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STAFF PAPER

**A Brief History of the Agricultural Economics
and Agribusiness Department
at the University of Arkansas, Fayetteville
1924-2009**

By

Bruce L. Dixon and Alicia Minden

SP 01 2009

December 2009



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A Brief History of the Agricultural Economics and Agribusiness Department at the University of Arkansas, Fayetteville 1924-2009

This narrative provided a historical context for the retreat held mid-May 2009. This document cannot be considered as comprehensive. Records of past activities and involvement are fragmentary and the analysis suffers as a result. Nonetheless, sufficient documentation exists to provide some useful snapshots of past departmental activity as the department has been defined in its various incarnations.

It appears from the *History of the Bumpers College* by Zellar and Wyatt that the Department came into being around 1920. It was a very small unit, probably with less than a full-time professional and no real departmental status. There is evidence that a Department of Rural Economics and Sociology existed by 1924 since Claude O. Brannen became the department head of Rural Economics and Sociology at that time. Table 1 lists the department heads and their years of service in that capacity. Henry Mennen has the longest tenure followed by Claude Brannen. In the post-Meenen era, no head has served longer than eleven years.

The department name has also undergone various mutations. It seems safe to assume the first name was Rural Economics and Sociology. Using various editions of the university course catalogs over time, it appears the name did not change until 1964-65. Then, there is evidence that the name became Agricultural Economics and Rural Sociology (AERS). This name served until 1998-1999, when the department got its current name—Agricultural Economics and Agribusiness (AEAB). There is also evidence from the course catalogs that 1954-55 was the first year a student could major in agricultural economics, although there is some indication this option may have been available a year earlier.

Records indicate that about 125 persons have served as faculty in either full-time or adjunct status. These individuals are listed in Appendix A. When various individuals who have served in a faculty capacity, such as USDA and Cooperative Extension Service faculty are added to this number, there are an additional 20 or so faculty members. So for a faculty that has existed for over 85 years, the department has had more than one new faculty member per year.

This report focuses primarily on the teaching, research, and grant activities. Although agricultural economists have worked for the Cooperative Extension Service for many years, extension economists did not come under the supervision of the AEAB department head until 2005. Nonetheless, cooperation between extension economists and economists in the college and Agricultural Experiment Station was certainly common before the official merger of the two units.

Table 1. Department Heads and Their Years of Service

Name	Years of Service
Claude O. Brannen	1924-1945
Tribble R.Hedges	1945-1947
John W. White	1947-1953
Henry J. Meenen	1953-1982
Robert L. Shulstad	1982-1987
Donald E. Voth ¹	1987-1989
J. C. Headley	1989-1996
Mark J. Cochran	1996-2006
Bruce L. Dixon ¹	2006-2007
Bruce L. Ahrendsen ¹	2007-2008
Steve A. Halbrook	2008-present
Lucas D. Parsch ²	2005-present

¹Interim Head

²Associate Head

Resident Instruction

To develop some sense of how instructional programs have changed over the decades, copies of relevant pages of the University of Arkansas Fayetteville course catalogs for 1928/29, 1948/49, and five catalogs beginning in 1968/69-2008/09 (on a decade basis) were collected. Table 2 lists the course numbers, titles and whether they were taught in one of the recorded years. While the number of courses offered has increased, it is of interest to observe that the topic matter has not changed that greatly in core areas, although substantive changes are clear.

Undergraduate Program

In 1928/29 the first two courses (freshman and sophomore) are production economics and introduction to marketing. Courses in farm management, finance, statistics, prices and advanced marketing were also offered. Farm taxation was offered but it is not listed after 1948/49. As one would imagine, the agricultural business curriculum was quite rigid in 1928/29 compared with today's much more flexible curricula. Students in those days had to enroll in chemistry, horticulture, agronomy, animal science, agricultural engineering, and entomology among other agricultural courses. So the degree was much more heavily weighted toward a comprehensive grasp of production agriculture. Students were also required to take military arts. In total, students had to take 132 hours for a degree, with 19 of those units being electives.

In 1948/49 the agricultural business curriculum required 134 hours for completion and students still had to take military arts with 32 hours of electives. Consistent with 1928/29, there was not much choice among courses taken. The curriculum was clearly focused on training students to be involved in production agriculture, although the business side (post farm-gate aspect of business) was part of the program. While many course numbers are not identical, the course subjects do not vary that much from those twenty years earlier.

The 1968/69 catalog shows an expansion of courses from earlier years. AGECE 1103 and AGECE 2103 are offered with much the same description as today. Marketing courses are offered as one-unit, commodity-specific courses (poultry and egg, cotton, dairy and livestock). General farm management and marketing courses are offered along with prices and farm records. Policy and finance are also offered along with advanced courses in farm management and marketing. By this time, graduate courses had entered the curriculum with many of the courses being similar to those offered today along with a land economics course and research methodology. Rural sociology courses are listed separately with three undergraduate courses offered in alternating years.

Table 2. Course Numbers and Titles Offered in Years Listed

Course No.	Course Title	Years Offered						
		1928/29	1948/49	1968/69	1978/79	1988/89	1998/99	2008/09
105	Production Economics	X						
203	Intro Marketing	X						
303	Farm Management	X						
313	Marketing Staple & Livestock Prod	X						
323	Rural Sociology	X						
403	Farm Finance	X	X					
413	Adv Agri Stat	X						
423	Agricultural Co-operation	X						
433	Marketing Farm Products	X	X					
443	Marketing Perishable Farm Products	X						
453	Price of Farm Products	X						
463	Farm Taxation	X	X					
103	Agri Resources		X					
323	Rural Sociology		X					
343	Community Organization		X					
352	The Rural Family		X					
373	Agricultural Economics		X					
383	Farm Management		X					
393	Farm Prices		X					
442	Agricultural Co-operation		X					
453	Land Economics		X					
485-495	Research Methods		X					
602	Economy & People of Arkansas		X					
1103	Prin Agri Micro			X	X	X	X	X
2103	Prin Agri Macro			X	X	X	X	X
2143	Agribus Fin Records							X
2303	Intro Agbus						X	X
2403	Quant Tools Agbus							X
3213	Ag Data Processing				X	X	X	
3303	Food & Agri Mkt			X	X	X	X	X
3313	Agribus Sales							X
3331	Poultry & Egg Mkt			X	X			
3341	Cotton Marketing			X	X			
3351	Dairy Marketing			X	X			
3373	Fut & Opt Mkts					X	X	X

