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The conditions of entry into farming in Iowa: 1959-1960

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THE CONDITIONS OF ENTRY INTO FARMING

IN IOWA: 1959-1960

by

Thomas Clark Jetton

A Thesis Submitted to the
Graduate Faculty in Partial Fulfillment of

The Requirements for the Degree of

MASTER OF SCIENCE

Major Subject: Agricultural Economics

Signatures have been redacted for privacy

Iowa State University
OF Science and Technology
Ames, Iowa

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INTRODUCTION

The agricultural sector of the United States economy has been under strong adjustment pressures for the past three decades. This pressure has been brought about largely by two factors. First, the natural increase in farm population has been larger than needed to maintain the population level, that is, more children were born to farm families than needed for replacement purposes. Second, technological advances have brought about a reduction in the labor force required in the agricultural sector.

These technological advances have had two effects, one labor saving and the other output increasing. Labor saving technological advances have had the effect of allowing the same amount of work to be done with fewer units of labor, i.e., fewer man-hours. On the other hand, the same labor saving advance would also have the effect of allowing more work to be done with the same number of labor units input.

Output increasing technological advances have had much the same effect on labor requirements per unit output. Advances of this type have allowed the production of more units of product with the same labor input, or, vis-a-vis, the same amount of product with less labor input.

Both advances have had the same effect, that is, to reduce the labor requirements in farming as well as to necessitate larger farms in order to take advantage of the economies to be gained from these advances.

Table 1 shows the effects of these two types of technological advances.

It can be seen that since 1930, the index of farm labor productivity has increased nearly 400 percent. Although the index for livestock and livestock products has not risen as rapidly as that for crops, both might be considered rather spectacular increases.

Table 1. Index of farm labor productivity: 1930 to 1960^a
(1947 = 49 = 100)

Item	1930	1940	1945	1950	1955	1958	1960 (prel.)
Index of farm output per man hour ^b	53	67	84	112	149	188	205
All livestock and products	76	80	91	107	130	144	157
All crops	50	67	85	114	148	208	222

^aStatistical Abstract of the United States, 1961 (17, p. 644).

^bIndex of farm output (production available for human use) divided by index of man-hours worked.

Table 2 shows the manner in which the farm population has decreased and the manner in which the number of farms has decreased since 1930. As can be seen, farm population has decreased by nearly one-third since 1930 while the number of farms has decreased by nearly one-half.

The rapid advances in agricultural technology and the excess of natural increase over maintenance needs has produced an acute population adjustment problem. It has been necessary for persons to move from the

agricultural sector of the economy to other sectors of the economy at an ever increasing rate. That this process has been going on can be seen in Table 2. Not only has the excess natural increase over maintenance needs left the agricultural sector but the agricultural population has declined to only a little more than two-thirds of the 1930 numbers.

Both types of technological advances have also had the effect of increasing the capital requirements in farming. As machines became more plentiful, they also became larger and more expensive. During the past two decades, advances have been very rapid in fertilizers, plant and animal breeding and chemical insecticides and pesticides until at the present time agriculture has become a highly capital intensive industry. It has been estimated that between 1940 and 1961 farm assets increased from 53.0 billion dollars to 199.3 billion dollars (17, p. 628). During this period, the value of farm machinery on farms increased from slightly more than 3 billion dollars in 1940 to more than 18 billion dollars in 1960 (17, p. 639).

Thus as the process of adjustment continues, that is, as farms continue to get larger and larger, and as agriculture becomes still more highly capital intensive, there will be fewer farms with such higher levels of capital per farm. These two trends make it difficult for the potential farm operator to acquire the necessary capital for carrying on the farm business. With the pressures for farm enlargement, it is also difficult for the potential operator to get control of land since he is in competition with many others for the control of any land which becomes available through the death or retirement of an established farm operator.

Iowa, being primarily an agricultural state, has been experiencing

Table 2. Farm population and number of farms: 1930 - 1960^a

Item	1930	1940	1945	1950	1955	1959	1960
Farm population (1000)	30,529	30,547	25,295	25,058	22,438	21,172	20,541 ^b
Percent of total population	24.9	23.2	18.1	16.6	13.6	12.0	8.7
Number of farms (1000)	6,546	6,350	5,967	5,648	4,654	4,097	3,811

^aStatistical Abstract of the United States, 1962 (18, p. 608).

^bComparable to 1959 estimate. Table does not show new definition figures for 1960.

such the same problems as other agricultural areas of the country, but the problems have been acutely felt because of the primarily agricultural character of the state. Young persons have been involved in migration away from the farm to a greater extent than older persons because they tend to have fewer family ties and thus are more mobile. Too, for the most part young persons do not have an occupational commitment and therefore are free to develop occupational skills in industries other than farming.

Taking account of the adjustment in farm size and the decrease in farm labor requirements, Wakeley, writing in 1957, (20, p. 35) estimated that for the 1950 - 60 decade ".... approximately 40 percent of farm boys reaching age 25 during the decade will not be needed on Iowa farms. During the 1970 - 1980 decade, this problem of young people entering the labor force promises to become more pressing than it is for the present time because of the greatly increased number of births during the 1945 - 55 decade".

Kanel estimated (9, p. 8), using 1945 and 1954 census data, that the proportion of young farm men who found farm employment during that period was about one-third. This would be considerably smaller than the 60 percent estimated by Wakeley.

It is generally held that opportunities for farm employment are limited, but there seems to be some disagreement over just how limited they actually are.

Significance of the Study

If one assumes that 60 percent of the farm boys reaching age 25 were

needed on Iowa farms during the decade 1950 - 1960, what were the conditions under which they entered farming? What effects did the changes in capital requirements have on the relative ease or difficulty in beginning farming operations? What were the characteristics of the beginning operator and the beginning operation?

Answers to the above questions are essential to an understanding of the problems faced by the beginning farm operator. Without an understanding of these problems, one of the areas of greatest agricultural adjustment is ignored.

It is hoped that this study will be of some help in understanding the problems faced by beginning farm operators in setting up their initial operation.

Objectives of the Study

The broad objective of the present study is concerned with describing the beginning farm operator and his initial farm operation. In order to best do this, this broad objective was broken down into five specific objectives. These objectives are as follows: (1) to determine the number of persons who began farming operations in the years 1959 and 1960; (2) to investigate and describe the background and personal characteristics of the beginning farm operator; (3) to investigate and describe the characteristics of the beginning farm operation with regard to tenure, business form, family arrangements and resource base; (4) to investigate the financial position of the beginning operator and the amount of resources he controls at or near the time he begins farming; (5) to determine the role gifts and other family assistance play in helping the beginning farm

operator get started in farming.

The present study was not intended to be a definitive study of all problems faced by beginning farm operators, but as a pilot study to point out areas where further investigation is needed to fully understand the problems of the beginning farm operator today.

Where warranted, relationships which appear statistically significant in view of the data at hand will be pointed out. In some cases, a hypothesis or suggestion for further investigation will be advanced when the data suggest such a hypothesis but are not conclusive due to data limitations.

It is hoped that the present study will be valuable as a guide for further study in those areas where it cannot be definitive.

Definition of Terms

The major terms which are used throughout the study are defined below. In addition, a few terms with specialized meanings are included. Those terms which are used in a specific context by a quoted author are defined where quoted.

Beginning farm operator or beginning operator --- a person who operated a farm for the first time for himself (or in partnership) by putting in his first crop in the spring of 1959 or 1960. Actual movement to the farm may have taken place at any time after the 1958 (1959) crop was in. An exception to this rule is the person who had at some previous time operated a farm, then went out of farming and disposed of all his equipment. To qualify as a beginning farm operator, this person must have changed his vocation and only returned to farming in 1959 or 1960.

