



December 7, 2004 –  
Final FY 2005 USDA Appropriations

## USDA Hits Record High for R&D in 2005

### Highlights

- **The U.S. Department of Agriculture's (USDA) R&D portfolio totals \$2.4 billion in FY 2005, a substantial increase of 7.8 percent in contrast to a requested cut that brings the USDA R&D portfolio to a record high (see Table).**

- Most of the increase goes to laboratory construction projects, leaving USDA basic and applied research up a smaller 2.5 percent.

- **Congress matched the USDA request of \$180 million for the National Research Initiative of competitively awarded extramural research grants, up nearly 10 percent from last year.**

- Congress provides \$122 million in new funds, down from the requested \$178 million, for animal research and diagnostic facilities at the National Centers for Animal Health in Ames, Iowa, that would be the heart of a USDA-wide food and biosafety initiative.

- R&D earmarks go up substantially to \$239 million in FY 2005, totaling 10 percent of the USDA R&D portfolio and nearly a quarter of USDA's extramural R&D funds.

On November 20, Congress came to an agreement on an FY 2005 omnibus appropriations bill (HR 4818), which incorporates the final version of the FY 2005 Agriculture appropriations bill. The House gave final approval on December 6, and President Bush is expected to sign the bill into law on December 8. The omnibus bill keeps funding for domestic programs flat in FY 2005; the U.S. Department of Agriculture (USDA) R&D portfolio does far better than the average for domestic programs, even after factoring in a 0.80 percent across-the-board cut for most domestic programs. (All figures in this analysis reflect the across-the-board cut.) The omnibus bill **gives USDA a total R&D budget of \$2.4 billion in FY 2005, an increase of 7.8 percent or \$174 million that stands in sharp contrast to a requested cut (see Table).**

### USDA R&D in FY 2005 Final Appropriations

In contrast to a requested cut of 3.5 percent down to \$2.2 billion, Congress funds USDA R&D at \$2.4 billion, a 7.8 percent increase. In February, USDA proposed to eliminate \$220 million in FY 2004 R&D earmarks, and hold other USDA R&D funding flat overall. The request contained a major facilities proposal of \$178 million to complete animal research and diagnostic facilities at the National Centers for Animal Health in Ames, Iowa, with cuts in other R&D programs. Congress provides enough money to boost earmarked funding above last year's level, to partially fund the animal research facilities request, and to add research funding for other priority areas in order to bring USDA R&D to an all-time high in inflation-adjusted dollars. (For full details of the President's request for USDA R&D, see Chapter 11 of *AAAS Report XXIX: R&D FY 2005*.)

**The congressional appropriation of \$122 million in new funds for the Ames facility, though down from the \$178 million request, continues strong USDA and congressional attention to homeland security since the terrorist attacks of 2001.** In the first few years after the attacks, USDA facilities funding went primarily to improve security at agricultural research facilities, many of which house dangerous pathogens, but now the focus is shifting to creating new scientific capabilities for homeland

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security-related research. The renovated National Centers for Animal Health will serve as the nation's premier animal research and diagnostic laboratory and will enhance the nation's ability to respond to attacks on the food supply. The \$122 million is contained in the \$186 million appropriation for Agricultural Research Service (ARS) Buildings and Facilities, nearly triple last year's funding level, with the remaining \$64 million parceled out to 22 congressionally earmarked construction projects at USDA laboratories. In addition to the construction funds, Congress provides the \$37 million request for new intramural research on food and agriculture defense, and \$18 million for homeland security-related extramural research grants.

Total ARS R&D climbs 12.2 percent to \$1.3 billion because of the Iowa and other facilities appropriations, but ARS funding for the conduct of R&D (excluding facilities) increases a smaller 2.5 percent to \$1.1 billion. ARS funds intramural research through a nationwide network of intramural laboratories and agricultural experiment stations, including numerous research projects on congressionally designated topics.

USDA's extramural research grants, nearly entirely to colleges and universities, are administered by the Cooperative State Research, Education and Extension Service (CSREES). **Total CSREES R&D will be \$643 million in FY 2005, a 4.0 percent or \$24 million increase over FY 2004 but a substantial \$132 million more than the request. The difference comes from the insertion of \$148 million in congressional earmarks that the Administration proposed to terminate.** Congress allocated \$120 million for **Special Research Grants**, up from \$111 million last year. This program has traditionally been home to congressionally designated, performer-specific research projects. The omnibus bill lists 196 itemized projects for specific performers, most of which were also earmarked for funding in FY 2004. Moreover, the rest of the CSREES budget is increasingly earmarked; the omnibus bill contains 40 other earmarks totaling \$33 million in other parts of the CSREES budget.

