excellent.

**INDIANA:** Temperatures 3 to 8° below normal. Lows mid 30s to low 50s, highs mid 60s to upper 70s. Precipitation 0.50 to 1.00 in.

Days suitable for fieldwork 4.3. Topsoil 5% short, 72% adequate, 23% surplus. Subsoil 3% short, 85% adequate, 12% surplus. Soybeans 68% turning yellow, 71% 1989, 93% avg. Tobacco 65% harvested, 70% 1989, 82% avg. Pasture 2% poor, 21% fair, 67% good, 10% excellent. 1991 winter wheat cropland 44% plowed, 45% 1990, 44% avg. Fall harvest underway. Corn borer, stalk rot damage some fields. Light frost, weekend.

**IOWA:** Temperatures 4 to 6° below normal. Extremes 29°; 75°. Rainfall 0.16 to 1.49 in.; average 0.71 in.

Days suitable for fieldwork 5.1. Topsoil 25% short, 73% adequate, 2% surplus. Subsoil 8% short, 90% adequate, 2% surplus. Pasture 5% poor, 24% fair, 58% good, 13% excellent. Winter wheat 20% sown, 21% 1989, 19% avg. Livestock mostly good. Some stress from changeable temperatures.

**KANSAS:** Temperatures 2 to 4° above normal central, eastern districts. Near normal in western districts. Precipitation across State; heaviest totals 2.43 in., 2.09 in. south central, southeast respectively.

Days suitable for fieldwork 5.0. Surface moisture 61% short, 38% adequate, 1% surplus. Subsoil moisture 65% short, 35% adequate. Corn, sorghum, soybeans slightly behind schedule. Lack of adequate soil moisture has delayed wheat planting. Wheat streak mosaic has been noted in central, eastern counties on volunteer wheat. Most of the early harvest of corn has been for silage; high moisture grain designated for feedlots. Third cutting of alfalfa is essentially complete; fourth cutting making good progress. Range, pastures fair to good, furnishing adequate amounts of grazing.

**KENTUCKY:** High temperatures upper 60s northeast to upper 70s west, about 5° below normal. Low temperatures lower 50s east, upper 50s west, about normal. Extremes 40°; 86°. Rainfall well above normal 1.00 to 2.00 in.

Days suitable for fieldwork 3.9. Soil moisture 6% very short, 26% short, 59% adequate, 9% surplus. Burley cutting active, many producers finished. Statewide, burley 75% cut, 83% 1989, 90% avg. Housed tobacco curing well. Houseburn reported, mostly light to moderate. Dark tobacco 76% cut. Corn harvest active in south, west. Soybean harvest beginning slowly, only one fourth soybeans considered safe from frost. Hay pastures mostly good to excellent.

**LOUISIANA:** Temperatures 5 to 8° above normal. Extremes 68°; 98°. Rainfall 0.36 to 1.71 in.

Days suitable for fieldwork 4.8. Soil moisture 5% very short, 15% short, 75% adequate, 5% surplus. Cotton open bolls 98%, 81% 1989, 90% avg.; harvested 45%, 11% 1989, 27% avg.; 12% poor, 37% fair, 38% good, 13% excellent. Hay final cutting 82%, 80% 1989, 78% avg. Rice ripe 97%, 95% 1989, 97% avg.; harvested 90%, 84% 1989, 88% avg. Second crop management active. Sorghum turning color 99%, 100% 1989, 100% avg.; ripe 92%, 99% 1989, 98% avg.; harvested 84%, 84% 1989, 87% avg. Soybeans turning color 73%, 57% 1989, 53% avg.; shedding leaves 35%, 35% 1989, 29% avg.; harvested 13%, 8% 1989, 5% avg.; 14% poor, 52% fair, 31% good, 3% excellent. Spraying worms, caterpillars active. Sweetpotatoes harvested 52%, 46% 1989, 61% avg.; 69% fair, 23% good, 8% excellent. Sugarcane planted 47%, 80% 1989, 67% avg.; 20% poor, 50% fair, 30% good. Rains interrupted planting in some parishes. Livestock 2% poor, 43% fair, 55% good. Mosquitos caused problems southwest. Dusting active. Pasture 21% poor, 51% fair, 28% good. Vegetable 26% poor, 54% fair, 20% good.

**MARYLAND & DELAWARE:** MARYLAND: Precipitation 0.72 in. Temperature 62°, normal 68°. Extremes 30°; 84°.

Days suitable for fieldwork 5.1. Topsoil 5% short, 95% adequate. Subsoil 10% short, 90% adequate. Corn good; 91% dent, 88% 1989, 93% avg.; 58% mature, 78% 1989, 73% avg.; grain 16% harvested, 13% 1989, 27% avg.; silage 67% harvested, 63% 1989, 76% avg. Soybeans good; 45% turned, 32% 1989, 44% avg.; 14% shedding leaves, 13% 1989, 19% avg. Tobacco good; 93% harvested, 82% 1989, 85% avg. Barley 19% seeded, 13% 1989, 18% avg. Rye 22% seeded, 10% 1989, 18% avg. Lima beans 84% harvested, 96% 1989, 90% avg. Sweetpotatoes 8% harvested, 37% 1989, 24% avg. Hay supplies adequate. Alfalfa hay fourth cut 53% complete, 36% 1989, 52% avg. Other hay third cut 49% complete, 43% 1989, 75% avg.; fourth cut 14% complete, 10% 1989, NA avg. Apples fair to good; 41% harvested, 50% 1989, 43% avg. Pasture good.

DELAWARE: Precipitation 0.72 in. Temperature 62°, normal 68°. Extremes 41°; 88°.

Days suitable for fieldwork 5.5. Topsoil 100% adequate. Subsoil 14% short, 86% adequate. Corn good; 78% mature, 64% 1989, 81% avg.; grain 34% harvested, 28% 1989, 28% avg.; silage 83% harvested, 65% 1989, 84% avg. Soybeans good; 27% turned, 17% 1989, 37% avg.; 8% shedding leaves, 7% 1989, 12% avg. Barley 6% seeded, 10% 1989, 5% avg. Rye 6% seeded, 8% 1989, 4% avg. Lima beans 79% harvested, 52% 1989, 68% avg. Snap beans 96% harvested, 92% 1989, NA avg. Hay supplies adequate. Alfalfa hay fourth cut 74% complete, 31% 1989, 72% avg. Other hay third cut 90% complete, 94% 1989, 94% avg. Apples fair to good; 55% harvested, 60% 1989, 39% avg. Pasture fair to good.

**MICHIGAN:** Temperatures 2 to 8° below normal. Extremes 27°; 73°. Precipitation 0.20 to 1.67 in. across the State.

Days suitable for fieldwork 4.0. Soil moisture 1% short, 55% adequate, 44% surplus. Corn 75% dent, 80% 1989, 90% avg.; 10% very poor, 5% poor, 15% fair, 50% good, 30% excellent. Soybeans 35% dropping leaves, 35% 1989, 55% avg.; 0% harvested, 0% 1989, 1% avg.; 3% poor, 17% fair, 50% good, 30% excellent. Winter wheat 20% seeded, 20% 1989, 10% avg. Pasture 5% poor, 15% fair, 45% good, 35% excellent. Major activities: Baling 3rd cutting hay, planting winter wheat, cutting corn silage, harvesting dry beans. Harvesting dry beans. Harvest of apples, vegetables continues. Excessive moisture slowed harvest.

**MINNESOTA:** Temperatures 4 to 5° below normal. Extremes 27°; 79°. Precipitation 0.30 to 0.60 in., greatest total 1.16 in.

