

A Comparison of Agricultural Education Programs
Located in Colleges of Agriculture with
Those Located in Colleges of Education

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Agricultural education departments are located administratively in a number of areas, most prominent of which are colleges of agriculture and colleges of education. Within the past 10 years, discussions have taken place both formally, such as the Binkley-Knebel (1977) debate in *The Journal of the American Association of Teacher Educators in Agriculture*, and informally among various faculty members concerning where departments of agricultural education at the university level should be located. Binkley and Knebel debated the location; presenting arguments both for and against the college of agriculture and the college of education. Weston and Sabol (1979) took a different approach to the location question by debating whether or not agricultural education teacher education programs should be located only in land-grant universities. Moore and Farrington (1974) called for the consolidation of all vocational teacher education facilities and hinted it should be housed within a college of education.

Most of the points presented in these articles are primarily theoretical or philosophical in nature. There is virtually no discussion of which type of administrative unit provides the more favorable climate for the continued nurturance and growth of agricultural education. The question, "Where do departments of agricultural education fare best - within the college of agriculture or within the college of education?" has not been addressed. The research in this paper focuses on this question.

Purpose of the Study

Agricultural education should be housed in an environment conducive to growth. There appears to be some concern in the profession about the climate for such growth in certain administrative units. Therefore, the primary purpose of this research was to investigate the similarities and differences found in agricultural education programs housed in colleges of agriculture and in colleges of education. By collecting these types of data, it is possible to ascertain in which administrative unit departments of agricultural education are faring the best.

Objective

The specific objective of this research was to compare departments of agricultural education housed in colleges of agriculture with those housed in colleges of education on the following variables:

1. Number of tenure track faculty,
2. Number of supported graduate students,
3. Percent of departments which had faculty on 12 month contracts,
4. Number of out-of-state professional meetings attended,
5. Amount of reimbursement for attending professional meetings,
6. Size of operating budget,
7. Starting salary for a beginning assistant professor,
8. Accreditation of undergraduate and graduate programs, and
9. Difficulty in securing promotions.

This research did not consider theoretical or philosophical factors, but considered only the more materialistic or survival factors.

Methodology

A list of agricultural education departments was compiled from the *1981-82 Directory of the American Association of Teacher Educators in Agriculture*. The 89 departments of agricultural education identified served as the population for this study. The departmental chairpersons were each asked to respond for their department.

Data were gathered by means of a researcher developed questionnaire. Twenty-two of the questions on the instrument were designed to collect data relative to selected aspects of the administrative structure, fiscal management, and characteristics of the agricultural education program. Additionally, perceptions of the departmental chairpersons regarding selected aspects of the program were ascertained through a 10 item attitude instrument which utilized a five point Likert-type scale. Most of the items on the instrument were gleaned from points made in the debate issues of *The Journal of Trade and Crawford* (1981). Peers of the authors reviewed the instrument to verify content validity. An analysis using Cronbach's Alpha of the 10 items on the attitude section of the instrument revealed a reliability coefficient of .76.

The instrument was mailed to departmental chairpersons in April of 1982. After two mailings, responses were received from 64 chairpersons for an overall response rate of 72%. An analysis of non-respondents by type of institution (1862 land-grant, 1890 land-grant, and non land-grant) revealed a difference in response rate among the groups. Nearly half of the non-respondents were from 1890 land-grant institutions. A breakdown of responses revealed the following response rates:

- 1862 land-grant universities - 84%
- 1890 land-grant universities - 31%
- non land-grant universities - 70%

In interpreting the findings it should be kept in mind that the data are primarily from 1862 land-grant universities and non land-grant universities.

Simple descriptive statistics were calculated on selected variables. Independent sample t-tests were used when the dependent variables were interval or ratio data.

Findings

Of the 64 departments which responded, 44 (69%) were located in colleges of agriculture or in units which were scientifically oriented, such as colleges of life science or colleges of technology. In this study, all units which were housed in colleges with a scientific orientation were classified as colleges of agriculture since the majority of the colleges were colleges of agriculture or included agriculture.

Twenty departments (31%) were located in colleges of education or similar types of units, such as colleges of professional study or colleges of humanities and art. In this study, all departments which were housed in humanistically oriented units were classified into one grouping called a college of education.