At the same time, the **National Research Initiative (NRI) receives a record \$180 million, the same as the request and \$16 million more than last year.** Congress also set aside \$43 million for competitive grants within the Integrated Grants program. USDA also provides formula funds for agricultural R&D to qualifying institutions in programs such as the Hatch Act, which sees a slight decline in funding to \$179 million in FY 2005.

The other major USDA R&D agency is the Forest Service; it has \$322 million for its R&D programs in FY 2005, an increase of \$6 million or 1.8 percent. Although the primary focus of its R&D portfolio is forestry and ecosystems research, in recent years the Forest Service has emphasized its fire science and wildfire management research portfolio as well. Most of this research is performed in intramural laboratories, although there is also an extramural fire science grants program that receives \$22 million in 2005.

The omnibus bill also contains some legislative provisions that are renewed annually. One provision renews a cap on indirect costs to extramural performers for USDA R&D at 20 percent, far less than what most universities recover for non-USDA grants; another provision sets a lower ceiling of 10 percent for independent nonprofit institutions engaged in cooperative R&D. Another provision blocks funding for a mandatory competitive research grants program, but allows USDA to use its discretionary grants programs such as NRI and Integrated Grants to fund research on topics that the mandatory program might have funded.

### **Impacts of the USDA R&D Portfolio**

**The FY 2005 increase for R&D brings the USDA R&D portfolio to an all-time peak** in inflation-adjusted dollars (see Figure 1). USDA R&D has been at historical highs for the past few years. Since hitting a recent low in FY 1996, the funding trend has been generally upward, first because the federal budget surplus made more discretionary funds available to congressional appropriators, then in FY 2000 and FY 2001 from the release of mandatory competitive research funds, and then since FY 2002 because heightened concern about agricultural terrorism and the security of USDA laboratories resulted in millions for security upgrades and other homeland security-related investments.

USDA is the sixth-largest supporter of R&D in the federal government, and its support is especially important for key disciplines. USDA is responsible for just 5 percent of all research support in the broad area of the life sciences, but dominates funding for two disciplines within life sciences, agricultural sciences and environmental biology. USDA funds more than 90 percent of all federal support for the agricultural sciences, with the remainder supported by the Agency for International Development (for international agriculture R&D) and the National Oceanic and Atmospheric Administration (for aquaculture and other marine-related R&D). USDA is also an important supporter of chemistry and biology, and represents a majority of federal support for economics through the Economic Research Service (ERS).

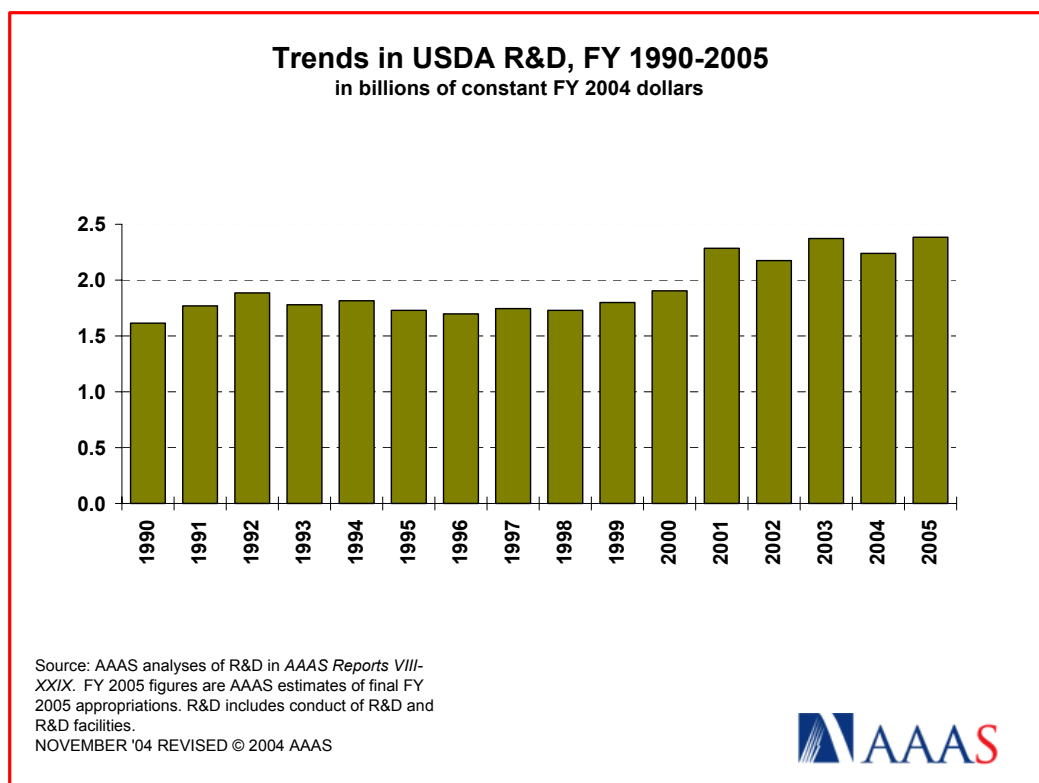


Figure 1. (click on the image for PDF)

