FEDERAL FUNDING OF SAES ECONOMICS RESEARCH: TRENDS AND POSSIBLE STRATEGIES FOR IMPROVED SUPPORT

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INTRODUCTION

Federal funding support for agricultural research in the State Agricultural Experiment Stations and the Land-Grant universities originated with passage of the Hatch Act in 1887. Additional Federal support has been provided by the various subsequent acts and appropriations over the nearly 100 years that have since elapsed.

Federal research funding has had an important role in the development of the state agricultural experiment stations (SAES). However, in recent years traditional Federal funding has declined in relative importance. Federal funding of SAES research tripled from 1970 to 1983, while State funding grew by 3.6 times over that period. In 1970 each dollar of Federal funds was matched by $1.70 of State funding but by 1983 each Federal dollar was matched by $1.96 in State funding (Christensen and Robinson).

While growth in State funding for SAES research has exceeded Federal funding, one should not underestimate the importance of Federal funding on the total support of SAES research and the character of research programs conducted. Huffman and Miranowski estimated the impact of changes in Federal support on State expenditures for agricultural research. They stated that a 10 percent decline in Federal support for agricultural research implies an accompanying decline in State expenditures of about 0.15 percent. Also, their conclusions indicated that the

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negative impacts on State funding for agricultural research from declines in Federal funding were likely to be more pronounced in less affluent and less agricultural states than in wealthier and more agriculturally oriented states.

A more recent study by Rose-Ackerman and Evanson also investigated the support for agricultural research. Their findings were that the larger the Federal grant support for research the larger will be State appropriations for research and education. They concluded that, "Unless Federal funding for agricultural research and extension increases markedly, the proportion of State budgets invested in public sector research and extension will continue to decline. This may mean an absolute decline as well, unless total State budgets increase at a rapid rate."

Federal funding also has significant impacts on the character of SAES research programs and the allocation of resources among disciplinary departments. Historically, the social sciences and agricultural economics in particular have benefited disproportionately from Federal legislation and funding. For example, there was a dramatic increase in agricultural economic research projects conducted at the SAES, following the passage of the Purnell Act in 1925. Similarly there was substantial growth in the support (both Federal and non-Federal) of marketing economics research in the years following the passage of the Research and Marketing Act of 1946. More recently, a large proportion of the Competitive Grant funds have been designated (earmarked) for research in biotechnology. This designation has greatly increased support for research in the biological science departments at the SAES.

The objectives of this paper are to examine recent changes in the total funding of SAES research programs and the economics research programs conducted at these institutions with emphasis on Federal funding sources; to examine the support allocated to economics research compared to total station research and to compare trends in the funding of economics research compared to funding of all research. On the basis of the above analyses the paper will offer suggestions for using the influences of the agricultural economics discipline in improving the Federal support of economics research conducted at the SAES.

TRENDS IN SAES RESEARCH FUNDING

Federal Funding of SAES Agricultural Research

Table 1 shows the major sources of funding for SAES research for 1977 and 1983 and changes that occurred between these two years. The total increase in support for SAES research from all sources between these two years was 67.9 percent. The increase from all Federal sources (67.0 percent) about equaled that from all non-Federal sources (68.3 percent). The Federal support sources are divided into two categories -- CSRS administered and non-CSRS administered. Federal support from the latter category comes from other agencies within USDA and from Federal agencies outside the Department. Federal support of SAES programs from non-CSRS sources increased 73.3 percent compared to 69.3 percent from CSRS. The major increase (182.4 percent) in non-CSRS funds came largely from other agencies within the USDA in the form of cooperative contracts and agreements (CGCA). The major increases in support from CSRS administered sources were from project grants (competitive,

special, animal health and others). The lowest percentage increases were from formula funds (Hatch and McIntire-Stennis).

