

CHARACTERISTICS OF BEGINNING FARMERS,  
THEIR FARMS, AND EDUCATIONAL NEEDS

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## TABLE OF CONTENTS

LIST OF TABLES . . . . .	ii
ACKNOWLEDGEMENTS . . . . .	iii
INTRODUCTION AND PROBLEM STATEMENT . . . . .	1
Introduction	
Problem	
The Problem Delimited	
REVIEW OF LITERATURE . . . . .	4
Needs of Beginning Farmers	
Curriculum	
DESIGN OF THE STUDY . . . . .	6
Sample	
The Instrument	
Analysis of Data	
PRESENTATION OF DATA . . . . .	8
Characteristics of Beginning Farmers	
Age	
Marital and Family Status	
Military Status	
Use of Leisure Time	
Tenure	
Education	
Off-Farm Employment	
Family Plans and Goals	
Farm Business Goals and Expansion Plans	
Involvement in Community Activity	
Characteristics of the Farm Business	
Size and Location	
Crop and Livestock Production	
Management Practices, Abilities and Problems	
Marketing Practices	
Membership in Management Associations	
Record Systems	
Management Problems	
Agriculture Mechanics	
Machinery	
Farm Shop	
Areas of Instruction	
Getting Started in Farming	
SUMMARY AND IMPLICATIONS . . . . .	19
Summary	
Implications	
BIBLIOGRAPHY . . . . .	22
Part A	
Part B	
APPENDIX A . . . . .	28
Exhibit A	

## LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Distribution of Beginning Farmers According to Age Groupings. . . . .	8
2. Selective Service Classifications for Beginning Farmers. . . . .	9
3. Leisure Time Activities - Beginning Farmers. .	10
4. Scope of Livestock and Crop Enterprises and Farmers Reporting Enterprise on Farm . . . . .	13
5. Self-Assessment of the Use of Three Production Practices. . . . .	14
6. Number of Farmers Reporting Training and Interest in Training in Seven Areas of Agricultural Mechanics Instruction. . . . .	17
7. Farm Operating Agreements. . . . .	18

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## CHAPTER I

### INTRODUCTION AND PROBLEM STATEMENT

#### Introduction

Getting started and established in farming is a difficult task. Rapid increase in farm size and capital requirements raise the threshold over which one must step to full establishment in a farm business of sufficient magnitude to insure some promise of adequate family income. Increased emphasis on pre-establishment education for farming as well as continuing education for established farmers has given new dimensions to the tasks of agriculture education during the establishment process.

One of the problems in beginning farmer education is to carefully define the group for which instruction is designed. This group has been defined as "young men mostly between 16 and 30 years of age who are out of school, live on farms, and want to become established as farmers."<sup>1</sup> The latitude allowed by this simple description suggests that the program of study for young farmers (or beginning farmers as they are sometimes called) must meet a wide variety of needs. Some needs may be associated more with the processes of growth and maturation than with the process of entrepreneurial establishment. Younger men are often still at home with parents. Many are undecided about occupational choice and are weighing the alternatives of farming, off-farm occupations and military obligations as they plan for the immediate future. There is logic in considering the needs of the young, not yet established young farmer as unique; particularly as these needs are compared to the problems of men who have definitely decided upon farming as an occupational goal and have made progress toward getting established.

Beginning farmers in Minnesota have been more narrowly defined as "out of school individuals or married couples who have decided upon farming as an occupational goal, but who have not yet attained a degree of business establishment that gives them freedom

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<sup>1</sup>Hunsicker, H. N., Planning and Conducting a Program of Instruction in Vocational Agriculture for Young Farmers, U. S. Office of Education, Voc. Div. Bulletin No. 262, Washington, D. C., 1956, p. 2.

to make their own major management decisions."<sup>2</sup> Thus defined, the program of instruction can be organized to deal more directly with the problems of establishment and gaining managerial control. To deal most efficiently with these broad areas of concern, it is necessary to be able to more carefully describe the characteristics of the group, the principal problem areas which the beginning farmer can identify, and the current resources of the farm.

### The Problem

Literature relating personal and farm characteristics of beginning farmers is not very current. The rapid changes in the characteristics of farms during the past decade has made obsolete much of the data which describes the farm characteristics during the establishment period. Likewise, increasing emphasis on post-high school education for prospective farmers has had some effect upon the educational characteristics of those who choose to farm.

