

## EFFECT OF WEATHER ON CROPS, JULY, 1919.

By J. WARREN SMITH, *Meteorologist in Charge.*

*Farm work.*—Comparatively dry weather prevailed during the first half of July, rainfall being of a local character and mostly in the form of showers, which made conditions favorable for outdoor work, and farming operations made good progress. There was likewise little interruption in central, northern, and western districts during the latter half of the month, but rainfall was frequent and often heavy in the East and Southeast, which caused much interruption; very little farm work was possible during much of this period in Southeastern localities.

*Winter grains.*—The weather was favorable for harvesting winter grains and this work progressed to the northern limits of the winter wheat belt early in the month, while good advance was made in the late northern and western districts as the month progressed. It was exceptionally favorable for drying grain in shock and also for thrashing, except in restricted localities, principally in the Atlantic coast States, where thrashing was delayed and considerable damage done to grain in shock by wet weather. The yield of winter wheat was disappointing, however, and far below expectations in many of the principal producing areas.

*Spring grains.*—The weather during July was generally unfavorable for spring wheat in practically the whole of the spring wheat area. Continued dry weather produced very harmful results in the western portion of the belt, while disease in the eastern portion, under the influence of warm, wet weather during the first half of the month, caused pronounced deterioration. Later the crop ripened too rapidly under the influence of moderately high temperature and dry weather. Oats and other spring grains showed some improvement during the month in the Northeast, but in many other sections the weather was unfavorable for these crops, particularly in the Northwest, where serious damage was done by drought.

*Corn.*—Under the influence of favorable temperatures and mostly sufficient soil moisture, corn made good growth in nearly all sections during the first half of the month. It was too dry the latter half, however, in

many normally heavy producing areas and at the close of the month corn was suffering greatly for moisture, and considerable damage had been done to the crop, in some localities, particularly from the lower Ohio Valley northward, in portions of the lower Missouri Valley, and from the central Great Plains northward. The weather continued favorable for corn in the Atlantic coast States.

*Cotton.*—While cotton in the western portion of the belt was in generally poor condition at the beginning of the month, under the influence of higher temperatures and less rainfall it made fairly good progress during July in that area. In most eastern sections, however, there was inadequate sunshine and too much rain, which unfavorably affected the development of the crop. There were many complaints of too rank growth at the expense of fruit and the weather was favorable for insect activity; weevil did much damage, particularly in districts where rainfall was frequent and heavy.

*Potatoes, truck, and fruit.*—The latter part of the month was rather unfavorable, on the whole, for potatoes and truck crops. They were unfavorably affected by lack of moisture in the central portion of the country and also in the West and Northwest, and by excessive moisture in the Atlantic coast States and many Gulf districts. The weather was mostly favorable for fruit, although there was some local damage to citrus fruit in Florida by heavy rain.

NOTE.—There was published in the National Weather and Crop Bulletin, No. 19, series of 1919, a chart showing for the country east of the Rocky Mountains the percentage of years with 30 consecutive days or more without 0.25 inch of rainfall in 24 hours for the period from March to September, inclusive. This chart shows graphically the relative frequency of warm season droughts of this character in different sections of this area. The percentages increase, as a rule, to the westward, and in the more western portions of the Great Plains-phenomena of this character are practically of yearly occurrence. In the Ohio, central Mississippi, and lower Missouri Valleys the percentages range from 40 to 50; they show a rapid increase from the eastern portion of the Great Plains to the westward. The lowest percentages appear in the interior of the Northeast and in the area extending northward from the central Appalachian Mountain districts, where there is experienced, on the average, droughts of this character only about one year in three.