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FINANCING AGRICULTURAL RESEARCH AND EDUCATION IN A PERIOD OF TIGHT BUDGETS

William P. Flatt

The headline of a major article in the *Athens Banner Herald/Daily News* on New Year's Day, 1983, was:

“GOVERNORS FACE REVENUE SHORT-FALLS—Hike Taxes or Cut Services”

This article, heralding the new year, clearly indicated that 1983 would be a period of tight budgets in virtually every state. A survey of 25 state capitals revealed that state revenues have been steadily declining. *Policy Reports*, a new bimonthly publication, surveyed the 16 states where newly elected governors will be inaugurated in January, 1983, and found that none had advocated a tax increase. It doesn't take a Ph.D. in economics to predict that these governors will try to balance the state budgets by reducing services rather than by increasing taxes to raise revenues.

When Bob Raunika and Max Langham asked me in July, 1982, to present an invitational paper to the Southern Agricultural Economics Association on the topic, “Financing Agricultural Research and Education in a Period of Tight Budgets,” I did not realize how timely the topic would be. Tight budgets are now a reality in most of the states represented here—with the possible exception of oil-producing states. The Southern Council of Administrative Heads of Agriculture is meeting concurrently with this session, and one of the major topics on the agenda will undoubtedly be how to cope with the budget cuts without seriously impairing agricultural research and education programs.

SOURCES AND ALLOCATION OF FUNDING

Agricultural research and education programs are primarily supported by state and federal tax revenues, and in the case of cooperative extension services, by county, state, and federal funds. Any reduction in revenues will potentially decrease funds available to support these services. The manner in which reductions in services will be made in each state will vary, since the organizational structure and methods of allocating funds to colleges of agriculture differ. The responsibility for administration of Hatch funds for agriculture research in the states is mandated by federal law to the directors of the state agricultural experiment stations.

For cooperative extension service programs, the Smith-Lever Act places this fiscal responsibility with the state director of cooperative extension service. For Evans-Allen Institutions, the chief administrative officer (usually the 1890 college president) has this responsibility. In some states, such as Georgia, there are line item budgets for state funds to finance the agricultural experiment stations and cooperative extension programs. In other states, the state funds for these programs are not designated by the state legislature, but are left to the discretion of the other decision-makers, such as the university officials.

How, then, with this variability in state budgeting processes, state laws, and regulations, will agricultural research and education (including cooperative extension and resident instruction) programs fare during this era of a bleak economy? During times of tight budgets, management of scarce resources becomes even more critical. Agricultural research programs are long-term in nature, and interruption for even a short period of time can delay solution of important problems, resulting in costly losses in some cases.

The University of Georgia President Fred C. Davison stated that:

A funding philosophy that does not reflect an understanding of the needs and nature of research stifles incentive, retards scientific inquiry, and leads to research sterility. Since research deals with the unknown, it is impossible to know what advances are lost, what knowledge remains undiscovered. The future return on research, while unknown, has potentially unlimited boundaries and immeasurable benefits. This is a view seldom appreciated in a budget process that deals with all functions in the same way.

The criteria used to evaluate agricultural research and education programs may differ from state to state and from institution to institution. In many states, the research, teaching, and extension budgets are separate line items from the state legislature. Priority setting, then, is not at the college level, but at the higher level.

Three fundamental criteria used in research priority setting, according to Fishel, are relevance, technological feasibility, and performer capability. These criteria would also appear to be appropriate in agricultural education programs. Course content and extension programs reflect these criteria. In reality, though, when

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student enrollments in agriculture have expanded rapidly it has been tempting to shift research resources to meet the demand for instruction. The extent to which college administrators have been able to do this has depended on local budget management procedures.

Huston concludes that:

Priority setting is a dynamic, ever changing, and complex activity of state agricultural experiment stations. It guides allocation of scarce resources in the development of research programs to meet local, state, regional, national, and international needs and concerns. Most stations have been setting priorities to develop research programs for 60 to 100 years or more. Priority setting in stations with operational research programs composed of high priority investigation means reassessing current programs in the light of changing needs and emerging needs. Priority setting now, in the past, and in the future, is an activity guided by federal and state legislative mandates.

Evenson, Waggoner, and Ruttan reported that the annual rates of return on investments in agricultural research were approximately 50 percent. They attributed a major part of the success of American agriculture to the state-federal partnership and to the decentralized system of agricultural research management.