**USDA's R&D portfolio is the most evenly distributed geographically among federal R&D funding agencies.** 73 percent of USDA's R&D goes to its own laboratories in a nationwide network of agricultural experiment stations located in all 50 states. Another 25 percent of the portfolio goes to colleges and universities, again to all 50 states because of the nationwide network of land-grant colleges and minority serving institutions that often receive USDA funds through formula distributions and geographically dispersed R&D earmarks. The top 10 state recipients of USDA R&D funds account for less than half the USDA total (see Figure 2), in contrast to the overall federal R&D portfolio in which just 7 states receive the majority of federal R&D.

### Next Steps

The record-setting USDA R&D budget for FY 2005 becomes final on December 8 when President Bush signs the omnibus bill into law. Although USDA R&D funding continues to hit new highs, there is growing interest in the agricultural science community in new funding mechanisms to ensure a steady funding stream for basic agricultural research through competitive grants. Although NRI hits a new high in 2005, the history of competitive agricultural research grants has been mixed in recent years as Congress and USDA have blocked mandatory competitive programs, directed the bulk of recent increases to facilities rather than research, siphoned off NRI dollars to fund earmarks, and repeatedly fallen short of the

original vision of NRI as a \$500 million-a-year program. In 2005, there is expected to be a push to create a National Institute for Food and Agriculture (NIFA) employing an extramural, peer-reviewed basic research model for agricultural research like the National Institutes of Health (NIH); advocates hope that a NIFA existing as a semi-independent agency within USDA would offer a higher profile for basic agricultural research and perhaps higher dollars. In a similar vein, a few weeks ago Senator Christopher Bond (R-MO) introduced a bill (S 3009) that would create a Division of Food and Agriculture Science within the National Science Foundation (NSF) to award peer-reviewed basic agricultural research grants. Although Congress did not act on the bill this year, it could be reintroduced in 2005.

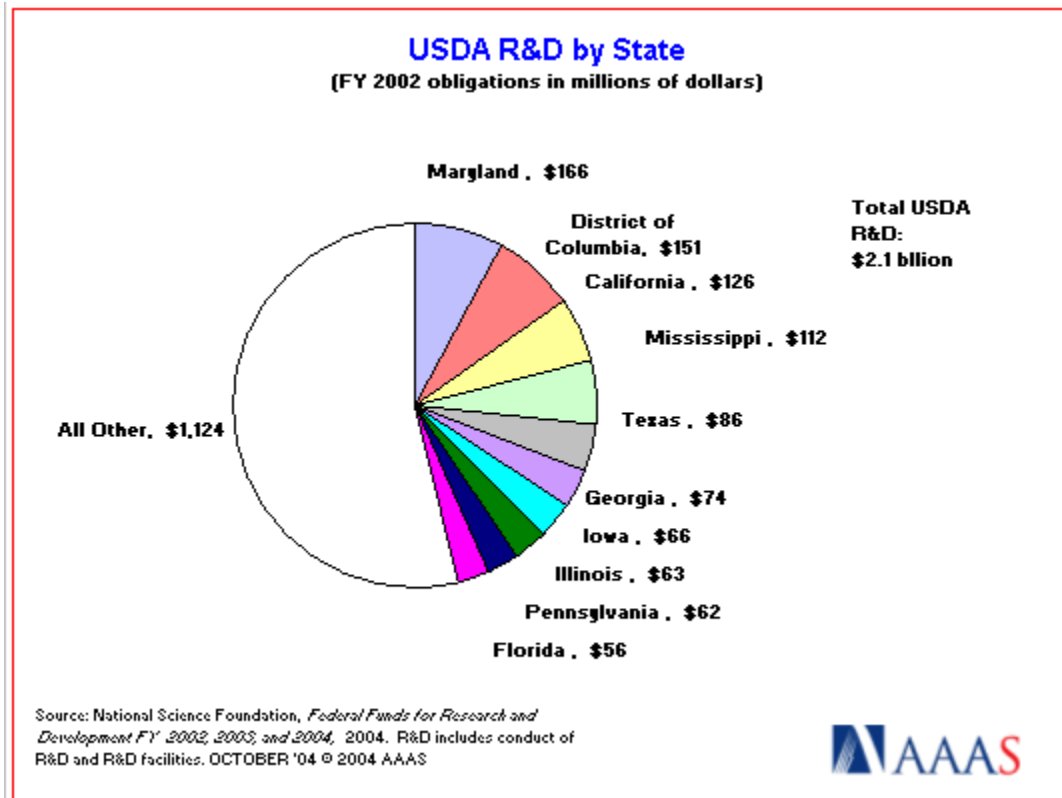


Figure 2. (click on the image for PDF)

