

**ELEMENTS OF AN UNDERGRADUATE AGRICULTURAL LEADERSHIP PROGRAM:  
A DELPHI STUDY**

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## **Abstract**

Programs in agricultural leadership are continuing to enjoy success in several institutions around the country. To this point, no research has been conducted to 1) identify consensus objectives for these programs, 2) identify courses that should be taught in these programs, 3) identify program resource needs, 4) identify the need for and objectives of an internship requirement, or to 5) determine future placements of program graduates. This study used a panel of 15 experts in agricultural leadership to address these questions. Although the panel came to consensus on these areas it was apparent that the experts in agricultural leadership must continue to work toward national goals and standards for agricultural leadership programs.

## **Introduction**

Across the United States, organizations are finding it difficult to fill leadership positions because of a lack of trained leaders – a leadership void (Burns, 1979; Figura, 1999; Fritz & Brown, 1998b). People with leadership skills are highly sought after by employers (Fritz & Brown, 1998b; Graham, 2001; US Department of Labor, 1999). As a whole, college graduates are ineffective leaders, suggesting that the most likely cause of the leadership void is a lack of formal leadership training (Fritz & Brown, 1998b; Ricketts & Rudd, 2002).

In an attempt to fill the leadership void, departments of agricultural education have begun a concerted effort to train leaders (Fritz & Brown, 1998b). The following questions have emerged: What should be the objectives of the program? What courses should be offered? What resources are required to provide a leadership program? What employment options are available for students who look to agricultural leadership as a major? The purpose of this study was to determine and prioritize the elements required for an undergraduate agricultural leadership program by soliciting input from a group of agricultural leadership education experts.

Throughout the country 68% of agricultural education departments are currently offering leadership courses and 49% of agricultural education departments plan to expand leadership course offerings (Fritz & Brown, 1998a). Leadership development has been a part of agricultural education for nearly a century. This leadership training has developed out of a necessity to train students for advisor responsibilities in FFA and 4-H youth organizations (Fritz, Townsend et al., 2003a).

Agricultural leadership courses attract a wide variety of students from within and outside of the college of agriculture (Brown & Fritz, 1994; Fritz, Hoover, Weeks, Townsend, & Carter, 2003). In addition, most agricultural leadership programs have support from their college dean, thus helping to provide sustained growth for these programs (Brown & Fritz, 1994; Fritz, Hoover et al., 2003; Fritz, Townsend et al., 2003b; Fritz & Brown, 1998b). Based on the experiences of departments of agricultural education from across the country, adding a leadership component has proven to be beneficial (Fritz & Brown, 1998b).

Even still, academic program curriculum can quickly become outdated and therefore must be constantly examined in terms of its effects and its effectiveness (Finch & Crunkilton, 1989). Unfortunately, colleges and universities have seldom applied continuous planning principles to curriculum (Briggs, Stark, & Rowland-Poplowski, 2003). Even though curriculum planning is at the heart of academic work, few studies are available to aid researchers or academic administrators in understanding the dimensions of program planning (Stark, Lowther, Sharp, & Arnold, 1997).

As the discipline of agricultural leadership has developed over the years, no national guidelines or frameworks have been established. Agricultural leadership course offerings across the country show little consistency of courses offered, content within courses, or texts used.

Leadership education, by its very nature requires a continuous state of alertness, awareness, and adaptation of its contents (Bisoux, 2002). The leadership necessary in today's work environment is different than the expectations of leaders in the past, and it will require quality leadership degree programs to fill the leadership void (Bisoux, 2002).

## **Methods**

This national study used the Delphi technique to determine the elements required for an undergraduate agricultural leadership program. Stufflebeam, McCormick, Brinkerhoff, and Nelson (2000) describe the Delphi technique as an effective tool to determine consensus from a group of people with diverse opinions. Keegan (2000) describes the Delphi method as useful for "group judgment for subject matter where precise subject matter is lacking."