Days suitable for fieldwork 4.9. Topsoil 11% very short, 20% short, 65% adequate, 4% surplus. Corn 98% denting, 98% 1989, 98% avg.; 33% mature, 61% 1989, 62% avg.; 2% combined, 2% 1989, 6% avg. Soybeans 82% shedding leaves, 90% 1989, 78% avg.; 29% mature, 35% 1989, 44% avg.; 4% combined, 4% 1989, 11% avg. Sugarbeets 6% harvested, 6% 1989, 7% avg. Dry beans 78% harvested, 50% 1989, 51% avg. Potatoes 47% harvested, 36% 1989, 48% avg. Sweet corn 90% harvested, 91% 1989, 94% avg. Flax 88% harvested, 76% 1989, 67% avg. Sunflowers 6% harvested, 5% 1989, 10% avg. Winter wheat 87% seeded, 87% 1989, 80% avg. Rye 82% seeded, 87% 1989, 80% avg. Field corn 25% silage, 30% 1989, 41% avg. Land 70% plowed, tilled, 69% 1989, 62% avg. Soybeans 11% moisture, NA% 1989, NA% avg. Corn 28% moisture, NA% 1989, NA% avg. Field corn 4% very poor, 8% poor, 34% fair, 45% good, 9% excellent. Soybeans 3% very poor, 6% poor, 43% fair, 40% good, 4% excellent.

**MISSISSIPPI:** Temperatures 3° above normal. Extremes 52°; 97°. Mostly dry statewide, wet Upper, Lower Delta. Rainfall 0.53 in., 0.43 in. below normal. Soil temperatures 82°.

Days suitable for fieldwork 5.2, 5.4 1989, 5.5 avg. Soil moisture 6% very short, 44% short, 45% adequate, 5% surplus. Cotton 95% open bolls, 62% 1989, NA avg.; 24% harvested, 1% 1989, 21% avg.; 7% very poor, 6% poor, 55% fair, 30% good, 2% excellent. Corn 94% mature, 90% 1989, 95% avg.; 53% harvested, 47% 1989, 68% avg.; 98% silage harvested, 96% 1989, 97% avg. Rice 75% mature, 85% 1989, 91% avg.; 40% harvested, 37% 1989, 64% avg. Soybeans 95% podding, 94% 1989, 48% turning color, 52% 1989, 55% avg.; 6% harvested, 4% 1989, 4% avg.; 17% very poor, 37% poor, 42% fair, 4% good. Sorghum 96% coloring, 96% 1989, 98% avg.; 86% mature, 81% 1989, 92% avg., 61% harvested, 51% 1989, 71% avg.; 92% silage harvested, 88% 1989, 86% avg. Hay 88% harvested, 86% 1989, 88% avg. Peanuts 78% harvested, 68% 1989, 65% avg. Sweetpotatoes 55% harvested, 52% 1989, 48% avg. Wheat 10% planted, 4% 1989, 9% avg., 6% emerged, 2% 1989.; 39% poor, 54% fair, 17% good. Pasture, livestock fair to good. Activities: Preparing winter grazing land, harvesting crops.

**MISSOURI:** Temperatures 2 to 7° below normal, coolest northeast. General rainfall statewide, heaviest southwest.

Days suitable for fieldwork 4.9. Topsoil 63% short, 37% adequate. Corn mature 39% east central to 100% southwest, mostly less than 60%. Corn harvested 54% southeast, less than 20% elsewhere. Soybean maturity about 1 week behind avg.; 8% mature, 9% 1989, 19% avg. Sorghum development 3 weeks behind avg. Pasture 8% very poor, 18% poor, 58% fair, 15% good, 1% excellent.

**MONTANA:** Warm, dry. Temperatures 2 to 7° above normal. Showers widely scattered with precipitation amounts less than 0.30 in.

Days suitable for fieldwork 6.8. Topsoil 71% short, 29% adequate. Subsoil 70% short, 29% adequate, 1% surplus. Range, pasture feed 5% very poor, 17% poor, 41% fair, 34% good, 3% excellent. Small grains virtually all harvested. Second cutting alfalfa 95% harvested, 89% 1989, 92% avg. Dry beans 59% harvested, 66% 1989, 60% avg. Corn silage 53% harvested, 66% 1989, 63% avg. Potatoes 12% harvested, 12% 1989, 14% avg. Sugarbeets 2% harvested, 0% 1989, 1% avg. Winter wheat emerged 14%, 13% 1989, 15% avg.

**NEBRASKA:** Temperatures 1 to 4° below normal. Extremes 26°; 82°. Precipitation occurred first half of week 0.25 to 1.00 in.

Days suitable for fieldwork 5.5. Topsoil 76% short, 24% adequate. Subsoil 77% short, 23% adequate. Alfalfa hay 3% very poor, 23% poor, 42% fair, 25% good, 7% excellent; 97% third cutting, 99% 1989, 99% avg. Many operators in northeast, central areas completing fourth cuttings. Soybeans 90% turning color, 88% 1989, 91% avg. Some northeast fields maturing unevenly, due to dry conditions, low areas remaining green. Early harvested beans reported to be shriveled, east. Corn borer damage continued to become evident, wind caused stalks breakage, some eastern counties. Sorghum lodging some east, southeast fields due to chinch bug damage, heat stress. Winter wheat 20% emerged, 16% 1989, 35% avg. Heavy rain will cause some replanting, Panhandle. Rain slowed planting, harvesting progress some areas, will help winter crop. Producers harvesting dryland crops; hail, insect, drought damaged crops; high moisture corn. Pasture, range feed supplies 13% very poor, 32% poor, 40% fair, 12% good, 3% excellent. Some supplemental feeding reported east, south, southwest. Some southwestern producers moving cattle into dry lots, selling calves. Dusty conditions caused cases of pneumonia in calves, Panhandle. Main activities: Preparing equipment, storage facilities for harvest; sowing winter wheat; cutting silage; harvesting corn, soybeans, sorghum; harvesting dry edible beans, millet, potatoes in western areas.

**NEVADA:** More seasonable temperatures early. Low pressure system mid week brought precipitation many areas. Scattered thunderstorms also reported weekend. Temperatures slightly above normal. Extremes 25°; 103°.

Good progress harvesting remaining acreage hay, alfalfa seed northern areas. Hot sun caused some sunburn 1990 new crop potatoes. Lack of stable market caused temporary delay harvesting this years fall potato crop. Livestock mostly all down from high elevation ranges.

**NEW ENGLAND:** Precipitation 0.25 to 0.90 in. New Hampshire, Vermont, Connecticut, most of Massachusetts; 1.00 to 2.00 in. Maine; 1.60 to 2.30 in. Rhode Island, extreme southeastern Massachusetts. Temperatures mid 40s to mid 50s north, high 40s to mid 50s south; 4 to 9° below normal for New England. Maximum temperatures low to high 60s north, mid 60s to low 70s south.

Days suitable for fieldwork 6.0. Soil moisture north 6% short, 75% adequate, 19% surplus; south 97% adequate; 3% surplus. Grazing availability 12% short, 85% adequate, 3% surplus. Pasture 28% fair, 67% good, 5% excellent. Maine potatoes 18% harvested, 27% 1989, 29% avg.; good. Rhode Island potatoes 85% harvested, 60% 1989, 69% avg.; good. Connecticut River Valley potatoes 56% harvested, 42% 1989, 42% avg.; good. Maine oats 100% harvested, 83% 1989, 82% avg.; good. Field corn 21% harvested, 20% 1989, 29% avg.; good. Sweet

corn 95% harvested, 95% 1989, 93% avg.; good. Second cut hay 92% harvested, 92% 1989, 93% avg.; good. Third crop hay 68% harvested, 53% 1989, 63% avg.; good. Apples 37% harvested, size medium to large; good. Peaches 96% harvested; fair to good. Pears 81% harvested; fair to good. Blueberries 100% harvested; good. Major farm activities: Cutting hay, picking apples, chopping corn, sowing winter cover crops, harvesting vegetables.

