

# WEEKLY WEATHER AND CROP BULLETIN

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

U.S. DEPARTMENT OF AGRICULTURE  
Statistical Reporting Service  
and World Agricultural Outlook Board

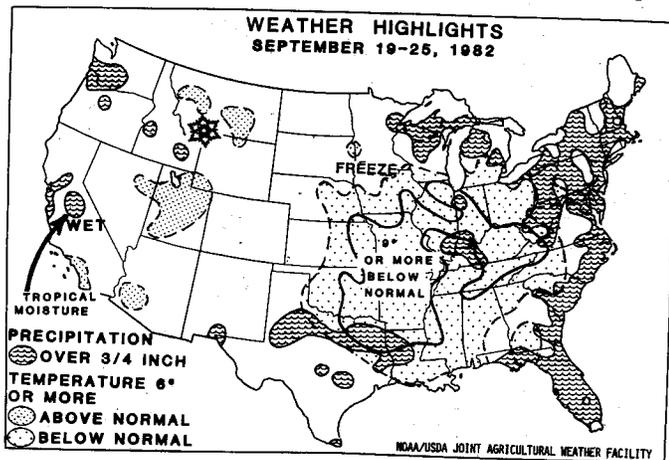
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Sept. 28, 1982

## National Weather Summary

Sept. 19 - 25



in the central Great Lakes region and upper Ohio Valley but heavier from western Virginia to southwestern New York. Light, occasionally moderate, showers fell through all of the East Coast States.

**WEDNESDAY . . .**The unseasonably cold weather centered over the middle Mississippi Valley. Freezing temperatures were confined to parts of the western Great Lake area, but record-low temperatures reached from Texas to Georgia. A low-pressure system off the mid-Atlantic coast spread rain through the Northeast from eastern Kentucky and Ohio northeastward and from northern Virginia northward. A few showers fell in Florida, and very light showers were scattered over the central Plains and upper Mississippi Valley.

**THURSDAY . . .**Freezing temperatures were confined to the northern Rockies, but unseasonably cool weather set records in the Southeast. A low-pressure system moving northward along the east coast caused light to moderate rain through the Northeast. A cold front from Minnesota to Kansas triggered showers along and ahead of it to northern Arkansas, through the Ohio Valley, and to the Great Lakes region. Late in the day, a few light showers began to fall through central and northern California.

**FRIDAY . . .**Showers and thunderstorms were concentrated along a line from southwestern New York to northeastern Texas, and more widely scattered showers reached eastward to the Appalachians. Cool weather continued to set records in the Southeast. Moisture from Tropical Storm Olivia helped spread rainshowers from south-central California all the way to Washington. The unseasonable rain in California was detrimental to several agricultural activities.

(continued on back cover)

**HIGHLIGHTS:** Unseasonably cold weather spread over the area east of the Rockies. Average temperatures for the week were as much as 9 to 12° colder than normal in the eastern portion of the central and southern Plains and in the Tennessee Valley. The Corn Belt averaged 6 to 10° colder than normal. Early-morning freezing temperatures were reported as far south as central Nebraska and northern Iowa. Moisture from Tropical Storm Olivia was swept northward through California and produced unseasonable rain in the San Joaquin Valley. Moderate rain in parts of the East Coast States helped relieve the dry condition there.

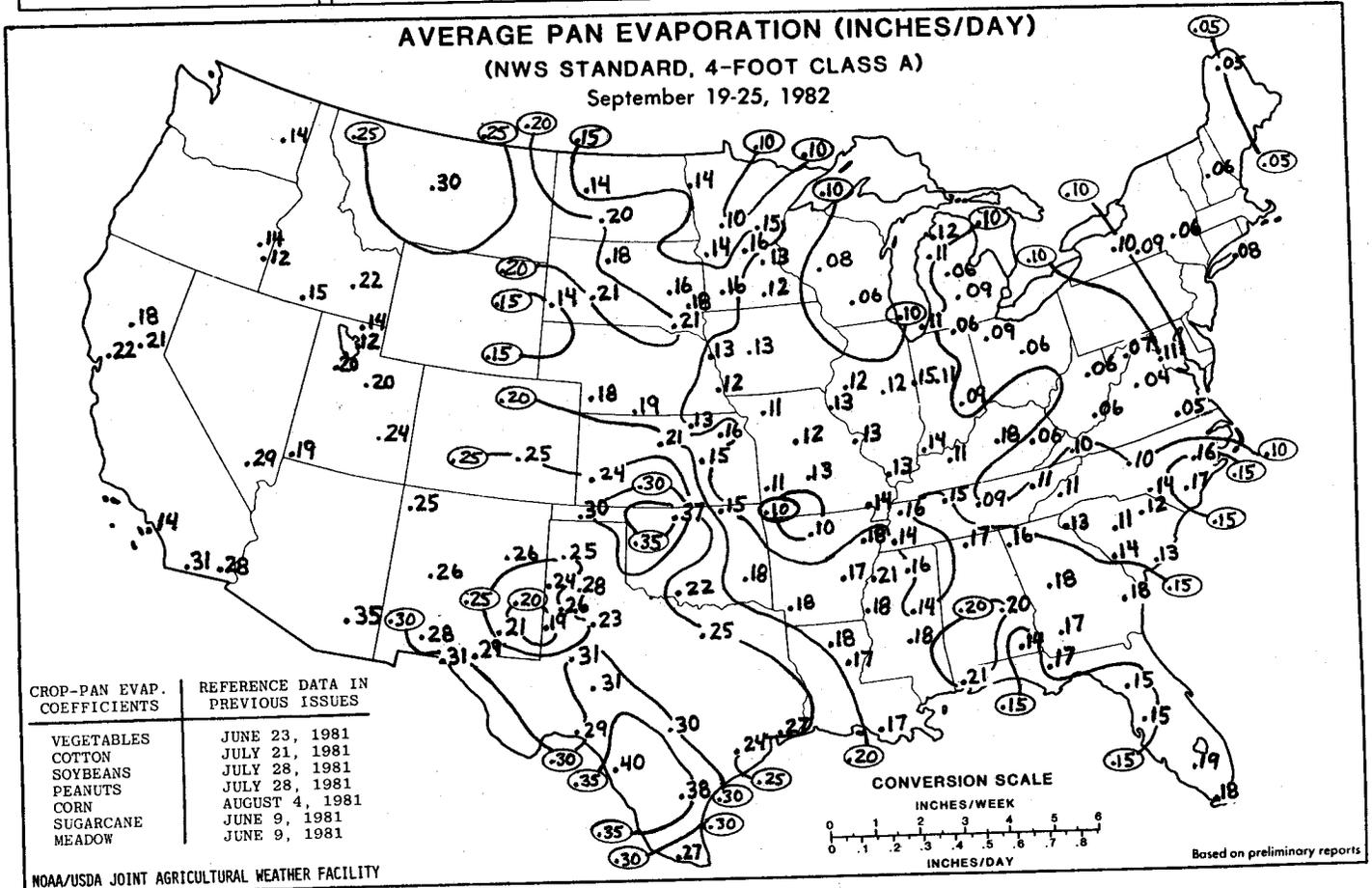
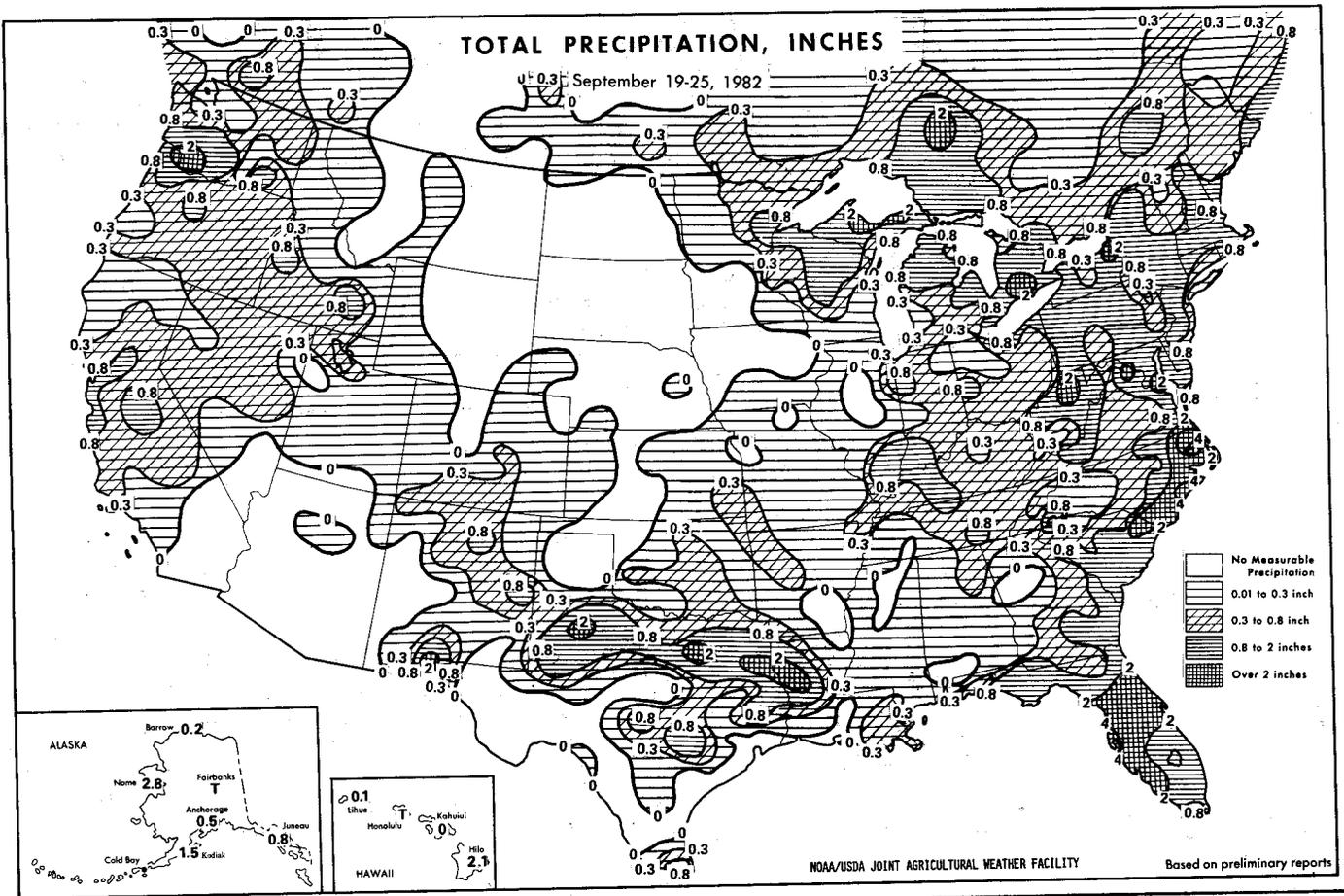
**SUNDAY . . .**Moderate to heavy showers and thunderstorms were widespread through eastern and west-central Texas, eastern Oklahoma, western Louisiana, and Arkansas. Lighter showers extended northward through the Mississippi Valley to the Great Lakes. Showers covered the area from eastern Pennsylvania to South Carolina and through most of Florida. Showers were scattered through the Pacific Northwest and the central Rockies.

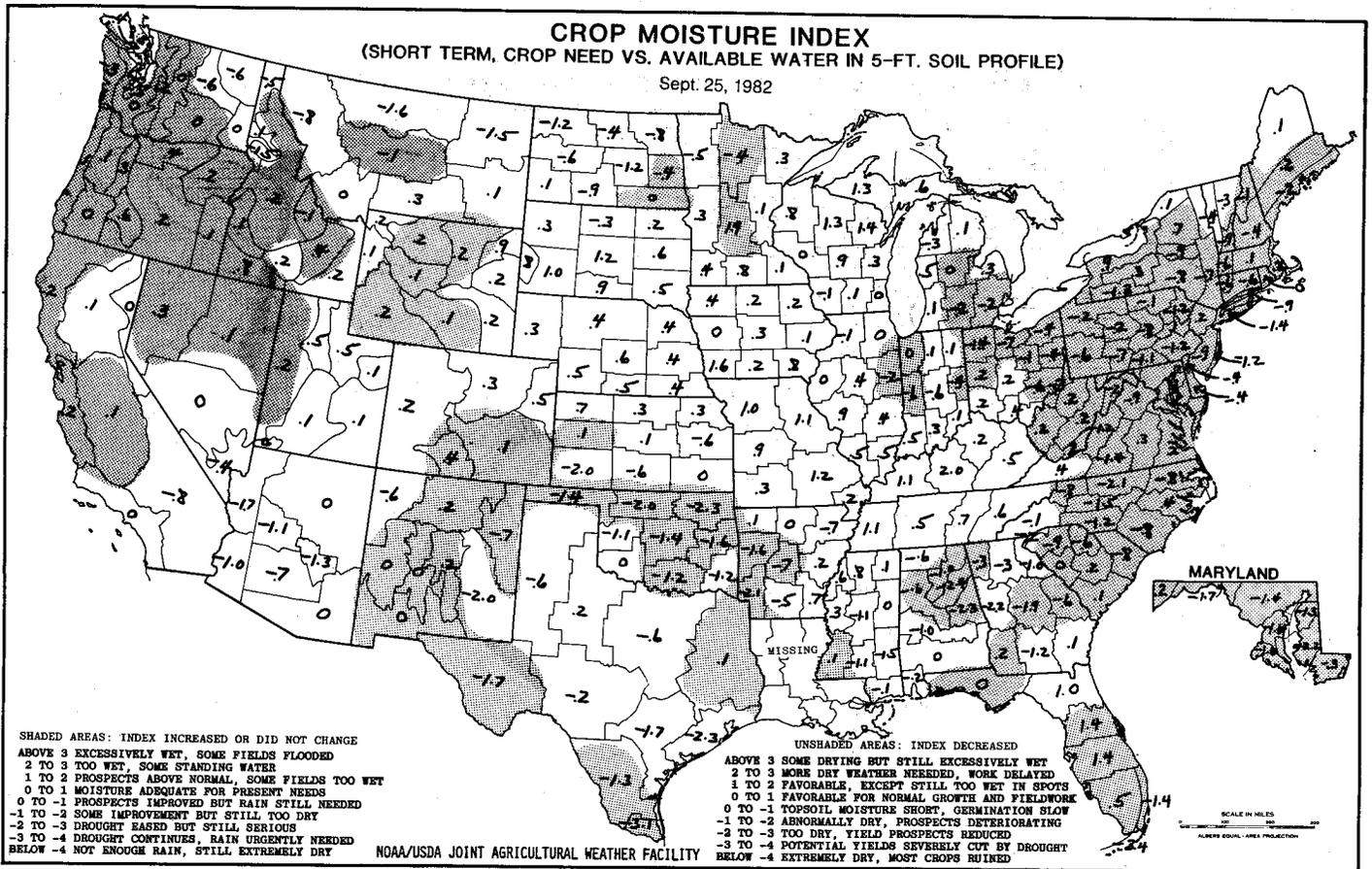
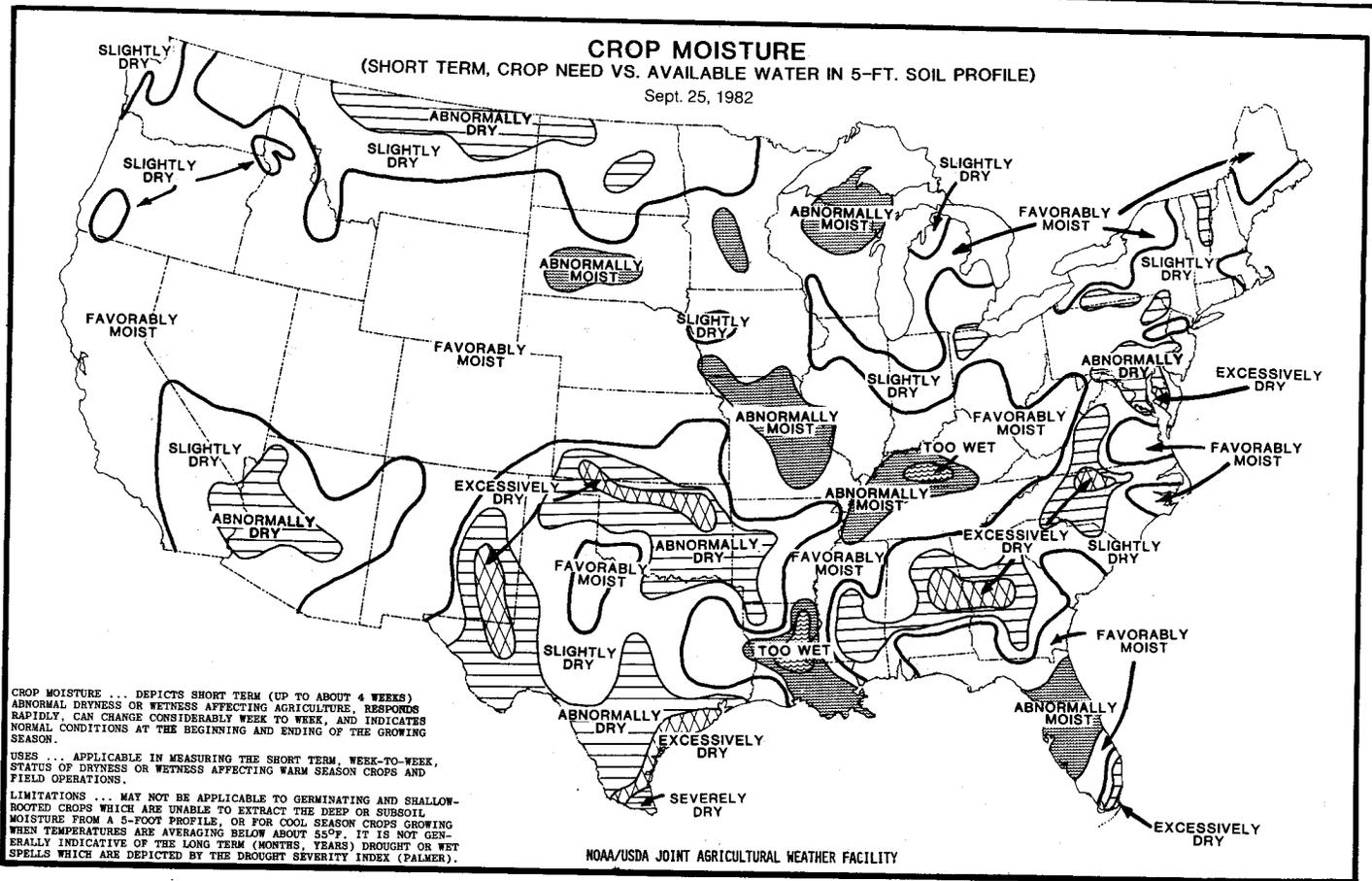
**MONDAY . . .**A high-pressure system brought freezing temperatures to parts of the northern Plains and northern Rockies. Cooler weather spread over all but the extreme South and Southwest. Light showers were scattered over the Pacific Northwest and through the Rockies. Isolated showers fell in the northern part of California's San Joaquin Valley. In the East, showers were generally light through the Ohio Valley and Great Lakes but light to moderate through the East Coast States.

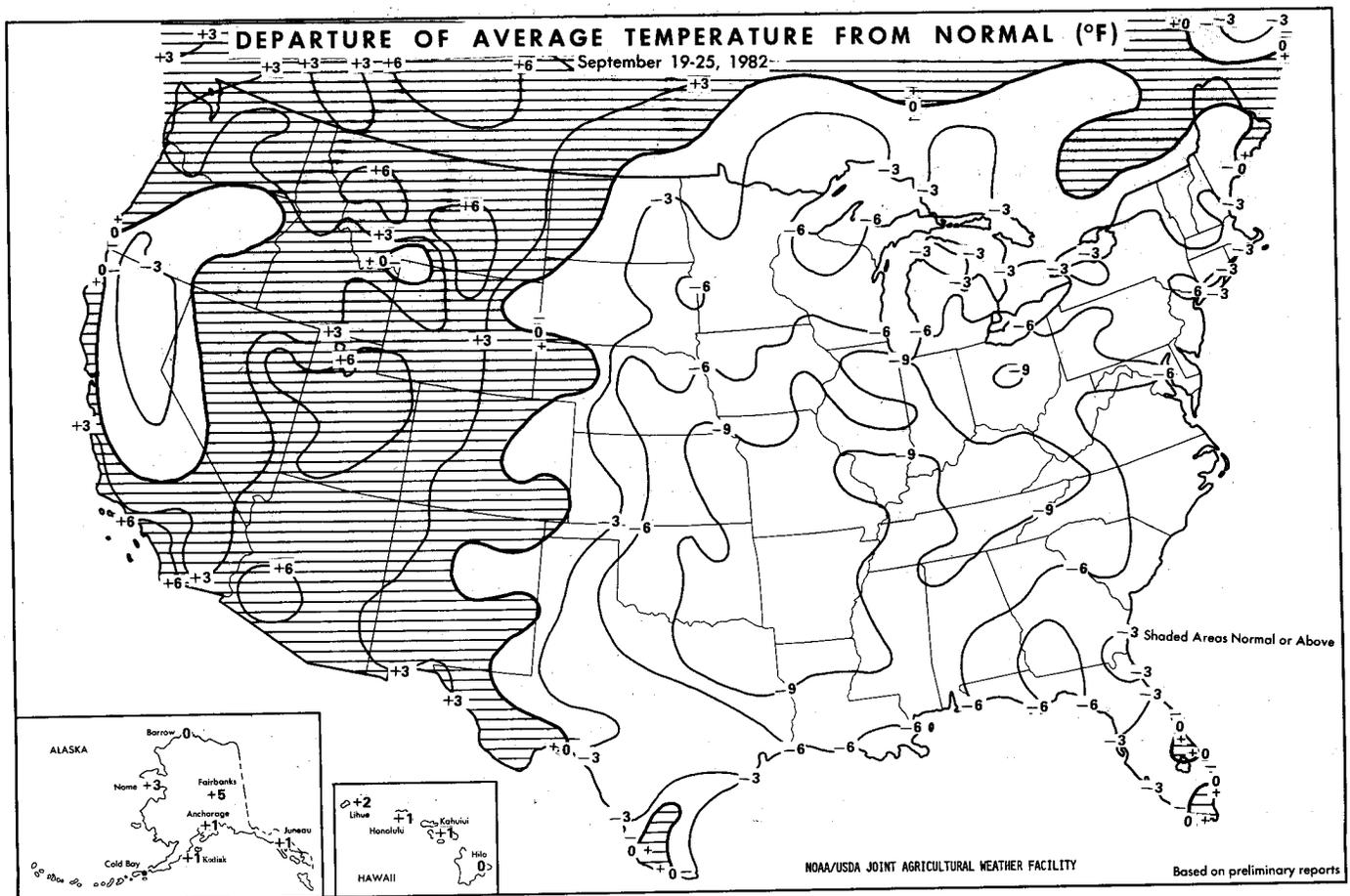
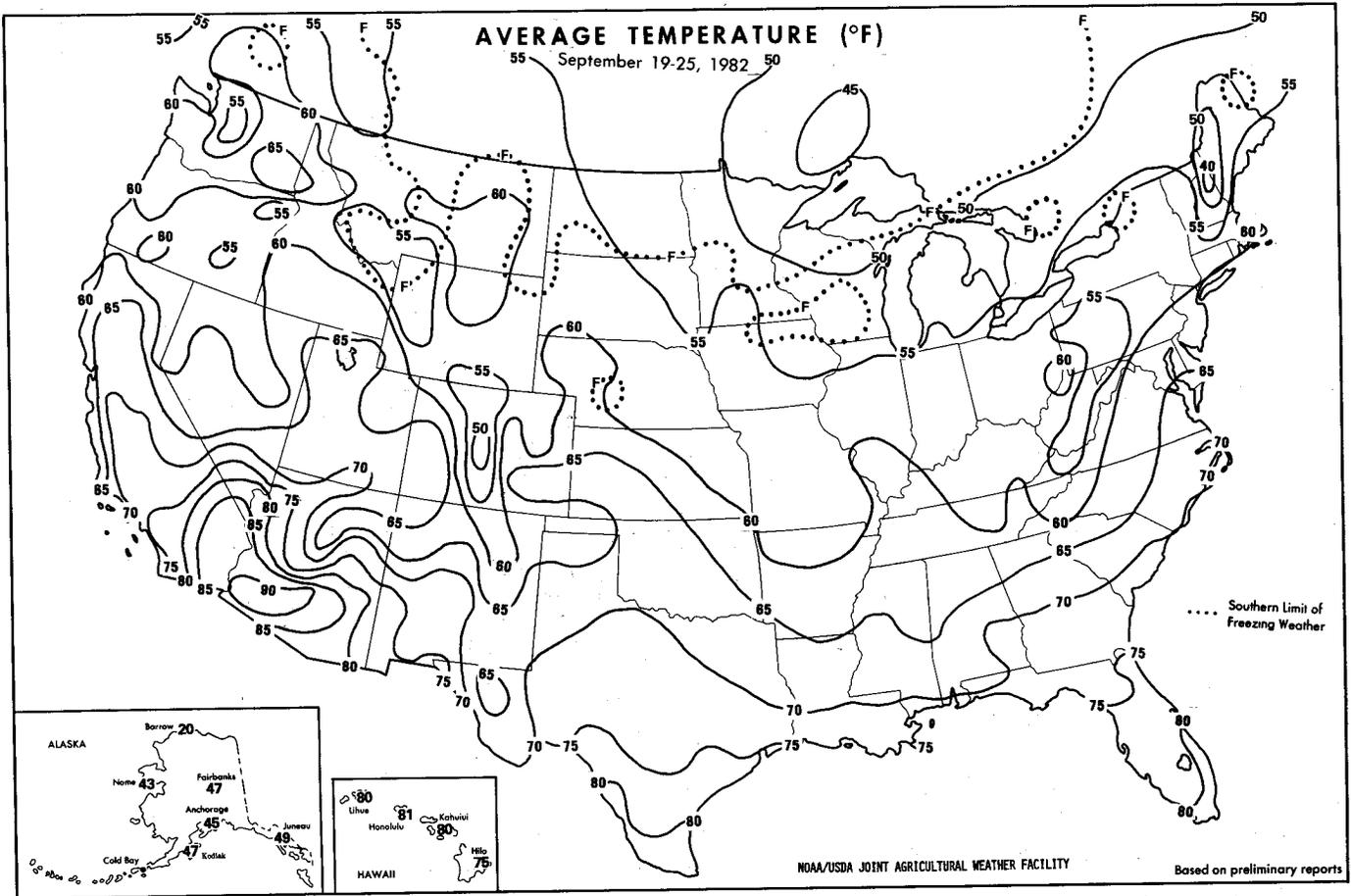
**TUESDAY . . .**The cold weather pushed deep into the Plains. Record-low temperatures were reached as far south as Kansas. Freezing weather was widespread through the northern Plains and reached to northern Iowa and central Nebraska. Precipitation was light