The population for this study consisted of 19 agricultural leadership university faculty selected from the 2001 AAEE Directory (Dyer, 2001) of University Faculty in Agricultural Education. These individuals were selected based on their expertise and experience in leadership instruction. Four individuals declined to participate in the

study, thus providing 15 participants in the study. A Delphi group size in excess of 13 yields a reliability of 0.80 or greater (Dalkey, 1969).

The study consisted of three rounds of questions with the participants. All 15 participants completed rounds one and two, and 13 of the participants completed round three. The participant's responses were collected using an electronic web based form consisting of questions or statements, text-boxes and radio buttons. The first round questionnaire consisted of seven open-ended prompts:

1. What should the objectives of an agricultural leadership program be?
2. What required courses should be included in an undergraduate agricultural leadership program?
3. What resources are necessary to offer an undergraduate agricultural leadership program?
- 4a. Should an internship be required in an undergraduate agricultural leadership program?
- 4b. If an internship should be required, what are the objectives of the internship?
5. What will a graduate be able to do with a degree in agricultural leadership? What jobs are available for graduates of agricultural leadership?

Using the constant comparative method (Glazer & Strauss, 1967; Lincoln & Guba, 1985), responses to these questions were sorted and grouped by common answers. These answers were written as statements for round two.

In round two, participants were asked to indicate their level of agreement with each statement using a five point Likert-type scale (1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree). After each statement a text-box was provided for the participants to provide additional comments about the statement. Statements with a mean of 4.0 or greater were kept for round three.

For round three, the participants were asked to use a five-point Likert scale to indicate their level of agreement with the statements carried over from round two. As in round two, responses to the statements from round three were analyzed using descriptive statistics. The mean of each question was determined and the responses were sorted by level of agreement.

### **Findings**

The findings considered reliable include items where the Delphi panel reached consensus at an 80% level of agreement. An average rating of at least 4.00/5.00 (.80) was necessary for consensus.

The Delphi panel identified 26 objectives at the 80% agreement level (Figure 1). The objective reaching the highest level of agreement (4.79/5.00) stated: "The student will develop an understanding of personal leadership strengths and weaknesses and how to accentuate their strengths." Other objectives included various components of defining, developing, and demonstrating leadership related theories and skills.

At the 80% agreement level, the Delphi panel identified 19 resources necessary to offer an agricultural leadership undergraduate degree program (Figure 2). The resource identified as most necessary was "students." "Faculty with a desire and expertise in leadership" and "a supportive college" were also ranked highly.

When identifying courses for inclusion in an agricultural leadership undergraduate degree program, "Introduction to leadership theory and practice" was ranked the highest, reaching an average rating of 4.57. Seven other courses also met minimum level necessary to be considered reliable (Figure 3).

Part four of the instrument dealt with the topic of internships in leadership education programs. The participants overwhelmingly agreed that internships should be a requirement for agricultural leadership students (11 of 13 said internships should be required). Given the level of agreement for including internships, prompt #4 asked participants to identify internship objectives. 14 objectives identified to guide leadership internships are included in Figure 4. The internship objective receiving the highest level of agreement stated: "Students will practice their personal leadership behaviors in a structured but safe real-world learning environment."

In considering employment opportunities for agricultural leadership graduates, a wide variety of careers were identified by the panel. Figure 5 lists the 22 possible career paths that achieved 80% agreement. Suggested career paths include community organization leadership, sales and marketing, public relations, management, lobbying, and others.

Additional comments were solicited from the panel in the first two rounds of data collection. The comments were added to the instrument as they were submitted and sent to the panelists to assess their agreement. Six of the comments offered by the panel reached a rating above an 80% level of agreement among all panelists and were considered in the conclusions and recommendations.