TIGHT BUDGETS A REGULAR OCCURRENCE

Tight budgets for agricultural research and education programs, though, have been the rule rather than the exception. Ruttan states that financial resources have been a limiting factor and have been well managed.

The U.S. public sector agricultural research system appears to be relatively efficient in the allocation of research resources. . . . The U.S. agricultural research system is far less effective in resource acquisition than in the use of research resources. The analysis presented in this chapter suggests that both its efficiency in the allocation of research resources and its capacity to mobilize resources are strongly related to its decentralized organization. A highly centralized system might be expected to be less efficient in allocating resources to research but more effective in resource acquisition. If the system were more highly centralized, a combination of a loss in efficiency in research resource allocation and an increase in funding for research might be expected to drive the returns to agricultural research to more conventional levels.

In colleges of agriculture, most of the day-to-day management decisions are made by the discipline department head. The department head and faculty are usually engaged in research, teaching, extension, and in some cases, international agriculture activities. They are responsible for undergraduate and graduate instructional activities. The joint appointment of scientists as teachers and researchers is a common practice that affords faculty an alternate means of responding to the needs of students as well as to agribusiness and other user clientele.

Flexibility to be able to respond to change is essential. This is best done at the departmental level where pressures are usually first apparent—either in terms of agricultural crises, student enrollment, or producer group concerns. It appears that the level of demand for research and education runs countercyclical to economic conditions. With the current recession (some would use the term depression with a capital “D”), the demands for and interest in research, extension, and education programs that would improve the management of resources in production, processing, and marketing appear to be increasing. When we had four years of drought in Georgia, the demand increased for irrigation system plans and water management information. With each outbreak of insects or diseases, the demand for research and extension activities in these areas escalated.

During a recession, the agribusiness sector places greater demand on research and education for information to improve decision-making processes, such as financial planning and other economic analyses affecting the firm, commodity group, or other organization affected. Students electing to major in agricultural economics have risen as financial problems in agribusiness have increased.

J. L. Hills, who served for 49 years as director of the Vermont Agricultural Experiment Station, summarized some of his experiences as a state agricultural experiment station director during the early years (1888-1942). His comments on early station funding make today's budget problems look mild. From 1886 to 1889, the Vermont state appropriations were \$3,500 per year, and following passage of the Hatch Act, federal funds were \$15,000 annually. Obviously, experiment station funding has increased greatly since those early years. Numerous problems existed then, as now, and it is doubtful that sufficient funds have ever been available to address all of the research needs.

RESPONSE TO TIGHT BUDGETS

The importance of management, though, was realized from the beginning. Hills stated:

An ideal station setup involves: the study of problems having pertinence to the agriculture of the state or region; the proper relation of station staff members to such problems and their individual fitness to deal with them; such allocation of personnel, time, laboratory space, field areas, equipment as shall be adequate to the tasks which are in hand; the location of the work at points where the attack may be pressed to best advantage; a high degree of freedom accorded to individual workers to pursue their studies in the manner that to them seems best; to the utmost extent possible, freedom from extraneous calls and interruptions to the end that unremitting attention may be devoted by staff members to their projects.

Hills further stated:

The conscientious director at times may be hard put to maintain a sound policy of investigation and to devote all

research funds to that end in the face of administrative urgency, directly or indirectly exerted, to divert some of them into other channels, an impulse often due to an increment in student numbers which is entirely disproportionate to that of income.

Numerous reports have been prepared that indicate the importance of public investments to support agricultural research and education programs. Several of your members have been active in preparing materials to be used in support of experiment station, cooperative extension, and resident instruction federal budget requests to the USDA, Office of Management and Budget, and to the Congress of the United States. Bobby Eddleman and Joe Havlicek have served as chairmen of the Interim Research Evaluating Committee of the Experiment Station Committee on Organization and Policy. These reports included cost-benefit analyses for research and extension programs for various agricultural commodities and other programs.

