EFFECT OF DATE OF SEEDING ON YIELD, LODGING, MATUREITY, AND NITROGEN CONTENT IN CEREAL VARIETAL EXPERIMENTS

V. H. Florell

The range in time of sowing the dry-land cereals in California extends on the average from November to March. Date-of-seeding experiments have shown that the highest yields usually are obtained from grain sown in November or December. This is recognized by the grain grower, but early sowing requires fallow land and the cropping systems employed frequently necessitates winter sowing.

The varietal experiment gives information as to which are the leading varieties in a group, when sown at a more or less definite time. At Davis the varietal experiment is sown in November or December, depending on weather conditions. When sown annually at about the same date, the experiment is conducted under more or less uniform conditions. Seasonal variations, however, produce differences in reaction in varieties. In a season of abundant and well-distributed rainfall a midseason or late variety may give the highest yield of grain, while in a season of less abundant rainfall an early maturing variety may give the best results. Considering such reactions, it is evident that a series of varieties, when sown in February, might and probably would rank differently in yield than when sown in November or December.

It thus would seem unsafe to recommend a certain variety as the best for a California grower to sow in February if the recommendation is based on its reactions in experiments sown in December. The variety giving the best yields when fall sown may be the best for spring sowing, but this should be determined definitely before making recommendations. To obtain exact information on this point, a preliminary varietal date-of-seeding experiment for wheat, barley, and oats was conducted in 1928. The results obtained are presented at this time because of their possible value in suggesting similar experiments to others.

EXPERIMENTAL METHODS

Relative yields from varieties grown in replicated nursery experiments are fairly consistent with those from the same varieties grown...

1Contribution from the Office of Cereal Crops and Diseases, Bureau of Plant Industry, U. S. Department of Agriculture, in cooperation with the Division of Agronomy, California Agricultural Experiment Station. Received for publication February 23, 1929.
2Associate Agronomist, Office of Cereal Crops and Diseases, and Associate in Agronomy, California Agricultural Experiment Station, Davis, Calif. The author expresses appreciation of encouragement and suggestions by J. P. Conrad, assistant Agronomist, University of California.