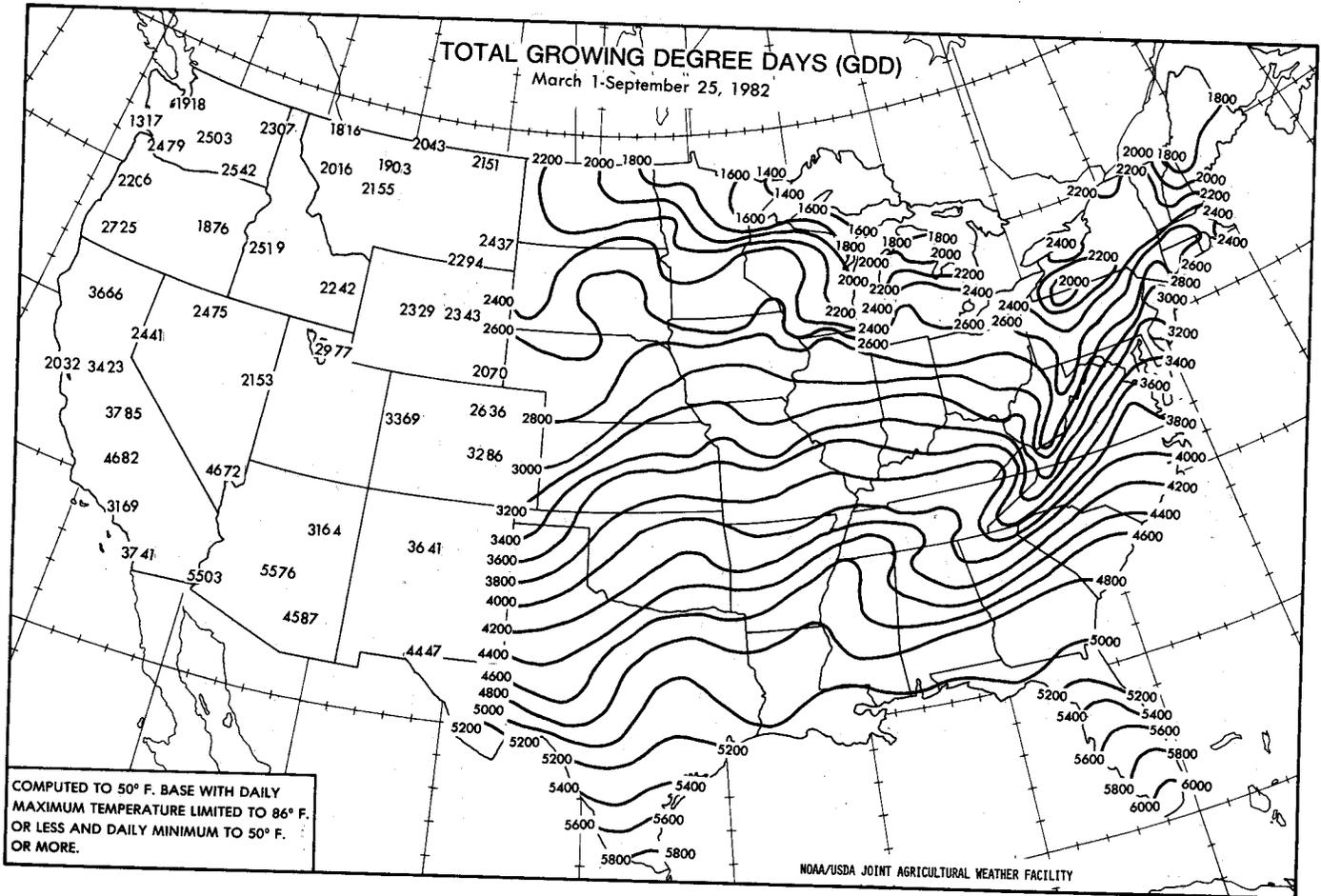
### Contents

|   | Page |
|---|------|
| National Weather Summary . . . . .  | 1    |
| Precipitation & Pan Evaporation . . . . .   | 2    |
| Crop Moisture & Crop Moisture Index . . . . .   | 3    |
| Average Temperature & Departure . . . . .   | 4    |
| Growing Degree Days . . . . .   | 5    |
| Weather Data for Selected Cities . . . . .  | 6    |
| Cooling Degree Days . . . . .   | 9    |
| Climates of the World . . . . .   | 10   |
| National Agricultural Summary . . . . .   | 12   |
| Crop Progress Tables . . . . .  | 13   |
| California Crop Damage Report & State Summaries<br>of Weather & Agriculture . . . . . | 14   |
| International Weather & Crop Summary . . . . .  | 21   |
| Subscription & Mailing Permit Information . . . . .                                   | 24   |









Weather Data for the Week Ending Sept. 25, 1982

| 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 AUG. 29 | PCT. NORMAL<br>SINCE AUG. 29 | TOTAL, IN.,<br>SINCE JAN. 1 | PCT. NORMAL<br>SINCE JAN. 1 | AVERAGE<br>MAXIMUM | AVERAGE<br>MINIMUM         | TEMPERATURE  |                | PRECIPITATION       |                     |  |
|                           |                    |                    |                 |                |         |                          |                      |                          |                             |                              |                              |                             |                             |                    |                            | 90 AND ABOVE | 32 AND BELOW   | .01 INCH<br>OR MORE | .50 INCH<br>OR MORE |  |
| AL BIRMINGHAM             | 77                 | 52                 | 84              | 42             | 65      | -8                       | .2                   | -.6                      | .2                          | 1.0                          | 29                           | 51.0                        | 128                         | 90                 | 36                         | 0            | 0              | 1                   | 0                   |  |
| AL MOBILE                 | 81                 | 58                 | 89              | 49             | 69      | -7                       | .1                   | -1.4                     | T                           | 4.7                          | 73                           | 60.7                        | 116                         | 90                 | 41                         | 0            | 0              | 1                   | 0                   |  |
| AL MONTGOMERY             | 82                 | 57                 | 90              | 47             | 69      | -5                       | T                    | -1.0                     | T                           | 2.0                          | 50                           | 47.4                        | 127                         | 86                 | 38                         | 1            | 1              | 1                   | 0                   |  |
| AK ANCHORAGE              | 52                 | 38                 | 57              | 28             | 45      | -1                       | .5                   | -.1                      | .3                          | 5.0                          | 208                          | 11.9                        | 109                         | 95                 | 60                         | 0            | 3              | 3                   | 0                   |  |
| AK BARROW                 | 32                 | 25                 | 37              | 22             | 28      | 0                        | .2                   | -.1                      | .1                          | .7                           | 100                          | 4.0                         | 103                         | 99                 | 87                         | 0            | 7              | 2                   | 0                   |  |
| AK FAIRBANKS              | 57                 | 36                 | 62              | 25             | 47      | 5                        | T                    | -.2                      | T                           | 1.4                          | 127                          | 9.7                         | 105                         | 79                 | 41                         | 0            | 2              | 1                   | 0                   |  |
| AK JUNEAU                 | 55                 | 42                 | 63              | 38             | 49      | 1                        | T                    | -.2                      | T                           | 4.3                          | 69                           | 30.9                        | 89                          | 100                | 85                         | 0            | 0              | 5                   | 1                   |  |
| AK KODIAK                 | 55                 | 40                 | 57              | 33             | 47      | -1                       | 1.5                  | 0                        | .5                          | 9.1                          | 165                          | 43.9                        | 116                         | 93                 | 64                         | 0            | 1              | 7                   | 2                   |  |
| AK NOME                   | 48                 | 38                 | 55              | 15             | 43      | 3                        | 2.8                  | 0                        | 1.1                         | 4.5                          | 196                          | 15.2                        | 118                         | 84                 | 62                         | 0            | 1              | 7                   | 2                   |  |
| AZ PHOENIX                | 105                | 77                 | 108             | 71             | 91      | 9                        | 0                    | -.1                      | 0                           | .1                           | 17                           | 5.8                         | 116                         | 54                 | 21                         | 7            | 0              | 0                   | 0                   |  |
| AZ PRESCOTT               | 85                 | 56                 | 88              | 52             | 71      | 4                        | 0                    | -.3                      | 0                           | .6                           | 40                           | 10.7                        | 76                          | 65                 | 22                         | 0            | 0              | 0                   | 0                   |  |
| AZ TUCSON                 | 98                 | 69                 | 101             | 64             | 83      | 4                        | 0                    | -.3                      | 0                           | 2.2                          | 157                          | 10.5                        | 121                         | 56                 | 20                         | 7            | 0              | 0                   | 0                   |  |
| AZ YUMA                   | 104                | 76                 | 110             | 72             | 90      | 5                        | 0                    | 0                        | 0                           | .1                           | 50                           | 2.9                         | 171                         | 49                 | 19                         | 7            | 0              | 0                   | 0                   |  |
| AR FORT SMITH             | 76                 | 50                 | 82              | 38             | 63      | -9                       | .1                   | -.7                      | .1                          | .7                           | 23                           | 32.8                        | 104                         | 89                 | 37                         | 0            | 0              | 2                   | 0                   |  |
| AR LITTLE ROCK            | 74                 | 53                 | 78              | 46             | 63      | -8                       | .3                   | -.6                      | .2                          | 1.5                          | 45                           | 42.1                        | 122                         | 85                 | 48                         | 2            | 0              | 2                   | 0                   |  |
| CA BAKERSFIELD            | 84                 | 66                 | 95              | 61             | 75      | 0                        | .2                   | -.2                      | T                           | .5                           | 125                          | 24.9                        | 109                         | 95                 | 73                         | 0            | 0              | 2                   | 0                   |  |
| CA EUREKA                 | 66                 | 52                 | 71              | 49             | 59      | 3                        | T                    | -.2                      | T                           | .5                           | +100                         | 9.6                         | 152                         | 89                 | 47                         | 1            | 0              | 2                   | 1                   |  |
| CA FRESNO                 | 82                 | 60                 | 93              | 55             | 71      | -2                       | 1.0                  | 1.0                      | .8                          | 1.0                          | 10                           | 9.1                         | 118                         | 88                 | 45                         | 2            | 0              | 1                   | 0                   |  |
| CA LOS ANGELES            | 82                 | 65                 | 92              | 61             | 74      | 5                        | T                    | 0                        | T                           | .5                           | 250                          | 9.1                         | 118                         | 88                 | 45                         | 2            | 0              | 1                   | 0                   |  |
| CA RED BLUFF              | 82                 | 56                 | 89              | 53             | 69      | -5                       | .2                   | -.2                      | .2                          | 1.3                          | 433                          | 13.3                        | 99                          | 89                 | 38                         | 0            | 0              | 3                   | 1                   |  |
| CA SACRAMENTO             | 79                 | 54                 | 87              | 50             | 67      | -5                       | .9                   | -.8                      | .6                          | 1.8                          | 900                          | 19.9                        | 169                         | 94                 | 44                         | 0            | 0              | 3                   | 1                   |  |
| CA SAN DIEGO              | 82                 | 68                 | 90              | 63             | 75      | 5                        | T                    | 0                        | T                           | .3                           | 300                          | 9.3                         | 163                         | 91                 | 57                         | 1            | 0              | 3                   | 0                   |  |
| CA SAN FRANCISCO          | 72                 | 55                 | 82              | 51             | 64      | 0                        | .6                   | -.6                      | .3                          | .9                           | +100                         | 23.5                        | 208                         | 78                 | 51                         | 0            | 0              | 1                   | 0                   |  |
| CO DENVER                 | 73                 | 49                 | 83              | 45             | 61      | 0                        | T                    | -.3                      | T                           | 1.4                          | 127                          | 10.1                        | 83                          | 80                 | 34                         | 0            | 0              | 2                   | 0                   |  |
| CO GRAND JUNCTION         | 81                 | 57                 | 87              | 54             | 69      | 4                        | .2                   | 0                        | .2                          | 1.7                          | 213                          | 5.5                         | 92                          | 77                 | 30                         | 0            | 0              | 2                   | 0                   |  |
| CO PUEBLO                 | 79                 | 50                 | 89              | 47             | 65      | 1                        | T                    | -.1                      | T                           | 1.8                          | 225                          | 14.1                        | 140                         | 88                 | 34                         | 0            | 0              | 0                   | 0                   |  |
| CT BRIDGEPORT             | 66                 | 52                 | 69              | 50             | 59      | -6                       | .6                   | 0                        | .5                          | 1.1                          | 41                           | 36.7                        | 133                         | 92                 | 55                         | 0            | 0              | 2                   | 0                   |  |
| CT HARTFORD               | 67                 | 49                 | 75              | 42             | 58      | -3                       | .8                   | 0                        | .5                          | 1.6                          | 47                           | 39.5                        | 131                         | 91                 | 53                         | 0            | 0              | 3                   | 0                   |  |
| DC WASHINGTON             | 72                 | 57                 | 77              | 51             | 64      | -4                       | 1.2                  | -.5                      | 1.0                         | 1.3                          | 42                           | 28.9                        | 98                          | 85                 | 53                         | 0            | 0              | 3                   | 1                   |  |
| FL APALACHICOLA           | 81                 | 64                 | 87              | 55             | 73      | -5                       | 1.4                  | -.6                      | .8                          | 16.1                         | 183                          | 58.1                        | 125                         | 88                 | 56                         | 1            | 0              | 4                   | 2                   |  |
| FL DAYTONA BEACH          | 84                 | 68                 | 90              | 65             | 76      | -3                       | 2.5                  | -.9                      | 1.3                         | 3.7                          | 56                           | 41.6                        | 108                         | 94                 | 66                         | 2            | 0              | 3                   | 0                   |  |
| FL JACKSONVILLE           | 85                 | 65                 | 92              | 56             | 75      | -2                       | .6                   | -1.1                     | .3                          | 9.1                          | 121                          | 43.1                        | 98                          | 99                 | 57                         | 2            | 0              | 4                   | 1                   |  |
| FL KEY WEST               | 86                 | 72                 | 88              | 75             | 82      | -1                       | .9                   | -.9                      | .7                          | 4.0                          | 60                           | 30.4                        | 106                         | 87                 | 70                         | 0            | 0              | 5                   | 1                   |  |
| FL MIAMI                  | 88                 | 74                 | 91              | 72             | 81      | 0                        | 1.4                  | -.7                      | .8                          | 4.7                          | 59                           | 47.6                        | 113                         | 96                 | 63                         | 2            | 0              | 5                   | 3                   |  |
| FL ORLANDO                | 85                 | 70                 | 91              | 68             | 78      | -2                       | 3.8                  | 2.2                      | 1.5                         | 5.3                          | 79                           | 47.6                        | 113                         | 96                 | 63                         | 2            | 0              | 2                   | 1                   |  |
| FL TALLAHASSEE            | 83                 | 59                 | 88              | 48             | 71      | -6                       | 1.5                  | 0                        | 1.3                         | 6.5                          | 103                          | 50.9                        | 103                         | 95                 | 49                         | 0            | 0              | 5                   | 2                   |  |
| FL TAMPA                  | 84                 | 72                 | 89              | 68             | 78      | -2                       | 4.2                  | 2.9                      | 2.4                         | 9.2                          | 148                          | 49.9                        | 121                         | 96                 | 70                         | 0            | 0              | 3                   | 1                   |  |
| FL WEST PALM BEACH        | 88                 | 72                 | 92              | 70             | 80      | -1                       | 1.5                  | -.9                      | 1.0                         | 4.3                          | 48                           | 57.6                        | 125                         | 89                 | 60                         | 0            | 0              | 0                   | 0                   |  |
| GA ATLANTA                | 76                 | 54                 | 87              | 45             | 65      | -6                       | T                    | -.7                      | T                           | 3.0                          | 97                           | 41.1                        | 111                         | 84                 | 42                         | 0            | 0              | 2                   | 0                   |  |
| GA AUGUSTA                | 80                 | 57                 | 87              | 47             | 69      | -4                       | .4                   | -.3                      | .2                          | 1.9                          | 59                           | 30.2                        | 89                          | 93                 | 46                         | 0            | 0              | 1                   | 0                   |  |
| GA MACON                  | 82                 | 57                 | 91              | 48             | 70      | -4                       | 1.7                  | -.6                      | 1.1                         | 2.7                          | 87                           | 36.7                        | 108                         | 98                 | 46                         | 1            | 0              | 3                   | 0                   |  |
| GA SAVANNAH               | 82                 | 61                 | 91              | 53             | 72      | -3                       | 1.7                  | -.5                      | 1.4                         | 2.8                          | 52                           | 46.2                        | 110                         | 91                 | 49                         | 2            | 0              | 6                   | 2                   |  |
| HI HILO                   | 82                 | 69                 | 83              | 65             | 75      | 0                        | 2.1                  | -.4                      | .8                          | 11.9                         | 168                          | 149.2                       | 168                         | 94                 | 68                         | 0            | 0              | 3                   | 1                   |  |
| HI HONOLULU               | 89                 | 74                 | 90              | 70             | 81      | 1                        | T                    | -.2                      | T                           | .5                           | 83                           | 23.2                        | 166                         | 78                 | 46                         | 1            | 0              | 1                   | 0                   |  |
| HI KAHULUI                | 88                 | 71                 | 91              | 67             | 80      | 1                        | 0                    | -.1                      | 0                           | .4                           | 200                          | 23.3                        | 204                         | 73                 | 43                         | 2            | 0              | 0                   | 0                   |  |
| HI LIHUE                  | 86                 | 75                 | 87              | 73             | 80      | 2                        | .1                   | -.4                      | T                           | 1.6                          | 94                           | 47.7                        | 179                         | 84                 | 60                         | 0            | 0              | 2                   | 0                   |  |
| ID BOISE                  | 75                 | 50                 | 86              | 45             | 63      | 2                        | 1.1                  | -1.0                     | .5                          | 1.2                          | 400                          | 8.7                         | 109                         | 88                 | 38                         | 0            | 0              | 4                   | 0                   |  |
| ID LEWISTON               | 78                 | 53                 | 85              | 46             | 66      | 4                        | T                    | -.2                      | T                           | .4                           | 50                           | 8.5                         | 94                          | 81                 | 33                         | 0            | 0              | 1                   | 0                   |  |
| ID POCATELLO              | 76                 | 47                 | 78              | 40             | 61      | 4                        | 1.0                  | -.9                      | .7                          | 2.9                          | 580                          | 12.7                        | 161                         | 91                 | 38                         | 0            | 0              | 4                   | 1                   |  |
| IL CHICAGO                | 62                 | 44                 | 73              | 40             | 53      | -9                       | .2                   | -.6                      | .1                          | 1.3                          | 43                           | 28.0                        | 113                         | 94                 | 54                         | 0            | 0              | 3                   | 0                   |  |
| IL MOLINE                 | 66                 | 44                 | 73              | 38             | 55      | -8                       | .1                   | -.8                      | .1                          | 2.2                          | 63                           | 31.4                        | 114                         | 91                 | 50                         | 0            | 0              | 1                   | 0                   |  |
| IL PEORIA                 | 66                 | 45                 | 72              | 40             | 56      | -8                       | T                    | -.8                      | T                           | 1.5                          | 44                           | 33.3                        | 122                         | 93                 | 52                         | 0            | 0              | 0                   | 0                   |  |
| IL QUINCY                 | 66                 | 47                 | 72              | 40             | 56      | -9                       | T                    | -1.0                     | T                           | 4.2                          | 105                          | 34.4                        | 90                          | 54                 | 0                          | 0            | 1              | 0                   |                     |  |
| IL ROCKFORD               | 63                 | 41                 | 73              | 35             | 52      | -9                       | .1                   | -.9                      | T                           | 1.8                          | 46                           | 30.9                        | 109                         | 98                 | 56                         | 0            | 0              | 2                   | 0                   |  |
| IL SPRINGFIELD            | 68                 | 45                 | 74              | 37             | 56      | -9                       | T                    | -.8                      | T                           | 4.1                          | 141                          | 29.5                        | 113                         | 94                 | 52                         | 0            | 0              | 1                   | 0                   |  |
| IN EVANSVILLE             | 70                 | 49                 | 75              | 42             | 60      | -8                       | 1.1                  | -.5                      | 1.1                         | 7.0                          | 269                          | 38.3                        | 121                         | 87                 | 45                         | 0            | 0              | 2                   | 1                   |  |
| IN FORT WAYNE             | 64                 | 45                 | 70              | 37             | 55      | -8                       | .2                   | -.4                      | .2                          | 1.4                          | 54                           | 31.1                        | 108                         | 99                 | 51                         | 0            | 0              | 1                   | 0                   |  |
| IN INDIANAPOLIS           | 64                 | 44                 | 69              | 37             | 54      | -10                      | .6                   | -.2                      | .5                          | 2.3                          | 77                           | 31.3                        | 118                         | 96                 | 62                         | 0            | 0              | 2                   | 1                   |  |
| IN SOUTH BEND             | 64                 | 49                 | 70              | 43             | 56      | -6                       | .1                   | -.6                      | .1                          | 4.9                          | 169                          | 35.3                        | 143                         | 87                 | 49                         | 0            | 0              | 1                   | 0                   |  |
| IA DES MOINES             | 66                 | 46                 | 75              | 38             | 56      | -6                       | T                    | -.6                      | T                           | 2.2                          | 81                           | 20.3                        | 92                          | 95                 | 43                         | 0            | 0              | 0                   | 0                   |  |
| IA SIOUX CITY             | 69                 | 42                 | 81              | 35             | 56      | -6                       | T                    | -.6                      | T                           | 2.2                          | 81                           | 20.3                        | 92                          | 95                 | 43                         | 0            | 1              | 0                   | 0                   |  |
| IA WATERLOO               | 65                 | 41                 | 74              | 32             | 53      | -7                       | T                    | -.8                      | T                           | 3.4                          | 97                           | 25.1                        | 94                          | 88                 | 51                         | 0            | 0              | 0                   | 0                   |  |
| KS CONCORDIA              | 72                 | 46                 | 81              | 37             | 59      | -6                       | T                    | -.7                      | T                           | 2.1                          | 68                           | 33.8                        | 146                         | 84                 | 37                         | 0            | 0              | 1                   | 0                   |  |
| KS DODGE CITY             | 81                 | 50                 | 88              | 40             | 66      | -1                       | 0                    | -.4                      | 0                           | 1.2                          | 67                           | 17.1                        | 101                         | 74                 | 28                         | 0            | 0              | 0                   | 0                   |  |
| KS GOODLAND               | 76                 | 46                 | 89              | 40             | 61      | -1                       | .1                   | -.2                      | .1                          | 2.4                          | 171                          | 22.8                        | 162                         | 85                 | 29                         | 0            | 0              | 1                   | 0                   |  |
| KS TOPEKA                 | 69                 | 42                 | 76              | 35             | 56      | -10                      | T                    | -.7                      | T                           | 1.2                          | 38                           | 31.2                        | 111                         | 93                 | 47                         | 0            | 0              | 2                   | 0                   |  |
| KS WICHITA                | 74                 | 49                 | 79              | 39             | 61      | -7                       | T                    | -.9                      | T                           | 2.0                          | 56                           | 24.4                        | 100                         | 86                 | 38                         | 0            | 0              | 3                   | 1                   |  |
| KY BOWLING GREEN          | 69                 | 48                 | 73              | 40             | 59      | -11                      | 1.2                  | -.6                      | .6                          | 8.7                          | 300                          | 39.9                        | 111                         | 98                 | 54                         | 0            | 0              | 4                   | 0                   |  |
| KY LEXINGTON              | 65                 | 47                 | 73              | 41             | 56      | -11                      | .3                   | -.3                      | .1                          | 4.0                          | 154                          | 29.1                        | 86                          | 92                 | 56                         | 0            | 0              | 2                   | 0                   |  |
| KY LOUISVILLE             | 67                 | 49                 | 73              | 42             | 58      | -9                       | .5                   | -.2                      | .4                          | 4.1                          | 146                          | 33.7                        | 102                         | 87                 | 54                         | 0            | 0              | 2                   | 2                   |  |
| LA ALEXANDRIA             | 80                 | 56                 | 90              | 48             | 68      | -8                       | 2.1                  | 1.4                      | 1.4                         | 4.8                          |                              |                             |                             |                    |                            |              |                |                     |                     |  |