As Ruttan mentioned, the decentralized nature of agricultural research in the U.S. has reduced our effectiveness in acquiring federal funds. One action taken to improve this situation was to organize a group whose responsibility was to prepare and defend a unified budget for research, extension, and teaching. The Committee for Agricultural Research, Extension, and Teaching (CARET) was formed for the express purpose of improving the acquisition of federal funds. CARET was initially a small committee composed of the legislative (budget) subcommittee chairmen of the Experiment Station Committee on Organization and Policy (ESCAP), the Extension Committee on Organization and Policy (ECOP), the Resident Instruction Committee on Organization and Policy (RICOP), and the Division of Agriculture of the National Association of State Universities and Land-Grant Colleges (NASULGC). The charter members were Orville Bentley, James Anderson, Howard Diesslen, Paul Poffenberger, and William Flatt. The assistance of E. A. Jaenke and Associates, as a Washington-based consultant, was obtained. This organization of CARET was subsequently changed to be a national group of leaders with representation from every state in the nation. This group may prove to be of immense benefit in obtaining much needed funds to finance agricultural research and education programs in a period of tight budgets.

The Congress of the United States requested the Office of Technology Assessment (OTA) to undertake an assessment of the U.S. food and agricultural research system. The assessment included the preparation of several background papers that included detailed analyses of the budgets for publicly financed agricultural research in the United States. Joe Havlicek, Bobby Eddleman, Fred White, Joe Purcell, Robert Evenson, and several other agricultural economists were authors of commissioned papers prepared in 1980 and published in 1982. The summary of the assessment published by OTA in 1981 is based to a great extent, but not entirely, on these papers. Statistics on research funding from the appendix of the OTA report show the

funds allocated to research in the USDA budget over the past several years. Table 1 is particularly revealing as it shows that the total research expenditures for the state agricultural experiment stations increased both in current and in constant dollars between 1966 and 1979. Table 2 shows that most of the increase was in state rather than federal appropriations. This reflects the fact that the ability to acquire funds to support agricultural research is greater at the state level than at the federal level.

Private industry funds have accounted for only about 5 percent of the total research expenditures at state agricultural experiment stations (Table 2). The total funds expended by private industry for applied research and development are shown in Table 3.

Scientists are encouraged to seek funds from private sources as well as grants from state and federal agencies. During times of fiscal restraint, nonpublic sources of funds become even more critical. The individual faculty member has the primary responsibility for generating funding from the private sector. In some institutions, organizational vehicles have been developed to assist faculty in obtaining funding from the private sector. As an example, the University of Georgia Research Foundation was created with the university's Vice President for Development responsible for seeking private funds for the University. In the College of Agriculture, a Coordinator of Sponsored Programs was named to assist faculty in acquiring funds from private as well as public granting agencies.

According to a recent editorial in *Science* by Clifton R. Wharton, in 1980-81 American firms provided \$778 million to colleges and universities, of which more than \$300 million went to public universities. Private gifts and grants help to maintain the margin of excellence in public institutions by underwriting innovation, experimentation, and modernization.

Ruttan's observation that a decentralized organizational structure is less effective for acquiring funds at the federal level may also hold true at the state level. At the state level the agricultural experiment station is centralized, with one director being responsible for management of the program and for fiscal policies. This

Table 1. Total Research Expenditures at SAES, USDA, and Combined SAES and USDA, 1966-79.

Year	SAES		USDA		Combined SAES + USDA	
	Current	Constant	Current	Constant	Current	Constant
	----- thousand dollars -----					
1966	205,215	215,336	153,084	160,634	358,299	375,970
1967	207,675	207,675	165,424	165,424	373,099	373,099
1968	242,687	229,817	159,150	150,710	401,837	380,527
1969	259,292	232,549	163,865	146,964	423,157	379,513
1970	282,101	234,109	176,896	146,802	458,997	380,911
1971	300,224	232,552	197,084	152,660	497,308	385,212
1972	346,942	251,955	224,308	162,896	571,250	414,851
1973	378,658	257,240	236,291	160,524	614,949	417,764
1974	430,609	264,015	240,183	147,261	670,792	411,276
1975	490,054	276,087	265,604	149,636	755,658	425,723
1976	527,120	279,936	302,531	160,664	829,651	440,601
1977	605,455	301,672	343,859	171,330	949,314	473,001
1978	662,533	304,893	380,556	175,129	1,043,089	480,022
1979	708,932	301,288	381,242	162,024	1,090,172	463,312

Source: OTA, 1981. Compiled from USDA, Inventory of Agricultural Research FY 1966-79, Vol. II, Science and Education Administration.

Table 2. Total Research Expenditures at SAES by Source of Funding (Federal Formula Funds, Cooperative Grants and Cooperative Agreements [CGCA], Other Federal Funds, State Appropriations, and Private Grants), 1966–79.

