NATURE AND EXTENT OF AGRICULTURAL ECONOMICS, MARKETING, AND FARM MANAGEMENT INSTRUCTION IN SELECTED NORTHWEST DISTRICT VOCATIONAL AGRICULTURE DEPARTMENTS

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CHAPTER I

INTRODUCTION

The areas of agricultural economics, marketing, and farm management are becoming very important to the students of vocational agriculture. These areas are important because knowledge of them is a great determinant of potential for success in agriculture. The level of knowledge in these areas can also be used to describe the economic literacy of agriculturalists, which has been described as

> . . . the ability of the individuals to use rudimentary economics in their daily work and personal lives. Competencies in economic literacy, especially in the free enterprise system, are essential in the agriculture industry. These need to be substantive and not merely populist political terms such as 'supply side economics', 'psycho-economics', and 'Reagan economics'. Agriculture educators must cut through the popular superficial economic lingo. Dealing with economic literacy is more than apple pie and motherhood. Times have changed. We cannot go back to yesterday. We must develop the economic literacy that deals with current situations and, hopefully, this will help people adjust with changes brought by the future (1, p. 3).

American agriculture has changed drastically from the 1700's when the farmers had to only rely on the land to feed them and their families and had a small surplus left over to trade for other essentials at the local trading post. The agricultural revolution has resulted in advances to the extent that each farmer today produces enough for himself and 78 others, with 23 of these 78 being in other countries (2).

This points out a need for farm producers to have an understanding of world-wide production, marketing, and distribution systems. Obviously, one way this can be accomplished is through well planned educational programs which focus on these concerns.

Oklahoma agriculture is in trouble. The average net farm income figures vary greatly from $14.00 (3) to $10,152 (4). No matter which figure a person believes, the fact is the margin of profit is very small. Farmers of the future must have knowledge to use correct farm management, agricultural economics, and marketing skills. The vocational agriculture teacher must teach these areas in his classroom so that the farmers of the future will have increased potential to make it in the farm world.

Given these conditions, a particular question with which this study dealt was, are the vocational agriculture departments in Northwest Oklahoma contributing to the farm management, agricultural economics, and marketing literacy of their students?

Another point of great concern is the lack of basic understanding of economics in general. As the Joint Council of Economic Education notes, in a test of 15,000 junior high students, only 23 percent could correctly identify a simple description of a capitalistic system (5). Certainly this raises some questions about economic literacy.

Purpose of Study

The purpose of this study was to investigate selected features associated with the teaching of subjects within the areas of agricultural economics, farm management, and marketing in certain vocational agriculture departments of the Northwest District of Oklahoma.

Objectives of Study

To attain the above purpose, the following objectives were established to (1) determine the total amount of time spent on each subject selected; (2) determine the amount of time spent by classes on the areas of agricultural economics, marketing, and farm management; (3) determine the relative importance of the subjects to the surveyed teachers; (4) determine if the surveyed teachers in the Northwest District believe a sufficient amount of time working spent teaching agricultural economics, marketing, and farm management subjects; (5) determine the reason or reasons why time was not sufficient; (6) determine if there had been any changes in the basic content and patterns of teaching in the areas and subjects under study over the years; (7) determine if the vocational agricultural curriculum IV was being used sufficiently.

Limitations of the Study

This study was limited to a purposely selected group of 42 teachers of vocational agriculture in the Northwest District of Oklahoma. It dealt primarily with years taught and time spent in farm management, agricultural economics, and marketing. It also included opinions on the degrees of importance in farm management, agricultural economics, and marketing areas.

The study was further limited to the teachers who stated that they felt they were adequately educated and felt at ease when teaching areas in farm management, agricultural economics, and marketing in the state department curriculum survey.

Definitions of Terms

Certain terms were used in a special way in this study. These were defined to increase understanding as follows:

Farming - Halcrow (6, p. 7) stated, "A farm is an economic unit a business firm organized to produce crops or raise livestock. It involves land, capital resources in addition to land management, and labor."

Agribusiness - Halcrow (6) stated:

> Agribusiness included firms and economic enterprises organized to produce and sell services and supplies to farmers for use in farm production and farm living. It also includes firms and industries that buy and process farm products and distribute them through wholesale and retail markets" (p. 3).

Farm Management - The Farm and Ranch Management I notebook described farm management as a practical study that is interested in profitability, takes the farm as a whole, and as the subdivision of economics which considers the allocation of limited resources within the individual farm. It is a science of choice and decision (7).

For this study, farm management was limited to the subjects that are in the farm management section of the Vocational Agriculture Curriculum IV. The subjects in the curriculum are: Farm Inventories, Depreciation, Financial Records, Loans and Interest, Insurance, Tax Management, Machinery and Equipment, and Analysis of Supervised Occupational Experience Programs.

Agricultural Economics - Deals with the allocations of limited resources, such as land, time and money toward goal satisfaction. It also deals with what should be produced, how much to produce, and for whom it should be produced.

In this study, the agricultural economics area dealt basically with selected theoritical aspects. The subjects chosen were: Economic Systems, Diminishing Returns, Opportunity Costs, Cost Analysis, Input Combinations, Supply and Demand, Budgets, and Price Trends.

Marketing - This subject has been defined as "the economic activities performed after the product leaves the original point of production. But this is an overly restrictive approach. Marketing starts with production" (8, p. 1).

This study dealt with the following subjects in marketing: Records Analysis, Seasonal Marketing, Commodity Futures, Contract Delivery, Government Loans, Government Programs, Marketing, Livestock, and Marketing Crops.

Supervised Occupational Experience (S.O.E.) - Are the projects that each Future Farmers of America member and vocational agriculture student must have to be in the program.

Future Farmers of America (F.F.A.) - The youth organization of vocational agriculture.

CHAPTER II

REVIEW OF LITERATURE

The review of literature for this study was divided into three sections as follows: Facts about Agriculture Today, Why Teach Farm Management, Agricultural Economics, and Marketing to Vocational Agriculture Students, and Related Research.

The first part of the review of literature is to show the state of affairs that farming and ranching are in today. Also, to show what students coming out of vocational agriculture will be facing when they graduate from high school and begin farming or ranching as a career.

Facts About Agriculture Today

The United States has moved from an agrarian to an industrial economy. The farmers and ranchers still fulfill roles in the economy. The most obvious roles are providing an adequate food supply. Other roles that are not so obvious include a favorable contribution to our nation's balance of payments, a source of employment and livelihood for many people in the food production and processing system a contribution to national economic growth, plus stewardship for many of our nation's natural resources (1).

The role of providing an adequate food supply has been readily filled by the American farmers and ranchers. Here are the facts and figures to show how well the farmers have become in the role of food

suppliers.

The Farm Journal found the following about American agriculture:

1. If you were to combine all of the assets of the top 400 U.S. Corporations, they would not equal what the farmers and ranchers have collectively invested in their operations.

2. One Soviet farm worker produces 33,000 pounds of food crops per year. One United States farmer produces 375,000 pounds of food crops each year.

3. In one year, United States farm exports fill more than $1\frac{1}{2}$ million freight cars. Each day, over 10 ships leave United States ports to overseas customers.

4. In 1900, farmers averaged 110 bushels of corn from four acres. Today that is the farmer's yield off of one acre (9, p. 1).

In the United States, it takes a worker 16 minutes to buy one pound of beef, four minutes for one pound of bread, and six minutes to buy a dozen eggs. In the U.S.S.R., it takes 60 minutes to buy one pound of beef, eight minutes to buy one pound of bread, and 71 minutes to buy one dozen eggs. Some places are even worse than the U.S.S.R. In China, for example, it takes 455 minutes to buy one pound of beef, and 205 minutes to buy one dozen eggs (11).

The following are data about less obvious very important facts. In the fiscal year of 1981 alone, U.S. agricultural trade with other countries gave the U.S. a net surplus of $27.3 billion (2). With the food that each American farm harvests, nine other jobs in related industries are created. This means 15 to 17 million people are employed (10). Some examples are: 308,000 workers in poultry and meat packing; 171,000 in dairy manufacturing; 237,000 in baking; 223,300 in food plants; 313,000 in cotton mills; and three million in agricultural supplies, seeds fertilizers, and others (1). In the steel

industry alone, U.S. Agriculture uses $16\frac{1}{2}$ million metric tons of steel each year. This is enough to account for 40,000 jobs in the steel industry (10). Each time the U.S. farm exports increase by one billion dollars, 31,700 new jobs are created for Americans (10).

After reviewing these figures, a reader might think that the American farmers are doing well. This is a major misconception because the American farmers and ranchers are in deep trouble.

The family farms and ranches are going by the way side. In 1980, there wre about 1.8 million farms compared to 5.5 million in 1950 (1). Non-farmers in the U.S. out number the farmer 37 to one. Farmers are only about 2.3 percent of the population today compared to 30 percent following World War I (10).

The reason why people are leaving the farming business is lack of income. For example, the total income per farm family in 1983 fell approximately 11 percent in real terms. Over two thirds of farm family earnings came from off-farm sources as income from farm sources declined (12).

The economic report of the President to Congress stated that the American farmers are in poor shape. The President's reasons for this problem were:

1. Net farm income from farm operations declined from $25 billion in 1981 to about $19 billion in 1982.

2. The value of agriculture exports in fiscal 1982 fell about 11 percent.

3. The U.S.'s share of world grain stocks is expected to continue its rapid growth and reach over 50 percent in 1982-83 crop year.

