THE subject of drought in relation to corn yield has been given very little attention, particularly in the northwestern corner of the Corn Belt. This paper proposes to investigate the variable yields of corn in this section of the United States by inquiring into the effect which drought periods during the growing season have on corn yields. The study also considers the importance of soil moisture reserves at the beginning of the growing season for securing a good corn crop.

REVIEW OF LITERATURE

In an effort to predict corn yields in various parts of the Corn Belt, considerable work has been done in correlating yields with temperature and precipitation. In 1901 Wren (10) summarized the work done up to that time. Much of it dealt with temperature, though other climatic variables were investigated. Smith (7) in 1904 showed that corn yield curves and July rainfall curves closely approximated one another for eight corn producing states. He showed further that July rainfall in Ohio affected more than the rainfall for any other month. Wallace (9) contended that July rainfall was not such a dominating factor in many of the other corn belt states as it was in Ohio. He considered the problem to be associated with the accurate determination of drought and heat.

In 1928 Kincer and Mattice (2) found growing crops were influenced by a number of weather elements acting in combination and obtained good correlation coefficients. Mattice (3) divided the Corn Belt along state boundaries using those climatic factors giving the highest correlation coefficients as a basis. He also made an attempt at computing corn yields by using various groupings of weather variables. Hodges in Kansas (1) noted that the effect of rainfall and temperature on corn yields was quite variable, and that July droughts affected corn yield estimates adversely. Rose in Indiana (5) in 1932 showed that corn yield correlates closely with July and August rainfall in northeastern Kansas and that 10-day drought periods are not long enough to damage corn.