

studies are needed. For the moment, let's not write off vocational agriculture programs as a potential source of future agricultural educators, administrators, and scientists.

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## INNOVATION REPORT

# Five-Week, One-Hour Agricultural Economics Courses

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### Introduction

The importance of some economic training has been recognized for all curriculums in the college of agriculture for many years. Agricultural students have always been encouraged to take a minimum number of courses in Agricultural Economics to meet specialized marketing needs. In recent years, many changes have occurred in the economic and institutional considerations in marketing agricultural commodities and the purchased inputs used in their production. Marketing systems have become much more specialized both with respect to commodities and to inputs. Agricultural majors need additional training in the application of economics and micro-computers to the operation and management of highly specialized, large-scale marketing and manufacturing firms (3). To cope successfully with the changes, many departments have added courses in marketing to their curriculums. Professors teaching the courses in agricultural marketing, and feedback from other departments, students, and industry has led to a changed format for teaching agricultural marketing courses at Mississippi State University. One teaching format developed by the Department of Agricultural Economics is the five-week, one-hour agricultural marketing, agri-business and micro-computer application course.

The development of the five-week, one-hour agricultural marketing, agribusiness and micro-computer application courses presented in Table 1 is viewed by the authors as one of the most important teaching innovations affecting our undergraduate

program and its students that has occurred in recent years. These courses provide agricultural economics majors as well as other agricultural majors with needed training in the application of economics to the operation and management of the various components of the food industry: the farm supply sector, the farm sector, and the food marketing system. In addition, the

**Table 1. Course numbers and titles of agricultural marketing five-week, one-hour courses, Department of Agricultural Economics, Mississippi State University, 1982**

AEC 2411	Introduction to Agricultural Commodity Marketing
AEC 2421	Cotton Marketing
AEC 2431	Grain Marketing
AEC 2441	Livestock and Meat Marketing
AEC 2451	Dairy Marketing
AEC 2461	Marketing Fruits, Vegetables, and Viticultural Products
AEC 2471	Poultry and Catfish Marketing
AEC 2481	Ornamental and Floricultural Products Marketing
AEC 2491	Commodity Futures Markets
AEC 2511	Introduction to Marketing Agricultural Supplies
AEC 2521	Merchandising Agricultural Supplies
AEC 2531	Marketing Seeds
AEC 2541	Agribusiness Sales Management
AEC 2551	Management Techniques for Agribusiness
AEC 2561	Agribusiness Organization and Structure
AEC 2571	Transportation and Distribution Management in Agribusiness
AEC 2581	Analysis of Performance for Agribusiness
AEC 2591	Estimating Market Potential and Forecasting Sales in Agribusiness
AEC 2621	Planning and Financial Management for Agribusiness
AEC 2631	Use of Microcomputers in Agribusiness

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Source: Syllabi of Courses, 1982, Department of Agricultural Economics, Mississippi Agricultural and Forestry Experiment Station, Mississippi State University.

courses provide students with scheduling and programming flexibility.

Scheduling flexibility, depending on individual needs, interest, and course load, enables a student to register for any number of one-hour courses in the three five-week block periods during the semester. Thus, a student may choose to lighten his course load during a semester or can add one-hour courses to offset the dropping of another course. Programming flexibility enables a student, particularly a non-agricultural economics major, to include in his program one-hour courses that more closely align with his interest and that could not be taken otherwise. Thus, the courses tend to give flexibility to highly structured curricula such as agricultural education and production agriculture (1). These courses should provide a student a better education and skills and training necessary to become a more productive worker.

The purpose of this article is to present an evaluation of students' perceptions of the five-week, one-hour courses taught in the Department of Agricultural Economics, Mississippi State University after one year's experience with the courses.

### Method of Investigation

In evaluating the department's academic facilities and services, the Academic Self-Study Committee recognized the need for better information on the series of specialized courses in agricultural marketing, agribusiness, and agricultural applications of micro-computers developed by the department in 1981. This paper presents part of the overall findings of the more detailed academic self-study (4) and may be helpful to those concerned with assessing the needs for additional course offerings, deletions, or modifications of existing undergraduate agricultural economics programs.

In a survey conducted to evaluate the quality of the department's one-hour agricultural marketing courses, undergraduate students were asked to rate the one-hour courses which they had already taken. The survey consisted of three parts: (1) an introductory letter; (2) request for general information; and (3) 16 attitudinal statements. Copies of the survey may be obtained from the co-authors.

