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THE STRUCTURE AND FUNCTIONS OF THE SCIENCE AND EDUCATION ADMINISTRATION OF THE U.S. DEPARTMENT OF AGRICULTURE

by

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The Science and Education Administration of the U.S. Department of Agriculture was formed as a result of concerns expressed by the 95th Congress with passage of the "Food and Agriculture Act of 1977." This legislation containing Title XIV referred to as "The National Agriculture Research, Extension and Teaching Act of 1977" established the USDA as lead agency within the Federal government for the food and agricultural sciences. Furthermore, it identified agricultural research, extension, and teaching as distinct missions of the Department. For the first time in history, teaching was given equal status similar to that which has existed in land grant institutions since passage of the Mirrell Act in 1862.

An overriding concern of Congress expressed in Title XIV was the need for improved coordination and planning of agricultural research, to identify needs, and establish priorities. Furthermore. cooperation and coordination among federal departments, state institutions, and users groups were to be improved. Another purpose of the Act was to assure the effective communication and demonstration of research results to farmers. professionals, handlers, consumers, and others were to be provided the means to implement needed agricultural research, extension, and teaching by establishing new programs and improving existing ones. Specifically, a new program of grants was proposed for high priority agricultural research to be awarded on a competitive basis among scientists and all colleges and universities. A new program of grants for facilities and instrumentation for research and a program for education grants and fellowships were included to strengthen training and research programs.

The Secretary of Agriculture was given authority to establish a Joint Council on Food and Agricultural Sciences under provisions of Title XIV. While the primary responsibility of the Council is to foster coordination among all performers of research, extension, and teaching in these sciences, an important function is to determine high priority areas for consideration by the Secretary in developing programs. Impact analyses, determining long range needs, establishing goals and the means of achieving them are all within the scope of Council activities.

Authority was also given to the Secretary to establish the National Agricultural Research and Extension Users Advisory Board with general responsibility for preparing independent advisory opinions on the food and agricultural sciences. The Board has specific responsibility to review policies, plans, and goals of USDA programs for the food and agricultural sciences as well as related ones of other federal agencies, states, colleges, and universities that are developed by the Secre-

tary under Title XIV. The Users Advisory Board advises the Secretary on national policies and strategies for research and extension and makes recommendations for allocating funds and resources authorized under the Act.

The Science and Education Administration (SEA) was established by the Secretary of Agriculture on January 24, 1978. The new Agency reflects the consolidation of the former Agricultural Research Service, the Cooperative Research Service, the Extension Service, and the National Agricultural Library. In addition, SEA was assigned new program responsibilities contained in the National Agricultural Research Extension and Teaching Act of 1977.

The Agricultural Research staff (AR) administers a basic applied and developmental program in animal and plant production and protection; use and improvement of soil, water, and air; processing storage, and distribution of farm products; and food safety. The re-

search applies to a wide range of goals, commodities, natural resources, fields of science and geographic, climatic, and environmental conditions.

Federal grant funds for agricultural research, marketing, rural development, and forestry are administered by the Cooperative Research (CR). The funds are made available to State Agricultural Experiment Stations, the 1890 Land Grant Universities, and other designed institutions. A specific grants program is also administered for research on special agricultural problems. Cooperative Research staff reviews research proposals that are submitted to it by institutions and individuals, conducts on site progress reviews of research, provides leadership in planning and coordination research, and encourages cooperation by and between experiment stations.

The Extension Staff (ES) serves as partners with State governments through their Land Grant Universities and county

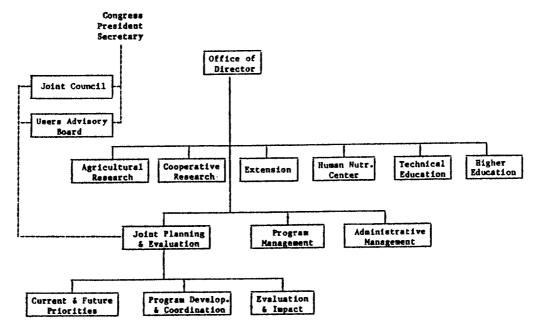


Figure 1 - USDA, Science and Education Organizational Chart (abridged).

governments to carry on the functions of Cooperative Extension Service. These levels of government share in financing and conducting educational and information programs to help the public learn about and apply to everyday activities the latest knowledge provided by research and numerous other sources. Major areas of assistance are agricultural production, marketing, natural resources, food and nutrition, family education, community and rural development and 4-H youth development and related subjects.

A federal research program on human nutrition is administered by the Human Nutrition Center (HNC) which provides leadership for national and international collaborative efforts of research, extension, and teaching among all federal and non-federal cooperators. The program includes but is not limited to human nutritional requirements, nutrient composition of foods, and the related effects of agricultural practices, handling, processing, and cooking upon food nutrients. Also under purview of the Nutrition Center is surveillance of the nutritional benefits provided to participants of USDA food programs, factors affecting food preferences and habits, and development of techniques and equipment to assist consumers in selecting food to provide nutritionally adequate diets.

A program of federal grants and other funds is administered by the Higher Education Staff (HE) to support the furtherance of education in the food and agricultural sciences in all colleges and universities. Included are predoctorial and postdoctorial fellowships. Support is also given to establishing schools of veterinary medicine.