Beginning operation --- the farm business which the beginning farm operator operated during the first year he farmed or the first year he returned to farming.

Beginning partner or partner --- a person who operated a farm for the first time jointly with another person or persons. In this sense he is not the sole operator, as he shared decisions with other persons. The partner associated with the beginning partner is usually referred to as the "other partner" or "senior partner".

Beginning single operator or single operator --- a person who operated a farm for the first time, for himself and not in cooperation or jointly with another person or persons. In this sense he is a sole operator.

Business form --- the legal form of the business, either a single operatorship or a partnership. The partnership need not have been a legal partnership in the sense that a written arrangement was extant, however, the partnership must have existed in fact.

Capital position or financial position --- the amount of money which the beginning operator could have realized had all assets owned by him been converted to cash and all liabilities paid. This is measured by the net worth of the beginning operator.

Family arrangement tenure --- found in partnership cases, an arrangement where the beginning operator owns no land and rents none. All land operated is owned by the other or senior partner.

Family members --- persons related to the beginning farm operator,

living in his household and dependent upon him for support. Does not include the partner associated with the beginning operator in partnership cases.

Farm --- all tracts of land, contiguous or non-contiguous, under the operation of a single individual or group of individuals in partnership. If the tract or tracts were less than 10 acres in size, at least \$250 worth of agricultural produce must have been sold from the place in a given year; or, if the tract or tracts were 10 acres or more in size, at least \$50 worth of agricultural produce must have been sold from the place in a given year.

Gifts --- all gratuitous receipts of property, either real or personal or the use thereof by the beginning farm operator.

Non-farm work or off-farm work --- all work done off the farm in an occupation not related directly to the farm business of the beginning operator. Does not include farm work done on other farms.

Partnership --- operation of a farm by two or more persons who jointly provide labor and share the management function of that farm. These persons need not have had a written agreement nor need they have been related. Did not include landlord-tenant arrangements in which the land is actually rented by the tenant who was the sole operator.

Significant or statistically significant --- use of either of these terms shall mean a finding of statistical significance at or beyond the 5 percent level of probability.

Single operatorship --- operation of a farm by a sole operator who provides all labor either himself or hires such labor as required for the operation of the business, and provides the management function for the farm business.

Other terms of a specialized nature will be defined where used in the text.

EMPIRICAL BASIS FOR THE STUDY

Sampling Procedure

The universe sampled, for this study, was the open country zone of Iowa as delineated on the current Master Sample materials for the state of Iowa. The universe was stratified into six strata corresponding to the State Economic Areas as defined by the Census of Agriculture of 1954 (15, p. 153). Each stratum and each county within stratum was sampled proportional to size in terms of the number of farms as given by the 1959 census. An approximately uniform sampling fraction of $1/24,255$ was used in all strata. Thus a self-weighting stratified single stage sample of 600 segments was drawn.

The number of segments drawn per county varied from three to seven.

The sampling unit

It was expected that approximately one and one-half to two percent of the farms provided a start for a beginning operator in any given year. Since the study was to be conducted for the two year period 1959 and 1960, it was expected that approximately 100 beginning farm operators would be found in each year or about one new operator per three segments (clusters).

The segments were of expected size 12, meaning that on the average, 12 farm households would be found in each segment. These segments ranged from three to five sections in area.

Field procedure

Interviewers were given county maps with the segments outlined on them. Since the primary interest of the study was to locate beginning farm operators, the interviewers were instructed to make use of neighbor

information, that is, the interviewer was instructed to stop at one house in each section in the segment and inquire about all other houses in that section. However, in practice, almost one-half the households were canvassed.

To ensure accuracy in the sample, the interviewer made a detailed record of each house in the segment for each year of the four year period 1958 - 1961. In addition, the interviewer determined whether anyone who operated a farm in the segment had lived in a town or city and if so, whether the northwest corner of that farm was within the segment. This procedure was followed to avoid omitting operators who lived in a town or city, but whose headquarters, for sample purposes, were within the segment.

Further, the interviewer completed an additional form for each change which appeared, that is, any moves which any operator had made, any change in the business form of a farm or the status of the farm, such as farm to non-farm or non-farm to farm. This additional form was completed for each change which occurred in the four year record of each house.

In this manner, it was determined if a farm operator began farming operations in the years 1959 or 1960. In those instances where it appeared that a new operator had started farming in 1959 or 1960, the interviewer was instructed to go to the house of that person and to determine positively that farming operations began in 1959 or 1960. In those cases in which it was determined that farming operations began in either of those years, a complete questionnaire was taken concerning all operations on that farm during the first year in which the operator farmed.

The questionnaire

The questionnaire which is shown in the Appendix was constructed in such a manner as to give as complete a picture of the beginning farm operator and his operation as possible. Although not all information obtained with the questionnaire was used in this study, the following nine areas of information basic to this study were investigated:

1. The background, family characteristics and personal characteristics of the beginning operator;
2. The land input and tenure arrangements of the beginning operation;
3. Crop inventories for the beginning of the year in which the operator started farming and gifts of crops;
4. Livestock inventories for the beginning of the year in which the operator started farming and gifts of livestock;
5. Farm machinery inventory;
6. Labor use by the beginning operator and his family;
7. The market value of the real estate (farm) per acre;
8. Non-farm assets and liabilities of the beginning operator;
9. Personal views of the beginning operator.

With information of this nature it was possible to examine the personal characteristics of the beginning operator, the resource base of the beginning operation, the financial position of the operator and family assistance received by the beginning operator in setting up his operation.

Results of the field work

As a result of the field work, 191 interviews were obtained from the total of 206 operators who were identified as having started farming in 1959 and 1960. Table 3 shows the numbers found in each year and the

reasons interviews were not obtained in all cases.

No attempt was made to obtain substitutes for those who were not interviewed and no attempt was made to contact those who had moved out of the state. In five instances interviews were not taken since the beginning operator was considered to be atypical. In one case, there was a very small land base, a greenhouse. In four other cases, a widow had taken over a farm upon becoming widowed. Although technically in these five cases, these persons were operating a farm for the first time for themselves, they were used only for the sample estimates of numbers of beginning farm operators.

Analytical Procedures

For analytical purposes, both years were treated as a single large sample since no basis could be found for concluding that the operators who began operations in 1959 were significantly different from those who began operations in 1960.

As a result of a priori considerations, three factors were thought to have major effects on the operation of the beginning operator, the size of the resource base, the problems associated with setting up the initial farm business and the amount and kind of assistance which might be received in setting up the business.

These three factors were considered to be the geographic area where the beginning operation was started, the age of the beginning operator and the business form under which the beginning operator set up his operation.

Although it would probably have been more accurate to use strata as the area for analysis, the small numbers of operators found in Stratum IV,

Table 3. Number of beginning operators found and number of beginning operators in the sample

Result of beginning operator contact	Number of operators found		
	1959	1960	Both Years
Number of interviews obtained	88	103	191
Interview not arranged	2 ^a	2 ^a	4 ^a
Refusals	1	2	3
Killed before interview	0	1	1
Interviews not taken	2 ^b	3 ^b	5 ^b
Number as a result of subsample	2 ^c	0	2 ^c
TOTAL NUMBER BEGINNING OPERATORS FOUND	95	111	206

^aInterviews not arranged because operator could not be located or had moved out of state.

^bIncludes four widows who were considered atypical. Also includes the greenhouse case.

^cOne beginning operator was found in a segment in which a large number of houses were found. Because of this large number of houses found, only one-third of the segment was sampled. Therefore two additional beginning operators were inferred.

V and VI and the large number found in Stratum I and II would have added to the complexity of the analysis. Therefore it was decided to use an area analysis in which approximately equal numbers of beginning operators would be contained in each area.