Course No.	Course Title	Years Offered						
		1928/29	1948/49	1968/69	1978/79	1988/89	1998/99	2008/09
	(Con Mkt & Fut Trad in Ag Commodities)				X			
3381	Livestock Marketing			X	X			
3403	Farm Bus Mgmt			X	X	X	X	X
3413	Prin Environ Econ						X	X
3453	AGRI Firm Rec & Accts			X	X	X	X	
3503	Agri Law I					X	X	X
3523	Environ & Nat Res Law							X
4113	Ag Price & Forecast			X	X	X	X	X
4123	Ag Cooperation			X	X	X	X	
4143	Agri Fin			X	X	X	X	X
4153	Pub Policy for Ag			X	X	X		
4163	Agri & Rural Devel							X
4303	Adv Agri Mkt Mgmt					X	X	X
	(Adv Agri Mkt)			X	X	X	X	X
4313	Agri Bus Mgmt						X	X
	(Econ Agri Bus Firms)			X	X	X		
4323	Agribus Entrepreneurship					X		X
	Agri Trade & Commer Pol							
4373	Adv Price Risk Mgmt						X	X
4403	Adv Farm Bus Mgmt			X	X	X	X	X
4413	Econ of Environ Mgmt				X	X	X	
4513	Agri Law II					X	X	
4613	Dom & Intl Ag Pol						X	X
5011	Seminar					X	X	X
5013	Res Method Social Sci			X	X	X	X	
5103	Intro Quant Econ			X	X	X	X	
5113	Agri Mkt Analysis					X	X	
5133	Ag & Environ Res Econ							X
	(Res Econ)				X	X	X	
	(Land Economics)			X				
5143	Fin Mgmt Agri					X	X	X
5153	Econ Pub Policy			X	X	X	X	X
5163	Agri & Rural Devel					X	X	X
	(Econ Devel Prob Rural Econ)			X	X			
5303	Ag Mkt Theory			X	X	X	X	X
5403	Quant Meth Agri						X	X
	(Econ Agri Prod & Res Use)			X	X	X		

Course No.	Course Title	Years Offered						
		1928/29	1948/49	1968/69	1978/79	1988/89	1998/99	2008/09
5413	Agribus Strat							X
5613	Econometrics I					X	X	X
5623	Econometrics II						X	
5633	App Math Program Agri						X	
5713	Food Safety Law							X
	Rural Soc courses							
3603	Rural Sociology			X	X	X		
3613	The Community					X		
4623	Community Organization			X	X	X		
4633	Group Dynamics			X	X			
5013	Res Method Social Sci				X	X		
5613	Adv Rural Sociology					X		
5623	Adv Community Development					X		

Source: Course catalogs, various years.

The 1968/69 curriculum was markedly different from twenty years earlier. Choice now becomes much more evident. The College began to offer five different plans. Only three of the plans, plans C, D and E, apply to agricultural economics. In Plan C, the emphasis was on production, marketing and processing. Agricultural economics was a possible major. Plan D was a business option that is designed for students who were interested in management positions in agriculturally related businesses and could be used by students from various departments. Plan E was more focused on biological and physical sciences and was probably taken by relatively few agricultural economics students. As a sign of the times, four hours of military or aerospace ROTC courses were required in all but plan B. It is somewhat surprising that even as far back as the 1960s, business was being emphasized for multiple departments in the College. There is a perception only that it was ten years ago that other departments in the College really started emphasizing business options for their majors. While it is undoubtedly true that many departments started adding business options within their departments over the last ten years, we can hardly claim that “business” was a new thing ten years ago for non-agricultural business disciplines.

Curriculum plans A-E were still available as of 1978/79. One hundred thirty-two hours were required just as in 1968/69 but the requirement for military training was absent. The course offerings did not vary that much from a decade earlier. Agricultural Data Processing (AGEC 3213) was now available and was essentially the course in how to use computers. Commodity-specific marketing courses were still offered. Contract Marketing and Futures Trading in Agricultural Commodities (AGEC 3373) as well as Economics of Environmental Management (AGEC 4413) were offered. Land Economics changed titles to Resource Economics (AGEC 5133). So the impact of the environmental movement in the 1970s was clearly evident.

Curriculum plans A-E were still available as of 1988/89. One hundred thirty-two hours were required just as in 1968/69. Plan D still had option A, which allowed students to major in a variety of specializations but their curriculum was augmented with business-oriented courses. In the 1988/89 catalog students were directed to AGEC courses, but there was an option for students to take the courses from the Business College. In 1968/69 and 1978/79, no direction was given to AGEC courses to fulfill these requirements.

Agricultural Law I and II (AGEC 3503 and AGEC 4513) show up in the 1988/89 catalog as well as Internships in Agribusiness (AGEC 401V and 503V) and Econometrics I (AGEC 5613). Economic Development Problems of Rural Economies has been changed to Agricultural and Rural Development (AGEC 5163). Rural sociology courses are being offered. This is significant, because by 1997/98, the department changes its name to Agricultural Economics and Agribusiness and no rural sociology courses are associated with AEAB.

Substantive changes were afoot by 1998/99. The old plan A-plan E curricula were gone. AEAB was now indicating that its major could provide paths to law, medical or veterinary schools. The university core was now in evidence and had 39 hours in AEAB. Requirements for a minor in

agricultural business were also clearly in evidence. Introduction to Agribusiness (AGEC 2303) was in the catalog along with Econometrics II (AGEC 5623) and Applications of Mathematical Programming to Agriculture (AGEC 5633). One hundred twenty-four hours were required for a degree.

The current offerings in 2008/09 display substantial changes from 1998/99. The university core is still present and the department offers three concentrations in the Agricultural Business major: Agricultural Business Management and Marketing (ABMM), Pre-Law (PRLW) and Agricultural Economics (AGEC), which is intended for those pursuing graduate school. The 3/3 Program is also offered. This program allows for exceptionally accomplished students to enroll in law school for their senior year of undergraduate credit. The law school credits provide the academic credit necessary for the student to complete their undergraduate degree. To our knowledge, no student has yet taken this program. The catalog also features the eight-semester degree completion program that is a contract with the student that they will be able to graduate in eight semesters if they adhere to the program laid out at the beginning of their studies. Besides the standard minor in agricultural business, students can also obtain a minor in global agricultural, food and life sciences. As with the standard minor, this is an 18-hour program. The number of hours required for a Bachelor of Science degree is 124.

There are many changes in course offerings. Most of the changes are motivated by the Department's desire to design a degree program that does not require students to take any Walton College of Business courses. Students still have the opportunity to take College of Business courses if they so desire. We now offer Agricultural Financial Records (AGEC 2143) essentially replacing Agricultural Firm Records and Accounts (AGEC 3453). Agricultural Data Processing (AGEC 3213) is gone. Agricultural Commodity Marketing has changed its name to Food and Agricultural Marketing (AGEC 3303). Quantitative Tools for Agribusiness (AGEC 2403) and Agricultural Sales (AGEC 3313) have been added. Price Risk Management Using Futures and Options has been changed to Futures and Options Markets (AGEC 3373).