**NEW JERSEY:** Temperatures much below normal. Extremes 33°; 77°. Rainfall 1.01 in. north, 1.41 in. central, 1.29 in. south. Heaviest 24 hour total 1.80 in. on 22nd, 23rd. Estimated soil moisture percent field capacity averaged 98% north, 79% central, 74% south. Four inch soil temperatures 53° north, 60° central, 61° south. Some light frost. Sharply cooler temperatures slowed crop growth.

Soil moisture adequate most areas for late season crop growth. Summer vegetable harvest about complete. Fall vegetable harvest increased. Apple picking active. Cranberry harvest began. Corn silage making active. Corn for grain harvest began. Soybeans coloring. Grain, cover crop seeding active. Early seedings showing good germination, growth.

**NEW MEXICO:** Temperatures near normal. Precipitation nearly all locations. Highest amounts included 3.46 in. at Las Cruces, 2.68 in. at Carlsbad.

Days suitable for fieldwork 5.2. Soil moisture 26% short, 67% adequate, 7% surplus. Showers continued across State this week. Rains have hampered some harvest activities. Chile, apple harvest in full swing, chile 69% complete, apples 58% complete. Peanuts good, harvest beginning this week. Potatoes fair to excellent. Cattle, sheep fair to good. Range 4% poor, 48% fair, 44% good, 4% excellent.

**NEW YORK:** Very cool week. Many areas received first frosts mornings of 18th, 19th. Temperatures 5 to 10° below normal. Extremes 26°; 79°. Rainfall variable. Rainfall 0.13 in. at Albany to 1.49 in. at New York City. Most areas received between 0.25, 0.75 in.

Days suitable for fieldwork 5.0. Soil moisture mostly adequate. Pastures 4% poor, 50% fair, 38% good, 8% excellent. Hay, corn good. Corn slow to mature. Hay, haylage harvest in full swing. Third cutting alfalfa 77% complete, 59% 1989, 61% avg. Silage corn 8% harvested, 14% 1989, 17% avg. Dry bean harvest gained momentum. Ground being prepared for winter wheat seeding. Some seeding underway. Scattered freezes hastened the end of vegetable harvests. Cool season crop harvesting active. Onion, potato harvests continued in full swing. In the Hudson Valley, McIntosh apple harvest neared completion. Cortland harvest was underway. Concord grape harvest was well underway. In the Lake Ontario region, McIntosh harvest nearly finished. Basc pear harvest underway.

**NORTH CAROLINA:** Temperatures were about normal across the State. Precipitation none to 1.42 in.

Days suitable for fieldwork 6.3. Soil moisture 27% very short, 40% short, 33% adequate. Pasture 6% very poor, 22% poor, 37% fair, 34% good, 1% excellent. Livestock feed from pasture 72%. Hay third cutting 55%. Harvested: Flue cured tobacco 89%; corn silage 88%; corn for grain 55%; burley tobacco 75%; sweetpotatoes 25%; apples 60%; sorghum 25%. Corn mature 98%; cotton opening bolls 78%; Soybeans dropping leaves 13%. Crop condition: Corn 9% very poor, 31% poor, 39% fair, 21% good; cotton 5% poor, 51% fair, 42% good, 2% excellent; soybeans 2% very poor, 17% poor, 47% fair, 33% good, 1% excellent; peanuts 3% poor, 32% fair, 62% good, 3% excellent; sorghum 3% very poor, 20% poor,

49% fair, 26% good, 2% excellent; sweetpotatoes, 8% poor, 18% fair, 72% good, 2% excellent; apples 16% poor, 53% fair, 31% good; hay 4% very poor, 18% poor, 42% fair, 35% good, 1% excellent. Major activities: Harvesting flue cured, burley tobacco; harvesting corn for grain, cutting corn for silage; cutting hay; digging peanuts; harvesting sorghum, sweetpotatoes, apples; land preparation. Other activities included: Seeding pastures; harvesting vegetables; spraying field crops; defoliating cotton; tending livestock; general farm maintenance.

**NORTH DAKOTA:** Temperatures normal to 2° below normal. Precipitation 0.25 northwest to 1.06 southeast.

Days suitable for fieldwork 6.4. Topsoil 37% very short, 60% short, 3% adequate. Subsoil 60% very short, 40% short. Wheat harvest complete. Spring wheat 100% combined, 100% 1989, 96% avg. Durum wheat 100% combined, 99% 1989, 92% avg. Flaxseed 4% poor, 48% fair, 42% good, 6% excellent; 89% combined, 82% 1989, 61% avg. Corn for grain 3% poor, 78% fair, 19% good; 29% ripe and beyond, 43% 1989, 40% avg. Corn for silage 6% very poor, 11% poor, 52% fair, 31% good; 73% cut, 71% 1989, 59% avg. Potatoes 46% very poor, none poor, 54% fair; 50% dug, 59% 1989, 56% avg. Soybeans 3% poor, 86% fair, 11% good; 13% combined, 16% 1989, 20% avg. Sugarbeets 17% poor, 66% fair, 17% good; 6% lifted, 5% 1989, 8% avg. Dry edible beans 28% poor, 55% fair, 16% good, 1% excellent; 74% combined, 50% 1989, 48% avg. Sunflower 7% poor, 34% fair, 55% good, 4% excellent; 68% bracts turned brown and beyond, 59% 1989, 49% avg. Winter wheat 87% planted, 85% 1989, 74% avg. Rye 85% planted, 88% 1989, 76% avg. Pastures 27% very poor, 41% poor, 30% fair, 2% good. Stockwater supplies 19% very short, 38% short, 43% adequate.

**OHIO:** Temperatures low to upper 60s; 8 to 12° subnormal. Lows mid 40s to 50°; 2 to 8° subnormal. Rainfall 0.60 to 1.50 in., 0.10 to 0.50 in. above normal. Soil temperature at 4 inch depth under bare soil low to mid 60s.

Days suitable for fieldwork 3.0. Soil moisture 67% adequate, 31% surplus. Field activities: Harvesting silage, haying, land preparation, seeding fall crops, mowing. Corn good, few fields harvested. Moisture content of harvested grain 25 to 30%. Soybeans good; few soybeans harvested at 13 to 14% moisture. Winter wheat seeding starting slowly; wet soils. Hay good; curing difficult. Pastures 1% very poor, 3% poor, 25% fair, 56% good, 15% excellent. Vegetable harvest slowed by wet conditions. Processing tomatoes hand picked where mechanical pickers could not operate. Landscape plants dug for fall marketing. Livestock good.

**OKLAHOMA:** Temperatures 6° below normal north central 2 to 2° below normal south central. Precipitation 0.79 in. southwest to 6.40 in. central.

Days suitable for fieldwork 5.5. Topsoil 70% short, 25% adequate, 5% surplus. Subsoil 60% short, 40% adequate. Wheat 15% planted, 25% 1989, 25% avg. Cotton 50% fair, 42% good, 8% excellent; 35% open bolls, 30% 1989, 35% avg.; 1% harvested, 0% 1989, 1% avg. Sorghum 10% poor, 75% fair, 15% good; 95% coloring, 100% 1989, 95% avg.; 25% mature, 25% 1989, 35% avg.; 4% harvested, 5% 1989, 5% avg. Soybeans 8% mature, 35% 1989, 25% avg. Peanuts 35% mature, 60% 1989, 40% avg.; 1% harvested, 3% 1989, 3% avg. Corn 30% harvested, 70% 1989, 70% avg. Pastures 15% poor, 60% fair, 25% good. Cattle good; marketings stable, prices steady from preceding week.