4. Lower crop prices, high mortage rates, and lower inflation were the major factors leading to a decline in land value.

5. Farmer's liabilities continued to increase and farmer's debt-to-asset ratio is estimated to have increased to about 20 percent, a significant rise from 15 to 17 percent range typical of the late 1960's and 1970's.

6. Food prices rose about four percent in 1982 with marketing costs rising at more than twice the rate of the farm value component of food prices (12).

Added to the above stated problems, the Farmer's Home Administration (FmHA), farmers biggest borrowing agency, is experiencing trouble. One of the auditors who looked over the agency's records said, "If this was a bank, we would be forced to close the door and throw away the key" (13).

The U.S.D.A.'s Office of Inspector General estimates that tax payers could risk to lose as much as $1.9 billion in delinquent farm loans. In January, 1983, a record delinquency rate was set at 52.4 percent (13).

Charles Shuman, FmHA's administrator, blamed the problems on back-to-back years of depressed farm incomes, unrest in the agricultural community, and members of Congress who are pushing for a mandatory freeze on most FmHA forclosures (13).

This part of the review of literature was to orient the readers of this study with the problems that farmers are facing and will be facing in the future. To survive, the farmer must use every means to make a profit, or a larger margin of profit. These means are knowledge of the proper use of farm management, agricultural economics, and marketing.

Why Teach Farm Management, Agricultural Economics, and Marketing

Peterson (2) stated this in the end of his article in Agricultural Education:

> Hopefully, vocational agriculture students acquire more than manipulative skills. They need the ability to think through and logically solve real economic problems. In the building of a vocational agriculture program, developing students' abilities to deal with the real economic impact of agriculture production merits a high priority in making them economical literate. Vocational agriculture has made a real contribution over the years in making agriculture efficient and productive. Hopefully, the program today will provide opportunities for developing efficient management and marketing of products from a world wide perspective (2, p. 5).

Murray and McCormick (14) found that after students have graduated from vocational agriculture programs, they suggest improvements in the following areas:

1. More farm management instruction
2. More emphasis upon record keeping
3. More instruction on business analysis
4. More competence in using sound business management tools, including budgeting, financing, and timely marketing skills (p. 13).

In the same Agricultural Education Herbst (15) stated, "that students should have the ability to apply economic principles in analyzing the farm business and making farm management decisions."

Herbst (15) further stated that the following areas seem to be the most critical:

1. Diminishing returns
2. Opportunity costs
3. Input combinations
4. Enterprise selection

5. Supply and demand

6. Risk and uncertainty (p. 8).

Osburn and Schneeberger (16), in their book, Modern Agricultural Management said, "A farm manager must have a larger scope." The scope contained the following:

1. Technical activities: Include responsibility for all production know-how, seeing that production is accomplished on time, and adapting production processes to changing economic and technical conditions.

2. Commercial activities: Include all buying and selling. This area involves procurement of inputs in the quantities and combinations necessary for efficient production, plus orderly storage, handling and marketing of commodities produced. It also includes the tasks of market forecasting.

3. Financial activities: Involve the acquisition and use of capital, presumably in an optimal manner. This requires forecasting future investment needs and arranging for their financing.

4. Accounting activities: Include physical, human business, and tax records. This area may involve setting standards for certain enterprises or segments of the business (p. 4, 5).

Richardson, Camp, and McVay (17) stressed in their book why farm management was so important. They stated:

> Farm management is one of the most important concepts in the production of food and fiber. The farmer has the sole responsiblity for the management function of the farm business.
>
> The management of the farm business is increasing in complexity. Production changes brought about by new and refined technology increase the need for farmers to be able to manage the resources of the farm business. Business innovations such as the use of computers and refined record keeping systems challenge the farmers ability to manage. Taxes, insurance, laws, and budgeting force the farmer to keep up with the business aspects of farming (p. ix).

Halcrow (6) answered the question of why study economics in this manner:

> Everyone makes economic decisions, and few if any of us can avoid making some important ones. How to allocate our scarce resources of time, talent, and money is a crucial part of economics. The study of economics helps us make more rational decisions about earning a living, saving and spending money, the costs and uses of our time, the allocation of our talents between work and play, and the development of our talents for the life ahead. In fact, the functioning of our entire economic system and society depends on the degree to which we as citizens and responsible people are economically literate, interested, and well informed (pp. 4, 5).

Purcell (8) stated the importance of having marketing skills in this way:

> The study of marketing is important to both the individual and to society. To the individual, an understanding of marketing is important primarily because of the economic gains that understanding can bring. To society, benefits accruing to be better informed public expenditure, or a better quality product (p. 5).

So far in this study, we have seen only the benefits that would go to the students that are going back to the farm. Farm management, agricultural economics, and marketing can also help the agri-business and college bound students.

Luening and Mortenson (18) said the following about how important a farm management course could be for young people who leave the farm.

> Many young men and women reared on farms may not be able to follow a farming career for one reason or another. For them, a course in farm management will be extremely valuable. It will help them qualify for the many career opportunities in agri-business, as well as help them manage their own personal business affairs.
>
> The combination of their rural backgrounds and formal agricultural training will place them in a strong competitive position for excellent jobs in the vital agricultural industry. With their knowledge of farming,

> they will be able to speak the farmer's language and will know more about the science of farming than do many operating farmers. Some training beyond high school, or even a college degree, will be most helpful if not essential for jobs in tommorrow's agriculture (p. viii).

If a young person does choose to go to college and major in some type of agriculture, this person will be required to take hours in agricultural economics. Agricultural education and animal science majors will need to complete at least 10 hours to fulfill their requirements. Agricultural economics majors take many more hours in agricultural economics to fulfill their requirements.

A study done by Herbst (19) polled colleagues all over the country to find out which subjects are being taught the most in beginning farm management courses. The following were the top 10 subjects being taught:

1. Economic principles applied to farm management
2. Budgeting
3. Crop and livestock decisions
4. Decision-making process
5. Financial management
6. Farm records and records analysis
7. Labor management
8. Machinery investment or management
9. Acquiring inputs
10. Risk and uncertainity (p. 23).

Herbst (19) also polled his colleagues on what subjects would receive more emphasis in the next ten years. These are the findings of that part of the study:

1. Financial management

2. Cash flow planning
3. Estate tax management
4. Income tax management
5. Use of computer
6. Farm budgeting
7. Personal management
8. Risk and uncertainity
9. Marketing as related to management
10. Forms and business organization (p. 23).

The vocational agriculture instructors can help farm, agri-business, and college bound students by teaching the basics of the subjects. There are many ways to teach these basics.

Sande and Groen in the article in Agriculture Education stated that they taught "economic literacy" through the S.O.E. project required for F.F.A. and vocational agriculture (20).

Amberson also stated that he would use the S.O.E. program to show students what poor management and bad decisions can cause. This would bring the students to economic reality when the losses showed up in their records (21).

Dettbarn teaches his eleventh and twelfth graders economics through the use of a game. First, he shows them a film that illustrates the problems the farmers are having. The film that Dettbarn uses is called "Hard Times in the Country", by the University of Indiana. Then, the class must find articles in recent papers and magazines that state the farm problem. Finally, the game is used to let the students make some real farm decisions. The students learn the concept of perfect and

imperfect competition, supply and demand, and other related principles (22).

Related Research

Three related studies at Oklahoma State University were completed in the early 1960's. The studies' findings on farm management, agricultural economics, and marketing will be briefly stated in this section.

Ashley's study done in 1960, found the following: Sixty-two percent of the teachers reported that the number of periods teaching farm management was insufficient. Fifty-eight percent were teaching less than nine periods of farm management during the four-year course of study.

The economics part of the study found that 60 percent of the teachers were teaching less than a total of nine periods. Approximately half of the questioned stated that the amount of time was insufficient.

The marketing section of the study found that 70 percent were teaching zero to four hours. Sixty-seven percent stated that their time spent on farm management was inadequate.

It was found that less than half of the vocational agriculture departments are provided with farm management, economic, or marketing texts. Charts and bulletins were the most used supplemental material (23).

Ward found with a survey he sent out in the Southwest district that 34 out of 40 teachers taught less than five class periods in four years in the farm management area. A majority of the teachers questioned stated that their amount of time on farm management was

insufficient.

The lack of maintaining students interest was the single biggest reason why more teachers did not spend sufficient amount of time on agriculture economics. Sixty percent taught less than five periods on the agriculture economics subject.

There was found to be a wide difference in opinions concerning the sufficiency of time devoted to marketing. Thirty percent taught less than five periods on marketing iwth five percent indicating that the time was sufficient. Twenty-two percent taught more than 25 periods in the four years. While two percent indicated that this time was sufficient.

The study found that Records and Analysis, and Efficient use of Capital were the two most important areas in the survey (24).

A study was completed by Triplett in 1961 in which it was found that 45 percent of the teachers surveyed taught less than four hours at farm management, agricultural economics and marketing. The remaining teachers were evenly scattered over the periods of time. All of the teachers that taught over 14 hours stated that the time was sufficient.

The average time spent on agricultural economics was a little over five hours per teacher. Forty-two percent of the teachers said that the time spent on agricultural economics was insufficient.

Slightly over 74 percent of the teachers devoted zero to four hours to the marketing subjects. Twenty-six percent of the instructors allowed no time at all on the marketing subject. Only 25 percent of the teachers stated that the time spent on marketing was sufficient.