The problem for this study is to identify the personal, farm, and resource characteristics of beginning farmers.

### The problem delimited

The problem can be viewed more objectively as a series of highly related questions. The criterion questions to which this study is addressed are as follows:

1. What are the biographical characteristics of those identified in communities as beginning farmers?
2. What is the educational level of the farmer and his family?
3. What kinds of family goals or plans does the beginning farmer verbalize?
4. What are the characteristics of the farms managed by beginning farmers?
5. How do farmers rate their management ability?
6. How do farmers rate their training needs in Ag. Mechanics?
7. Do beginning farmers take an active role in community leadership.
8. How do young farmers get started in a farm business?

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<sup>2</sup> A Guide for Instruction in Agricultural Education, Minnesota Department of Education, Curriculum Bulletin 15, Revised, St. Paul, 1968, p. 77.

It is this list of criterion questions to which the study sought answers. The responses to the criterion questions should have some effect upon the way in which beginning farmer education is organized and the content of the curriculum.

## CHAPTER II

### REVIEW OF LITERATURE

It is not the purpose of this review of literature to provide an exhaustive report of the writings that relate to young or beginning farmers. Rather, the purpose is to give some illustrations of the types of literature and research that have recently been reported.

#### Needs of Beginning Farmers

Farmers training needs are reported in the categories of management, land use, field crops, livestock and poultry and harvesting, processing and machinery.<sup>1</sup> The increasing importance of management and marketing, increased use of science on the farm and continuing growth in agricultural technology will all have influence on the content appropriate to the training categories. A major emphasis must be placed on the management input of the farm business.

Many of the understandings and abilities needed by farmers are related closely to principles of management,<sup>2,3,4,5</sup> The concepts of diminishing marginal returns, marginal analysis economics of size, opportunity costs and other common principles of operation are considered important to the successful operation of the business. Other needs for understandings and abilities are specific to one or more of the production units of the farm business.

The research method used in these studies gathered data directly from farm operators. The results are not specific to

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<sup>1</sup> \_\_\_\_\_, Some Training and Services Needed in Agriculture, AgriResearch Service, U.S.D.A., Washington, D.C., 1964.

<sup>2</sup>Lockwood, Larry, "Competencies Needed by Males Engaged in Dairy Farming," Masters Paper, Iowa State University, Ames, 1964.

<sup>3</sup>Bennett, William, "Competencies in Soil Management and Use of Fertilizers Needed by Farmers," Masters Paper, Iowa State University, Ames, 1965.

<sup>4</sup>Robinson, Norman, "Competencies in Farm Machinery Maintenance Needed by Farmers," Masters Paper, Iowa State University, Ames, 1964.

<sup>5</sup>Harper, Joseph, "Competencies in Swine Production Needed by Farmers," Thesis, M.S., 1968, Iowa State University, Ames.

beginning farmers since establishment was not a criterion in selecting farmers for study.

Except for those and several other similar studies conducted at Iowa State University, there has been no research in the period since 1962 in any of the other States of the Central United States to determine the specific needs for training beginning or adult farmers. Cushman, however, reported the educational needs of beginning dairy farmers in New York.<sup>6</sup> He described the characteristics of the farmers and their farms and outlined some of the important needs of beginning farmers. Farm Management was identified as the most important problem area with keeping records, analyzing accounts, reporting income tax, marketing, increasing efficiency, cost control, credit and using legal instruments as topics of greatest concern.

### Curriculum

The literature about curriculum for beginning farmers shows marked paucity of recent information. There is not, to the authors knowledge, a single study reported in the Summaries of Studies in Agriculture Education since 1962, that deals specifically with curriculum. While there have been several articles in magazines such as Agriculture Education reporting curriculum content, there has been no testing of curriculum patterns through organized research.

It is evident from the response of educators to a training institute for young farmer education that there are still those who have a high interest in young farmer education.<sup>7</sup> It is likewise evident that little attention has been given to any formal pursuit of research in training programs for the establishing farmer. The frequent acclamation of interest in developing beginning farmer education is not matched by the same attention to research and formal development of curriculum for young farmer programs. Neither has there been much attention to innovative forms of program organization.