**OREGON:** Temperatures well above normal west; mostly normal to 2° above east; except north

central, northeast mountains 2° below normal. High temperatures in 90s central, south coast on 21st, cooled into 60s on 22nd. Measurable precipitation on 15th coast, Willamette Valley; dried out after that. No measurable precipitation east.

Soil moisture 64% short, 36% adequate. Winter wheat seeding progressing rapidly to take advantage of favorable soil moisture some areas. Barley 92% harvested, 88% 1989, 95% avg.; mainly Klamath County has acres remaining to be harvested. The 1991 barley crop 4% planted, 8% 1990, 7% avg. Anjou pears harvested Hood River, good quality, yields. Pears picked Medford. Golden Delicious apples harvested Hood River, Wasco Cos. Red Delicious apples harvested Milton Freewater. Late season apples picked Willamette Valley; also prune harvest completed, hazelnuts continued to fall. Cranberry harvest preparations south coast; bogs sprinkled for scald control on 21st when temperatures soared to 97°, humidity 33%. Onion harvest continued east, nearly finished west. Late potato harvest began Columbia Basin, continued Malheur Co. Sweet corn harvest continued Willamette Valley, completed Malheur Co. Livestock good to excellent. Pastures fair west, rangeland poor to good east. Range cattle moved off early due to dryness, lack of stockwater. Range, pasture 11% poor, 44% fair, 37% good, 8% excellent.

**PENNSYLVANIA:** Cool, wet week. Temperature 54°, 8° below normal. Extremes 30°; 78°. Precipitation 1.24 in., 0.40 in. above normal.

Days suitable for fieldwork 4. Soil moisture 3% short, 59% adequate, 38% surplus. Corn 100% silk, 100% 1989, 100% avg.; 93% dough, 85% 1989, 96% avg; 56% dent, 42% 1989, 73% avg.; 9% mature, 6% 1989, 24% avg.; 1% harvested, 0% 1989, 2% avg. Ensilage corn harvested 21% complete, 16% 1989. Corn 1% very poor, 5% poor, 19% fair, 49% good, 26% excellent. Soybean 4% poor, 18% fair, 52% good, 26% excellent. Wheat planted 18% complete, 26% 1989. Oat harvest 100% complete, 100% 1989. Barley planted 30% complete, 30% 1989. Tobacco harvest 89% complete, 89% 1989. Potato harvest 48% complete, 55% 1989. Second cutting alfalfa 97% complete, 95% 1989. Third cutting alfalfa 67% complete, 64% 1989. Fourth cutting alfalfa 31% complete, 30% 1989. Second cutting clover timothy 88% complete, 85% 1989. Quality of hay made mostly fair. Feed from pasture 1% very poor, 4% poor, 67% fair, 28% good. Apple harvest 35% complete, 40% 1989. Peach harvest 94% complete, 92% 1989. Grapes harvest 44% complete, 29% 1989. Fall plowing 46% complete, 48% 1989. Activities: Harvesting hay, haylage, potatoes, tobacco, corn silage, fruits, vegetables; fall plowing, planting; maintaining machinery; caring for livestock.

**PUERTO RICO:** Data not available.

**SOUTH CAROLINA:** Temperatures near normal in upper Piedmont to 4 to 5° above normal near south coast. Rainfall 0.20 in. southern part of the State to 0.70 in. northwest.

Days suitable for fieldwork 5.9. Soil moisture 9% very short, 70% short, 21% adequate. Cotton 1% very poor, 61% poor, 38% fair, 79% open bolls, 58% 1989, 75% avg.; 13% harvested, 2% 1989, 6% avg. Soybeans 12% poor, 56% fair, 32% good, 96% setting pods, 93% 1989, 94% avg.; 12% leaves turning, 22% 1989, 20% avg.; 2% shedding leaves, 7% 1989, 6% avg. Corn poor to fair, 86% harvested, 58% 1989, 68% avg. Sorghum fair, 47% harvested, 31% 1989, 32% avg. Tobacco fair to good, 96% harvested, 94% 1989, 98% avg.; 43% stalks destroyed, 45% 1989, 45% avg. Peanuts fair, 13% harvested, 22% 1989, 13% avg. Pastures 11% poor, 58% fair, 31% good.

**SOUTH DAKOTA:** Temperatures 3° above to 5° below normal. Extremes 24°; 87°. Precipitation

widespread, largest Black Hills, north central, northeast. Maximum 1.63 in. Harvest season precipitation 1.70 in. below normal to 1.50 in. above normal. Growing degree days 35 units below to 444 units above normal.

Days suitable for fieldwork 5.4. Subsoil 26% critically short, 51% short, 23% adequate. Topsoil 16% critically short, 49% short, 34% adequate, 1% surplus. Range, pasture 4% very poor, 15% poor, 43% fair, 34% good, 4% excellent. Crop conditions mostly good. Cooler weather, some rain helping conditions, slowing crop progress. Wheat streak mosaic, green bug, corn borer problems. Major activities silage harvest, winter grain seeding, fall tillage, working cattle, fencing.

**TENNESSEE:** Cold fronts pushed through State mid week, weekend. Precipitation in association with fronts. Temperatures below normal, coolest on Plateau. Precipitation above normal east, west; below normal Middle Plateau.

Days suitable for fieldwork 5.0. Soil moisture 11% very short, 43% short, 46% adequate. Corn 80% mature, 90% 1989, 88% avg.; 62% harvested for silage, 90% 1989, 90% avg.; 24% harvested for grain, 25% 1989, 34% avg. Cotton 80% open bolls, 65% 1989, 82% avg.; 8% harvested, 4% 1989, 15% avg.; 5% very poor, 29% poor, 66% fair. Sorghum 72% mature, 85% 1989, 75% avg.; 14% harvested for grain, 52% 1989, 48% avg. Soybeans 28% shedding leaves, 34% 1989, 32% avg.; 8% mature, 16% 1989, 12% avg.; 1% very poor, 34% poor, 48% fair, 17% good. Burley tobacco 88% harvested, 85% 1989, 87% avg. Dark fired tobacco 82% harvested, 96% 1989, 86% avg. Dark air cured tobacco 84% harvested, 94% 1989, 86% avg. Pastures 3% very poor, 24% poor, 49% fair, 23% good, 1% excellent. Cattle 1% poor, 40% fair, 57% good, 2% excellent. Primary activities: Harvesting tobacco, corn, sorghum, cotton; preparing land for fall seeding.

**TEXAS:** Upper level high pressure southeast, south kept temperatures above normal, rainfall below normal. West, north, weather disturbances helped produce clouds, heavy rainfall, kept temperatures below average, rains above average. Stronger disturbance mid week produced very heavy rains portions Edwards Plateau, Trans Pecos. Late week seasonally strong cold front produced more heavy rains over much same areas, some flooding. Temperatures generally above normal, rains below normal Upper Coast, south central, south. Elsewhere, temperatures below normal, rainfall above normal.

