BREEDING WINTER OATS FOR THE SOUTH

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INTRODUCTION

The systematic breeding of winter oats by the Office of Cereal Crops and Diseases, Bureau of Plant Industry, U. S. Department of Agriculture, was begun in 1904, in cooperation with the Maryland Experiment Station. This work was transferred to the Arlington Experiment Farm, Rosslyn, Va., in 1907, where a fairly efficient nursery for the isolation and determination of winter-resistant strains of oats has been maintained to the present date. During the earlier years work was confined almost entirely to the collecting of varieties from both domestic and foreign sources, the determination of their adaptation and the making of pure-line selections from them. Since 1915, some attention has been given to improvement by hybridization, particularly in breeding for cold resistance. To discuss briefly such progress as has been made in these investigations and to emphasize a few of the outstanding accomplishments, is the major purpose of this paper.

NURSERY METHODS

Since 1921, the breeding work with winter oats at the Arlington Experiment Farm has been conducted in accordance with a more or less standardized nursery system. Three different series of nursery rows are employed. These include (1) 5-foot head or plant rows; (2) duplicated 15-foot rows; and (3) duplicated blocks or plats of three rows.

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