The informal research which this report contains adds appreciably to the understanding of the problems of establishment which may guide the development of a sound local program. While the sample size and method of selection limit generalization, the method of obtaining data may be tried in other locations to help build a data bank useful for reference in developing beginning farmer education programs.

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<sup>6</sup> Cushman, Harold, "Educational Needs of Beginning Dairy Farm Operators in New York," in Final Report - A Training Institute for Administrative Personnel and Teacher Educators Responsible for Young Farmer Education, U.S.O.E. Bureau of Research, Washington, D.C., 1968.

<sup>7</sup> Rogers, John H. Final Report, A Training Institute for Administrative Personnel and Teacher Educators Responsible for Young Farmer Education, U.S.O.E. Bureau of Research, Washington, D.C., 1968.

### CHAPTER III

#### DESIGN OF THE STUDY

##### Sample

The sampling procedure was designed to give geographic distribution of the sample. Each student teacher during Winter Quarter, 1969, was assigned the task of interviewing two beginning farmers in the school area to which he was assigned. No special scheme was devised to select the interviewees within the area and thus no claim can be made about the representativeness of the sample group or the inference of the information obtained to the larger population of all beginning farmers. The geographic distribution is shown on the accompanying map (Figure 1).<sup>\*</sup> While not randomly selected, the sample is drawn in approximate proportion to the distribution of farmers throughout the State. Because not all students carried out their assignment, only fifty-seven completed questionnaires were returned.

##### The Instrument

As part of a class project in the laboratory period of Agriculture Education 101, Winter Quarter, 1969, the students developed the instrument. Committees were assigned to each of four sections; (1) demographic data; (2) establishment; (3) educational background and plans and (4) course content areas which included farm management, enterprises, agriculture mechanics and socio-civic problems.

They were instructed to adhere to the following guidelines:

1. Ask only those questions which will be useful in planning a beginning farmer program. Avoid questions for which there is no clear-cut use.
2. Organize the questionnaire in sections with questions based upon a central theme or criterion question.
3. Keep the questions simple and unambiguous; limit each question to one thought or concept.
4. Avoid personal questions.
5. Design questions for easy tabulation.

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<sup>\*</sup> See Appendix A, Page 32

The committee reports were assembled into questionnaire form by the author's assistant. The questionnaire in this form was introduced to the class at the next laboratory session where they revised the content. Many items were deleted as they failed to meet the test of the guidelines just reported. The final interview instrument was compiled from the suggestions of the review committees.

To insure some similarity in interview techniques, two students were asked to participate in a role playing demonstration as interviewer and interviewee. The demonstration was extremely well done and provided all class members an opportunity to observe a well planned interview.

Each student was supplied with two copies of the questionnaire and instructed to complete the interviews during the period from February 10 to March 13.

The instrument used is shown as Exhibit 1 in Appendix A.

#### Analysis of Data

The purpose of the study is primarily to describe the sample rather than to infer to the population from which the sample was drawn. Thus, the analysis is confined for the most part, to descriptive techniques. Charts, tables, and simple narrative description are adequate for the purpose of the study. The descriptive presentations are grouped according to the criterion question outlined in the previous section. Some items gathered with the interview instrument did not appear by inspection to be of any significance and are not reported in the chapters which follow.

## CHAPTER IV

### PRESENTATION OF DATA

#### Characteristics of Beginning Farmers

##### Age

The young farmer population is usually described as being between 16 and 35 years of age. The age distribution for the 56 farmers who reported their age to the interviewers in this study is shown in table 1. The average age was 24.7 years.

Table 1. DISTRIBUTION OF BEGINNING FARMERS ACCORDING TO AGE GROUPINGS

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Age	Number
16 - 20	13
21 - 25	17
26 - 30	20
31 - 35	4
36 +	2

---

The small number of farmers in the upper age groups may be related to two factors: (1) The vocational agriculture teachers who were asked by the interviewers to provide a list of young farmers judged persons in these groups to be beyond the establishment criteria which defines the beginning farmer group, (2) The interviewers, since no random selection process was employed, may have chosen to interview families more nearly their own age and thus would have chosen the younger persons from the lists provided by instructors.

##### Marital and Family Status

The group was evenly divided between married and unmarried beginning farmers (28 vs. 29). As would be expected, fewer of the married beginning farmers were in the younger age group. Of the

30 farmers 25 years of age or less, only six were married, while of the 26 men 26 years of age or older, only four remained single.

