COMMENT ON DEVELOPING A HIGH-YIELDING STRAIN OF CORN

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In 1914, the Office of Corn Investigations of the Bureau of Plant Industry issued a circular letter in which data were given on the yields of corn at Piketon, Ohio, to show improvement from ear-to-row breeding. In this the average yield for the seven years, 1901 to 1907, inclusive, was compared with the average yield for the seven years, 1907 to 1913, inclusive. The increase was attributed to the ear-to-row breeding. Kiesselbach showed that on the basis of the data in this circular the ratio of the first period to the second was 100:110.4 for ear corn, and 100:119 for shelled corn.

Kiesselbach also states that the yields for Ohio during the same two periods, as compiled from the yearbooks of the U. S. Department of Agriculture, indicate a similar increase for the state in general. During the last period of seven years the state yield was 11.4% higher than during the previous seven years. Similarly, on the basis of the reports of the Ohio State Secretary of Agriculture, the yields in Pike County, Ohio, where the ear-to-row experiments were conducted, averaged 9.4% larger during the last seven years than during the previous seven years. Kiesselbach concludes, "this suggests that more favorable climatic conditions may have been the cause of the apparent improvement of the ear-to-row corn."

An interesting paper in a recent number of this JOURNAL purports to show increased yields of corn accompanying 12 years of breeding by the Williams ear-to-row remnant method. The increased yields obtained over three 4-year periods are given as evidence of the efficacy of the methods followed. The Walden Farms on which Mr. Kirkpatrick obtained the yields reported are located in Keokuk County, Iowa. In view of the Ohio experiments referred to, it seemed worth while to look up the yields of corn in Keokuk County, Iowa, and in the state as a whole. These are shown in Table 1 where they are averaged by 4-year periods to correspond with the yields reported for the Walden Farms which are shown for comparison. The last column in Table 1 shows the yield on the Walden

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