In order to get approximately equal numbers in each area, it can be seen from Figure 1 that it was necessary to have widely different area sizes. Whereas Area I is approximately encompassed by State Economic Area IV as defined by the Agricultural Census of 1954, Area II includes nearly one-third of the state. Also, Area III is very large and encompasses nearly all the southern half of the state.

Also shown in Figure 1 are the numbers of beginning operators found through the sampling procedure, by county.

Again, because of the relatively small numbers of beginning operators found, it was decided to use an analysis of age factors based on discrete age intervals rather than an analysis of the continuous age variable.

It was considered that the characteristics of the beginning operator in the age group under 24 years of age would be different from the characteristics of the group 24 to 34. Also, the characteristics of operators in the age group over 34 were thought to be different than either of the other two age groups.

Using this basis for classification into age groups, two age groups of approximately the same size were obtained, leaving the highest age group as a residual.

It is apparent that the business form, single operatorship or partnership, would have a great bearing on the establishment of the beginning operation. The widely different numbers of single operators and partners

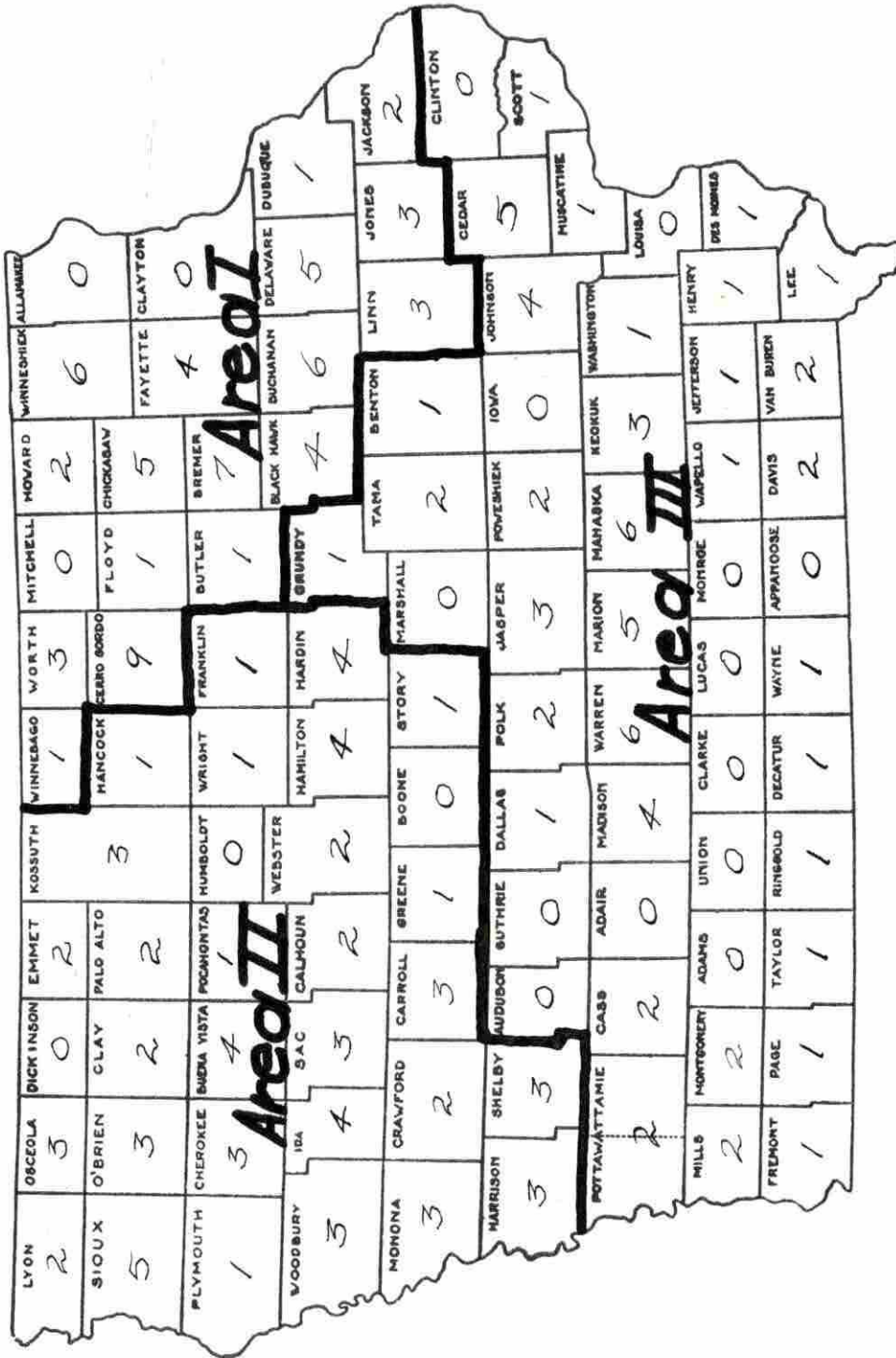


Figure 1. Location of geographic areas used in the test and sample numbers of telephone operators by county

complicated statistical analysis somewhat but proved to be quite useful.

Estimation procedures

Two types of estimation procedures were used. To determine total and variance of the numbers of beginning operators, standard formulas for stratified samples were used.

Although the same formulas could have been used for estimating the variance of individual characteristics of beginning operators, the three classifications which were used, age, geographic area and business form, did not conform to stratum boundaries. Therefore these formulas would have been more difficult to use. Since in only a few cases was more than one new operator found per segment, it was possible to treat these found as if they had been obtained by simple random sample methods. Using simple random sample formulas had the effect of slightly underestimating the variance. However, this underestimation was not considered serious.

The following procedures were used in estimating the total and the variance of the total numbers of beginning operators.

Notation:

Y = total number of beginning operators found in one year;

y_h = total number of beginning operators found in the h^{th} stratum;

y_{hi} = total for the i^{th} cluster; h^{th} stratum, where $h = 1, 2, \dots, L$ ($L = 6$) and $i = 1, 2, \dots, n_h$;

N_h = number of segments in the h^{th} stratum;

and, n_h = number of segments sampled in the h^{th} stratum.

Estimates:

$$\hat{Y}_h = \sum_{i=1}^{n_h} \frac{N_h}{n_h} y_{hi}$$

$$\hat{Y} = \sum_{h=1}^L \hat{Y}_h = \sum_{h=1}^L \sum_{i=1}^{n_h} \frac{N_h}{n_h} y_{hi}$$

but since $\frac{N_h}{n_h} = 24.255$ for all h ,

$$\hat{Y} = 24.255 \sum_{h=1}^L \sum_{i=1}^{n_h} y_{hi} = (\text{raising factor} \times \text{simple sample total})$$

$$\text{var}(\hat{Y}_h) = N_h^2 \left(1 - \frac{n_h}{N_h}\right) \frac{s_h^2}{n_h}$$

$$= \left(\frac{N_h^2}{n_h}\right) \left(1 - \frac{n_h}{N_h}\right) n_h s_h^2$$

$$\text{where, } s_h^2 = \frac{1}{n_h - 1} \sum_{i=1}^{n_h} (x_{hi} - \bar{x}_h)^2$$

$$\text{var} \hat{Y} = \sum_{h=1}^L \text{var}(\hat{Y}_h) = \sum_{h=1}^L \sum_{i=1}^{n_h} \left(\frac{N_h^2}{n_h}\right) \left(1 - \frac{n_h}{N_h}\right) n_h s_h^2,$$

ignoring the finite correction term and using the overall raising factor this can be reduced to:

$$\text{var} \hat{Y} = (24.255)^2 \sum_{h=1}^L n_h s_h^2.$$

For estimating the mean and variance of individual characteristics of beginning operators the simple random sample assumption was used with the following procedures.

