

Changes in Funding Sources Interact To Influence Research Portfolios

SAES were able to maintain stable staffing levels from 1980 to 2005 because declines in formula funds were accompanied by increases in competitive and special grants, industry agreements, and other Federal funding. As figure 14 shows, ARS is the largest intramural research agency. By agency history and design, the topics addressed by ARS are often similar to those addressed by the SAES. ARS's National Programs (including 1,200 research projects) are grouped by ARS into topics similar to SAES topics reported to CRIS/CSREES. These ARS research program areas are crop production and protection, animal production and protection, natural resources, and nutrition/food safety (www.ars.usda.gov/research/programs.htm).

Given the size of the SAES research programs, it is not possible to outline fluctuations in funding of individual research programs. Changes in basic and applied research approaches at ARS might have impacts on the research agenda of the SAES, but ARS has maintained a basic-research portfolio of just over 50 percent across all programs for most years from 1980 through 2005. Basic research at ARS accounted for 53 to 54 percent of the total portfolio from 1980 to 2000. From 2001 to 2003, the percent in basic research rose to 55 percent, and for 2004 to 2006 it dropped back to 49 percent (ARS budget office, personal communication, January 2007).

ARS's allocation to developmental research, which is for research on technologies that are closer to market than applied research usually is, remained stable at between 9 to 10 percent throughout the period. Applied research also remained relatively constant at between 35 and 40 percent. Thus, the funding ratios for basic, applied, and developmental research at ARS have held fairly constant. As a result, the shift from basic to applied research within the SAES, whether linked to funding mechanisms or not (which as indicated earlier is difficult to establish), was not offset by a shift in the opposite direction at ARS. Furthermore, an increase in near-market developmental research appeared to reinforce the trend toward more applied research at the SAES, as discussed in the next section.

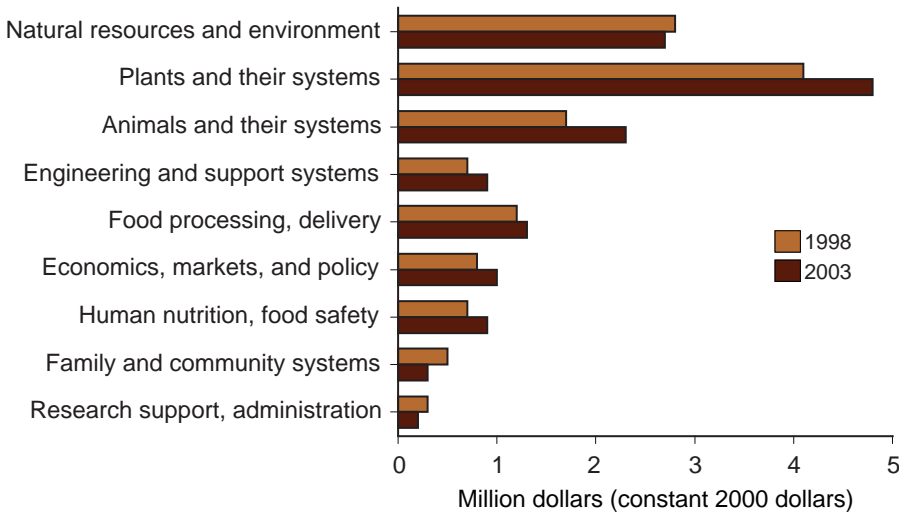
Growth in Near-Market Developmental Research

Strongly motivated to search for relevance in pursuit of funding options, SAES researchers and administrators have often searched for marketable applications for their agricultural research outputs. To track changes in developmental funding we look at changes in funding from three sources: CSREES-administered competitive grants, formula funds, and special grants. While developmental competitive grants were almost nonexistent in 1998, the topic "plants" was awarded over \$500,000 (constant 2000 dollars) competitively for developmental research in 2003. The second-largest competitive developmental topic was nutrition, at over \$300,000. Within developmental formula funds, two out of three of the largest topics, plants and animals, rose from 1998 to 2003, while natural resources fell slightly. While there was growth in applied research overall and also growth in basic and applied special grants,

special grants for developmental topics fell in all areas except nutrition and research support. The largest percentage decrease was in developmental plant systems research. The overall impact of changes in developmental funding was that the growth in applied SAES research was reinforced by shifts in developmental funding for the SAES (see figs. 16, 17, and 18). Note: the scale for figs. 16-18 is from 0 to \$5 million, changed from the scale for figs. 8 to 9 (0 to \$40 million), figs. 10 to 11 (0 to \$25 million), and figs. 12 to 13 (0 to \$20 million).