The number of departments located within colleges of agriculture and education corresponded closely to the numbers reported by Boucher (1972) in a study conducted over a decade ago.

Faculty

Departments of agricultural education associated with colleges of agriculture had slightly more full time equivalent (FTE) faculty than did those departments housed in the colleges of education. Departments in the colleges of agriculture had a mean FTE of 3.17 compared to a mean FTE of 2.89 for departments in the colleges of education. This slight difference was not statistically significant. These figures, along with other data, are displayed in Table 1.

Table 1

Selected Characteristics of Departments of Agricultural Education Located in Colleges of Agriculture and Colleges of Education

| Variable | College of Agriculture N=44 | College of Education N=20 |
|---------------------------------------------------------------------------------------|--------------------------------|------------------------------|
| Mean number of FTE tenure track faculty | 3.17 | 2.89 |
| Percent of departments with faculty on 12 month contracts | 70.30 | 55.75 |
| Mean number of supported graduate students | 1.76 | 1.54 |
| Mean number of out-of-state professional meetings attended by each faculty member | 2.81 | 2.90 |
| Percent of reimbursement for out-of-state professional meetings | 83.57 | 77.05 |
| Mean starting salary for assistant professor | 21,942 ^a | 22,855 ^a |
| Percent of departments receiving research funds from agricultural experiment stations | 36.4 | 5.0 |
| Percent of departments receiving support from the State Department of Education | 81.4 | 80.0 |

^aNote: Extrapolation process was used to calculate the means.

More faculty in colleges of agriculture were on 12 month contracts than were faculty in colleges of education. Slightly over 70% of the departments of agricultural education in the colleges of agriculture had faculty who were on 12 month contracts, while 56% of the departments of agricultural education in colleges of education had faculty who were on 12 month contracts. Caution must be exercised in interpreting this finding. The data reported were for departments, not individual faculty members. For example, one department with 14 faculty members could report the percent of faculty on 12 month contracts was 100%. Another department with two faculty members could report that only 50% of the faculty were on 12 month contracts. Since the data were reported by departments, the computer would add 100% and 50%, divide by two departments, and arrive at a figure of 75%. In actuality, 15 out of 16 members were on 12 month contracts.

There was virtually no difference in the number of supported graduate students according to the location of the department. De-

departments housed in colleges of agriculture averaged 1.76 supported graduate students, while departments housed in colleges of education averaged 1.54 supported graduate students. This difference was not statistically significant.

The number of out-of-state professional meetings attended by faculty in the colleges of agriculture was 2.8, while the number of out-of-state professional trips taken by faculty in the colleges of education was 2.9. Faculty in the colleges of agriculture were reimbursed for 83% of their travel expenses, while faculty in colleges of education received reimbursement at the rate of 77%. None of these differences were statistically significant. This information is presented in Table 1.

Finances

Four questions were asked to determine the financial resources of the departments. One finance question concerned whether or not agricultural education received research funds or salary support from the Agricultural Experiment Station. Sixteen chairpersons (36%) of departments located in colleges of agriculture responded yes, while only one chairperson (5%) located in a college of education responded yes.

The second question concerning finances dealt with whether or not agricultural education departments received support from the State Department of Education or State Board of Vocational Education. Thirty-five (81.4%) of the agricultural education departments in colleges of agriculture responded yes to this question, while sixteen (80.0%) of the agricultural education departments in colleges of education responded yes (See Table 1).

Departments of agricultural education located in colleges of education indicated they would pay slightly more for a beginning assistant professor. In order to avoid embarrassing department heads or forcing department heads to reveal financial information they did not want revealed, the possible responses to this item and the next were grouped into broad categories. The respondents only had to check the most appropriate category. Even though the data were grouped, the researcher calculated a mean salary through an extrapolation process using the midpoint of each range. The extrapolated starting salary in a department located in a college of education was \$22,855, while the extrapolated starting salary in a college of agriculture was \$21,942 (See Table 1).