Notation:

y_i = the characteristic of the i^{th} observation;

and, n = the number of beginning operators observed.

Estimates:

$$\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$$

$$\text{var}(y) = \frac{1}{n-1} \sum_{i=1}^n (y_i - \bar{y})^2$$

$$\text{var}(\bar{y}) = \frac{1}{n} \text{var}(y)$$

NUMBER OF BEGINNING FARM OPERATORS

Estimates of the Number of Beginning Farm Operators

In the two year study period, approximately 5000 persons began farming operations, or on the average about 2500 per year. The exact estimates by year using the formulas of the preceding section are shown in Table 4. It can be seen that the estimates of the total number of beginning operators per year varied from 2304 in 1959 to 2692 in 1960. The difference between these two estimates was no greater than could be attributed to sampling error.

A 95 percent confidence interval was placed around each estimate. This confidence interval was 1815 to 2793 for 1959 and 2171 to 3214 for 1960.

The estimates above probably slightly underestimate the number of beginning operators who started farming in either of the two years since the universe sampled was only the open country zone of the state of Iowa as delineated on the current Master Sample materials and did not include those areas lying within the boundaries of towns and cities.

Ratio of beginning operators to total farms

The last column of Table 4 shows the proportion of beginning operators to total farms by stratum and year. It can be seen that not all areas of the state provide the same proportion of beginning operators to farms. Not only did the ratio vary by stratum but also by year. Stratum I, corresponding to Economic Area 4 as defined by the census (15, p. 153) had the highest ratio of beginning operators to farms while Stratum IV, corresponding to Economic Area 3 (the south central part of the state) had generally the lowest ratio.

Table 4. Estimates of the number of beginning farm operators; number of farms and proportion of beginning farm operators to total farms; by stratum, year and total

Stratum & Economic Area ^a	Year	Number of beginning operators found in sample	Number of beginning operators (estimated from sample)	Number of farms (estimated from sample farms)	Proportion beginning operators to farms ^b (X100) (sample estimates)
I 4	1959	29	703	28,597	2.46
	1960	29	703	28,281	2.49
II 2	1959	12	291	32,065	0.91
	1960	20	485	31,410	1.54
III 1	1959	21	509	36,358	1.40
	1960	27	655	36,019	1.82
IV 3	1959	9	218	24,837	0.88
	1960	15	364	24,643	1.48
V 5	1959	10	243	20,083	1.21
	1960	12	291	19,647	1.48
VI 6	1959	14	340	21,174	1.60
	1960	8	194	20,884	0.93
All	1959	95	2304	163,115	1.41
	1960	111	2692	160,883	1.67
	Both	206	4996	323,998	1.54

^a As defined in the Agricultural Census of 1954 (15, p. 153).

^b Number of beginning operators used rather than number of beginning operations, since only 4 instances were found where two beginning operators began operations on the same farm.

PERSONAL CHARACTERISTICS OF THE BEGINNING FARM OPERATOR

As a preliminary to a study of the conditions of entry into the farming business, an inquiry into the characteristics of the beginning farm operator can be of value. In this section, the age, family characteristics, training for farming, general educational level and reasons for beginning farming operations will be investigated in an attempt to discover what sort of person begins farming.

Personal Characteristics

Age of the beginning farmer

There are many reasons for beginning farming. The young man may wish to begin operation and continue as a life work. An older man may have a different set of reasons. He may wish to raise his family in the country, or combine part time farming with a non-farm job. An old man may want a place to retire. For these and many other reasons, beginning farmers vary in age.

The youngest beginning operator found in this study was only 16 years old and the oldest was over 60 years of age. As might have been expected, the majority were young men. The mean age of all beginning operators was 28.1 and over 78 percent were under 34 years of age. The mean age of single operators was 29.2 while that of partners was only 23.3 years. Table 5 shows the age distribution of the beginning operators observed.

Years lived on a farm before farming

That beginning farm operators are primarily young men who have been reared on the farm has been a basic assumption in most investigations relating to farming opportunities. For example, Edmond (6) and Osterbur

(11) assumed that the difference between the land given up by farmers through death, retirement and quits and that taken by farm enlargement, consolidation, roads, etc. would be taken over by young beginning farmers who had been raised on farms.

Table 5. Age distribution of beginning farm operators by business form

Age Group	Single Operators		Partners		Total	
	Number	Percent	Number	Percent	Number	Percent
Less than 18.9	8	5.1	2	5.9	10	5.3
19 - 23.9	46	29.3	20	58.9	66	34.5
24 - 28.9	44	28.0	10	29.4	54	28.3
29 - 33.9	19	12.1	1	2.9	20	10.5
34 - 38.9	13	8.3	0	- -	13	6.8
39 - 43.9	10	6.4	0	- -	10	5.3
44 - 48.9	6	3.8	0	- -	6	3.1
49 - 53.9	5	3.2	1	2.9	6	3.1
54 and over	6	3.8	0	- -	6	3.1
Total	157	100.0	34	100.0	191	100.0
Mean age of beginning farm operators		29.2		23.3		28.1

Generally the assumption is upheld. Most beginning operators are young and most had lived on a farm a large part of their lives, however, there are exceptions. Table 6 shows the distribution of beginning operators by the number of years they had lived on a farm before beginning farming. Although there is a high concentration of beginning operators

in the group 11 years to 20 years, it is notable that 6.3 percent of the beginning operators had lived on a farm one year or less and 12.6 percent had lived on a farm 10 years or less before farming.

There is evidence to support the idea that the majority of beginning operators have a farm background but there is also evidence to support the idea that there is some demand for farm land from persons who do not have farm backgrounds.

This demand for farm land by persons who do not have farm backgrounds, although not limited to the higher age groups appears to be heavily concentrated in them (Table 6). Such factors as retirement, investment, and a desire for country living may play an important part in this demand for farm land. These factors will be investigated more fully when the reasons for beginning farming are examined.

Educational level

Those persons beginning farming did not appear to have a very different level of educational attainment from that of the labor force of the United States, age 18 - 64, as reported by the census (17, p. 110).

The median grade completed reported by the respondents in this study was 12 years or a high school education. Sixty-six percent of the group reported this number of years of schooling or more. Slightly less than five percent reported four or more years of college. Over 27 percent reported having eight or less years of schooling (Table 7).

The census (17, p. 110) reported somewhat similar data for the United States labor force as a whole. The median school years completed was reported as 11.7 in March 1959. Also from the census data, 48.4 percent of

Table 6. Number of years beginning operators lived on a farm before beginning farming operations, by age

Years	16-23.9		Age 24-33.9		34 +		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1 year or less	1	1.3	5	6.6	6	15.0	12	6.3
2 - 10 years	4	5.3	2	2.7	6	15.0	12	6.3
11 - 20 years	43	57.4	23	30.7	10	25.0	76	40.0
21 years and over	27	36.0	45	60.0	18	45.0	90	47.4
TOTAL	75	100.0	75	100.0	40	100.0	190	100.0
Mean years lived on a farm before farming	19.0		20.0		20.0		19.6	

Table 7. Distribution of years schooling of beginning farm operators by age

Years Schooling	16-23.9		Age 24-33.9		34 +		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Less than 8	0	0.0	5	6.7	4	9.8	9	4.7
8	4	5.3	14	18.7	15	36.6	33	23.0
9 - 11	7	9.3	9	12.0	6	14.7	22	11.6
12	53	70.8	37	49.3	11	26.8	101	52.9
13 - 15	10	13.3	4	5.3	3	7.3	17	8.9
16	1	1.3	5	6.7	1	2.4	7	3.8
More than 16	0	0.0	1	1.3	1	2.4	2	1.1
TOTAL	75	100.0	75	100.0	41	100.0	191	100.0
Median years school	12		12		10		12	
Mean years school	11.8		11.1		10.1		11.2	

the respondents reported 4 years of high school or more and 31.5 percent reported having 8 years of schooling or less as compared with about 27 percent for the beginning operators of this study.

