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## Perspective on Agricultural Research

Recent commentators on the status of agricultural research have expressed concerns about long-range program priorities, resource allocations, and the capacity of the system to provide leadership in fundamental aspects of the agricultural sciences. The discussions have involved primarily the programs of the federally and state-supported research and education system. Some critics contend that the system is giving insufficient attention to basic research. Others argue that the system has demonstrated its capacity to adjust and accommodate to new scientific and technological developments. Finding a consensus is a priority concern of the Department of Agriculture's Science and Education agencies and our partners—the state-based institutions, the Agricultural Experiment Stations, and the Cooperative Extension Service.

Over the next 12 months, our agencies will be taking a new look at research priorities and directions. An assessment will be made of the long-term food, fiber, and forest products needs for the 21st century and the role of science and education in meeting those needs. A 5-year plan will then be prepared for research, higher education, and extension programs, including an examination of the roles of federal, state, and private agencies.

The Agricultural Research Service has already prepared a long-range strategic national research plan. Through its Office of Education, it is examining the supply-demand picture for agricultural expertise. The Forest Service, in cooperation with forestry schools, recently completed a 10-year national program of research on forests and associated rangelands. The Cooperative State Research Service is looking to new approaches for identifying research priorities. The Extension Service is completing a comprehensive study of its program designed to develop guidelines for its activities in the 1980's and beyond. A common denominator in all of these studies is a reevaluation of the role of research and development in relation to expanding opportunities for institutional-industry interactions that can strengthen our national research and education capacity in agriculture.

This is a time to intensify the use of the scientific and educational resources of the agricultural community and to find answers to critical questions. Will it be possible to reduce severe soil erosion and increase the water use efficiency of crops? Will new developments in molecular biology provide a much better understanding of genetic linkages to basic physiological functions? What new scientific developments can be employed to expand the use of agricultural products and develop new markets? Finally, what programs can be instituted to encourage more high-potential students to prepare for careers in the agricultural sciences? Already, new developments in plant and animal genetics and in the field of bioregulation promise to increase yields of major food and fiber crops and improve the efficiency of animal production. Nutrition research must address the special dietary problems of the more vulnerable segments of the population, including children and the elderly. Research must also be carried out on the effects new production practices might have on the composition of the food we eat. Other areas needing attention concern the impact of technology on the environment and the effects of changing social, political, and economic conditions on the quality of family life, especially in rural America.

Today's budgetary realities may slow adjustments, but we must prepare to seize promising scientific developments in the years ahead and apply them to our food and fiber production system. Scientists and institutions involved in agricultural science and education are not only receptive to new ideas, but anxious to adopt approaches that will bring stronger programs. The foundation for science and education is strong within the agricultural sciences and has demonstrated a capacity for change and progress. American agriculture is at a crossroads of significant proportions, and all those involved must reexamine ways of collaborating and marshalling resources for the future.—ORVILLE G. BENTLEY, *Assistant Secretary, Science and Education, Department of Agriculture, Washington, D.C. 20250.*