In general, the wives were considerably younger than their husbands. Wives were, on the average, three years younger than their mate with nine of the wives reported as four or more years younger than their husband. Nineteen of the families had children but none had more than two.

Four single respondents, when asked about family goals named marriage as the high priority goal.

### Military Status

Respondents reported a wide variety of classifications in the selective service system. The draft status is reported in Table 2. Those not responding did not belong to any single age category. The majority of those responding had already fulfilled their obligation.

Table 2. SELECTIVE SERVICE CLASSIFICATIONS FOR BEGINNING FARMERS

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Draft Classification	Number
1A	5
2A	3
3A	1
2C	5
1D	1
1Y	5
Active National Guard	5
Obligation Fulfilled	22
No Response	10

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### Use of Leisure Time

Leisure time activities were generally those most closely associated with the outdoors and those which were facilitated by

rural living. The activities reported are shown in Table 3. Fourteen of the interviewees failed to respond to the question. Either they had no hobby or could not choose one or more activity which they thought dominant.

Table 3. LEISURE TIME ACTIVITIES - BEGINNING FARMERS

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Activity	Number Reporting
Hunting	16
Fishing	9
Trapping	9
Outdoors (Not specified)	4
Sports	6
Reading	2
Golf	1
Travel	2
Bridge	1
Swimming	1
Snow Mobiling	1
Skiing (water and snow)	3
Archery	1
Photography	1
Horses	2
Music	1
Shopwork	5

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Several chose to utilize their farm shop for avocational as well as vocational activity.

## Tenure

The beginning farmers reported an average of 4.5 years of farm operation with a range of from 1 to 11 years. With an average age of 24.7 years, farmers generally measured the time they began farming from the age of 20 years. With almost all completing high school and most fulfilling their military obligation, it can be assumed that few beginning farmers worked at other occupations prior to the time they became engaged in farming.

## Education

With two exceptions, all farmers finished the twelfth grade. Four had completed four years of college (major not specified), six had attended some college but had not received a degree and nine others reported attending some other form of post high school training. Only two reported further vocational training as part of the long term family goal. However, of those couples who were married, twenty placed a high priority on education of their children as a family goal. In most cases they referred specifically to college education rather than simply education. Several families who had no children expressed education for the family they were planning to have as one of the important family goals.

Of the wives, only one had less than twelve years of schooling and three reported education at the college level.

## Off-Farm Employment

The interview instrument did not assess the length of time or the proportion of the working year spent off the farm. In response to the question "Do you have any off-farm employment", twenty-two reported "yes" while thirty-five devoted all their time to the farm business. Few rated off farm employment as a significant factor in getting initially established in the farm business.

## Family Plans and Goals

The question concerning goals and plans was of necessity open ended. Thus a variety of responses were given. Many failed to respond at all to the question. This failure suggesting that either little thought had been given to personal goals and therefore no goals statement could be made or while a goal may have been in mind, the elusiveness of an adequate verbal description prompted the interviewee not to respond.

Of those who did respond, the majority expressed concern about education for their children. Some gave high priority to acquiring a mate while others were interested in expanding the business, improving their living conditions or obtaining more education.

The interview instrument did not provide opportunity to determine if the family had made any attempt to formalize goals by writing them down or had in fact even discussed the goals of the family unit.

### Farm Business Goals and Expansion Plans

All farmers interviewed responded to the open ended question on plans or goals for the business. While there was great variety in the goals expressed, the responses fit generally into two categories. Expansion of the business in one form or another was mentioned by thirty-six of the farmers interviewed. They expressed desire to expand their business by increasing the land area of the farm or by large expansions in livestock numbers. Only a few expressed their goals in absolute terms such as "increase to 800 acres", "add 30 cows to the herd", "expand beef herd to 200 head". Most verbalized their future in very general terms such as "increase the number of acres", "add more cows" or "expand the business".

It is perhaps significant that none of the farmers interviewed expressed future goals or plans in terms of increased efficiency of their present operation. Yet many readily admitted upon further questioning that the production levels and efficiency of their operation was below the average of their community or named efficiency as one of their major management problems. Some used "efficiency" in their goal description, but only as it related to the use of their own labor or the justification for some planned change in buildings and facilities.

The other predominant goal was farm ownership. Twenty-three respondents said they intended to own land. Some were looking forward to owning the home farm or the farm they were operating, while others had no definite farm in mind.