**Crops:** Corn harvest continued intermittent High Plains. Scattered rain slowed progress. Harvest full swing as conditions open up. Yields so far good to excellent. Grain sorghum harvest began light basis last week Plains, rainfall allowed producers cut small amount. Cooler temperatures slowed maturing later fields. More time needed before frost. Harvest slowed Hill Country, few scattered fields left Blacklands. Rainfall still help dryland cotton fields Plains. Bolls not opening fast with cooler temperatures. Isolated heavy rain Low Plains may have hurt some open cotton. High Plains harvest slow to begin because wet, cool conditions. Harvest slowed Blacklands. Producers hoping desiccants may help lower bolls open, cooler temperatures slowed process. Harvest central beginning wind down between showers. Small grain planting, emergence High Plains benefit from rainfall. Added moisture beneficial other areas. Rain delayed planting operations most State some point last week. Cooler temperatures aid emergence. Wheat emerged 6%, 16% 1989, 18% avg. Soybean harvest beginning Plains. Early yields good. Showers delayed harvest Blacklands, northeast. Harvest continued Upper Coast. Yields low early varieties. Rice harvest Upper Coast experienced slight delays last week. Some peanut

fields Low Plains, Cross Timbers still use more moisture, harvest early varieties beginning. Rain caused delays. Prospects good. Harvest continued between showers south central. Disease problems increasing with rain, high humidity. Other field crops: Peanuts 16% harvested, 4% 1989, 10% avg. Soybeans harvested 30%, 32% 1989, 24% avg. Sunflowers harvested 13%, 12% 1989, 14% avg. Oats planted 15%, 17% 1989, 21% avg.

**Commercial Vegetables:** Rio Grande Valley, pepper, cucumber, tomato progress good. Scattered rain helped reduce irrigation needs. Land preparations continued. San Antonio Winter Garden, rain slowed planting, land preparations. Eastern State, sweetpotato harvest continued good yields. Rain delayed progress some. High Plains, cucumber, carrot, pepper harvest experienced some rain delays. Trans Pecos, chile harvest continued. Pecan harvest beginning parts south. Central, east shucks splitting. Cooler weather helped all areas.

**Range and Livestock:** Rapid improvement conditions east. Additional hay cutting now possible many fields. Ranges, pastures improved nearly all areas. Armyworms active parts east. Stockers beginning arrive Plains. Shearing operations winding down Hill Country. Range, pasture 3% very poor, 12% poor, 45% fair, 32% good, 8% excellent.

**UTAH:** Temperatures 4° above normal. Precipitation light to heavy.

Days suitable for fieldwork 6.1. Soil moisture 68% short, 32% adequate. Fall land preparation continued. Winter wheat 57% seeded, 54% 1989, 67% avg. Alfalfa hay third cutting 82% completed, 90% 1989, 78% avg.; fourth cutting underway Box Elder, Utah Counties, full swing Millard County. Alfalfa seed harvest winding down Millard County. Field corn acreage 84% dent stage, 73% 1989, 83% avg.; 58% matured, 56% 1989, 51% avg. Corn grain harvest underway. Corn silage harvest 49% completed, 50% 1989, 50% avg. Peach harvest virtually completed. Apple, onion, potato harvests ongoing. Cattle, sheep moving from summer range.

**VIRGINIA:** Rainfall at beginning, weekend. Temperatures 3 to 5° below normal.

Days suitable for fieldwork 5.4. Topsoil 3% very short, 30% short, 57% adequate, 10% surplus. Corn for grain 34% harvested, 33% 1989, 36% avg. Corn silage 48% harvested, 49% 1989, 57% avg. Corn dented 90%, 92% 1989, 88% avg.; mature 77%, 70% 1989, 75% avg. Soybean 2% poor, 53% fair, 44% good, 1% excellent. Peanuts dug 7%, 1% 1989, 4% avg.; combined 3%, 4% avg.; 43% fair, 57% good. Flue tobacco 82% harvested, 82% 1989, 70% avg. Fire tobacco 96% harvested, 95% 1989, 78% avg. Burley tobacco 75% harvested, 68% 1989, 72% avg. Pasture 6% poor, 39% fair, 44% good, 11% excellent. Livestock mostly good. Wheat 6% seeded, 1% 1989, 3% avg. Oats 9% seeded, 8% 1989, 8% avg. Barley 8% seeded, 6% 1989, 8% avg. Hay cutting continued. Harvesting apples, sweetpotatoes, snap beans, cucumbers. Excessive moisture in August causing quality problems with cukes, snaps. Spinach planting commenced. Spraying for leafspot disease on peanuts.

**WASHINGTON:** Temperatures 2° below to 3° above normal, east; 2° below to 4° above normal, west. Precipitation none to 0.08 in., east; 0.03 in. to 0.53 in., west.

Days suitable for fieldwork 7.0. Soil moisture 59% short, 41% adequate. Range, pasture 30% poor, 40% fair, 20% good, 10% excellent. Hay, other roughage 95% adequate, 5% surplus. Winter wheat planted 60%, 46% 1989, 53% avg.; emerged 26%, 25% 1989, 30% avg. Potatoes harvested 42%, 41% 1989, 37% avg. Dry beans harvested 36%, 36% 1989, 58%

(Continued to back cover)

## International Weather and Crop Summary

### HIGHLIGHTS

September 16-22, 1990

**USSR** ... In Western USSR, wet weather in the northwest continues to slow fieldwork, while the optimum time for winter grain planting arrives in the south. In the New Lands, mostly dry weather helps spring grain harvesting.

**EUROPE** ... Cool, wet weather continues fall fieldwork delays in the northeast. Scattered rain helps reduce dryness across the south.

**EASTERN ASIA** ... Typhoon Flo brings heavy rain, flooding, and extensive property damage to sections of Japan. Favorably dry weather returns to sections of east-central China and the Korean Peninsula.

**SOUTH ASIA** ... Local heavy rain and flooding occur in central and far eastern crop areas. The southwest monsoon is beginning to withdraw from the northwest.

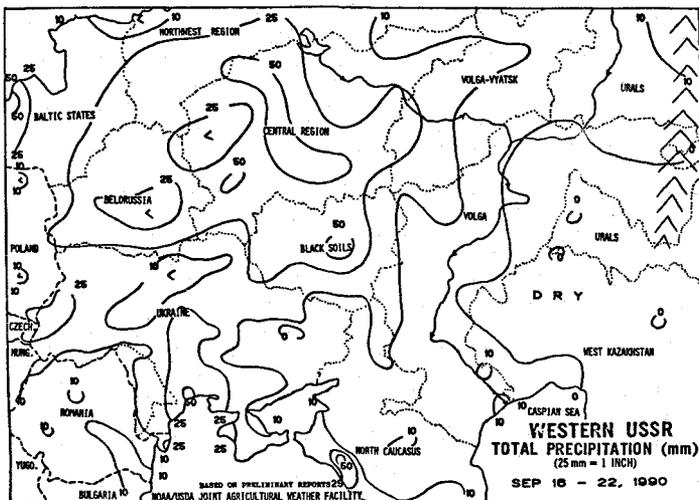
**SOUTHEAST ASIA** ... Typhoon Ed brings heavy rain and flooding to northern Indochina.

**SOUTH AMERICA** ... Unseasonably cool weather slows wheat growth in Argentina. Showers maintain adequate moisture for wheat in southern Brazil.

**AUSTRALIA** ... Rain favors winter grains in the southwest. Dryness covers much of the east.

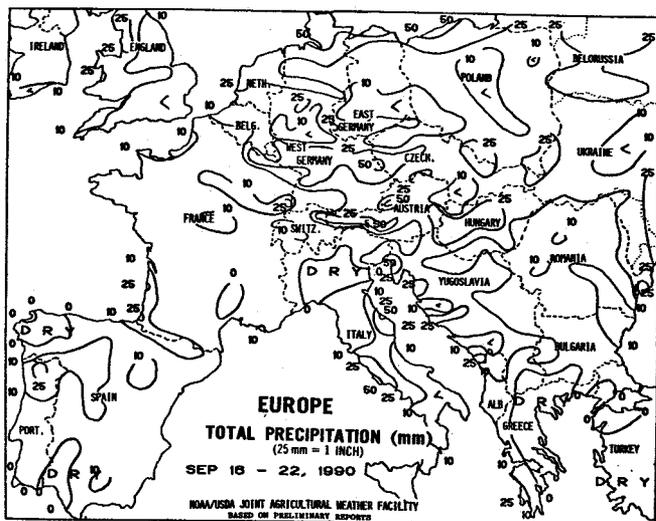
**CANADA** ... Showers halt late harvests in the eastern Prairies.

