THE USE OF ROW PLANTINGS TO CHECK FIELD PLATS.

V. L. Cory,
Bureau of Plant Industry, Washington, D. C.
Presented at the Washington Meeting, 1908.

During the crop season of 1905, on a farm near Dallas, Texas, where I was doing my first work for the Department of Agriculture, it was necessary to use the yields of the row plantings to check those of the field plats. We had 38 varieties of grain, more or less badly mixed, all of which were grown in field plats of various sizes and shapes, the latter due to three ravines badly cutting up the field. These plats covered about 35 acres of the farm. Of the 38 varieties, 18 were durums, 5 were common wheats, and the remainder consisted of barley, oats, rye and emmer. All were sown in the fall in field plats, and duplicate plantings were made in rows 50 links long and 2 links apart.

The owner of the farm had a hundred acres or more in wheat, and our threshing was done by the same outfit that threshed his wheat. The thresherman received the same amount per bushel for threshing our small plats that he received for threshing the general crop, or 12 cents per bushel. Upon stating my objection to this method, I was informed that for the preceding three years the threshing had been done in this way and that everything had been all right. The mixture of varieties with which we were dealing obviously substantiated the first statement. The row-work bundles which had been harvested at the proper time and stored in the barn, were carefully threshed by hand as a check upon the unsatisfactory results secured with the machine. The grain was measured in a graduated quart cup in fractions of a pint and the yields computed as from 1/990 of an acre. The most striking case of difference in results was with Black Winter emmer, in which at the machine a yield of 3.3 bushels per acre was indicated, while the row planting showed a yield of 61.9 bushels per acre, or almost 19 times as much. The yield of the plats generally ran below that of the row plantings on account of damaged grain, loss at the machine, etc. The most noticeable feature, however, was that the ranking of the varieties in yield was materially changed. The value of the check in this instance depend upon the use of two methods of threshing and of storing, and hence is an extreme case.

Since that time my work has been done at the McPherson Coöperative Experiment Station in central Kansas. Here we have less land, 30 acres, and some 1,200 varieties. As the Station owns a small