### Involvement in Community Activity

The forty-eight farmers who responded belonged to an average of 2 community organizations. Some did not belong to any while others were members of five or six organizations. Many considered the adult farmer or beginning farmer class as an organization and reported membership therein. Quite a few of the younger respondents still held membership in their FFA Chapter.

Farm organizations (NFO, Farm Bureau, Farmers Union) were most frequently mentioned followed by church activities. Few beginning farmers held a leadership position in the organizations to which they belonged. Since fifty of the members had three or more years of FFA membership, one would anticipate a more active leadership role. There does not appear to be good opportunities for the beginning farmer to exercise his leadership in any formal way in the structure of the organizations to which he belongs.

## Characteristics of the Farm Business

### Size and Location

Since the farms represented in the survey had widespread geographic distribution, measures of size and of location are difficult to compare from farm to farm. The average farm managed contained 327 tillable acres and 59 non tillable acres. Farms ranged in size from 75 total acres to 2360. Forty-two farms were from 160 to 640 acres in size.

The average beginning farmer was six miles from the nearest town with the range being less than one mile to twenty miles.

### Crop and Livestock Production

The scope of the crops and livestock enterprises are commensurate with overall farm size. The enterprise scope for those reporting various crop and livestock enterprises are shown in Table 4.

Table 4. SCOPE OF LIVESTOCK AND CROP ENTERPRISES FOR FARMERS REPORTING ENTERPRISE ON FARM

Enterprise	Number Reporting	Average Scope
Corn	52	101 Acres
Wheat	12	123 "
Oats	45	70 "
Soybeans	30	90 "
Other	48	82 "
Dairy	26	58 Head
Beef	46	46 "
Swine	24	259 "
Feeder Cattle	19	99 "
Feeder Pigs	12	226 "
Sheep	7	43 "
Other	8	--

Thirty farmers reported that they thought their yield on one or more crops was above average for their community. Only six reported one or more crops with below average yields. It was anticipated that their self assessment of yield levels would be more evenly divided between "higher", "average", and "lower" categories.

#### Management Practices, Abilities and Problems

Management level is extremely difficult to measure. One gross proxy measure of the management input can be obtained by a farmers self-assessment of his use of modern practice. To get some indication of the self-assessment of this level of management, farmers were asked to rate their use of three common agricultural practices. The results are reported in Table 5. Although asked to add other practices to the list, few chose to do so.

Table 5. SELF-ASSESSMENT OF THE USE OF THREE PRODUCTION PRACTICES

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Practice	Self-Assessment		
	Above Average Use	Average Use	Below Average Use
Use of Commercial Fertilizer	28	23	6
Use of Insecticides	13	25	13
Application of Herbicides	25	21	10

---

It can be observed from Table 5 that in general the beginning farmers rate their own use of these practices higher than their neighbors. Only for the use of insecticides was their rating balanced between above and below average ratings. This rating is consistent with their higher rating on crop yields.

#### Marketing Practices

No marketing practice pattern was evident from the surveys which might be useful in guiding a study of marketing for the beginning farmer group. A majority of the farmers reported that most of their products were sold at local markets (37), while six reported the terminal market, two reported contracts and twelve reported various combinations of marketing alternatives as the chief means of product disposal.

Buying practice was evenly divided between cash and credit as the chief means of financing purchases (twenty-two in each category), while eleven farmers reported using both cash and credit for the majority of their purchasing.

#### Membership in Management Associations

Thirty-five reported they were members of a management association. The kind of association to which they belonged was not described, but it can be assumed that almost all were members of the vocational agriculture adult farm management program. Such a program was taught in each of the sample areas and the list of prospective interviewees was prepared by the vocational agriculture teacher. With less than 10 per cent of the commercial farm operators enrolled in management programs, the high enrollment rate of this beginning group is atypical of normal farm operation.

#### Record Systems

About 80 per cent reported they kept their farm records in the Minnesota farm account book or similar record book prepared by the Thief River Falls Area Vocational School. Seven reported using their own system of journal or ledger accounting. Only one farm reported using one of the available mail-in monthly systems.

