flotation method also has the advantage of separating the large soil particles and gravel from the roots by leaving them on the bottom of the container. Other methods utilizing a screening process leave the roots and large soil particles together on the fine-wire screen after the small soil particles have passed through the screen. —CYRUS M. McKELL, ALMA M. WILSON, and MILTON B. JONES, Physiologist and Research Agronomist, Crops Research Division, ARS, USDA, and Assistant Agronomist, University of California, Davis, Calif.

FORAGE PRODUCTION OF SMALL GRAINS UNDER MAXIMUM FAVORABLE CONDITIONS

The potential production of crop varieties can be tested and measured by various methods. Probably the most common method is to grow them under conditions of fertility, management, and weather risks similar to those that farmers encounter. Another method, used with forage grasses at the Georgia Coastal Plain Experiment Station, is to subject the crop to stresses of drouth, low fertility, and other hazards. For example, this is done with bahiagrass, bermudagrass, and other grasses by growing them on deep sand in a poor location with limited nutrition. Such experiments could be classified as a minimum type. They obviously have much value in selecting drouth resistant grasses.

Another type of experiment is a maximum experiment in which as many factors as possible are controlled to favor the crop. Attempts to grow 200 bushels of corn or a ton of beef per acre would come under this classification. Because of increasing use of green oats and rye for winter livestock feed, it seemed desirable to learn how much small grain forage could be produced under maximum favorable conditions.

Forage experiments described herein were designed to control as many variables as possible. The major limiting factor not controlled was the weather, especially temperature during the winter. However, the experiments included three seasons with varying temperature and cloudiness.