OAT IMPROVEMENT IN THE WESTERN HALF OF THE UNITED STATES

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High acre yields are fundamental for the production of oats without serious economic loss to the farmer.

The smaller total production of oats in the western half of the United States is compensated in a measure by a higher acre yield and by a superior quality of grain.

On the basis of climate and other environmental conditions, four more or less distinct oat-growing areas exist west of the 96th Meridian. These may be designated as the Great Plains area, the intermountain irrigated region, Columbia River basin and Pacific Coast region of Oregon and Washington, and the California red oat region.

Marked improvement in oats for these regions has been effected by the introduction of varieties from other countries. The most notable of such varieties are the Kherson or Sixty-Day for the Great Plains area; the Swedish Select, Victory, and Golden Rain for the intermountain and irrigated regions and also for the Columbia River Basin and Pacific Coast region of Oregon and Washington; and the variety Sunrise for central California.

Much improvement in oats for the western United States has been made by the method of pure-line selection. Among the most notable selections are: Albion, Richland, Gopher, Nebraska No. 21, Iowar, Idamine, Colorado No. 37, and Markton.

Although as yet no cross-bred varieties have become of great economic importance, extensive crossing experiments are now in progress and no less than 10 crosses are being grown by the Office of Cereal Investigations in cooperation with state stations in the western United States. Among the objects for which these investigations are being conducted are higher yield, disease resistance, stiffness of straw, and better kernel quality.

Less progress than formerly probably may be expected from pureline breeding. Such varieties as Burt and Fulghum, particularly the latter, still offer possibilities for great improvement by the method of individual plant selection.

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