Order Code RS22693
July 11, 2007

CRS Report for Congress

Agricultural Research, Education, and Extension in the 2007 Farm Bill

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Summary

Congress is currently considering a new multi-year farm bill to govern U.S. Department of Agriculture (USDA) programs, including those in the Department's Research, Extension, and Economics (REE) mission area. The Administration, the land grant university system,[1] and a congressionally authorized task force have put forth proposals to make major changes to the structure of the REE mission area. The farm bill research title that the House Agriculture Subcommittee on Conservation, Credit, Energy, and Research approved in May 2007 reflects some aspects of these proposals in that it calls for a unified annual budget for the REE agencies, establishes an Agricultural Research Institute to help coordinate intramural and extramural research and extension activities, and creates a National Institute for Food and Agriculture, supported by mandatory funds, to administer all competitive grants. This report will be updated as the 2007 farm bill progresses.

Background

The U.S. Department of Agriculture (USDA) is responsible for conducting agricultural research at the federal level, and for providing partial support for cooperative research, extension, and post-secondary agricultural education programs in the states. This mission area of USDA is called Research, Extension, and Economics (REE). In addition to research in the hard sciences, it also includes agricultural economics research, and data collection and statistical analysis.

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[1] The term "land grant" refers to the law first establishing an institution of public higher education in each state to teach the "agricultural and mechanical arts." The Morrill Act of 1862 gave a grant of federal land to each state and directed the state to sell the land and use the proceeds to establish a college of agriculture. In many states, the original 1862 school became the foundation for the state university, growing to include a wide range of academic disciplines, including agriculture. These large institutions sometimes are referred to as land grant universities, but USDA funding and programs pertain only to the colleges of agriculture within them.

The USDA agencies responsible for these functions are (1) the Agricultural Research Service (ARS), the department's in-house science agency, which has roughly 100 research centers located across the United States; (2) the Economic Research Service (ERS), an entirely Washington, D.C.-based social science agency; (3) the National Agricultural Statistics Service (NASS), a data-gathering agency headquartered at USDA, with offices in most states and U.S. territories; and (4) the Cooperative State Research, Education, and Extension Service (CSREES), which is headquartered at USDA and administers the federal funds that pass through to the state partners as well as a variety of grant programs.

The state partners are the colleges of agriculture at land grant universities in 50 states and eight U.S. territories, with their affiliated state agricultural experiment stations, schools of forestry and veterinary medicine, and cooperative extension. There also are 18 historically black land grant colleges of agriculture (the 1890 institutions) and 31 Native American colleges that gained land grant status in 1994 (referred to as the tribal colleges). Small grant programs support agricultural education at Hispanic-serving institutions, and at Alaskan and Hawaiian native-serving institutions.

Key Issues. USDA differs from other federal research agencies in allocating the majority of its annual research appropriation directly to in-house research (ARS, ERS, and NASS). Most federal science agencies primarily fund extramural research through a competitive, peer-reviewed grant process. The National Academy of Sciences (NAS) has recommended for more than a decade that at least 35% of total USDA research money be distributed competitively. When the NAS first made its recommendation in 1989, it determined that less than 6% of USDA's research funding was competitively awarded. In FY2006 it was approximately 14%, according to CRS calculations.[2]

The primary and longest-standing mechanisms for distributing annual federal appropriations to the colleges of agriculture at the state land grant universities are contained in the Hatch Act of 1887 (for cooperative research) and Smith-Lever Act of 1914 (for extension activities).[3] Formulas set forth in each of these acts determine how annual federal appropriations are divided among states. The majority of funding for state-level programs, however, comes from state appropriations, competitive grants from USDA and other federal agencies, and private industry. States are required to match Hatch and Smith-Lever formula funds; most states appropriate three to four times the federal allotment. Nonetheless, despite the fact that federal formula funds represent only a small percentage of total funding at the state level, they traditionally have been viewed by state research and extension directors as a very reliable source of support for their core programs.

Congress has set the policies and authorized the funding for USDA's research, education, and extension programs as part of omnibus farm bills since 1977. Permanent authority for most of the programs resides in older laws, but the authorization for appropriations for them expires at the end of FY2007 unless a new farm bill is enacted.

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[2] For more in-depth information on issues related to the structure and funding of the U.S. agricultural research and extension system, see CRS Report RL33327, *Agricultural Research, Education, and Extension: Issues and Background*.

[3] 7 U.S.C. 361a et seq. and 7 U.S.C. 341 et seq., respectively.

To address the challenges posed by the perceived need to increase competitive grants in agriculture, the major proposals for the research title propose significant changes in how ARS and CSREES are structured and administered.