Agricultural Law II (AGEC 4513) is no longer offered, but we now have Environmental and Natural Resources Law (AGEC 3523). Agricultural Cooperation (AGEC 4123), Economics of Environmental Management (AGEC 4413) have all been discontinued. Agricultural and Environmental Resource Economics (AGEC 5133) has a new name instead of Resource Economics. Research Methodology (AGEC 5013), Introduction to Quantitative Economics (AGEC 5103), Agricultural Marketing Analysis (AGEC 5113), Agricultural and Rural Development (AGEC 5163), Econometrics II (AGEC 5623), and Applications of Mathematical Programming to Agriculture (AGEC 5633) have all been discontinued. AGEC 5153 has changed its name from The Economics of Agricultural Policy to The Economics of Public Policy. AGEC 5403 has changed names from Economics of Agricultural Production to Quantitative Methods for Agribusiness. Agribusiness Strategy (AGEC 5413) is a new addition along with Food Safety Law (AGEC 5713) which is a Web-based course.

During the first decade of the twenty-first century, change was clearly occurring at a much quicker pace than in prior decades. Much of the change in the undergraduate curriculum was motivated by a desire to incorporate as many agricultural business classes into the departmental curriculum as possible. The curriculum changes in the Walton College were the result of a major overhaul of their programs. One of the changes was stricter adherence to prerequisites which sometimes made it difficult to qualify for upper division—and some lower division—courses. In response, AEAB added several courses so that students could more easily gain entry into these types of classes.

Figure 1 displays the number of students graduated each year. These data were provided by the Arkansas Alumni Association. We have no way of verifying the accuracy but they seem reasonable and the Alumni Association has good reason to keep track of all graduates. Until the 1970s, there were very few students graduating. From the 1980s on, numbers have fluctuated but the mean for 1980-2008 is 27.7. The mean for 2000-2008 is 29.4. The latest data indicate that the department currently has over 170 students majoring in Agricultural Business.

Graduate Program

The department offers the master of science degree and has never offered a doctoral degree. Faculty, on rare occasion, have supervised theses by doctoral students in economics. While the dissertation topic has been agricultural, the degree was in economics. Interestingly, the MS degree has been offered over the history of the department. What makes this odd is that no graduate courses are offered as of 1948/49, but students were obtaining master's degrees from the department as early as 1930. As shown in Fig. 2, very few students obtained masters degrees on a yearly basis until the end of the sixties. At this point in time the numbers increase substantially and in 2003 hit an astounding 20 in one year!

The Master of Science degree curriculum has undergone enormous change since 1928/29. As stated previously, the department offered no graduate courses in that year. Students obtained the master's degree by taking upper division courses in the department or related disciplines according to how the student and advisor believed the student's program should be structured. Graduate students taking the undergraduate courses were expected to do special assignments to enrich their learning. In general the student was to have a major and minor area. The requirements were 24 class hours and a master's thesis. So the course requirements are not that much different from the hours required currently. It appears that there was no non-thesis option in any of these early years.

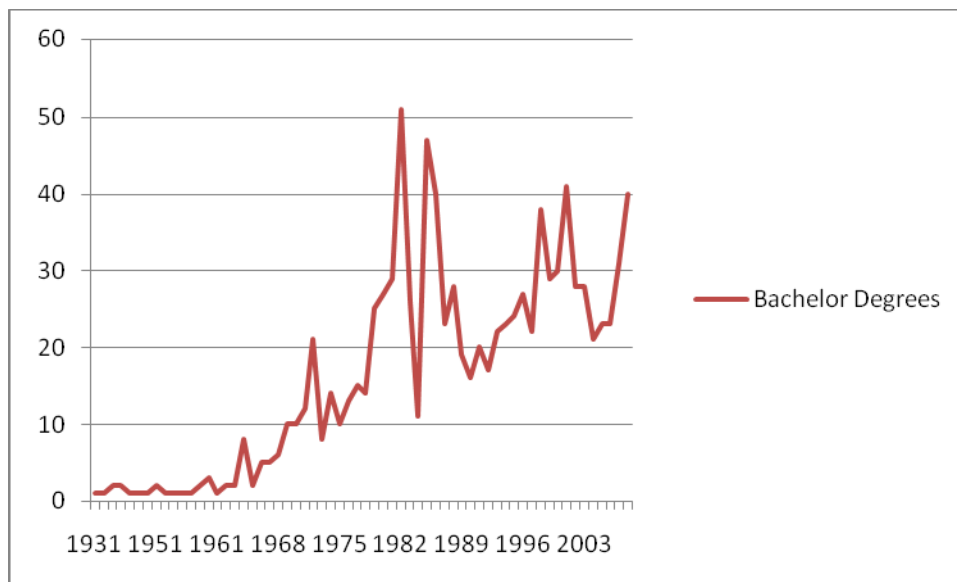


Fig. 1. AGECE or AEAB B. S. Graduates by Year, 1930-2008

Source: University of Arkansas Alumni Association, personal communication. Spring 2009.

By 1968/69, graduate courses were being offered. In 1968/69 the thesis and non-thesis programs both required 30 and 30 hours, respectively. The Graduate School recognized both thesis and non-thesis programs. A Master of Science could be earned in either agricultural economics or rural sociology. Students could earn credit toward the master's degree by taking some courses in the College of Business Administration. A non-thesis program required 30 hours whereas the thesis program required 24 hours plus the thesis. There did not appear to be any rigid, specific course requirements. The student, in consultation with the advisor, selected a suitable set of courses which at least 15 hours had to be graduate credit hours in the College of Agriculture and Home Economics.

Ten years later, the program took more shape and had specific prerequisites including algebra, statistics and upper level economics courses. The non-thesis program had been expanded to 36 hours with the thesis still at 30. No specific course requirements were given, although there may have been general Graduate School requirements of a minimum number of graduate hours in the discipline.

A seminar course became part of the curriculum sometime before 1988-89. There were specific requirements for the degree as laid out in the Handbook of Graduate Program Policies. It is unclear how far back specific requirements go. As of July 1984, there was no Handbook. There was an information sheet which had specific course requirements but, again, it is unclear how far back these sheets went. In the 1988/89 Handbook there are 24 hours of prerequisite courses including junior level macroeconomics and microeconomics and no differentiation between thesis and non-thesis. Course requirements were 5000-level courses in microeconomics, marketing and production. Then two additional courses in quantitative methods or research methods were required. Even non-thesis students had to take the microeconomics and quantitative methods.