Weather Data for the Week Ending Sept. 25, 1982

| 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 Aug. 29 | PCT. NORMAL<br>SINCE Aug. 29 | TOTAL, IN.,<br>SINCE Jan. 1 | PCT. NORMAL<br>SINCE Jan. 1 | AVERAGE<br>MAXIMUM | AVERAGE<br>MINIMUM         | 90 AND ABOVE | 32 AND BELOW   | TEMPERATURE |    | PRECIPITATION       |                     |   |
|                           |                    |                    |                 |                |         |                             |                      |                             |                             |                              |                              |                             |                             |                    |                            |              |                | °F          | °F | .01 INCH<br>OR MORE | .50 INCH<br>OR MORE |   |
| ME SHREVEPORT             | 80                 | 55                 | 91              | 45             | 67      | -8                          | .8                   | .1                          | .8                          | 1.5                          | 52                           | 23.8                        | 73                          | 95                 | 43                         | 1            | 0              |             |    |                     |                     |   |
| ME CARIBOU                | 61                 | 44                 | 68              | 34             | 53      | 1                           | .8                   | .8                          | .5                          | 1.7                          | 83                           | 26.8                        | 104                         | 93                 | 58                         | 0            | 0              | 1           | 1  | 0                   | 0                   |   |
| ME PORTLAND               | 63                 | 46                 | 73              | 40             | 55      | 1                           | .3                   | .5                          | 1.7                         | 61                           | 32.4                         | 120                         | 94                          | 65                 | 0                          | 0            | 0              | 1           | 1  | 0                   | 0                   |   |
| MD BALTIMORE              | 69                 | 53                 | 74              | 46             | 61      | -1.2                        | 1.0                  | 1.1                         | 1.5                         | 87                           | 26.5                         | 88                          | 90                          | 54                 | 0                          | 0            | 0              | 4           | 2  | 1                   | 1                   |   |
| MD SALISBURY              | 73                 | 57                 | 76              | 45             | 65      | -1.3                        | 1.8                  | 1.1                         | 2.7                         | 87                           | 26.5                         | 88                          | 90                          | 54                 | 0                          | 0            | 0              | 4           | 2  | 1                   | 1                   |   |
| MA BOSTON                 | 67                 | 54                 | 76              | 51             | 60      | -1.3                        | 1.4                  | 1.1                         | 1.4                         | 35                           | 29.6                         | 88                          | 99                          | 63                 | 0                          | 0            | 0              | 3           | 3  | 1                   | 1                   |   |
| MA CHATHAM                | 64                 | 55                 | 71              | 50             | 60      | -1.3                        | 1.0                  | 1.1                         | 1.4                         | 44                           | 36.6                         | 123                         | 95                          | 58                 | 0                          | 0            | 0              | 3           | 2  | 1                   | 1                   |   |
| MI ALPENA                 | 60                 | 44                 | 68              | 35             | 52      | -1.3                        | 1.0                  | 1.1                         | 1.4                         | 44                           | 36.6                         | 123                         | 95                          | 58                 | 0                          | 0            | 0              | 3           | 2  | 1                   | 1                   |   |
| MI DETROIT                | 64                 | 46                 | 70              | 37             | 55      | -1.7                        | .8                   | 0                           | .6                          | 3.4                          | 103                          | 19.2                        | 95                          | 99                 | 66                         | 0            | 0              | 0           | 5  | 1                   | 1                   |   |
| MI FLINT                  | 62                 | 46                 | 68              | 37             | 54      | -1.5                        | .8                   | .2                          | 1.8                         | 86                           | 23.4                         | 99                          | 92                          | 57                 | 0                          | 0            | 0              | 4           | 4  | 0                   | 0                   |   |
| MI GRAND RAPIDS           | 64                 | 46                 | 70              | 38             | 55      | -1.5                        | .8                   | .4                          | 2.4                         | 100                          | 19.7                         | 89                          | 97                          | 66                 | 0                          | 0            | 0              | 4           | 4  | 0                   | 0                   |   |
| MI HOUGHTON LAKE          | 58                 | 43                 | 65              | 33             | 51      | -1.5                        | 1.2                  | .1                          | 2.3                         | 72                           | 23.7                         | 102                         | 91                          | 59                 | 0                          | 0            | 0              | 3           | 3  | 0                   | 0                   |   |
| MI LANSING                | 62                 | 44                 | 68              | 35             | 53      | -1.7                        | 1.3                  | .6                          | 4.0                         | 143                          | 23.8                         | 118                         | 97                          | 69                 | 0                          | 0            | 0              | 5           | 1  | 1                   | 0                   |   |
| MI MARQUETTE              | 56                 | 37                 | 66              | 28             | 47      | -6                          | .3                   | .3                          | 1                           | 3.1                          | 124                          | 19.4                        | 85                          | 98                 | 68                         | 0            | 0              | 0           | 4  | 5                   | 1                   | 0 |
| MI MUSKEGON               | 62                 | 46                 | 66              | 38             | 54      | -5                          | 2.1                  | 1.2                         | 4.9                         | 129                          | 27.5                         | 106                         | 99                          | 66                 | 0                          | 0            | 1              | 5           | 1  | 1                   | 0                   |   |
| MI SAULT STE. MARIE       | 57                 | 39                 | 65              | 33             | 48      | -6                          | 1.6                  | .7                          | 1.1                         | 2.9                          | 94                           | 24.7                        | 112                         | 96                 | 64                         | 0            | 0              | 0           | 2  | 2                   | 0                   | 1 |
| MN ALEXANDRIA             | 60                 | 44                 | 69              | 38             | 52      | -3                          | 1.1                  | .4                          | 1.1                         | 6.3                          | 170                          | 26.3                        | 120                         | 97                 | 66                         | 0            | 0              | 0           | 3  | 1                   | 0                   | 0 |
| MN DULUTH                 | 58                 | 37                 | 65              | 30             | 47      | -5                          | 1.1                  | .5                          | 2.9                         | 126                          | 22.0                         | 107                         | 94                          | 52                 | 0                          | 0            | 0              | 3           | 1  | 0                   | 0                   |   |
| MN INT'L FALLS            | 58                 | 35                 | 68              | 27             | 46      | -4                          | 1.1                  | .2                          | 1.0                         | 4.4                          | 157                          | 24.7                        | 106                         | 90                 | 51                         | 0            | 0              | 3           | 2  | 0                   | 1                   | 0 |
| MN MINNEAPOLIS            | 64                 | 44                 | 75              | 36             | 54      | -4                          | .6                   | .5                          | 2.7                         | 82                           | 18.1                         | 86                          | 99                          | 60                 | 0                          | 2            | 2              | 0           | 0  | 0                   | 0                   | 0 |
| MN ROCHESTER              | 64                 | 42                 | 75              | 35             | 53      | -4                          | T                    | .6                          | T                           | 3.1                          | 115                          | 19.2                        | 91                          | 80                 | 46                         | 0            | 0              | 0           | 0  | 0                   | 0                   | 0 |
| MS GREENWOOD              | 76                 | 53                 | 83              | 42             | 65      | -9                          | T                    | .7                          | T                           | 5.3                          | 183                          | 28.0                        | 122                         | 81                 | 48                         | 0            | 0              | 1           | 0  | 0                   | 0                   | 0 |
| MS JACKSON                | 78                 | 53                 | 84              | 41             | 65      | -9                          | T                    | .5                          | T                           | 4.3                          | 148                          | 39.5                        | 92                          | 44                 | 0                          | 0            | 0              | 1           | 0  | 0                   | 0                   | 0 |
| MS MERIDIAN               | 81                 | 54                 | 89              | 43             | 68      | -6                          | T                    | .7                          | T                           | 1.1                          | 37                           | 43.8                        | 121                         | 98                 | 47                         | 0            | 0              | 0           | 1  | 0                   | 0                   | 0 |
| MO CAPE GIRARDEAU         | 71                 | 49                 | 78              | 42             | 60      | -9                          | T                    | .7                          | T                           | .8                           | 25                           | 42.3                        | 110                         | 90                 | 38                         | 0            | 0              | 0           | 1  | 0                   | 0                   | 0 |
| MO COLUMBIA               | 65                 | 47                 | 72              | 40             | 56      | -10                         | .2                   | .7                          | .2                          | 2.5                          | 69                           | 38.9                        | 121                         | 98                 | 52                         | 0            | 0              | 0           | 1  | 0                   | 0                   | 0 |
| MO KANSAS CITY            | 68                 | 47                 | 75              | 40             | 57      | -9                          | .1                   | 1.0                         | .1                          | 5.9                          | 144                          | 36.9                        | 129                         | 94                 | 57                         | 0            | 0              | 0           | 1  | 0                   | 0                   | 0 |
| MO SAINT LOUIS            | 69                 | 51                 | 76              | 44             | 60      | -8                          | T                    | 1.0                         | T                           | 1.7                          | 44                           | 38.0                        | 131                         | 93                 | 50                         | 0            | 0              | 0           | 0  | 0                   | 0                   | 0 |
| MO SPRINGFIELD            | 68                 | 46                 | 77              | 38             | 57      | -10                         | .1                   | .6                          | .1                          | 5.6                          | 207                          | 40.9                        | 150                         | 98                 | 52                         | 0            | 0              | 0           | 1  | 0                   | 0                   | 0 |
| MT BILLINGS               | 77                 | 50                 | 82              | 41             | 63      | 7                           | .2                   | .8                          | .2                          | 1.8                          | 47                           | 32.1                        | 108                         | 87                 | 46                         | 0            | 0              | 0           | 1  | 0                   | 0                   | 0 |
| MT GLASGOW                | 75                 | 43                 | 80              | 34             | 59      | 4                           | T                    | .3                          | T                           | 1.2                          | 92                           | 15.3                        | 134                         | 69                 | 25                         | 0            | 0              | 0           | 0  | 0                   | 0                   | 0 |
| MT GREAT FALLS            | 76                 | 43                 | 83              | 31             | 60      | 4                           | T                    | .3                          | T                           | .2                           | 22                           | 9.1                         | 101                         | 65                 | 22                         | 0            | 0              | 0           | 0  | 0                   | 0                   | 0 |
| MT HAYRE                  | 76                 | 41                 | 80              | 31             | 58      | 4                           | T                    | .3                          | T                           | .4                           | 33                           | 13.3                        | 106                         | 67                 | 22                         | 0            | 1              | 0           | 0  | 0                   | 0                   | 0 |
| MT HELENA                 | 75                 | 42                 | 79              | 38             | 59      | 6                           | .1                   | .2                          | .1                          | .1                           | 8                            | 12.4                        | 127                         | 76                 | 22                         | 0            | 1              | 0           | 0  | 0                   | 0                   | 0 |
| MT KALISPELL              | 71                 | 41                 | 78              | 34             | 56      | 5                           | 0                    | .2                          | 0                           | 1.4                          | 156                          | 10.7                        | 119                         | 79                 | 26                         | 0            | 0              | 1           | 1  | 0                   | 0                   | 0 |
| MT MILES CITY             | 75                 | 45                 | 82              | 38             | 60      | 3                           | .2                   | 0                           | .2                          | .7                           | 70                           | 14.4                        | 127                         | 95                 | 38                         | 0            | 0              | 0           | 2  | 0                   | 0                   | 0 |
| MT MISSOULA               | 75                 | 46                 | 80              | 38             | 60      | 7                           | 0                    | .3                          | 0                           | 1.1                          | 92                           | 11.7                        | 102                         | 71                 | 23                         | 0            | 0              | 0           | 2  | 0                   | 0                   | 0 |
| NE GRAND ISLAND           | 70                 | 42                 | 77              | 35             | 56      | -6                          | 0                    | .6                          | .3                          | .7                           | 64                           | 12.1                        | 127                         | 90                 | 33                         | 0            | 0              | 0           | 2  | 0                   | 0                   | 0 |
| NE LINCOLN                | 68                 | 43                 | 75              | 37             | 55      | -8                          | T                    | .6                          | T                           | 2.1                          | 84                           | 30.4                        | 150                         | 87                 | 37                         | 0            | 0              | 0           | 2  | 0                   | 0                   | 0 |
| NE NORFOLK                | 70                 | 42                 | 82              | 35             | 56      | -5                          | 0                    | .6                          | T                           | 2.8                          | 100                          | 33.0                        | 139                         | 81                 | 37                         | 0            | 0              | 0           | 0  | 0                   | 0                   | 0 |
| NE NORTH PLATTE           | 75                 | 38                 | 88              | 32             | 56      | -3                          | 0                    | .5                          | 0                           | 1.4                          | 61                           | 21.4                        | 103                         | 89                 | 43                         | 0            | 0              | 0           | 0  | 0                   | 0                   | 0 |
| NE OMAHA                  | 66                 | 47                 | 76              | 40             | 57      | -6                          | T                    | .5                          | T                           | .8                           | 40                           | 15.1                        | 88                          | 89                 | 29                         | 0            | 1              | 0           | 0  | 0                   | 0                   | 0 |
| NE SCOTTSBLUFF            | 76                 | 43                 | 87              | 34             | 60      | 1                           | T                    | .7                          | T                           | 2.9                          | 94                           | 27.5                        | 111                         | 89                 | 54                         | 0            | 0              | 0           | 0  | 0                   | 0                   | 0 |
| NE VALENTINE              | 72                 | 39                 | 87              | 33             | 56      | -3                          | 0                    | .3                          | 0                           | 1.3                          | 144                          | 18.7                        | 153                         | 79                 | 28                         | 0            | 0              | 0           | 1  | 0                   | 0                   | 0 |
| NV ELY                    | 76                 | 42                 | 83              | 35             | 59      | 4                           | 0                    | .3                          | 0                           | 2.0                          | 143                          | 19.7                        | 129                         | 62                 | 30                         | 0            | 0              | 0           | 0  | 0                   | 0                   | 0 |
| NV LAS VEGAS              | 95                 | 69                 | 101             | 63             | 82      | 4                           | 0                    | .3                          | .4                          | 1.3                          | 325                          | 9.1                         | 142                         | 84                 | 33                         | 0            | 0              | 2           | 0  | 0                   | 0                   | 0 |
| NV RENO                   | 72                 | 41                 | 82              | 33             | 57      | -2                          | .7                   | .6                          | .4                          | 1.8                          | 900                          | 6.1                         | 124                         | 100                | 41                         | 7            | 0              | 0           | 0  | 0                   | 0                   | 0 |
| NV WINNEMUCCA             | 74                 | 42                 | 86              | 34             | 58      | 0                           | .7                   | .7                          | .4                          | 1.1                          | 367                          | 5.8                         | 98                          | 84                 | 34                         | 0            | 0              | 0           | 4  | 0                   | 0                   | 0 |
| NH CONCORD                | 64                 | 46                 | 72              | 36             | 55      | -3                          | .6                   | .1                          | .4                          | 1.2                          | 41                           | 28.7                        | 114                         | 93                 | 62                         | 0            | 0              | 0           | 3  | 0                   | 0                   | 0 |
| NJ ATLANTIC CITY          | 68                 | 52                 | 73              | 45             | 60      | -5                          | .5                   | .1                          | .3                          | 1.1                          | 37                           | 24.5                        | 75                          | 99                 | 65                         | 0            | 0              | 0           | 4  | 0                   | 0                   | 0 |
| NM ALBUQUERQUE            | 80                 | 56                 | 89              | 51             | 68      | -1                          | .4                   | .3                          | .2                          | 1.3                          | 186                          | 5.7                         | 92                          | 87                 | 33                         | 0            | 0              | 0           | 3  | 0                   | 0                   | 0 |
| NM CLOVIS                 | 78                 | 57                 | 91              | 51             | 68      | 0                           | 1.1                  | .6                          | 1.1                         | 1.1                          | 61                           | 13.3                        | 74                          | 37                 | 1                          | 0            | 0              | 2           | 0  | 0                   | 0                   | 0 |
| NM ROSWELL                | 81                 | 57                 | 92              | 51             | 69      | 1                           | .2                   | .2                          | .2                          | 2.2                          | 169                          | 6.6                         | 68                          | 80                 | 42                         | 1            | 0              | 1           | 0  | 0                   | 0                   | 0 |
| NY ALBANY                 | 66                 | 46                 | 76              | 37             | 56      | -4                          | .9                   | .2                          | .7                          | 1.2                          | 41                           | 25.8                        | 109                         | 99                 | 58                         | 0            | 0              | 0           | 3  | 1                   | 0                   | 0 |
| NY BINGHAMTON             | 62                 | 47                 | 68              | 42             | 55      | -3                          | .8                   | .1                          | .7                          | 1.2                          | 43                           | 27.3                        | 101                         | 94                 | 59                         | 0            | 0              | 0           | 3  | 1                   | 0                   | 0 |
| NY BUFFALO                | 65                 | 49                 | 70              | 39             | 57      | -3                          | .9                   | .2                          | .4                          | 2.9                          | 94                           | 28.5                        | 114                         | 97                 | 56                         | 0            | 0              | 0           | 6  | 0                   | 0                   | 0 |
| NY NEW YORK               | 67                 | 56                 | 72              | 55             | 62      | -5                          | .5                   | .2                          | .2                          | .8                           | 26                           | 27.2                        | 92                          | 93                 | 59                         | 0            | 0              | 0           | 3  | 0                   | 0                   | 0 |
| NY ROCHESTER              | 68                 | 49                 | 73              | 40             | 58      | -2                          | .7                   | .2                          | .4                          | 2.5                          | 109                          | 22.9                        | 101                         | 92                 | 50                         | 0            | 0              | 0           | 4  | 0                   | 0                   | 0 |
| NY SYRACUSE               | 66                 | 47                 | 72              | 39             | 56      | -5                          | 2.0                  | 1.4                         | 2.0                         | 3.3                          | 132                          | 26.4                        | 103                         | 97                 | 62                         | 0            | 0              | 0           | 4  | 0                   | 0                   | 0 |
| NC ASHEVILLE              | 69                 | 47                 | 72              | 37             | 58      | -7                          | .1                   | .7                          | .1                          | .5                           | 15                           | 30.5                        | 96                          | 90                 | 53                         | 0            | 0              | 0           | 2  | 1                   | 0                   | 0 |
| NC CHARLOTTE              | 73                 | 55                 | 78              | 46             | 64      | -6                          | .1                   | .7                          | .1                          | .5                           | 15                           | 30.5                        | 96                          | 90                 | 53                         | 0            | 0              | 0           | 2  | 0                   | 0                   | 0 |
| NC GREENSBORO             | 71                 | 52                 | 75              | 43             | 62      | -6                          | T                    | .7                          | T                           | .3                           | 9                            | 33.4                        | 107                         | 90                 | 49                         | 0            | 0              | 0           | 2  | 0                   | 0                   | 0 |
| NC HATTERAS               | 76                 | 64                 | 80              | 53             | 70      | -2                          | .6                   | .7                          | .5                          | 1.6                          | 29                           | 41.7                        | 104                         | 99                 | 68                         | 0            | 0              | 0           | 2  | 0                   | 0                   | 0 |
| NC NEW BERN               | 74                 | 60                 | 80              | 47             | 68      | -5                          | 2.8                  | 1.6                         | 1.6                         | 2.8                          | 51                           | 33.7                        | 77                          | 95                 | 62                         | 0            | 0              | 0           | 3  | 2                   | 0                   | 0 |
| NC RALEIGH                | 76                 | 55                 | 78              | 45             | 65      | -4                          | .7                   | .1                          | .5                          | .7                           | 19                           | 33.2                        | 102                         | 91                 | 53                         | 0            | 0              | 0           | 3  | 1                   | 0                   | 0 |
| NC WILMINGTON             | 78                 | 61                 | 83              | 50             | 69      | -4                          | 3.4                  | 2.1                         | 1.7                         | 6.0                          | 105                          | 45.9                        | 107                         | 94                 | 59                         | 0            | 0              | 0           | 3  | 2                   | 0                   | 0 |
| ND BISMARCK               | 69                 | 36                 | 80              | 25             | 53      | -3                          | 0                    | .3                          | 0                           | .4                           | 31                           | 12.4                        | 91                          | 88                 | 28                         | 0            | 2              | 0           | 0  | 0                   | 0                   | 0 |
| ND FARGO                  | 64                 | 39                 | 77              | 30             | 52      | -4                          | T                    | .4                          | T                           | 1.0                          | 53                           | 11.5                        | 68                          | 88                 | 45                         | 0            | 2              | 0           | 0  | 0                   | 0                   | 0 |
| ND GRAND FORKS            | 64                 | 37                 | 78              | 30             | 51      | -4                          | T                    | .4                          | T                           | .6                           | 33                           | 14.1                        | 89                          | 93                 | 46                         | 0            | 1              | 1           | 0  | 0                   | 0                   | 0 |
| ND WILLISTON              | 74                 | 39                 | 82              | 30             | 57      | 2                           | 0                    | .3                          | 0                           | .9                           | 69                           | 11.9                        | 94                          | 79                 | 30                         | 0            | 2              | 0           | 0  | 0                   | 0                   | 0 |
| OH AKRON-CANTON           | 64                 | 49                 | 70              | 47             | 57      | -5                          | .6                   | 0                           | .3                          | 2.1                          | 81                           | 24.6                        | 92                          | 84                 | 55                         | 0            | 0              | 0           | 5  | 0                   | 0                   | 0 |
| OH CINCINNATI             | 67                 | 50                 | 73              | 42             | 58      | -8                          | .4                   | .2                          | .4                          | 1.5                          | 63                           | 34.7                        | 116                         | 84                 | 50                         | 0            | 0              | 0           | 2  | 0                   | 0                   | 0 |
| OH CLEVELAND              | 63                 | 47                 | 70              | 40             | 55      | -7                          | 1.0                  | .4                          | .5                          | 2.6                          | 104                          | 24.9                        | 96                          | 92                 | 62                         | 0            | 0              | 0           | 3  | 0                   | 0                   | 0 |