The Tripplett (25) study found that Marketing Livestock and Efficient Use of Capital were the two most important subjects ranked by this

group.

Summary

Farmers today are in more trouble financially than ever before. With decreasing income and high cost of production, many farmers will go bankrupt.

Many of today's agricultural scholars see the problems in farming and are saying that the teaching of agricultural economics, marketing, and farm management is essential to farms of today and to future farmers.

The studies done in the 1960's show that at that time most of the vocational agriculture teachers did not feel that agricultural economics marketing, and farm management were of great importance to the students as future farmers.

This review of literature shows how important farm management, agricultural economics, and marketing are to vocational agriculture. Also revealed is the fact that it has been well over 20 years since an in-depth study has been conducted to determine what is being done to educate high school vocational agriculture students in basic economics of agriculture, marketing and products, and farm management.

CHAPTER III

PROCEDURE

The data for this study were obtained through a questionnaire. The questionnaire was formulated after consulting with faculty of the Department of Agricultural Education at Oklahoma State University, and with others knowledgeable about the topic under study.

Development of the Instrument

The questionnaire was formulated to obtain the data needed for proper coverage of the major purpose and objectives.

The first part of the questionnaire dealt with determining the amount of time teachers were spending with each of the selected subjects in the areas of agricultural economics, marketing, and farm management, and in which vocational agriculture classes they were teaching the subjects.

It was asked in this part if the teachers thought that they were spending amounts of time they considered sufficient for the subjects. If time was judged to be not sufficient, they were asked for the reasons for the insufficient time being taught.

The second part of the questionnaire asked the teachers to rank, in order of importance, the subjects in agricultural economics, marketing, and farm management.

Also in this part, the teachers were asked to identify sources used to supplement the core in these subject areas.

Also in the second part, some general questions were asked. They were, "Do you have a computer in your department or access to one." "If you do have a computer or access to one do you use it in teaching farm management, agricultural economics, and marketing?" Another question asked was, "Do you think a unit in marketing and agricultural economics should be added to the core and if so, what year and years?"

The survey concluded with an open-ended question on what were the surveyed teachers' thoughts on farm management, agricultural economics, and marketing.

Collection of Data

The names of the 42 teacher respondents were obtained in the following manner. The State Department of Vocational Agriculture had completed a survey on the attitudes of teachers toward the curriculum and on their activities regarding different subjects in the curriculum. The writer was granted access to the surveys to see how the teachers in the Northwest District reacted regarding the subject areas being considered. The teachers chosen for this study were the 42 who ranked their ability high or fairly high to teach the farm management subjects covered in the State Department survey.

The questinnaire was given to this group at the 1983 Summer Conference of vocational agriculture teachers in their Northwest District meeting. Forty-one questionnaires were filled out and handed back the writer at the session. One teacher who did not attend the conference was mailed a questionnaire. Teachers were given a pen for

their cooperation.

Treatment of Data

Data secured from the first part of the questionnaire were analyzed to determine such things as cummulative and mean hours taught, percentages, item counts, and other measures which would facilitate presentations in tables and narrations about these tables. Figures were also developed to portray some findings.

To analyze data secured relative to teachers' opinions as to importance of the selected subjects, a Likert-type scale was employed. Categories of response used and numerical values for each were as follows:

Very Great Importance	- 4.0
Great Importance	- 3.0
Much Importance	- 2.0
Some Importance	- 1.0
No Importance	- 0.0

Then, to permit calculation of mean responses for the total group, limits were established which permitted translation of numerical means into the above categories. These limits were as follows:

Very Great Importance	3.5 - 4.0
Great Importance	2.5 - 3.49
Much Importance	1.5 - 2.49
Some Importance	.5 - 1.49
No Importance	0.0 - .49

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The data in this chapter were compiled from responses obtained from questionnaires administered to 42 vocational agriculture teachers from the Northwest Supervisory District. The questionnaire was administered at the 1983 Summer Conference. Forty-one of the vocational agriculture teachers completed questionnaires while attending a special session of the 1983 Vo-Tech Summer Conference. One of the questionnaires had to be mailed. All of the questionnaires were returned, for a return rate of 100 percent.

Time Spent on Subjects

The total amount of time being spent teaching agricultural economics, marketing, and farm management subjects varied greatly. Table I shows this variation, with "Analysis of S.O.E. Program" being taught a total of 1,166 hours a year by the 42 teachers and only 53 hours being taught in the area of "Input Combinations". The top ten subjects being taught according to the 42 teachers by total hours were:

1, Analysis of S.O.E. Programs, 1,160 hours
2. Financial records, 927 hours
3. Farm inventories, 675 hours
4. Machinery and equipment, 484 hours

TABLE I

TOTAL TIME SPENT TEACHING AGRICULTURAL ECONOMICS, MARKETING, AND FARM MANAGEMENT BY FORTY-TWO VOCATIONAL AGRICULTURE TEACHERS OF THE NORTHWEST DISTRICT

	Subjects	Hours	Percent
1.	Analysis of S.O.E. program	1,166	15.0
2.	Financial records	927	11.9
3.	Farm inventories	675	8.7
4.	Machinery and equipment	484	6.3
5.	Loans and interest	469	6.0
6.	Marketing livestock	456	5.9
7.	Record analysis	449	5.8
8.	Marketing crops	371	4.8
9.	Depreciation	345	4.5
10.	Budgets	284	3.7
11.	Supply and demand	284	3.7
12.	Price trends	283	3.7
13.	Seasonal marketing	216	2.8
14.	Insurance	205	2.6
15.	Commodity futures	186	2.4
16.	Tax management	171	2.2
17.	Economic systems	123	1.6
18.	Contract delivery	120	1.6
19.	Cost analysis	115	1.5
20.	Government programs	110	1.4
21.	Government loans	91	1.2
22.	Opportunity cost	78	1.0
23.	Diminishing returns	74	1.0
24.	Input combinations	53	0.7
		7,735	100.0

5. Loans and interest, 469 hours
6. Marketing livestock, 456 hours
7. Record analysis, 449 hours
8. Marketing crops, 371 hours
9. Depreciation, 345 hours
10. Budgeting, and supply and demand, with 284 hours each

The first two subjects, Analysis of S.O.E. Program and Financial Records, represent 26.9 percent of the total time being spent on all subjects in this survey.

The top 10 subjects accounted for a total of 76.3 percent of the total hours spent on the subjects in this survey.

Table II shows the extent to which subjects in agricultural economics, marketing, and farm management are being taught in the various vocational agriculture classes.

In the agricultural economics area, the most emphasized subjects were Supply and Demand, Budgets, and Price Trends. The Input Combination was also the least emphasized subject of all areas.

Instruction in agricultural economics took place most often in vocational agriculture III and IV, and 387 and 411 periods respectively. The least amount of agricultural economics was being taught in vocational agriculture II with 237 periods.

The subjects of Marketing Livestock, Records Analysis and Marketing Crops were stressed the most in the marketing area. Government Loans was the least stressed subject in the marketing area.

The classes in which the most marketing was taught were vocational agriculture IV and III, with 604 and 595 periods respectively. The least amount of periods devoted to this area was in vocational

TABLE II

COMPARISON OF EXTENT TO WHICH SUBJECTS IN AGRICULTURAL ECONOMICS, MARKETING, AND FARM MANAGEMENT ARE BEING TAUGHT IN VOCATIONAL AGRICULTURE CLASSES

Areas/Subjects	Periods of Instruction by Class I	II	III	IV	Totals
Agricultural economics					
Economic systems	26	16	39	42	123
Diminishing returns	14	9	22	29	74
Opportunity costs	15	16	21	26	78
Cost analysis	22	26	34	33	115
Input combination	6	9	14	24	53
Supply and demand	67	64	75	78	284
Budgets	55	47	88	94	284
Price trends	54	50	94	85	283
Sub-total	259	237	387	411	1,294
Marketing					
Records analysis	101	89	123	136	449
Seasonal marketing	37	55	76	48	216
Commodity futures	24	19	70	73	186
Contract delivery	12	18	43	47	120
Government loans	7	14	29	41	91
Government programs	13	20	37	40	110
Marketing livestock	104	118	117	117	456
Marketing crops	81	88	100	102	371
Sub-total	379	421	595	604	1,999
Farm management					
Farm inventories	212	151	151	161	675
Depreciation	79	71	104	91	345
Financial records	260	209	219	239	927
Loans and interest	93	109	120	147	469
Insurance	16	27	60	102	205
Tax management	18	17	48	88	171
Machinery and equipment	85	78	159	162	484
Analysis of S.O.E. programs	304	283	290	289	1,166
Sub-total	1,067	945	1,151	1,279	4,442
Totals	1,705	1,603	2,133	2,294	7,735

agriculture I, with 379 periods.

In the farm management area, Analysis of S.O.E. Programs, Financial Records, and Farm Inventories were the most stressed subjects. Tax Management received the least attention of any farm management subjects. Only slightly ahead of Tax Management was Insurance.

Vocational agriculture III and IV were to classes in which farm management was taught. Vocational agriculture II was the class in which the least amount of farm management was taught.

In total amount of hours, farm management was the most taught area. Farm management was taught a total of 4,442 hours for 57 percent of the total hours. Marketing subjects were taught a total of 1,999 hours for 26 percent of the total hours and agricultural economics subjects were taught a total of 1,294 hours for 17 percent of the total hours.