The introductory letter explained the purpose of the survey, who was conducting it, and whom to contact for assistance. The section of the survey asking for general information identified the grade level of each respondent. In many cases, a freshman or sophomore's perception of a course might differ completely from a junior or senior's. Each student was asked to list his academic major, sex, class, the number of one-hour courses he had already taken, and other information, not including his name.

The main section of the survey contained 16 attitudinal statements regarding the students' perceptions of the one-hour courses already taken. Respondents

were asked to indicate their degree of agreement or disagreement with each statement by circling one of the five choices: "Strongly Disagree," "Disagree," "Agree," "Strongly Agree," and "No Opinion."

Questionnaires were distributed to undergraduate students in selected departmental classes. The students had already taken at least one five-week, one-hour course. The survey yielded an almost 42 percent response rate from a total of 174 students. Results may not be completely representative of the total student population since no effort was made to develop a scientific sample and no follow-up of non-respondents was conducted. Even with these inherent limitations, the results indicate the perceived quality of the one-hour courses taught in the department.

### Results

Since possible differences of opinion about a particular course or group of courses might exist among students of different class levels, the results of this study are discussed in terms of class levels.

Results of the questionnaire are shown in Table 2. Each value is the number of percentage of respondents, by class level, who answered the items as "Strongly Disagree," "Disagree," "Agree," "Strongly Agree," and "No Opinion."

The distribution of responses to the statement "The level of difficulty of the one-hour courses is about right" reveals that about 82 percent of the students responding to this statement agreed that the one-hour courses they had taken were about right, whereas only about four percent indicated that the courses were difficult. Among the sophomores, more than 92 percent of the respondents saw no major problem with the level of difficulty of the one-hour courses. The response rate decreased to about 83 percent among seniors and to almost 77 percent among juniors. At the junior level, about three percent of the respondents felt that the level of the courses they had taken were difficult. These high ratings suggest that the instructors are extremely successful in coordinating the amount of material covered in the one-hour courses as well as the number of exams with the time and hours of credit for the courses.

On the statement "The one-hour courses have been very helpful to me in most of my advanced three-hour courses," about 67 percent of the respondents agreed or strongly agreed that the one-hour courses were helpful in most of their advanced, three-hour courses. Differences, by class level, in the proportion of respondents who either disagreed or strongly disagreed to this statement were only minor.

Responses to the statement "I have ample time to prepare for exams, projects, and reading assignments" indicate that about 75 percent of the respondents gave or strongly gave the one-hour courses top marks on that point. About 23 percent of the respondents disagreed or strongly disagreed with this statement,

indicating that they did not have time to prepare for exams and class projects and assignments. Although the percentage of students disagreeing with this statement was only minor, the 23 percent response rate to the statement indicates that instructors need to be extremely careful not to overload students with assignments and other material because the five-week time limit for each course just isn't enough time for the student to grow and mature in a course.

On the statement "I feel that the one-hour courses will improve my job marketability," almost 52 percent of respondents agreed that their courses will improve their job marketability, while about 30 percent strongly agreed that the courses will improve their job marketability. Among the seniors and juniors, 50 percent of the respondents each felt that the courses will improve their chances of obtaining a job. The response rate increased to almost 62 percent among sophomores. At the sophomore level, about 15 percent of the respondents felt strongly that their one-hour courses would provide better job opportunities while almost eight percent answered, "No Opinion." These results indicate that one of the main reasons for students taking the one-hour courses is that they feel that the courses will provide them with training and skills to enable them to become better competitors in the job market.

Responses to the statement that read "Tests should be given more frequently than they are presently given in the one-hour courses" reveal that almost 66 percent of the respondents felt or strongly felt that exams should not be given more frequently than they are currently given. However, about 30 percent of them felt or strongly felt that exams should be given more frequently in the courses. On a class level basis, juniors were the most satisfied group of students, while sophomores were the least satisfied group.

The statement reading "I would recommend the one-hour courses to another student" received relatively high marks. Data reveal that 41 percent of the respondents strongly agreed that the one-hour courses already taken would be worth their efforts to inform other students about the courses. Analyses by class level show that the strongly agreeable response rates were as follows: seniors, 47 percent; juniors, 47 percent; and sophomores, only about 15 percent. A total of approximately 81 percent of the students either agreed or strongly agreed on this question.

