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? WHY THE WEATHER ? Mailed September 27, 1929

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FROST DAMAGE TO CORN

One of the great hazards of the corn crop in the early autumn is the possible occurrence of frost before the crop is fully matured. In the American Corn Belt almost every year brings at this season a period varying from a few days to more than two weeks when the night temperatures fall below 50 Fahrenheit, usually culminating in a few nights on which occur frosts of more or less severity. Often this cold period is followed by days or weeks of warmer weather, favorable for normal ripening of uninjured corn.

Recent studies by the U.S. Department of Agriculture indicate that corn plants may be injured by temperatures above those at which frosts occur. Some strains suffer ill effects from a succession of cool nights during which the temperature falls only to 50 or 45. Others are killed by a few hours' exposure to temperatures around 40. Though some strains may not actually be killed by such temperatures, their maturing is often slowed down sufficiently to reduce the quality of the grain. Corn from plants killed prematurely by cold is not only inferior in quality but also more susceptible to "ear rot". Thus there is often much commercial damage to the crop when the temperature falls below 40 for a few hours, even though there is no frost.

In order to reduce this loss to farmers the Department has for some years been breeding hybrids less susceptible to the effects of cold. Some of these have proved capable of enduring for several hours without injury temperatures lower than 32 (the freezing point of water), and in a few cases even as low as 28.

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