

R&D in the Department of Agriculture

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HIGHLIGHTS

- The National Research Initiative would receive \$180 million.
- The Food and Agricultural Defense Initiative would receive \$250 million.
- Bovine Spongiform Encephalopathy (BSE) Research would be funded at \$5 million.

BUDGET OVERVIEW

With the White House calling for limited discretionary spending, the FY 2005 budget proposal for the U.S. Department of Agriculture (USDA) responds to the call. Discretionary spending authority in USDA would experience the greatest decrease of all government agencies. While mandatory spending programs would increase by \$5 billion, discretionary spending would decrease by \$720 million to \$20.8 billion.

As much as any other agency, USDA is committed to supporting strong research programs that use the best available science. However, one cannot fully discuss the R&D budget without first considering the overall competition for funding within the agency itself. 75 percent of USDA's budget goes to support its mandatory domestic programs; the remaining 25 percent supports all the discretionary programs. Within that 25 percent there is keen competition among a diverse array of program types, ranging from supports provided to low-income households, school lunch programs, promotion of civil rights in program delivery, rural development loans, conservation programs, international trade, food and animal inspection activities, and finally research labs using sophisticated

equipment and techniques to solve pressing and challenging scientific questions. As a result, it's not difficult to understand why significant funding gains within agricultural R&D are rarely seen. Requests for FY 2005 continue the trend of small increases or level funding for most research programs overall with larger investments for a few initiatives.

This may also help to explain the great popularity of earmarked research grants proposed and funded by Congress. In FY 2004 alone, Congress appropriated \$166 million for these types of grants. In FY 2003, that figure was \$159 million. This particular funding strategy will continue in FY 2005, just as it will continue in future years. However, the Administration ignores these grants in its funding proposals, which accounts for a significant part of the proposed decrease in funding levels reflected in the bottom line of its research programs.

STRATEGIC GOALS AND TARGETED FUNDING

The Administration's FY 2005 budget proposal conforms to the policies and priorities set forth by its policy book *Food and Agricultural Policy for the 21st Century*. Basing its targeted efforts on these principles, USDA's research and development efforts strive to support five strategic goals. Funding levels below reflect proposed funding agency-wide and dollar amounts are often repeated from one category to another, reflecting the multi-faceted nature of these goals.

Strategic Goal 1 – Enhance Economic Opportunities for Agricultural Producers. Research efforts in this area would promote the development of new or improved agricultural products and expand their uses to fill market needs. Research efforts could be funded out of the proposed \$180 million for the National Research Initiative (NRI) competitive grants program (an increase of \$16 million for FY 2005) or by the proposed increase of \$7 million requested for the Agricultural Research Service's (ARS) animal genomics research or the \$5 million increase proposed for plant genomic research. Targeted areas would include developing scientific knowledge to enhance productivity, efficiency, and quality of plant and animal production systems through agricultural genomics.

Strategic Goal 2 – Support Increased Economic Opportunities and Improved Quality of Life in Rural America. Research would assist rural residents and community and business leaders gain and use knowledge and skills to help their communities thrive in the global

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economy. Total proposed funding levels for research, education, and economics activities are \$198 million, an increase of \$9 million over FY 2004 estimates. Funding would include support for research and analysis in order to better understand the economic, demographic, and environmental forces affecting rural regions and communities.

Strategic Goal 3 – Enhance Protection and Safety of the Nation’s Agriculture and Food Supply. It is USDA’s responsibility to ensure the safety of the nation’s food and fiber supply chain and the security of the agricultural production system. Overall research, education, and economics efforts would be funded at a level of \$730 million, an increase of \$67 million over FY 2004. Research funding in ARS would include \$178 million for renovation of the National Center for Animal Health; a \$10.7 million increase to support research to develop more sensitive and rapid on-site diagnostic tests and vaccines for existing and emerging diseases; and a \$14.4 million increase for food safety research.

Strategic Goal 4 – Improve the Nation’s Nutrition and Health. Research activities in this category would focus on scientific and socioeconomic research and nutrition education programs that would help people make informed food choices, reduce disease prevalence, obesity, and enhance quality of life. Overall research, education, and economics funding would be \$240 million, an increase of \$14 million over FY 2004. ARS would use a \$5 million increase to establish coordinated obesity prevention research projects at the six ARS Human Nutrition Research Centers. The Economic Research Service (ERS) would receive an \$8.7 million increase to develop a data and analysis framework of the post-farm food system to identify, understand, and track changes in food supply and consumption patterns and to explore the relationship between consumers’ knowledge and attitudes and their consumption patterns. The NRI would also provide funding in this area.

Strategic Goal 5 – Protect and Enhance the Nation’s Natural Resource Base and Environment. Research efforts would seek to build the scientific foundation and enhance the capability for forecasting response of ecosystems to multiple environmental changes such as climate, atmospheric chemistry, and land use management, and for developing products that could be used to support decision-making. Total agency funding for research, education, and extension activities related to this strategic goal would equal \$390 million, a decrease of \$62 million from the FY 2004 estimate of \$452 million. ARS would receive a

\$5.2 million increase to conduct and coordinate interagency efforts associated with the Climate Change Research Initiative (CCRI) that has an additional proposed interagency (USDA, EPA, and Interior) funding level of \$238 million. (See Chapter 16 for more on CCRI.)