<b>The objectives of an agricultural leadership program should be:</b>	<b>Level of agreement</b>
The student will develop an understanding of personal leadership strengths and weaknesses and how to accentuate their strengths	4.79
The student will identify and apply contemporary key leadership theories and leadership models	4.71
The student will develop a personal leadership philosophy	4.64
The students will apply leadership theories and practice in a structured, supportive learning environment	4.64
The student will define leadership	4.57
The student will develop decision making skills	4.54
The student will practice team building skills	4.50
The student will develop problem solving skills	4.50
The student will develop a personal vision for leadership	4.50
The student will effectively discuss ethics in the workplace	4.50
The student will develop professional human relation skills	4.50
The student will effectively communicate through public speaking and written communication	4.50
The student will develop the leadership skill of visioning	4.43
The student will increase their understanding of human interaction in all relationships and tasks	4.43
The student will demonstrate an understanding of personality types and/or learning styles	4.36
The student will integrate leadership theory with critical issues in agriculture	4.36
The student will demonstrate the ability to set achievable goals	4.29
The student will develop critical thinking skills	4.29
The student will demonstrate the ability to delegate effectively	4.29
The student will develop the leadership skill of recognizing others	4.21
The student will communicate effectively through presentations	4.21
The student will demonstrate the ability to lead change in organizations	4.14
The student will demonstrate effective time management skills	4.14
The student will demonstrate the steps required for conflict resolution	4.07
The student will demonstrate the ability to empower and enable others	4.00

Figure 1: Objectives of an agricultural leadership program

<b>The resources necessary for an agricultural leadership program are:</b>	<b>Level of agreement</b>
Students	5.00
Faculty with desire and expertise in leadership	4.93
A supportive college	4.93
Faculty to advise leadership students	4.73
Faculty offices, support, communications, etc.	4.73
Multi-use classroom to accommodate a variety of teaching methods	4.67
Two or more full-time faculty members	4.60
Budget for leadership resources (books, activities, inventories, etc.)	4.60
Research appointments for faculty to conduct leadership research	4.60
Budget for travel, equipment, supplies, field trips, speakers, publications, and multi-media materials	4.60
Adequate support staff	4.53
Budget for faculty travel and professional development	4.53
Positive and ongoing business relationships for internships	4.53
Leadership experience in the faculty	4.33
Faculty available to supervise internships	4.20
Marketing and promotional material development and distribution	4.20
Buy-in from other departments offering coursework	4.07
Readily available resources for practical and simulation exercises	4.07
Budget to conduct leadership research	4.07

Figure 2: Resources necessary for an agricultural leadership program

<b>These courses should be included in an agricultural leadership program:</b>	<b>Level of agreement</b>
Introduction to leadership theory and practice	4.57
Team building / working with teams and groups	4.43
Capstone course to allow students to present their leadership discoveries	4.43
Personal communication techniques for leaders	4.14
Personal leadership development (intrapersonal leadership)	4.14
Seminar related to leadership in the food, agricultural, and natural resource sciences	4.14
Organizational leadership theory (systems thinking)	4.00
Leadership ethics	4.00

*Figure 3: Courses for inclusion in an agricultural leadership program*

<b>The objectives of an agricultural leadership internship should be:</b>	<b>Level of agreement</b>
Students will practice their personal leadership behaviors in a structured but safe real-world learning environment	4.69
The student will apply leadership and learning theories to the educational, training, and development needs of the agricultural business, organization, or governmental agency	4.62
The student will apply a variety of verbal, written, and interpersonal communication techniques	4.62
The student will complete the outcomes identified by the intern, the intern supervisor, and the university coordinator	4.54
The student will compile a portfolio to document accomplishments during the internship	4.54
The student will practice, analyze, and assess interpersonal skills	4.54
The student will practice and analyze team building skills and organizational development skills	4.38
The student will practice ethical decision making	4.31
The student will participate in business meeting and project meetings	4.31
The student will learn and operate under office / business protocol	4.15
The student will shadow different employees in the company	4.15
The student will identify the communication systems in the company	4.08
The student will attend professional development sessions / programs	4.00
The student will visit clients of the cooperating organization	4.00