On the statement "I plan to take more one-hour courses prior to my graduation," about 64 percent of the respondents rated this statement favorable or strongly favorable. This low response rate suggests that the faculty need to do more to inform students of the benefits that might be gained by taking more of the one-hour courses.

The distribution of responses to the statement "The level of workload for the one-hour courses is

about right" revealed that almost 82 percent of the respondents reported that the level of workload for the courses was suitable or strongly suitable. Percentages of favorable or strongly favorable responses among class levels were as follows: seniors, 83.4 percent; juniors, 80.0 percent; and sophomores, 84.6 percent.

On the statement "The one-hour courses have been effective," more than 82 percent of the respondents agreed or strongly agreed that the courses were effective. Students providing the highest rating for this statement (about 86.6 percent favorable) were juniors. Since one of the principal functions of the teacher is to place within the grasp of each student pertinent information on the course materials, making it understandable, providing techniques for learning, such as special problems, visuals, and hands-on experiences, these ratings indicate that teachers are doing a creditable job with their students in the one-hour courses.

Responses to the statement reading "The tests, projects, and other class assignments reflect the importance of the topics presented in the one-hour courses" revealed that 83.6 percent of the respondents agreed or strongly agreed that tests, projects, and other class assignments that were given in class reflected the topical areas in the one-hour courses. Seniors (86.6 percent), juniors (83.3 percent), and sophomores (76.9 percent) felt favorably toward their courses in this area.

When asked to respond to the statement "Textbooks, notes, handouts, and class projects facilitate learning the one-hour course material," about 75 percent of the respondents agreed or strongly agreed that the textbooks, notes and other class materials helped them in learning the material at the levels the teachers expected them to learn. On a class level basis, 80 percent of the seniors, almost 73 percent of the juniors, and almost 69 percent of the sophomores agreed or strongly agreed with this statement. Such responses to the statement indicate that teachers of one-hour courses should continue to maintain or increase their efforts to show their students that the material being presented in the classes will facilitate their learning. This might involve more outside help through a personal review of the material with students, supplementing discussions with other materials the teacher has developed in the one-hour course.

The distribution of responses to the statement "My objectives for taking the one-hour courses have been satisfied" reveals that the majority, about 56 percent, of the respondents felt that their objectives had been favorably satisfied, while another 26 percent strongly indicated that their objectives for taking the courses had been satisfied. On a class level basis, almost 63 percent of the juniors agreed that their objectives for taking a one-hour course had been satisfied and 30 percent were strongly satisfied. The response rate

Table 2. Numbers and percentages of responses to specific statements in Department of Agricultural Economics student opinion surveys, by class level of respondents, Mississippi State University, April 1982<sup>1/</sup>

