

R&D in the U.S. Department of Agriculture

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HIGHLIGHTS

- National Research Initiative (NRI): The FY 2003 budget proposes a \$120 million increase to \$240 million—a 99.2 percent increase (see Table II-13).
- Initiative for Future Agriculture and Food Systems (IFAFS) would receive no funds in either FY 2002 or FY 2003.
- Agricultural Genomics: augmented funding in both intramural and extramural programs.
- Homeland Security Research: a proposed increase of \$5 million.

BUDGET OVERVIEW

The U.S. Department of Agriculture (USDA) funds agricultural-related research activities at federal research laboratories, colleges, universities, and private national laboratories. Funding mechanisms include direct funding for federal research laboratories; formula funding for specific programs at the land-grant colleges and universities; funding for research grants awarded through a competitive, peer-reviewed process to federal research laboratories, colleges, universities, and private national laboratories; and special research grants that are initiated both by USDA and Congress. Special grants initiated by Congress in one year are never included in the next year's budget proposal from the President. This lack of inclusion is often highly noticeable in some of the proposed funding totals. Typically, however, Congress restores funding for these

earmarked special grants and often proposes others. These special grants are for targeted research that meets individual state agricultural needs.

Funding for R&D activities in USDA seeks to address agricultural issues as they relate to the environment, natural resource management, food safety, competitiveness, and emerging markets, as well as continuation of the basic research needed for a solid understanding of the animal and plant sciences. USDA orchestrates a national network of agricultural research conducted at federal research laboratories (Agricultural Research Service), the 1862 and 1890 land-grant colleges and universities, other colleges and universities, and private national laboratories. USDA is also unique as it partners with the nation's land-grant colleges and universities to conduct research that impacts agriculture and the environment at both the state and national levels. This partnership has proven highly effective for the 100 plus years it has been in place.

USDA INITIATIVES

National Research Initiative (NRI): As USDA's primary competitive research grants program, the NRI funds basic and mission-linked research. With a funding request of \$240 million for FY 2003, the Administration indicates its support of strengthening the NRI (see Table II-13). Increased funding would allow scientists to target areas of new concern and promise such as new and emerging pests and diseases of crops and livestock; agricultural genomics; food and agricultural products; management of agricultural operations; and expanded graduate training.

Initiative for Future Agriculture and Food Systems (IFAFS): IFAFS was mandated in Section 401 of the Agricultural Research, Education, and Reform Act of 1998 and was established as a competitive grants program in the Cooperative State Research, Education, and Extension Service (CSREES) for five years with a funding level of \$120 million per year. In FY 2002, the Agriculture Appropriations Act blocked the use of these funds. The FY 2003 budget proposal would continue this policy by proposing to also block FY 2003 funds (see Table II-13).

Agricultural Genomics: The FY 2003 budget proposes augmenting funding for research in genomics in the Agricultural Research Service (ARS) and the Cooperative State Research, Education, and Extension

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Service (CSREES). ARS would increase its funding by \$6.9 million for genome research, using an increase of \$3 million to support sequencing of plant and crop genomes, which would include maize, legumes, microbes, and insects. Additional increases would support research to map and identify genes that influence resistance, reproduction, nutrition, and other economically important traits of livestock and poultry. Funds would also support efforts to partially develop a “rough draft” of the cattle, swine, and chicken genomes. Within CSREES, genome research would be conducted under the umbrella of the National Research Initiative (NRI). If the NRI were to double available funding from \$120 million to \$240 million, then some of that increase would be used to fund genome research.

Homeland Security: A supplemental appropriation was made in FY 2002 at a level of \$40 million to the Agricultural Research Service (ARS) for Homeland Security needs: facility, operational, and biosecurity research. In the President’s FY 2003 budget, it is proposed that ARS increase its Biosecurity research efforts by \$5 million, allowing ARS to further complement other homeland security efforts.

USDA AGENCIES

Agricultural Research Service (ARS): With over 100 research locations throughout the United States and the world, the Agricultural Research Service (ARS) is the principal in-house research agency in USDA in the area of natural and biological sciences. The FY 2003 budget proposes a total funding level of just over \$1 billion for research and information (see Table II-13). Increased funding would include Soil, Water and Air Sciences at \$109 million, up from the 2002 level of \$92 million; Plant Science at \$368 million, up from \$333 million; Animal Science at \$198 million, up from \$174 million; Commodity Conversion and Delivery at \$194 million, up from \$177 million; Human Nutrition at \$79 million, up from \$77 million; Integration of Agricultural Systems at \$40 million, up from \$39 million; and Information and Library Services at \$23 million, up from \$20 million. The ARS budget proposes the following increases for these targeted areas: (1) \$8 million for Emerging, Reemerging, and Exotic Diseases of Animals such as “mad cow disease” and foot and mouth disease; (2) \$5.4 million for Emerging and Exotic Diseases of Plants such as citrus canker; (3) \$9 million for New Uses for Agricultural Products such as bio-based industrial products; (4) \$6.5 million for Global Climate Change; (5) \$6.9 million for Agricultural

Genomes; (6) \$5 million for Biosecurity; and (7) \$2 million for Agricultural Information Services.

Cooperative State Research, Education, and Extension Service (CSREES): The Cooperative State Research, Education, and Extension Service (CSREES) serves as the base for the federal-state partnership of agricultural research, education, and extension. Partners of CSREES include the State Agricultural Experiment Stations, State Cooperative Extension Systems, land-grant universities, colleges, and other research and education institutions. CSREES also administers the National Research Initiative (NRI). Along with ARS, CSREES activities represent the major research efforts of USDA.

The FY 2003 budget proposes level funding for all formula research funds: (1) Hatch Act (agricultural experiment stations at 1862 land-grant universities), \$180 million; (2) McIntire-Stennis Cooperative Forestry, \$22 million; (3) Evans-Allen Program at 1890 land-grant colleges and universities, \$34 million; and (4) Animal Health and Disease Section 1433, \$5 million. Funding for Special Grants would total \$18 million, a decrease from the \$112 million funding level of FY 2002. The higher funding level of FY 2002 reflects keen congressional interest in meeting special needs throughout the United States. However, true to form, the President's FY 2003 request does not include continuing funding for any of these earmarks. The NRI would receive a total of \$240 million (see details above). Other research requests include level funding for water quality at \$13 million and food safety at \$15 million. The budget proposes to reduce pest control and management activities by \$1 million to a level of \$39 million. There would be a reduction of \$3 million in funding for sustained agriculture research and extension allowing only \$9 million for FY 2003. Research activities at 1994 Institutions (Native American) would receive level funding at \$1 million.

Forest Service (FS): The Forest Service is one of the world's largest forest research organizations. Its mission is to "develop the knowledge and technology needed to enhance the economic and environmental values of all the Nation's Forests and related industries [and] support the specific research needs that arise from...managing the [National Forest System]." The President's FY 2003 budget proposes a funding level for Forest and Ecosystems Research, the main FS R&D account, of \$254 million, representing a \$1 million increase over the FY 2002 level. Included in this proposal is an elimination of low-priority research and

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Congressional earmarks and a redirection of \$10 million: \$5 million for bio-based products and bioenergy research and an additional \$5 million for a quantitative and analytic data project. For more information on FS R&D, please see Chapter 18.

Economic Research Service (ERS): The Economic Research Service “provides economic analysis on agriculture, food, natural resources, and rural development.” The President’s FY 2003 budget proposes funding at a level of \$82 million, which would be \$6 million more than the FY 2002 level. For more information on ERS, please see Chapter 21.