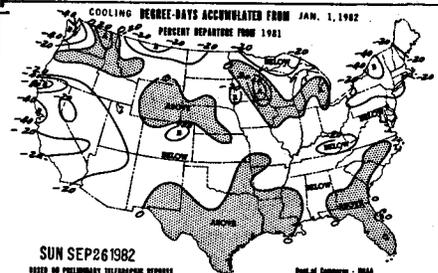
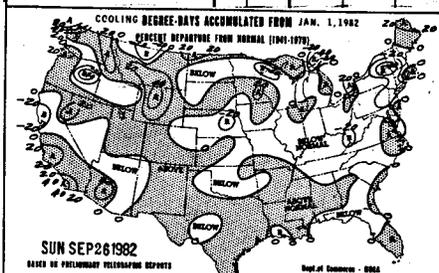
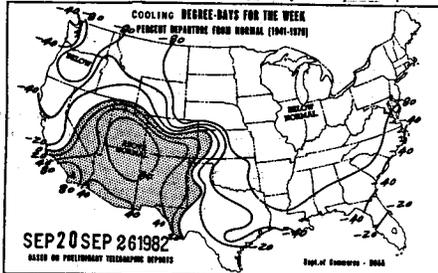
Weather Data for the Week Ending Sept. 25, 1982

| 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 AUG. 29 | PCT. NORMAL<br>SINCE AUG. 29 | TOTAL, IN.,<br>SINCE JAN. 1 | PCT. NORMAL<br>SINCE JAN. 1 | AVERAGE | MAXIMUM        | MINIMUM | TEMPERATURE  |              | PRECIPITATION       |                     |  |
|                           |                    |                    |                 |                |         |                             |                      |                             |                             |                              |                              |                             |                             |         |                |         | 90 AND ABOVE | 32 AND BELOW | .01 INCH<br>OR MORE | .50 INCH<br>OR MORE |  |
| DAYTON                    | 64                 | 47                 | 71              | 41             | 56      | -9                          | 1.0                  | .5                          | .6                          | 1.0                          | 45                           | 33.2                        | 123                         | 93      | 52             | 0       | 0            | 4            | 1                   |                     |  |
| TOLEDO                    | 64                 | 46                 | 70              | 36             | 55      | -7                          | .1                   | .4                          | .6                          | .26                          | 18.6                         | 78                          | 96                          | 55      | 0              | 0       | 4            | 0            |                     |                     |  |
| YOUNGSTOWN                | 62                 | 46                 | 72              | 39             | 54      | -7                          | .7                   | .1                          | .3                          | 1.3                          | 52                           | 24.4                        | 87                          | 96      | 65             | 0       | 0            | 6            | 0                   |                     |  |
| OK OKLAHOMA CITY          | 77                 | 53                 | 87              | 46             | 65      | -6                          | .2                   | .6                          | .2                          | 2.9                          | 91                           | 30.4                        | 124                         | 81      | 36             | 0       | 0            | 1            | 0                   |                     |  |
| TULSA                     | 75                 | 52                 | 86              | 44             | 64      | -8                          | T                    | .9                          | T                           | 2.9                          | 78                           | 26.0                        | 92                          | 88      | 40             | 0       | 0            | 4            | 1                   |                     |  |
| OR ASTORIA                | 68                 | 54                 | 79              | 49             | 61      | 3                           | 1.5                  | .7                          | .9                          | 3.6                          | 150                          | 45.1                        | 123                         | 87      | 62             | 0       | 0            | 4            | 0                   |                     |  |
| BURNS                     | 68                 | 39                 | 83              | 35             | 53      | -3                          | .7                   | .6                          | .5                          | 1.2                          | 400                          | 7.9                         | 105                         | 88      | 47             | 0       | 0            | 2            | 0                   |                     |  |
| MEDFORD                   | 77                 | 48                 | 87              | 43             | 62      | 0                           | .3                   | .1                          | .3                          | 1.1                          | 220                          | 10.3                        | 89                          | 93      | 38             | 0       | 0            | 2            | 0                   |                     |  |
| PENDLETON                 | 71                 | 51                 | 78              | 45             | 61      | -1                          | .5                   | .3                          | .4                          | 1.1                          | 220                          | 7.0                         | 90                          | 91      | 47             | 0       | 0            | 4            | 2                   |                     |  |
| PORTLAND                  | 72                 | 55                 | 84              | 52             | 64      | 3                           | 2.6                  | 2.2                         | 2.0                         | 4.2                          | 323                          | 26.6                        | 127                         | 90      | 59             | 0       | 0            | 4            | 0                   |                     |  |
| SALEM                     | 72                 | 53                 | 82              | 45             | 63      | 2                           | .9                   | .5                          | .5                          | 1.9                          | 173                          | 23.3                        | 101                         | 90      | 54             | 0       | 0            | 3            | 0                   |                     |  |
| PA ALLENTOWN              | 66                 | 52                 | 73              | 48             | 59      | -4                          | .4                   | .4                          | .3                          | .8                           | 24                           | 36.1                        | 115                         | 96      | 55             | 0       | 0            | 6            | 0                   |                     |  |
| ERIE                      | 65                 | 50                 | 71              | 42             | 57      | -3                          | 1.0                  | .1                          | .3                          | 2.4                          | 73                           | 28.5                        | 107                         | 81      | 58             | 0       | 0            | 3            | 1                   |                     |  |
| HARRISBURG                | 67                 | 52                 | 72              | 45             | 60      | -5                          | 1.3                  | .7                          | .9                          | 1.9                          | 76                           | 32.2                        | 106                         | 95      | 57             | 0       | 0            | 4            | 1                   |                     |  |
| PHILADELPHIA              | 69                 | 54                 | 76              | 50             | 61      | -5                          | 1.1                  | .4                          | .6                          | 2.1                          | 68                           | 32.8                        | 113                         | 93      | 54             | 0       | 0            | 3            | 0                   |                     |  |
| PITTSBURGH                | 65                 | 45                 | 73              | 40             | 55      | -7                          | .8                   | .2                          | .5                          | 1.7                          | 71                           | 24.4                        | 90                          | 91      | 53             | 0       | 0            | 3            | 0                   |                     |  |
| SCRANTON                  | 65                 | 50                 | 70              | 43             | 57      | -4                          | .3                   | .4                          | .1                          | 1.0                          | 38                           | 29.5                        | 116                         | 95      | 63             | 0       | 0            | 2            | 0                   |                     |  |
| RI PROVIDENCE             | 67                 | 51                 | 73              | 46             | 59      | -3                          | .7                   | 0                           | .4                          | 3.6                          | 113                          | 40.0                        | 137                         | 92      | 52             | 0       | 0            | 4            | 1                   |                     |  |
| SC CHARLESTON             | 80                 | 63                 | 89              | 54             | 72      | -2                          | 1.4                  | .3                          | .8                          | 2.6                          | 53                           | 37.9                        | 91                          | 95      | 57             | 0       | 0            | 3            | 0                   |                     |  |
| COLUMBIA                  | 78                 | 56                 | 85              | 44             | 67      | -6                          | .8                   | .2                          | .5                          | 3.2                          | 73                           | 42.4                        | 115                         | 97      | 51             | 0       | 0            | 4            | 0                   |                     |  |
| FLORENCE                  | 77                 | 57                 | 82              | 47             | 67      | -5                          | .7                   | .2                          | .3                          | 1.3                          | 33                           | 31.9                        | 92                          | 99      | 58             | 0       | 0            | 2            | 0                   |                     |  |
| GREENVILLE                | 74                 | 54                 | 77              | 42             | 64      | -6                          | .2                   | .7                          | .1                          | 1.6                          | 43                           | 44.1                        | 124                         | 89      | 48             | 0       | 0            | 0            | 0                   |                     |  |
| SD ABERDEEN               | 67                 | 41                 | 78              | 29             | 54      | -2                          | T                    | T                           | T                           | 4.3                          | 253                          | 20.4                        | 128                         | 94      | 42             | 0       | 0            | 0            | 0                   |                     |  |
| HURON                     | 68                 | 42                 | 77              | 35             | 55      | -3                          | T                    | .4                          | T                           | 1.2                          | 100                          | 20.1                        | 135                         | 76      | 31             | 0       | 0            | 0            | 0                   |                     |  |
| RAPID CITY                | 72                 | 43                 | 77              | 35             | 57      | -1                          | 0                    | .3                          | 0                           | 7.6                          | 281                          | 23.0                        | 110                         | 95      | 48             | 0       | 0            | 0            | 0                   |                     |  |
| SIoux FALLS               | 65                 | 40                 | 76              | 33             | 53      | -6                          | 0                    | .6                          | 0                           | 1.3                          | 39                           | 40.1                        | 106                         | 94      | 43             | 0       | 0            | 1            | 1                   |                     |  |
| TN CHATTANOOGA            | 73                 | 51                 | 83              | 40             | 62      | -8                          | .8                   | 0                           | .8                          | 1.3                          | 99                           | 41.6                        | 122                         | 91      | 58             | 0       | 0            | 3            | 0                   |                     |  |
| KNOXVILLE                 | 71                 | 53                 | 82              | 44             | 62      | -8                          | .4                   | .2                          | .3                          | 2.3                          | 92                           | 43.3                        | 119                         | 88      | 45             | 0       | 0            | 1            | 0                   |                     |  |
| MEMPHIS                   | 74                 | 54                 | 80              | 48             | 64      | -8                          | T                    | .7                          | T                           | 1.8                          | 62                           | 43.3                        | 109                         | 95      | 50             | 0       | 0            | 3            | 0                   |                     |  |
| NASHVILLE                 | 72                 | 52                 | 77              | 42             | 62      | -8                          | .7                   | 0                           | .3                          | 3.7                          | 123                          | 37.3                        | 109                         | 95      | 50             | 0       | 0            | 1            | 1                   |                     |  |
| TX ABILENE                | 82                 | 59                 | 89              | 51             | 70      | -4                          | .7                   | .1                          | .7                          | 1.1                          | 52                           | 17.6                        | 97                          | 78      | 32             | 0       | 0            | 0            | 0                   |                     |  |
| AMARILLO                  | 82                 | 52                 | 89              | 47             | 65      | -3                          | 0                    | .4                          | 0                           | 1.4                          | 74                           | 16.3                        | 101                         | 76      | 36             | 0       | 0            | 2            | 1                   |                     |  |
| AUSTIN                    | 78                 | 64                 | 98              | 55             | 76      | -2                          | .7                   | .2                          | .7                          | 2.1                          | 64                           | 18.5                        | 78                          | 76      | 31             | 2       | 0            | 0            | 0                   |                     |  |
| BEAUMONT                  | 87                 | 62                 | 94              | 54             | 74      | -4                          | 0                    | .2                          | 0                           | 1.1                          | 21                           | 42.4                        | 104                         | 92      | 42             | 2       | 0            | 0            | 0                   |                     |  |
| BROWNSVILLE               | 85                 | 69                 | 95              | 62             | 80      | -1                          | 1.2                  | .1                          | 1.0                         | 2.4                          | 50                           | 17.9                        | 100                         | 90      | 47             | 4       | 0            | 2            | 1                   |                     |  |
| CORPUS CHRISTI            | 90                 | 62                 | 95              | 62             | 80      | -1                          | .0                   | .2                          | 0                           | .6                           | 13                           | 15.8                        | 74                          | 79      | 38             | 3       | 0            | 0            | 0                   |                     |  |
| DEL RIO                   | 89                 | 66                 | 94              | 59             | 78      | -2                          | T                    | .7                          | T                           | 1.0                          | 38                           | 9.2                         | 71                          | 77      | 31             | 3       | 0            | 3            | 1                   |                     |  |
| EL PASO                   | 88                 | 65                 | 95              | 58             | 76      | -2                          | T                    | .7                          | T                           | 1.0                          | 38                           | 9.2                         | 71                          | 77      | 31             | 3       | 0            | 3            | 1                   |                     |  |
| FORT WORTH                | 89                 | 62                 | 97              | 59             | 76      | 3                           | 2.0                  | 1.8                         | 2.0                         | 3.1                          | 310                          | 5.8                         | 95                          | 76      | 31             | 0       | 0            | 2            | 0                   |                     |  |
| GALVESTON                 | 80                 | 58                 | 86              | 50             | 69      | -7                          | .5                   | .2                          | .5                          | .6                           | 21                           | 30.4                        | 126                         | 69      | 31             | 0       | 0            | 0            | 0                   |                     |  |
| HOUSTON                   | 82                 | 69                 | 88              | 58             | 76      | -3                          | 0                    | .3                          | 0                           | 1.3                          | 24                           | 20.0                        | 65                          | 81      | 56             | 0       | 0            | 0            | 0                   |                     |  |
| LUBBOCK                   | 86                 | 59                 | 95              | 50             | 73      | -5                          | 0                    | .1                          | 0                           | 1.0                          | 23                           | 22.3                        | 65                          | 90      | 34             | 2       | 0            | 0            | 0                   |                     |  |
| MIDLAND                   | 80                 | 57                 | 89              | 52             | 68      | -1                          | .7                   | .2                          | .7                          | 1.2                          | 60                           | 17.4                        | 118                         | 82      | 40             | 0       | 0            | 1            | 1                   |                     |  |
| SAN ANGELO                | 83                 | 58                 | 91              | 54             | 71      | -3                          | .8                   | .4                          | .8                          | 1.5                          | 100                          | 11.7                        | 110                         | 79      | 34             | 2       | 0            | 1            | 1                   |                     |  |
| SAN ANTONIO               | 85                 | 58                 | 92              | 47             | 72      | -3                          | .1                   | .6                          | .1                          | .1                           | 4                            | 14.1                        | 104                         | 78      | 33             | 1       | 0            | 0            | 0                   |                     |  |
| VICTORIA                  | 86                 | 60                 | 95              | 51             | 73      | -5                          | .1                   | .8                          | .1                          | .9                           | 26                           | 13.3                        | 66                          | 81      | 32             | 2       | 0            | 2            | 0                   |                     |  |
| WACO                      | 89                 | 64                 | 94              | 55             | 77      | -2                          | T                    | 1.1                         | T                           | 1.2                          | 29                           | 19.0                        | 76                          | 87      | 36             | 4       | 0            | 0            | 0                   |                     |  |
| WICHITA FALLS             | 88                 | 58                 | 93              | 45             | 73      | -4                          | .2                   | .8                          | .2                          | .2                           | 78                           | 32.5                        | 159                         | 87      | 36             | 1       | 0            | 2            | 0                   |                     |  |
| UT BLANDING               | 80                 | 54                 | 90              | 47             | 67      | -8                          | T                    | .5                          | .2                          | 2.1                          | 78                           | 32.5                        | 159                         | 77      | 34             | 0       | 0            | 1            | 0                   |                     |  |
| CEDAR CITY                | 80                 | 49                 | 84              | 46             | 65      | 3                           | .1                   | .2                          | .1                          | .9                           | 113                          | 11.0                        | 151                         | 72      | 22             | 0       | 0            | 1            | 0                   |                     |  |
| SALT LAKE CITY            | 84                 | 52                 | 87              | 47             | 68      | 7                           | .4                   | .2                          | .2                          | 2.7                          | 386                          | 13.9                        | 130                         | 81      | 36             | 0       | 0            | 4            | 0                   |                     |  |
| VT BURLINGTON             | 81                 | 57                 | 84              | 55             | 69      | 6                           | .3                   | .4                          | .3                          | 1.5                          | 50                           | 24.2                        | 100                         | 86      | 50             | 0       | 0            | 1            | 0                   |                     |  |
| VA NORFOLK                | 68                 | 49                 | 74              | 40             | 59      | 1                           | .3                   | .4                          | .9                          | 1.5                          | 38                           | 35.1                        | 103                         | 94      | 61             | 0       | 0            | 4            | 1                   |                     |  |
| RICHMOND                  | 73                 | 57                 | 77              | 46             | 65      | -3                          | .7                   | .1                          | .6                          | .7                           | 45                           | 33.4                        | 116                         | 95      | 52             | 0       | 0            | 3            | 1                   |                     |  |
| ROANOKE                   | 69                 | 49                 | 73              | 41             | 59      | -7                          | 1.1                  | .3                          | .9                          | 1.5                          | 45                           | 33.4                        | 116                         | 95      | 52             | 0       | 0            | 3            | 0                   |                     |  |
| WA COLVILLE               | 71                 | 50                 | 83              | 44             | 61      | 4                           | .6                   | .4                          | .3                          | 1.2                          | 150                          | 12.8                        | 120                         | 86      | 58             | 0       | 0            | 0            | 0                   |                     |  |
| QUILLAYUTE                | 66                 | 51                 | 76              | 44             | 58      | 2                           | .5                   | .2                          | .5                          | 4.2                          | 100                          | 70.5                        | 118                         | 99      | 75             | 0       | 0            | 2            | 0                   |                     |  |
| SEATTLE-TACOMA            | 67                 | 56                 | 76              | 53             | 61      | 3                           | .2                   | .3                          | .2                          | 1.2                          | 75                           | 22.7                        | 104                         | 94      | 69             | 0       | 0            | 4            | 0                   |                     |  |
| SPOKANE                   | 72                 | 51                 | 80              | 45             | 61      | 4                           | .6                   | .4                          | .4                          | 1.6                          | 200                          | 11.0                        | 101                         | 88      | 42             | 0       | 0            | 4            | 0                   |                     |  |
| YAKIMA                    | 74                 | 50                 | 80              | 42             | 62      | 2                           | 1.0                  | .9                          | .4                          | 1.2                          | 400                          | 6.4                         | 131                         | 89      | 46             | 0       | 0            | 2            | 0                   |                     |  |
| WV BECKLEY                | 63                 | 45                 | 67              | 41             | 54      | -7                          | .2                   | .6                          | .1                          | 1.8                          | 53                           | 33.9                        | 104                         | 99      | 68             | 0       | 0            | 5            | 1                   |                     |  |
| CHARLESTON                | 67                 | 49                 | 73              | 42             | 58      | -8                          | 1.1                  | .4                          | .6                          | 2.6                          | 93                           | 33.7                        | 108                         | 92      | 54             | 0       | 0            | 3            | 0                   |                     |  |
| HUNTINGTON                | 65                 | 46                 | 71              | 42             | 56      | -10                         | .5                   | .2                          | .2                          | 2.2                          | 79                           | 33.3                        | 110                         | 100     | 59             | 0       | 0            | 4            | 0                   |                     |  |
| PARKERSBURG               | 68                 | 52                 | 74              | 48             | 60      | -5                          | .5                   | .2                          | .4                          | 1.7                          | 63                           | 28.0                        | 85                          | 95      | 58             | 0       | 0            | 2            | 0                   |                     |  |
| WI GREEN BAY              | 60                 | 41                 | 67              | 35             | 50      | -6                          | .2                   | .5                          | .2                          | 2.1                          | 72                           | 20.9                        | 101                         | 92      | 55             | 0       | 0            | 2            | 0                   |                     |  |
| LA CROSSE                 | 63                 | 43                 | 72              | 38             | 53      | -7                          | .1                   | .7                          | .1                          | 2.8                          | 90                           | 17.1                        | 72                          | 97      | 59             | 0       | 0            | 2            | 0                   |                     |  |
| MADISON                   | 62                 | 39                 | 70              | 31             | 50      | -7                          | .1                   | .7                          | .1                          | 2.5                          | 76                           | 22.2                        | 94                          | 99      | 58             | 0       | 0            | 2            | 0                   |                     |  |
| MILWAUKEE                 | 61                 | 46                 | 73              | 44             | 54      | -6                          | .1                   | .6                          | .1                          | .8                           | 28                           | 24.4                        | 109                         | 91      | 56             | 0       | 0            | 4            | 1                   |                     |  |
| WAUSAU                    | 60                 | 41                 | 66              | 36             | 50      | -5                          | .9                   | 0                           | .8                          | 4.6                          | 128                          | 28.8                        | 114                         | 95      | 55             | 0       | 0            | 0            | 0                   |                     |  |
| WY CASPER                 | 75                 | 42                 | 83              | 35             | 59      | 3                           | T                    | .2                          | T                           | 2.2                          | 275                          | 13.9                        | 156                         | 86      | 27             | 0       | 0            | 1            | 0                   |                     |  |
| CHEYENNE                  | 69                 | 43                 | 79              | 38             | 56      | 0                           | 0                    | .3                          | 0                           | 1.2                          | 133                          | 7.8                         | 74                          | 72      | 41             | 0       | 0            | 0            | 0                   |                     |  |
| LANDER                    | 72                 | 46                 | 81              | 42             | 59      | 3                           | 0                    | .3                          | 0                           | 1.8                          | 138                          | 11.4                        | 90                          | 74      | 24             | 0       | 0            | 0            | 0                   |                     |  |
| SHERIDAN                  | 79                 | 43                 | 86              | 34             | 61      | 5                           | .1                   | 1.3                         | .1                          | 3.4                          | 58                           | 33.3                        | 80                          | 89      | 62             | 6       | 0            | 0            | 1                   | 0                   |  |
| PR SAN JUAN               | 91                 | 79                 | 93              | 78             | 85      | 4                           | 0                    | 0                           | 0                           | 0                            | 0                            | 0                           | 0                           | 0       | 0              | 0       | 0            | 0            | 0                   | 0                   |  |

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

COOLING DEGREE DAYS (BASE 65°) FOR WEEK ENDING SEP. 26, 1982.
BASED ON 1941=70 NORMALS. + ACCUMULATION FROM JAN. 1, 1982

Table with columns for STATES AND STATIONS, WEEKLY DEPARTURE\*, SEASONAL ACCUMULATION +, and DEPARTURE FROM 1981. Rows list various cities across the United States.



# Climates of the World

Taken from *Climates of the World*, U.S. Department of Commerce, NOAA, EDIS, 1972 which also contains climatic tabular data for major world cities. Available from U.S. Government Printing Office, Washington, DC or the NOAA National Climatic Center, Federal Building, Asheville, NC - Price 80¢.

## Temperature Distribution

The distribution of temperature over the world and its variations through the year depend primarily on the amount of distribution of the radiant energy received from the sun in different regions. This in turn depends mainly on latitude but is greatly modified by the distribution of continents and oceans, prevailing winds, oceanic circulation, topography, and other factors.

the area marked  $-50^{\circ}$ . In western Europe, to the east of the Atlantic Ocean and the North Atlantic Drift, and in the region of prevailing westerly winds, the temperature gradient is much more gradual, as indicated by the fact that the isotherms, or lines of equal temperature, are far apart. In the winter of the Southern Hemisphere, as shown on the map for July (a winter month south of the Equator), the temperature gradient toward the South Pole is very gradual, and the isothermal deflections from the east-west direction (that is, the dipping of the iso-

AVERAGE JANUARY TEMPERATURE ( $F^{\circ}$ )

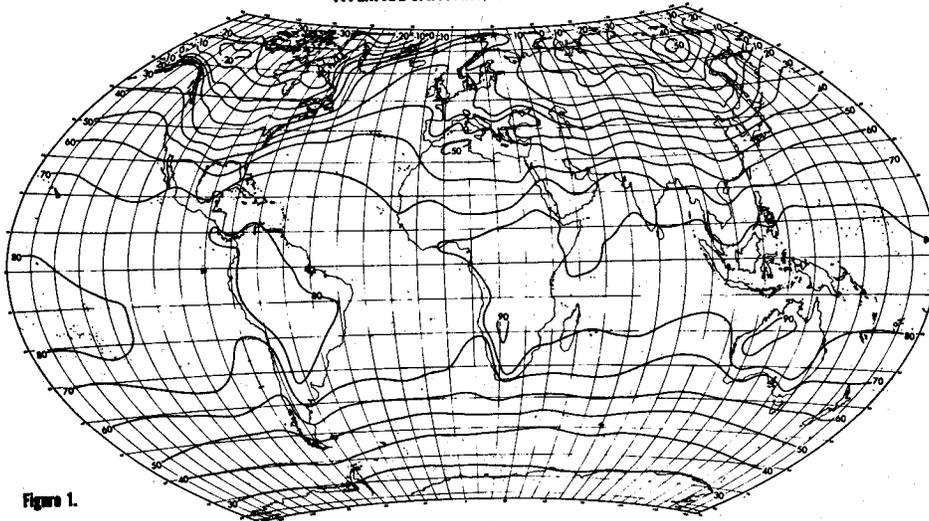


Figure 1.

Maps showing average temperatures over the surface of the earth for January and for July are given in figures 1 and 2.

In the winter of the Northern Hemisphere, it will be noted, the poleward temperature gradient (that is, the rate of fall in temperature) north of latitude  $15^{\circ}$  is very steep over the interior of North America. This is shown by the fact that the lines indicating changes in temperature come very close together. The temperature gradient is also steep toward the cold pole over Asia—

thermal lines) are of minor importance because continental effects are largely absent.

In the summers of the two hemispheres—July in the north and January in the south—the temperature gradients poleward are very much diminished as compared with those during the winter. This is especially marked over the middle and higher northern latitudes because of the greater warming of the extensive interiors of North America and Eurasia than of the smaller land areas in middle and higher southern latitudes.

AVERAGE JULY TEMPERATURE ( $F^{\circ}$ )

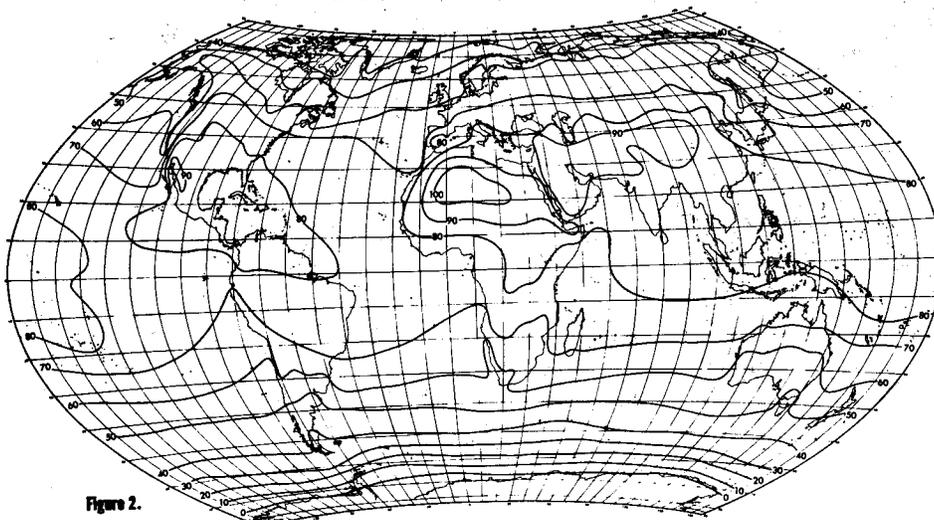


Figure 2.

## Distribution of Precipitation

Whether precipitation (see the map, fig. 3) occurs as rain or snow or in the rarer forms of hail or sleet depends largely on the temperature climate, which may be influenced more by elevation than by latitude, as in the case of the perpetually snowcapped mountain peaks and glaciers on the Equator in both South America and Africa.