Statement	Class Level <sup>2/</sup>	Responses <sup>3/</sup>									
		Strongly Disagree		Disagree		Agree		Strongly Agree		No Opinion	
		No.	%	No.	%	No.	%	No.	%	No.	%
1. The level of difficulty of the 1-hour courses is about right	Total	2	2.7	1	1.4	60	82.2	10	13.7	0	0.0
	Senior	0	0.0	0	0.0	25	83.3	5	16.7	0	0.0
	Junior	1	3.3	1	3.3	23	76.7	5	16.7	0	0.0
	Sophomore	1	7.7	0	0.0	12	92.3	0	0.0	0	0.0
2. The 1-hour courses have been very helpful to me in most of my advanced three-hour courses	Total	4	5.5	11	15.1	32	43.8	17	23.3	9	12.3
	Senior	3	10.0	6	20.0	13	43.3	6	20.0	2	6.7
	Junior	0	0.0	2	6.7	15	50.0	10	33.3	3	10.0
	Sophomore	1	7.7	3	23.1	4	30.8	1	7.7	4	30.8
3. I have ample time to prepare for exams, projects, and reading assignments in the 1-hour courses	Total	2	2.7	15	20.5	42	57.5	13	17.8	1	1.4
	Senior	0	0.0	7	23.3	16	53.3	6	20.0	1	3.3
	Junior	1	3.3	3	10.0	19	63.3	7	23.3	0	0.0
	Sophomore	1	7.7	5	38.5	7	23.3	0	0.0	0	0.0
4. I feel that the 1-hour courses will improve my job marketability	Total	5	6.8	4	5.5	38	52.1	22	30.1	4	5.5
	Senior	2	6.7	2	6.7	15	50.0	9	30.0	2	6.7
	Junior	2	6.7	1	3.3	15	50.0	11	36.7	1	3.3
	Sophomore	1	7.7	1	7.7	8	61.5	2	15.4	1	7.7
5. Tests should be given more frequently than they are presently given in the 1-hour courses	Total	15	20.5	33	45.2	14	19.2	8	11.0	3	4.1
	Senior	8	26.7	13	43.3	5	16.7	2	6.7	2	6.7
	Junior	5	16.7	15	50.0	4	13.3	5	16.7	1	3.3
	Sophomore	2	15.4	5	38.5	5	38.5	1	7.7	0	0.0
6. I would recommend the 1-hour courses to another student	Total	4	5.5	5	6.8	29	39.7	30	41.1	5	6.8
	Senior	1	3.3	1	3.3	11	36.7	14	46.7	3	10.0
	Junior	2	6.7	2	6.7	11	36.7	14	46.7	1	3.3
	Sophomore	1	7.7	2	15.4	7	53.8	2	15.4	1	7.7
7. I plan to take more 1-hour courses prior to my graduation	Total	9	12.3	8	11.0	27	37.0	20	27.4	9	12.3
	Senior	5	16.7	4	13.3	9	30.0	6	20.0	6	20.0
	Junior	3	10.0	3	10.0	12	40.0	11	36.7	1	3.3
	Sophomore	1	7.7	1	7.7	6	46.2	3	23.1	2	15.4
8. The level of workload for the 1-hour courses is about right	Total	3	4.1	7	9.6	40	54.8	20	27.4	3	4.1
	Senior	0	0.0	3	10.0	20	66.7	5	16.7	2	6.7
	Junior	2	6.7	3	10.0	11	36.7	13	43.3	1	3.3
	Sophomore	1	7.7	1	7.7	9	69.2	2	15.4	0	0.0
9. The 1-hour courses have been effective	Total	5	6.8	4	5.5	42	57.5	18	24.7	4	5.5
	Senior	1	3.3	2	6.7	19	63.3	5	16.7	3	10.0
	Junior	2	6.7	1	3.3	16	53.3	10	33.3	1	3.3
	Sophomore	2	15.4	1	7.7	7	53.8	3	23.1	0	0.0
10. The tests, projects, and other class assignments reflect the importance of the topics presented in the 1-hour courses	Total	2	2.7	7	9.6	43	58.9	18	24.7	3	4.1
	Senior	0	0.0	2	6.7	20	66.7	6	20.0	2	6.7
	Junior	2	6.7	2	6.7	16	53.3	9	30.0	1	3.3
	Sophomore	0	0.0	3	23.1	7	53.8	3	23.1	0	0.0
11. Textbooks, notes, handouts, and class projects facilitate learning in the 1-hour course material	Total	5	6.8	10	13.7	40	54.8	15	20.5	3	4.1
	Senior	3	10.0	2	6.7	18	60.0	6	20.0	1	3.3
	Junior	2	6.7	5	16.7	14	46.7	8	26.7	1	3.3
	Sophomore	0	0.0	3	23.1	8	61.5	1	7.7	1	7.7
12. My objectives for taking the 1-hour courses have been satisfied	Total	5	6.8	5	6.8	41	56.2	19	26.0	3	4.1
	Senior	2	6.7	1	3.3	17	56.7	8	26.7	2	6.7
	Junior	1	3.3	1	3.3	19	63.3	9	30.0	0	0.0
	Sophomore	2	15.4	3	23.1	5	38.5	2	15.4	1	7.7
13. I would like to see additional 1-hour courses in other areas of study in the Department of Agricultural Economics	Total	5	6.8	6	8.2	31	42.5	26	35.6	5	6.8
	Senior	1	3.3	1	3.3	17	56.7	9	30.0	2	6.7
	Junior	2	6.7	4	13.3	7	23.3	15	50.0	2	6.7
	Sophomore	2	15.4	1	7.7	7	53.8	2	15.4	1	7.7
14. My attitude toward a specific subject matter has improved as a result of taking a 1-hour course	Total	3	4.1	6	8.2	35	47.9	24	32.9	5	6.8
	Senior	1	3.3	1	3.3	16	53.3	9	30.0	3	10.0
	Junior	1	3.3	2	6.7	13	43.3	13	43.3	1	3.3
	Sophomore	1	7.7	3	23.1	6	46.2	2	15.4	1	7.7
15. The 5-week time span for each 1-hour course gives me an opportunity to obtain specific information on a particular subject matter in which I am interested	Total	2	2.7	9	12.3	49	67.1	13	17.8	0	0.0
	Senior	1	3.3	3	10.0	23	76.7	3	10.0	0	0.0
	Junior	1	3.3	2	6.7	19	63.3	8	26.7	0	0.0
	Sophomore	0	0.0	4	30.8	7	53.8	2	15.4	0	0.0
16. Although the 1-hour courses are relatively new to the department I like the 1-hour course concept	Total	5	6.8	4	5.5	28	38.4	31	42.5	5	6.8
	Senior	3	10.0	0	0.0	14	46.7	11	36.7	2	6.7
	Junior	1	3.3	3	10.0	8	26.7	16	53.3	2	6.7
	Sophomore	1	7.7	1	7.7	6	46.2	4	30.8	1	7.7