**MEXICO** ... Widespread rain continues throughout the country, favoring immature crops and irrigation supplies but delaying crop harvests.

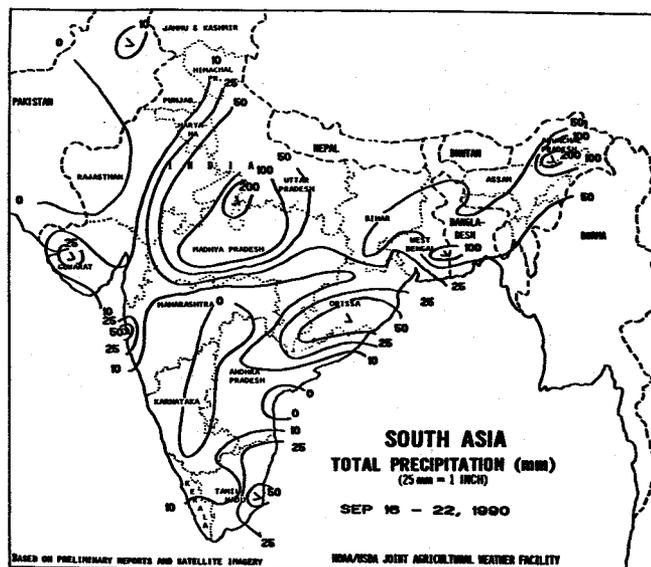


**USSR** ... In Western USSR, frequent showers over Belorussia, the Central Region, and the Black Soils Region continued to cause further delays in final grain harvesting, as well as potato and sugarbeet harvests. Precipitation amounts in these areas generally ranged from 25 to 50mm, with local amounts in excess of 50mm. Generally dry weather in the North Caucasus and the Volga Valley helped the corn, sunflower, and sugarbeet harvests to progress without delay. Although light to moderate showers over the Ukraine slowed corn and sugarbeet harvests, it increased topsoil moisture for winter grain planting. By September 17, reports indicated the corn harvest was about 60 percent complete. The optimum time for winter grain planting in the Ukraine and North Caucasus is mid-September. At present, topsoil moisture in these areas is adequate for crop emergence. Weekly average temperatures were 1-3 degrees C below normal in the west and near normal in the east.

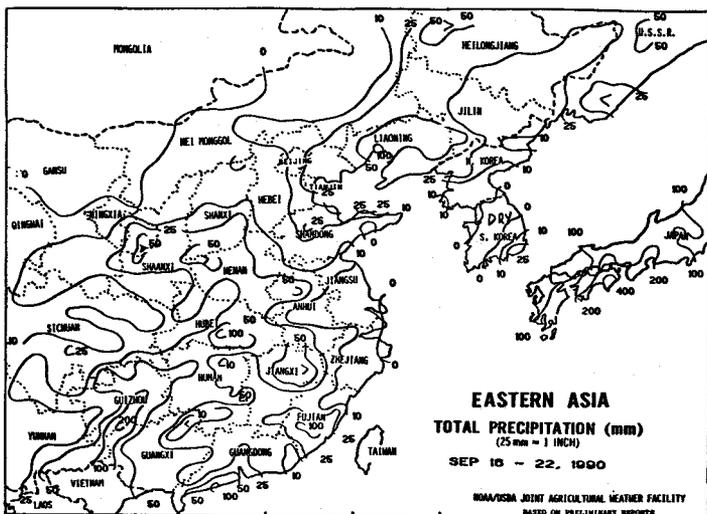
In the New Lands, mostly dry weather allowed spring grain harvesting to progress rapidly. By September 17, reports indicated small grains and pulses had been harvested on 78 percent of the sown area, compared with 69 percent the previous week and about 95 percent in 1989. In south-central USSR cotton areas, unseasonably warm, dry weather favored boll maturation and helped harvesting.



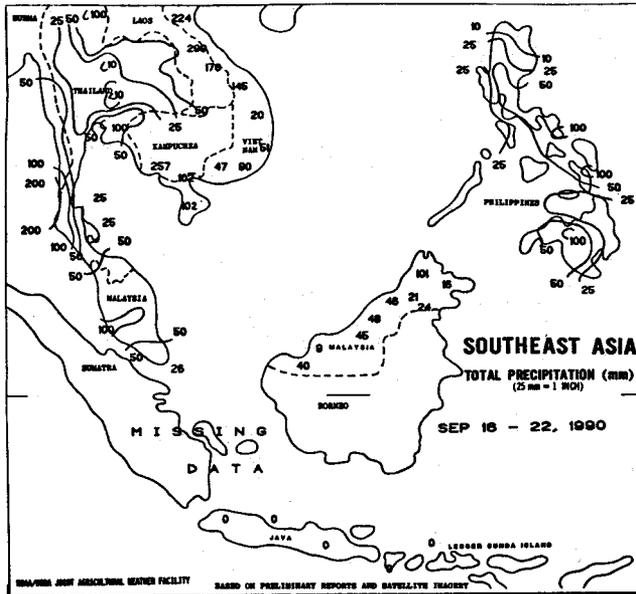
**EUROPE** ... Moderate to heavy rain (15-40mm, with isolated amounts in excess of 40mm) from the remnants of Tropical Storm Isadore fell across much of northeastern Europe and spread southward into Austria and Hungary. Much-below-normal temperatures (2-4 degrees C below normal) combined with the precipitation to cause continuing fall harvest and winter grain planting delays. Minimum temperatures in the 1-2 degrees C range on the 17th - 19th may have caused localized frost across sections of the Germanies and Poland, although most all summer crops have reached maturity. In the south, scattered rain (5-15mm, with isolated amounts greater than 15mm) helped reduce long-term dryness across many areas, although most topsoils remain unfavorably dry for upcoming winter crop planting.



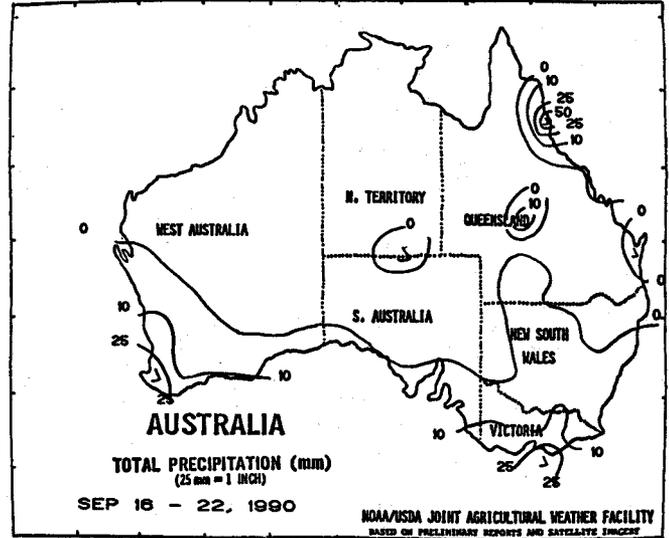
**SOUTH ASIA** ... Heavy rain (100-200mm or more) over the western two-thirds of Madhya Pradesh boosted irrigation reserves for immature summer crops and fall plantings but caused local flooding. Minimal rain continued over the primary crop regions of the southern interior and Gujarat, although beneficial showers (20-50mm or more) improved fall planting conditions over India's southern tip. More rain will be needed in upcoming weeks over southern India's primary cotton regions as crops advance through the flowering and boll forming stages of development. Highly variable rainfall (25-100mm or more) maintained ample irrigation reserves over most eastern rice areas but resulted in some flooding in West Bengal and Assam. In the north, beneficial showers (45-65mm) boosted planting moisture supplies in wheat regions of Uttar Pradesh and Bihar. However, drier and warmer weather returned to growing regions of Pakistan and north-central India as the monsoon began its southward retreat.



