THE RELATION OF AWNS TO THE PRODUCTIVITY OF OHIO WHEATS

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In the Ohio wheat breeding program, the possible influence of the awn on yield is peculiarly important. Farmers have a marked antipathy to bearded varieties, not alone because they are unpleasant to handle, but also because they do not make as good shocks, nor cap as well. In a region with frequent heavy thunder showers, these considerations are by no means negligible, and unless there is sound basis for urging growers to adopt bearded varieties, the obvious advantages of beardless wheats would justify the practical elimination of bearded segregates from the breeding nursery.

REVIEW OF LITERATURE

The statement has recently appeared that bearded varieties are rapidly replacing beardless varieties in the United States (9). To test the validity of this statement, the data in Table I were compiled from the distribution of classes and varieties of wheat given by Clark and Quisenberry (3). Separation into bearded and beardless groups follows Clark, Martin, and Ball (2) and Clark and Bayles (1). Awnless and awnleted varieties were grouped as beardless wheats. In the few cases where it could not be determined from these sources whether or not named varieties were bearded, acreages were omitted. Such omissions were negligible. Since durum wheats are all bearded, they were not considered at all.

A study of Table I shows that for the United States as a whole, bearded wheats occupied 49.6% of the acreage in 1919, and that the acreage increased to 57.2% in 1929. However, consideration of the data by classes shows that this increase was due not to bearded varieties supplanting similar beardless ones, but rather to a shift in the class of wheat grown. The increase in acreage of hard red winter wheat from 1919 to 1929 was roughly 3,600,000 acres, made up almost exclusively of awned varieties. The decrease in acreage of soft red winter wheats over the same period was approximately 11,000,000 acres, of which about two-thirds were

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3 Figures in parentheses refer to "Literature Cited", p. 347.