By 1998/99, there is a much clearer distinction between the thesis and non-thesis programs. Graduate level microeconomics was no longer required for the non-thesis M.S. Instead, non-thesis students took ECON 5333, Managerial Economics. Provisions were also made for the Scottish Agricultural College option.¹ In addition, provisions were possible for the joint program with the LL.M. and M.S. in agricultural economics. The plan B paper was gone and non-thesis students took an oral examination over their coursework. Another big change is that the non-thesis program became 31 hours instead of 37. Part of the motivation for this was that the MBA program was fewer hours and to remain competitive, it was felt that the additional six hours of study should be eliminated.

¹ This was a program where students from both the Scottish Agricultural College and the University of Arkansas studied one semester in the U.S. and one semester in Scotland.

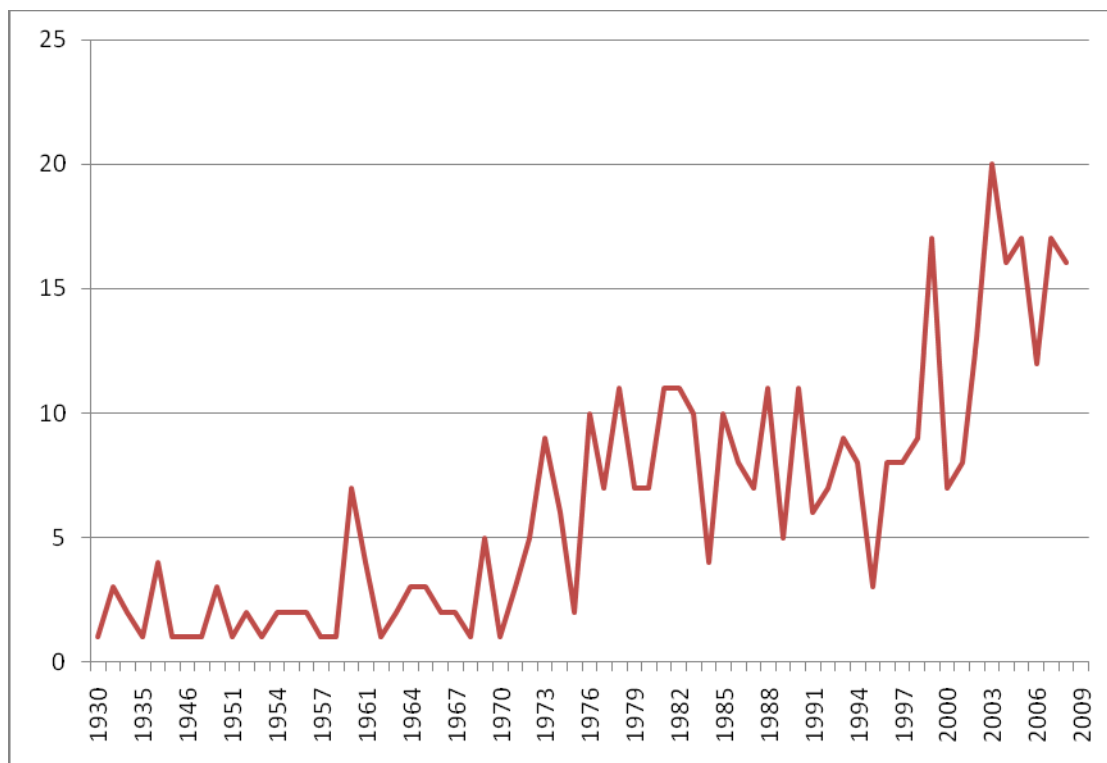


Fig. 2. Number of MS Degrees Granted 1930-2008

Source: Departmental records.

At the graduate level, course changes from 1998/99 to the present were driven by several forces. One of those was personnel. As faculty changed, the interests of incoming faculty were different from those of departing faculty and the course changes reflect that. Also, the connection with rural sociology was effectively ended. Four other forces are likely causes of programmatic changes within the department and the campus. The joint program with the Scottish Agricultural College (SAC) caused us to shape our graduate program to be compatible with our students studying here and then going to Scotland. When the SAC program terminated, we began a similar program with the University of Ghent so that changes made for the Scottish program continue. It is not clear at this point if the Atlantis² program will require any programmatic changes. Since that program is of limited duration, there will probably not be much programmatic response to it.

Another change is the public policy doctoral program. As mentioned earlier, AEAB and its predecessor departments have never had a Ph.D. program. The public policy program has given our faculty a chance to be dissertation supervisors instead of reading members or, on rare occasion, supervisors of economics students emphasizing agricultural economics in their dissertation. Along with the public policy program, there is environmental dynamics, which also is a program that gives our faculty an opportunity to supervise dissertations.

Climate change and the consequent environmental movement have had an impact on our teaching program at both the graduate and undergraduate levels. With the coming of the sustainability movement, AEAB has been uniquely positioned to be the primary University of Arkansas campus source of education in environmental economics. AEAB has become the primary provider of environmental economics instruction. A question that faces our department is how active do we want to become in this area?

Finally, the graduate program shifted in the 1990s away from the so-called plan B paper program for non-thesis graduate students. The faculty believed that the plan B paper was absorbing too much time. So the non-thesis option was adopted. This allows for students to take a thirty-one hour program, a final comprehensive exam and then graduate with a master's degree that is essentially fashioned after an MBA program. This programmatic shift has undoubtedly increased the number of M. S. graduates and influenced the courses offered by AEAB. In particular, Agribusiness Strategy (AGEC 5413) was instituted to replace micro theory in economics and give students a more applied, managerial course.

From time-to-time there has been pressure from higher administrative levels to institute a Ph.D. program. Our response has been that such an addition would require two or three more faculty positions. Discussions seem to end there. About ten years ago we worked on a joint program

² The Atlantis program allows U.S. student to study for two semesters in one of five European Universities (University of Ghent, Belgium; University of Pisa, Italy; University of Nitra, Slovakia; Humboldt University, Germany; University of Rennes, France) and for student in Europe to study at the University of Arkansas or University of Florida. It is supported by a four-year Department of Education grant.

with Oklahoma State University. The proposal was rejected by the Provost after having been approved by the Graduate Council. The Provost objected to the fact that the diplomas and degrees would be from OSU so that University of Arkansas Fayetteville would not get credit for the head count.

Research and Grants

The department's research thrust is summarized in the report to the 2003 CSREES review committee as:

“In an attempt to stimulate research programs that are on par with the best in the country, four areas have been targeted as high priorities. Faculty staffing and professional development have tended to emphasize these priorities. Long run intentions are to have a minimum of at least three faculty working in each area. The targeted areas include: Marketing & Policy; Agribusiness Management & Finance; Production & Environmental Economics; and Economic Development & Public Finance.” (AEAB 2003, pg. 146)

Since the above report was written the department has become more oriented to food economics and food safety issues. This latter emphasis is probably due to synergisms with the Law School, which is interested in food safety issues. It should be added that the department has an applied emphasis on its research. As agricultural economics departments go, AEAB has relatively few faculty. Also, the connection to state funding is abundantly clear so that research has tended to focus on problems related to Arkansas.

