AGRONOMIC RESEARCH PROJECTS
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RESEARCH in agronomic fields embracing crop improvement and production, soils, and fertilizers has long occupied a leading position in the programs of the state experiment stations and has composed a substantial part of the activities of the U. S. Dept. of Agriculture. Experimentation in the pioneer years of the experiment stations, made largely in response to local requests for information on immediate practical problems, including for example, variety, cultural, rotation, and fertilizer tests and breeding work with many crops, was usually elementary in nature and of conventional type. The subjects dealt with often appeared simple and possible of solution by a few comparative tests. Many of the problems, however, were more involved than was apparent upon first consideration, and new methods and improved technic were needed for their solution.

During recent years, experiment station agronomists have been giving special attention to more complex and more fundamental problems, such as weather-crop relations; soil-fertility problems associated closely with crop production and plant composition; availability of essential soil nutrients to the plant, effects of their deficiencies, and effective and economical methods of supplying them to crops in fertilizers; vegetative and other methods of soil-erosion control; machine-harvesting problems; crop storage and handling; and factors variously affecting market values and qualities of the several crops. Prominent in present-day agronomic research is the improvement of cereal, fiber, oil-seed, forage, sugar, and root crops and tobacco in yield, resistance to diseases, insects, and adverse environmental factors, and in market and technological qualities. Work in this field usually proceeds in association with research in genetics and cytology. Agronomic phases of the greatly expanded pasture investigations throughout the country are also receiving serious attention.

Many of these problems go far beyond the province of a single institution and have been best coped with by cooperative action among several or many stations and the U. S. Dept. of Agriculture. These broader activities find places in the station programs along with the more fundamental researches that provide information on which to base experimentation with more immediate practical application, and the numerous variety, fertilizer, cultural, and harvesting tests, often more or less conventional or local, yet necessary in the broad industry of agriculture.

RESEARCH ON A PROJECT BASIS

Most of the research in agronomy, as in other fields of agricultural science dealt with by the experiment stations and the U. S. Dept.

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