RELATIVE YIELDS FROM BROKEN AND ENTIRE KERNELS OF SEED CORN.\textsuperscript{1}

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It is not uncommon to find kernels in seed corn that have been physically injured. These injuries are usually the result of weevil attacks, gnawing by mice, cracking in shelling and seeding, or abrasions from other causes. Ordinarily, the presence of a small percentage of injured kernels is not regarded as seriously affecting the quality of the seed. Occasionally, either from necessity or otherwise, corn containing a considerable percentage of injured kernels is planted. Whether injuries of this physical nature affect the growth, development, and productivity of the plant is the subject of this investigation.

Three ears of U. S. Selection No. 120, a white dent variety; were used in the experiment. Broken or cracked kernels from each ear were planted in comparison with uninjured kernels from the same ear. The breaking was similar to the injuries that frequently occur in mechanical shelling and seeding, and analogous to weevil and mouse damage in that the amount of nutriment in the kernel was lessened. The injuries were confined to the endosperm, in no instance extending to the germ.

The experiment was conducted on Arlington Farm, near Washington, D. C., in 1914. The corn was planted May 29 by hand in rows 3.3 feet apart, 40 hills per row, with the hills 3.3 feet apart in the row. When the plants were 6 to 8 inches tall, the stand was thinned to 2 plants per hill. The crop was harvested October 30. The statistical data are presented in Table 1.

\textsuperscript{1} Contribution from the Office of Cereal Investigations, Bureau of Plant Industry, United States Department of Agriculture, Washington, D. C. Received for publication June 30, 1920.