Year	Federal formula funds		CGCA		Other Federal funds		State Appro.		Private	
	Current	Constant	Current	Constant	Current	Constant	Current	Constant	Current	Constant
----- thousand dollars -----										
1966	48,017	50,385.1	6,008	6,304.30	24,522	25,731.4	117,942	123,759	8,726	9,156.3
1967	48,694	48,694.0	6,260	6,260.00	23,566	23,566.0	120,610	120,610	8,545	8,545.0
1968	52,449	49,667.6	9,594	9,085.23	28,602	27,085.2	142,276	134,731	9,766	9,248.1
1969	53,912	48,351.6	7,784	6,981.17	27,834	24,963.2	157,526	141,279	12,236	10,974.0
1970	56,439	46,837.3	6,837	5,673.86	26,440	21,941.9	178,666	148,271	13,719	11,385.1
1971	62,743	48,600.3	6,320	4,895.43	25,957	20,106.1	190,892	147,864	14,312	11,086.0
1972	70,587	51,261.4	6,850	4,974.58	27,299	19,825.0	226,185	164,259	16,021	11,634.7
1973	77,220	52,459.2	7,476	5,078.80	28,748	19,529.9	247,691	168,268	17,523	11,904.2
1974	82,127	50,353.8	8,631	5,291.85	31,205	19,132.4	288,022	176,592	20,624	12,645.0
1975	90,302	50,874.4	10,773	6,069.30	34,236	19,287.9	331,270	186,631	23,473	13,224.2
1976	102,505	54,437.1	9,882	5,248.01	37,772	20,059.5	349,502	185,609	27,459	14,582.6
1977	116,761	58,176.9	11,758	5,858.50	51,759	25,789.2	393,358	195,993	31,819	15,854.0
1978	132,179	60,827.9	14,783	6,803.04	53,590	24,661.8	428,489	197,187	33,587	15,456.5
1979	142,735	60,660.9	17,827	7,576.29	56,165	23,869.5	457,104	194,264	35,101	14,917.6

Source: OTA, 1981. Compiled from USDA, Inventory of Agricultural Research, FY 1966–79, Vol. II, Science and Education Administration.

Table 3. Private Industry Funds for Applied Research and Development for Agricultural Products, 1963–75.

Year	Food and kindred		Farm machinery		Agricultural chemicals		Total private agricultural research	
	Current	Constant	Current	Constant	Current	Constant	Current	Constant
----- million dollars -----								
1963	102	125.5	76	93.5	45	55.4	223	274.3
1964	118	139.0	79	93.1	48	56.5	245	288.6
1965	131	147.0	96	107.7	64	71.8	291	326.6
1966	130	137.9	100	106.0	77	81.7	307	325.6
1967	134	134.0	102	102.0	92	92.0	328	328.0
1968	165	154.3	96	89.8	99	92.6	360	336.0
1969	179	158.7	99	87.8	104	92.2	382	339.3
1970	204	170.1	89	74.2	126	105.1	419	349.5
1971	207	165.2	90	71.8	130	103.8	427	340.8
1972	222	168.9	92	70.0	108	82.2	422	321.2
1973	234	170.8	117	85.4	114	83.2	465	339.4
1974	268	181.8	127	85.8	137	92.6	533	360.1
1975	292	184.8	145	91.8	165	104.4	602	381.0

Source: OTA, 1981. NSF, "Table B-51 Research and Development in Industry 1975," Surveys of Science Resources Series, P. 72, NSF.

Table 4. Sources of Funds Allotted for Cooperative Extension Work in the United States, FY 1973–1982.

Fiscal Year	Grand Total	Total Fed. Funds ^{1/}	Total Within States	Funds from Non-federal Sources		
				State (Est.)	County (Est.)	Non-tax (Est.)
----- current dollars -----						
1973	385,091,219	163,103,760	221,987,459	148,218,402	66,386,559	7,382,498
1974	407,451,898	165,604,560	241,847,338	161,897,119	71,744,456	8,205,763
1975	448,334,111	178,820,960	269,513,151	181,847,731	79,126,442	8,538,978
1976	499,288,449	192,662,960	306,625,489	205,980,873	91,805,387	8,839,229
1977	523,662,615	198,358,680	325,303,935	220,080,459	93,611,751	11,611,725
1978	583,544,339	212,926,680	370,617,659	244,811,924	111,018,658	14,787,077
1979	623,223,131	220,202,080	403,021,051	269,221,251	119,193,271	14,606,529
1980	680,998,954	229,946,560	451,052,394	304,057,144	130,630,008	16,365,242
1981	744,815,531	248,061,000	496,754,531	334,897,236	142,390,519	19,466,776
1982	852,100,827	301,976,008	550,124,819	367,983,174	157,670,741	24,470,904

¹ Smith-Lever Act, plus other federal funds, including Title V Rural Development, Agricultural Marketing Act, PL 95-163, Section 1444.

may at least partially account for the relatively greater success in obtaining state than federal funds for agricultural research.