Figure 16

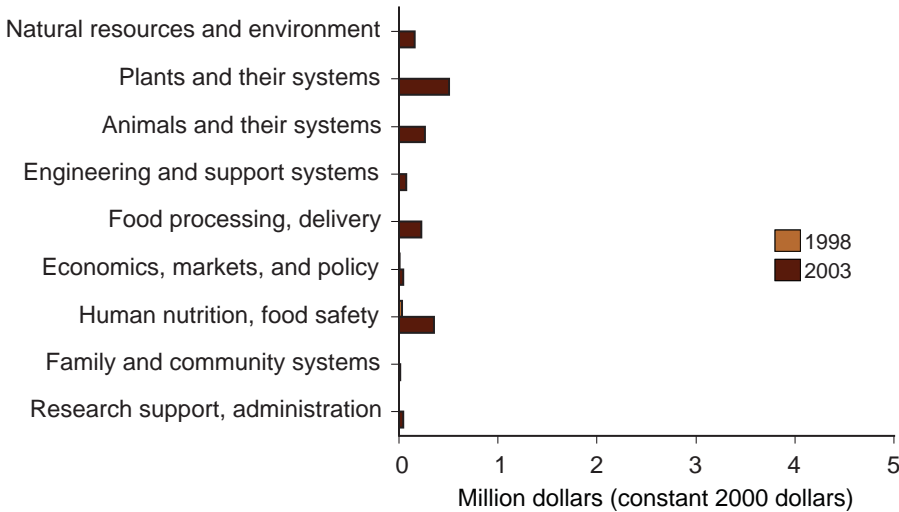
CSREES-administered developmental formula funds spent by SAES, by topic area



Source: USDA, CRIS.

Figure 17

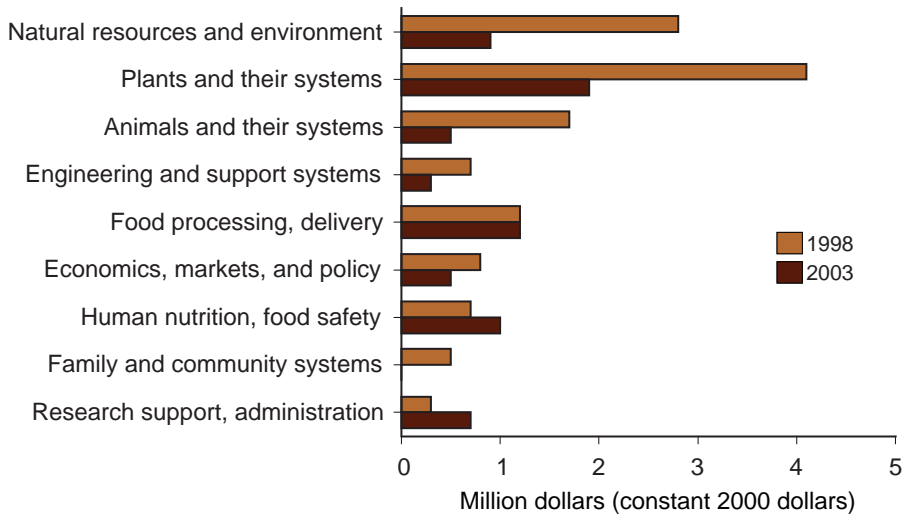
CSREES-administered developmental competitive grants spent by SAES, by topic area



Source: USDA, CRIS.

Figure 18

CSREES-administered developmental special grants spent by SAES, by topic area



Source: USDA, CRIS.