<sup>1/</sup> Since only three freshmen and one graduate student responded to the survey, those students' responses are included in the sophomore and senior responses, respectively.

<sup>3/</sup> Percentages in rows may not add exactly to 100 due to rounding.

decreased to about 57 percent for seniors agreeing with the statement and to about 27 percent for those strongly agreeing. At the sophomore level, about 54 percent of the respondents felt that their objectives were satisfied or strongly satisfied while almost 39 percent of the respondents were dissatisfied or strongly dissatisfied.

On the statement "I would like to see additional one-hour courses in other areas of study in the Department of Agricultural Economics," about 43 percent of the respondents indicated that they wanted to see additional courses added to the curriculum and about 36 percent of the respondents were strongly in favor of such courses. Differences, by class level, in the proportion of respondents who ranked the need for additional courses favorably were only minor except for juniors. Fifty-percent of the junior respondents indicated that they strongly favored more one-hour courses.

Responses to the statement "My attitude toward a specific subject matter has improved as a result of taking a one-hour course" indicate that about 81 percent of the respondents agreed or strongly agreed that their attitudes about a specific subject matter had improved. A higher proportion of junior respondents than sophomore or senior respondents rated the courses strong or strongly on this attribute. The overall implication of the 81 percent "Agree or Strongly Agree" rating is that students attitudes toward a specific subject matter had greatly improved as a result of taking a one-hour course.

The distribution of responses to the statement "The five-week time span for each one-hour course gives me an opportunity to obtain specific information on a particular subject matter in which I am interested" reveals that about 85 percent of the students responding felt that the courses allowed them to gain more information about a subject area of interest to them. Among the seniors, almost 87 percent saw no major problem in getting the information they needed on a specific area in the five-weeks allowed for each course. The favorable response rate increased to 90 percent for juniors; however, only about 69 percent of the sophomores responded favorably.

#### Summary

Several broad statements were posed to students in this survey. Their responses indicate a position reaction toward the courses and strong support for this approach in the department. Students especially feel that the level of difficulty of the courses is about right, the workload is sufficient, and the courses will improve their job marketability. Responses to statements concerning the recommendation of the one-hour courses to other students, the effectiveness of the courses, personal objectives for taking the courses, the attitudes toward a specific subject matter after taking a one-hour course, and the need for additional courses of

this nature were also very positive. On a class level basis, 100 percent of senior respondents rated or strongly rated the level of difficulty of the one-hour courses as about right for the amount of credit received for them, while 93.4 percent of the juniors rated or strongly rated the level of difficulty of the courses about right. At the sophomore level, 92.3 percent of the respondents had no problem with the level of difficulty of the one-hour courses, while 7.7 percent had problems with the courses. On the statement about the sufficiency of the workload of the one-hour courses, 83.4 percent of seniors, 80.4 percent of juniors, and 84.6 percent of sophomores rated or strongly rated the workload of the one-hour courses as being sufficient.

Responses to this survey indicate that students in general were very satisfied to the newly adopted approach to teaching agricultural marketing.

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