The relative economy of the directors of state agricultural experiment stations and cooperative extension services may prove advantageous during financial exigencies. Action can be taken to reduce expenses, and more concerted efforts can be made to increase revenues from sources other than federal appropriations. County and state legislators are usually more accessible and are in positions where they can see the results of agricultural research and extension programs. Their constituents have personal contact with research and extension personnel as well as with the public officials, and this can prove beneficial.

When budget cuts come, though, administrative action is required. The general tendency seems to be for the top state executive to order state agencies to reduce expenditures, such as for travel, equipment, and operating supplies, and to freeze hiring. Vacancies are left open so that salary savings may be accrued to return to the institution's or state's coffers. More severe cuts may result in reductions in force or may even close entire programs. Stories of such drastic cuts have been prevalent in the past year, but those of us in the Sunbelt have not experienced such events—and I hope that we never will.

Public announcements of austerity measures are intended to garner public support and to show fiscal responsibility. However, when demands for certain services—particularly education and research—increase during times of fiscal austerity, it is best to leave the decision of how and where to cut costs to the discretion of administrators close to the action. For instance, it might be a more efficient use of public funds to increase travel, to purchase more video equipment, to use more telecommunications, or to publish more articles to tell taxpayers how to cope with their problems.

Another alternative would be to request each department head, director, and dean to submit a plan for how economies of varying specific dollar amounts could be made, along with an analysis of the impact such budget reductions would have on research, extension, and teaching programs. In some units, equipment purchases could be delayed, whereas in others additional equipment purchases or automation could reduce the need for expenditures for personnel. The plans could be reviewed at each higher level of administration, priorities set, and decisions made, based on appropriate criteria, including relevance, technological feasibility, and performer capability.

For example, in response to the current cash flow problem faced by firms in the agribusiness sector, the Georgia Cooperative Extension Service sponsored several workshops and special television programs on survival and growth strategy for agriculture. Similar programs were held in response to water stress problems. These programs required additional travel and time of professional staff, and since no additional funds were obtained, it meant a management decision and change of priorities for the use of existing funds by the director of the Cooperative Extension Service.

Similar examples illustrating the need for such management flexibility through the directors of agricultural experiment stations could be given for such problems as aflatoxicosis, fall armyworm outbreaks, the phony peach problem, cotton stunt, peach tree short life, and many other "crises" faced by the agricultural industry in Georgia.

The key to success in coping with tight budgets is management. The deans; directors of research, extension, and teaching; department heads; and faculty are in the best positions to make decisions that will result in solutions to problems within the constraints of available resources.

THE GEORGIA EXPERIENCE

The experience I have had in coping with budget reductions has been mild compared with that of my counterparts in other states. However, to illustrate how we approached a budget cut, I will recount a recent experience.

In September, 1982, the governor of Georgia announced that the current budget (FY 1983) would be reduced by \$75 million because the revenues were not accruing as rapidly as was predicted when the state budget was approved. This meant that the university system budget would be reduced \$14 million, of which \$4 million would come from the University of Georgia. The proportionate share of the cut to the College of agriculture programs was as follows:

Agricultural Experiment Stations	\$ 572,000
Cooperative Extension Service	531,000
Resident Instruction	60,000
Total,	
College of Agriculture	\$1,163,000

We were asked (told) to submit budget amendments indicating where the cuts would be made. Each university administrator was asked to adhere to a plan in which the effectiveness of high priority programs would not be impaired. The deans were given the responsibility to so make the needed budget cuts. The associate deans of the College of Agriculture for Cooperative Extension, Agricultural Experiment Stations, and Resident Instruction identified programs that would be reduced and prepared a statement of the anticipated impact on research and education programs. These statements were used to inform state decision-makers and others of the effects such cuts would have. The University of Georgia's president also met with several state officials to enlist their support in restoring the funds when the Georgia General Assembly convened in January 1983. It is still too early to tell the outcome, but the budget reduction exercise resulted in greater awareness of many citizens of the importance of educational programs to the economic welfare of the state.

