

## PERCEPTIONS OF AGRIBUSINESS LEADERS TOWARD AGRICULTURAL EDUCATION IN NEBRASKA

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The need for change today is perhaps no greater than within the ranks of public programs in agricultural education. Technological advancements coupled with the need for even greater economic efficiency not only continues to encourage and force change, but suggests that the pressures for even better educational programs in agriculture will continue until change actually occurs or most importantly is actually perceived to occur.

Miller (1983), stated that "other teachers also often perceive our students (agricultural education) as the less talented and our instructional content as less than rigorous." He further indicated that "our image with legislators is best characterized as politically naive. Legislators are much more likely to recognize the term FFA Advisor than teacher of Vocational Agriculture. Since most legislators come from and represent urban areas, they often perceive that the industry for which we are training is diminishing."

In Michigan, Pritchard and Smarr (1983) studied the perceptions of education in general in Macomb County. They concluded that "among all county residents, 83 percent think the nation is risking the well being of its people because of educational shortcomings and 71 percent gave improvement in education a high or top priority." In a study of teacher perception of secondary programs of agricultural education in Missouri, Birkenholz (1987) concluded that "agricultural education should monitor the environment in which vocational programs operate." He further suggested that the programs must then be modified to meet these environmental conditions.

Stewart, Lighari and Gott (1983) conducted a study to verify the professional competencies needed by teachers of vocational agriculture in Missouri as perceived by secondary school administration and to compare those perceptions with those of (agricultural education). Considerable differences were found between groups surveyed with respect to perceptions of competencies needed by teachers of vocational agriculture.

Much attention has also been given to the identification of educational competencies needed by vocational agriculture teachers and competencies that need to be taught in the classroom. (Garner, 1974; McGhee, 1967; and Moore and Bender, 1975). These studies also result from general perceptions often from within the profession itself or from various focused clientele groups.

The 1988 report Understanding Agriculture, New Directions for Education, from the National Research Council, recommended that major revisions be made in Agricultural Education programs with new curriculum components to more adequately prepare persons for jobs in natural resources, agribusiness, marketing, management, and national and international economics.

Spotanski and Foster (1989) found that customer relation skills and communication skills were the most required skill categories identified by Nebraska agribusiness managers. Cooper (1985) reported a need for continuous revision of competencies needed for agribusiness employment.

Hanson, Holmes and Jimmerson (1989), in a study of competency needs of agricultural workers in central Washington, found that general math, and oral and written communication were the most highly rated non-technical competencies needed by managers, sales, and office personnel.

In spite of a comprehensive review of the related literature, few studies were found which attempted to assess the perceptions of local agribusiness leaders with respect to Agricultural Education in a specific state. This lack of information with respect to the perception of agricultural leaders became the main focus of this study.

### Purposes and Objective

The purpose of the study was to determine the perceptions of agribusiness leaders with regard to Agricultural Education in the State of Nebraska. More specifically, the objectives were to:

1. Determine perceptions of the skills, attitudes and knowledge that should be taught in Nebraska's elementary and secondary schools to prepare students for their future in agriculture.
2. Determine perceptions of funding levels for agricultural education in Nebraska.
3. Determine perceptions of the need for a name change for vocational agriculture in Nebraska's secondary schools.
4. Determine perceptions of where various agricultural knowledge, skills, and attitudes should be taught at the elementary, junior high, and high school levels.
5. Determine perceptions with respect to the effectiveness of leadership from the teacher education program in agriculture at the University of Nebraska-Lincoln and the Agriculture Division of The Nebraska Department of Education.

#### **Procedures**

To accomplish the objectives of this study, a two-stage design was employed in a cooperative research effort between representatives in the Agricultural Education Department at the University of Nebraska-Lincoln and SRI/Gallup, a national marketing organization based in Lincoln, Nebraska. The first design was a Delphi procedure and the second was a telephone survey. The Delphi procedure followed was modified from standard Delphi procedures.

Step 1: A sample of 50 agribusiness and agricultural education leaders in Nebraska were selected by a jury from the Agricultural Education Department at the University of Nebraska-Lincoln and the Agricultural Education Section of the Nebraska Department of Education. The jury identified leaders who were informed and concerned about agricultural education in Nebraska. These 50 leaders were sent seven open-ended questions; the questions asked respondents to list the skills, attitudes and knowledge they felt Nebraska elementary and secondary schools should be teaching students to prepare them for the future in agriculture.

The seven questions were:

To directly enter the agribusiness job market following high school graduation:

1. What essential knowledge must a young person possess?
2. What basic attitudes must they hold?
3. What critical skills must they possess to enter the work force?

