THE NECESSITY FOR GREATER CARE IN THE IDENTIFICATION OF CROP VARIETIES USED IN EXPERIMENTAL WORK.

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In discussing the subject indicated in the title, it is assumed that there is now little difference of opinion among agronomists regarding the desirability of making preliminary tests of as large a collection of varieties as can be obtained before entering upon serious experimental or breeding work. Some recent experiences have indicated beyond doubt that it is possible virtually to waste a large amount of time in breeding work, from the fact that much better varieties are already in existence than those whose improvement is essayed. The tendency, too, has been general to underestimate the number of varieties that exist in most cultivated plants, especially in crops of minor importance. For example, the Bureau of Plant Industry has gotten together during the past few years fully 200 varieties of cowpeas, over 300 of soybeans, and 17 of velvet beans. In the case of the first-mentioned crop not over 50 varieties at the outside were known to American agronomists previous to 1905. Of soybeans, only 23 varieties were recognized as late as 1907. Of velvet beans, only two varieties were known in the United States previous to 1907. Many other cases might be cited where it is commonly supposed there is but one variety, while in fact there are several at least. It is evident, therefore, that a very wide range of characters might exist in a crop which were entirely unknown to the breeder who is at work upon its improvement. The recognition of the fact of the enormous number of varieties and strains of most cultivated plants impresses the necessity of an experimenter keeping a careful record of the source and identity of his material.

Even if we leave out of consideration the possibilities that might arise from distributing the large number of new varieties being introduced for testing by the Department of Agriculture, there is confusion enough in the American agricultural literature regarding varieties already in this country. Apparently, the usual method employed by an experimenter in testing varieties is to get together such varieties as he can, and after testing them, to publish his results, nearly always under the names which he obtained them and without preserving any other record as to their identity. An illuminat-