Research

Unlike resident instruction, there is not a good record of research accomplishments of the department over past decades. Annual publication lists go back for only about two decades. We had hoped to use the latest two CSREES reviews. However, the report prepared for the 1991 review could not be found. We do have the report prepared for the 2003 review and it provides some information.

Other potential information sources are the annual reports handed in by departments to the College and Station. These are of some interest in their own right as to how the items reported have changed over time. The extant holdings are somewhat irregular. The sole repository of these documents seems to be the Associate Dean for the Bumpers College. The collection of the annual reports is just about complete from 1990 to the present. During the 1980s there are gaps. Mullins Library does not have the reports, nor does the Provost's Office.

This section presents publication numbers and grant numbers. It could be argued that a better source of departmental research interests would be to inventory the various Hatch (federal formula funds) projects that faculty have written over the years. The records on Hatch project descriptions are probably pretty good for the last two decades with electronic records on national

databases. But what gets published is of much more relevance to the de facto research interests and accomplishments of the faculty.

Table 3 lists the numbers of publications by type from 1993 through 2008. This is the most complete record of publications we can find. A complete list of publications from 1993-2003 is available in the CSREES review team report (AEAB 2003). Since then annual reports of department publications have been prepared. It might be more accurate to list the number of publications per research scientist hour, but that would take some time and be further complicated by the fact that the extension faculty merged into the department around 2005.

Several things become apparent in perusing Table 3. The first is that there have not been many books generated by the department. The year 1994 is the only one in which the department faculty published books and then had a total of six. The books were put out by Gail Cramer and John Goodwin. In addition to the textbook Goodwin published, he also put out a student manual and a guide for professors. Cramer was in the department in 1994 and he also did the same thing as Goodwin. Book chapters have been more frequent but only one or two a year.

The number of refereed publications has varied considerably from year-to-year but there does not seem to be a noticeable trend over the years listed. This list also includes nineteen Station bulletins. Station bulletins are no longer published by the Arkansas Experiment Station. Our recollection is that the station decided in the 1990s that if their faculty were to become more competitive for grants then publishing station bulletins was not as likely to build the kind of vitas that compete best for grants. As a result of eliminating the refereed status of bulletins, faculty were focusing their publishing efforts elsewhere.

Agricultural Economics and Agri Business faculty and post docs have published in a number of outlets. Appendix B provides a list of the journals where faculty and post docs published from 1993-2008. By far the most popular is the *Journal of Agricultural and Applied Economics* with twenty-eight publications.³ This is a regional journal and is a venue for applied work. The *American Journal of Agricultural Economics*, was a venue eleven times in the sixteen year span, however, it is not receptive to a large portion of the scholarship produced in the department. Publication in other agricultural economics journals has also been frequent. Nine articles have been published in *Agricultural Finance Review*, twelve in the *Review of Agricultural Economics* and three in the *Journal of Agricultural & Resource Economics*.

³ It should be noted here that the lists of publications in refereed journals includes articles published in refereed journals that are not necessarily subject to the normal review process. Nonetheless, the list is consistent with what is reported in the annual reports of the department. There are likely errors. For example, in Appendix B a *Law Notes* article is listed. Dixon is one of the authors and that article should not be there since *Law Notes* is not a refereed journal.

Table 3. Publication Numbers by Type and Year

Publications¹					
Year	Books	Chapters	Refereed	Nonrefereed	Presentations
1986/87	0	2	11	25	29
1987/88	0	3	19	11	41
1993	0	3	5	19	NA
1994	6	2	20	72	NA
1995	0	3	17	35	NA
1996	0	1	15	40	NA
1997	0	1	10	15	NA
1998	0	3	9	45	5
1999	0	1	21	22	11
2000	0	1	2	14	11
2001	0	1	16	25	8
2002	0	3	22	20	15
2003	0	1	19	33	25
2004	0	1	16	40	14
2005	0	3	14	65	32
2006	0	0	13	57	28
2007	0	0	16	50	33
2008	0	1	11	42	20

1. The numbers in this table must be viewed as approximate, particularly the earlier years.

What counts as what is self-reported largely by author but Alicia Minden exercised some discretion. The earlier years include articles in Arkansas Farm Research and our hunch is that there were many of those. However, these may be offset in later years by the Farm Management and Marketing Newsletter put out by Extension.

Sources: Year end AEAB Annual Reports, various years.

Department faculty have also published in more mainstream economics journals. Four articles have been published in *Applied Economics*, one each in *The Review of Economics and Statistics*, *Environmental & Resource Economics*, *Journal of Corporate Finance*, *Quarterly Journal of Business and Economics*, *Journal of Futures Markets* and *The Southern Business & Economics Journal*.

Also apparent in the list of publications is the interdisciplinary bent of the department. Interestingly, ten articles have been published in the *Agronomy Journal*. Agricultural economists publish in this journal when working with agronomy scholars. This reflects the department's long-standing commitment to addressing problems of production agriculture. In the agronomy-related articles, the economists typically provide the economic analysis to demonstrate the comparative costs and profitability impacts of new innovations in crop production. *Journal of Food Distribution Research*, *Water Resource Research*, *Journal of Plant Nutrition*, and the *Journal of Production Agriculture* are also examples of interdisciplinary collaborations. To the extent that many of today's problems require interdisciplinary approaches, the department is well-positioned to meet those demands. Such an approach is also needed to be successful in obtaining competitive grants.

Grants

It is a reasonable conjecture that in the early years of the department, grants were of minor interest and perhaps not an issue at all. Funds to support the station probably came from both the State and federal Hatch formula funds sources in more even proportions than they do now. It is our opinion that currently, federal formula funds probably support about 15% of the station budget, and the state and grant funds constitute the remainder. It is also the opinion of Division leadership that grants are becoming ever more important and that in the future, federal formula funds are likely to become an even smaller proportion and may disappear completely.

It is clear that grant acquisition is an expected activity for AEAB faculty. In tenure and promotion considerations, the conventional triad of teaching, research and service has been augmented by grants. While it is possible for a faculty member to be granted tenure and promoted without grants, it is becoming an increasingly infrequent event. In AEAB, grant funds are used primarily to hire personnel, which come in the form of program associates and graduate students. Grants are also used to support travel and data acquisition.

There are many grant sources. The department focuses primarily on federally funded grants and those from producer groups in the form of Research and Promotion Board funding. Some funds are provided by other sources but this is rare. Grants also dictate the nature of the department's research agenda. As faculty become more dependent on grants, research agendas must be brought in line with what grant programs will fund. Currently "sustainability" is a buzzword along with "global warming" or "climate change." Grant applications that incorporate these topics in some way are likely to be more successful in acquiring funding.

