

PRIORITIES FOR RESEARCH IN AGRICULTURAL EDUCATION

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The future of agricultural education depends substantially on the development and application of new knowledge through research. Given the limited staff time, funding and staff lines allocated to research, agricultural education researchers should be concerned with the priority researchable questions. Critics have suggested areas in which agricultural education research needs improvement. This study seeks to help the profession improve its research program by identifying priority areas to investigate.

Agricultural education research has been cited as too shallow to develop essential understandings, focussed on ancillary areas, and often unrelated to what is already known (Mannebach, 1981; Miller and Warmbrod, 1982; Warmbrod, 1987; Newcomb, 1978; Brown, 1980). Too often research is driven by priorities established by federal and state funding agencies (Mannebach, 1981) rather than by needs within the profession. Warmbrod (1987) advocated a broader research agenda to include extension education, communications, nonvocational education in agriculture, postsecondary education, and agricultural education in higher education. Lee (1985), less critical, noted growing sophistication in agricultural education research, but, recognized the need for further improvement.

A conceptual base for the study was taken from Stewart, Shinn and Richardson (1977), who established categories of problems and concerns in agricultural education. This traditional approach of building on previous research contrasts with Buriak and Shinn (1988) who ran a parallel investigation concurrently with this study. The latter study used a Delphi approach involving deans of instruction and directors of agricultural experiment stations as respondents. Together the two studies provide a perspective of research priorities in agricultural education as perceived by two different audiences who responded to different research procedures.

The need for thoughtful inquiry on what should be researched provided the motivation for this study. "Researching to research" is a line of inquiry to focus the profession on salient problems that are significant to the future of agricultural education.

Purpose and Objectives

The purpose of this descriptive study was to determine priority categories and topics for research in agricultural education and to ascertain their relevance levels; national, regional or state. The findings should provoke discussion and an on-going dialogue rather than provide a single answer for all time.

Objectives for the study were:

1. Identify and categorize high priority research topics in agricultural education.
2. Determine the priority levels of research topics and research categories in agricultural education.
3. Determine which research priorities should be addressed at the national, regional, and state level.

Procedures

This research was a multistage one-shot case study. Stage one included a review of related literature and the use of a panel of research experts to identify research categories and topics. In stage two the categories and topics were prioritized and additional researchable problems identified.

Stage One-Identifying the Research Topics and Categories

Panel of experts. A panel of twenty experts in agricultural education and in related areas identified research topics and categories. Experts from agricultural education included leaders of professional associations in teacher education, state supervision and secondary teaching. Perceptions of experts in areas related to agricultural education brought an interdisciplinary perspective to this study. The

related areas included educational philosophy, educational psychology, curriculum and instruction, research and statistics. These experts were nominated independently by a panel of three persons knowledgeable of the respective areas to eliminate researcher bias in selection.

Panel activity. Panelists were mailed a cover letter explaining the study and an open-ended research instrument. The instrument listed fourteen categories of research proposed by Stewart et. al. (1977), but none of the topics. The experts were asked to list two to four important research topics in each category, revise categories and return the completed instrument in a postage paid self-addressed envelope included with the mailing. The responses were aggregated by the researcher by research topics and categories. Panel responses were combined with topics and categories from the literature review, resulting in one hundred and nine research topics clustered in thirteen categories. Thus, topics and categories emanated from previous research, historical data and from the current perceptions of research experts in agricultural education and related fields. Based on this phase of the study an instrument was developed to prioritize the research categories and topics.

Stage Two-Prioritizing Research Topics and Categories

Population and sample. Agricultural education department heads and research experts were selected to prioritize the topics and categories. The sampling procedures controlled for researcher selection bias, frame error and selection errors.

Sixty-two teacher education department heads listed in the 1987 Directory of Teacher Educators in Agriculture provided the frame for this category of respondents. The opinions of department heads were important because they often provide leadership, program direction, allocate funds for staff research, coordinate research activities and administer funds for research.

Forty-two research experts in agricultural education were nominated independently by editors of the Journal of Agricultural Education and the profession's national research committee chair. Research experts were selected for their active research programs, research projects, publishing record and leadership in research. Four of the nominees were deleted because they were already included in the study as department heads, leaving thirty-seven research experts.