#### Management Problems

Beginning farmers define their management problems in a variety of ways. When asked "what problems dealing with farm management do you find most pressing at present?", most responses fit into five general categories: (1) Almost half of the responses referred to problems of production. Such things as feeding, disease control and herbicide use were frequently mentioned. This category may be classed as relating primarily to the adaptation of technology rather than decision making. (2) Many expressed concern about farm records and accounts. Here the references were most frequently about timeliness and accuracy. (3) How to increase efficiency, increase net production, or control production costs was the third most popular problem. (4) Many have problems with credit and finance. A frequent problem area was the lack of adequate capital or the inability to get enough capital to get established or expand existing businesses. (5) Still another group were concerned with problems of expansion; how should the business be expanded, to what size and when? Others were perplexed by problems of building and facility expansions to accompany planned increases in livestock and crop operations.

Several other problems were expressed which were unique to a single farm. Only a few made no response to the initial question.

## Agriculture Mechanics

### Machinery

Only thirteen of the farmers thought the machinery on their farm was inadequate. Many of these farmers were doing some or all of their work by custom hire in order to supplement the machines they owned. Only a few of those reporting their machinery as adequate utilized custom hiring as a means of securing additional machine use. The questionnaire did not facilitate reporting custom work hired by crop or by machine function nor permit those who made very limited use of custom hired machines to report this fact.

### Farm Shop

Contrary to expectation, a vast majority reported they had a farm shop. Forty responded yes to the question "Do you have a specific farm shop?", while sixteen reported "no".

Judging from the number who reported having numerous large shop tools, the farm shops of the beginning farmers generally are well-equipped. They reported an average of four major shop tools per farm with those farms not having shops generally reporting fewer tools. While the number of tools does not measure the utilization of the shop facility, it nevertheless is some indication of the potential usefulness of the facility for maintenance and repair of the production components.

### Areas of Instruction

Farmers were asked if they had received any formal instruction in each of seven areas of agriculture mechanics. They were further asked to indicate if they desired instruction in each of the areas. The responses are given in Table 6. Those not responding yes either checked the item "no" or failed to respond. There appears to have been high training emphasis on metal work and welding. The areas in which farmers desire the most instruction are Engine Repair and Maintenance and Soil and Water Management. With half or more of the respondents indicating a need for more training, greater emphasis should be placed on agricultural mechanics instruction for post-high youth and adults. The high incidence of training in welding and metal work which farmers have already received indicates that more emphasis need be placed in the other instructional areas in future training programs.

Table 6. NUMBER OF FARMERS REPORTING TRAINING AND INTEREST IN TRAINING IN SEVEN AREAS OF AGRICULTURAL MECHANICS INSTRUCTION

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Instruction Area	Number Received Training	Number Desiring Training
Woodwork and Building Construction	30	28
Metal Work and Welding	46	27
Farm Equipment Calibration and Adjustment	23	29
Engine Maintenance and Repair	23	36
Farm Electrification	24	29
Concrete and Masonery	27	21
Soil and Water Management	25	36

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#### Getting Started in Farming

When asked how they got started in farming, most (forty-one) reported that they were in a partnership or had some other arrangement with their father for operating the farm. Seven reported that the FFA had been a significant influence in getting them started and listed the FFA as the means of initial establishment. Others (ten) began farming by renting while seven reported that working had been a means of entry. Several of the methods were offered in combination. FFA was most frequently mentioned in combination with some other establishment method.

While the group reported farming for 4.5 years, the partnership still was the most common form of operating agreement. Table 7 reports the kinds of operating agreements currently in effect for the fifty-seven respondents.

Table 7. FARM OPERATING AGREEMENTS

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Type of Agreement	Number Reporting
Partnership	25
Owner	7
Cash Rent	9
Share Rent	12
Wages	3
Other	1

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Since only seven reported begin owners, a report of the method of finance of their purchase has little meaning. References from other sources would need to be consulted in order to determine the frequency with which various kinds of financial arrangements may be utilized for the purchase of a farm.

## CHAPTER V

### SUMMARY AND IMPLICATIONS

#### Summary

The fifty-seven interviews of beginning farmers were conducted in over twenty schools which served as student teaching centers during the Winter Quarter, 1969. A survey or interview instrument was devised as part of a class exercise in Ag. Ed. 101-Young Farmers in Agriculture.

Results of the surveys were tabulated in the research office of the Department of Agricultural Education.