Census data show a somewhat greater proportion of college and post graduate work than that indicated by the beginning operators. Only 13.7 percent of the beginning farm operators reported schooling beyond high school while 19.7 percent of the total male working force age 18 - 64 had this much schooling.

There are several differences between census data and that of the current study. First, the census data cover a group which is more evenly distributed throughout the age range 18 - 64. Not only does the data of the current study differ in range from that of the census data, since the youngest beginning operator was found to be 16 years of age, but there is a very heavy concentration of persons under 30 years of age among beginning farm operators. Second, the census data includes all persons in the labor force from those with little or no education to doctors, lawyers, university professors and other highly trained persons.

The difference in the composition of the two groups would lead to two different results. Since a high proportion of the beginning farm operators were under 30 years of age, one would expect them to have a higher educational level than the more even distribution of persons in the general labor force. This expectation arises from the fact that there has been a greater emphasis in the past few years on formal schooling and more especially on a high school education.

Another effect which would tend to offset the differences one would expect to find is the inclusion of professional and other highly trained

persons in the data presented by the census. These persons would tend to raise the mean educational level of the entire group. A further offsetting factor is that the younger age of beginning farm operators had not allowed for the eventual completion of college and possibly post graduate work.

Prior Occupation

In order to examine the extent to which beginning farm operators had held non-farm jobs before farming, the following question was asked: "Did you do any non-farm work before you started farming?" (Appendix). If the question was answered in the affirmative, the kind and approximate amount of time so engaged was obtained.

Over 77 percent of the beginning operators reported having done non-farm work before starting farming. The percentage of operators who had worked at a non-farm job was much higher among those who began as single operators than among partners. It is apparent that part of the difference is due to the age differential between single operators and partners, there being a higher proportion of single operators in the higher age groups. Over 81 percent of the single operators had worked at a non-farm job before beginning farming while slightly less than 72 percent of the partners had held non-farm jobs.

When the information on length of non-farm employment was examined, it would found that single operators had worked an average of 6.1 years at non-farm jobs while partners, on the other hand, had worked only an average of 2.7 years (Table 8).

Accompanying this information was data on the number of non-farm jobs

Table 8. Length of time beginning operators had worked at a non-farm job before beginning farming operations by business form

Length of time (years)	Single Operators		Partners		Total	
	Number	Percent	Number	Percent	Number	Percent
Less than 1 year	7	5.5	7	33.3	14	9.5
1 but less than 2	11	8.7	1	4.8	12	8.1
2 but less than 3	26	20.5	3	14.3	29	19.6
3 but less than 4	14	11.0	2	9.5	16	10.8
4 but less than 5	12	9.5	2	9.5	14	9.5
5 but less than 7	15	11.7	2	9.5	17	11.5
7 but less than 9	6	4.7	3	14.3	9	6.1
9 but less than 11	3	2.4	0	0.0	3	2.0
11 but less than 13	1	0.8	0	0.0	1	0.6
13 but less than 20	21	16.5	0	0.0	21	14.2
20 and over	11	8.7	1	4.8	12	8.1
TOTAL	127	100.0	21	100.0	148	100.0
Number having no non-farm work	29		13		42	
Mean years of non-farm work	6.1		2.7		5.5	

held. It was found that single operators had held an average of 1.5 jobs and partners had held an average of only 1.0 jobs. None of the respondents reported more than 5 non-farm jobs regardless of the length of time worked at non-farm jobs.

Table 9, using the census occupational classification, shows the types of non-farm jobs worked at immediately before beginning farming operations. Although all types of occupations were included, more than one-third of all beginning operators were included in the categories "craftsmen and foremen, managers and officials and professional" in which one would expect to find special skills or educational requirements.

Although the evidence is inconclusive, the widespread occurrence of non-farm work and the length of time which many of the beginning operators had worked at non-farm jobs might indicate that at least one of the rungs of the "agricultural ladder", that of farm laborer, may have been replaced by non-farm work as a method of acquiring the necessary capital for beginning farming. It is unfortunate that more attention was not given to farm labor done before farming, however, no questions were asked concerning this type of job and therefore no conclusions can be drawn concerning its incidence.

Even though no conclusions can be drawn as to the changes which have occurred in the "agricultural ladder" concept, it can be said with certainty, on the basis of the above information, that non-farm work plays an extremely important part in the life of the beginning farm operator before he sets up his initial operation.

Other occupations considered before farming

Farming was by no means the only occupation to which consideration was given before the decision was made to begin farming operations. Table 10 shows the different types of occupations which were considered. It is apparent that in the lowest age group, less consideration was given to another occupation than was given by those in the upper two age groups. Also, those who began farming in partnership had considered other occupations less frequently than those who began farming as single operators.

These two observations no doubt are due in part to the heavier family responsibilities of the older entrants and to the greater ease of entry into farming found by beginning partners as opposed to the beginning single operators.

Notable are the changes which occur with age in the type of occupation to which thought was given before farming (Table 10). At younger ages, it appears that professional type occupations hold a much greater place in occupational thinking than at older ages. Whereas 44.1 percent of the beginning operators in the youngest age group had thought of a professional or technical occupation, only 23.2 percent in the second age group had thought about such an occupation before beginning farming. The percentage thinking about professional type occupations is almost exactly the same as that found in a study of the occupational plans of Iowa farm boys by Kalder, Eldridge, Burchinal and Arthur (8, p. 632).

The numbers who had thought about becoming craftsmen or foremen remained relatively constant as age increased. As the number who had thought about the professions decreased with increasing age, the number who had thought about an occupation as a manager or official increased in almost the same proportion.

Table 9. Kind of non-farm work held immediately before farming by Business Form

Kind of work ^a	Single Operators		Partners		Total	
	Number	Percent	Number	Percent	Number	Percent
Craftsmen and foremen	49	38.3	9	42.9	58	38.9
Operatives	39	30.4	5	23.8	44	29.6
Laborers	12	9.4	2	9.5	14	9.4
Managers and officials	11	8.6	0	0.0	11	7.4
Professional	6	4.7	1	4.7	7	4.7
Salesworkers	4	3.1	2	9.5	6	4.0
Clerical	4	3.1	1	4.8	5	3.4
Service workers	2	1.6	0	0.0	2	1.3
Farm laborers	1	0.8	1	4.8	2	1.3
TOTAL	128	100.0	21	100.0	149	100.0
Number having no non-farm work	29		13		42	

^aU. S. Census Bureau, 1950 Census of Population, Alphabetical index of occupations and industries (19).

Table 10. Other occupations given most thought before deciding to begin farming by age

Occupation ^a	Age				TOTAL			
	16-23.9 Number	24-33.9 Percent	34-43.9 Number	44-53.9 Percent	Number	Percent		
Professional & technical	15	44.1	10	23.2	5	16.1	30	27.6
Managers & officials	0	0.0	4	9.3	8	25.0	12	11.1
Craftsmen & foremen	11	32.4	15	34.9	12	36.8	38	35.2
Operatives	5	14.7	6	14.0	5	15.1	16	14.8
Clerical	1	2.9	3	7.0	0	0.0	4	3.7
Sales workers	0	0.0	1	2.3	0	0.0	1	0.9
Laborers	2	5.9	4	9.3	1	3.2	7	6.5
Farm laborers	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL	34	100.0	43	100.0	31	100.0	108	100.0
Number giving no thought to another occupation	39		27		7		72	

U. S. Bureau of the Census, 1950 Census of Population, Alphabetical Index of Occupations and Industry, (19)

It is possible that the explanation for this shift away from the professions and toward the occupations of managers and officials can be explained by the increased family responsibilities and a decreased possibility of acquiring the necessary training for the professions as age increases.