For the student that graduates from high school and enters a post secondary agriculture based program:

4. What essential knowledge must they possess?
5. What basic attitudes must they hold?
6. What critical skills must they possess?
7. What general knowledge of agriculture should all informed consumers have so they can better understand the role of agriculture in contemporary society?

This mailing, supported by telephone follow-up calls, had a 76 percent return rate. Responses to the open-ended questions were summarized. Thirty-eight essential knowledges, twenty-seven basic attitudes, and thirty-four critical skills were listed for persons who were preparing to enter the production agriculture or agribusiness job market directly following high school graduation. Thirty-six essential knowledges, twenty-two basic attitudes, and thirty-five critical skills were listed for persons who graduate from high school and plan to enter a university or post-secondary agriculture program.

**Step 2:** A questionnaire that included the knowledges, attitudes, and critical college/job entry skills recommended for each of the seven questions in Step 1 was prepared. This questionnaire was forwarded to the original 50 respondents. For this step, each respondent marked the five most important knowledges, attitudes, and critical skills of those listed. This mailing, supported by telephone follow-up calls, had an 80 percent return rate. Responses to this questionnaire were tallied and the most frequently cited suggestions/recommendations were included in the telephone instrument.

**Telephone Survey:** The telephone survey instrument included the 24 highest priority knowledge, skill and attitude recommendations as identified in Step 2 of the Delphi procedure. In addition, other pertinent questions were asked to fulfill the overall goals and objectives of the study. Two trained telephone interviewers from SRI-Gallup Research used a read-verbatim telephone procedure to collect data.

Results of the second step of the Delphi procedure were summarized. Based on the results of the second step of the Delphi procedure, twenty-four skills, attitudes and knowledges were ranked as important, and were included in the telephone survey of the 264 Agribusiness leaders and educators.

The telephone survey sample included 264 respondents. One sample sub-group was 131 or 51 percent educators. The second sample sub-group was 130 or 49 percent agribusiness leaders and related leaders. Educators were randomly selected from twelve different K-12 school districts and state educational organizations. The educators were proportionally distributed by membership in twelve statewide organizations and constituted a 10 percent sample. Business leaders were randomly selected from 25 different statewide organizations. The business sample was also proportionally distributed by membership in the most prominent statewide organizations and also was a 10 percent sample.

**Data Analysis:** Results of the study were summarized using percent or mean values. Results for the educator and business samples were systematically compared using appropriate inferential statistical techniques. In all statistical comparisons, statistical significance was defined as the .05 level of probability.

**Findings and Results**

**Skills, Attitudes and Knowledge:** Eight of the twenty-four skills, attitudes and knowledge items were deemed critical for entry into the work force or for college for secondary school graduates. Results of responses were averaged using a relative importance scale: 1.0 - 2.25 = important; 2.26 - 3.24 = very important; 3.25 - 4.0 = critical. The eight skills by sample group are shown in Figure 1.

**Figure 1.** Eight skills by sample group.

<b>PERCEIVED AS CRITICAL BY EDUCATORS</b>	
<u>For Job-Bound Students</u>	<u>Mean Score</u>
1. Honesty, integrity and fairness	3.51
2. Continue to learn	3.46
3. Positive work ethic	3.33
4. Willingness to work-cooperation	3.33
<u>For College Bound Students</u>	<u>Mean Score</u>
1. Honesty, integrity, and fairness	3.41
2. Continue to learn	3.35
3. Reading comprehension	3.34
4. Written communication	3.33
5. Positive work ethic	3.32
6. Willingness to work-cooperation	3.31
7. Math and computation skills	3.31

**Figure 1.** continued

**PERCEIVED AS CRITICAL BY AGRIBUSINESS LEADERS**

<u>For Job-Bound Students</u>	<u>Mean Score</u>
1. Continue to learn	3.54
2. Honesty, integrity and fairness	3.48
3. Positive work ethic	3.43
4. Willingness to work-cooperation	3.30

  

<u>For College Bound Students</u>	<u>Mean Score</u>
1. Continue to learn	3.43
2. Reading comprehension	3.34
3. Honesty, integrity and fairness	3.34
4. Positive work ethic	3.26
5. Listening skills	3.25

**Perceptions of Funding Levels in Nebraska:** No line-item funding to support vocational education in agriculture was present in the state funding to schools. Study respondents were asked if they would support a change in how money is allocated for vocational education in agriculture. Educators and agribusiness leaders believed secondary agricultural education programs were funded appropriately at the local level, but not funded appropriately by the state. A majority, fifty-nine percent, of both educators and agribusiness leaders would support a change in how money is allocated to vocational education in agriculture.

The most commonly cited recommendation was the need for more funding, specifically line-item funding in the state budget for vocational education in agriculture.