Recent Changes in the Funding of SAES Economics Research

Table 2 shows the major sources of funding for economics research conducted at the SAES for 1977 and 1983, and changes that occurred between these two years. The total increase in support for economics research from all sources between these years amounted to 62.2 percent. The increase, however, from all Federal sources was only 19.2 percent while from all non-Federal sources the increase was 100.3 percent. The increase in funding from non-Federal sources was therefore five times greater than Federal sources. The greater increases in Federal funding for economics research came from non-CSRS sources — that is, other USDA agencies and other Federal agencies, external to the Department. The greatest increase in Federal support for SAES economics research came from other agencies within USDA (121.0 percent). These agencies include the Economic Research Service (ERS) and others that either conduct and/or contract for economics research at the SAES.

Again, the lowest levels of increase came from Federal formula sources -- Hatch/RRF and McIntire-Stennis with increases of only 6.5 and 9.1 percent respectively. Federal fundings of SAES economic research from Special and Competitive grants has been virtually non-existent.

Relative Shares Allocated to Economic Research

Table 3 shows the percentage of SAES research funds allocated to economics research by major funding source from 1970 to 1983. The relative share of funds allocated to economic research, from all sources,

has remained fairly constant (around 6 percent) over the 14 year time span. However, the maintenance of this relative share came from increased non-Federal sources (primarily State appropriations) and other agencies of the USDA.

In fact, these increases fortuitously offset the declines in the traditional CSRS administered funds. The support of economics research from CSRS administered funds has declined consistently and significantly since the passage of Title XIV of the 1977 Farm Bill. In 1976, 13.5 percent of CSRS funding was allocated to economics research, while in 1983 only 8.2 percent of funds were spent on economics research. If that proportion had been maintained in 1983, CSRS funding of economics research would have totaled $23.5 million rather than the actual $14.3 million. Thus, all other things being equal, total Federal funding of economics research in the SAES would have been about 45.7 percent greater.

Table 4 shows relative changes in funding levels for economics and total SAES research, from major support sources, from 1970 to 1983. These movements are reflected in indexes using 1970 as the base year in each instance. Total SAES research funding has grown at a faster rate for all SAES research (1980 index = 352) compared to funding for SAES economics research (1983 index = 328). In contrast, funding for economics research from non-Federal sources has grown at a faster rate than for all SAES research (1983 indexes of 403 and 372 respectively). The growth in Federal funding from the different sources from 1970 to 1983 was mixed, however. The 1983 index of total Federal funding for economic research was 244 compared to 314 for all SAES research. CSRS

administered funding for economic research also grew at a slower rate than funding for all SAES research -- 1983 indexes of 204 and 310 respectively. Interesting enough all other Federal agencies -- both within and external to USDA -- are giving greater emphasis to economics research as reflected in funding growth indexes. The 1983 index of funding growth for economics research from other agencies within USDA was 604 compared to 485 for all station research. Similar patterns of funding have evolved in Federal agencies external to the Department. The 1983 funding index for other Federal agencies was 319 for economic research and 277 for all station research.

In summary, funding for economic research through CSRS has declined relative to other disciplinary areas in recent years. Non-Federal allocations have offset the decreases in Federal funding to some degree. Funding from other USDA agencies sources through grants and contracts from USDA and other agencies have also grown markedly over the period described by the data. However, these sources may have peaked judging from current budget proposals in Washington.

IMPROVING FEDERAL SUPPORT OF AGRICULTURAL ECONOMICS RESEARCH IN SAES

The implications of decreased CSRS support are substantial and should be of concern. These funds are among the more stable elements of research funding on a year-to-year basis and, as they decline in relative amount, the total research budget becomes more susceptible to short-term fluctuations as soft money support is secured or lost. Since CSRS funding is the primary source of support for disciplinary and multidisciplinary research on a regional basis, decreases in funding will

increasingly curtail this type of research.