Five of the departments located in colleges of agriculture had operating budgets in excess of \$300,001. None of the departments located in colleges of education had this large a budget. One department housed in a college of education had a budget between \$200,001 and \$300,000, while two departments in colleges of agriculture had budgets this large. Forty percent (8 of 20) of the departments housed in colleges of education had operating budgets of less than \$10,000. Approximately 20% of the departments (9 of 44) housed in colleges of agriculture had budgets this small. Seven departments

Table 2

Budgets of Departments of Agricultural Education Located in Colleges of Agriculture and Colleges of Education

| Budget | College of Agriculture | College of Education |
|----------------------------------------------------------------------------|------------------------|----------------------|
| Operating budget over which the head of agricultural education has control | | |
| Under \$10,000 | 9 | 8 |
| \$10,001 to \$25,000 | 10 | 6 |
| \$25,001 to \$50,000 | 7 | 1 |
| \$50,001 to \$100,000 | 4 | 3 |
| \$100,001 to \$150,000 | 4 | 0 |
| \$150,001 to \$200,000 | 2 | 1 |
| \$200,001 to \$300,000 | 2 | 1 |
| Over \$300,001 | 5 | 0 |

in colleges of agriculture had budgets of \$25,001 to \$50,000. A complete breakdown of the budgets is presented in Table 2. It appears that departments in colleges of agriculture either have larger budgets or have more control over the budget. A number of departments indicated that they only controlled the supply and expense money.

Enrollment and Accreditation

Departments of agricultural education located in colleges of education averaged about four less undergraduate students. Again using an extrapolation process, since the data were grouped, the mean undergraduate enrollment in departments housed in colleges of agriculture was 70.1, while departments located in colleges of education had a mean undergraduate enrollment of 66.8.

All of the undergraduate programs (100%) located in colleges of education were accredited by NCATE. Eighty-eight percent of the programs located in colleges of agriculture were accredited.

Departments of agricultural education located in colleges of agriculture indicated they would award an average of 9.2 Master of Science degrees during the 1981-82 school year. Departments housed

in colleges of education indicated they would award 6.7 Master of Education or Master of Science degrees during the 1981-82 school year. This difference was not statistically significant.

There is a difference in the number of masters programs which are accredited by NCATE in the two colleges. Only 25 of the 33 (approximately 75%) departments which offered masters degrees in the colleges of agriculture were accredited by NCATE. By contrast, all 19 departments which offered the masters degree in the colleges of education were accredited by NCATE.

Thirteen of the 20 departments located in colleges of education offered the doctorate, while 12 of the 44 departments located in colleges of agriculture offered doctorates. The doctorate-awarding departments in the colleges of agriculture indicated they would award an average of 3.4 doctorates in the 1981-1982 school year, while the departments in college of education were going to award 1.8 doctorates.

Approximately 92% of the doctoral programs housed in colleges of education were approved by NCATE, while nearly 67% of the doctoral programs located in colleges of agriculture were accredited by NCATE. Data about enrollments and accreditation are presented in Table 3.

Table 3
*Enrollment and Accreditation Figures for
Departments of Agricultural Education*

| Variables | College of Agriculture | College of Education |
|------------------------------------------------------------|------------------------|----------------------|
| Mean undergraduate enrollment | 70.1 ^a | 66.8 ^a |
| Percent of undergraduate programs accredited by NCATE | 88.4 | 100.0 |
| Number predicted to receive a Master's degree in 1981-1982 | 9.2 | 6.7 |
| Percent of Master's programs accredited by NCATE | 75.8 | 100.0 |
| Number predicted to receive a doctoral degree in 1981-1982 | 3.4 | 1.8 |
| Percent of doctoral programs accredited by NCATE | 66.7 | 92.3 |

^aNote: Extrapolation process was used in calculating these means.

Table 4

*Perceptions of Departmental Chairpersons
Regarding Selected Statements*

| Statements | College of Agriculture | College of Education | t-value |
|--------------------------------------------------------------------------------|---------------------------|-------------------------|---------|
| Agriculture education receives strong support from the college of agriculture. | 4.5 | 4.2 | 1.55 |
| Agriculture education receives strong support from the college of education. | 3.7 | 4.0 | 1.37 |
| The teaching ability of faculty in the college of agriculture is good. | 4.3 | 4.2 | 1.09 |
| The teaching ability of faculty in the college of education is good. | 3.7 | 3.9 | 1.04 |
| The quality of courses in the college of agriculture is high. | 4.5 | 4.2 | 2.55* |
| The quality of courses in the college of education is high. | 3.4 | 3.7 | 1.14 |
| It is difficult getting faculty promoted in the college of agriculture. | 1.8 | 2.8 | 3.15 |
| It is difficult getting faculty promoted in the college of education. | 2.6 | 3.1 | 1.26 |
| Agricultural education would fare better in some other college. | 1.3 | 2.7 | 4.16* |
| Programs in extension education should be a part of agricultural education. | 4.4 | 3.5 | 2.52* |

The rating scale was 5-strongly agree, 4-agree, 3-undecided, 2-disagree, and 1-strongly disagree.