**Need for Name Change:** Nearly two-thirds of the respondents felt the program name "Vocational Agriculture" should not be changed. Of the educators, 64 percent felt the name should not be changed, while 71 percent of business leaders felt it should not be changed.

**Perceptions of Where Agricultural Knowledges, Skills and Attitudes Should Be Taught:** No differences existed between educators and agribusiness leaders in their belief that present Nebraska secondary Agricultural Education programs are providing current and relevant instruction for today's agribusiness needs. Using a rating scale where 1 = not very important to 3 = extremely important, both respondent groups believed it was quite important for the general consumer to possess:

1. An awareness of the farmer's, rancher's and agribusiness person's roles in U.S. and international economics.
2. A broad knowledge of where food comes from and agriculture's contribution to our society.
3. A knowledge of the cultural, social, economic and political importance of agriculture.
4. An understanding of how changes in agriculture affect all citizens.
5. An understanding of conservation of our natural resources such as water, soil, air and wildlife.

Both respondent groups also believed that:

1. Basic consumer-related agriculture knowledge, attitudes and skills should first be taught in elementary school.
2. Introductory production agriculture and agribusiness knowledge, skills and attitudes should first be taught in junior high school.

3. Science, technology, economics, management and accounting principles of agriculture should first be taught in high school.

Educators and agribusiness leaders felt that all seven of the Agricultural Education program components listed should receive continued support from the state's agricultural education leadership, with three of the seven definitely so. These seven program components were:

1. Agriculture-related instruction in the elementary school.
2. Agriculture-related instruction in the junior high school.
3. Vocational agriculture education in the secondary school, (definitely so).
4. Continuing education courses for young farmers, ranchers and other adults, (definitely so).
5. Supervised occupational experience for high school students.
6. FFA, (definitely so).
7. Summer educational activities and consulting provided to farmers, ranchers and others in agribusiness provided by agricultural education teachers.

**Perceptions of Effectiveness of State Leadership:** Using a three-point scale of very effective, somewhat effective and not at all effective, all respondents were asked to rate the Agricultural Education Division of the Nebraska State Department of Education and the Agricultural Education Department at the University of Nebraska-Lincoln. "Don't know" responses were not solicited but were recorded. Rating results were averaged where 1 = not at all effective through 3 = very effective.

Both educators and agribusiness leaders believed the Agricultural Education Division in the Nebraska State Department of Education and the Agricultural Education Department at the University of Nebraska-Lincoln, were providing quite effective leadership to agricultural education programs in Nebraska's schools.

1. Of the total sample, one-fourth (25%) rated the Agriculture Education Division of the Nebraska State Department of Education as very effective while over one-half (53%) rated it as somewhat effective. Six percent (6%) of the total sample rated it as not at all effective. Sixteen percent had no opinion. The average rating was 2.23. There was not statistically significant difference between the average rating assigned by educators (avg. = 2.24) and business leaders (avg. = 2.21).
2. Of those rating the Agriculture Education Division of the State Department of Education as not at all effective, the most frequent reason given was the loss of funding by the Division.
3. Of the total sample, 45% rated the Agriculture Education Department of the University of Nebraska-Lincoln as very effective while 44% rate it as somewhat effective. Two percent (2%) of the total rated it as not at all effective. Nine percent had no opinion. The average rating was 2.47. However, business leaders (avg = 2.56) rated the Department more effective than did educators (avg. = 2.40).

### **Recommendations**

Research should be planned which would measure the extent to which the eight skills, attitudes and knowledges were being developed that educators and agribusiness leaders deemed critical for job bound and college bound secondary school graduates. Professional Agricultural Education groups and agribusiness groups should develop methods to lobby the state funding sources, so that greater public attention would be given to change how state funds are appropriated for agricultural education in Nebraska.

Significant efforts should be made by agricultural educators to develop programs designed to educate the consumer, beginning in the elementary school, about the farmer/rancher role in the United States and the effect of our international economy, the food chain, the cultural, social and political importance of agriculture, and conservation of our natural resources.

Introductory production agriculture and agribusiness knowledge, skills and attitudes should be introduced to junior high school teachers, through teacher education programs and inservice programs.

Research should be planned which measures the extent to which science, technology, economics, and management and accounting principles of agriculture are actually taught in the high school.

Efforts must be continued by state agricultural education leaders, educators, and agribusiness leaders to support and educate the general public concerning the need to plan and conduct programs for: a) Agricultural related instruction in the elementary school; b) Agricultural related instruction in the junior high school; c) Vocational agriculture education in the secondary school; d) Continuing education courses for young farmers, ranchers and other adults; e) Supervised occupational experience for high school students; f) FFA ;and, g) Summer educational activities provided through Agricultural Education teachers.

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