**EASTERN ASIA** ... Typhoon Flo moved past Japan's southern Ryukyu and Shikoku islands on the 17th and 18th before making landfall in southern Honshu on the 19th. The storm, which was the strongest to affect Japan in more than 20 years, brought 140-160 km/hr winds and torrential rains (100-300mm, with isolated amounts up to 500mm) to southern sections, causing numerous fatalities, extensive property damage, and flooding. In China, heavy rain (25-50mm, with isolated amounts greater than 50mm) and cool temperatures (mean weekly temperatures 1-4 degrees C below normal) combined to delay harvest of corn, soybeans, and rice in much of Manchuria. Mostly dry weather favored drying rates in Zhejiang and in the central Korean Peninsula following recent flooding. In southern China, widespread rain (10-50mm, with scattered amounts in excess of 50mm) helped reduce dryness and favored reproductive late-crop rice.

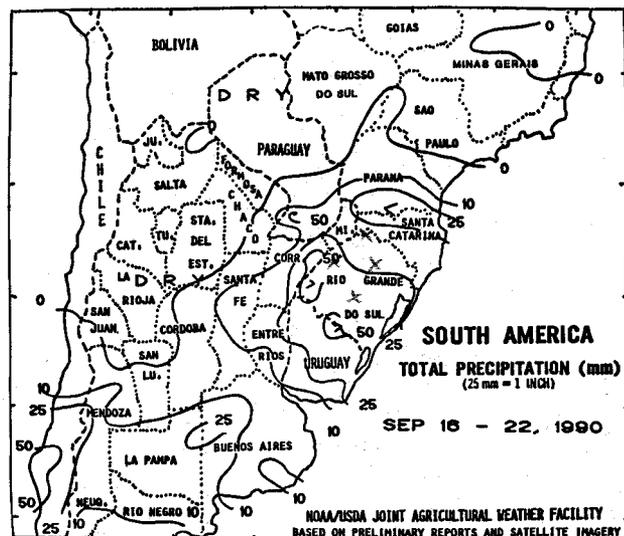


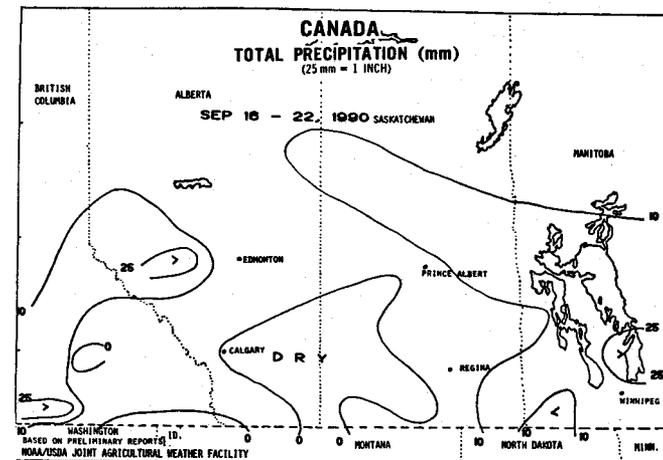
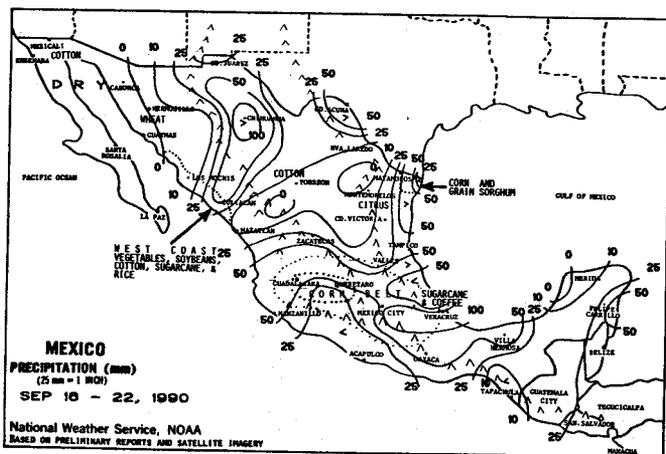
**SOUTHEAST ASIA** ... Typhoon Ed, which hit the northern Philippines last week, struck north-central Vietnam on the 18th with sustained winds of about 60 knots, bringing heavy showers (100-200mm or more) to much of northern Vietnam and portions of Laos. Local areas of northern and northeastern Thailand received 50-100mm or more, due partly to the remnants of Ed. However, light to moderate rain (10-25mm or more) returned to most other Thai grain areas, with temperatures averaging 1-2 degrees C above normal. Inundating rain (100-200mm or more) caused flooding along the western coast of peninsular Thailand. In the Philippines, rainfall totaled less than 25mm over much of northern Luzon, bringing some relief to flooded areas. Moderate to heavy showers (25-50mm or more) covered most crop regions from southern Luzon southward, with rainfall exceeding 100mm over local regions of the east-central islands and southeastern Luzon.



**AUSTRALIA** ... Moderate to heavy rain (10-40mm, with isolated amounts in excess of 40mm) covered crop areas of Western Australia, favoring vegetative winter grains. Mostly light rain (less than 10mm) fell over sections of northern Victoria and central New South Wales, while South Australia and other southeastern crop areas were mostly dry. In Queensland, scattered showers (5-40mm) along coastal areas reduced dryness for sugarcane planting, while interior crop areas remained dry. Drier-than-normal weather during the past 2 months in sections of east-central Queensland has left some topsoils abnormally dry for reproductive winter grains. Mean weekly temperatures were near to above normal in the east and below normal in the west.

**SOUTH AMERICA** ... In Argentina, beneficial showers (10-25mm, with isolated amounts up to 40mm) helped wheat growth in western Buenos Aires and eastern La Pampa. Light showers (less than 10mm) fell over the remaining wheat areas, except for a small area of southeastern Buenos Aires, where 10-18mm of rain fell. Unseasonably cool weather has slowed early wheat growth, with several episodes of near freezing temperatures in western crop areas causing some concern. In south-central Brazil, showers maintained wet field conditions for wheat development from southern Parana to Rio Grande do Sul. Mostly dry weather in northern Parana favored wheat harvesting. Dry weather prevailed in coffee areas of Sao Paulo and southern Minas Gerais.





**MEXICO** ... Periodic showers brought significant moisture to much of the country. Substantial rain (25-50mm) benefited immature soybeans and peanuts in the southern half of the west coast farming region. Locally heavy rain (50-181mm) helped northwestern watershed levels and northern rangelands but produced some flooding. Little or no rain fell in extreme northwestern wheat areas and eastern portions of north-central cotton and rangelands. Widespread rain covered the Southern Plateau, favoring immature corn but delaying harvesting in northern and southeastern portions where total rainfall averaged 50-192mm. Showers also helped corn growth in the south, but only light rain (1-10mm) fell along the Yucatan's Gulf Coast near Campeche.