(This analysis is one of a series of AAAS R&D Funding Updates on the FY 2005 appropriations process. The complete series of AAAS R&D Funding Updates, including continually updated analyses of R&D by agency in FY 2005 appropriations, is available on the AAAS R&D Web Site (<http://www.aaas.org/spp/rd>) in the “FY 2005 R&D” or the “What’s New” sections.)

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Table. USDA R&amp;D in FY 2005 FINAL Appropriations

**Table. U.S. Department of Agriculture  
Final Congressional Action on R&D in the FY 2005 Budget  
(budget authority in millions of dollars)**

	FY 2004 Estimate	FY 2005 Request	House-Senate Conference				
			<b>FY 2005 Approved</b>	Chg. from Request Amount	Percent	Chg. from FY 2004 Amount	Percent
<b>Agricultural Research Service (ARS)</b>							
Salaries and Expenses	1,083	988	<b>1,102</b>	114	11.6%	19	1.8%
Trust Funds	25	25	<b>25</b>	0	0.0%	0	0.0%
Buildings and Facilities	63	178	<b>186</b>	8	4.7%	123	195.8%
<b>Total ARS R&amp;D</b>	<b>1,171</b>	<b>1,191</b>	<b>1,313</b>	<b>123</b>	<b>10.3%</b>	<b>142</b>	<b>12.2%</b>
<b>Cooperative State Research, Education and Extension Service (CSREES)</b>							
National Research Initiative	164	180	<b>180</b>	0	-0.2%	16	9.5%
Special Research Grants	111	3	<b>120</b>	117	3501.1%	10	8.7%
Hatch Act	179	180	<b>179</b>	-1	-0.8%	0	-0.2%
Integrated Grants	26	43	<b>31</b>	-12	-28.8%	5	17.7%
All Other CSREES R&D	139	105	<b>134</b>	29	27.4%	-5	-3.6%
<b>Total CSREES R&amp;D</b>	<b>619</b>	<b>512</b>	<b>643</b>	<b>132</b>	<b>25.7%</b>	<b>24</b>	<b>4.0%</b>
<i>(CSREES Non-R&amp;D Programs)</i>	<i>503</i>	<i>506</i>	<i>530</i>	<i>25</i>	<i>4.9%</i>	<i>27</i>	<i>5.4%</i>
<i>(Total CSREES Budget)</i>	<i>1,122</i>	<i>1,018</i>	<i>1,174</i>	<i>156</i>	<i>15.3%</i>	<i>52</i>	<i>4.6%</i>
Forest Service	316	316	<b>322</b>	6	1.8%	6	1.8%
Economic Research Service	71	80	<b>74</b>	-6	-7.3%	3	4.5%
Agricultural Marketing Service	6	6	<b>6</b>	0	0.0%	0	0.0%
Foreign Agricultural Service	2	2	<b>2</b>	0	0.0%	0	0.0%
Nat'l Agricultural Statistics Service	5	5	<b>5</b>	0	0.0%	0	0.0%
Grain Inspection	7	7	<b>7</b>	0	0.0%	0	0.0%
Natural Resources Conservation	14	14	<b>14</b>	0	-0.8%	0	-0.8%
Animal & Plant Inspection Service	29	30	<b>28</b>	-2	-8.1%	-1	-4.9%
<b>Total USDA R&amp;D</b>	<b>2,240</b>	<b>2,163</b>	<b>2,414</b>	<b>252</b>	<b>11.6%</b>	<b>174</b>	<b>7.8%</b>

AAAS estimates based on FY 2005 appropriations bills. Includes conduct of R&D and R&D facilities.

FY 2004 and FY 2005 request figures based on OMB R&D data and supplemental agency budget data.

Figures are rounded to the nearest million. Changes calculated from unrounded figures.

**FY 2005 Approved figures adjusted to reflect across-the-board reductions in the FY 2005 omnibus bill.  
November 24, 2004 - AAAS estimates of final FY 2005 appropriations bills.**