

Future Directions for Agricultural Economics Curricula: Faculty and Administrative Perspectives

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Abstract

In recent years many departments of agricultural economics have shown an interest in revising their curricula to include specializations in the areas of agribusiness management. This evolution has received considerable attention and debate among professionals in the area. Past research has focused on the academic preparation that employers desire in graduates entering the work force in agricultural economics and agribusiness. This study examines the attitudes of faculty and chairs of agricultural economics departments as well as those of deans of the colleges of agriculture. Seven of the attitudes addressed program focus and nine addressed curricula issues. The distribution of responses among the three groups were similar. In general, where differences did occur, the deans differed from either the faculty or chairs. The high degree of variability among most of the responses indicates that there will be considerable debate as agricultural economics departments revisit their curricula.

Introduction

There were 92,245 undergraduate students enrolled nationally in agriculture and natural resources baccalaureate degree programs in 1992 (FAEIS). Fifteen percent (13,848) of these undergraduate students were in the broad degree area that includes agricultural economics (AGEC), agricultural business and agricultural business management as areas of specialization. This degree area was the third largest nationally, ranking behind Animal Science and Natural Resources. The total enrollment in this degree area over this same time period has followed the trends of other degree programs in agriculture. In 1984, the enrollment was 16,824, it fell to 12,987 in 1988 and has since risen to its present level.

The recent increased enrollment in this degree area has been primarily due to the increased enrollment in the agricultural business and management specialization. For example, in 1986, 57.0 percent of the students in this area were enrolled in AGEC degree programs (NACTA, June 1987). By 1992, only 34.0 percent of the total degree area were in the AGEC specialization, whereas enrollment in the agricultural

business and management specialization made up 63.0 percent of the total. These changes can be attributed to such factors as the demographics of students entering colleges of agriculture in general, an increased awareness of projected future job availability in the economic and management areas, and, perhaps, an improved perception of agriculture and agriculturally related employment as a career opportunity.

As a result of the interest in the agribusiness management specialization, many traditional agricultural economics departments have broadened, or are considering broadening, their curricula and programs to include specializations in the areas of agribusiness management. This evolution or process has received considerable attention and debate among professionals in the area recently. Numerous articles (Hite, Mandersheid, Williams, Erven, Litzenberg), American Agricultural Economics workshops (1986, 1989, 1992) and conferences (Farm Foundation) have addressed the needs and direction of undergraduate programs in agricultural economics and related fields.

Previous research has identified what employers desire in graduates entering the work force in agricultural economics and agribusiness. While this group has provided insight and input into degree programs and curriculum for many agricultural programs (Reisenberg, Slocombe and Baughen, Litzenberg and Schneider, Harris), they are not the ultimate decision makers or the proprietors of the programs. Faculty and chairs will make the decisions of what to include or exclude from a degree program. Their decisions will be influenced, in part, by their deans. Because neither faculty, chairs or deans have been formally or systematically polled with respect to the changes taking place within the profession, this study will investigate their attitudes to determine potential

Table 1. Response Rate for the Survey on Paradigm and Paradigm Shifts in Undergraduate Agricultural Economics Education.

Group	Sample Size	Response (Number)	Response (Percent)
Academic Deans	65	35	53.8
Chairs	85	37	43.5
Faculty	290	132	45.5
Total	440	204	46.4

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future directions of programs in departments of agricultural economics.

The purpose of this paper is to provide the results of a national survey of faculty and administrators concerning undergraduate agricultural economics education. Specific objectives are (1) to examine the overall views of these individuals with regard to program focus and curriculum concerns and (2) to contrast the similarities and differences between faculty, department heads/chairs and college deans.

Methodology

Surveys were sent to a randomly selected sample of faculty who are members of the American Agricultural Economics Association (AAEA), agricultural economic department heads and chairs, and academic deans of colleges of agriculture.¹ The overall response rate was 46.4 percent (204 useable surveys). Table 1 gives the breakdown of sample size and response rates for the three groups.