Figure I was developed to allow a visual comparison of the total amount of hours these three subject areas were taught during time allocations were as follows:

1. Vocational agriculture I - 1,705
2. Vocational agriculture II - 1,603
3. Vocational agriculture III - 2,133
4. Vocational agriculture IV - 2,294

The total amount of hours spent was 7,735.

As presented in Table III, for the area of Agricultural Economics, the range in the number of teachers not teaching a subject was from a high of 26, or 62 percent, for Input Combinations to a low of seven or 17 percent for Price Trends. For the subjects Diminishing Returns,

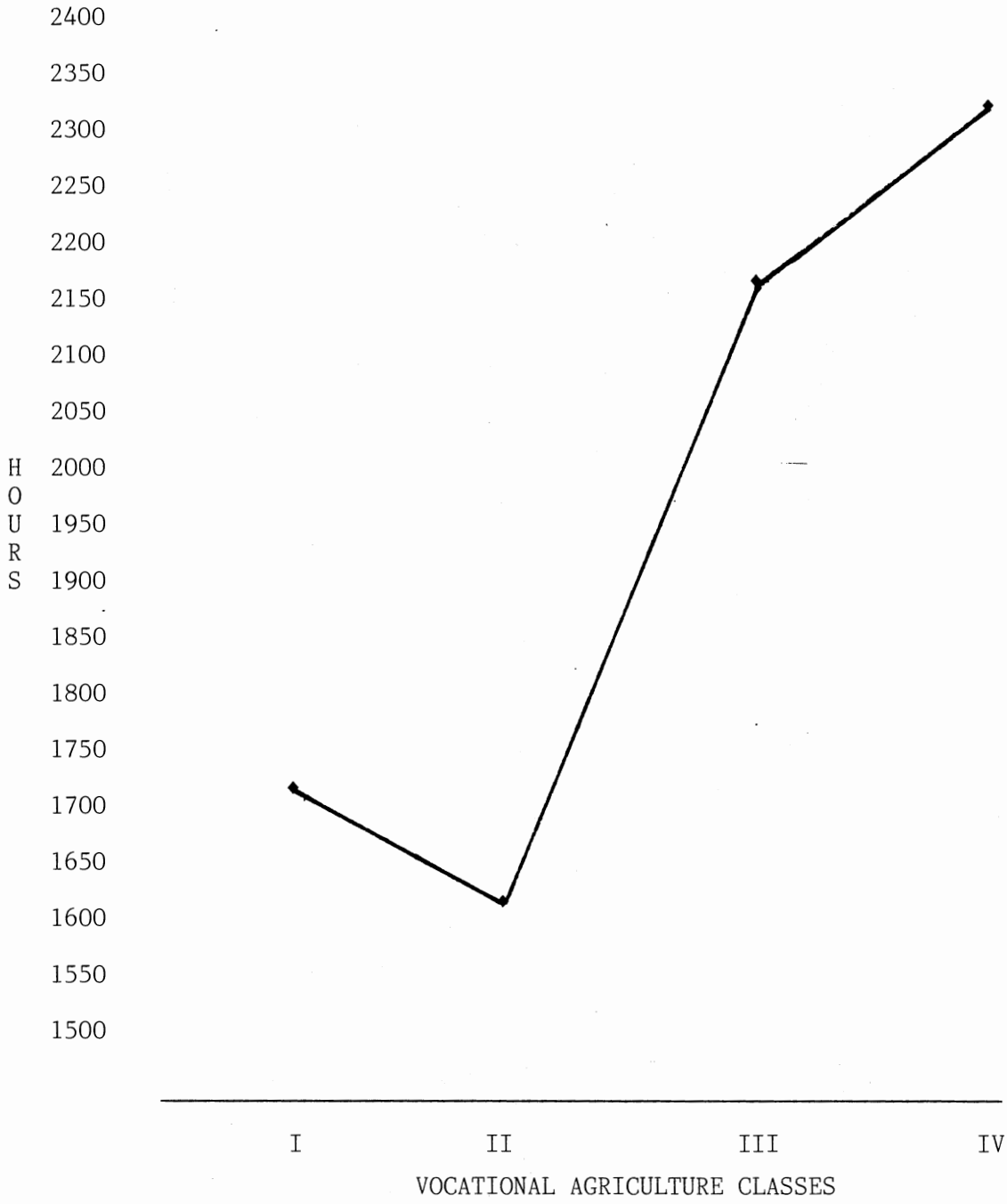

Figure 1. Total Hours of Agricultural Economics, Marketing, and Farm Management Taught by Class of Vocational Agriculture

TABLE III

DISTRIBUTION OF TEACHERS BY TIME ALLOCATED TO SUBJECTS IN AGRICULTURAL ECONOMICS, MARKETING, AND FARM MANAGEMENT

Area/Subject	Distribution of Teachers by Periods Taught									
	0		1-5		6-10		11-20		21+	
	N	%	N	%	N	%	N	%	N	%
Agricultural economics										
Economic systems	16	38	18	43	8	19	-	-	-	-
Diminishing returns	23	55	16	38	2	5	1	2	-	-
Opportunity costs	25	59	13	31	3	8	1	2	-	-
Cost analysis	19	45	15	36	7	17	1	2	-	-
Input combinations	26	62	12	29	4	9	-	-	-	-
Supply and demand	8	19	15	36	12	29	6	14	1	22
Budgets	9	21	16	38	10	24	4	9	3	8
Price trends	7	17	16	38	10	24	8	19	1	2
Marketing										
Records analysis	8	19	11	26	9	21	7	17	7	17
Seasonal marketing	10	24	19	45	6	14	5	12	2	5
Commodity futures	14	33	16	39	6	14	5	14	-	-
Contract delivery	18	43	17	40	4	9	3	8	-	-
Government loans	15	36	23	55	4	9	-	-	-	-
Government programs	15	36	21	50	3	7	3	7	-	-
Marketing livestock	3	8	13	31	10	24	12	28	4	9
Marketing crops	4	9	17	40	8	19	11	27	2	5
Farm Management										
Farm inventories	2	5	11	26	2	7	15	36	11	26
Depreciation	5	12	12	29	13	31	11	26	1	2
Financial records	3	7	8	19	7	17	10	24	14	33
Loans and interest	5	12	14	33	10	24	5	12	8	19
Insurance	12	29	16	38	8	19	6	24	-	-
Tax management	15	36	18	43	7	17	1	2	1	2
Machinery and equipment	6	14	9	22	14	33	9	22	4	9
Analysis of S.O.E. programs	1	2	1	2	11	26	12	26	17	41

Opportunity Costs, and Cost Analysis, nearly one half or more of the teachers reported no instructional time.

Based upon groupings of the teachers as presetnted in Table III, a majority of the agricultural economics subjects were taught five periods or less. Three subjects had teachers teaching 21 or more hours. These subjects were Supply and Demand, Budgets, and Price Trends, with one, three and one teachers respectively.

In the marketing area, the range of teachers not teaching a subject varied from a high of 18, or 43 percent for the Contract Delivery subject to three or eight percent in the Marketing Livestock subject.

Again, a majority of the marketing subjects were taught five hours or less. In the marketing area there were 15 teachers teaching 21 or more hours of four different subjects. The subjects that had teachers teaching 21 or more periods were Records Analysis, Seasonal Marketing, Marketing Livestock, and Marketing Crops.

The farm management area had the lower range of teachers stating they did not teach a subject. The range of number of teachers spending no time teaching was 12 or 21 percent for insurance, to one or two percent for Analysis of S.O.E. Program.

For farm management the teachers were widely distributed throughout the categories. Every subject in the farm management area had at least one teacher teaching 21 hours.

Sufficiency of Time Spent Teaching

Table IV contains a summary of teachers' opinions as to whether or not they were spending sufficient time teaching in the areas of instruction being investigated.

TABLE IV

TEACHERS' OPINIONS OF SUFFICIENCY OF TIME SPENT ON TEACHING SUBJECTS IN AGRICULTURAL ECONOMICS, MARKETING, AND FARM MANAGEMENT

Areas/Subjects	Distribution by Opinion of Sufficiency of Time Spent			
	Yes		No	
	N	%	N	%
Agricultural economics				
Economic systems	31	74	11	26
Diminishing returns	25	59	17	41
Opportunity costs	23	55	19	45
Cost anlaysis	28	66	14	34
Input combinations	23	55	19	45
Supply and demand	40	95	2	5
Budgets	39	93	3	7
Price Trends	40	95	2	5
Marketing				
Records analysis	38	91	4	9
Seasonal marketing	35	83	7	17
Commodity futures	29	69	13	31
Contract delivery	27	64	15	36
Government loans	30	71	12	29
Government programs	31	74	11	26
Marketing livestock	40	95	2	5
Marketing crops	39	93	3	7
Farm Management				
Farm inventories	41	98	1	2
Depreciation	36	86	6	14
Financial records	38	91	4	9
Loans and interest	37	88	5	12
Insurance	29	69	13	31
Tax management	24	57	18	43
Machinery and equipment	36	86	6	14
Analysis of S.O.E. programs	41	98	1	2

For the agricultural economics subjects of Supply and Demand, Price Trends, and Budgets, 95 percent, 95 percent, and 93 percent of the teachers respectively felt they were spending enough time teaching these subjects. For the other subjects in this area, from 74 percent to 55 percent of the teachers indicated their teaching time was sufficient. The latter figure was reported for the subjects of Opportunity Costs and Input Combinations. For these two subjects areas, 45 percent of the teachers felt they should be spending more time.

