METHODS OF STUDYING THE RELATIVE YIELDING POWER OF KERNELS OF DIFFERENT SIZES.

W. M. JARDINE.
Bureau of Plant Industry, Washington, D. C.
Presented at the Washington Meeting, 1908.

The question of the relative yielding value of kernels of different sizes for seed was discussed at some length at the summer meeting of this Society, held at Cornell University in July. Opinions differed widely on the subject. Experiments conducted for the purpose of solving this problem were cited, the results of which showed great variation. One point brought out, apparent to all, was the great need of a more uniform method of study, as it was evident that the conclusions reached by a number of the experimenters were diametrically opposed. This was due, no doubt, to the fact that practically no two experiments were conducted according to the same methods or from the same point of view.

When we remember that so much time and money are spent yearly by the farmer in the grading of seed, and that most of our plant improvement work is at present based on the selection of large, vigorous seed, it is scarcely necessary to state that the subject in hand is of the greatest importance. The problem is a difficult one, because there are so many factors to be taken into consideration in addition to the mere selection of the kernels themselves. Moisture content and temperature of the soil, character of the seed bed, depth of seeding, state of the weather, especially during germination—these and many other factors may materially affect the experiment and therefore should be accurately observed and recorded. If, for example, a similar experiment is being conducted at two different