Beginning farmers can be described in a variety of ways. In this study, the beginning farmers were generally less than thirty years of age. While half the farmers were married, families were still very young and averaged less than two children per family.

When expressing goals for the farm business, the most frequently mentioned was expansion. Few expressed goals in discrete terms nor did they specify production or efficiency levels.

Farms vary widely in size but most could be considered economically sized units. The distributions of crop and livestock enterprises was not atypical of farms from the areas represented in the survey. Off farm employment was reported by many respondents indicating that there were at least some seasons of the year when the farm business did not demand full time employment.

Problems in management were often related to specific enterprises although problems of finance, credit, business expansion, increasing efficiency and farm records were frequently mentioned.

Training in mechanics was widespread with the most training reported in metals and welding. The two most frequently mentioned training needs were in engine maintenance and repair and in soil and water management.

## Implications

Programs for beginning farmers may need to be divided between those who have made an occupational choice with progress toward establishment and those who are still exploring their future occupational goals.

Programs of instruction must be a combination of management, mechanical skills and technical instruction, since these are all areas in which beginning farmers express concern. The nature of their concerns in management, however, suggest that the regular management education program for adults needs to be supplemented with special sessions for beginning farmers. There are many problems in getting established, establishing and using credit and business expansion which appear to be unique to this group.

Judging from their expressed problem areas, an instructional program should encompass the following kinds of activities:

### 1) Farm Management Instructions

Because many problems dealt with records, accounting and use of analysis data, it would appear that beginning farmers could and should be enrolled in the regular farm management series offered for adults. The recognized content of the management series is directed toward many of the problems beginning farmers express. The emphasis on family and business goals is highly important since this area appears to be given little emphasis in the farm business.

### 2) Problems in Business Establishment

Getting started in farming is difficult. Beginning farmers classify many of their problems as those dealing with establishment. A course series that deals with getting established, selecting a farm, obtaining credit, expanding the small business and similar topics pertinent to the beginning farmer, should be offered. Because the time available to devote to education is limited by business responsibilities, these topics may best be organized in a series that runs for two or more years.

While beginning farmers did not specifically indicate socio-civic topics as essential to their business, the apparent lack of involvement in community organizations and civic activity, may indicate a need to introduce some topics that will develop civic responsibility and better fit the beginning farmer for his eventual leadership role.

### 3) Technology in Crop and Livestock Production

Many expressed concern with specific kinds of enterprise production problems. Instruction should be provided in the enterprises to build a better background of technical information. The kinds of problems expressed, however, do not appear to be unique to those just getting established. An instructional program open to both beginning and adult farmers may offer the kinds of opportunities for problem solving which were frequently expressed. In this respect, the counsel of older farmers who may have experienced many of the same kinds of technical problems would be beneficial. Interchange of experiences would be facilitated if beginning and adult farmers met in the same instructional group.

### 4) Agriculture Mechanics

All areas of agriculture mechanics instruction were listed as being desirable. Here, as with enterprises, the problems did not appear to be unique to those getting established. An outstanding agriculture mechanics program open to all farmers, regardless of the degree of establishment, appears to be a reasonable means of providing the opportunity for skill development. The large proportion of farmers who had already had some training in metals and welding would suggest that the emphasis in other areas of instruction be increased. A survey of farmers in a community as to their most pressing need for mechanical skills could help pinpoint the kind of instruction that should be given high priority.

### 5) On Farm Instruction

While respondents do not suggest that their instruction should be carried out on the farm, the nature of their problems is some evidence of the unique qualities of their instructional needs. Experience in the Adult Farm Management program has demonstrated the effectiveness of on farm instruction in carrying the classroom activities to the "doing" stage on the farm, and in dealing with problems that are unique to an individual.

Beginning farming education can be characterized as an area of widely diverse problems in widely diverse business environmental settings. This study of the beginning farmers demonstrates some of the principal problem areas which are expressed by young men in the process of establishment. The suggestions for program development are made in the hope that beginning farmer instruction will once again be emphasized in vocational agriculture departments in Minnesota. Perhaps ways will be found to supplement the very excellent programs for established farmers with educational offerings related to the problems and progress of beginning farmers.

## BIBLIOGRAPHY

The selected bibliography reports a wide variety of materials about beginning farmers and beginning farmer problems. Only a few of the articles listed have been cited in this study. Often teachers find it useful to have a bibliography which they may use to locate materials which may be of use in planning and developing programs for their own school. It is with this purpose in mind that this bibliography has been prepared.