The marketing subjects of Marketing Livestock, Marketing Crops, and Records Analysis had 94 percent, 93 percent, and 91 percent of the teachers respectively stating they were sufficeintly teaching these areas. The other subjects in the marketing area had from 83 percent to 64 percent of the teachers indicating their teaching time was sufficient. For the marketing subject of Contract Delivery, 36 percent of the teachers indicated they were not devoting sufficient teaching time.

In the farm management area, Farm Inventories and Analysis of S.O.E. Program were both being taught a sufficient amount of time as indicated by 98 percent of the teachers. Financial Records were sufficiently taught in the opinion of 91 percent of the teachers. The remaining farm management subjects had from 88 percent to 57 percent of the teachers stating sufficient time was taught in these subjects. Tax Management was the least sufficiently taught subject, with 43 percent of the teachers feeling they had not devoted enough time.

Seventy-nine percent of the total responses were in the sufficiently taught category and only 21 percent of the teachers

stated that the time they taught was insufficient

Reasons for not Spending Sufficient Time Teaching Areas/Subjects

Table V shows the reasons given by teachers who indicated they were not spending sufficient time in teaching subjects from the agricultural economics area to be as follows: Do Not Have Enough Time, Insufficient Reference Material, and Unable to Maintain Interest of the Students.

In the marketing section, the most used reasons were, Teacher Not Sufficiently Trained to Teach More, and Do Not Have Enough Time.

In the farm management section, the one reason which received the most responses was, Teacher Not Sufficiently Trained to Teach More. The next most cited reasons were: Insufficient Reference Materials, Do Not Have Enough Time, and Unable to Maintain Interest of Students, each receiving nine responses.

For all the areas combined, the rank order of the reasons cited for not teaching more were determined to be as follows: (1) Do not have enough time, (2) Insufficient reference material, (3) Teacher not sufficiently trained to teach more, (4) Unable to maintain interest of the students, (5) Teacher does not feel comfortable with the subject, (6) Too few students returning to farm to justify more time, (7) Not important to vocational agriculture students, (8) Not in vocational agriculture cores.

Importance Ratings of Subjects

The vocational agriculture teachers were asked to rate the subjects

TABLE V

COMPARISON OF REASONS GIVEN BY TEACHERS FOR NOT SPENDING SUFFICIENT TIME TEACHING AGRICULTURAL ECONOMICS, MARKETING, AND FARM MANAGEMENT

Areas/Subjects	Number of Responses by Reason for not Teaching							
	A	B	C	D	E	F	G	H
Agricultural economics								
Economic systems	–	3	1	–	5	2	1	–
Diminishing returns	1	5	3	2	6	2	1	1
Opportunity costs	–	5	4	2	7	4	1	–
Cost analysis	–	4	1	2	4	3	1	–
Input combinations	1	4	3	1	5	7	1	1
Supply and demand	–	2	1	–	–	1	–	–
Budgets	–	3	1	–	–	1	–	–
Price trends	–	1	–	–	1	1	–	–
Sub-Totals	1	27	14	7	28	21	5	–
Marketing								
Records analysis	–	1	1	1	–	1	–	–
Seasonal marketing	–	3	1	1	1	1	–	–
Commodity futures	–	2	1	3	3	1	–	1
Contract delivery	–	3	4	2	4	1	1	1
Government loans	–	1	5	2	4	1	–	1
Government programs	–	1	3	1	2	3	–	1
Marketing livestock	–	–	1	–	–	–	–	–
Marketing crops	–	–	1	–	–	1	–	–
Sub-Totals	–	11	17	11	14	9	–	4
Farm management								
Farm inventories	1	–	–	–	–	–	–	–
Depreciation	1	1	2	1	1	2	–	–
Financial records	1	–	–	–	1	2	–	–
Loans and interest	1	1	–	–	2	1	–	–
Insurance	1	4	5	–	1	3	–	–
Tax management	1	4	5	–	1	3	–	–
Machinery and equipment	1	1	–	2	1	–	1	–
Analysis of S.O.E. programs	–	–	–	–	1	–	–	–
Sub-Totals	7	9	14	8	9	9	1	–
Totals	8	47	45	26	51	39	6	4

A – Too few students returning to the farm to justify more time.
B – Insufficient reference material.
C – Teacher not sufficiently trained to teach more.
D – Teacher does not feel comfortable with subject.
E – Do not have enough time.
F – Unable to maintain interest of the students.
G – No important to vocational agriculture students.
H – Not in vocational agriculture core.

according to degrees of importance in the areas of agricultural economics, marketing, and farm management. The degrees of importance response categories were: No Importance, Some Importance, Much Importance, Great Importance, and Very Great Importance. Refer to Chapter III for explanation of how the ratings were calculated and classified.

As can be determined from Table VI, the following were the subjects that had a mean rating of 3.17 or above which placed all of them in the upper portions of the Great Importance category. These subjects and their respective ratings were as follows:

Financial records 3.38

Analysis of S.O.E. program. 3.26

Marketing livestock 3.19

Marketing crops 3.19

Loans and interest. 3.17

Although receiving lower mean responses, ranging from 2.98 to 2.52, six other subjects were also classified in the Great Importance category. In order according to the magnitude of mean responses these subjects were: Farm Inventories, Records Analysis, Budgets, and Supply and Demand, Machinery and Equipment, Management, and Price Trends.

The remaining 13 subjects were all placed in the Much Importance response category, receiving mean responses ranging from 2.48 for Depreciation to 1.83 for both Diminishing Returns and Input Combinations.

Overall, farm management subjects had a 2.80 mean rating and marketing subjects had a mean rating of 2.57, both groups falling into the Great Importance category. Agricultural economics subjects as a group had a mean rating of 2.19, which fell into the Much Importance

TABLE VI

RATINGS OF THE IMPORTANCE OF VARIOUS SUBJECTS IN AGRICULTURAL ECONOMICS, MARKETING AND FARM MANAGEMENT BY FORTY-TWO VOCATIONAL AGRICUTURE TEACHERS IN NORTHWESTERN OKLAHOMA

Subjects	Cumulative Rating	Mean Rating
Financial records	142	3.38
Analysis of S.O.E. program	137	3.26
Marketing livestock	134	3.19
Marketing crops	134	3.19
Loans and interest	133	3.17
Farm inventories	125	2.98
Records analysis	115	2.74
Budgets	114	2.71
Supply and demand	110	2.62
Machinery and equipment management	109	2.60
Price trends	106	2.52
Depreciation	104	2.48
Seasonal marketing	103	2.45
Tax management	100	2.38
Government programs	97	2.31
Commodity futures	97	2.31
Government loans	94	2.24
Contract delivery	89	2.12
Insurance	89	2.12
Cost analysis	88	2.10
Economic systems	83	1.98
Opportunity cost	81	1.93
Diminishing returns	77	1.83
Input combinations	77	1.83

category.

Core Supplementation Materials

The sources that the teachers used to supplement the state core curriculum materials are shown in Table VII. The most used sources and number of times cited by teachers were as follows:

Magazines - 36

Books - 32

Bulletins - 27

Bankers - 20

Charts - 17

College notes - 14

Resource persons, other core materials, and Ohio State materials were each named as sources of supplementation by one teacher.

Availability and Use of Computers

One section of the survey asked the teachers questions regarding availability and use of computers. Table VIII reports data on the computer questions, beginning with "Do you have a departmental computer or access to one?". A total of 14 teachers represented 33 percent of the teachers surveyed. The teachers who had computers or access to one were asked how the computers were used in teaching. Five used the computers to teach farm management, agricultural economics, and marketing. This represented 36 percent of the 14 teachers who had computers.

TABLE VII

REFERENCE SOURCES USED TO SUPPLEMENT THE CORE CURRICULUM MATERIALS

Type of Reference	Distribution of Responses	
	Number	Percent
Magazines	36	24
Books	32	21
Bulletins	27	18
Bankers	20	13
Charts	17	12
College notes	14	.09
Resource persons	1	.01
Core	1	.01
Ohio State material	1	.01

*Total responses, 150

TABLE VIII

AVAILABILITY AND USE OF DEPARTMENTAL COMPUTER FOR INSTRUCTION

Question	Distribution of Responses			
	Yes	%	No	%
Do you have a departmental computer?	14	33	27	67
Is the computer used to teach:				
Farm management	5	36	9	64
Agricultural economics	5	36	9	64
Marketing	5	36	9	64

Need for Additional Units in the Core Curriculum

"Do you think that a unit in agricultural economics, farm management, and marketing should be added to the curriculum?", was a question asked of the 42 teachers. As reported in Table IX, 33 of the teachers responded yes. This represented 79 of the 42 questioned. Seven teachers, 16 percent indicated no, while the remaining two teachers were undecided on this question.

Table X shows the year or years where the 33 teachers who marked yes to the above question thought that the agricultural economics, farm management, and marketing subjects should be added to the curriculum. The junior and senior years, either together or separately, were the preference of 75 percent of the teachers.

Comparison of Years of Experience and Teaching Emphasis

In Table XI, the years of experience shown along with the total amount of time spent in the areas of agricultural economics, marketing, and farm management. The total years of experience were 390.5. This came to an average of 9.3 years per teacher. The total hours taught in the areas of agricultural economics, marketing, and farm management were 7,735 hours. This averages out to 184.2 hours per teacher.

