INTERVARIETAL COMPETITION AMONG
SMALL GRAINS

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Competition is well recognized as a factor in determining which plants shall survive in nature. Competition among plants differing markedly in vigor, time and manner of growth, and other adaptive factors may exert a degree of influence, however, wholly different from that occurring in variety tests among similar varieties of cereals.

As part of their studies in competition, Keisselbach (2), Hayes and Arny (1), and Stadler (4) have shown, under conditions obtaining at Nebraska, Minnesota, and Missouri, respectively, that yields of the small grains may be considerably influenced by adjacent rows of other varieties.

The Committee on Standardization of Field Experiments of the American Society of Agronomy (5) gives the following recommendation: "When varieties are planted adjacent to each other, without the intervention of alleys, certain ones may affect others adversely. When plats are flanked or surrounded by alleys it is known that the yields are increased and that all varieties are not influenced alike. To obviate these difficulties it is recommended that two drill rows from either side of each plat in the case of small grain and an equivalent width in the case of broadcasted grain or forage crops, and one row from either side of each plat in intertilled crops, be either removed before harvest or left unharvested."

1Contribution from the Department of Agronomy, Ohio Agricultural Experiment Station, Wooster, Ohio. Published with the approval of the Director.

2Assistant Agronomist. The writer is indebted to Mr. L. E. Thatcher for many valuable suggestions in the preparation of this paper.

3Reference by number is to "Literature Cited," p. 983.