The survey presented the respondents with statements concerning various aspects of agricultural economics/agribusiness management undergraduate programs and curricula. Discussions at recent agricultural economics meetings and the perceptions the authors felt they had heard expressed served as the basis for the statements that were developed. Seven of the statements concentrated on the direction or focus the profession should take in the future in the undergraduate major options, such as agricultural economics and agribusiness management. Nine of the statements concerned curricula issues of course work and its content. To each statement, the respondent was presented with a Likert Scale and asked to indicate either: strongly agree (1), agree (2), indifferent (3), disagree (4), or strongly disagree (5).

A Chi square test was performed to examine for differences in the distribution of responses between deans, chairs and faculty. For the purpose of these tests, the strongly agree/agree and strongly disagree/disagree categories were combined into agree and disagree. This was done to reduce the number of cells with low or no frequency counts.

Program Focus

Two of the statements concerning program focus addressed whether agricultural economics programs should have an agribusiness component (Table 2). There were subtle differences between the statements and the responses to them differed somewhat. One question, "agricultural economics undergraduate programs should have an agribusiness/applied business focus," allowed for the possibility of other areas of importance as well as an agribusiness area. Over two-thirds of all respondents (67.8 percent) agreed that this should be a focus within the programs (mean 2.3, where 3.0 represents indifference). There was a significant difference ($p=0.096$)² in the distribution of the responses across the three groups, with a larger percentage of the deans strongly agreeing than either the department chairs or the faculty on the appropriateness of this focus. Among the deans, 85.7 percent expressed

Table 2. Response to Statements Concerning Program Focus.³

Agricultural economics undergraduate programs should have an agribusiness/applied business focus ($p=.096$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	28.2	39.6	11.4	18.3	2.5	2.3	1.1
Dean	37.1	48.6	0.0	14.3	0.0	1.9	1.0
Chair	25.0	41.7	13.9	16.7	2.8	2.3	1.1
Faculty	26.7	36.6	13.7	19.9	3.1	2.4	1.2

Our new agricultural economics undergraduate focus should be on agribusiness *economics* ($p=.047$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	11.0	36.8	17.4	29.4	5.5	2.8	1.1
Dean	14.7	44.1	5.9	29.4	5.9	2.7	1.2
Chair	11.1	27.8	11.1	38.9	11.1	3.1	1.3
Faculty	9.9	37.4	22.1	26.7	3.8	2.8	1.1

The undergraduate major should focus on basic agricultural economics options, such farm and ranch management, agricultural marketing, price analysis, resource economics, etc. ($p=.290$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	6.9	32.0	15.3	39.9	5.9	3.1	1.1
Dean	0.0	31.4	11.4	45.7	11.4	3.4	1.1
Chair	5.6	25.0	13.9	47.2	8.3	3.3	1.1
Faculty	9.1	34.1	16.7	36.4	3.8	2.9	1.1

Agricultural economics undergraduate programs should be designed to prepare students for competitive environments of graduate school ($p=.714$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	5.6	36.4	15.2	30.3	12.6	3.1	1.2
Dean	8.8	38.2	11.8	35.3	5.9	2.9	1.2
Chair	3.1	37.5	9.4	34.4	15.6	3.2	1.2
Faculty	5.3	35.6	17.4	28.0	13.6	3.1	1.2

Agricultural economics should devote teaching resources to participate in multidisciplinary, multidepartment, undergraduate majors such as environmental science, agricultural production systems, etc ($p=.533$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	25.0	56.4	9.8	6.4	2.5	2.1	0.9
Dean	42.9	45.7	5.7	5.7	0.0	1.7	0.8
Chair	18.9	56.8	16.2	5.4	2.7	2.2	0.9
Faculty	22.0	59.1	9.1	6.8	3.0	2.1	0.9

either agreement or strong agreement to this statement, whereas 66.7 percent of the chairs and 63.3 percent of the faculty agreed or strongly agreed. The highest level of dis-

Agricultural economics undergraduate programs should include applied social science majors/options such as community development, public resource management, human resource development, etc. ($p=.725$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	12.9	54.2	13.4	14.9	4.5	2.4	1.1
Dean	8.6	62.9	14.3	11.4	2.9	2.4	0.9
Chair	11.4	54.3	8.6	20.0	5.7	2.5	1.1
Faculty	14.5	51.9	14.5	14.5	4.6	2.4	1.1