Figure 2 shows the relationship of the number of years teaching experience to the number of hours spent teaching agricultural economics, marketing, and farm management by the 42 agriculture teachers surveyed.

Three groups are very close in average hours spent, namely the one-to-five year group, five-to-10 year group and, the 16 and up

TABLE IX

TEACHERS' OPINIONS CONCERNING ADDING AGRICULTURAL AND MARKETING TO THE CURRICULUM

Response	Distribution N	Distribution %
Yes	33	79
No	7	16
Undecided	2	5
Total	42	100

TABLE X

TEACHER PREFERENCE FOR YEARS THAT AGRICULTURAL ECONOMICS AND MARKETING SHOULD BE ADDED TO THE CURRICULUM

Rank	Year(s) Preferred	Number	Percent
1	Junior	9	27
	Junior and senior	9	27
3	Senior	7	21
4	Sophomore and junior	3	10
5	All years	2	6
6	Sophomore, junior and senior	1	3
	Freshman and junior	1	3
	Sophomore	1	3
	Total responses	33	100

TABLE XI

TEACHING EXPERIENCE OF THE FORTY-TWO VOCATIONAL AGRICUTLURE TEACHERS AND TOTAL HOURS TAUGHT IN THE AREAS OF AGRICULTURAL ECONOMICS, MARKETING, AND FARM MANAGEMENT

Teaching Experience		Total Hours Taught
1		380
1		300
1		233
1		170
1		170
1		132
1		127
1		99
4		434
4		271
4.5		195
5		110
5		102
5		57
6		204
7		256
7		234
7		141
7		67
7		57
7		45
8		260
8		162
8		140
9		290
9		204
9		203
10		310
10		309
10		129
10		61
11		254
13		80
13		68
15		104
15		70
22		234
22		81
23		158
24		160
25		60
33		506
3,905	Total	7,730
9.3	Average	184.2

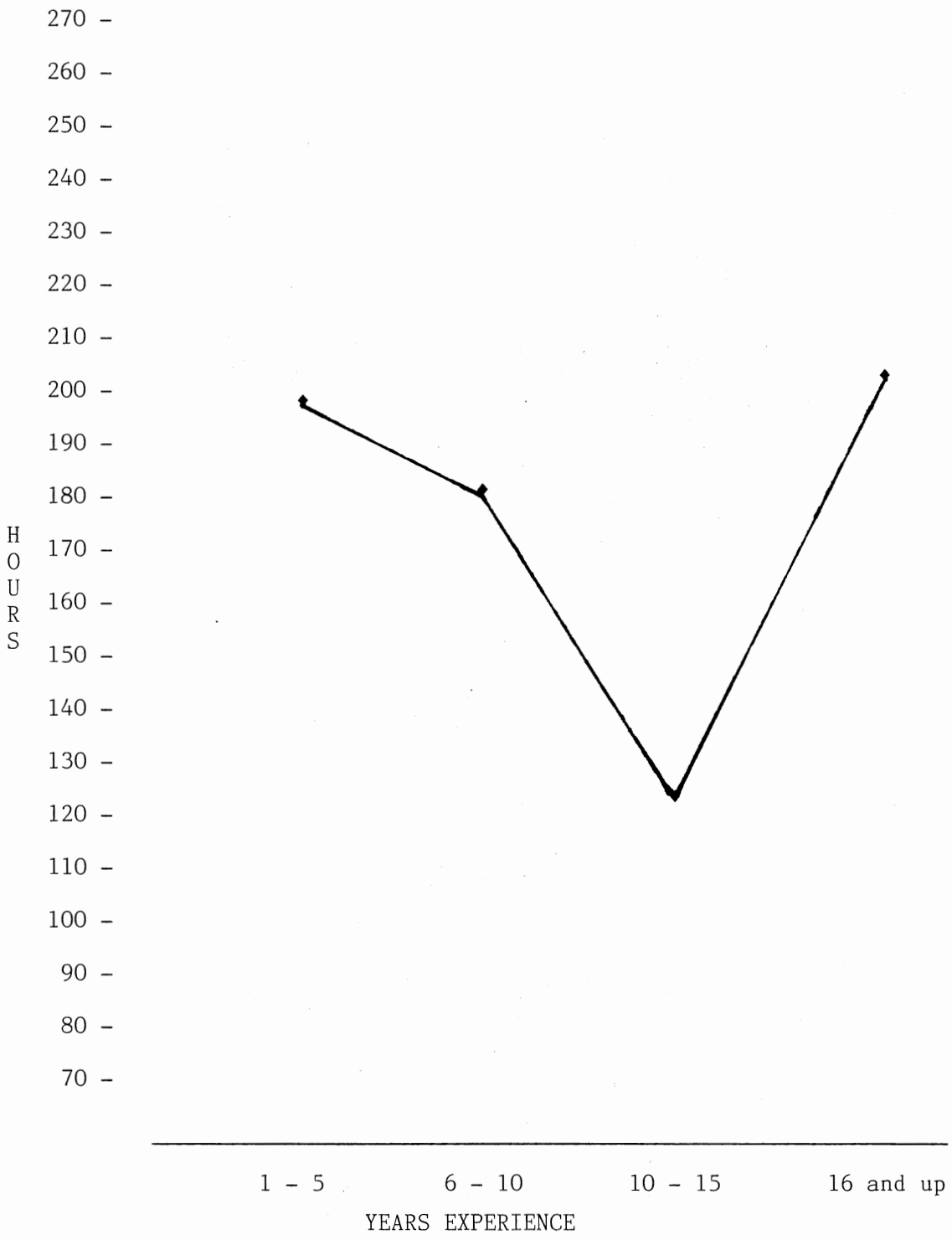

Figure 2. The Relationship of the Number of Years Teaching Experience to the Number of Hours Spent Teaching Agricultural Economics, Marketing, and Farm Management by 42 Teachers in Northwestern Oklahoma

group.

When grouped, it was found that teachers having from one to five years experience taught on an average of 199 hours in these areas. Those with six to 10 years expereince taught an average of 181 periods. The group having 11 years or more in the teaching profession spent an average of 161 periods in these areas combined hours. The 10 to 15 year group decreased to 115.2 average hours taught.

Respondents' Comments

The survey contained an open-ended question. The question was, "Your thoughts on farm management, agricultural economics, and marketing." The following were the responses received to this question:

> The areas of agricultural economics, marketing, and farm management are very important, but it is hard to find time to teach them properly.
>
> Farm management and agricultural economics are the most important part of our agriculture curriculum. However, due to lack of in-service training and curriculum materials, it is hardly taught.
>
> We need more useful material on farm management and marketing.
>
> Farm management, economics, and marketing are very important to the modern farmer and rancher if he is going to be successful in the business.
>
> I feel that more detailed information should be provided to the vocational agriculture teachers in the areas of farm managment, agricultural economics, and marketing.
>
> I feel that these are the areas that we need to strengthen so that agriculture will become profitable once more.
>
> There is more need for farm managment, agricultural

economics, and marketing each year.

These areas are important if administered right.

They are very important to vocational agriculture students.

There needs to be more teaching of these subjects to the teachers coming out of college.

These subjects are very difficult to get the student to understand their importance.

These areas are important but other things are more important.

Complex areas which should be taught in junior and senior years.

Vocational agriculture students will be faced with problems in the areas of farm management, marketing, and agricultural economics for the rest of their lives. Just as well to get started in vocational agriculture.

A wide variety of responses were stated in this area, but most of the teachers remarked how important the areas of agricultural economics, marketing, and farm management were to vocational agriculture students.

Changes in Teaching Patterns and Content

The author of this study wanted to find if the areas of agricultural economics, marketing, and farm management have been changed in terms of periods taught and importance over a period of time.

In order to accomplish this, findings of this study were compared in so far as possible with related findings from a study completed by Triplett in 1961. The latter study was one of about three such projects completed during that same general time period. His study surveyed 40 teachers in the Northwest District on teaching

programs in the areas of farm management, agricutural economics, and marketing. The questionnaire used in Triplett's study was very similar to the one used in this study. The only difference being that there were some different subjects included in the farm management, agriculture economics, and marketing areas.

In 1961, the teachers in Northwest Oklahoma who were surveyed stated that farm management was taught zero to four hours 55 percent of the time. Only 15 percent of the teachers devoted more than 25 hours to the farm management section.

In this survey, 41 percent of the teachers were teaching zero to five hours in farm management, and 16 percent teaching over 21 or more hours in the farm management section.

The main reason cited as to why more time was not spent in farm management in 1961 was, "Taught in Other Enterprises." In this study, the main reason for not teaching more farm management was "Teachers Were Not Sufficiently Trained to Teach More."

In the area of marketing in 1961, 74 percent of the teachers were teaching zero to four hours. In this study, 66 percent were teaching zero to five hours. No teachers were teaching 25 or more hours in the Triplett study in marketing, while this study had five percent who were teaching 21 or more hours.

Federal Agencies and Policies were the least emphasized areas in the marketing subjects in 1961. In 1983, the subject of Contract Delivery was the least stressed subject in marketing.

In 1961, a total of 50 percent of the teachers spent no time on agricultural economics subjects. In 1983, only 39 percent were not teaching one of the agricultural economics subjects.