The list is in two parts. Part A lists references that may be useful in planning, organizing and conducting beginning farmer programs; Part B lists references which are related to the general problems of getting established in the farm business.

### PART A

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## PART B

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## APPENDIX A

Ag Ed 101 -- Winter, 1969  
 Special Class Project  
 Student Survey

## EXHIBIT 1

## BEGINNING FARMER SURVEY FORM

PERSONAL

Name \_\_\_\_\_ Phone No. \_\_\_\_\_ Date \_\_\_\_\_  
 Address \_\_\_\_\_ Military status \_\_\_\_\_ Age \_\_\_\_\_  
 Single ☐ Married ☐ . Wife's name \_\_\_\_\_ Age \_\_\_\_\_  
 Children: No. of boys \_\_\_\_ Ages \_\_\_\_\_ No. of girls \_\_\_\_ Ages \_\_\_\_\_  
 Highest school grade completed: self \_\_\_\_\_ wife \_\_\_\_\_  
 Number of years of high school agriculture \_\_\_\_ Have you attended a vocational  
 school since graduation from high school? Yes ☐ No ☐ If yes, how  
 long? \_\_\_\_ months. Courses taken \_\_\_\_\_  
 Number of years of participation in Beginning Farmer Program \_\_\_\_\_  
 What are your educational plans for your children? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Farm business goals and expansion plan: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Farm family goals: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SECURITY

Do you think you have adequate insurance coverage?

	<u>Yes</u>	<u>No</u>	<u>Don't know</u>
Property insurance	_____	_____	_____
Life	_____	_____	_____
Fire	_____	_____	_____
Health	_____	_____	_____



CROP HISTORY--MOST RECENT YEAR

<u>Crop</u>	<u>Acres</u>	<u>Field</u>		
		<u>Above Ave.</u>	<u>Average</u>	<u>Below Ave.</u>
<u>Corn</u>	_____	_____	_____	_____
<u>Oats</u>	_____	_____	_____	_____
<u>Wheat</u>	_____	_____	_____	_____
<u>Soybeans</u>	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

<u>Kind of livestock</u>	<u>No.</u>	<u>Kind of livestock</u>	<u>No.</u>
Dairy cattle	_____	Feeder pigs	_____
Beef cattle	_____	Sheep flock	_____
Swine	_____	_____	_____
Feeder cattle	_____	_____	_____

MANAGEMENT

How often do you test your soil? \_\_\_\_\_ Do you keep production records? Yes \_\_\_ No \_\_\_

Do you participate in government programs for: Diverted acres \_\_\_ Feed grains \_\_\_  
others \_\_\_\_\_

How do you rank yourself in the following practices?

<u>Practices</u>	<u>Above ave.</u>	<u>Average</u>	<u>Below ave.</u>
Fertilizer application	_____	_____	_____
Insecticide application	_____	_____	_____
Herbicide application	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

How do you market most of your products? Contract ☐ Local market ☐

Terminal ☐. How do you do most of your buying? Cash ☐ Credit ☐

What problems dealing with farm management do you find most pressing at present? \_\_\_\_\_

#### AG. MECHANICS

Do you consider your machinery adequate? Yes ☐ No ☐

Machinery arrangement: Owned ☐ Custom hired ☐ Partnership ☐

Do you have a specific shop? Yes ☐ No ☐. What equipment is available?

<u>Equipment</u>	<u>Yes</u>	<u>No</u>	<u>Equipment</u>	<u>Yes</u>	<u>No</u>
Power saw	___	___	Gas welder	___	___
Power drill	___	___	_____	___	___
Arc welder	___	___	_____	___	___
_____	___	___	_____	___	___

Have you had any formal instruction and/or desire any formal instruction in:

<u>Farm Mechanics Areas</u>	<u>Have had</u>		<u>Desire</u>	
	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
Woodwork and building construction	___	___	___	___
Metal work and welding	___	___	___	___
Farm equipment calibration & adjustment	___	___	___	___
Engine maintenance and repair	___	___	___	___
Farm electrification	___	___	___	___
Concrete and masonry	___	___	___	___
Soil and water management	___	___	___	___

What do you consider your immediate problems in farm mechanics?

EXHIBIT 1