As with the research program, it is difficult to get a good picture of the history of grant activity in the department. The annual reports have some data. The 1983/84 report mentions approximately \$240,000 of grant activity. The 1987/88 annual report cites the department obtaining \$84,200 for the first five months of 1988 and no other amounts.

Figure 3 presents the data that are available but of questionable consistency or reliability. For the years 1992-93 through 2004-05, aggregate data were obtained from the departmental annual reports. The data are supposedly total grant dollars awarded for that academic year. The annual reports for 2005-2008, do not give aggregate dollar totals. So for the three years encompassed in 2005-08 we used the departmental annual reports and computed figures as we think they were computed in 1992-2005 and then how we think they should be computed. These three latest departmental annual reports provide individual grant titles, investigators, dates for grant duration (for some, not all) and various monetary figures. In using the method we think was used for the early annual reports, we just added up gross amounts. But only for the year the grant was awarded, not the nominal amount for each year of the grant. These computations are represented as “gross” for the three latest years. For what we think is the most accurate method (labeled “net” in Fig. 3), we only counted money that was obtained for that year and only the share attributable to a faculty member in AEAB. So, for example, suppose a grant was obtained for 2006-2008 (a two-year grant) that was nominally for \$100,000 in which a faculty member had a 35 percent share. We counted that as \$35,000 for 2006-07 and \$0 for 2007-08.⁴

We see in Fig. 3 that there has been strong, annual volatility. This is not surprising since big grants tend to be competitive and rejection rates can hit about 70 percent looking at current data for NRI type grants. The gross curve indicates the trend is up and that is a positive attribute.

The net curve, which we have only for the latest three years, is provocative. It suggests that the figures that have been reported in the earlier annual reports are for gross levels of the grants so they overstate the magnitude of resources for the department. It also suggests that it would be useful if faculty reported grant activities uniformly.⁵

⁴ There could be many factors at work here. If two faculty members in the department were on the same grant, it could be reported twice in the years 2005-08. In getting the aggregates for the last three years, we counted such grants—to the extent we could identify them—once. Also, the same grant could get reported over several years. We tried to count such grants only once. Should the full amount of the grant be counted or only that part that accrued to a faculty member in AEAB? We think it should only be that part that accrues to faculty in AEAB but have no idea how it was done over the earlier years. Because of this potential for misrepresentation, only the graph is presented.

⁵ The Faculty Service Review does have a uniform way of requesting how grant data are reported, the requirements are not always followed.

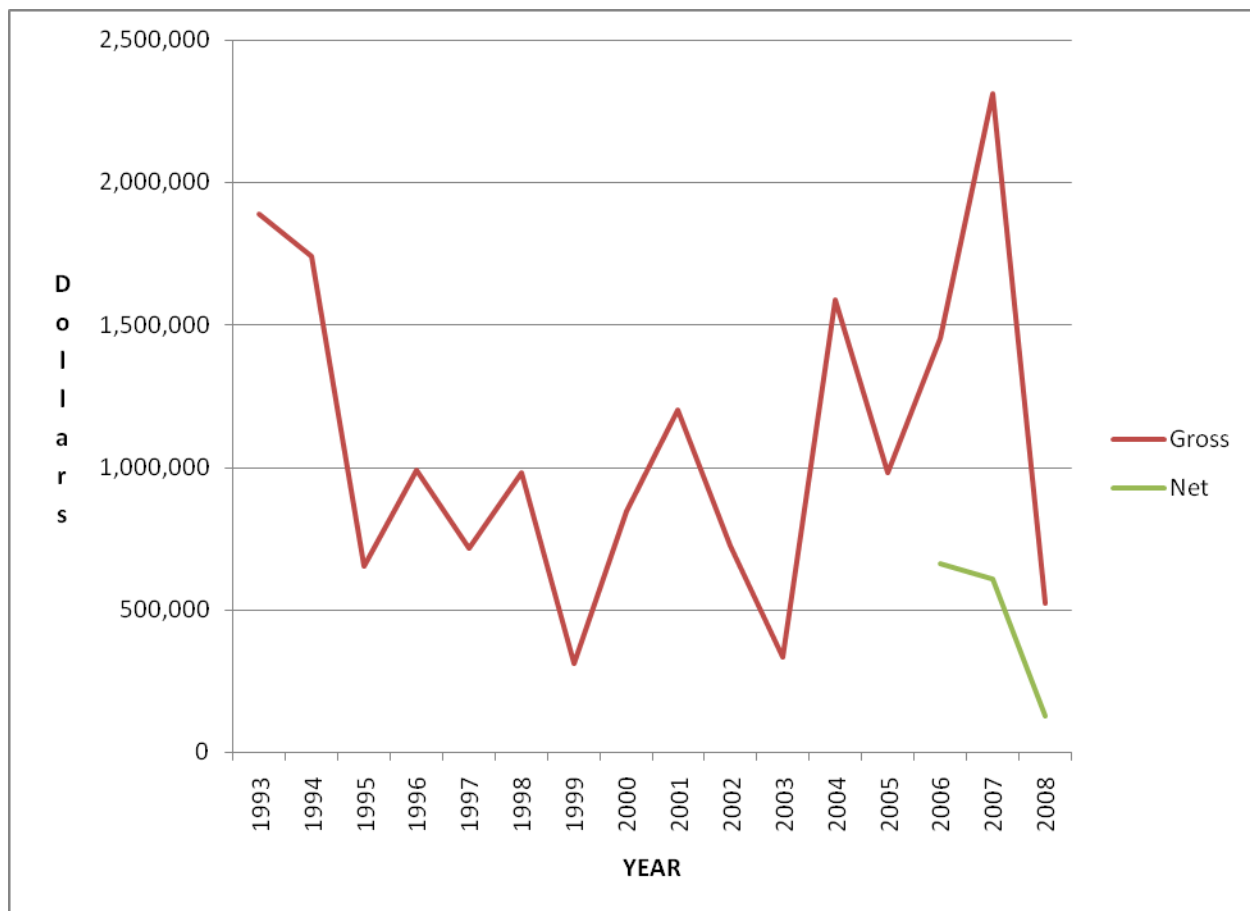


Fig. 3. Total Grant Award Levels by Academic Year 1992/93 Through 2007/08 with Net Values for 2005/06-2007/08

Source: Departmental annual reports.

Computing and Data Analysis

One of the distinctive aspects of the department over the last thirty or so years has been the quality of its computer/data analysis professionals. The ability to amass large quantities of data and then do analysis on them has been a great resource to the faculty and graduate students in AEAB. Also, the level of computer complexity has grown over time and having computer professionals to make computing efficient. The computer professionals have also been known to mandate updating. One example was to convert a professor's computer from DOS to Windows unbeknownst to him while he was attending meetings elsewhere. While certainly traumatic, he survives to this day.