Instrumentation. The research instrument contained a five point Likert rating scale of lowest (0) to highest (5) priority, a box to check each topic as state, regional or national relevance and an area to list additional topics or categories. For the relevance level, respondents were asked to select the most appropriate level. A panel of experts determined that the instrument was content valid. A Cronbachs Alpha reliability coefficient of .96 resulted from a field test with agriculture teacher educators nominated as research experts but who lacked sufficient support to be part of the study sample.

Data collection. The questionnaire and a cover letter explaining the study were mailed to the purposely selected sample. Respondents were given three weeks to return the completed instruments. Those who had not responded after two weeks were mailed a postcard to remind them of the deadline. Three weeks later non-respondents were mailed another questionnaire and cover letter requesting a response within one week. Both the initial mailing and final follow-up contained a self-addressed prepaid return envelope.

Data source. Thirty-four (92%) research experts and forty-nine (79%) department heads responded for an eighty-four percent response rate. To account for nonrespondent differences, early respondents were compared with late respondents. No differences were found using a t-test and Chi Square Test for significance. A follow-up letter determined the primary reasons for not responding were 'never received the mailing and that it was misplaced'.

Data analysis. Only descriptive statistics were used to analyze data since the sample was purposely selected. Frequencies, percentage, means and standard deviations were computed.

Results

Research Topics and Categories

One hundred and nine priority research topics and thirteen categories were identified by experts within and outside the agricultural education profession and from a review of related literature. Both the categories and topics were similar to those identified by Stewart et al. (1977). Thirty-two additional topics concerning trends in agricultural education, psychological variables, philosophical issues, historical perspectives, extension education and the relationship of agricultural education to

the total secondary curricula were written-in during the final research phase. The new topics fit the existing categories, except for four extension topics. However, the new topics were more conceptually oriented and theoretically driven than those originally listed.

Priority Levels of Research Topics

Priority levels for 109 topics and 13 categories were determined by the combined mean scores of department heads and research experts. Mean scores for the research topics ranged from 1.08 to 4.24 (rated on a continuous scale from "0" for the lowest priority to "5" for the highest priority). A majority of the research topics (76 out of 109) were rated between 3.00 and 3.99. Differences in mean scores between research experts and department heads were less than .50 for all but eight (8) research topics.

New and emerging skills in biotechnology, high technology, and agribusiness; curriculum for agricultural education; the long-term impact of agricultural education on graduates and the cost/benefit of vocational agriculture were rated highest priority. The lowest priorities were strategies to identify resources for teaching, criteria for tenuring secondary agriculture teachers and procedures to select students for FFA membership. Table 1 shows the one hundred and nine research topics prioritized from highest to lowest using the combined mean scores of researchers and department heads.

Priority Level of Research Categories

Of the thirteen categories, "funding for agricultural education" ($\bar{m} = 3.57$) was rated highest, followed closely by "evaluation" ($\bar{m} = 3.56$), and "international agricultural education" ($\bar{m} = 3.56$). The categories with the lowest mean score were "occupational experience programs" ($\bar{m} = 3.16$) and "postsecondary education" ($\bar{m} = 3.08$). Table 2 portrays mean scores by respondent types for each category of research.

National, Regional or State Relevance

Respondents indicated the most appropriate of three relevance levels to address the research topics. Although the topics may have some level of relevance to the other two levels, the respondents made a judgement on the most appropriate research context. Over one half of respondents found that 67 (61%) of the research topics were nationally relevant and 40 (37%) were most relevant to the state.

Based on a more conservative decision rule of two-thirds agreement, 22 research topics were nationally relevant. Only five topics were state relevant, and no topic reached the two-third minimum response for regional level designation. Eighty-two topics did not receive a two-thirds majority in any of the three levels. Table 1 portrays the relevance level designations by percentage of respondents.

Conclusions and Recommendations

Research Topics and Categories

The 109 prioritized research topics were not as theoretically, conceptually or psychologically based as 32 additional research topics listed by respondents during the final phase of this study. Perhaps, the research process stimulated thinking which led to this situation.