Agribusiness majors should have two options — input supply and food distribution — because they appeal to different students, need different supporting courses, and relate to different job markets ($p=.058$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	2.5	13.9	30.2	41.6	11.9	3.5	1.0
Dean	2.9	25.7	31.4	34.3	5.7	3.1	1.0
Chair	2.9	17.1	17.1	48.6	14.3	3.5	1.0
Faculty	2.3	9.9	33.3	41.7	12.9	3.5	0.9

agreement was from the faculty (23.0 percent). Another related question, the “new agricultural economics undergraduate focus should be on agribusiness economics,” implied a stronger linkage between agribusiness and economics and that this is the direction the profession should be going. There were no significant differences ($p=.47$) in the responses to this statement among groups. Of all who responded, 47.8 percent agreed with this statement, again the largest percentage of respondents agreeing with this statement were the deans. Of the chairs surveyed, 50.0 percent disagreed with focusing the new agricultural economics undergraduate program on agribusiness economics. Among the faculty, 47.3 percent agreed, 22.1 were indifferent, and 30.5 disagreed with this focus.

On two statements, the profession was divided. One concerned whether “the undergraduate major should focus on basic agricultural economics options, such as farm and ranch management, agricultural marketing, price analysis and resource economics.” Overall the respondents had a mean score of 3.1; essentially they were indifferent. When the distribution of the responses was examined, however, it was found that 38.9 percent agreed with the statement and 45.8 percent disagreed. Looking at the distribution within the individual groups, 57.1 percent of the deans and 55.5 percent of the department chairs disagreed with this statement. On the other hand, the faculty agreement/disagreement, to this statement was fairly evenly divided; 40.2 percent of the faculty did not think this was the appropriate direction and 43.2 percent did agree.

A similar level of divergence among respondents was found for the statement, “agricultural economics undergraduate programs should be designed to prepare students for the com-

petitive environments of graduate school.” Interestingly, more (47.0 percent) deans agreed this was an appropriate focus for agricultural economics undergraduate programs than department chairs (41.6 percent) or faculty (40.9 percent). The highest level of disagreement with this focus was from the chairs (50.0 percent), whereas 41.6 percent of the faculty and 41.2 percent of the deans disagreed with this statement.

The question of whether or not agricultural economics teaching resources should be devoted toward multidisciplinary, multidepartment majors was expected to draw divergent views. It was felt that, while many may agree that multidisciplinary majors are desirable to have, there would be a reluctance to devote resources to achieve this, especially in times of tight budgets. Overall, a majority of the respondents agreed with this statement, with a mean of 2.1. Almost 89.0 percent of the deans and slightly more than 81.0 percent of the faculty agreed that teaching resources should be devoted to multidisciplinary majors; however, only 75.7 percent of the chairs were willing to devote resources toward multidisciplinary majors.

Overall, 67.1 percent felt “agricultural economics undergraduate programs should include applied social science majors/options, such as community development, public resource management, human resource development.” The deans (71.4 percent) supported this idea slightly more than the chairs (65.7 percent) or faculty (66.4 percent).

Little support was given to the statement that “agribusiness majors should have two options - input supply and food distribution - because they appeal to different students, need different supporting courses, and relate to different job markets.” Over 83.0 percent of the respondents were either indifferent or disagreed to some extent with this question, for an overall mean score of 3.5. There were, however, significant differences in the distribution of responses among those surveyed ($p=.058$). Almost 29.0 percent of the deans agreed with this statement, whereas only 12.2 percent of the faculty agreed with it. The strongest disagreement came from the department chairs (62.9 percent), and the least from the deans (40.0 percent). About a third of both the deans and the faculty were indifferent.

In general, it would appear that the profession supports the paradigm of programs with a broader definition than historical programs. Programs that are agribusiness, multidisciplinary, or applied in nature were supported more than the traditional agricultural economics areas. This is somewhat consistent with the findings in the statements covering issues related to courses and curricula.

Curricula

Nine statements were aimed at curricula issues, course work and program content (Table 3). Understandably, there was very strong support for curricula that prepared students for changing employment markets as compared to specific jobs. Over 96.0 percent of the respondents agreed with this concept, for a mean of 1.5. This is in contrast to the responses to the statement, “successful agricultural economics majors

increasingly recognize and respond to segmented markets with unique and targeted programs." Over half of the respondents (55.8 percent) agreed, with a mean of 2.6.