The quantity of precipitation is governed by the amount of water vapor in the air and the nature of the process that leads to its condensation into liquid or solid form through cooling. Air may ascend to great elevations through local convection, as in thunderstorms and in tropical regions generally; it may be forced up over topographical elevations across the prevailing wind direction, as on the southern or windward slopes of the Himalayas in the path of the southwest monsoon of India; or it may ascend more or less gradually in migratory low-pressure formations such as those that govern the main features of weather in the United States.

The areas of heaviest precipitation on the map (fig. 3) are generally located, as would be expected, in tropical regions, where because of the high temperature the greatest amount of water vapor may be present in the atmosphere and the greatest evaporation takes place—although only where conditions favor condensation can rainfall occur. Outstanding exceptions are certain regions in high latitudes, such as southern Alaska, western Norway, and southern Chile, where relatively warm, moist winds from the sea undergo forced ascent over considerable elevations.

In marked contrast to the rainy regions just named are the dry polar regions, where the water-vapor content of the air is always very low because of the low temperature and very limited evaporation. The dry areas in the subtropical belts of high atmospheric pressure (in the vicinity of latitude  $30^{\circ}$  on all continents, and especially from the extreme western Sahara over a broad, somewhat broken belt to the Desert of Gobi) and the arid strips on the lee sides of mountains on whose windward slopes precipitation is heavy to excessive, are caused by conditions which, even though the temperature may be high, are unfavorable to the condensation of whatever water vapor may be present in the atmosphere.

In the tables following are data on mean maximum and minimum temperatures for January, April, July, and October, with extremes recorded in the period of record, and monthly and annual precipitation for about 800 selected stations well distributed over the earth.

## North America

North America is nearly all within middle and northern latitudes. Consequently it has a large central area in which the continental type of climate with marked seasonal temperature extremes is to be found.

Along the coasts of northern Alaska, western Canada, and the northwestern part of the United States, moderate midsummer temperatures are in marked contrast to those prevailing in the interior east of the mountains. (Note, for example, the great southward dip of the  $60^{\circ}$  isotherm along the west coast in fig. 2.) Again, the mild midwinter temperatures in the coastal areas stand out against the severe conditions to be found from the Great Lakes region northward and northwestward (fig. 1).

In the West Indian region, temperature conditions are subtropical; and in Mexico and Central America, climatic zones depend on elevation, ranging from subtropical to temperate in the higher levels.

The prevailing westerly wind movement carries the continental type of climate eastward over the United States, so that the region of maritime climate along the Atlantic Ocean is very narrow.

The northern areas are, of course, very cold; but the midwinter low temperatures fall far short of the records set in the cold-pole area of northeastern Siberia, where the vast extent of land becomes much colder than the partly ice-covered area of northern Canada.

From the Aleutian Peninsula to northern California west of the crests of the mountains, there is a narrow strip where annual precipitation is over 40 inches; it exceeds 100 inches locally on the coast of British Columbia (see fig. 3). East of this belt there is an abrupt fall-off in precipitation to less than 20 inches annually over the western half of the continent from Lower California northward, and to even less than 5 inches in parts of what used to be called the "Great American Desert," in the southwestern part of the United States.

In the eastern part of the continent—that is, from the southeastern part of the United States northeastward to Newfoundland—the average annual precipitation is more than 40 inches. Rainfall in the West Indies, south-

GENERAL PATTERN OF ANNUAL WORLD PRECIPITATION (INCHES)

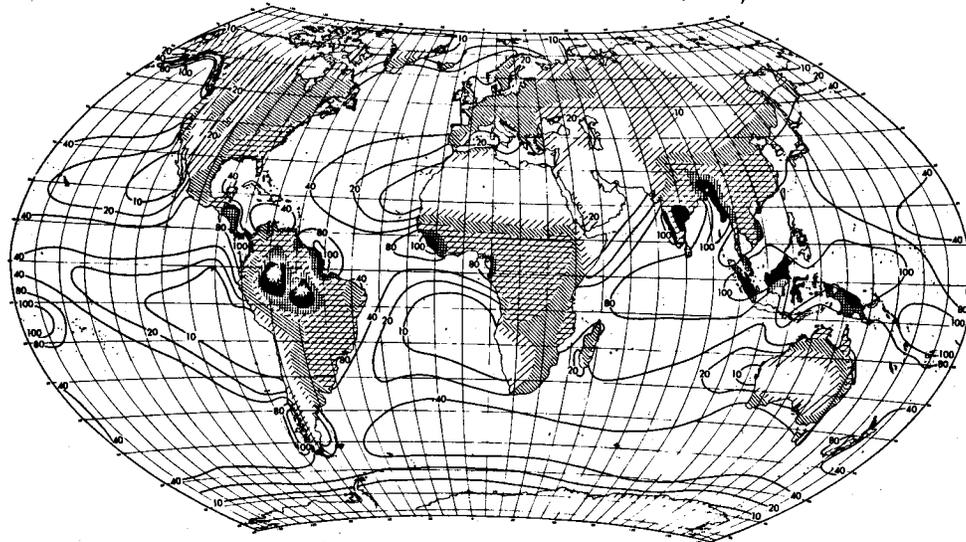


Figure 1

PRECIPITATION (INCHES)  
 □ UNDER 10  
 ▨ 10 TO 20  
 ▤ 20 TO 40  
 ▥ 40 TO 80  
 ■ 80 TO 100  
 ● OVER 100

ern Mexico, and Central America is generally abundant. It is very spotty, however, varying widely even within short distances, especially from the windward to the leeward sides of the mountains.

**South America**

A large part of South America lies within the Tropics and has a characteristically tropical climate. The remaining rather narrow southern portion is not subject to the extremes of heat and cold that are found where wide land areas give full sway to the continental type of climate with its hot summers and cold winters, as in North America and Asia. Temperature anomalies unusual for a given latitude are to be found mainly at the elevated levels of the Andean region stretching from the Isthmus of Panama to Cape Horn.

The Antarctic Current and its cool Humboldt branch skirting the western shores northward to the Equator, together with the prevailing on-shore winds, exert a strong cooling influence over the coastal regions of all the western countries of South America except Colombia. On the east the southerly moving Brazilian current from tropical waters has the opposite, or warming, effect except along southern Argentina.

In the northern countries of South America the sharply contrasted dry and wet seasons are related to the regime of the trade winds. In the dry season (corresponding to winter in the Northern Hemisphere) these winds sweep the entire region, while the wet season (corresponding to summer in the Northern Hemisphere) calms and variable winds prevail. In the basin of the Amazon River the rainfall is related to the equatorial belt of low pressure and to the trade winds, which give the maximum amounts of rainfall in the extreme west, where they ascend the Andean slopes.

The desert areas on the west coast of South America, extending from the Equator southward to the latitude of Santiago, are due primarily to the cold Humboldt or Peruvian Current and upwelling cold coastal water. The moist, cool ocean air is warmed in passing over the land, with a consequent decrease in relative humidity, so that the dew point is not reached and condensation of vapor does not occur until the incoming air has reached high elevations in the Andes, where temperatures are very much lower than along the coast.

In southern Chile the summer season has moderate rainfall, and winters are excessively wet. The conditions that prevail farther north are not present here, and condensation of moisture from the ocean progresses from the shores up to the crests of the Andes. By the time the air passes these elevations, however, the moisture has been so depleted that the winds on the leeward slopes are dry, becoming more and more so as they are warmed on reaching lower levels. The mountains can be looked upon as casting a great "rain shadow"—an area of little rain—over southern Argentina.

**Europe**

In Europe there is no extensive north-south mountain system such as is found in both of the Americas, and the general east-west direction of the ranges in the south allows the conditions in the maritime west to change rather gradually toward Asia. Generally rainfall is heaviest on the western coasts, where locally it exceeds 60 inches annually, and diminishes toward the east—except in the elevated Alpine and Caucasus regions—to less than 20 inches in eastern Russia. There is a well-defined rain shadow in Scandinavia, with over 60 inches of rain in western Norway and less than 20 inches in eastern Sweden.

Over much of Europe rainfall is both abundant and rather evenly distributed throughout the year. The chief feature of seasonal distribution of precipitation is the marked winter maximum and the extremely dry, even droughty, summers in most of the Mediterranean lands.

Isothermal lines have the general direction of the parallels of latitude except in winter, when the waters of the western ocean, warmed by the Gulf Stream, give them a north-south trend. Generally there are no marked dips in isotherms due to elevation and continental type of climate such as are found in North America. In Scandinavia, however, the winter map shows an abrupt fall in temperature from the western coast of Norway to the eastern coast of Sweden and thence a continued fall eastward, under a type of exposure more and more continental in contrast to the oceanic exposure on the west.

**Asia**

The vast extent of Asia gives full opportunity for continental conditions to develop a cold area of high barometric pressure in winter and a low-pressure, hot area in summer, the former northeast of the Himalayas and the latter stretching widely from west to east in the latitude of northern India. (See the area marked 90° on the map, fig. 2.) These distributions of pressure give to India the well-known monsoon seasons, during which the wind comes from one direction for several months, and also affect the yearly distribution of rainfall over eastern Asia.

In winter, the air circulation is outward over the land from the cold pole, and precipitation is very light over the entire continent. In summer, on the contrary, there is an inflow of air from the oceans; even the southeast trade winds flow across the Equator and merge into the southwest monsoon which crosses India. This usually produces abundant rain over most of that country, with excessively heavy amounts when the air is forced to rise, even to moderate elevations, in its passage over the land. At Cherrapunji (4,455 feet), on the southern side of the Khasi Hills in Assam, the average rainfall in a winter month is about 1 inch, while in both June and July it is approximately 100 inches. However, this heavy summer rainfall meets an impassable barrier in the

Himalaya Mountains, while the much lighter summer monsoon rainfall over Japan and eastern Asia does not extend far into China because of lesser elevations. Consequently, while the southeast quadrant of Asia, including the East Indies, also with monsoon winds, has heavy to excessive annual rainfall, the remainder of the continent is dry, with vast areas receiving less than 10 inches annually.

North of the Himalayas the low plains are excessively cold in winter and temperatures rise rather high in summer. At Verkhoyansk in the cold-pole area, and north of the Arctic Circle, the mean temperature in January is about -59°F, and in July approximately 64°; the extreme records are a maximum of 98°, from readings at 1 p.m., and a minimum of -90°.

In southwestern Asia the winter temperature control is still the interior high-pressure area, and temperatures are generally low, especially at high elevations; in summer at low elevations excessively high maxima are recorded, as, for example, in the Tigris-Euphrates Valley.

**Africa**

Africa, like South America, lies very largely within the Tropics. There too, temperature distribution is determined mainly by altitude. Moreover, along the southern portion of the western coast the cool Benguela Current moves northward, and on the eastern coast are the warm tropical currents of the Indian Ocean, which create conditions closely paralleling those found around the South American Continent. In the strictly tropical areas of Africa conditions are characterized by prevailing low barometric pressure, with convective rainfall and alternate northward and southward movement of the heat equator, while in both the north and the south the ruling influences are the belts of high barometric pressure.

Except in the Atlas Mountains in the northwest where the considerable elevations set up a barrier in the path of trade winds and produce moderate rainfall, the desert conditions typified by the Sahara extend from the Atlantic to the Red Sea and from the Mediterranean southward well beyond the northern Tropic to about the latitude of southern Arabia.

South of the Sahara, rainfall increases rapidly, becoming abundant to heavy from the west coast to the central lakes, with annual maxima of over 80 inches in the regions bordering the eastern and western extremes of the Guinea coast. This marked increase in precipitation does not extend to the eastern portion of the middle region of the continent, where the annual amounts received are below 40 inches and decrease to less than 10 inches on the coasts of Somalia. Also to the south of the central rainy area there is a rapid fall in precipitation toward the arid regions of Southwest Africa, where conditions are similar to those in Somalia.

The heavy rainfall over sections of Ethiopia from June to October, when more than 40 inches fall and bring the overflowing of the otherwise arid Nile Valley, is one of the earth's outstanding features of seasonal distribution of rainfall.

Moist equatorial climate is typified by conditions in the Democratic Republic of the Congo; arid torrid climate by those of the United Arab Republic and the Sahara; and moderate plateau climate by those found in parts of Ethiopia, Kenya and Tanzania.

**Australia**

In the southern winter the high-pressure belt crosses the interior of Australia, and all except the southernmost parts of the continent are dry. In summer, on the other hand, this pressure belt has moved south of the continent, still giving dry conditions over the southern and western areas. Thus the total annual precipitation is less than 20 inches except in the extreme southwest and in a strip circling from southeast to northwest. The average annual precipitation is even less than 10 inches in a large south-central area.

In the south the winter precipitation is the cyclonic type; the heavy summer rains of the north are of monsoon origin; and those of the eastern borders are in large part orographic, owing to the presence of the highlands in the immediate vicinity of the coasts. In the outer border of the rainfall strip along the coastal region, the mean annual rainfall is over 40 inches and in many localities over 60 inches. This is true for the monsoon rains in the north.

Because of the location of Australia, on both sides of the southern Tropic, temperatures far below freezing are to be found only in a small part of the continent, in the south at high elevations. In the arid interior extreme maximum temperatures are very high, ranking with those of the hottest regions of the earth.

## National Agricultural Summary

September 20-26

**HIGHLIGHTS:** Unusually cool weather in the East slowed development of row crops. Freezing temperatures caused minor damage to crops in the northern Plains. Rain benefited newly seeded winter wheat on the southern Plains, but more is needed to produce good stands. Unseasonable rains in California damaged vegetable and fruit crops. Soil moisture supplies were adequate to surplus in Missouri and short to adequate in most other areas. Farmers had 4 to 7 days suitable for fieldwork. Spring wheat harvest neared completion. Winter wheat seeding advanced to 35% completion, only 6 points behind average. Corn and soybean harvests gained momentum. Corn was 8% harvested while the soybean combining reached 7% completion. Sorghum harvest, which actively moved northward into Kansas, was 26% complete. Cotton harvest was 13% finished. Rice harvest passed the half-way mark. Tobacco harvesting and marketing remained active. Fall apple picking gained momentum as harvesting moved north into New England. Recent rainfall improved pastures, but more is needed. Livestock were in fair to good condition as movement from summer grazing increased.

**SMALL GRAINS:** Spring wheat was 97% harvested, 1 point behind average. Progress was behind normal in Minnesota and Montana, equal to average in Idaho, and ahead in North Dakota. The South Dakota harvest was completed.

The 1983 winter wheat crop was 35% seeded, behind last year's 42% and the average of 41%. Seeding was underway in all States except California where producers normally start at a later date. Seeding ranged from 7% in Indiana and Missouri to 87% in South Dakota. The Kansas crop was 35% seeded, Nebraska -- 75% and Oklahoma -- 20% seeded. Progress in Texas reached 29% completion. Dry weather in parts of Oklahoma again delayed seeding. Scattered showers, which alleviated dryness in some areas of Texas, provided necessary moisture for planting. However, some seeding continues in areas not receiving rain.

**CORN:** In the 17 major producing States, 94% of the corn was dented, 65% was mature, and 8% had been harvested. A year ago, 96% was dented, 68% was mature, and 9% had been harvested. Cool weather again slowed development of the crop, especially in the western Corn Belt. Damp weather in the eastern Corn Belt delayed the harvest. Harvest was underway in all States except Colorado, Minnesota, Pennsylvania, South Dakota, and Wisconsin. Progress of this year's harvest was generally ahead of average in the eastern Corn Belt and in the Southeast but lagging in the western Corn Belt.

**SOYBEANS:** In the 18 major producing States, 52% of the soybeans were dropping leaves and 7% had been harvested. A year earlier, 50% were dropping leaves and 7% had been combined. Harvest was active in all States except Nebraska, North Carolina, and South Carolina. This year's harvest was behind average in all States except Arkansas, Georgia, Illinois, Indiana, Louisiana, Michigan, North Carolina, and Ohio. Rainfall in the Southeast benefited late-planted fields, but some soybeans still showed signs of moisture stress. Cool weather in all growing areas slowed development of the crop.

**COTTON:** Cotton was in fair to mostly good condition. In the 14 major producing States, bolls were opening on 58% of the acreage, behind last year's 64% but equal to average. Harvest reached 13% completion, about on schedule. Harvest was active in all States except California, New Mexico, and Oklahoma. Mild weather and cool nights slowed development on the High Plains of Texas. Some early-planted fields in this area were defoliated, but many producers were waiting for the first frost. Control measures were active in late-planted fields on the Low Plains to combat heavy insect populations. Defoliation and picking increased at a steady pace in Arizona.

**OTHER CROPS:** In the 7 major producing States, 40% of the sorghum was mature, 21 points behind average. Harvest was 26% finished, 6 points slower than average. Harvest reached northward into Kansas but had not yet begun in Colorado, Nebraska, or South Dakota. The Texas harvest moved into parts of the Panhandle.

Rice harvest was finished in Texas, neared completion in Louisiana, and just started in California. In the 5 major States, harvest was 56% complete, only 1 point behind average.

Peanut harvest became more widespread. Harvest was 6% complete in North Carolina, 7% in Virginia, 22% in Texas, 42% in Alabama, 48% in Mississippi, and 57% complete in Georgia.

Tobacco harvest and marketing remained in full swing in all producing areas. Barn space was becoming short in parts of Kentucky.

**VEGETABLES:** Fall vegetable harvests gained momentum in Northern areas. Summer crop harvests neared completion.

Moderate to heavy rainfall in California halted the canning tomato harvest. Losses from water mold, split tomatoes, and mud resulted. Due to wet field conditions, growers will be forced to bypass some mature fields. Drying winds are needed to improve conditions. Heavy rainfall caused local crop damage in west-central Florida. Land preparations and planting continued active in most areas of the State, although wet conditions delayed fieldwork in the west-central area. Limited harvesting of squash, sweet corn, and pole beans continued. Scattered showers benefited fall-planted crops in parts of Texas.

**FRUITS AND NUTS:** Fall apple harvests gained momentum, reaching into parts of New England. Florida's citrus groves were in excellent condition with very good fruit color and size. Harvesting of early fruit continued active. Rain halted California's wine grape harvest. Only about one-half of the crop had been picked. Growers were concerned over the development of bunch rot. Heavy rains in the Fresno area caused damage to the drying raisin crop. About 10 to 15% of the crop had been removed from fields prior to the rain. Much of the remaining crop was rolled in the fields to promote drying. Some losses were also expected in almonds.

**PASTURES AND LIVESTOCK:** Scattered rainfall benefited pastures and ranges, but cool weather slowed the growth of grasses. Additional moisture is needed in Texas for good development of winter grasses. Livestock were in fair to good condition. Movement from summer grazing continued active.

**CROP PROGRESS**  
FOR WEEK ENDING SEPT 26

|                         | CORN<br>% DENT |      |      |
|-------------------------|----------------|------|------|
|                         | 1982           | 1981 | AVG. |
| COLO                    | 85             | 86   | 87   |
| GA                      | 100            | 100  | NA   |
| ILL                     | 100            | 100  | 100  |
| IND                     | 100            | 90   | 99   |
| IOWA                    | 94             | 100  | 100  |
| KANS                    | 90             | 95   | 95   |
| KY                      | 100            | 100  | 100  |
| MICH                    | 92             | 99   | 96   |
| MINN                    | 96             | 99   | 97   |
| MO                      | 99             | 100  | 100  |
| NEBR                    | 85             | 93   | 99   |
| N C                     | 100            | 100  | 100  |
| OHIO                    | 100            | 90   | 95   |
| PA                      | 81             | 92   | 88   |
| S DAK                   | 87             | 93   | 98   |
| VA                      | 100            | 99   | NA   |
| WIS                     | 81             | 90   | 95   |
| 17 STATES               | 94             | 96   | NA   |
| EXCL. STATES<br>WITH NA | 94             | 96   | 98   |

|                         | CORN<br>% HARVESTED |      |      |
|-------------------------|---------------------|------|------|
|                         | 1982                | 1981 | AVG. |
| COLO                    | 0                   | 1    | 1    |
| GA                      | 89                  | 88   | 77   |
| ILL                     | 8                   | 8    | 10   |
| IND                     | 8                   | 1    | 5    |
| IOWA                    | 2                   | 10   | 9    |
| KANS                    | 10                  | 15   | 25   |
| KY                      | 16                  | 24   | 23   |
| MICH                    | 2                   | 1    | 1    |
| MINN                    | 0                   | 2    | 4    |
| MO                      | 19                  | 21   | 28   |
| NEBR                    | 0                   | 3    | 5    |
| N C                     | 72                  | 66   | 63   |
| OHIO                    | 10                  | 0    | 5    |
| PA                      | 0                   | 0    | 0    |
| S DAK                   | 0                   | 4    | 4    |
| VA                      | 34                  | 37   | 39   |
| WIS                     | 0                   | 0    | NA   |
| 17 STATES               | 8                   | 9    | NA   |
| EXCL. STATES<br>WITH NA | 9                   | 10   | 11   |

|                         | SOYBEANS<br>% DROPPING LEAVES |      |      |
|-------------------------|-------------------------------|------|------|
|                         | 1982                          | 1981 | AVG. |
| ALA                     | 24                            | 31   | NA   |
| ARK                     | 16                            | 13   | 27   |
| GA                      | 33                            | 26   | NA   |
| ILL                     | 80                            | 61   | 76   |
| IND                     | 90                            | 45   | 75   |
| IOWA                    | 50                            | 81   | 81   |
| KANS                    | 30                            | 50   | NA   |
| KY                      | 41                            | 26   | 35   |
| LA                      | 39                            | 38   | 36   |
| MICH                    | 80                            | 70   | 65   |
| MINN                    | 79                            | 93   | 91   |
| MISS                    | 60                            | 68   | 61   |
| MO                      | 32                            | 39   | 47   |
| NEBR                    | 15                            | 60   | 70   |
| N C                     | 9                             | 8    | 4    |
| OHIO                    | 90                            | 50   | 70   |
| S C                     | 10                            | 10   | 15   |
| TENN                    | 27                            | 21   | 24   |
| 18 STATES               | 52                            | 50   | NA   |
| EXCL. STATES<br>WITH NA | 54                            | 52   | 60   |

|           | WINTER WHEAT<br>% PLANTED |      |      |
|-----------|---------------------------|------|------|
|           | 1982                      | 1981 | AVG. |
| CALIF     | 0                         | 0    | 0    |
| COLO      | 68                        | 70   | 83   |
| IDAHO     | 42                        | 34   | 27   |
| ILL       | 8                         | 8    | 8    |
| IND       | 7                         | 8    | 11   |
| KANS      | 35                        | 45   | 40   |
| MO        | 7                         | 9    | 12   |
| MONT      | 60                        | 45   | 65   |
| NEBR      | 75                        | 90   | 80   |
| OHIO      | 10                        | 10   | 15   |
| OKLA      | 20                        | 40   | 30   |
| OREG      | 20                        | 20   | 23   |
| S DAK     | 87                        | 87   | 87   |
| TEX       | 29                        | 36   | 41   |
| WASH      | 52                        | 53   | 44   |
| 15 STATES | 35                        | 42   | 41   |

THESE 15 STATES PRODUCED 88% OF THE 1981 WINTER WHEAT CROP.

|                         | CORN<br>% MATURE |      |      |
|-------------------------|------------------|------|------|
|                         | 1982             | 1981 | AVG. |
| COLO                    | 30               | 34   | 37   |
| GA                      | 100              | 100  | NA   |
| ILL                     | 94               | 81   | 93   |
| IND                     | 90               | 40   | 80   |
| IOWA                    | 50               | 88   | 88   |
| KANS                    | 60               | 70   | 75   |
| KY                      | 82               | 79   | 80   |
| MICH                    | 65               | 70   | 50   |
| MINN                    | 48               | 57   | 69   |
| MO                      | 75               | 70   | 72   |
| NEBR                    | 20               | 45   | 70   |
| N C                     | 100              | 99   | 96   |
| OHIO                    | 90               | 40   | 65   |
| PA                      | 24               | 43   | 34   |
| S DAK                   | 67               | 66   | 88   |
| VA                      | 92               | 96   | NA   |
| WIS                     | 58               | 79   | 83   |
| 17 STATES               | 65               | 68   | NA   |
| EXCL. STATES<br>WITH NA | 63               | 67   | 78   |

THESE 17 STATES PRODUCED 93% OF THE 1981 CORN CROP.

NA - NOT AVAILABLE

|           | COTTON<br>% BOLLS OPENING |      |      |
|-----------|---------------------------|------|------|
|           | 1982                      | 1981 | AVG. |
| ALA       | 77                        | 77   | 58   |
| ARIZ      | 80                        | 94   | 90   |
| ARK       | 92                        | 80   | 69   |
| CALIF     | 65                        | 85   | 65   |
| GA        | 68                        | 78   | 74   |
| LA        | 96                        | 94   | 70   |
| MISS      | 99                        | 98   | 91   |
| MO        | 100                       | 71   | 70   |
| N MEX     | 65                        | 70   | 65   |
| N C       | 90                        | 93   | 80   |
| OKLA      | 15                        | 40   | 45   |
| S C       | 84                        | 80   | 85   |
| TENN      | 78                        | 49   | 48   |
| TEX       | 41                        | 48   | 46   |
| 14 STATES | 58                        | 64   | 58   |

THESE 14 STATES PRODUCED 93% OF THE 1981 COTTON CROP.