Research categories and topics were similar to those found by Stewart et al. (1977) even though research experts, department heads, state supervisors, secondary teachers, and experts in related areas who responded had multiple opportunities to establish new areas. This seems to suggest that tradition is a powerful force within the profession.

Research Priorities

The level of priority for research topics varied from $\bar{m} = 2.08$ to $\bar{m} = 4.24$ ("0" = lowest priority; "5" = highest priority). Similar ratings by research experts and department heads cross validates the priority levels and suggests that agricultural educators tend to have similar views of research.

The highest priority research pertains to secondary agricultural education curriculum in areas such as integrating new technologies, improving the program and documenting program effectiveness. Topics dealing with university, post secondary and federal/state levels received lower priority ratings.

Funding agricultural education is the highest priority research category and post secondary agricultural education is the lowest level.

Relevance Levels

Two-thirds of the respondents agreed that 22 of the 109 research topics are relevant nationally and five have state level relevance. Hence, collaborative research, national level studies and a focus on conceptual areas that transcend state borders should become priorities for researchers in agricultural education.

Since the relevance level of 82 topics was not established by a two-thirds majority, further study and discussion of these areas is needed.

Recommendations for Further Research

This study, following the standard practice of building on previous research, proved successful and provided findings similar to a previous study by Stewart et al. (1977). An alternative approach such as the Delphi technique may be useful to periodically "wipe the slate clean" and to stimulate creative thought and discussion within the profession.

Once the profession has identified research priorities, individual researchers should strive to develop programmatic research and use the profession's research agenda to justify their research.

Researchers should consider the results of this study as one source of researchable topics in agricultural education. However, the researchers believe that the process of identifying research priorities stimulates thoughtful consideration and discussion which is as important as the list of priorities emanating from the study.

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Table 1
Priority Mean Responses and Relevance Levels for Research Topics.

Research Topics	Priority Levels			Relevance Levels		
	RE (n=34)	DH (n=49)	Comb. (N=83)	N	R	S
	m sd	m sd	\bar{M} sD	\bar{f} \	\bar{f} \	\bar{f} \
Determine the new and emerging skills needed by students to work in areas such as biotechnology, high technology and agribusiness.	4.21 0.88	4.27 0.76	4.24 0.81	61 74	13 16	9 11
Determine the appropriate curriculum for agricultural education in the secondary schools.	4.00 1.01	4.33 0.85	4.19 0.97	17 21	10 12	56 68
Determine the long term impact of secondary agriculture programs on graduates.	4.03 0.97	4.23 0.78	4.15 0.87	47 57	13 16	23 28
Determine the cost benefit of vocational agriculture.	4.03 0.97	4.22 0.80	4.14 0.87	46 55	13 16	24 29
Identify the type of agricultural programs needed in urban areas.	3.88 0.84	4.16 0.80	4.05 0.82	26 31	15 18	42 51
Determine the long term benefits of agricultural education.	4.03 0.90	4.02 0.97	4.02 0.94	49 59	13 16	21 25
Determine the long and short term impact/value of SOEP in vocational agriculture.	3.97 1.00	4.00 0.98	3.99 0.98	41 49	18 22	24 29
Determine strategies to maximize the educational benefits of FFA in agricultural instruction.	3.91 0.87	3.96 0.99	3.93 0.94	59 71	6 7	18 22
Identify strategies to integrate new skills such as biotechnology and high technology to the vocational agriculture curriculum.	3.88 0.95	3.96 0.96	3.93 0.95	47 57	16 19	20 24
Determine which content should be included in local vocational agriculture programs about international agriculture.	3.97 1.17	3.88 1.33	3.92 1.26	51 61	11 13	20 24
Identify instructional materials needs for third world agriculture.	3.94 1.23	3.90 1.21	3.92 1.21	66 81	10 12	3 7
Determine the long term benefits of FFA such as leadership development in local communities.	3.85 1.08	3.92 1.33	3.89 1.23	54 65	9 11	20 24
Determine trends in manpower needs in agriculture such as entrepreneurship opportunities.	3.71 1.17	3.98 1.27	3.87 1.24	39 47	19 23	25 30
Determine the need for urban agricultural education programs.	3.71 1.06	3.98 1.01	3.87 1.03	35 43	12 15	35 43