Records and Records Analysis were the most taught classes in 1961. In 1983, Analysis of S.O.E. Program was the most taught class. The Analysis of S.O.E. Program subjects was not on the 1961 survey. The second most taught subject in this survey was Financial Records.

The average time spent on all three areas in the Triplett study was 112 hours per teacher. In this study, the average time spent in the three areas was 184 hours per teacher. This was an increase of 72 hours.

The main reason chose for not teaching more in Triplett's study was, "Taught in Other Enterprises", and the least reason was, "Not Important to High School Students."

In this study, the most used reason for not teaching a subject was "Do Not Have Enough Time," and the least used reason was, "Not In Vocational Agriculture Cores."

The teachers in the Triplett study that fit into the nine to 15 year experience category spent 50 percent more time in the farm management, agricultural economics, and marketing areas than did first year teachers.

In this study, teachers in their first year of teaching taught on the average, 198.57 hours while the teachers in the 10 to 15 year experience category taught an average of 115.2 hours. This result is just the opposite of the Triplett study.

Triplett did a composite rating of the subjects in farm management, agricultural economics, and marketing. Some of the subjects were different in his ratings. The ratings were as follows: In 1961 (1) Marketing livestock, (2) Effective use of

capital, (3) Records and analysis, (4) Credit, (5) Seasonal marketing, (6) Rates of livestock production, (7) Effective use of labor, (8) Supply and demand, (9) Marketing crops, (10) Rates of crop production.

The biggest change was in the subject of Budgets In the Triplett study, Budgets was ranked 28 and in this study Budgets was ranked eighth.

The sources used to supplement the core was about the same in both studies. In the Triplett study, charts were the second most used, and fell to fifth most used in this study. In this study, bankers were fourth most used, and it was fifth in the Triplett study.

The difference between the two surveys was mainly the time spent by each teacher.

The increase of 72 hours was spread over all three areas.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Purpose of Study

The purpose of this study was to investigate selected features associated with the teaching of subjects within the areas of agricultural economics, farm management, and marketing in certain vocational agriculture departments of the Northwest District of Oklahoma.

Objectives of Study

As stated in Chapter I, the objectives of the study were to (1) determine the total amount of time spent on each subject selected for study; (2) determine the amount of time spent by classes on the areas of agricultural economics, marketing, and farm management; (3) determine the relative importance of the subjects to the surveyed teachers; (4) determine if the surveyed teachers in the Northwest District believe a sufficient amount of time was being spent teaching agricutural ecnomics, marketing, and farm management subjects; (5) determine the reason or reasons why time was not sufficient; (6) determine if there had been any changes in the basic content and patterns of teaching in the areas and subjects under study over the

years; (7) determine if the vocational agricultural curriculum IV was being used sufficiently.

Collection of Data

The teachers that were surveyed in this study were chosen in the following manner. The State Department of Vocational Agriculture had completed a survey on the attitudes of teachers toward the curriculum and on their activities regarding different subjects in the curriculum. The teachers chosen for this survey were the ones that had ranked their ability high or fairly high to teach the farm management subjects covered in the State Department survey. Forty-two teachers were thus chosen.

The group was surveyed through the questionnaire at the 1983 Summer Conference of Vocational Agriculture Teachers in their Northwest District meeting. Forty-one questinnaires were filled out and handed back to the writer at the session. One teacher did not attend and was mailed a questionnaire. All surveys were returned to the writer.

Findings

Table XII was developed to provide an overall summary comparison of hours of instruction in total and by class, teachers' perceptions of sufficiency of time spent, and importance ratings for subjects in the areas of agricultural economics, marketing, and farm management.

The total hours spent per subject ranged from 1,166 hours for Analysis of S.O.E. Program to 53 hours for Input Combinations.

In terms of total hours, the subjects that were taught the most

TABLE XII

SUMMARY OF TIME SPENT, SUFFICIENCY OF TIME, AND IMPORTANCE OF SUBJECT IN AGRICULTURAL ECONOMICS, MARKETING AND FARM MANAGEMENT

	HOURS OF INSTRUCTION By Class				Sufficent Time				Importance
	Total	I	II	III	IV	YES	%	NO	%	Rating
Agricultural Economics										
Economic Systems	123	26	16	39	42	31	74	11	26	1.98
Diminishing Returns	74	14	9	22	29	25	59	17	41	1.83
Opportunity Costs	78	15	16	21	26	23	55	19	45	1.93
Cost Analysis	115	22	26	34	33	28	66	14	34	2.10
Input Combinations	53	6	9	14	24	23	55	19	45	1.83
Supply and Demand	284	67	64	75	78	40	95	2	5	2.62
Budgets	284	55	47	88	94	39	93	3	7	2.71
Price Trends	283	54	50	94	85	40	95	2	5	2.52
Sub-Total	1,294	259	237	387	411	AV	74	AV	26	AV-2.19
Marketing										
Records Analysis	449	101	89	123	136	38	91	4	9	2.74
Seasonal Marketing	216	37	55	76	48	35	83	7	17	2.45
Commodity Futures	186	24	19	70	73	29	69	13	31	2.31
Contract Delivery	120	12	18	43	47	27	64	15	36	2.12
Government Loans	91	7	14	29	41	30	71	12	29	2.24
Government Programs	110	13	20	37	40	31	74	11	26	2.31
Marketing Livestock	456	104	118	117	117	40	95	2	5	3.19
Marketing Crops	371	81	88	100	102	39	93	3	7	3.19
Sub-Total	1,999	379	421	595	604	AV	80	AV	20	AV-2.57

TABLE XII (Continued)

	HOURS OF INSTRUCTION By Class					Sufficient Time			Importance
	Total	I	II	III	IV	YES	%	NO	%	Rating
Farm Management										
Farm Inventories	675	212	151	151	161	41	98	1	2	2.98
Depreciation	345	79	71	104	91	36	86	6	14	2.48
Financial Records	927	260	209	219	239	38	91	4	9	3.38
Loans and Interest	469	93	109	120	147	37	88	5	12	3.17
Insurance	205	16	27	60	102	29	69	13	31	2.12
Tax Management	171	18	17	48	88	24	57	18	43	2.38
Machinery and Equipment Management	484	85	78	159	162	36	86	6	14	2.60
Analysis of S.O.E. Program	1,166	304	283	290	289	41	98	1	2	3.26
Sub-Totals	4,442	1,067	945	1,151	1,279	AV	84	AV	16	AV-2.80
TOTAL	7,732	1,705	1,603	2,133	2,294					

in the areas of agricultural economics, marketing, and farm management were: (1) Analysis of S.O.E. Program; (2) Financial Records; (3) Farm Inventories; (4) Machinery and Equipment Management; (5) Loans and Interest; (6) Marketing Livestock; (7) Records Analysis; (8) Marketing Crops; (9) Depreciaiton; (10) Budgets, and Supply and Demand. These ten subjects accounted for 76.2 percent of all the time spent on the subjects in this survey.

The farm management area was the most taught area with 4,442 total hours in this area which accounted for 57 percent of the total time alloted to these three areas. The marketing area was the second most taught area, with 1,999 total hours, which represent 26 percent of the total time, and agricultural economics was the least taught area with 1,294 total hours which represents 17 percent of the total hours.

Vocational agriculture IV was the class in which the most agricultural economics, marketing, and farm management was taught. Vocational agriculture II was the class in which the least amount of agricultural economics and farm management were taught. The least amount of marketing was taught in vocational agriculture I.

At least one-half of the vocational agriculture teachers stated that they felt they spent a sufficient amount of time teaching each subject. The subject which most teachers stated they were not teaching sufficiently was Input Combinations. The subjects that the teachers stated they were teaching most sufficiently were Farm Inventories and Analysis of S.O.E. program.

Overall, the agricultural economics area was the one that most teachers stated they were not teaching sufficiently, with 26 percent stating they were spending insufficient time. The marketing area was

insufficiently taught in the opinions of 20 percent of the teachers. Farm management was the most sufficiently taught area with 84 percent of the teachers stating sufficient time used.

The importance mean ratings ranged from Financial Records with a 3.38 mean, to Diminishing Returns and Input Combinations each with a 1.83 mean rating.

The subjects that the 42 surveyed teachers felt were most important to vocational agriculture students were in order: (1) Financial Records - 3.38; (2) Analysis of S.O.E. Program - 3.26; (3) Marketing Livestock - 3.19; (4) Marketing Crops - 3.19; (5) Loans and Interest - 3.17; (6) Farm Inventories - 2.98; (7) Record Analysis - 2.74; (8) Budgets - 2.71; (9) Supply and Demand - 2.62; (10) Machinery and Equipment - 2.60; and (11) Price Trends - 2.52.

All 11 of the above subjects fell in the Great Importance category. Thirteen subjects were in the Much Importance category. No subjects were in the categories of Some Importance and No Importance.

Subjects in the agricultural economics area had a mean importance of 2.19 which was in the Much Importance category for the group. The subjects compairing the marketing area had a 2.57 mean importance rating which was in the Great Importance categoary. The highest mean importance rating was for subjects making up the area of farm management with a 2.80 rating which was also in the Great Importance category.

The most often cited reasons why teachers were not spending sufficient amount of time on the subjects of agricultural economics, farm management, and marketing were, "Do not have enough time" and

"Insufficient reference materials."

The two most used sources used to supplement the core were magazines and books.