NA - NOT AVAILABLE

|                         | COTTON<br>% HARVESTED |      |      |
|-------------------------|-----------------------|------|------|
|                         | 1982                  | 1981 | AVG. |
| ALA                     | 8                     | 11   | NA   |
| ARIZ                    | 1                     | 9    | 4    |
| ARK                     | 21                    | 10   | 12   |
| CALIF                   | 0                     | 0    | 0    |
| GA                      | 9                     | 25   | 19   |
| LA                      | 15                    | 21   | 15   |
| MISS                    | 9                     | 20   | 11   |
| MO                      | 33                    | 3    | 15   |
| N MEX                   | 0                     | 0    | 0    |
| N C                     | 15                    | 15   | 10   |
| OKLA                    | 0                     | 5    | 1    |
| S C                     | 4                     | 8    | 14   |
| TENN                    | 16                    | 3    | 12   |
| TEX                     | 17                    | 14   | 18   |
| 14 STATES               | 13                    | 12   | NA   |
| EXCL. STATES<br>WITH NA | 13                    | 12   | 13   |

THESE 14 STATES PRODUCED 99% OF THE 1981 COTTON CROP.

NA - NOT AVAILABLE

|          | RICE<br>% HARVESTED |      |      |
|----------|---------------------|------|------|
|          | 1982                | 1981 | AVG. |
| ARK      | 45                  | 61   | 42   |
| CALIF    | 2                   | 14   | 11   |
| LA       | 92                  | 94   | 91   |
| MISS     | 45                  | 56   | 53   |
| TEX      | 100                 | 100  | 100  |
| 5 STATES | 56                  | 66   | 57   |

THESE 5 STATES PRODUCED 98% OF THE 1981 RICE CROP.

|                         | SOYBEANS<br>% HARVESTED |      |      |
|-------------------------|-------------------------|------|------|
|                         | 1982                    | 1981 | AVG. |
| ALA                     | 6                       | 1    | NA   |
| ARK                     | 2                       | 3    | 2    |
| GA                      | 1                       | 1    | 1    |
| ILL                     | 20                      | 10   | 17   |
| IND                     | 15                      | 3    | 10   |
| IOWA                    | 4                       | 18   | 14   |
| KANS                    | 1                       | 3    | 4    |
| KY                      | 4                       | 1    | 5    |
| LA                      | 9                       | 8    | 7    |
| MICH                    | 1                       | 1    | 0    |
| MINN                    | 1                       | 10   | 8    |
| MISS                    | 3                       | 6    | 6    |
| MO                      | 3                       | 4    | 6    |
| NEBR                    | 0                       | 10   | 5    |
| N C                     | 0                       | 0    | 0    |
| OHIO                    | 20                      | 5    | 5    |
| S C                     | 0                       | 1    | 1    |
| TENN                    | 1                       | 0    | 2    |
| 18 STATES               | 7                       | 7    | NA   |
| EXCL. STATES<br>WITH NA | 7                       | 7    | 8    |

THESE 18 STATES PRODUCED 95% OF THE 1981 SOYBEAN CROP.

NA - NOT AVAILABLE

|                         | SORGHUM<br>% COLORING |      |      |
|-------------------------|-----------------------|------|------|
|                         | 1982                  | 1981 | AVG. |
| COLO                    | 78                    | 62   | 79   |
| KANS                    | 65                    | 75   | 85   |
| MO                      | 90                    | 87   | 91   |
| NEBR                    | 75                    | 95   | 95   |
| OKLA                    | NA                    | NA   | NA   |
| S DAK                   | 87                    | 92   | 94   |
| TEX                     | 91                    | 93   | 94   |
| 7 STATES                | NA                    | NA   | NA   |
| EXCL. STATES<br>WITH NA | 79                    | 86   | 91   |

THESE 7 STATES PRODUCED 92% OF THE 1981 SORGHUM CROP.

NA - NOT AVAILABLE

|          | SPRING WHEAT<br>% HARVESTED |      |      |
|----------|-----------------------------|------|------|
|          | 1982                        | 1981 | AVG. |
| IDAHO    | 92                          | 98   | 92   |
| MINN     | 98                          | 99   | 99   |
| MONT     | 90                          | 100  | 95   |
| N D      | 99                          | 100  | 95   |
| S DAK    | 100                         | 100  | 100  |
| 5 STATES | 97                          | 100  | 96   |

THESE 5 STATES PRODUCED 92% OF THE 1981 SPRING WHEAT CROP.

|          | SORGHUM<br>% HARVESTED |      |      |
|----------|------------------------|------|------|
|          | 1982                   | 1981 | AVG. |
| COLO     | 0                      | 0    | 0    |
| KANS     | 3                      | 4    | 15   |
| MO       | 19                     | 21   | 28   |
| NEBR     | 0                      | 1    | 4    |
| OKLA     | 10                     | 20   | 10   |
| S DAK    | 0                      | 8    | 7    |
| TEX      | 69                     | 72   | 72   |
| 7 STATES | 26                     | 28   | 32   |

|          | SORGHUM<br>% MATURE |      |      |
|----------|---------------------|------|------|
|          | 1982                | 1981 | AVG. |
| COLO     | 22                  | 16   | 23   |
| KANS     | 15                  | 30   | 45   |
| MO       | 68                  | 62   | 66   |
| NEBR     | 4                   | 40   | 60   |
| OKLA     | 50                  | 70   | 65   |
| S DAK    | 48                  | 56   | 58   |
| TEX      | 73                  | 77   | 78   |
| 7 STATES | 40                  | 52   | 61   |

THESE 7 STATES PRODUCED 92% OF THE 1981 SORGHUM CROP.

## CALIFORNIA CROP DAMAGE REPORT

Moderate to heavy rainfall, beginning Thursday afternoon (September 23) along the central coast and northern California and extending into the Central Valley and southern California over the weekend, virtually halted the canning tomato harvest. Losses resulting from water mold, split tomatoes, and mud are expected to increase in tomato fields, particularly in the Sacramento Valley where unseasonably heavy rains also fell September 15-18. Very wet field conditions and increasing mold problems will force growers to bypass some mature fields. The harvest this week likely will center on less ripe fields with firmer tomatoes. Drying winds are definitely needed to improve conditions. Losses may reach 300-500 thousand tons depending on weather conditions during the next 2 weeks. Season total deliveries reached 5.35 million tons through the week ending September 25, with about 10-15 percent of the crop remaining for harvest.

The rains also halted the wine grape harvest, with about 50-55 percent of the crop remaining. Sugar levels continue to be lower than expected, and growers are concerned about bunch rot development. Some observers feel that losses in the north coast wine grape harvest may total 10-15

percent, with potential losses much higher depending on weather. Heavy rains in the Fresno area over the weekend damaged the drying raisin crop. The extent of damage is unknown and depends on weather conditions during the next few days. An estimated 10-15 percent of the crop had already been removed from the fields prior to the rains. Much of the remaining crop was rolled in the field, but trays will need to be opened to promote drying.

Some losses also are expected in later blocks of almonds remaining for harvest, with nuts on the ground susceptible to mold damage. Walnut orchards escaped damage, with harvest just getting underway.

Some losses are also expected in the Sacramento Valley honeydew melon harvest as well as the strawberry harvest in the central coast. Some down hay and dry beans in windrows have been damaged. The rice harvest has been delayed again but should pick up as the weather clears. Cotton fields in the San Joaquin Valley are maturing more slowly than expected, with temperatures below normal since mid-September. Warmer, dry weather is needed to provide good yields at harvest.

### 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 SRS State Offices in cooperation with the National Weather Service.

**ALABAMA:** Temperatures averaged 5 to 10° below normal with little rainfall. Some record low temperatures midweek.

Soil moisture mostly short. Fieldwork: 5.3 days. Peanuts: Dug 65%, 54% 1981, 40% average; combined 42%, 41% 1981, 30% average. Corn harvested 79%, 81% 1981, 62% average. Soybeans: Leaves turning yellow 54%, 53% 1981, 62% average; dropping leaves 24%, 31% 1981. Cotton: Bolls open 77%, 77% 1981, 58% average; harvested 8%, 11% 1981. Sorghum harvested 58%, 41% 1981. Conditions: Corn, cotton, peanuts, sorghum, livestock good; soybeans, pastures fair to good.

**ALASKA:** Partly cloudy and dry northern valleys with cloudy and rainy weather in southern sections. Temperatures were above normal in north and near normal south. Precipitation was light north but from 0.33 to 0.75 in. south. Seasonal rainfall totals are generally near or above normal.

Nearly ideal harvest conditions existed in Tanana Valley while wet weather and heavy dew limited harvest elsewhere in Railbelt. Barley combining made excellent progress, over 85% of crop now in the bin compared with 33% harvested a year ago. Most progress was in Tanana Valley. Moisture content harvested barley ranges 16 to 22%. Test weights ranged from 43 to 58 pounds per bushel. Haying activities made excellent progress in the Tanana Valley. Warm dry weather needed in Matanuska Valley to finish harvest. Hard killing frosts ended all growing activity in most areas. Potato digging made good progress. Winter hay supplies range from adequate to surplus in Tanana Valley. Mostly short elsewhere. Soil moisture supplies range short in Tanana Valley to surplus in Matanuska Valley.

**ARIZONA:** Hot, dry weather past week. Rain limited, very isolated light showers during first part week, again at end. Maximum temperatures in 70's and 80's in mountains, ranging upward 100 to 110° lower Deserts. Averages 3 to 9° above seasonal normals.

Harvest fall vegetable crop began limited scale past week central Arizona. Green onions, few mixed greens such as spinach, turnip greens included in harvest. Few cantaloup expected to be picked Central Valley area first October. Cochise County in middle apple harvest, winding down watermelon picking activities. Pumpkin harvest just underway Cochise County area. Unseasonably warm temperatures caused some problems lettuce seed germination Yuma area. In that area crickets, armyworms causing damage cauliflower, lettuce stands. Lettuce making seasonal progress Pima County, some hand thinning, weeding activities taking place. Lettuce planting complete Central Valley area. Fall melons made good progress Yuma area. Lemon harvest, packing continued normal limited scale both Yuma, Maricopa Counties, citrus groves good condition. Harvest activities beginning on limited scale for 1982 cotton crop. Only 1% this year's crop harvested compared to 9% last year, average 4%. Yuma County had greatest amount harvest activity with defoliation, first picking increasing at steady rate. Harvest some fields already completed. Graham County just started picking cotton. Defoliation procedures underway Pima County. Cotton bolls open 80% fields planted compared to 94% last year, average 90%. Texas root rot damage severe some fields Pima County. Insect populations high Yuma County, problem Statewide. Sorghum crop heading, turning color. Some harvesting taking place Yuma, Santa Cruz counties. Corn for grain made seasonal progress southeastern counties, harvest activities ranging from just starting Cochise County to winding down Santa Cruz County. Alfalfa made average progress. Slow down recent rains allowed alfalfa harvest to resume to normal.

**ARKANSAS:** Much colder than normal. Little rainfall. Highest temperature 84°. Lowest 32°. All departures from normal -15 to -7°. Most rainfall 0.50 in., least zero.

Seven days suitable for fieldwork. Soil moisture short. Crop growth slow to moderate. Soybean condition good; turning yellow 38%, 26% 1981, 37% average; shedding 16%, 13% 1981, 27% average; mature

14%, 8% 1981, 12% average. Rice good condition; ripe 87%, 90% 1981, 85% average; harvested 45%, 61% 1981, 42% average. Cotton good condition; open bolls 92%, 80% 1981, 69% average; harvest 21%, 10% 1981, 12% average. Corn good condition, harvest virtually complete, 88% 1981, 60% average. Sorghum good condition, harvested 85%, 83% 1981, 70% average. Oats good condition, planted 5%, 6% 1981, 6% average. Wheat good condition, planted 9%, 7% 1981, 9% average. Pastures average. Cattle good condition.

**CALIFORNIA:** Mean temperature quite a bit above normal along the South Coast. The rest of the State had mean temperatures below normal; the coldest was the Sacramento Valley. Unseasonably heavy rain over the Central Valley averaged about 0.50 in.; the San Joaquin Valley average greater than the Sacramento Valley. Central Coast averaged nearly 0.50 in. of rain also.

Unseasonably early rains and cool temperatures disrupted development and harvest field crops in Central Valleys. Early rice harvest delayed last half of week due to rain. Some lodging. Fields being drained. Two percent of rice harvested, 14% last year, 11 average. Cotton development remains behind normal due to cool temperatures. Sixty-five percent of bolls open, 85% last year, 65 average. Defoliation will progress as weather permits. Harvest of dry edible beans stalled by rains. Ten percent harvested to date. No significant damage expected. Alfalfa suffering quality deterioration. Sugarbeets, grain sorghum, and field corn progressing satisfactorily. Safflower harvest winding down. Volume of stone fruits being packed declining as harvest nears completion. Nonpareil almonds main variety being harvested. Desert lemon harvest continued. Walnut harvest began Sacramento Valley. Wine grapes and raisins damaged by rains, losses undetermined. Rain hampering harvest activities, San Joaquin, Sacramento Valleys, Central Coast. Broccoli, cauliflower harvests slowed on Central Coast. Quality not expected to suffer. Brussels sprouts harvest continues. Carrot harvest stopped in Salinas Valley due to rain. Harvest will start again this week. Honeydew and miscellaneous melon harvest was curtailed, Sacramento and San Joaquin Valleys, due to rains; 20% of honeydew crop unharvested and harvest expected to begin again this week if no further rain. Packers having to wash melons prior to packing due to muddy field conditions. Lettuce harvest, Salinas Valley, stopped. Poor quality expected for awhile. Harvest should begin this week. Bell pepper harvest slowed, Central Coast, Salinas Valley. Potato digging continues but remains light due to wet field conditions. Strawberry harvest stopped on Central Coast. Ripe berries will be stripped and discarded. Harvest delayed for several days. Deliveries to processors above last year. Further production will go fresh market. Processing tomato harvest virtually halted over weekend. Losses from mold, splitting, mud expected to increase in fields. Unseasonably heavy rains fell on Sacramento Valley fields. Growers forced to by-pass mature fields due to wet conditions. Drying winds definitely needed. Losses may reach 300-500 thousand tons depending on weather next two weeks. Season total deliveries 5.35 million tons through week ending September 25; 10-15% of crop unharvested. Rains beneficial pastures. Sheep cattle moved from summer range. Livestock excellent condition. Stock water supplies adequate.

**COLORADO:** Light showers 20th, 22nd and 23rd over most of the State. Precipitation ranged from 0.10 to 0.50 in. Temperatures near normal.

Grain and hay harvest delayed slightly from rain. Row crop prospects mostly good. Winter wheat: 68% seeded, 38% emerged; last year 70% seeded, 37% emerged; average 83% seeded, 48% emer-

ged. Dry beans: Suffer from vine rot, 64% cut, 35% threshed; last year 70% cut, 36% threshed. Corn: 85% dented, 30% mature; in 1981, 86% dented, 34% mature; average 87% dented and 37% mature. Corn silage 67% harvested. Sorghum 78% turning, 22% mature; last year 62% turning and 16% mature. Alfalfa third cutting 55% complete, fourth cutting 4%. Top and subsoil moisture adequate to surplus. Five and one-half days suitable for fieldwork. Livestock in good condition.

**FLORIDA:** A weak cold front from the Florida-Georgia border moved southeastward through the State by the 23rd. Locally heavy rains along and ahead of the front were widespread. On the 25th, old cold front in the Florida Straits, began moving northward. Another northeast-southwest trough of lower pressure on the Florida-Georgia border began a southward movement. The two systems met in the central Peninsula early on the 26th; by midday both systems moved southward followed by clearing skies, sunshine, much drier air.

Soil moisture adequate most areas, excessive along Gulf Coast. Peanut, hay harvest remain active, some delays due to weather. Soybeans maturing rapidly, combining about ready to begin. Yield prospects variable, poor many areas due poor pod set and small size beans. Tobacco markets closing. Cotton good condition. Sugarcane good to excellent condition. Cutting cane for seed continues. Pasture condition varies from good to excellent except poor to fair Panhandle. Armyworm infestations heavy some areas. Cattle in mostly good condition. Citrus grove condition excellent. Rain with cold front first of week, heavy weekend rains, many localities. Lower temperatures all areas. Very good early fruit color, good fruit sizes. Some fruit splitting but not a serious problem. Harvest early fruit continues active. A weak frontal system brought cloudy to partly cloudy skies, cooler temperatures to vegetable areas. Showers, thundershowers frequent. Rain-fall locally heavy. Heaviest rains in west central area; some local crop damage reported. Land preparation, planting continue active most areas. Wet fields, heavy rains delayed fieldwork west central area. Overall condition, most crops, good to very good. Light harvest of squash, sweet corn continues. Pole bean harvest active in Gadsden County.

**GEORGIA:** Warm and humid early in period with scattered showers, less numerous north. Turning dry and much cooler late week. Total rainfall less than 0.10 in. north, near 0.25 in. central, and near 0.50 in. south. Temperatures overall 1 to 3° below normal. Unsettled weekend 25th and 26th. Rainfall mainly from showers, averaging less than 0.10 in. north and central and near 0.25 in. south. Temperatures about 5° below normal.

Soil moisture 7% very short, 34% short, 57% adequate, 2% surplus. Five days suitable for fieldwork. Main activities harvesting, spraying for insect control, haymaking and small grain planting. Corn 89% harvested, 88% last year, 77% average. Cotton 31% fair, 62% good, 5% excellent; 68% open, 78% last year, 74% average; 9% harvested, 25% last year, 19% average. Peanuts 76% dug, 53% last year and average; 57% threshed, 39% last year and average. Soybeans 6% poor, 32% fair, 59% good and 3% excellent; 33% dropping leaves, 26% last year; 1% harvested, same for last year and average. Actively spraying for stinkbugs, velvet bean caterpillars and loopers many areas. Apples 93% picked, 87% last year, 84% average. Pecans 7% poor, 44% fair, 42% good, 6% excellent. Some spraying for insects. Wheat 3% planted, 6% last year and average. Rye 10% planted, 8% last year and average. Other small grains

8% planted, 12% last year, 9% average. Pasture and hay crops fair to good. Cattle and hogs good.

**HAWAII:** Weather favorable. Hot and humid in some areas. Few light showers, mainly windward sections. Irrigation necessary major crop areas. Spraying for disease and insect control. Vegetables: Supplies light to moderate. Only sweetpotatoes heavy. Bananas: Supplies light. Papayas: Low production will continue. Pineapples: Light harvest. Sugar: Steady harvest. Pastures: Generally fair to good. Few light rains beneficial.

**IDAHO:** Warmer than normal weather dominated but one storm system brought varying amounts of precipitation to mainly southern areas. Temperatures averaged from 1 to 6° above normal. The highest temperature recorded was 90° at Lewiston while the low was 23° at Stanley. Precipitation was rather light in the north except for Porthill where they recorded 0.76 in. Locations in south generally received from 0.25 to 0.50 in. of precipitation. Exceptions included New Meadows with 1.19, American Falls with 0.78, Aberdeen and Pocatello with 0.70 in.

Once again rain and cool weather limited harvest progress in many areas. Grain harvest was virtually complete except in east. Potato digging remains behind last year but equal to average, with 14% dug. Winter wheat seeding reached 42% complete compared to 34% last year and 27% average. Third cutting alfalfa hay 51% complete. Apple harvest 7% complete, 30% in 1981. Ranges in good condition with recent moisture.

**ILLINOIS:** Temperatures 7 to 10° below normal as a two week warm trend ended. Minimum temperatures fell into the 40's setting a few new record lows. Precipitation light in most sections (0.01 to 0.15 in.) except for the extreme south (0.50 to 1.00 in.).

Corn 100% dent, 100% 1981, 100% average; 94% mature, 81% 1981, 93% average; 8% harvested, 8% 1981, 10% average. Soybeans 95% turning yellow, 85% 1981, 91% average; 80% dropping leaves, 61% 1981, 76% average; 20% harvested, 10% 1981, 17% average. Eight percent of the 1983 winter wheat crop has been seeded. This compares to 8% last year and an average of 8% also. Ten percent of the sorghum crop had been harvested. Pastures 15% excellent, 72% good, 13% fair. Soil moisture 12% short, 85% adequate and 3% surplus. Days suitable for fieldwork: 5.3.

**INDIANA:** Fieldwork averaged 6 days. Topsoil and subsoil moisture short to adequate. Corn 8% harvested, 1981 1%, average 5%. Corn 90% mature, 1981 40%, average 80%. Corn 100% dented, 1981 90%, average 99%. Soybeans 15% combined, 1981 3%, average 10%. Soybeans 90% dropping leaves, 1981 45%, average 75%. Moisture content: Corn 26%, soybeans 14%. Wheat land 50% plowed, 1981 45%, average 50%. Wheat 7% seeded, 1981 8%, average 11%. Tobacco 80% harvested, 1981 75%, average 85%. Silos 80% filled, 1981 35%, average 65%.

**IOWA:** A cool, dry week. Frost, mostly light, was reported generally in rural lowland areas Statewide 21st and 22nd. No crop damage reported. Topsoil moisture: 12% surplus, 87% adequate, 1% short. Subsoil moisture: 14% surplus, 85% adequate, 1% short. Corn in or past dent stage: 94%, last year 100%, normal 100%. Corn mature: 50%, last year 88%, normal 88%. Corn harvested: 2%, last year 10%, normal 9%. Soybeans with leaves turning: 82%, last year 96%, normal 98%. Soybeans with leaves shedding: 50%, last year 81%, normal 81%. Soybeans mature: 22%, last year 70%, normal 69%. Soybeans harvested: 4%, last year 18%, normal 14%. Winter wheat sown: 23%, last year 26%, normal 38%. Field-

work: 5.7 days suitable. Crop conditions: Corn, soybeans, and pasture mostly good to excellent. Livestock in good condition.

**KANSAS:** Precipitation less than 0.10 in. except southeast average 0.23 in. Temperatures averaged 6 to 10° below normal eastern two-thirds. The western third near normal, averaging from 1° above to 3° below normal. Light frost reported central and northeast districts.

Sorghum 65% coloring, 75% last year, 85% average; 15% mature, 30% last year, 45% normal; 3% harvested, 4% last year, 15% normal. Soybeans 30% shedding leaves, 50% last year; 1% harvested, 3% last year, average 4%. Corn 90% dented, 95% last year and normal; 60% mature, 70% last year, 75% average; 10% harvested, 15% last year, 25% normal. Wheat 35% planted, 45% last year, 40% normal. Scattered reports armyworms in sorghum, new alfalfa.

**KENTUCKY:** Cool with temperatures averaging 5 to 10° below normal. Precipitation ranged from 0.33 to 1.50 in. High temperatures generally in 60's, lows in 40's.

Soil moisture 9% short, 84% adequate, 7% surplus. Fieldwork: 4.9 days suitable. Corn 16% harvested, 24% year ago, 23% average. Yields good; 100% dented for current, year ago and average; 82% mature, 79% last year, 80% average. Ten percent burley tobacco still in field. Barn space tight. Houseburn mostly light. Limited stripping to date. Soybeans 4% harvested, 1% last year, average 5%; 41% dropping leaves or beyond, 26% year ago, average 35%. Other activities: Cover crop seeding, late hay harvest, initial sorghum harvest.

**LOUISIANA:** Rainfall light ranging from 0 to 0.85 in. Temperatures 7 to 11° below normal.

Soil moisture short to adequate. Days suitable: 5.5. Corn harvested 98%, 94% 1981, 88% average. Rice harvested 92%, 94% 1981, 91% average. Cotton open bolls 96%, 94% 1981, 70% average; harvested 15% 1982 and average, 21% 1981; condition good. Soybeans leaves turning 66% 1982 and 1981, 59% average; shedding 39%, 38% 1981, 36% average; harvested 9%, 8% 1981, 7% average; condition fair to good. Sorghum ripe 97%, 95% 1981, 89% average; harvested 90%, 81% 1981, 69% average. Wheat planted 1%, 5% 1981, 14% average. Sweetpotatoes harvested 59%, 71% 1981, 58% average; condition fair to good. Sugarcane planted 73%, 72% 1981, 46% average; condition good. Pecans and vegetables rated fair. Last cutting of hay 80%, 77% 1981. Pastures fair. Cattle good.

**MARYLAND AND DELAWARE:** Temperatures averaged 4° below normal. High temperatures averaged in the mid 70's in western Maryland to the mid to upper 80's elsewhere in the two State area. Low temperatures averaged in the mid 30's in western Maryland to mid 40's elsewhere. Rainfall over the two State area averaged 1.13 in. ranging from 0.52 in. in Hagerstown to 3.09 in. in Patuxent.

Showers over the two State area relieved moisture shortages and late planted crops continued to exhibit effects from earlier drought conditions. By the end of the week nearly all of the two State area had adequate topsoil moisture but subsoil moisture was short in many areas. Five days were suitable for fieldwork in Maryland and Delaware.