Note. DH = Department Head, RE = Research Expert, N = National, R = Regional, S = State
 (table continues)

Research Topics	Priority Levels			Relevance Levels		
	RE (n=34)	DH (n=49)	Comb. (N=83)	N	R	S
	m sd	m sd	M sD	f \<	f \<	f \<
Determine the effectiveness of four year vocational agriculture programs considering items such as preparation for employment.	3.85 0.89	3.86 1.08	3.86 1.00	47 57	8 10	28 34
Identify strategies for cooperative states research.	4.03 0.88	3.71 1.47	3.84 1.27	42 51	37 45	3 4
Determine the curriculum development needed to address new and emerging content areas such as urban agriculture programs and programs for the gifted.	3.88 0.94	3.74 1.03	3.80 0.99	30 36	20 24	33 40
Determine the impact of national and state level funding on types and quality of agricultural education.	3.68 1.03	3.77 1.19	3.73 1.12	56 68	9 11	18 22
Identify content to include in preservice teacher education in agriculture.	3.74 1.19	3.69 1.17	3.71 1.17	35 43	17 21	31 37
Identify appropriate use of funding for teacher education in agriculture.	3.47 1.19	3.88 1.16	3.71 1.18	47 57	7 8	29 35
Determine and describe how agricultural education promotes learning.	3.91 1.02	3.53 1.53	3.69 1.24	52 63	8 10	22 27
Determine the role of state level supervision and administration in agricultural education.	3.65 1.20	3.71 1.27	3.69 1.24	27 33	8 10	47 57
Determine the appropriate use of State Departments of Education funding inservice, development and other activities to improve secondary agricultural education.	3.62 1.10	3.71 1.22	3.68 1.17	28 33	8 10	47 57
Identify strategies to measure teacher effectiveness.	3.56 1.10	3.69 1.26	3.64 1.20	44 53	6 7	31 37
Determine curriculum models for urban agricultural education programs.	3.47 1.31	3.76 1.09	3.64 1.19	27 33	15 18	40 49
Determine the immediate educational benefits of FFA activities in secondary agricultural education.	3.65 0.98	3.63 1.32	3.64 1.19	58 70	3 4	10 12
Identify models for future teacher education programs.	3.41 1.33	3.76 1.35	3.62 1.34	58 70	12 15	13 16
Identify strategies to determine local program standards.	3.53 1.16	3.65 1.03	3.60 1.08	9 11	6 7	62 82
Identify recruitment strategies for urban agricultural education programs.	3.50 1.24	3.65 1.15	3.59 1.16	25 30	19 23	39 47
Identify programs for new clientele such as urban students and the gifted.	3.75 0.85	3.45 1.06	3.59 0.99	35 42	17 21	31 37

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(table continues)

Research Topics	Priority Levels			Relevance Levels		
	RE	DH	Comb.	N	R	S
	(n=34)	(n=49)	(N=83)			
	m sd	m sd	\bar{M} sD	f √	f √	f √
Determine the effects of supervision on program quality in agricultural education.	3.62 1.04	3.55 1.17	3.58 1.12	38 46	10 12	35 42
Evaluate teaching effectiveness in agricultural education.	3.68 0.94	3.45 0.96	3.55 0.95	30 36	5 6	48 58
What should be the relationship between content in agricultural education and industry/business needs?	3.38 1.26	3.65 1.20	3.54 1.22	44 54	14 17	24 29
Identify strategies to improve prospective teacher recruitment.	3.35 1.07	3.61 1.29	3.51 1.20	44 54	16 20	22 27
Identify characteristics of "successful" teachers in vocational agriculture to guide teacher education programs.	3.53 1.40	3.48 1.34	3.50 1.35	43 52	14 17	26 31
Determine articulation strategies/models for postsecondary and secondary agricultural education.	3.47 1.40	3.51 1.23	3.49 1.29	24 29	8 10	51 61
Determine the short and long term impact of farm business management adult programs in agriculture.	3.27 1.31	3.65 1.19	3.49 1.25	24 29	19 23	39 47
Determine the role of supervision and administration in agricultural education at the local level.	3.27 1.16	3.63 1.13	3.48 1.15	9 11	8 10	66 80
Identify new activities for effective use of FFA in agriculture.	3.24 1.26	3.63 1.15	3.47 1.20	51 62	11 13	20 24
Determine turn-over rates for agricultural jobs.	3.50 1.31	3.44 1.44	3.46 1.38	41 49	19 23	23 28
Determine current national standards for high quality in agricultural education.	3.32 1.34	3.53 1.32	3.45 1.33	74 89	1 1	8 10
Determine articulation strategies/models for post-secondary and secondary programs and baccalaureate agricultural instruction.	3.62 1.37	3.31 1.37	3.43 1.37	28 34	15 18	39 47
Identify types/alternatives for SOEP.	3.21 1.17	3.59 1.29	3.43 1.25	24 29	13 16	44 54
Identify strategies for keeping agricultural teachers up-to-date in terms of subject matter.	3.41 1.39	3.43 1.29	3.42 1.32	45 54	13 16	25 30
Identify procedures for maintaining agricultural employment data bases.	3.27 1.31	3.51 1.31	3.41 1.31	48 58	17 21	18 22
Identify alternatives to provide adult agricultural instruction for new areas and audiences.	3.44 1.21	3.36 1.25	3.40 1.23	28 34	11 13	43 52