It was found that 14 or 33 percent of the teachers, who were surveyed had a departmental computer or access to a computer. Of the 14 teachers who had computers, five were using the computers to teach marketing, agricultural economics, and farm management.

A total of 33 teachers or 79 percent of the teachers surveyed stated that they wanted an agricultural economics and marketing section added to the core. The teachers further stated that they wanted the section added to the curriculum for vocational agriculture classes III and IV.

An objective of this study was to determine changes in teaching patterns and content in the areas of agricultural economics, marketing, and farm management which had occurred over a period of time. In order to accomplish this, comparisons were made, where possible, of the findings of the current study with those of a study completed by Triplett in 1961. He surveyed a selected group of teachers in the Northwest District of Oklahoma about the extent of time being used and importance of subjects in the areas of agricultural economics, marketing, and farm management.

The comparison below indicates the top 10 subject areas from the 1961 and current studies. It should be noted that there were some major differences in the subject areas studied.

1961 Study	1983 Study
1. Marketing Livestock	1. Financial Records
2. Effective Use of Capital	2. Analysis of S.O.E. Programs
3. Records and Analysis	3. Marketing Livestock
4. Credit	4. Marketing Crops
5. Seasonal Marketing	5. Loans and Interest
6. Rates of Livestock Production	6. Farm Inventories
7. Effective Use of Labor	7. Records Analysis
8. Supply and Demand	8. Budgets
9. Marketing Crops	9. Supply and Demand
10. Rates of Crop Production	10. Machinery and Equipment Management

The four areas that were in the top ten in both surveys were: Marketing Livestock, Records, Records Analysis, and Supply and Demand.

The average time spent per teacher in 1961 was 112 hours for the subjects offered. In this study, 184 hours per teacher was the average time spent on the subjects in the areas of farm management, agricultural economics, and marketing. This is an increase of 72 hours from 1961 to 1983.

In the earlier study, 55 percent of the teachers taught four or less hours in farm management. In this survey, the figure dropped to 41 percent.

In the 1961 study, 74 percent of the teachers were teaching four or less hours. This figure has dropped to 66 percent in this study. Also, no teachers were teaching 25 or more hours in 1961, but in this study, five percent were teaching 21 or more hours.

In 1961, a total of 50 percent of the teachers surveyed spent no time on agricultural economics subjects. In this survey, only three percent were not teaching an agricultural economics subject.

The main reason indicated for not teaching more agricultural economics, farm management, and marketing in 1961 was, "Taught in other Enterprises." In the current study, the reason given the most often was, "Do Not Have Enough Time."

Conclusions

1. While there is a great variation amoung vocational agriculture teachers on the amount of emphasis that agricultural economics, marketing, and farm management receive, there was a common pattern of placing the greatest amount of emphasis upon subjects in the farm management area. Of particular not was the emphasis placed on the subjects of Analysis of S.O.E. Progarm and Financial Records.

2. Computers are becoming an important resource for the vocational agriculture departments instructional programs.

3. The areas of agricultural economics and marketing would have been taught more if materials related to them had been available in the core curriculum.

4. A majority of the teachers found it necessary to use magazines, books, and bulletins to supplement instructional materials available in the core curriuclum.

5. The areas of agricultural economics, marketing, and farm management account for about one-fourth of the amount of total time available for classroom instruction in vocational agriculture in the

departments studied.

6. The teaching of agricultural economics, marketing, and farm management takes place for the most part with the older vocational agriculture students, particularly those in vocational agriculture III and IV.

7. Agricultural economics, marketing, and farm management areas have increased in importance and use over a period of years in Northwest District vocational agriculture departments.

8. The teachers surveyed felt that overall, sufficient amounts of time were spent teaching the areas of agricultural economics, marketing, and farm management.

9. The following subjects would have been more sufficiently taught if the teachers had been more sufficiently trained: Depreciation, Farm Tax Management, Farm Insurance, Diminishing Returns, Opportunity Costs, Input Combinations, Contract Delivery, Government Loans, and Government Programs.

10. In spite of the fact that a great deal of instruction is taking place in the areas studied, there is room for improving the mix and quality of instruction.

Recommendations

1. It is recommended that the agricultural economics courses that are required for prospective agriculture teachers place more emphasis on the following areas; Depreciaton, Farm Tax Management, Farm Insurance, Diminishing Returns, Opportunity Costs, Input Combinations, Contract Delivery, and Government Loans and Programs.

2. It is recommended that an agricultural economics and marketing section be added to the core curriculum. This curriculum should be put together by Vocational Agriculture teachers in the field, Agricultural Economics faculty, and curriculum specialists. This will help the vocational agriculture teachers with some of the theories in agricultural economics and some of the timing and variations that can occur in marketing of livestock and crops.

3. It is recommended that a list of sources which could be of value in supplementing the core curriculum materials be compiled. This could help teachers better teach the areas of agricultural economics, marketing, and farm management. This source should list certain magazines, books, and bulletins that would help teachers in planning for subject materials and subject contents.

4. It is recommended that some type of computer class be taken by prospective vocational agriculture teachers and vocational agriculture teachers already in the field. This computer literacy class should be taken during college or during inservice training.

5. It is further recommended that a study be completed that incorporates the vocational agriculture teachers emphasis, thoughts, and importance on agricultural economics, marketing, and farm management for all the districts in the state.

It is the belief of the writer that agricultural economics, marketing, and farm management skills are needed more and more each day by students of vocational agriculture. The vocational agriculture teachers that prepare their students for the future must teach agricultural economics, marketing, and farm management. It is hoped that

this study will help teachers look forward to teaching agricultural economics, marketing, and farm management.

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APPENDIXES

APPENDIX A

COVER LETTER

Dear Vocational Agriculture Teacher,

Indicated by your responses on the curriculum survey by the state department, you are teaching or feel adequate when teaching some type of farm management.

This survey is trying to obtain the amount of time being spent on farm management, agriculture economics, and marketing being taught in your school.

I would appreciate you filling out this survey so that I may complete my study on farm management, agriculture economics, and marketing.

The pen is a gift of my appreciation of your time.

Sincerely,

Terry W. Kellner

APPENDIX B

FARM MANAGEMENT SURVEY

Number of years teaching experience in vocational agriculture_____.

Indicate in the areas below the approximate amount of time being spent in each subject each year. If you think that you are spending enough time on each subject, check the yes column. If you think that you are not spending enough time on each of the below subjects, check the no column, and indicate the main reason why. Reasons are lettered A, B, C, etc. Use the appropriate letter to indicate the reason why.

A. Too few students returning to the farm to justify more time
B. Insufficient reference material
C. Teacher not sufficiently trained to teach more
D. Teacher does not feel comfortable with subject
E. Do not have enough time
F. Unable to maintain interest of the students
G. Not important to vocational agriculture students
H. Not in vocational agriculture cores

	PERIODS TAUGHT PER YEAR				Sufficient Time?		If No — Choose Letter(s) From Above
	VoAg I	VoAg II	VoAg III	VoAg IV	YES	NO	
FARM MANAGEMENT							
Farm inventories							
Depreciation							
Financial records							
Loans and interest							
Insurance							
Tax management							
Machinery and equipment management							
Analysis of S.O.E. program							

	PERIODS TAUGHT PER YEAR						
	VOAg I	VOAg II	VOAg III	VOAg IV	YES	NO	If No — Choose Letter(s) From Above
ECONOMICS							
Economic systems							
Diminishing returns							
Opportunity cost							
Cost analysis (fixed, variable)							
Input combinations							
Supply and demand							
Budgets							
Price trends							
MARKETING							
Records-analysis							
Seasonal marketing							
Commodity futures							
Contract delivery							
Government loans							
Government programs							
Marketing livestock							
Marketing crops							

Circle the sources of information being used to supplement the core:

Books Bulletins College notes

Charts Magazines Bankers

Other sources (list)_____

Please rate the following areas in farm management, agriculture economics, and marketing according to the degree of their importance to vocational agriculture students.

	DEGREE OF IMPORTANCE				
	NO 0	SOME 1	MUCH 2	GREAT 3	VERY GREAT 4
FARM MANAGEMENT					
Farm inventories					
Depreciation					
Financial records					
Loans and interest					
Insurance					
Tax management					
Machinery and equipment mangement					
Analysis of S.O.E. program					
ECONOMICS					
Economic systems					
Diminishing returns					
Opportunity cost					
Cost analysis (fixed, variable)					
Input combinations					
Supply and demand theory					
Budgets					
Price trends					
MARKETING					
Records-analysis					
Seasonal marketing					
Commodity futures					
Contract delivery					
Government loans					
Government programs					
Marketing livestock					
Marketing crops					

Circle Answer:

Do you have a departmental computer or access to one? YES NO

Do you use a computer to teach farm management? YES NO

Do you use a computer to teach agriculture economics? YES NO

Do you use a computer to teach marketing? YES NO

Do you think that a unit in farm management, agriculture economics, and marketing should be added to the curriculum? YES NO

If yes, what year or years should it be added? VoAg I, II, III, IV

Your thoughts on farm management, agriculture economics, and marketing.

_____

_____

_____

VITA 2

Terry Warren Kellner

Candidate for the Degree of

Master of Science

Thesis: NATURE AND EXTENT OF AGRICULTURAL ECONOMICS, MARKETING, AND FARM MANAGEMENT INSTRUCTION IN SELECTED NORTHWEST DISTRICT VOCATIONAL AGRICULTURE DEPARTMENTS

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