USDA INITIATIVES

National Research Initiative (NRI): As USDA's primary competitive research grants program, the NRI funds basic and mission-linked research. The FY 2005 budget proposes \$180 million, a \$16 million increase over FY 2004 (see Table II-13). The \$180 million falls far short of the expected \$240 million that should have occurred by combining in FY 2002 the NRI and Initiative for Future Agriculture and Food Systems (IFAFS, the other competitive grants program) programs. Over the years, funding for the NRI has increased slowly as it competes directly with congressional earmarks funded out of the Cooperative State Research, Education, and Extension Service (CSREES). It is not likely that the NRI will achieve any time soon the original authorized funding level of \$500 million, which was the target when the NRI was first created. Funding would support research in emerging diseases and pests, biosecurity, farm management, air quality, and food and nutritional improvements.

Food and Agriculture Defense Initiative: This initiative represents USDA's participation in the nation's homeland security efforts and would create a greater readiness to identify and characterize any attack on the nation's food supply. Funding is proposed at a level of \$381 million. The largest single expenditure would be in ARS with \$178 million provided to complete the renovation of the National Centers for Animal Health in Ames, Iowa. This facility would serve as the nation's premier animal research and diagnostic laboratory and will enable the United States to enhance its ability to respond to attacks on the food supply. Of the remaining \$203 million, ARS would receive \$31 million for research and CSREES would receive \$30 million for a Regional Diagnostic Network and \$5 million for a Higher Education Agrosecurity Program. Research would aim to improve rapid detection and pathogen information systems in ARS, CSREES, and other USDA agencies.

Bovine Spongiform Encephalopathy (BSE) or Mad Cow Disease Research: Overall, BSE efforts would receive \$60 million in FY 2005. However, ARS would receive only \$5 million for advanced R&D of BSE testing technologies. This represents a \$1 million increase over FY 2004.

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USDA seeks to continue and enhance its ongoing efforts to safeguard the food supply, thus ensuring the health and well being of Americans.

USDA AGENCIES

Agricultural Research Service (ARS): With research locations throughout the United States and the world, ARS is the principal in-house research agency in USDA in the area of natural and biological sciences. The proposed ARS FY 2005 funding level is \$988 million. Funding would provide for research in the following areas: \$99 million for Product Quality/Value Added; \$80 million for livestock production; \$154 million for crop production; \$90 for food safety; \$61 million for livestock protection; \$152 million for crop protection; \$81 million for human nutrition; \$182 million for environmental stewardship; \$22 million for the National Agricultural Library; \$18 million for repair and maintenance of facilities; and \$49 million for homeland security.

Cooperative State Research, Education, and Extension Service (CSREES): 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 System, 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 total funding request for CSREES in FY 2005 is just over \$1 billion. This is a decrease over the FY 2004 estimate but the decrease reflects the absence of \$166 million in earmarked congressional funding that was included in the FY 2004 funding estimate of \$1.1 billion. Therefore, though the FY 2005 request is lower than the FY 2004 estimate by \$166 million, the decrease is mostly artificial. Within the requested funding levels, formula funds for the nation's land-grant colleges and universities remain fairly stagnant. A negligible increase of \$1 million is proposed for the Hatch Act, which provides funding for the Agricultural Experiment Stations of the nation's land-grant colleges and universities; funding for FY 2005 would be \$180 million (see Table II-13). Level funding is proposed for 1890 Research and Extension (\$68 million), Cooperative Forestry (\$22 million), and Animal Health (\$5 million). The National Research Initiative (NRI) would receive a \$16 million increase, bringing FY 2005 funding to \$180 million. Integrated research activities would remain fairly constant: water quality would see a \$1 million increase for a total of \$13 million; food

safety a \$2 million increase for a total of \$15 million; pest control/management activities a \$1 million increase to \$39 million. CSREES would see a large increase for the Regional Diagnostic Network (from \$8 million to \$30 million) within the Food and Agriculture Defense Initiative.

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 Administration proposes \$281 million for forest and rangeland research activities, a \$15 million increase above FY 2004 estimates. Funding would focus on utilizing forestry research to provide a significant increase in optimizing the delivery of research findings to improve the ability of the Forest Service to manage its investments in research, development, and technology applications. Funds would also be provided for continued accelerated research on rapid management responses to invasive species that threaten forest and rangeland health.

Economic Research Service (ERS): The Economic Research Service "provides economic analysis on agriculture, food, natural resources, and rural development." ERS would receive a net increase of \$9.1 million for a budget total of \$80 million (see Table II-13). This would include \$8.7 million to support a Consumer Data and Information System. This system would be developed to identify, understand, and track changes in food supply and consumption patterns and for use in policy decisions in the food, health, and consumer arenas. Within the Consumer Data and Information System, funding would be used to create a Food Market Surveillance System (\$4.2 million) to survey and support analyses to identify consumption patterns and how these respond to changes in the food marketplace and in a customer's lifestyle over time; \$1.0 million would be used to develop a Rapid Consumer Response Module so that instantaneous information could be gathered on consumer reactions to current market events and government policies and linking consumer reactions to actual food purchases, sales, consumption, and price information; and \$3 million to fund a Flexible Consumer Behavior Module to assess the relationship between individuals' knowledge and attitudes about dietary guidance, food safety, and their food choices. (For more on ERS, please see Chapter 22.)