*Figure 4: Agricultural leadership internship objectives*

<b>A graduate with a degree in agricultural leadership will be able to pursue a career in:</b>	<b>Level of agreement</b>
Commodity groups and breed associations	4.67
Youth leadership positions	4.67
Community organization leadership	4.53
Work for government agencies responsible for leadership in agricultural issues	4.53
FFA executive director / secretary	4.53
Non-profit organization leadership	4.47
Agricultural policies and legislation (legislative aid)	4.40
Organization / association representative	4.40
Business leadership	4.33
Volunteer organization leadership	4.26
Employee leadership training and education	4.27
Sales and marketing	4.27
Government agencies	4.20
University student activities director	4.20
Public relations	4.13
Event planning	4.13

<b>A graduate with a degree in agricultural leadership will be able to pursue a career in: Continued</b>	<b>Level of agreement</b>
Service	4.13
Management	4.07
State and national policy positions	4.07
Extension	4.07
Lobbying	4.07
Human resource development	4.00

*Figure 5: Career paths for agricultural leadership graduates*

### **Conclusions and Future Implications**

A Delphi panel of 13 experts in agricultural leadership completed all three rounds of this study to arrive at consensus agreement in five critical areas for undergraduate agricultural leadership programs. Agricultural leadership program objectives, courses offered, resources needed for program implementation, internship objectives, and career paths for agricultural leadership graduates were addressed in this study.

The panel agreed with 26 objectives of an undergraduate agricultural leadership program, with 12 objectives reaching a 90% (4.50/5.00) agreement level. Several of the key objectives relate to developing an understanding of personal leadership strengths and weaknesses. At the foundation of all quality leadership degree programs must be understanding personal leadership traits and learning how to accentuate these skills.

Consensus was reached on eight courses to be included in an undergraduate agricultural leadership program. The courses represent leadership theory and practice, team leadership, capstone experience, communication, intrapersonal leadership, and organizational theory. Several of the courses, such as ethics and organizational theory, are relatively clear in their intended content. Conversely, some of the course titles are ambiguous and beg a clear definition of intended course content and objectives. However, the list provided in figure 2 may serve as a helpful guide as faculty decide what types of courses should be included in an ideal undergraduate agricultural leadership degree program.

Necessary resources identified include: students, faculty, office space, and money. A total of 13 specific resources were identified at the 90% agreement level. Budget recourses appeared in several lines as did the need for faculty who were trained in leadership, had leadership experience, and the will and desire to be faculty in an agricultural leadership program. It was apparent that an agricultural leadership program has many resource requirements. This part of the study highlights the need for financial and personnel resources to make any academic program a success.

The vast majority of the panel (11 of 13) agreed that internship programs were an important requirement for undergraduate agricultural leadership students. Once the need for internships was established, the panel identified numerous objectives to guide the internship experience. Again, as in the overall program objectives, there was a broad range of objectives ranging from the very specific (compiling a portfolio) to the very broad (apply leadership and learning theories). The wide range of consensus objectives could prove problematic for faculty developing leadership internship programs. However, the objectives listed in figure 4 may serve as an invaluable starting point as faculty work to outline an appropriate internship program.

As with program and internship objectives, the range of potential career paths was great. The panel identified, with 80% agreement, careers in 22 different areas from the very specific (FFA Executive secretary) to the broad (governmental agencies). One concern among faculty with the agricultural leadership degree is the future placement of graduates. Although a lengthy list helps to alleviate some of the concern for graduate placement, it appears leadership graduates can fill any number of positions available at the time of graduation. The career areas reaching the highest level of agreement (figure 5) may be helpful to consider as students and faculty identify potential internship areas. In addition, the identified career areas could prove useful in promoting undergraduate agricultural leadership programs

Based on the findings and conclusions of this study, the researchers suggest the following implications and recommendations:

1. That institutions consider geographical and institutional differences and use the results of this study as a guide for efforts to revitalize existing leadership education programs or to begin new programs, not as a blueprint for agricultural leadership programs; and
2. That experts in agricultural leadership begin a discussion to clearly identify national goals and objectives for agricultural leadership programs.

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