Training for Farming

With the high state of technology available to the farming industry today, it is necessary that the farm operator have a high level of management skill in order to use this technical information to best advantage.

There are several ways of acquiring a high level of managerial skill. It can be acquired from personal experience such as FFA projects, 4-H projects, working with an experienced operator who has a high level of managerial skill or through formal training.

It was possible to examine three of these sources of managerial knowledge. Each beginning farmer was asked whether he had participated in 4-H or FFA, and if he had, the length of time he had participated in these activities. In addition, inquiry was made into the formal agricultural training which had been taken by the beginning farm operator. The results are tabulated in Tables 11, 12 and 13.

Table 11 shows the distribution of semesters of formal agricultural training by type and age. It is apparent that the younger beginning operator had more formal agricultural training than those who began at older ages. If the figures from Table 11 are compared to those of Table 7 (schooling), a close relationship can be observed between the two sets of figures. Table 7 shows that 85.4 percent of the youngest beginning oper-

Table 11. Semesters of formal agricultural training before farming by type of training and age (n=107)

Type of Training	Age Group	Semesters of trainings ^a										Total Number	Total Percent	No formal training
		1-2		3-6		7 & over		Total						
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent			
High School	All	30	41.1	15	20.5	20	30.4	73	100.0			114		
	16-23.9	17	56.7	9	60.0	19	67.9	45	61.6			28		
	24-33.9	7	23.3	6	40.0	9	32.1	22	30.2			52		
	34+	6	20.0	0	-	0	-	6	8.2			34		
	Total	30	100.0	15	100.0	20	100.0	73	100.0			114		
College ^b	All	7	63.6	0	-	4	36.4	11	100.0			176		
	16-23.9	4	57.1	0	-	1	25.0	5	45.5			68		
	24-33.9	2	28.6	0	-	2	50.0	4	36.3			70		
	34+	1	14.3	0	-	1	25.0	2	18.2			36		
	Total	7	100.0	0	-	4	100.0	11	100.0			176		
Other ^c	All	2	66.7	1	33.3	0	-	3	100.0			124		
	16-23.9	2	100.0	0	-	0	-	2	66.7			71		
	24-33.9	0	-	1	100.0	0	-	1	33.3			73		
	34+	0	-	0	-	0	-	0	-			40		
	Total	2	100.0	1	100.0	0	-	3	100.0			124		

^aAny semester in which the operator was in school and in which one or more courses in agriculture were taken.

^bEnrollment in a college of agriculture.

^cIncludes all types of training not covered by high school or college.

aters had completed high school and at the same time, Table 11 shows that 61.6 percent of the same age group had at least some high school agricultural training. When the middle age group was observed, it was found that 62.6 percent had completed high school while only 29.7 percent of the group had some high school agricultural training. The relationship follows in the highest age group.

These relationships are not surprising since the availability of agricultural training through vocational agriculture in high schools has been increasing as more high schools made such courses available. Too, there has been a greater emphasis placed on a high school education resulting in more people attending high school. These two factors would help explain the relatively greater proportion of beginning operators who had agricultural training in the youngest age group. It was in this group where the opportunity for agricultural training was the greatest. Even in this age group, almost 30 percent of the beginning operators had no high school agricultural training.

In looking at college agricultural training and other agricultural training, the trend which was seen in high school training did not stand out so prominently. It was seen in college training but was much smaller. In other training, which included G.I. training and any training not otherwise included, little was to be gained from investigation, since these activities played a very small part in the training of the beginning operator.

Participation in 4-H and FFA activities ~~was~~ also a way in which managerial skill could be gained. Tables 12 and 13 show the level of participation in these activities by age.

Table 12. Participation in 4-H activities by years participated and age

Years Partici- pated in 4-H	16 - 23.9 (n = 73)		Age 24 - 33.9 (n = 75)		34 + (n = 41)		Total (n = 189)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1 - 2	6	20.7	7	25.9	0	- -	13	22.8
3 - 4	2	6.9	7	25.9	1	100.0	10	17.6
5 - 6	10	34.5	5	18.6	0	- -	15	26.3
7 & over	11	37.9	8	29.6	0	- -	19	33.3
Total	29	100.0	27	100.0	1	100.0	57	100.0
None	44		48		40		132	
Mean years partici- pated ^a		2.3		1.7		0.1		1.6

^aMean computed for all beginning operators not just those with 4-H training.

Table 13. Participation in FFA activities by years participated and age

Years Participated in FFA	16 - 23.9 (n = 73)		Age 24 - 33.9 (n = 73)		34 + (n = 41)		Total (n = 187)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	5	16.1	3	15.0	0	- -	8	15.7
2	6	19.4	3	15.0	0	- -	9	17.7
3	3	9.7	4	20.0	0	- -	7	13.7
4	17	54.8	10	50.0	0	- -	27	52.9
Total	31	100.0	20	100.0	0	- -	51	100.0
None	43		53		41		137	
Mean years participated ^a		1.27		0.84		0.0		0.82

^aMean computed for all beginning operators not just those with FFA training.

Participation in both these activities by beginning operators was quite low, being slightly more than 30 percent for 4-H and 28 percent for FFA.

There seemed to be about the same interest in these two activities in the two lowest age groups. Participation in these activities by the highest age group was almost nil, there being no persons in this group who had participated in FFA and only one who had participated in 4-H. Although a high percentage of the youngest beginning operators had high school agricultural training, this did not seem to be reflected in participation in FFA activities although the two are closely related. Participation in FFA activities was notably lower than participation in high school agricultural training.

Except for the youngest age group in which there was a high participation in high school agricultural training, participation in those activities which would lead to high levels of managerial skill seemed quite low. It is possible that many of the beginning operators had worked with highly skilled farm operators and had acquired a high level of managerial skill in that manner, however, no data were taken on this type of training except that on the length of time lived on a farm before farming. No inferences concerning management skill can be drawn from that information.

Reasons for Beginning Farming

In order to investigate the reasons beginning operators entered farming, each respondent was asked to list and order the three main reasons for starting to farm. The question was asked in an open end manner. The answers presented some difficulty in categorization and analysis.

The reasons given ranged from a confession that farming was the only job opportunity open to him, to investment reasons. Many of the reasons given were non-income in nature. Among these reasons were a desire to live in the country and a desire to be one's own boss. Another large group of reasons was simply given as "Like it" or "because I like farm work". This last group of reasons was categorized as "Likes type of work farm provides". It is realized that the category is quite non-specific.

The reasons listed as most important (those reasons given first) were classified by age and analyzed statistically. Chi-square tests were made on the following reasons: (1) wanted to live in the country or good place to raise children; (2) likes type of work the farm provides; (3) wanted to be my own boss; (4) had a chance to start and (6) didn't know what else to do (Table 14)¹. Only reasons 1 and 3 were statistically significant at the 5 percent level of probability. Apparently the beginning operators in the lowest age group did not have the desire for country living or did not have children which they wished to raise in the country as the upper two groups had. At the same time, there appeared to be a greater desire for independence as evidenced by the response "wanted to be my own boss" in the youngest age group.

Table 14¹ shows the distribution of all reasons given for beginning farming by the age of the operator. Although other differences than those noted above can be seen in the table, no tests were made except on the first reason due to difficulty in statistical analysis resulting from a failure of some respondents to give three responses to the questions.

Such differences as appear may be found statistically significant

¹Rank order of reasons not given in the table.

when further investigation is made into the process by which the decision to farm is made.