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(table continues)

Research Topics	Priority Levels			Relevance Levels		
	RE (n=34)	DH (n=49)	Comb. (N=83)	N	R	S
	m sd	m sd	M sD	f √	f √	f √
Identify funding sources for research in agricultural education.	3.61 1.07	3.24 1.44	3.40 1.31	64 78	7 9	11 13
Determine the model and strategies needed to supervise local agriculture instructional programs.	3.21 1.07	3.51 1.14	3.39 1.11	27 33	10 12	46 55
What funding patterns and levels are needed for secondary school level?	3.44 0.99	3.35 1.42	3.39 1.26	37 45	10 12	36 43
Determine the facility needs for urban agricultural education programs.	3.27 1.08	3.45 1.26	3.37 1.19	16 19	13 16	54 65
Determine skills for development during student teaching.	3.00 1.30	3.63 1.24	3.37 1.30	40 42	12 15	31 37
Determine the role of international agricultural education.	3.50 1.33	3.27 1.57	3.37 1.47	76 92	1 1	5 6
Determine ways to improve the teaching learning environment in agricultural education through teaching techniques such as occupational experiences.	3.53 1.05	3.25 1.19	3.37 1.14	34 42	16 20	32 39
What is the role of leadership and supervision at the national level?	3.35 1.47	3.37 1.36	3.36 1.40	72 87	3 4	7 9
Determine the effectiveness of teacher certification programs.	3.38 1.18	3.31 1.44	3.34 1.34	36 44	18 22	28 34
Identify models to deliver adult education in agriculture.	3.12 1.34	3.46 1.27	3.32 1.30	36 44	14 17	32 39
Determine the short term benefits of agricultural education.	3.27 1.08	3.33 1.05	3.30 1.05	35 42	12 15	36 43
Identify programs appropriate for postsecondary agricultural education.	3.38 1.15	3.18 1.17	3.26 1.16	24 29	17 21	42 51
Determine the most effective methods to evaluate student progress.	3.29 1.19	3.20 1.54	3.24 1.40	43 52	8 10	31 37
Determine minimum SOEP standards.	2.91 1.26	3.55 1.17	3.23 1.24	22 27	10 12	51 61
Identify and explain the variables that relate to student enrollment in agriculture such as career preference, background, and socioeconomic status.	3.18 1.22	3.35 1.05	3.23 1.12	28 34	14 17	41 49
Identify local strategies for adult agricultural education.	2.85 1.23	3.45 1.24	3.22 1.27	10 12	1 1	71 86

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(table continues)

