METHODS OF MAKING DETERMINATIONS AND INTERPRETING RESULTS IN GRAIN GRADING

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PURPOSE OF THE INVESTIGATIONS

The work which forms the basis of this paper was planned and carried out with the idea of securing data to answer questions arising in the classroom and in discussions with men engaged in the grain trade regarding phases of grain grading on which there appeared to be no published data.

A statistical study of the relation of size of sample to the reliability of determinations, which not only points out the most desirable size or sizes of samples but at the same time gives the facts on which the decision is based, should aid in securing greater uniformity in the size of the samples used.

It appeared desirable to know whether samples of a size adequate for determinations on grain of relatively poor quality, because of the presence of comparatively large amounts of heat damage or foreign material, would serve as well in grain of good quality where the damage or injurious material was present in small amounts.

The matter of the manner of securing samples for determinations appeared to warrant sufficient investigation to answer one or two questions, at least. Is the accuracy increased by combining two or more small samples taken in regular order from different parts of the original sample, as compared with combining small samples taken from the same location which amounts to the same thing as taking the

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