The House and Senate Agriculture Committees met and provided us an opportunity to present budget re-

Table 5. Budgets of The University of Georgia College of Agriculture for the Past Ten Fiscal Years (1972-1982).

Program	Fiscal Years									
	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
Resident Instruction	dollars									
State Approp.	1,557,719	1,500,541	1,561,386	1,546,378	1,690,394	1,810,539	2,004,642	2,050,558	2,279,173	2,684,679
Other	51,240	31,236	37,546	26,418	41,486	44,559	35,689	24,346	30,293	32,682
TOTAL	1,608,959	1,531,777	1,598,932	1,572,796	1,731,880	1,855,098	2,040,331	2,074,904	2,309,466	2,717,361
Agr. Exp. Stations										
Federal Approp.	1,867,013	1,874,707	2,034,277	2,228,337	2,389,351	2,763,038	2,932,986	2,845,309	3,181,518	3,428,993
State Approp.	6,401,541	8,011,000	8,863,780	9,430,970	9,663,593	11,326,818	12,384,900	13,933,259	15,774,650	18,223,293
Gifts, Grants, Contr.	1,613,558	1,752,326	1,950,380	2,099,974	2,274,562	2,632,286	3,273,385	3,865,321	4,779,507	4,881,887
Ind. Cost Recover.	59,120	36,039	26,643	26,236	42,092	28,514	63,246	123,966	156,175	247,687
Sales & Services	1,301,234	1,804,980	1,595,900	1,583,173	1,782,428	1,916,666	2,085,568	2,487,322	1,964,335	2,181,419
Other	81,707	29,042	41,565	38,117	67,621	35,113	148,738	93,300	43,730	33,375
TOTAL	11,324,173	13,508,094	14,512,545	15,406,807	16,219,647	18,702,435	20,888,823	23,348,477	25,899,915	28,996,654
Coop. Ext. Serv.										
Federal Approp.	3,355,116	3,513,498	3,837,737	3,763,351	3,773,863	4,027,844	4,217,593	4,707,618	4,641,166	4,618,150
State Approp.	6,121,000	7,490,041	8,240,044	8,315,990	8,916,636	10,423,636	12,049,415	13,553,125	15,476,455	17,777,951
Local Approp.	1,823,224	1,891,446	2,204,297	2,350,198	2,320,639	2,898,414	3,135,623	3,585,837	3,832,589	3,996,935
Gifts, Grants, Contr.	2,740,095	2,905,925	3,336,043	3,803,371	4,337,819	4,723,914	5,182,555	5,245,830	5,252,538	4,708,240
Ind. Cost. Recover.		128				2,592				
Sales & Services	1,654	4,160	4,625	3,000	15,679	9,050	14,756	14,000	9,000	14,140
Other	327	855	27	444	308	280	525	439	2,347	3,465
TOTAL	14,041,416	15,806,053	17,622,773	18,236,354	19,364,944	22,085,730	24,600,467	27,106,849	29,214,095	31,118,881

quests for the Georgia Agricultural Experiment Stations and Cooperative Extension Service well in advance of the convening of the General Assembly. These are line item budgets within the university system, so the state legislature may, if it chooses to do so, increase the appropriation for FY 1984 or appropriate supplemental funds in FY 1983, if revenues permit them to do so. Priorities for the allocation of public funds will be made by these leaders, and the organizational structure at the state level is such that the budget may be prepared and defended to support agricultural research and extension program even if other services in the state are cut. The converse is also possible. In some states the importance of agriculture may not be known to state leaders to the extent it is in Georgia, where agriculture is the state's number one industry. Therefore, it is even more critical that the colleges of agriculture and administrators in these states de-

velop means of communicating with the state decision-makers that affect their budgets.

Table 5 shows the growth of the budgets for the Georgia Agricultural Experiment Station and Cooperative Extension Service over the past decade. Some years were bleak, but in general, funds have been provided for a modest increase in programs.

In my opinion, tight budgets will continue to be a reality. Even when the general economy improves, there will be continued intense competition for public funds. We have plenty of data to show the public how they benefit immensely from investments in agricultural research and education. However, these benefits are so dispersed that most consumers are not even aware of their benefactors. The struggle to acquire funds will continue, and management of scarce resources will remain as important in the future as in the past.

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