Research Topics	Priority Levels			Relevance Levels		
	RE (n=34)	DH (n=49)	Comb. (N=83)	N	R	S
	m sd	m sd	M sD	f \	f \	f \
Determine the appropriate use of computers in vocational agriculture programs.	2.97 1.38	3.39 1.25	3.22 1.32	40 48	11 13	32 39
Determine the process for and importance of student cognitive development.	3.44 1.24	3.04 1.29	3.20 1.28	52 63	12 15	19 19
Determine models for instructional content selection for undergraduate teacher education programs.	3.12 1.37	3.27 1.24	3.20 1.29	48 58	13 16	21 26
Develop a professional agenda for types and methods of research needed in agricultural education.	3.18 1.26	3.20 1.53	3.19 1.42	69 85	8 10	4 5
What management systems are needed for local vocational agriculture programs?	3.08 1.08	3.27 1.09	3.19 1.09	26 31	7 8	50 60
Determine and compare different models of certification for vocational agriculture teachers.	3.18 1.14	3.16 1.28	3.17 1.23	47 57	16 19	20 24
Identify funding strategies for adult education in agriculture.	2.88 1.22	3.35 1.28	3.16 1.27	30 37	9 11	43 52
Determine if the image portrayed by the name "FFA" is appropriate.	3.23 1.46	3.06 1.61	3.13 1.54	69 84	3 4	10 12
Determine the relationship between student career choice and curriculum planning in agricultural education.	3.18 0.99	3.10 1.26	3.13 1.16	34 41	12 15	37 45
Determine the need for a clearing house for agricultural education research.	3.08 1.16	3.16 1.36	3.13 1.28	74 89	5 6	4 5
Identify strategies to determine the quality of student SOEPs.	3.12 1.17	3.12 1.33	3.12 1.26	30 37	6 7	46 56
Identify trends in state leadership for agricultural instructional programs.	3.15 1.05	3.08 1.38	3.11 1.25	41 49	7 8	35 42
Determine appropriate strategies * evaluate adult education in agriculture.	2.91 1.11	3.23 1.12	3.09 1.12	29 35	19 23	34 42
Determine the curriculum development needs for postsecondary agricultural education.	3.06 1.20	3.12 1.24	3.09 1.23	26 32	17 21	38 46
Re-examine the rationale for cooperative activities by federal, state, and local agencies.	3.24 1.26	2.98 1.46	3.08 1.38	59 73	3 4	19 24
Determine models for providing agricultural manpower needs through existing agencies such as The Bureau of Labor and Statistics.	3.09 1.16	3.06 1.46	3.07 1.34	63 76	8 10	12 15

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Research Topics	Priority Levels			Relevance Levels		
	RE (n=34)	DH (n=49)	Comb. (N=83)	N	R	S
	m sd	m sd	M sD	f \ 	f \ 	f \
Determine if an adult education program should be a part of the secondary vocational agriculture teacher's job description.	2.91 1.26	3.15 1.60	3.05 1.46	23 29	7 9	50 63
Identify programmatic thrusts for research in agricultural education.	3.26 0.99	2.88 1.52	3.04 1.38	59 74	13 16	8 10
Identify teaching strategies for urban agricultural education programs.	3.15 1.18	2.94 1.31	3.02 1.26	29 35	13 16	41 49
Identify the characteristics of an exemplary SOEP project.	2.82 1.27	3.12 1.11	3.00 1.18	26 31	12 15	45 54
Identify competencies needed by prospective agriculture teachers.	2.76 1.58	3.14 1.62	2.99 1.60	49 59	13 16	21 25
Identify effective laboratory management and safety procedures.	2.73 1.18	3.16 1.26	2.99 1.24	37 45	9 11	37 45
Identify opportunities to participate in international agricultural education.	2.73 1.42	3.14 1.40	2.98 1.41	67 82	7 9	8 10
Identify effective strategies for individualized instruction.	3.30 0.98	2.71 1.15	2.95 1.12	35 43	8 10	39 48
Determine the rationale for five-year programs in teacher education.	2.76 1.65	3.04 1.74	2.93 1.70	59 71	11 13	13 16
Determine the admissions' criteria to undergraduate teacher certification programs.	3.06 1.15	2.84 1.49	2.93 1.36	44 53	9 11	30 36
Compare vocational agriculture teacher salaries with other related fields.	3.12 1.59	2.77 1.71	2.92 1.66	40 49	13 16	29 35
Determine models for sequencing competency development for university agricultural education programs.	2.68 1.34	3.04 1.32	2.89 1.33	48 58	12 15	23 28
Determine strategies for funding postsecondary agricultural education programs.	2.59 1.26	3.10 1.36	2.89 1.33	35 42	6 7	42 51
Identify current funding patterns for agricultural education programs.	2.65 1.07	3.00 1.47	2.85 1.32	44 53	8 10	31 37
Determine the effectiveness of certification procedures.	2.76 1.58	2.84 1.62	2.81 1.59	34 42	14 17	33 41
Determine the purpose of adult education in agriculture.	2.97 1.24	2.69 1.47	2.80 1.38	45 56	11 14	25 31