**Delaware:** Corn was 90% dented; 85% mature, and 30% harvested for grain; last year 95, 75, and 30 respectively. Corn silage 90% harvested, 80% last year. Soybeans 100% podded, 85% turning, 40% shed leaves; last year, 100% podded, 35% turning, 10% shed leaves. Barley 35% seeded in 1982, 1981 15% seeded. Wheat not being planted yet. Rye seeded 10% both years. Lima beans 70% harvested; 75% last year. Apples 50% picked this

year and last. Fourth cutting alfalfa 65%, 55% last year.

**Maryland:** Corn in fair to good condition. Dented corn 95%; 90% last year. Corn mature 70% both years. Corn 20% harvested for grain both years. Silage cut 75% 1982; 90% cut 1981. Soybean development: Podded 100%, turning 55%, shed leaves 25%. Last year's soybean development 95% podded, 55% turning, 20% shed leaves. Tobacco in good to excellent condition; 90% harvested; 100% harvested in 1981. Apples 40% picked this year and last. Fourth cutting alfalfa hay 65%, 60% 1981. Barley seeded 20% both years. Rye 20% seeded 1982, 30% 1981. Wheat just starting to be planted, 25% planted last year. Oats just starting to seed.

**MICHIGAN:** Rains throughout week hindered harvesting. Precipitation: 0.25 to 2.00 in. most stations, over 0.50 in. Average temperatures: 0 to 4° below normal, 3° below normal in principal field crop areas. Minimums: 33 to 46°; maximums: 64 to 71°. Low temperatures slowed maturing of crops. Wheat planted, 10%, 15% in 1981, 25% average. Corn mature, 65%, 70% in 1981, 50% average. Corn silage 35%. Dry beans harvested, 25%, 50% in 1981, 50% average. Soybeans dropping leaves, 80%, 70% in 1981, 65% average. Corn for grain and soybeans harvesting just starting. Apple picking heavy. Concord grapes harvest underway. Tomato picking ending. Celery 75% cut.

**MINNESOTA:** Mostly fair, cool weather prevailed. Temperatures averaged from the upper 40's to the mid 50's and were generally 2 to 6° below normal. Highest reported temperature was 77° at Hallock, Browns Valley, Moorehead and Lamberton. Coolest reported temperature was 26° at Fosston. Light frost reported in many areas. Rainfall light with heaviest amounts in the northeast averaging 0.50 in. and the north central averaging 0.33 in. Remainder of the State averaged 0.10 in. Heaviest rainfall reported was 1.08 in. at Duluth.

Lack of rain welcome in most areas since soils needed to dry so fieldwork could resume. Need more dry sunny days for crops still standing or in the swath. Frost in additional areas of State. Damage slight since most crops nearing maturity. Topsoil moisture: 3% short, 85% adequate, 12% surplus. Denting: Corn 96%, 1981 99%, normal 97%. Shedding leaves: Soybeans 79%, 1981 93%, normal 91%. Mature: Corn 48%, 1981 57%, normal 69%. Soybeans 45%, 1981 48%, normal 57%. Combined: Corn 0%, 1981 2%, normal 4%; soybeans 1%, 1981 10%, normal 8%.

**MISSISSIPPI:** Temperatures were 5 to 17° below normal. Extremes: 35 and 92°. Several locations set new low records for three consecutive days. Greatest 24-hour rainfall was 1.86 in., but most of the State was dry during the week.

Soil moisture adequate north, short central and south. Fieldwork: 5.8 days suitable. Cotton 99% of acreage with some open bolls, 98% last year, 91% average; 9% harvested, 20% last year, 11% average; condition good to fair. Soybeans 60% shedding, 68% last year, 61% average; 21% mature, 26% last year, 24% average; 3% harvested, 6% last year, 6% average; condition good to fair. Rice 92% mature; 45% harvested, 56% last year, 53% average; condition good to fair. Corn 70% harvested, hay 94%, sorghum silage 89%, peanuts 48%, sorghum 56%, sweetpotatoes 38% harvested. Winter wheat 5% seeded. Pasture condition good to fair.

**MISSOURI:** Temperatures averaged 9° below normal. Rain was spotty and slight, with a maximum of slightly above 0.50 in. received in the southwestern and southeastern parts of the State. Frost occurred in areas throughout the State, except in extreme southeast.

Fieldwork: 4.5 days suitable. Corn 75% mature, 70% 1981, normal 72%. Corn 19% harvested, 21% 1981, normal 28%. Soybeans 46% turning color, 1981 60%, normal 66%. Soybeans 14% mature, 1981 21%, normal 32%. Soybeans 3% harvested, 1981 4%, normal 6%. Grain sorghum 68% mature, 1981 62%, normal 66%. Sorghum 30% harvested, 1981 21%, normal 24%. Winter wheat seeding 7% completed, 1981 9%, normal 12%. Cotton 33% harvested, 1981 3%, normal 15%. Cotton condition 71% good, 29% fair. Pasture condition 15% excellent, 66% good, 17% fair, 2% poor. Topsoil moisture supply 26% surplus, 73% adequate, 1% short.

**MONTANA:** Very mild week. Temperatures 3 to 6° above normal. Precipitation only west of Divide, 0.25 in. early in week.

Topsoil moisture improved by end of week rain. Subsoil moisture short to adequate. Days suitable for fieldwork: 6. Harvest progress compared with last year and normal: Spring wheat 90, 100, 95; barley 90, 100, 95; oats 95, 100, 95; second cutting alfalfa hay 90, 100, 100; corn silage 60, 80, 75; dry beans 75, 75, 65 and potatoes 20, 25, 20. Winter wheat seeding 60% compared with 45% last year and 65% normally. Fall grazing prospects mostly good. Cattle moved from summer ranges 25%; sheep 30% -- slightly behind normal.

**NEBRASKA:** Precipitation: A relatively dry week with only light scattered showers. Temperatures: Panhandle and southwest near normal. Elsewhere, below normal, with southeast 8° below.

Light frost reported in many areas early last week. Damage limited to low-lying areas. Corn mostly good to fair; dented 85%, 93% last year and 99% normal; mature 20%, 45% previous year and 70% normal; harvested less than 1%, 3% previous year and 5% normal. Soybeans good; turning color 60%, 90% a year ago and normal; dropping leaves 15%, 60% last year and 70% normal; harvested 0%, 10% a year ago and 5% normal. Sorghum good; turning color 75%, 95% last year and normal; ripe 4%, well behind 40% last year and nearly four weeks behind 60% normal; harvested 0%, 1% previous year and normal. Wheat sown 75%, 90% a year ago and 80% normal; emerged 30%, 50% last year. Pasture and range feed supplies adequate. Topsoil and subsoil moisture adequate. Days suitable for fieldwork: 5.7.

**NEVADA:** Wet weather continued for second consecutive week. Precipitation heaviest and most widespread beginning and end of period. Temperatures averaged below normal northwest, above elsewhere. Extremes: 101 and 29°.

Digging potato crop gaining momentum between showers. Alfalfa seed harvest well along. Onion harvest started. Winter grain seeding good progress. Livestock starting to be moved off high elevation ranges.

**NEW ENGLAND:** Temperatures near normal. Coldest morning 20th with minima in the 30's, but sub-freezing only in northern Maine. Rainfall spread over four-day period 20th through 23rd. Totaled 0.75 to 1.00 in. southern and central New England, and 0.25 to 0.50 in. in northern New England.

No general killing frost so far. Soil moisture adequate. Grazing adequate to short. Corn silage harvest underway, although the crop isn't fully mature. Apple picking in progress. Good crop. Arrostook County, Maine potato harvest 35 to 40% complete, one week behind normal. Wet harvesting of early cranberries at full scale.

**NEW JERSEY:** Temperatures averaged well below normal. Extremes: 41° at Charlotteburg on the 24th, 25th and 26th and 77° at Pemberton on 24th. Rainfall averaged 2.07 in. north, 1.17 in. central and 1.15 in. south. The heaviest 24-hour total was

1.18 in. at Charlotteburg on the 26th to 27th. Soil moisture, in percent of field capacity, averaged 95% north, 87% central and 75% south. Four inch soil temperatures averaged 61° north, 66° central and 67° south.

Fieldwork: 5.0 days suitable. Recent rain beneficial to late crops and fall seeded grains. Movement of fall vegetables increasing. Irish potato harvest well advanced. Sweetpotato harvest increasing. Apple harvest continues active, harvest of corn for grain increasing. Light soybean harvest continues. Pasture growth rate increasing. Grain and cover crop seeding making good progress. Cranberry harvest begun. Corn silage still active.

**NEW MEXICO:** Average temperatures were slightly above normal in most areas.

Soil moisture in adequate supply in most areas. Precipitation continued to occur. Cotton in good condition. The first bale of cotton was picked this week, however, except for some limited fields harvest will not become active until mid-October. Alfalfa fields remain in mostly good condition. The fourth cutting progressing normally with the fifth cutting well underway. Grain sorghum in good condition. Approximately 65% of the wheat and barley fields seeded. Corn in good condition. Harvest of ensilage 85% complete. Green chile harvest beginning to wind down as fields continue to turn red. Fall lettuce harvest expected to get underway next week. Cotton open bolls 65%, 70% 1981, 65% average.

**NEW YORK:** Above average rainfall in most areas except north, temperatures cool.

Corn still maturing, no additional frost. Corn silage 23% done, 12% 1981, 20% average. Third cutting alfalfa 62% in, 58% 1981, 61% average. Apple harvest active. Grape harvest active in Finger Lakes and western regions. Upstate potato harvest in progress. Long Island dry, irrigation of cabbage and cauliflower.

**NORTH CAROLINA:** Temperatures: 3 to 5° below normal. Precipitation widely varied.

Fieldwork: 4.8 days suitable. Soil moisture: 8% very short, 29% short, 55% adequate and 8% surplus. Conditions: Pasture and soybeans mostly fair to good. Cotton, peanuts, sweetpotatoes and sorghum, mostly good. Harvest: Cotton 15%, 1981 15%, average 10%; sweetpotatoes 44%, 1981 31%, average 32%; sorghum 48%, 1981 35%; burley tobacco 83%, 1981 90%, average 83%; corn for grain 72%, 1981 66%, average 63%; peanuts dug 13%, 1981 10%, average 14%; peanuts threshed 6%, 1981 6%, average 9%; apples 74%, 1981 57%, average 53%. Phenological stages: Cotton open bolls 90%, 1981 93%, average 80%; corn matured 100%, 1981 99%, average 96%; soybeans set pods 100%, 1981 99%, average 93%; soybeans shedding leaves 9%, 1981 8%, average 4%. Major farm activities: Corn harvest for grain, burley tobacco harvest, sweetpotato harvest and land preparation for fall seeding.

**NORTH DAKOTA:** Temperatures ranged from near normal west to 5° below normal southeast. Highest temperature was 83° south central on 22nd. Below normal rainfall continued. Only 4 stations reported any measurable precipitation with the greatest 0.06 in. The State was from 0.30 to 0.45 in. below normal.

Dry weather allowed rapid progress on row crop harvest. Harvest of flax, potatoes, and corn silage were all near or ahead of last year's pace at weeks end and all were ahead of average. Dry bean combining gained on the average pace and was only slightly behind normal by 26th. Harvest of sunflower, soybeans, and corn grain were just beginning and were behind average. General combining of these still about 2 weeks away. The per-

centage harvested with last year and average was: Durum 98, 100, 89; flax 75, 74, 60; potatoes 66, 67, 50; dry beans 54, 78, 59; corn silage 73, 61, 58; sunflower 1, 5, 5; soybeans 8, 24, 17; corn grain 2, 3, 6; and sugarbeets 13, 3, 4. Soil moisture conditions continued to be quite dry and below average. Only 18% of the State had adequate topsoil moisture compared to 57 last year and to the average of 68.

**OHIO:** High temperatures 7 to 10° below normal. Averaged in low to mid 60's. Cloudiness kept lows from near normal to 4° below normal. Lowest temperatures in 40's south to upper 30's north. Cool weather kept growing degree days accumulations from 30 to 40 below normal. Seven day totals ranged from mid 50's north - low 60's south. Rainfall totals were above normal ranging from 0.12 to over 2.00 in.

Cool, damp weather slowed maturation and harvesting of corn, soybeans, and tobacco. Dry weather needed for harvest to progress. Activities included corn and soybean harvesting, tobacco cutting, sowing winter wheat, apple picking, harvesting tomatoes, potatoes, carrots and broccoli, spreading fertilizer and fall plowing. Corn dent-ed 100%, 90% 1981, 95% average. Corn mature 90%, 40% 1981, 65% average. Corn harvested 10%, 0% 1981, 5% average. Soybeans dropping leaves 90%, 50% 1981, 70% average. Soybeans mature 65%, 20% 1981, 40% average. Soybeans harvested 20%, 5% 1981, 5% average. Winter wheat planted 10%, 10% 1981, 15% average. Tobacco cut 85%, 80% 1981, 90% average. Days favorable 6. Pasture condition fair. Soil moisture 75% short, 25% adequate.

**OKLAHOMA:** Rainfall was light, averaging 0.30 in. south central and 0.20 in. east central. Elsewhere averages were mostly less than 0.10 in. Temperatures averaged from 2° below normal Panhandle to 10° below normal southeast.

Dry weather aided harvesting activities but hindered development of late planted row crops. Temperatures were favorable for planting small grains, although farmers in some dry areas were still postponing sowing until moisture received. Wheat planting: 20%, 40% 1981, 30% average. Sorghum mature: 50%, 70% 1981, 65% average. Sorghum harvested: 10%, 20% 1981, 10% average. Cotton open bolls: 15%, 40% 1981, 45% average. Days suitable for fieldwork: 6.3.

**OREGON:** Temperatures 3° above normal. Precipitation averaged 1.50 in. throughout mid-State and north central; 0.50 in. elsewhere; up to 2.00 in. at Portland and Hood River.

Wheat seeding slowed at 20% complete; 20% last year; 23% average. Early seeded wheat stands good; some reseeded necessary due to crusting and weeds. Seeding being put off in some instances for more weed control. Corn silage harvest in full swing. Ryegrass seeding progressing. Alfalfa seed harvest continues. New pastures being seeded rapidly. Winter pear harvest progressing. Some damage in Jackson County orchards from high winds. Apple harvest off to good start. Prune harvest in final stages. Filberts dropping. Late potato harvest underway; some movement into storage in Malheur County, also for onions. Onion harvest continuing between showers. Carrot seed harvest ready. Tomatoes and fall vegetables being picked in volume. Livestock condition good. Cattle moving off summer grazing allotments. Range and pastures improving with recent rains.

**PENNSYLVANIA:** Damp and cool most of the week. Latter part produced warmer and drier conditions. Rainfall amounts ranged from 0.25 in. to just over 1.25 in. Driest area was the northeast. Normal temperature was 57° which was 5° below the normal.

Four days suitable. Moisture adequate to short. Activities: Plowing, planting wheat and barley; making hay; and harvesting tobacco, corn silage, potatoes, tomatoes, sweet corn, cucumbers, peppers, cabbage, pumpkins, apples, grapes, and cantaloups. Tobacco 91% harvested, last year virtually complete. Potatoes 77% harvested, last year 59%. Corn 81% dented and 24% mature; last year 92% dented and 43% mature; average 88% dented and 34% mature. Corn silage 51% harvested, last year 49%. Fall plowing 78% complete; last year 69%; average 69%. Barley 63% planted, last year 52%. Wheat 46% planted, last year 38%. Third crop alfalfa 79% harvested, last year 84%. Fourth crop alfalfa 37% harvested, last year 31%. Quality of hay made mostly fair. Feed from pasture below average to average.

PUERTO RICO: Island average rainfall 0.89 in. or 0.91 in. below normal. Highest total 3.76 in. Highest 24-hour total 1.92 in. Temperatures averaged about 84 to 81° on Coasts and 77 to 76° Interior Divisions. Extremes: 94 and 57°.

SOUTH CAROLINA: Temperatures mostly 3 to 7° below normal. Scattered showers earlier, finally, general rain with totals ranging to 4.00 in. over middle of coastal plain.

Soil moisture short to adequate. Five days suitable for outdoor work. Corn 89% harvested, 88 year ago, 84 average. Some cotton benefited from rains, cool weather slowing development; some bolls opening too rapidly due to dry stress; 84% open, 80 last year, 85 average; 4% harvested, 8 year ago, 14 average; fair to good condition. Soybeans fair condition, early crop where stressed shedding pods or pods not filling; some late crop helped by rains, insects not general, occasionally severe pressure; 30% had leaves turning, 29 last year, 33 average; 10% shedding leaves same as 1981, 15 average; 3% mature, 8 last year; none harvested, 1% last year and average. Winter grazing 44% planted, 29 last year, 31 average; 21% germinating with rains arrival, 12 year ago. All cucumbers 11% harvested, 22 last year; fair to good condition. Fall snap beans 1% harvested, 12 last year, 14 average; conditions good.

SOUTH DAKOTA: Temperatures normal west, 6 to 8° below normal east. Extremes: 85 and 23°. Precipitation almost non-existent.

Frost damage low lying areas. Mostly light to moderate. Topsoil moisture critically short much of northwest and north central; short northwest, west central, north central and northeast; adequate elsewhere. Six days suitable. Main activities corn silage chopping and winter grain seeding. Soybean harvest getting underway. Corn maturity 7 days behind. Sorghum 5 days behind. Flax harvested 95%, 1981 100%, average 100%. Soybeans shedding leaves 81%, 1981 87%, average 87%. Corn in dough 96%, 1981 100%, average 100%. Corn dented 87%; 1981 93%, average 98%. Sorghum showing color 87%, 1981 92%, average 94%. Corn mature 67%, 1981 66%, average 88%. Soybeans mature 63%, 1981 63%, average 62%. Sorghum mature 48%, 1981 56%, average 58%. Sunflowers mature 84%, 1981 75%, average 73%. Winter wheat seeded 87%, 1981 87%, average 87%. Winter rye seeded 83%, 1981 86%, average 83%. Winter wheat emerged 50%, 1981 46%, average 60%. Winter rye emerged 52%, 1981 55%, average 63%.

TENNESSEE: Fieldwork available 4.8 days. Soil moisture 19% short, 67% adequate, 14% surplus. Corn mature 86%, 1981 85%, average 78%; harvested 20%, 1981 27%, average 21%. Cotton open bolls 78%, 1981 49%, average 48%; harvested 16%, 1981 3%, average 12%. Soybeans shedding leaves 27%, 1981 21%, average 24%; mature 6%, 1981 6%, average 6%; harvested 1%, 1981 0%, average 2%. Tobacco harvested:

Burley 92%, 1981 93%, average 90%; dark fired 89%, 1981 96%, average 90%; dark air-cured 90%, 1981 96%, average 92%. Wheat sown 16%, 1981 14%, average 24%. Oats sown 32%, 1981 33%, average 42%.

TEXAS: Weather: Upper level disturbance triggered scattered thunderstorms North and East Texas first half week, while Canadian air mass brought clear skies midweek. Cold front on 24th southeastward across State, preceded by scattered showers and thunderstorms from Panhandle through North Central and East Texas. Temperatures cooler. Precipitation confined western, southern and eastern regions of the State.

Crops: Scattered showers alleviated dry conditions, interrupted field operations some areas. Rains provided needed pre-plant moisture some small grain fields, many wheat, oat stands dry seeded. Ground too hard and dry to cultivate some areas. Mild weather, cool night temperatures slowed cotton development High Plains. Some early-planted fields defoliated, but many producers waiting first frost. Insect populations heavy some late-planted stands Low Plains, control measures active. Harvest good progress Blacklands, yields good despite prolonged dry, summer weather. Early fields being defoliated Trans-Pecos where bollworm activity decreasing. Statewide condition, at 57% of normal, was unchanged from last week. Condition across the State was 1% excellent; 15% good; 64% fair; and 20% poor. This compares with 82% of normal last year. Sorghum harvest underway scattered areas Panhandle. Widespread showers Plains alleviate some moisture-stressed conditions, some dryland fields "burned back" by the hot, dry weather not recover. Low Plains yields below average late-planted fields. Condition across the State was 84% of normal with 14% excellent; 57% good; and 29% fair. This compares with 91% of normal last year. Corn harvest progressing well High Plains, high moisture grain harvested scattered areas. Lodging remains problem some areas, but generally yields good. Statewide condition was 88% of normal with 24% excellent; 57% good; 16% fair; and 3% poor. This compares with 90% of normal last year. Scattered showers necessary pre-plant moisture small grain fields, but many stands continue dry seeded. Producers Low Plains fertilizing wheat fields planted for winter pasture. South Central Texas rain needed for oat and wheat fields to germinate. Peanut harvest good progress Cross-Timbers, where many dryland fields moisture stressed by dry, summer weather. Yields fair many early varieties. Minor disease problems Edwards Plateau. Some leaf spot damage Low Plains. Scattered showers High Plains benefited soybean stands in pod-fill stage. Many fields turning color, harvest early-planted varieties. Insects have damaged some fields along coast, where additional moisture be welcomed. Second crop rice hard dough stage. Birds major problem some fields. Hay meadows responding recent showers, although cooler temperatures slowed development some areas. Cotton open bolls 41%, 48% 1981, 46% average. Cotton harvested 17%, 14% 1981, 18% average. Sorghum turning color 91%, 93% 1981, 94% average. Sorghum mature 73%, 77% 1981, 78% average. Sorghum harvested for grain 69%, 72% 1981, 72% average. Wheat planted all purposes 29%, 36% 1981, 41% average. Wheat emerged 5%, 8% 1981, 14% average. Corn for grain harvested 63%, 61% 1981, 61% average. Peanuts harvested 22%, 16% 1981, 23% average. Soybeans harvested 2%, 4% 1981, 3% average. Sunflowers harvested 23%, 33% 1981, 22% average. Oats planted 18%, 24% 1981, 30% average.

Range and pasture: Ranges, pastures responded scattered showers, although additional rainfall needed winter grass development. In comparison with recent years, amount dry, available forage good. However, moisture needed so pastures "green-up" and cure before first frost. Dry conditions

problem Cross-Timbers, fire hazard still exists. Short grazing conditions Low Plains, producers not moved stocker cattle onto pastures. Livestock good to fair condition as producers continue supplemental feeding. Panhandle calves moving to market good weaning weights.

**Commercial vegetables:** Lower Rio Grande Valley, fall vegetable planting good progress, many producers fertilizing tomato and pepper stands. Onion transplanting and lettuce planting active. Irrigation operations continue most citrus groves. Coastal Bend, fall cucumbers benefited from scattered showers. Carrot planting nearing completion, while onion planting continued. San Antonio-Winter Garden, cabbage and carrots good progress. East Texas, sweetpotato harvest nearing completion some areas. Trans-Pecos, carrots, tomatoes and bell peppers move to market. Plains, cantaloup and bell pepper harvest slowing down. Supplies carrots remain for harvest. Pecans splitting shucks Central Texas southward. Light crop most of the State, irrigated orchards Trans-Pecos should have good production. Shells hardening around El Paso area, many producers winding down irrigation operations.

**UTAH:** Few isolated light showers forepart period. Heavy precipitation most areas of State over weekend. Considerable local flash flooding, especially along Wasatch front. Average temperatures continued well above normal most areas, ranging from 1° below to 8° above.

Rain continued to delay fall seeding and harvesting. Greatest damage has been to alfalfa hay. Nearly two-thirds of third crop hay was in, but much was hit by rain. Alfalfa seed 57% harvested and waiting for dry weather. Only 13% of onions and 26% of potatoes had been dug by week's end. Winter wheat planting stood at 48%. Livestock continue in good condition on very good range feed.

**VIRGINIA:** Cool with spotty precipitation. One front passed through the State 20th and 21st bringing cloudy, cool weather through 22nd. Clearing skies and warmer temperatures returned 23rd and 24th. Temperatures averaged 2 to 3° below normal--the first freezing temperature of the fall season was observed--32° at Blacksburg on the 24th. A low pressure center developed 25th over South Carolina and moved northward 25th and 26th. Much needed precipitation accompanied this system--with Statewide precipitation amounts of 1.00 to 1.50 in. common.

The showers during the weekend reduced days suitable for fieldwork to 4.0, but improved soil moisture to 59% short and 41% adequate. Rains amounting to 1.00 to 1.50 in. over the State reduced stress on peanuts and late crop beans. Major activities included harvest of corn for grain and silage, seeding small grains and other cover crops, preparation for and marketing of livestock, picking apples, harvesting vegetables and digging peanuts. Corn for grain 100% dent, 99% 1981; 92% mature, 96% 1981; 34% harvested, 37% 1981, 39% average; cut for silage 81%, 78% 1981. Soybeans condition rated good but late season beans still show some damage from dry weather. Harvest less than 1%, 3% 1981, 1% average. Tobacco harvest and marketing active. Flue-cured 96% pulled, 91% 1981, 76% average. Burley 92% cut, 92% 1981, 84% average. Fire-cured 96% cut, 98% 1981, 90% average. Sun-cured 93% harvested, 92% 1981, 85% average. Winter wheat seeding 6% complete, 7% 1981, 5% average. Barley 12% seeded, 16% 1981, 12% average. Oats 18% seeded, 26% 1981, 18% average. Peanuts 15% dug, 12% 1981, 5% average; 7% combined, 3% 1981, 2% average. Apples 40% picked, 42% 1981, 37% average. Sweetpotatoes are 49% dug, 40% 1981, 20% average. Pastures dry. Haying limited with livestock sales active.