* $p < .05$

Perceptions

Ten statements were included on the survey instrument which called for an agree-disagree response from the department chairpersons. A five point Likert-type scale was the device used to ascertain the degree of agreement or disagreement. A rating of 5.0 would indicate strong agreement, while a rating of 1.0 would indicate strong disagreement. The statements and responses are presented in Table 4.

Two of the statements were concerned with the amount of support agricultural education programs received from the colleges of education and agriculture. In both instances, the departmental chairpersons indicated they received more support from the college of agriculture than from the college of education. It was interesting to note that chairpersons of departments of agricultural education located in colleges of education indicated they received more support from the college of agriculture. However, it should be noted that the differences were not statistically significant.

Two statements focused on the teaching ability of faculty members in the colleges of agriculture and education. Here again, the departmental chairpersons indicated that they perceived the teaching ability of the total faculty located in colleges of agriculture to be greater than that of the total education faculty.

Two statements dealt with the quality of courses taught in the two different colleges. On the average, the courses in the agricultural colleges received higher ratings.

One of the statements was, "It is difficult getting faculty promoted in the college of agriculture." Chairpersons of departments located in colleges of agriculture were in general disagreement with this statement. Department heads in colleges of education leaned toward the uncertain position. The rankings were 1.8 and 2.8 respectively, which is statistically significant, $t(28.34) = 3.15, p < .05$. The corresponding statement was, "It is difficult getting faculty promoted in the college of education." The agricultural department heads' rating was 2.6, while the education department heads' rating was 3.1. This would indicate that both groups believed it is somewhat easier to get promoted in colleges of agriculture.

One final statement was, "Agricultural education would fare better in some other college." Heads of departments housed in colleges of agriculture were in strong disagreement with this statement. Chairpersons located in colleges of education were near the uncertain mark. It appears that heads of departments housed in colleges of agriculture were strongly opposed to moving to another college, while department heads housed in colleges of education were somewhat uncertain. The difference in ratings was statistically significant, $t(21.34) = 4.16, p < .05$.

The concluding statement was, "Programs in extension education should be a part of agricultural education." Chairpersons located in colleges of agriculture were in stronger agreement with this statement than chairpersons located in colleges of education. This difference was statistically significant, $t(20.65) = 2.52, p < .05$.

An independent sample t -test was calculated on each of the 10 statements. The researchers realize this technique has a tendency to increase the chance of making alpha error. The researchers would have preferred to sum the scores on the statements and come up with one overall score to analyze. However, the statements were not appropriate for summing.

Conclusions

There were no major differences between departments of agricultural education located in colleges of education and those located in colleges of agriculture. The number of faculty, supported graduate students, attendance at professional meetings, undergraduate enrollment, and masters enrollment were virtually the same. There was a tendency for programs located in colleges of education to be approved by NCATE more often than were similar programs in the colleges of agriculture. Departments located in colleges of agriculture appear to have larger operating budgets and have more access to experiment station funds.

The major differences appear to be in how departmental chairpersons perceive the atmosphere in which they are located. Regardless of college affiliation, the chairpersons believed (a) agricultural education programs received stronger support from the colleges of agriculture, (b) the quality of teaching and courses in colleges of agriculture were better, and (c) it would be easier to get faculty promoted in colleges of agriculture. If given the opportunity to leave the college of agriculture, departments which are housed there would not. The departments housed in the colleges of education tended to be undecided if they would move.

While it would be difficult to make a strong statement about where agricultural education programs fare the best, based on the data contained in this article, it appears there may be a slight advantage in colleges of agriculture.

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(Peters and Moore -- Continued from page 38)

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