Note. DH = Department Head, RE = Research Expert, N = National, R = Regional, S = State
(table continues)

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	RE (n=34)	DH (n=49)	Comb. (N=83)	N	R	S
	m sd	m sd	M sD	f \<	f \<	f \<
Determine strategies to identify facility and equipment obsolescence.	2.88 1.06	2.67 1.30	2.76 1.21	19 23	14 17	49 60
Determine the purposes of postsecondary agricultural education.	2.94 1.51	2.63 1.48	2.76 1.50	39 48	15 19	27 33
Determine the types of agricultural students for which SOEP is appropriate.	2.82 1.31	2.59 1.51	2.69 1.43	35 43	9 11	37 46
Identify staffing patterns in university agricultural education.	2.76 1.28	2.61 1.25	2.67 1.26	55 66	11 13	17 21
Determine the effectiveness of census bureau categories in agriculture.	2.41 1.54	2.85 1.54	2.67 1.55	62 75	10 12	11 13
Identify and describe appropriate processes for curriculum planning.	2.48 1.20	2.79 1.49	2.67 1.38	41 49	8 10	34 41
Determine strategies/models for advance credit courses taught at secondary level for postsecondary credit.	2.71 1.22	2.55 1.43	2.61 1.34	20 24	12 15	51 61
Determine process for student selection of an SOEP.	2.50 1.05	2.63 1.35	2.56 1.23	25 31	5 6	52 63
Compare reasons for selecting agricultural education among urban and rural students.	2.70 1.22	2.47 1.36	2.56 1.30	25 31	17 21	40 49
Determine the extent to which research should be a priority of the National Council for Agricultural Education.	2.21 1.32	2.80 1.41	2.55 1.40	78 95	0 0	4 5
Determine the reasons why teachers leave the profession.	2.53 1.28	2.55 1.59	2.54 1.47	38 46	14 17	30 37
Identify effective university promotion/tenure criteria for agricultural education.	2.41 1.28	2.59 1.63	2.52 1.49	57 69	5 6	21 25
Determine strategies to identify resources for teaching.	2.35 1.01	2.55 1.41	2.47 1.26	19 23	9 11	55 66
Determine strategies for tenuring secondary agriculture teachers.	2.12 1.39	2.29 1.67	2.22 1.55	31 38	8 10	42 52
What students are appropriate for FFA membership?	2.09 1.26	2.08 1.48	2.08 1.38	50 65	3 4	24 31

Note. DH = Department Head, RE = Research Expert, N = National, R = Regional, S = State
(table continues)

Table 2
Priority Levels for Research Topics by Conceptual/Programmatic Categories.

Categories	RE	DH	Total
	m	m	<u>M</u>
Funding for Agricultural Education	3.46	3.65	3.57
Evaluation	3.56	3.56	3.56
International Agricultural Education	3.54	3.55	3.55
Urban Programs	3.38	3.49	3.44
Curriculum and Instructional Development	3.41	3.40	3.40
Future Farmers of America	3.33	3.38	3.36
Supervision and Administration	3.32	3.39	3.36
Manpower Needs	3.23	3.42	3.34
Teacher Education/Certification	3.17	3.28	3.24
Adult Education	3.04	3.29	3.19
Research in Agricultural Education	3.23	3.16	3.19
Occupational Experience Programs	3.05	3.23	3.16
Postsecondary Education	3.11	3.06	3.08

Note. RE = Research Experts, DH = Department Heads;
 1 = Lowest Priority, 5 = Highest Priority