Support for agricultural economics research in the land-grant university comes from the Federal and State funds discussed above as well as from a variety of other sources, including industry. Within the university setting, funding to a particular department, discipline, or faculty member is a function of several factors. Included is the department's historical share of experiment station funding, relative research productivity of faculty, perceptions of priorities at the State level, relative persuasive abilities of department heads/chairs and researchers, availability of earmarked or special purpose funds, and a variety of other individual factors. Nevertheless, directions and priorities identified and established at the national level by ESCOP, CSRS, the Joint Council, the Users Advisory Group, and Congress have a substantial effect on the funding of research at the experiment stations.

Agricultural economists in the universities have, therefore, two arenas for influence upon research funding for the discipline. The home arena is within their own experiment station/department milieu. The other arena is at the national level where the experiment stations are represented by CSRS. For the university-based agricultural economist the only consistent spokespersons for the profession at the national level are the staff agricultural economists in CSRS. The attrition that has occurred with respect to our discipline's representation has been documented elsewhere (AAEA Ad Hoc Committee Report on CSRS, 1984). Two points made in that report are worth repeating here. First, CSRS professional staff have an important role in developing the program justifications and prioritizations that are part of, and accompany, budget

recommendations. As representatives and spokespersons for disciplinary interests, this role of CSRS staff should not be underestimated. Secondly, following from the attrition mentioned in the report, representation for agricultural economics at the national level has been meager indeed.

Beyond the influence exerted by disciplinary representatives in CSRS there is need for increased influence with the Congress and the funding agencies. For example, the Consortium of Social Science Associations represent a large spectrum of the social sciences in Washington. This organization provides a means for two-way communication between the disciplinary interests of the various associations and the Congress and government agencies. The AAEA is not a member of the Consortium.

Stanton and Farrell have noted the fact that representatives of the American Society of Animal Scientists have appeared on several occasions before SAES/USDA research planning entities to present statements on behalf of their membership. Other disciplines have appeared before congressional appropriations committees to support particular research. Stanton and Farrell state that they know of no occasion in the past decade when a state agricultural economist has appeared before congressional committees to support or comment on budget proposals. Further, they state that direct support for agricultural economics research in the budget making process is diffuse and weak.

Many in our profession would argue that "lobbying" for funding for our research is unprofessional or unethical and represents a compromise of our professional objectivity. While we would not go so far as to

advocate employment of an aggressive public relations firm to lobby our interests, we would suggest that the attrition in funding support at the Federal level is a serious issue calling for advocacy of economics research. The AAEA Ad Hoc Committee on CSRS called for the establishment of an "Agricultural Economics Advisory Committee" to serve in an advisory capacity to ESCOP and to CSRS administration. This committee would have two major responsibilities. It would monitor on a continuous basis the adequacy of representation of agricultural economics programs at the national level. Secondly, the committee would be charged with formulating consensus on research priorities in agricultural economics and the communication of these priorities to both ESCOP and CSRS administration. We believe that the AAEA must seriously consider such action or face the prospect of continually dwindling CSRS support for economics research.

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Table 1

Funding Levels and Changes by Source, SAES Research, 1977 and 1983

Funding Source	1977 ($000)		1983 ($000)		Changes 1977-1983 ($000)		%	
FEDERAL		168,097		280,706		112,609		67.0
CSRS Administered	104,925		174,207		69,282		69.3	
Hatch/RRF	94,078		141,355		47,277		50.2	
McIntire-Stennis	6,124		9,177		3,053		49.9	
Special Grants	4,582		12,858		8,276		180.6	
Competitive Grants	0		6,040					
Animal Health	0		4,310					
Other Funds	141		467		326		231.2	
Non-CSRS Administered	63,172		106,499		43,327		73.3	
USDA (CGCA)	11,739		33,149		21,410		182.4	
Other Federal Agencies[1/]	51,433		73,350		21,917		42.6	
NON-FEDERAL[2/]		425,105		715,601		290,496		68.3
ALL SOURCES		593,202		996,307		403,105		67.9

1/ NSF, DOE, AID, DOD, NIH, PHS, HHS, NASA, TVA and Others.