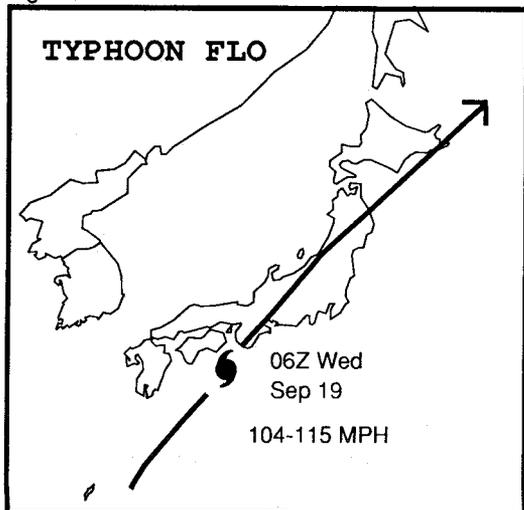
**CANADA** ... Light to moderate showers (5-30mm) late in the week in crop regions of eastern Saskatchewan and Manitoba halted oilseed and late spring wheat harvests. Temperatures in the eastern Prairies averaged near to below normal and dipped below freezing early in the week over much of Manitoba. In the western Prairies, mostly dry weather favored harvests in Alberta and western Saskatchewan. Temperatures averaged near to above normal in the west, but by week's end, freezing temperature had been reported in most crop areas. The spring wheat harvest should be nearly complete across the Prairies following recent weeks of favorable weather.

**TYPHOONS STRIKE JAPAN AND CHINA**

Typhoon Flo smashed into south-central Japan last week, bringing 200-500 mm (8-20 inches) of rain. The storm made landfall at approximately 0600 Greenwich mean time (G.m.t), Wednesday, September 19 with sustained winds of 90-100 knots (104-115 mph) and gusts up to 110 knots (126 mph) (fig 1). There were 29 reported deaths from Flo, mostly due to flooding and landslides. Flo was said to be the worst typhoon to hit Japan since the early 1960's.

Before hitting the main Japanese island of Honshu, Flo passed just to the east of the Ryukyu Islands (Okinawa) with sustained winds of 135-145 knots (155-167 mph) and gusts of 175 knots (200 mph)

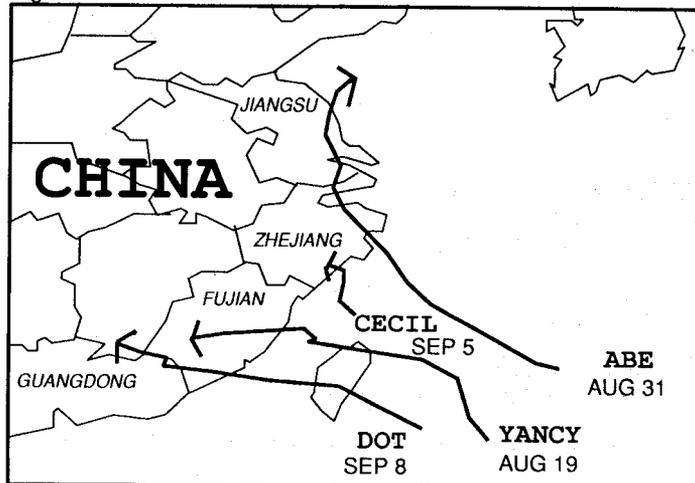
Figure 1



Meanwhile, from mid-August to mid-September, four tropical cyclones hit southeastern China. Figure 2 shows the tracks and dates of landfall for each storm. Portions of Jiangsu, Zhejiang, Fujian and Guangdong provinces received 200-500 mm (8-20 inches) of rain during this period. While the storms have brought relief to some areas of southeastern China which had been too dry, widespread flooding will probably have an impact on the cotton and single-crop rice harvest in Jiangsu and Zhejiang. Chinese news services have reported over 800 deaths so far this year in southeastern China due to tropical cyclones.

Bob Stefanski

Figure 2



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U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service/Climate Analysis Center  
Managing Editor . . . . . Douglas Le Comte  
Meteorologists . . . . . Tom Heddinghaus (202) 382-1444  
Vilhelm Bjerknes, Bob Stefanski, Wes Byrd.

Subscriptions (202) 447-7917 . . Joyce Houston

U.S. DEPARTMENT OF AGRICULTURE  
Economics Management Staff  
Editor . . . . . Sharon Lee  
National Agricultural Statistics Service  
Agricultural Statistician . . . Tom Kurtz (202) 447-2157  
World Agricultural Outlook Board  
Agricultural Weather Analysts. . Ray Motha (202) 447-5716  
Tom Puterbaugh, Mark Brusberg, and Jeff Andresen

(Continued from p. 19)

avg. Corn silage harvested 44%, 48% 1989, 47% avg. Alfalfa hay 3rd cutting 89%, 89% 1989, 89% avg. The small grain harvest was completed. Fall seeding continued with many areas waiting for moisture before planting. Many counties have completed fall seeding. The apple harvest continued. The Red Delicious apple harvest was slowly getting underway, with the Golden Delicious harvest continuing. The pear, other fruit harvests were winding down. Other crops harvested included: Hops, mint, carrots, onions, peppers, squash, sweet corn, melons, tomatoes.

**WEST VIRGINIA:** Temperatures 58°, 5 to 8° below normal. Extremes 33°; 79°. Precipitation 1.08 in., 0.18 in. below to 0.69 in. above normal.

Days suitable for fieldwork 3.6. Soil moisture 17% short, 65% adequate, 18% surplus. Pasture 15% fair, 71% good, 14% excellent. Cattle, sheep good. Corn good; 85% dough, 34% mature. Hay good; second cutting 85% complete, third cutting 60% complete. Wheat 18% planted. Apples poor. Tobacco fair to good; 78% harvested. Farm activities: Hay, tobacco harvest, chopping silage.

**WISCONSIN:** Temperature 54°, 4° below normal. Extremes 29°; 77°. Precipitation 0.40 to 0.90 in. Days suitable for fieldwork 4.8. Soil moisture 7% short, 62% adequate, 31% surplus. Pasture 2% poor,

8% fair, 73% good, 17% excellent. General condition of crops 7% fair, 83% good, 10% excellent. Soybean 85% of normal; 72% turned, 68% 1989, 76% avg.; 19% shed, 22% 1989, 39% avg. Corn 11% fair, 77% good, 12% excellent; 78% in dent, 88% 1989, 87% avg.; 26% mature, 32% 1989, 50% avg.; silo filling 9% complete, 15% 1989, 32% avg. Third cut hay 66% complete, 70% 1989, 67% avg. Fall tillage 6% complete, 8% 1989, 10% avg.

**WYOMING:** Temperatures above normal. Above normal precipitation.

Days suitable for fieldwork 5.0. Topsoil 50% short, 43% adequate, 7% surplus. Subsoil 56% short, 44% adequate. Oats 95% harvested, 95% 1989, 95% avg. Dry beans 95% windrowed, 70% 1989, 75% avg.; 65% combined, 40% 1989, 50% avg. Corn 5% milk, 0% 1989, 0% avg.; 25% dough, 15% 1989, 15% avg.; 40% dented, 50% 1989, 55% avg.; 20% mature, 30% 1989, 25% avg.; 10% harvested, 5% 1989, 5% avg. Corn silage 70% harvested, 70% 1989, 55% avg. Sugarbeets 5% dug, 5% 1989, 10% avg. Potatoes 55% harvested, 60% 1989, 45% avg. 1991 winter wheat fair to good, 75% seeded, 80% 1989, 70% avg.; 55% emerged, 40% 1989, 30% avg. Hay, roughage 20% short, 65% adequate, 15% surplus. Livestock feed obtained from pastures 100%. Livestock moved from summer ranges; cattle, calves 25%; sheep, lambs 25%. Producers culling, marketing livestock.

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