Table 14. Reasons for beginning farming by age^a

Reason	Age			Total	
	16-23.9 Number Percent	24-33.9 Number Percent	34 + Number Percent	Number	Percent
(1) Wanted to live in the country - good place to raise children	19 9.6	40 19.1	32 30.2	91	17.7
(2) Likes type of work the farm provides	58 29.1	61 29.2	14 13.2	133	25.9
(3) Wanted to be my own boss	38 19.1	32 15.3	9 8.5	79	15.4
(4) Had a chance to start	32 16.1	22 10.5	6 5.7	60	11.7
(5) Was needed on the farm	9 4.5	6 2.9	6 5.7	21	4.1
(6) Didn't know what else to do	25 13.1	22 10.5	7 6.6	55	10.7
(7) Job & income security	5 2.5	9 4.3	12 11.3	26	5.0
(8) Investment	0 0.0	3 1.4	3 2.8	6	1.2
(9) Hoped for profit	8 4.0	10 4.9	8 7.5	26	5.0
(10) Miscellaneous	4 2.0	4 1.9	9 8.5	17	3.3
TOTAL ALL REASONS	199 100.0	209 100.0	106 100.0	514	100.0
No reasons given	26	16	17	59	

^aRank order of reasons disregarded.

THE BEGINNING FARM OPERATION

Several factors are involved in the size and division of the returns of any business. Among these are the business form, tenure and the physical size of the business. Included in the tenure aspect is the ownership of the resources used in the business. In this section, these three factors will be taken up separately.

Because the two types of business form are not comparable in regard to tenure and resource ownership the discussion of single proprietorships and partnerships will be kept separate except in those instances where comparability exists.

Business Form

The business form under which farming operations begin has a direct bearing on the total resources which can be drawn upon in order that the business may combine resources in the most efficient manner. From the point of view of the single operator, all resources must be controlled by him. He may own or lease the land, but in either case, most of the responsibility for the success or failure of the business is his alone. At the same time, the beginning single operator may have difficulty in acquiring the necessary land and capital in order that he may start operation.

The case of the beginning partner is much different. In most cases he becomes associated with a going concern in which the resources are controlled by the other partner, usually a close relative. Not only are land and capital requirements reduced for the beginning partner, but he may not be required to buy or own the physical resources used in the business. All

that he may be required to provide is his labor.

Returns to the beginning operator may vary depending on the business form of the operation, resource ownership and other arrangements. In many cases the partnership arrangement may be advantageous in that returns to the beginning operator will be greater due to the greater amount of capital which can be combined with the beginning operator's labor. On the other hand, the beginning single operator with a large amount of capital may receive greater returns since he gets both the returns from his labor and his capital inputs.

In view of the fact that most beginning operators have a fairly limited capital position, the partnership holds certain advantages over the single proprietorship in that most of the capital items have already been accumulated, and in most cases, the total resource base is greater than that of the single operator. Because of this, the beginning partner may be able to combine his labor with other inputs in a more efficient manner. However, in a partnership the resource base per man may be smaller than that of the single operatorship.

Of the beginning operators interviewed, 157 or 82.2 percent began as single operators and 34 or 17.8 percent began as partners. The percentages varied less than one percent from these percentages over the two year observational period.

As was noted before, there was an age difference between those who began as single operators and those who began as partners. The operators who began as partners had a mean age of 23.3 years while the operators who began as single operators had a mean age of 29.2 years. This difference was found to be highly significant, well beyond the .001 level of proba-

bility.

There are many reasons why the mean age should be different. Not all men wishing to farm have the same opportunity to begin in a partnership. Since most of those beginning as partners started on their father's farm, the opportunity for this type of arrangement decreases as the older generation dies or retires from farming. In addition, not all men who have the opportunity to begin in a partnership framework wish to do so. Probably the desire to enter into a partnership on the part of the beginning operator decreases with increasing age because a partnership arrangement requires a measure of mutual dependence which may not be desired by the older beginning operator. Hence, one would not only expect the opportunity to decrease but the desire also.

On the other hand, one might expect the partnership form of business to appeal to the younger beginning operators. There are several reasons for this expectation. Since the young beginning operator is likely to have a very low capital position, the large amount of resources already on hand on the prospective other partner's farm would be highly attractive, especially in those cases where little is required of the beginner but his labor. The partnership form of business also gives the young operator a chance to develop management skills under the supervision of an experienced operator. Also, in many of these cases, an added incentive may be that the older partner may wish to retire within a few years and the young operator may expect to take over complete management of the business in a relatively short time.

It appeared that at the younger ages of the beginning operator there was a greater propensity for a partnership formation to occur than at greater

ages. Also, it may be said, that although partnership formation could occur at any age, the probability of formation for beginning operators was quite small after the beginning operator reached his late twenties.

Other implications of this age differential will be discussed as they arise throughout this and subsequent chapters.

Tenure

In order to control the resources necessary for farming, beginning operators resorted to many sources of supply. They owned some resources, rented some and borrowed others. This section will be devoted to an examination of the tenure conditions under which these various resources were held and who owned them.

Land tenure

Among the more common forms of tenure are full ownership, part ownership and tenancy. These forms are quite common in Iowa. Under tenure as a full owner, the operator has complete control of the land and all its attributes. Under conditions as a part owner, the operator owns some land and rents some land. He may have almost complete control over the part which he rents, as would be the case with a cash lease, or he may have his operations proscribed by the wishes of the landlord where another form of lease is extant. In the case of tenancy, the actions of the tenant are almost always proscribed by the wishes of the landlord, except in the case of the cash lease. Under other tenure forms, the actions of the operator are almost always more restricted than those of the full owner.

In addition to the necessity of conforming to the wishes of the landlord, tenancy has other disadvantages, chief among them is the rental pay-

ment requirement which works to reduce the income of the operator. At the same time, this disadvantage has a built in advantage, inasmuch as the land owner shares part of the risk, except in the case of the cash lease. This risk sharing feature is especially true of crop-livestock share and crop share-cash leases. Other types of leases may or may not tend to work in this direction depending on the leasing agreement.

Regardless of the restrictions and other disadvantages of tenure inherent in the status of tenancy, most beginning operators did not have the necessary capital to acquire ownership status. Even if beginning operators had the necessary resources to acquire ownership status, it was not necessarily desirable that they should do this. Unless the capital position of the beginning operator was of such magnitude that other resources such as livestock and equipment could be acquired in addition to land to allow an optimal combination of all resources, land ownership could well be a luxury the beginning operator could ill afford.

Since most beginning operators had limited resources, the great majority of them began operations as tenants under various lease forms.

Almost 74 percent of the beginning single operators began as tenants. This figure was more than double that for the population of Iowa farm operators. The census (16, p. 6) reported in 1959 that only 35 percent of the farm operators in Iowa were tenants.

The next largest tenure class of single operators was that of full owners with nearly 23 percent of the total. The smallest was that of part-owner which contained only 3 percent of the cases.

To discuss the tenure of beginning partners, another tenure class must be added which might best be called "family arrangement tenure". In

this class fall the beginning operators who were neither tenants nor owners. In these cases, all land operated by the partnership was owned by the senior partner. Nearly 53 percent of the beginning partners began under this form of tenure.

Other forms of tenure found in the partnership cases follow those of the single operators, but form a much smaller part of the total. Tenancy under all lease forms, made up only 35 percent of the total; part ownership (only 3 cases of 34), 9 percent and full ownership only one case and less than 3 percent. The proportions between tenure classes varied more between observational years than did the proportions for single operators, but they were relatively constant.

Relationship between tenure and age

Table 15 shows the tenure of the beginning operators by age class. It can be seen that as age increases the proportion of full ownership increases quite markedly. Also, the proportion of tenancy decreases. Although the numbers are too small in the part-owner category to provide a basis for inference, it is reasonable to assume that a relationship of this nature does exist.