Leadership is provided by the Technical Information Staff (TIS) for the continuing development and coordination of comprehensive technical information and library systems for the food and agricultural sciences and related needs.

Library services consist of maintaining a permanent worldwide collection of books and journals and a complete inventory of U.S. publications; providing assistance to USDA personnel and others; and promoting cooperation among USDA agencies, land grant institutions, colleges and universities for library services. Information concerning research, extension, and teaching results and efforts are made available to scientists and professionals through use of several different information systems.

The other staff units comprising SEA are Administration, Joint Planning and Evaluation (JPE), and Program Management.

The basic mission of SEA is to improve the nationwide effectiveness of research, extension and teaching in the food and agricultural sciences. This is accomplished through the discovery and development of new knowledge, the dissemination of new as well as current information in usable and readily available forms, and the conduct of educational programs.

SEA functions are accomplished through a partnership arrangement of USDA, land grant and non-land grant universities, business, industry, and private foundations. By furthering the advancement of scientific knowledge, many needs are served including those of consumers; rural and urban communities; the food, agricultural, and forestry industries; and action and regulatory programs of federal, state, and local governments.

The SEA programs are planned and conducted to produce and disseminate information and processes to achieve:

--improved management and use of the nation's soil, land, water, air, and climate resources for the best interest of the public, with particular

- emphasis on insuring a stable and productive agriculture and forestry;
- --improvements in levels of living for families as consumers and as producers of food and fiber products;
- --improvements in food and agricultural production, marketing, and distribution efficiency;
- --conservation and wise use of natural resources, the nations forests, and agricultural crop land;
- --improved quality of living, family life, and human development in rural America by activities in addition to those of agriculture and forestry;
- --promotion of world peace through international scientific exchange and export of science and technology to developing countries; and
- --better understanding of the interrelationships between producers and consumers in the United States and the impact of the world agricultural situation on the domestic economy.

The activities of SEA are broad and encompass technical, economic, social, and political aspects of agriculture. They involve soil and water conservation and use; plant and animal production and protection from pests and diseases; aquaculture; processing, marketing, distribution; utilization of food and agricultural products and the social sciences. Included is forestry consisting of range management, production of forest and range products, multiple use of forest and range lands, urban forestry, and activities associated with home economics, human nutrition and family life, and rural and community development.

To help carry out some of the provisions of Title XIV, the Secretary of Agriculture established a Joint Planning

and Evaluation Staff. This group serves the Director of SEA, the Joint Council, the Users Advisory Board, and SEA partners consisting of Extension and Research Staffs of land grant institutions and other sectors interested in agriculture. The role of JPE is to help develop, integrate, and coordinate the food and agriculture science programs of SEA through numerous types of activities. It facilitates and carries out joint program planning, coordination, evaluation, and analysis activities, and provides leadership for developing SEA budgets. Trends, issues, progress, and needs are assessed and recommendations made; programs are evaluated to assess their technological, economic, and social impacts; and planning and assistance is given for making program reviews. Help is given in developing program structure planning systems, program reviews, and evaluation methodology. JPE works closely with program staff specialists and scientists of SEA to promote coordination across disciplines and functions for planning, analyses, reports, and special studies. Special assignments are also performed at the request of the Director of SEA.

Joint Planning and Evaluation is comprised of three staffs; Current and Future Priorities, Program Development and Coordination, and Evaluation and Impact. These staffs function under the leadership of a Deputy Director who serves also as Executive Director of the Joint Council and the Users Advisory Board.

The Current and Future Priorities
Staff identifies critical needs and areas
of opportunity in the food and agricultural sciences that may require program
redirection or shifts in priorities or
objectives. Recommendations are made on
long range priorities for research, extension, technical information, and
higher education. Information is also
provided for use in making recommendations for initiating, terminating, ex-

panding, or redirecting program activities. Another responsibility is the preparation of support statements which summarize social, economic, and physical conditions and events that impact upon priorities, taking into account the need for a national balance among competing programs and benefits. A closely related activity of the staff is the preparation of position papers for consideration by the Joint Council and Users Advisory Board.

The Program Development and Coordination Staff provides leadership in developing and coordinating joint national programs that encompass in-house and cooperative research, extension, higher education, and technical information systems. It also has responsibility for developing implementation plans and budget support for joint programs. Along with others, the staff plans and conducts science and education program reviews to assess the progress being made toward stated objectives. Responsibility also exists for assisting in developing program structures, management and planning systems, and technical information systems. The staff has the assignment of insuring the availability and coordination of resources needed to carry out programs. Another of its tasks is to provide liaison between program managers, technical staffs, and administrative staffs.

The Evaluation and Impact Staff provides leadership in evaluating the technological, economic, and social impacts of current and past joint national food and agricultural science and education programs. This includes expected impacts of programs that are likely in the future. Staff members develop evaluation methodologies and initiate, design, and conduct program evaluations to provide both quantitative and qualitative assessments of program impacts in collaboration with other departmental and cooperator organizations. They also provide leadership in developing and coordinating program reviews and evaluating joint programs. The evaluative results are made available for joint program planning and budget development.

Members of the three staffs have extensive academic training and professional experience in research, extension and management. Some of them are permanent federal employees. Others are IPA's (Intergovernmental Personnel Act) on assignment from state universities for one or two years or else detailed from other Federal agencies such as the Forest Service or Economics, Statistics and Cooperative Service (ESCS).