Proposals for Change

Administration's Proposal. In the comprehensive farm bill proposal that USDA released in February 2007, the Administration proposed to rename the Research, Education, and Extension mission area the Office of Science, and to merge ARS and CSREES into a single agency conducting both intramural and extramural programs under the leadership of a Chief Scientist. The proposal calls for the current formula-funded authorities to be retained. ERS and NASS would be the other two agencies also under the Office of Science. The Administration maintains that an integration of budgets and programs would provide more efficient and effective program implementation and resource allocation. In its call for a unified budget and a single scientific agency, this proposal mirrors some of the key aspects of the land grant system's CREATE-21 proposal (see below).[4]

2002 Farm Bill Task Force Proposal. In Section 7404 of the 2002 farm bill (P.L. 107-171), Congress commissioned a task force "to conduct a review and evaluation of the merits of establishing one or more National Institutes focused on disciplines important to the progress of food and agricultural sciences," among other things. The task force recommendations, released in July 2004, call for the formation of a National Institute for Food and Agriculture (NIFA) within USDA "to supplement and enhance, not replace, the existing research programs." The task force conceived of the NIFA as a separate entity solely for awarding competitive peer-reviewed grants, and called for an annual budget for the institute to build to $1 billion over a five-year period.[5]

H.R. 2118 (C. Peterson)/S. 971 (Bond) reflect the task force recommendations. The companion bills would establish the NIFA and commission it to award an estimated 1,000 competitive grants annually in research areas to be determined by a Director appointed by the President, in consultation with a Council of Advisors (to include stakeholders as well as scientists). The bills would provide mandatory funds for the NIFA starting at $245 million in FY2008 and increasing to $966 million by FY2012.

Land Grant Organization Proposal. H.R. 2398 (Barrow)/S. 1094 (Stabenow) reflect recommendations put forth by the National Association of State Universities and Land Grant Colleges (NASULGC) after a nationwide deliberative process within the land grant system (both the NASULGC document and the legislative proposals are under the title "Creating Research, Extension, and Teaching Excellence for the 21st Century" or "CREATE-21"). The key provisions would (1) put all of USDA's intramural and extramural research, education, and extension agencies (including the research arm of the Forest Service) under one administrative body, working with a unified budget; (2) provide $200 million annually in mandatory funds and substantial annual increases in appropriated funds (to 171.5% of the current level of $2.67 billion) in FY2012; and (3) provide

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[4] The full Administration proposal is available online at [http://www.usda.gov].

[5] *National Institute for Food and Agriculture: A Proposal*, report of the Research, Education, and Economics Task Force of USDA, July 2004. Available online at [http://www.ars.usda.gov].

opportunities for minority and smaller schools, both land grant and non-land grant, to expand their capacity for agricultural research, education, and extension. The CREATE-21 proposal was widely but not unanimously endorsed by the colleges of agriculture at the land grant universities.

Current Legislative Activity

In the House. On May 22, 2007, the House Agriculture Subcommittee on Conservation, Credit, Energy, and Research marked up and approved the research title of the 2007 farm bill.[6]

Subtitle A of Title VII contains several key provisions. It would establish six research institutes, collectively called the "Agricultural Research Institute," to coordinate and administer all current ARS and CSREES research, education, and extension programs.[7] The President would submit a unified annual budget reflecting the total funding request for this USDA mission area.

The subcommittee-approved title also would establish within CSREES a National Institute for Food and Agriculture (NIFA) to administer all extramural competitive grant programs. The title proposes to require USDA to use 30% of the annual funding appropriated for the existing National Research Initiative Competitive Grants program (NRI) to make NIFA grants (approximately $63 million, based on an FY2007 appropriation of $190.2 million for the NRI), and would make an additional $200 million in mandatory funds available annually for the NIFA.

Other new provisions in the title include (1) a $50 million authorization for annual appropriations to renew and expand an Agricultural Bioenergy and Biobased Products Research Initiative; (2) a $100 million authorization for annual appropriations for a Specialty Crop Research Initiative to award competitive grants for research on all aspects of fruit, vegetable, tree nut, and nursery crop production and protection; and (3) the designation of USDA as the lead agency for research on animal diseases, giving the Secretary the sole control over the importation and transportation of live animal viruses.

Finally, the title also would establish a formula to guide state appropriations of matching funds for the historically black land grant colleges, and would authorize $25 million in annual appropriations for research and extension activities pertaining to organic agriculture. The 2002 farm bill provided $3 million annually in mandatory funds through FY2007 for this initiative.

In the Senate. No formal mark-up sessions have been held yet by the Senate Committee on Agriculture, Nutrition, and Forestry. However, the bills reflecting the 2002 farm bill task force proposal (the NIFA proposal) and the CREATE-21 proposal have

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[6] The House Agriculture Committee research title and section-by-section analysis are available online at [http://agriculture.house.gov].

[7] The Agricultural Research Institute would be composed of individual institutes for (1) renewable energy, resources, and environment; (2) food safety, nutrition, and health; (3) plant health and production; (4) animal health and production; (5) agriculture systems and technology; and (6) agriculture economics and rural communities.

been introduced in the Senate (S. 971 and S. 1094) as well as in the House. This could set the stage for possible consideration of provisions to reorganize the structure of the research, education, and extension mission area; to establish some new entity for awarding more competitive grants; and to provide more mandatory funds to boost total funding in this area (given the budget constraints on future increases in appropriated funds).