2/ State Appropriations, Product Sales, Industry and Others.

Source of Data: CRIS, CSRS, USDA

Table 2

Funding Levels and Changes in Economics Research by Source, SAES, 1977 and 1983

Funding Source	1977 ($000)	1983 ($000)	Changes 1977-1983 ($000)	Changes 1977-1983 %
FEDERAL	16,855	20,091	3,236	19.2
CSRS Administered	13,454	14,331	877	6.5
Hatch/RRF	11,898	12,980	1,082	9.1
McIntire-Stennis	549	764	215	39.1
Special Grants	439	560	121	27.6
Competitive Grants	0	0	0	0
Animal Health	0	0	0	0
Other Funds	568	27	541	95.2
Non-CSRS Administered	3,401	5,760	2,359	69.4
USDA (CGCA)	1,746	3,859	2,113	121.0
Other Federal Agencies 1/	1,655	1,901	246	14.8
NON-FEDERAL 2/	18,836	37,729	18,893	100.3
ALL SOURCES	35,691	57,820	22,129	62.0

1/ NSF, DOE, AID, DOD, NIH, PHS, HHS, NASA, TVA and Others.

2/ State Appropriations, Product Sales, Industry and Others.

Source of Data: CRIS, CSRS, USDA

Table 3

Percentage of SAES Research Funds Allocated to Economic Research by Major Funding Source, 1970 to 1983

	USDA Agencies		Other Federal Agencies	Total Federal	Total Non-Federal	Total All Sources
	CSRS	Other				
			(Percent)			
1970	12.5	9.4	2.3	9.2	4.9	6.2
1971	13.2	12.3	8.1	11.7	4.8	6.9
1972	13.4	10.8	5.7	11.2	4.3	6.2
1973	13.2	10.7	3.7	10.5	4.1	6.0
1974	12.6	10.0	4.6	10.3	4.1	6.0
1975	12.7	10.1	3.5	10.0	4.1	5.7
1976	13.5	12.2	5.0	11.1	4.6	6.4
1977	12.8	14.9	3.2	10.0	4.4	6.0
1978	11.0	13.5	4.5	9.3	4.8	6.1
1979	10.0	15.1	5.1	9.0	5.0	6.1
1980	9.6	13.5	4.8	8.6	5.0	6.0
1981	8.8	12.6	4.1	7.9	5.2	6.0
1982	8.6	13.0	4.1	7.8	5.2	6.0
1983	8.2	11.6	2.3	7.2	5.0	5.8

Data Source: CRIS, CSRS, USDA

Table 4

Indexes of Changes in Support Levels, by Funding Sources, SAES, 1970-1983
(1947 = 100)

Year	USDA Agencies CSRS		USDA Agencies Other		Other Federal Agencies		Total Federal		Total Non-Federal		Total All Sources	
	Economics	All Research	Economics	All Research	Economics	All Research	Economics	All Research	Economics	All Research	Economics	All Research
1970	100	100	100	100	100	100	100	100	100	100	100	100
1971	117	111	121	93	350	98	135	106	104	107	118	106
1972	133	124	111	96	262	103	141	116	110	126	125	126
1973	138	130	125	110	179	109	140	122	116	138	127	136
1974	136	134	134	126	241	118	143	129	132	160	137	150
1975	150	147	171	158	201	129	155	142	157	184	156	171
1976	177	162	189	145	317	143	188	155	186	196	187	183
1977	192	187	273	172	278	195	204	288	201	221	203	211
1978	186	212	312	216	396	201	211	209	238	240	256	230
1979	178	222	453	280	523	230	224	229	293	267	250	255
1980	188	243	515	357	540	229	238	256	306	300	277	286
1981	189	222	589	437	538	294	245	287	356	331	304	317
1982	205	297	628	454	538	294	262	308	375	352	322	338
1983	204	310	604	485	319	277	244	314	403	372	328	353

Data Source: CRIS, CSRS, USDA

FOOTNOTES

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