**WASHINGTON:** The 18th was a typical late summer day with hot and dry conditions caused by an easterly flow over the State. The pattern changed by 20th as low pressure and an onshore flow of moist marine air moved into the State. Temperatures dropped by 10 to 15° and most of the rainfall occurred over 19th and 20th. High pressure to the west continued the onshore flow of cool marine air through midweek; but, the rapid movement of moisture from the south brought warmer air, clouds and rain--mainly to the south half--late 23rd.

**West:** Vegetable harvesting continued for sweet corn, onions, carrots, tomatoes, peppers, cucumbers, cauliflower, green beans, and vegetable harvesting almost finished. Raspberry caning underway. Livestock in good condition with range and pasture feed in mostly adequate supply. Beef cattle and feeder calves being moved to market. Dairymen green chopping.

**East:** Fall planting of winter wheat continues with considerable reseeding because of crusting. Harvesting of silage corn, potatoes, hops, alfalfa seed, and third cutting of alfalfa hay continues. Golden and Red Delicious apples still being picked. D'Anjou pear harvest almost over. Grapes just being harvested. Livestock in good condition. Some cattle and sheep being moved to lower pasture and hay fields. Range and pasture feeds in adequate supply. Winter wheat 52% seeded, 53% 1981, 44% average.

**WEST VIRGINIA:** Temperatures averaged 5 to 10° below normal. Low 30°, high 85°. Precipitation normal. Range: 0.18 to 2.04 in.

Soil moisture short to adequate. Days worked averaged 4.4. Main activities: Corn chopping, hay harvesting, pasture clipping and maintenance. Fall plantings: Wheat 16%, 55% in 1981; barley 27%, 57% in 1981. Corn in good to fair condition with 21% harvested, 23% in 1981. Hay in fair condition. The 2nd cutting was 93% complete; 3rd cutting was 74% complete and 86% of normal. Intermittent showers stalled hay harvesting in some areas. Pastures in fair condition. Tobacco in fair to good condition with 98% topped, 94% harvested at 91% of normal. Apples in fair to good condition. Gardening mostly completed. Rain gave some short term relief of dry condition.

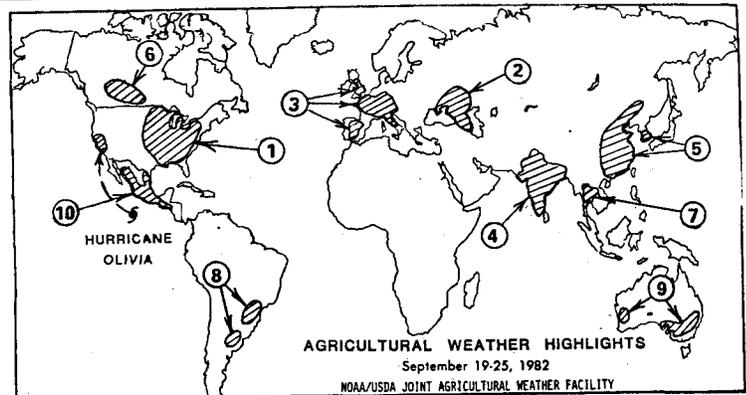
**WISCONSIN:** Week began on a cool and wet note, but moderated by 23rd. Temperatures averaged 8° below normal. Temperatures ranged from a very pleasant 75° in Hudson on the 23rd to an unseasonably cool 24° in Lafarge on the 21st. Widely scattered frost was reported in northern areas on the mornings of the 21st and 22nd. Heaviest rainfall was reported from north with many stations reporting totals of 1.00 in. or more.

Fieldwork: 5 days suitable. Silo filling began in earnest, now 13% complete, 24% 1981, 34% average. The 1982 corn crop has made progress but still behind schedule. Currently 81% of the crop in dent, 90% 1981, 95% average. An estimated 58% of the crop safe from frost, 79% 1981, 83% average. Virtually no corn grain harvesting will be accomplished in September this year. The soybean crop maturing and 40% of acreage has leaves which are shedding, 50% 1981, 49% average. Some 3rd and 4th crop hay being made but drying conditions have not been optimal. Pastures still relatively lush and rated at 84% of normal, 91% 1981, 84% average. The 1982 tobacco harvest rapidly winding down. Vegetables and speciality crops being harvested as field conditions permit. Topsoil moisture supplies were rated 6% short, 70% adequate, and 24% surplus. Growing degree day accumulations, since April 1, have averaged 9% below normal.

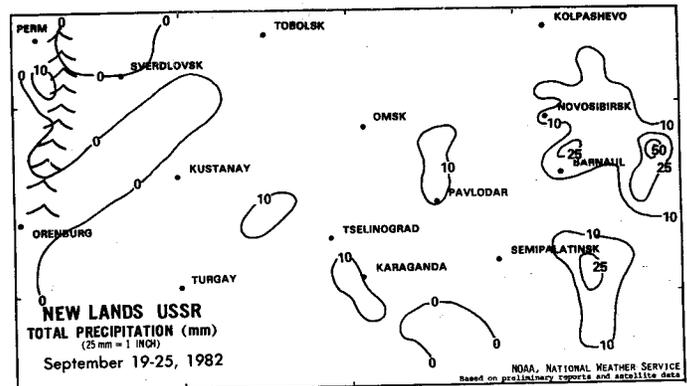
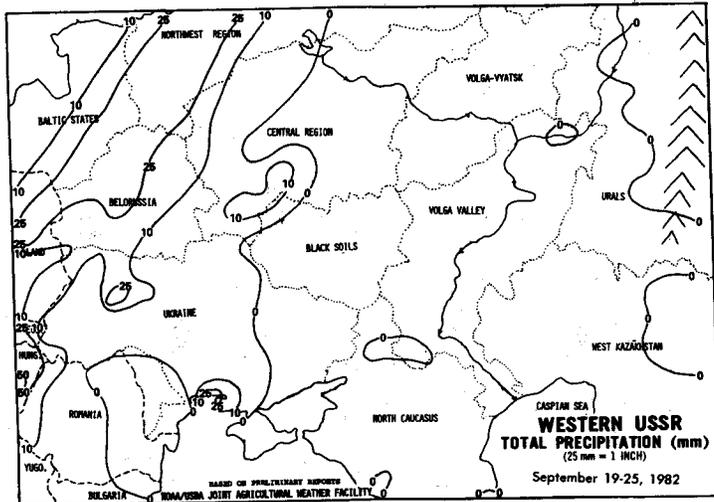
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# International Weather and Crop Summary

September 19-25



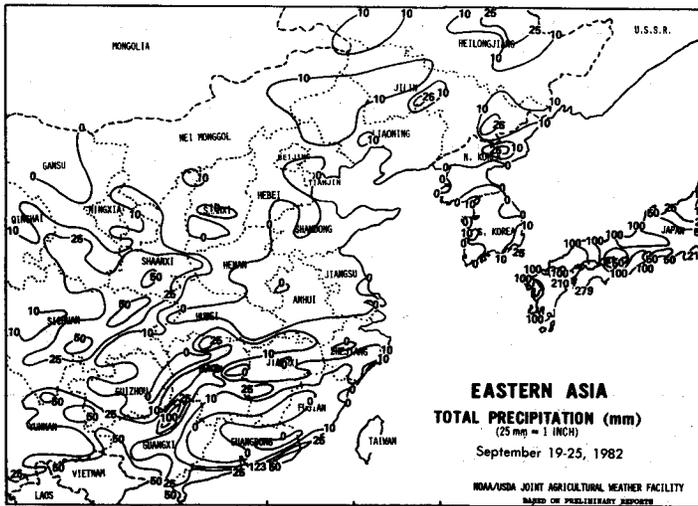
1. **UNITED STATES:** Unusually cool weather east of the Rockies slows crop development. Freezing temperatures cause some damage to crops in northern Plains. Unseasonable rain in central California damaged fruit and vegetable crops.
2. **USSR:** Dry weather continues to aggravate topsoil moisture conditions for planting in the major winter grain area.
3. **EUROPE:** Wet weather aids soil moisture recharge in some areas but is unfavorable to maturing crops.
4. **SOUTH ASIA:** Beneficial rains in southern India, beneficially drier in the northeast, and continued unfavorably dry in the northwest.
5. **EASTERN ASIA:** Below-normal rainfall in most areas; crop prospects remain quite good.
6. **CANADA:** Dry, mild weather favors rapid harvest progress throughout Canadian Prairies.
7. **SOUTHEAST ASIA:** Generous rains benefit much of Thailand, only localized areas remain too dry.
8. **SOUTH AMERICA:** In Argentina, timely showers in western wheat area but mostly dry elsewhere; in Brazil, showery weather continues in south but dry in north as wheat nears maturity.
9. **AUSTRALIA:** Beneficial showers in west; some localized rain in east, but severe drought persists throughout east and south.
10. **MEXICO:** Rains from fringes of Hurricane Olivia flood some croplands along the southern coast, while northwestern watersheds remain drier than usual.



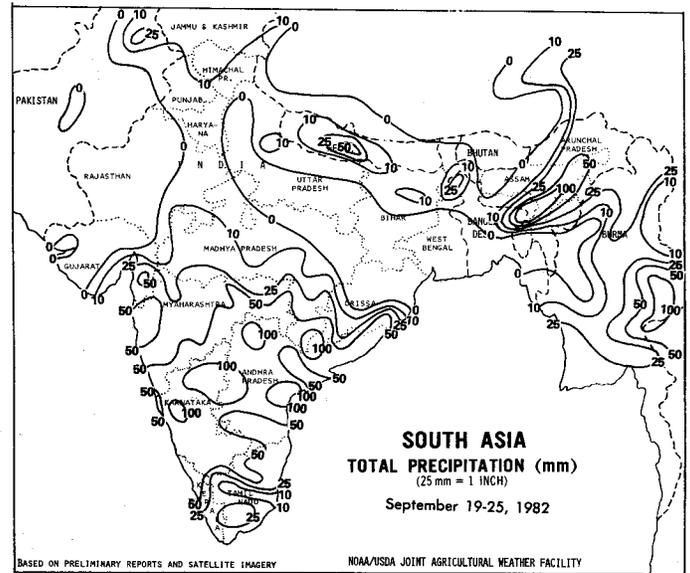
**USSR:** An eastward-moving cold front advanced into European USSR early in the week, where a ridge of high pressure, centered over the Urals and West Kazakhstan, then stalled it. Along the front, widespread showers fell over crop areas in the Baltic States, Belorussia, and the Northwest Region. The rain provided favorable topsoil moisture needed for winter grain planting, but it may have caused some delays in the harvest. Elsewhere, dry weather covered most crop areas, favoring maturing crops and aiding the harvest. The continued dry weather in the eastern Ukraine, southern Black Soils, southern Volga Valley, and North Caucasus aggravated the delay in winter

grain sowing progress because topsoil moisture supplies are at unfavorably low levels for proper seed germination. Planting beyond early October in these areas may not ensure that the winter grain crop becomes well established before entering dormancy. Weekly temperatures in European USSR were above normal in many areas.

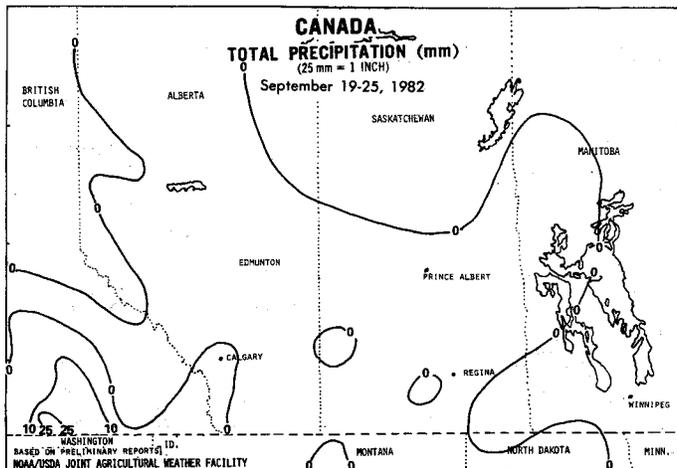
In the New Lands, high pressure prevailed over the region. Consequently, only light, scattered showers covered most areas and harvest delays were minimal. Some eastern crop areas, however, did receive 10-25 mm of precipitation, and harvest delays in these areas may have been greater. Weekly temperatures were generally above normal in the west and below normal in the east. In addition, night frosts were common everywhere except the southwest.



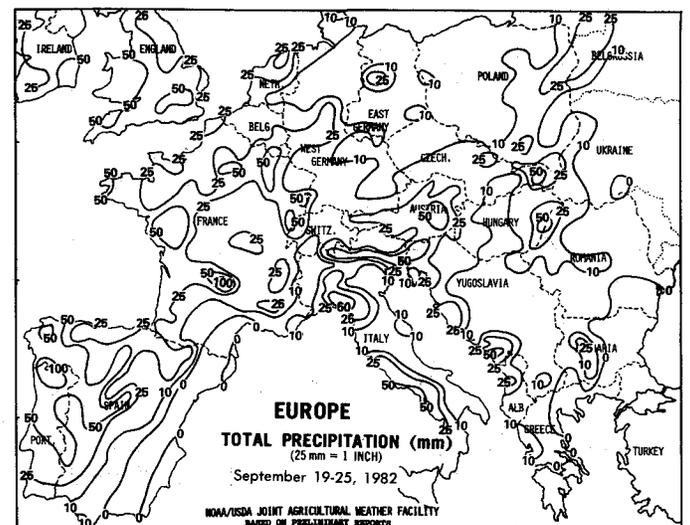
**EASTERN ASIA:** Little or no rain fell on the North China Plain and in the northeast. Conditions remained good for sowing winter grains. Heaviest rains fell in the hills to the west, while rainfall in the south slackened markedly. The drier weather favored harvesting, and soil moisture remained quite adequate for late-maturing crops. Wetter-than-normal weather continued along coastal portions of Guangdong. Temperatures were above normal in northern and northeastern China, slightly below normal near the Yangtze River, and near normal in the south. In South Korea, light rain fell in most areas; 20-25 mm amounts in the southeast were still below normal. These conditions favored rice harvesting. Typhoon Ken drifted across western Japan during the weekend, dumping heavy rains along the southern coast and lesser but above-normal rainfall over much of western Japan. This moisture was unfavorable for maturing rice.



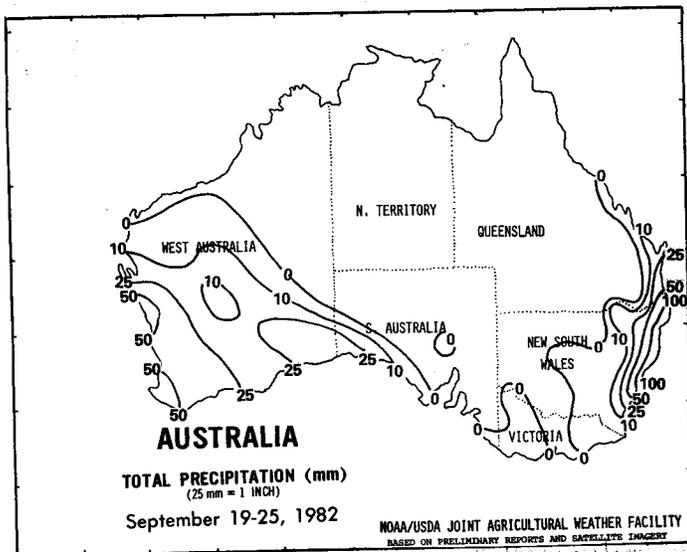
**SOUTH ASIA:** Scattered showers fell in northern parts of Pakistan and India, while above-normal rainfall benefited crops over much of southern India. The dry weather in the Ganges Basin relieved the wet conditions of recent weeks. Most of Gujarat remained detrimentally dry for peanuts and cotton. Rainfall increased further in southern India, maintaining improved growing conditions. There is no evidence yet that the early termination of monsoon rains that occurred in northern India will also occur in the south. Temperatures over the region held mostly near normal.



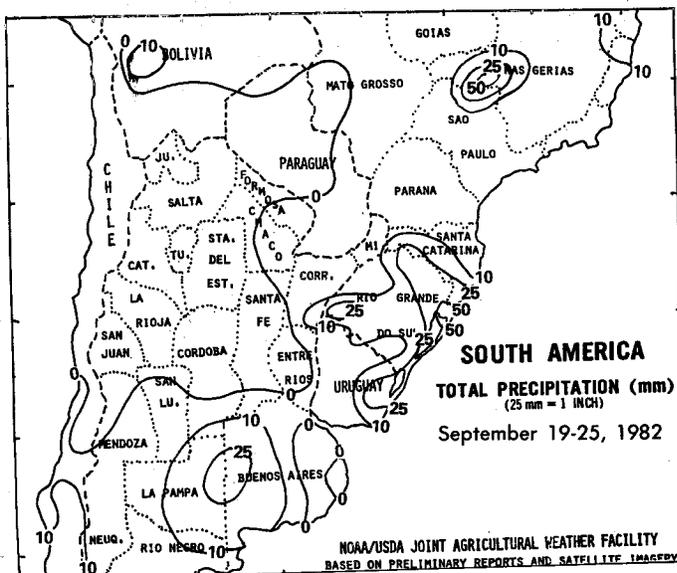
**CANADA:** Mostly dry weather and above-average weekly temperatures favored the harvest of grains and oilseeds throughout the Prairie Provinces. The dry, mild conditions especially benefited drying of grains which had been cut with a high-moisture content. Showery weather and frost during the previous few weeks have caused some reduction in crop quality as grains and oilseeds neared maturity, particularly in northern crop areas of Alberta and Saskatchewan. Reports estimate that over 75 percent of Alberta's wheat crop has been swathed and over 25 percent combined. In Saskatchewan, southern crop areas are in late harvesting stages, but less than 50 percent of the northern grains have been combined. Mostly favorable weather has allowed Manitoba's crop harvests to progress rapidly toward completion.



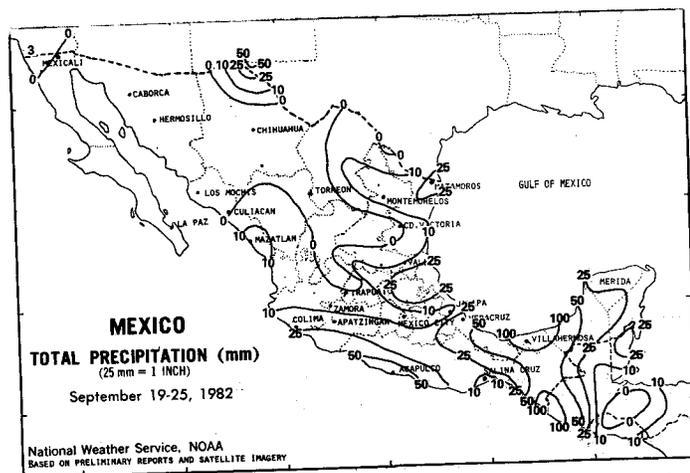
**EUROPE:** A frontal system moved slowly eastward during the week, leaving behind a highly variable precipitation pattern. Wet weather covered much of Spain, France, England, northern Italy, and central Europe. Rainfall amounts, which ranged from 25 to 50 mm, aided soil moisture recharge but were unfavorable to maturing crops. The rain also caused some delays in harvest and fall planting. In contrast, light showers covered northern crop areas, and more rain is needed for winter grain planting. In the southeast, a generally dry precipitation pattern favored maturing crops and aided the harvest. Weekly temperatures were near to above normal in most areas.



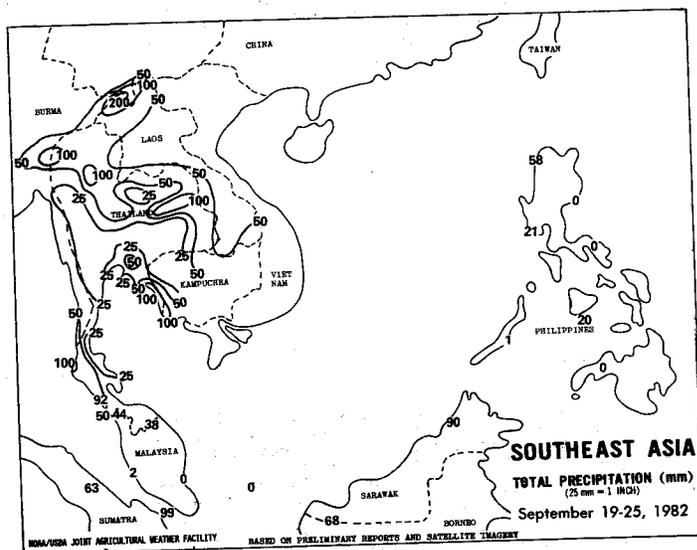
**AUSTRALIA:** An upper-level low-pressure system over eastern Australia induced a surface weather disturbance which produced heavy rain over coastal areas of New South Wales. Some shower activity penetrated into the wheat area of northern New South Wales, but most other eastern and southern crop areas missed any significant rainfall. Thus, severe drought conditions persist throughout the region which, in total, normally produces over 70 percent of the Australian wheat crop. In Western Australia, where timely rains have provided generally favorable conditions for vegetative growth since planting, another week of beneficial showers maintained good growth conditions. In contrast, eastern and southern crop areas are in dire need of moisture to prevent further deterioration of an already depressed agricultural situation.



**SOUTH AMERICA:** In Argentina, showers benefited vegetative growth of wheat in crop areas of eastern La Pampa and western Buenos Aires. Scattered showers also fell in the wheat areas of Santa Fe, Cordoba, and Entre Rios. Mild weather has promoted vigorous vegetative development necessitating timely rains in upcoming weeks as crops advance into reproductive and grain-filling periods. In Brazil, showery weather continued in Rio Grande do Sul, but weekly rainfall amounts were not excessive as in previous weeks. Drier weather prevailed in Parana's wheat area where the early season crop should be nearing maturity. The harvest season usually begins in September in Parana and in October and November further south. Mostly dry weather continued in the citrus/coffee areas of Parana, Sao Paulo, and vicinity.



**MEXICO:** Heavy rains, falling along the outer edge of Hurricane Olivia as it skirted the southern coast, locally flooded and eroded some cropland. Other tropical storms heavily damaged crops and property and took over 1,000 lives earlier in El Salvador and the southern coast of Guatemala. The first significant rains since May fell over parts of the northeastern citrus area. But, in general, the rains were too little and too late to improve the citrus fruit much, but they should help some of the critically stressed trees to survive. The northwestern watersheds remained drier than usual as Olivia stayed well offshore, recurving and sending heavy rains into central California's raisin district.



**SOUTHEAST ASIA:** Rainfall generally increased over most of northern Thailand. Many locations had above-normal rains, maintaining improved growing conditions. The previous week's drier weather should have allowed eastern areas to recover from the flooding so that the abundant rainfall there was beneficial. Above-normal rainfall over much of the north improved water supplies. Relatively dry weather in parts of the west kept localized areas unfavorably dry. Satellite imagery indicated that rainfall in Laos, Vietnam, and Kampuchea was about the same as in eastern Thailand.



**National Agricultural Summary** (continued from front page)

**SATURDAY** . . .The combination of tropical moisture, pumped into the West by the remains of Olivia and an approaching cold front, produced unusual rains across much of California, the central Plateau, and the Northwest. The showers spread eastward to the central and northern Rockies. Another surge of cold air brought freezing weather to eastern North Dakota and northern Minnesota. Light rain spread from the Ohio Valley through Michigan, and showers and a few thunderstorms were scattered from southern Mississippi to the central Appalachians and from Florida to southern Virginia.

**State Summaries** (continued from p. 20)

**WYOMING:** Most stations above seasonal temperatures. Areas in west 4 to 5° above normal. Dry week with no reported precipitation except small amount along southern border.

Topsoil moisture adequate 95% State. Average 6 days suitable fieldwork. Winter wheat planted: 80%; year ago 85%. Winter wheat emerged: 45%; year ago 80%. Winter wheat prospects good most areas. Spring wheat harvested, 95%. Oats harvested, 90%. Normally most small grains harvested by this time. Potatoes harvested: 25%; year ago 30%. Corn in dough: 15%; year ago 10%. Corn denting: 70%; year ago 50%. Corn mature: 15%; year ago 35%. Few fields harvested. Corn silage harvested: 25%; year ago 75%. Sugarbeet harvest starting. Dry beans windrowed: 65%; last year 90%. Dry beans combined: 45%; year ago 70%. Second cutting alfalfa, 95% complete. Third cutting continues few areas. Winter grazing prospects good most areas. Livestock producers expect to winter about the same number of livestock as last year. Calf, lamb weights heavier many areas; few areas indicate lighter weights.

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Managing Editor . . . . . Don Haddock  
Meteorologists . . . . . Jim Williams  
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