We think no history of the department would be complete without a description of how the computer unit came to be and what its purposes were and have become. We asked Diana Danforth, the current leader of this group, to give us a first-person recollection of how the unit originated and what its functions have been. Here is her account:

“When I started in 1975 the AERS department maintained a “Statistics Lab”. It contained calculators and drafting tables and was staffed by mathematical and statistical personnel who compiled data, computed statistical tests, drew graphs and penned mathematical formulas for publication. There was a mainframe computing facility on-campus that utilized punch cards and there was one programmer, Margaret Banton(sp?), who developed FORTRAN computer programs to support departmental research. My first job was as a graduate assistant to Professor Don Voth. My responsibilities were to process survey data, enter data and write programs for the SPSS statistical package. Soon after I started, the statistics lab was dismantled and Margaret left the department.

David Martella was hired to provide programming and research support for agricultural economics. As I remember, he was an ABD agricultural economist. He developed applications in FORTRAN and, I think, programmed the “budget generator” to produce the Arkansas crop budgets. David was succeeded by Doug Dorland (sp), an accomplished programmer with an engineering background who developed applications in PL1 and FORTRAN. About that time the department housed and staffed a mainframe remote job entry facility, Remote14, in the room that is currently our computer lab, AGRI 218. That room had formerly housed graduate students and was referred to as the “Bull Pen”. The remote facility had card punches, a card reader and a line printer and served all of agriculture. I continued to work for rural sociology faculty in support of their research program. However, I also assisted with running Remote14 and, with additional staff, informally formed a central computing support group.

When Doug left, I proposed formally organizing the computing and statistical support staff to serve the department. That proposal was accepted and I became the staff coordinator in 1982, ending my sole assignment to rural sociology. The department

continued to operate Remote14 for a short time and then it was moved to the newly formed agricultural statistics department. At that point, computer terminals were installed in AGRI 218 and it became a computer lab. Since 1982 we have maintained a central group of computer programmers and researchers to serve the department's research needs. The function is not all that different from the "Statistics Lab" when I first started, but the form has changed with changing technology."

Conclusions

The department can be proud of its history. There has probably been more emphasis on teaching over the decades than the formal teaching budget supports. Faculty have provided students with strong interpersonal interaction at both the undergraduate and graduate levels. Our course offerings have changed over time to meet the changing needs of students and to address issues important to Arkansas and the nation. We have broadened the scope of course offerings to accommodate the complexities of problems facing food and agriculture. We have also added a significant international component to our graduate program to help prepare students to interact in a globalized economy.

Our research productivity has expanded over time. Although we were not able to document research productivity in the early to mid part of the twentieth century, we think it is fair to surmise that refereed journal article output has increased in the latter part of the twentieth century and first part of the twenty first. Because of Arkansas's role as a prominent commodity producer, the department will have to remain close to production agriculture. This means having some faculty dedicated to production and primary product marketing problems. And as long as agriculture is supported by government programs, we need policy-related research. Since the state is also very much concerned with food and environmental issues, we also need faculty with expertise and research interest in how the production and processing affect the environment.

Although the state provides substantial funding, there will be continued emphasis on grant acquisition. Department faculty will be encouraged to seek grants because, in addition to state funding, they will allow the hiring of more academic professionals, thereby helping the department to address more of the pressing concerns. But going for nationally competitive funds also presents a dilemma. Successful grant acquisition is based partially on investigators having established national reputations. This is done by refereed publication. Articles in agricultural economics based on applications to one state are not the best strategy for manuscript acceptance in prestigious venues. So to serve our state clients and get external, competitive funding, faculty will have to be able to balance serving a local clientele and yet commanding the attention of a national and international scholarly community.

References

AEAB, "Agricultural Economics Program Review", prepared for the 2003 CSREES Program Review, College of Food, Agricultural, Food, and Life Sciences, Division of Agriculture, September 2003.

Zellar, G. and N. Wyatt. History of the Bumpers College. Arkansas Agricultural Experiment Station Special Report 194, Fayetteville AR, 1999.

Appendix A.

Faculty Members, Expertise, and Years in Department

Last Name	First Name	Area of Expertise	Years of Service
Abel	George		2
Ahrendsen	Bruce	Ag Finance	+
Anderson	Fred		6
Arnold	Adlai		10
Babione ²	William	Law	3
Bender	Lloyd		11
Berry	Cal	Marketing (Dairy)	39
Blalock	Henry		3
Bragg	Peter		2
Brannen	Claude	Dept Head	20
Brockway	Horace		11
Bryant ³	Kelly	Farm Mgmt	+
Budd-Hale	Karol		6
Cable	Cecil Curtis		5
Campbell	Carlos		2
Campbell	John		5
Capstick	Dan		31
Charlton ¹	Jessie	Rural Sociology	36
Chase	Wallace		2
Coats	Bobby		+
Cochran	Mark	cotton/IPM Dept Head	+
Coddington	James		9
Collins	Bob	Ag Finance	4
Cramer	Gail	Policy	13
Dargan	Evan		6
Dickey	James		6
Dillon	Carl	Farm Management	5
Dixon	Bruce	Econometrics/Ag Finan	+
Dorlund(sp)	E. Douglass		3
Douglas	Thomas		2
Dunnuck	Noble		11
Edmondson	Vance		2
Egermeier	John		2
Elam	Emmett	Marketing	8
Engel ³	Carole	catfish/ aquaculture	5
Farmer ¹	Frank	Rural Sociology	+
Farris	Don		5
Faught	William		1
Fielder	Virgil		15
Flanders	Archie	Simulation	+
Folkman	William		8
Fryar	Ed	Price Risk	13

Last Name	First Name	Area of Expertise	Years of Service
Fuller	Frank	Policy	2
Gigoux	Jimmie		3
Gile	Bueford		8
Goodwin	John W.	micro econ//ag prices	9
Goodwin	H. L.	poultry econ	+
Griffin	Terry		+
Halbrook	W. A.	Farm Mgmt	25
Halbrook	Steve	Dept Head	+
Hall	Orville		19
Headley	J. C.	Dept Head	7
Hedges	Trimble	Dept Head	9
Hipp ²	Janie	Law	7
Hodgkins			1
Hogan	Rob		3
Hottel	James		2
Hudson ¹	Gerald	Rural Sociology	32
Hunter	Kenneth		2
Jackson	Hilliard		41
Jenks	George		1
Jones	James		1
Knapp	Bradford		
LaFerney	Preston	Policy/International	26
Laferty	Jack		36
Law	Jerry		1
Lessley	Billy		3
Looney ²	Jake	Law	11
Maddox	James		1
Marshall	Don		6
Martin	Billy		2
Martin	Lee		5
Martin	Ralph		3
May	Ralph		1
McCormick	Thomas		4
McKenzie	Andrew	Price Risk	+
McNair	A. D.		8
McNeeley	John		2
Meenen	Henry	Ag Finance/Dept Head	38
Metzler	William		7
Miller	Wayne	Rural Development	+
Miller ¹	Michael	Rural Sociology	7
Moberg	Theodore		1
Moore	Clarence		3
Morrison	William		32
Nalley	Lanier	Intl Ag Policy	+
Nayga	Rudy	Food Econ	+