While almost 85.0 percent of the respondents felt that a successful undergraduate curriculum involved extracurricular activities such as internships, clubs, and field trips, there were some differences in the distribution of responses, but they were not statistically significant ($p=.127$). Slightly more than 94.0 percent of the deans agreed with the importance of these activities, whereas only 72.2 percent of the chairs agreed with their importance. Over 19.0 percent of the chairs dis-

Table 3. Response to Statements Concerning Curricula Issues.

A good undergraduate program should prepare students for changing employment markets as opposed for a specific job ($p=.968$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	55.0	41.6	3.0	0.5	0.0	1.5	0.6
Dean	68.6	28.6	2.9	0.0	0.0	1.3	0.5
Chair	50.0	47.2	2.8	0.0	0.0	1.5	0.6
Faculty	52.7	43.5	3.1	0.8	0.0	1.5	0.6

Successful agricultural economics majors increasingly recognize and respond to segmented markets with unique and targeted programs ($p=.144$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	6.0	49.8	31.7	10.1	2.5	2.6	0.9
Dean	5.7	51.4	34.3	8.6	0.0	2.5	0.7
Chair	5.7	40.0	28.6	25.7	0.0	2.7	0.9
Faculty	6.2	51.9	31.8	6.2	3.9	2.5	0.9

A successful agricultural economics undergraduate curriculum requires a program approach involving internships, clubs, leadership development, industry field trips and speakers, etc., in addition to a list of courses. ($p=.127$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	31.7	53.0	5.5	7.9	2.0	2.0	0.9
Dean	54.3	40.0	2.9	0.0	2.9	1.6	0.8
Chair	25.0	47.2	8.3	13.9	5.6	2.3	1.2
Faculty	27.5	58.0	5.3	8.4	0.8	2.0	0.9

An undergraduate program is synonymous with its list of courses ($p=.676$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	1.5	8.8	8.8	51.0	29.9	4.0	0.9
Dean	0.0	8.6	5.7	45.7	40.0	4.2	0.9
Chair	0.0	5.4	8.1	43.2	43.2	4.2	0.8
Faculty	2.3	9.9	9.9	54.6	23.5	3.9	1.0

Calculus should be required for all undergraduate agribusiness and agricultural economics majors ($p=.015$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	27.6	43.4	8.4	17.2	3.5	2.3	1.1
Dean	17.1	31.4	20.0	31.4	0.0	2.7	1.1
Chair	22.2	55.6	5.6	11.1	5.6	2.2	1.1
Faculty	31.8	43.2	6.1	15.2	3.8	2.2	1.1

All undergraduate agricultural economics majors need to be exposed to production agriculture ($p=.293$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	12.3	41.4	14.3	22.2	9.9	2.8	1.2
Dean	11.4	42.9	11.4	22.9	11.4	2.8	1.3
Chair	5.4	35.1	13.5	32.4	13.5	3.1	1.2
Faculty	14.5	42.8	15.3	19.1	8.4	2.6	1.2

Agricultural economics should provide more university service/general education courses ($p=.287$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	8.3	54.4	15.7	18.6	2.9	2.5	1.0
Dean	8.6	65.7	14.3	11.4	0.0	2.3	0.8
Chair	5.4	64.9	10.8	13.5	5.4	2.5	1.0
Faculty	9.1	48.5	17.4	22.0	3.0	2.6	1.0

Undergraduate agribusiness and graduate agricultural economics programs share little synergism and relationship ($p=.297$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	9.6	25.1	12.6	47.7	5.0	3.1	1.2
Dean	5.9	23.5	8.8	52.9	8.8	3.4	1.1
Chair	8.6	22.9	5.7	60.0	2.9	3.3	1.1
Faculty	10.8	26.2	15.4	43.1	4.6	3.1	1.2

A successful agribusiness curriculum will not prepare graduates for further study in agricultural economics ($p=.372$).

