FIELD TECHNIC IN DETERMINING YIELDS OF PLOTS OF GRAIN BY THE ROD-ROW METHOD.

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INTRODUCTION.

Determining the yields of grain on varietal, rotation or soil fertility plots or on large fields by harvesting portions of the areas is frequently desirable or necessary. The necessity may arise at outlying fields where tests are made in cooperation with farmers or at substations where facilities are lacking for harvesting or thrashing accurately the product of the entire areas. Also, it is frequently desirable to harvest portions of plots as a check on the yields obtained from harvesting the entire areas.

The value of any method used for this purpose depends upon (a) the degree of precision which may be obtained from its use, (b) the labor required, and (c) ease of manipulation. In the present paper, data are given (a) on the precision obtained by determining yields by the removal of rod rows from tenth-acre plots as compared with harvesting and thrashing the entire plots, and (b) the comparative labor requirements of determining yields by the two methods.

REVIEW OF LITERATURE.

McCall (3) gives directions for making an apparatus to be used in measuring off areas of 1/5,000 acre in grain or grass plots. An outline of a plot is given showing the location of five areas, making a total of 1/1,000 of an acre, which were removed from each plot of wheat and timothy in a preliminary trial. The statement is made that the results secured by this method checked quite satisfactorily with the yields ascertained by harvesting and thrashing the product of the entire plots. The inclusion of border rows in each area harvested is a serious objection to the use of the method as outlined, especially in varietal test plots. Removal of at least two border rows from either side of each plot before taking the samples would tend to remove this objectionable feature.

Arny and Hayes (1) show that increase in yield due to the utilization of alley space by the two border rows on the sides only of plots

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2 Reference is to "Literature cited," p. 47.