Last Name	First Name	Area of Expertise	Years of Service
Neff	David	Price Risk	7
Osgood	Otis		8
Parsch	Lucas	Fm Mgmt/Quant Assoc Head	+
Pittman ²	Harrison	Law	+
Popp	Mike	Farm Mgmt/biofuels	+
Popp	Jennie	Environ mental econ	+
Price	Carter	marketing	33
Rainey	Dan	Rural Dev/policy	+
Rainey	Ron		+
Redfern	J. Martin	Natural Resources	39
Reid	James		3
Reneau	Duane	Farm Mgmt	8
Schneider ¹	Mary Jo	Rural Sociology	
Scoggins	Harold		3
Shulstad	Bob	micro econ/Dept Head	14
Singer	Joseph		31
Sizer ¹	Molly	Rural Sociology	1
Smith	Owen		1
Smith	William		1
Spaulding	Brent	Farm Mgmt	6
Sparlin	Estal		5
Stark	Robert		+
Stuart	Clyde		4
Tarver	James		1
Tatum	Julien		4
Thomsen	Mike	Ag Mkt/ FoodPolicy	+
Voth ¹	Don	Rural Sociology/ Dept Head	29
Wailes	Eric	Intl Ag Policy/grain mkt	+
Walker	Rod		1
Watkins	K Brad	Cropping systems	+
Webb	Billy Ray		2
White	James		34
White	John W.		34
Wilson	William		11
Windham	W. J.		25
Wise	Harry		1
Wood	Noel		2
Windham	Tony		+
Mullins ⁴	Troy		12
Armitage ⁴	Norman		2
Grimstad ⁴	Cleo		5
Lucas	Broder		4

Last Name	First Name	Area of Expertise	Years of Service
McPeek ⁴	Miles		7
Slusher ⁴	Melvin		15
Stevens ⁴	Harold		4
Garner	Carroll		18
Green ⁴	Bernal		6
Grosz ³	Ronald		1
Moussie ³	Menwuyellet		5
Swanson ³	Richard		8
Webb ³	Alan		1
Collins ⁴	Robert		2
Gerlow ⁴	Arthur		2
Korslund ⁴	Harry		2
Mosley ⁴	Wiley		1
Suthmer ⁴	Kenneth		2
Thomas ⁴	Olen		2
Thompson ⁴	Lesesne		2
Holder ⁴	Shelby		

1 Rural Sociology included in the Department until 1996

2 Law instructor

3 Adjunct

4 USDA Coop Agent

*This list was provided by Communication Services. List is likely not inclusive nor are Years of Service necessarily precise.

+ Presently employed by the Division of Agriculture.

Appendix B

List of Journals Used by AEAB Scientists as Research Outlets, 1993-2008

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Acta Horticulturea										1							1
AgBio Forum									1								1
Agribusiness				1	1								1				3
Agribusiness: An International Journal												1					1
Agricultural & Resource Economic Review			2														2
Agricultural Economics	1	2	1														4
Agricultural Finance Review		3	1	1				1			1			1	1		9
Agricultural Systems											1	1	1	1			4
Agronomy Journal								1	4			1	1	1	1	1	10
American Journal of Agricultural Economics	1	1	2	3		1	1		1		1					1	12
Animal Science													1				1
Applied Economics	1								1		1	1					4
Applied Engineering in Agriculture													1			1	2
Applied Financial Economics															1		1
Applied Research in Economic Development														1	1		2
Arkansas Law Notes						1											1
Canadian Journal of Agricultural Economics										1			1				2
Communications Soil Science Plant Analysis							1	1	1								3
Crop Management															1		1
Crop Science														2			2
Ecological Indicators								1									1
Ecological Modelling								1									1

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total	
Empirical Economic Letters	1																1	
Encyclopedia of Life Support Systems	1																1	
Environmental & Resource Economics	1																1	
Food Protection Trends	1																1	
Food Technology	1																1	
International Food & Agri Business Management Review	1																1	2
International Journal Biotechnology	1																1	
Journal of American Society of Farm Managers & Rural Appraisers	1			1						1		1				1	5	
Journal Agricultural & Applied Economics		3	2			2	6			1	1		4	2	5	2	28	
Journal of African Economies	1																1	
Journal of Agricultural & Resource Economics	1								1			1					3	
Journal of Animal Science	1																1	2
Journal of Applied Poultry Research	1																1	2
Journal of Comparative Economics	1																1	
Journal of Cooperatives	1																1	
Journal of Corporate Finance	1																1	
Journal of Cotton Science	1																1	
Journal of Crop Production	1																1	
Journal of Educational Research & Policy Studies	1																1	
Journal of Environmental Monitoring and Restoration	2																2	
Journal of Environmental Planning & Management	1																1	

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Journal of Food Distribution Research										1	1						2
Journal of Forestry		1															1
Journal of International Agricultural Trade & Development															1	1	2
Journal of Natural Resources & Life Sciences Education												1					1
Journal of Plant Nutrition										1	1						2
Journal of Production Agriculture				2													2
Journal of Soil & Water Conservation														2		1	3
Journal of Sustainable Agriculture												1					1
Journal of the American Dietetic Association						1											1
Journal of the Arkansas Academy of Science										1							1
Precision Agriculture																1	1
Quarterly Journal International Agriculture							1										1
Quarterly Journal of Business and Economics								1					1				2
Review of Agricultural Economics		1	1	3		1		1	2	1	1			1			12
Review of Economics and Statistics						1											1
Rural Sociology		1															1
Social Science Quarterly				1													1
Soil Science																1	1
South West Economic Review						1											1
Southern Journal of Rural Sociology		1															1
Southern Rural Sociology		1															1
Station Bulletins	1	4	9	1			3		1								19

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
The Journal of Futures Markets												1					1
The Journal of Rural Health	1			1													2
The Journal of Solid Waster Technology and Management															2		2
The Professional Animal Scientist												1	1				2
The Southern Business & Economics Journal									1			1					2
The World Economy										2							2
Tourism Economics																1	1
Total	5	20	18	17	1	8	15	8	14	12	10	13	14	13	16	12	196

Source: Departmental Annual Reports, various years.