	Percent					Mean	STD
	SA	A	I	D	SD		
Overall	1.5	11.3	15.3	44.8	27.1	3.8	1.0
Dean	0.0	2.9	14.3	57.1	25.7	4.1	0.7
Chair	0.0	13.5	13.5	40.5	32.4	3.9	1.0
Faculty	2.3	13.0	16.0	42.8	26.0	3.8	1.1

agreed with the importance of these activities but only 2.9 percent of the deans disagreed with this statement.

Few of the respondents (10.3 percent) felt that an undergraduate program was synonymous with its list of courses. The mean response was 4.0 (disagree). Interestingly, more faculty (12.2 percent) agreed with this concept relative to the deans (8.6 percent) and chairs (5.4 percent).

Two questions addressed supporting course work for agricultural economics majors. Seventy-five percent of the fac-

ulty and 77.8 percent of the chairs agreed that calculus should be required. The distribution of responses from deans, on the other hand, differed significantly ($p=.015$) with those of the chairs and faculty. Only 48.5 percent of the deans agreed with requiring calculus and 31.4 percent disagreed. Only 53.7 percent of the respondents agreed that agricultural economics majors should be exposed to production agriculture. Interestingly, the strongest support (57.3 percent) came from the faculty and the least support (40.5 percent) came from the chairs. Almost 46 percent of the chairs disagreed with requiring production agriculture.

There was a large percentage of the respondents, particularly by the deans and chairs, who agreed that "agricultural economics should provide more university service/general education courses." As one might expect, the deans supported this statement the strongest, with a mean score of 2.3 and 74.3 percent in agreement, followed closely by the chairs, with a mean of 2.5 and 70.3 percent in agreement. Faculty had the least support for this statement, with 57.6 percent of the faculty agreeing with this statement (mean of 2.6) and 25.0 percent disagreeing.

Two questions looked at relationships between agribusiness and graduate study in agricultural economics. Only 34.7 percent of all respondents agreed that there was little synergism between undergraduate agribusiness and graduate agricultural economics programs, while 52.7 percent disagreed. The percentage of faculty (47.7 percent) who disagreed with this statement was higher than that of either the deans (61.7 percent) or chairs (62.9 percent). Almost 72 percent disagreed with the statement "a successful agribusiness curriculum will not prepare graduates for further study in agricultural economics."

Conclusions

Professionals in traditional agricultural economics departments have debated the needs and direction of undergraduate programs in agricultural economics and related areas. The attitudes of the faculty and university administrators, the proprietors of the programs, were examined to identify areas of consensus and differences. Seven of the attitudes addressed program focus and nine addressed curricula issues. There were fewer differences in the distribution of responses among the three groups surveyed (deans, chairs, and faculty) than might be expected. In general, where differences did occur, the deans differed from either the faculty or chairs. The strongest difference concerned requiring calculus, with the deans disagreeing that it should be a requirement and the chairs and faculty agreeing with it as a requirement. One reason for this difference might be attributed to the fact that many deans do not come from the discipline of agricultural economics. The only area where the distribution of responses for the chairs differed significantly from that of the faculty and deans concerned the idea that the new agricultural economics undergraduate focus should be on agribusiness economics. The chairs disagreed on this focus whereas the faculty and deans tended to agree. The high degree of variability among most

of the responses indicates that there will be considerable debate among faculty and administrators as agricultural economics departments revisit their curricula.

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Endnotes

¹The mailing lists for the department chairs and for the deans were developed using different sources. The list of department chairs came from the list of schools in American Agricultural Economics Association Handbook and deans were all those at land grant institutions as well as American Association of State Colleges of Agriculture and Renewable Resources (AASCARR) institutions.

²The probability figures reported are for the Chi square test and indicate the probability of incorrectly rejecting H_0 : The distribution of responses between deans, chairs and faculty are the same. For the purpose of these tests, the strongly agree/agree and strongly disagree/disagree categories were combined into agree and disagree. This was done to reduce the number of cells with low or no frequency counts.

³The numbers under strongly agree, agree, indifferent, disagree and strongly disagree headers represent the percentage of respondents selecting that choice. Values were assigned to the responses, where one represents strongly agree and five represents strongly disagree. The mean and standard deviation were calculated using a simple average of all responses.