

EFFECT OF WEATHER ON CROPS AND FARMING OPERATIONS, DECEMBER, 1929

By J. B. KINCER

General summary.—During the first decade frosts and freezing weather overspread the more southern States and did more or less harm to winter truck in the Gulf section, but a reaction to warmer about the 10th was favorable and some recovery was reported. Rains in the Florida Peninsula were beneficial in relieving the drought that had prevailed for some time, while the general snow that was deposited during the first part of the month in more northern portions disappeared from nearly all the principal winter wheat area. Toward the latter part of the decade generous rains fell in the droughty sections of the West, especially heavy falls being reported from coast districts, while rather heavy snows occurred over the northwestern Great Plains.

During the second decade mild weather throughout the central valley States, attended by considerable moisture, made fields soft and muddy and little outside work could be performed. The main winter wheat belt was generally bare of snow; in more southern sections winter truck showed rapid recovery from the effects of the previous freeze. Further rains in the far West greatly improved conditions in the northern part, but it continued dry in southern districts. During the last part of the decade there was a marked reaction to colder and outside operations were not very active.

The last decade of the month was much warmer throughout the interior of the country, which permitted more active field operations. The snow cover disappeared rapidly except over the more northern districts, while truck showed improvement in the west Gulf area. The warmer weather and absence of storms were favorable for livestock, though there was much need of snow on ranges in some sections.

Small grains.—Winter wheat was well protected during the severe weather of the first decade, but toward the

latter part of the period the snow cover disappeared from nearly all of the main belt; very little injury was apparent from the cold. Oats were damaged by the freeze in the Southeast, while moisture was needed in parts of the West, although the Pacific Northwest had general rains; the moisture in the latter area was beneficial, but was too late to save large acreages. Winter wheat remained in satisfactory condition during the second decade, despite the variable weather, which checked growth in places. During the last decade the ground was bare over practically the entire wheat area, but the general condition of grains remained satisfactory, except for some further damage to oats in the Southeast.

Corn and cotton.—The variable weather in the Corn Belt caused marked variations in gathering the remaining crop; there were some complaints of grain spoiling in fields and cribs; but molding was mostly checked by cold weather.

Gathering the remaining cotton crop was largely completed during the month, with but little unpicked at the close.

Miscellaneous crops.—Meadows remained in generally satisfactory condition throughout the month. The cold weather caused some suffering among livestock in the northern Great Plains, but at the close the open range permitted free grazing. The absence of water in the central Rocky Mountain region necessitated long drives of livestock, which was detrimental, but the rains in the Pacific Northwest caused good growth of grass; ranges were still poor in the far Southwest.

There was considerable damage to truck during the month, especially to cabbage and to tender varieties which were injured or killed south to southern Florida. Sugarcane in Louisiana showed some deterioration due to the warmth, following the freeze. Citrus continued to do well generally, with no extensive damage reported.

WEATHER OF THE ATLANTIC AND PACIFIC OCEANS

551.506 (261.1)

NORTH ATLANTIC OCEAN

By F. A. YOUNG

The weather over the steamer lanes was exceptionally severe during the first and last decades of the month, when the northern section of the ocean was swept by one storm of hurricane force after another. Both series of gales were noticeable for the extreme deepness of the lows. The observer, Mr. P. W. Nelson of the American S. S. *Westpool*, Capt. L. F. Thompson, from Bremen to Boston, reports as follows:

At 8:15 p. m. (ship's time) on December 4 the following was received from the American S. S. *Balsam*: While in 52° 07' N., 18° 41' W., wind SSE., 10, barometer 27.40 inches. Our position and barometer at same time, 50° 47' N., 16° 38' W., wind NW., 12, barometer 27.46 inches (lowest reading). Both readings corrected.

Both of these vessels are equipped with aneroid barometers, recently compared. While the corrections to be applied at such abnormally low readings may differ somewhat from those obtained at near normal pressure, the close agreement of the two instruments indicates that the error is probably not very large.

William Allingham in his "Manual of Marine Meteorology" states that the Royal Mail steamer *Tarifa* on February 5, 1870, while in 51° N., 24° W., reported a barometer reading of 27.33 inches, which was the lowest ever recorded in this region. As the reliability of the reading of the *Tarifa's* barometer is not known, these of the

Westpool and *Balsam* can be assumed to be not far from the record.

As shown in the table of storms a number of vessels reported readings below 28 inches in the first decade and two vessels so reported in the last. Due to the duration and severity of the first series of gales the powerful German liner *Bremen* was delayed three days on her westward voyage, arriving in New York on the 13th. Numerous press reports give an idea of the conditions during this period, and also refer to the large number of casualties, which were especially numerous along the British coast.

The low average pressure for the month in this region is shown by the unusually large negative departures at the three land stations on the British Isles, as given in Table 1, although a period of high pressure occurred from the 15th to 19th, the barometric readings at London ranging from 30.43 to 30.72 inches.

It is interesting to note that while these extreme cyclonic conditions existed over the North Atlantic, equally extreme anticyclonic conditions prevailed over the northwestern United States and Alaska, where readings of 31 inches and over were recorded at a number of stations.

Charts VIII to XIII cover the period from the 1st to 6th, inclusive, and not only give an idea of the conditions in the steamer lanes, but also show the "norther" in the Gulf of Mexico that prevailed from the 2d to 4th.

As is generally the case in an unusually stormy month, fog was comparatively rare over the steamer lanes, being