Lease types

Two types of leases stand out as being quite popular among beginning single operators. Together, the crop-livestock share lease and the crop share-cash lease accounted for more than 60 percent of all leases. The crop-livestock share lease accounted for 29.2 percent. Following closely behind these two lease types in popularity was the crop share lease which accounted for 23.8 percent of the leases. The cash lease was the least

Table 15. Land tenure of beginning operators by age

Tenure class	16-23.9		Age 24-33.9		34 +		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Owner	1	1.3	13	17.3	23	56.1	37	19.4
Part owner	1	1.3	5	6.7	2	4.9	8	4.2
Tenant	59	79.7	53	70.7	16	39.0	128	67.0
Family arrangement ^a	14	18.7	4	5.3	0	0.0	18	9.4
TOTAL	75	100.0	75	100.0	41	100.0	191	100.0

^aIncluded in this category are those beginning partners who owned no land and rented none.

important, making up only 13.1 percent of the total.

Probably the reason for the lack of popularity of the cash lease is the fixed sum requirement of most of these leases. The other three types of leases allow for most or all of the payment to be made in kind, which in the view of the tenant, tends to reduce the risk born by him, i.e., if there is a poor harvest, the rent is correspondingly reduced. Although this feature can be written into the cash lease, such is not usually the case.

The popularity of the crop-livestock share lease and the crop-share cash lease becomes even more pronounced when a breakdown is made by acreage rented. Under this analysis, the crop-livestock share lease accounted for 37.8 percent of the land rented, the crop share-cash lease 34.2 percent and the crop share lease and cash lease 19.0 and 8.1 percent respectively.

No doubt the popularity of the crop-livestock share lease reflects the ease of entry into livestock enterprises provided by this leasing arrangement. Not only is risk reduced, since the landlord assumes part of the risk for the livestock enterprise, but in many cases the landlord provides all the livestock and takes a note from the beginning operator for one half of this livestock. This type of arrangement may be attractive to the beginning operator who has limited capital.

Land ownership

Only about 24 percent of the beginning single operators owned the land which they operated. By far the most common source of land was from the non-relative landlord. Almost 40 percent of the beginning single

operators used land not owned by them or a member of their family. Although ownership by a member of the respondent's family was not as common as ownership by a non-relative, almost 30 percent of the beginning single operators rented land from family members. Other ownership arrangements among beginning single operators were part-ownership by the beginning operator and part-ownership by another person. In a few cases, ownership of the land was held by more than one landlord, a family member and a non-relative.

Among beginning partners, the most frequent case was one in which a close relative partner owned the land. This form of ownership accounted for more than 40 percent of the land operated by beginning partners. In those partnerships on a completely tenant operation, a close relative landlord accounted for 3 of 11 cases and a non-relative landlord accounted for the remaining three cases.

Few beginning partners owned land. There was only one case of full ownership and only three cases of part-ownership. Other arrangements were those of the close relative partner and a close or non-relative landlord owning all the land used.

Machinery and livestock tenure

Four types of machinery ownership arrangements stand out among beginning single operators. The most important, as might be expected, was that of full ownership by the beginning operator. In those arrangements in which the beginning operator did not own all machinery, the most important was ownership by the beginning operator and a close relative who was not involved in land ownership. This one arrangement accounted for slightly

more than 34 percent of the cases in which the beginning operator was not the full owner.

In 12 percent of the beginning single operatorships, all machinery used on the beginning operation was owned by a close relative, i.e., no machinery was owned by the beginning operator.

The fourth arrangement was that of a close relative landlord furnishing part of the machinery. In total, close relatives were involved in providing part of the machinery used in 53 percent of all beginning single operations. Also, non-relatives provided part of the machinery used on only 13 percent of these operations.

Among beginning partners, both partners were involved in machinery ownership in more than 73 percent of the cases. In 4 cases the beginning partner owned all the machinery and in 3 cases the other partner owned all the machinery.

It might be expected that joint ownership of livestock would be more common than joint ownership of other resources, since the livestock share lease is a very popular lease form among beginning single operators. Likewise, among beginning partners one might expect to find both partners owning the livestock.

More than 64 percent of the beginning single operators owned all the livestock on the place, while 30 percent of this group owned livestock jointly with a landlord. Joint livestock ownership was slightly more prevalent when the landlord was a close relative than when he was a non-relative, however the difference amounted to only 4 percent. In only 5 percent of the beginning single operatorship cases was livestock owned jointly by the respondent and someone who was not involved in the land

ownership. A majority of these cases were with relatives, only one being with a non-relative.

No cases among beginning partners were found in which livestock was partly owned by one who was not a relative. Most livestock was owned by both partners, or by both partners and a landlord in those cases of partnership tenancy. Only one case was found in which the other partner owned no livestock. In that case, the livestock was owned by the respondent and a close relative landlord.

Unfortunately information concerning the manner in which livestock and machinery were held, i.e., the lease or use arrangement, was obtained in only a small number of cases, primarily those in which gifts were involved. Because of this, little can be said about these arrangements except what will be discussed in the chapter where gifts are taken up in detail.

Decision Making

Closely associated with the business form and the tenure and ownership arrangements are those arrangements relating to the making of decisions. The division of decision making was obtained for two types of decisions made by beginning operators. Decision making in the area of crops and livestock will be discussed in this section.

Decisions concerning what crops to plant

More than 44 percent of the beginning single operators reported that they alone made all decisions concerning what crops to plant. Another 50 percent reported that no one aside from their landlord(s) and themselves had made decisions of this type. Only about 4 percent of the beginning

single operators reported that outsiders, either relative or non-relative had assisted in making decisions concerning the crops.

Notable, however, is the fact that relatives assisted in about 28 percent of the cases in which decisions concerning what crops to plant were made. A similar percentage reported that non-relatives had assisted in the decision making process (27 percent).

Among beginning partners, almost all decisions concerning what crops to plant were made within the partnership framework. More than 77 percent of the beginning partners reported that no one other than they and their partners had made such decisions. In another 19 percent of the cases, the partners and their landlord(s) made these decisions. In only one case was there an outsider who helped make decisions.

Decisions when or where to sell livestock

Most decisions of the single operator, concerning livestock, were made by the operator himself or with the aid of his landlord. Over 67 percent of the beginning single operators reported that they alone had made all decisions concerning livestock. Another 29 percent reported that livestock decisions had been made together with a landlord. Less than 5 percent of the single operators reported that one not connected with the farm business had aided in making livestock decisions.

Among beginning partners, more than 87 percent reported that all decisions concerning livestock had been made jointly by the partners concerned. Of the remaining 4 partnerships not covered in the 87 percent reported above, all reported that the decisions had been made by the partnership and their landlord.

Characteristics of Size and Quality of the Beginning Operation

One might hypothesize that the land base of the beginning operation would be as large or larger than the average for all farms. There are several factors which would lead to this expectation.

First, a great proportion of the beginning operators were tenants and tenant farms tend to be larger than the average. The proportion of tenancy among beginning operators was considerably higher than among all farm operators. Second, a recent study (8, p. 637) indicated that the number of crop acres needed for a "satisfactory" income in farming reported by farm boys planning to farm was substantially greater than the land base of the average Iowa farm. Also, in cases involving partnership, one would expect the land base to be larger than the average since the resource base must support two or more families. Further, Kanel (10) reported that younger operators played the most important role in increasing the mean farm size in the decade 1950 - 1960.

One factor which might tend to offset the expectation of larger farms among beginning operators would be capital limitations, since, given a choice, one would expect landlords to prefer a tenant with a large amount of capital to one with a small amount of capital. Also, the managerial ability of the beginning operator is largely untried and may be a factor in the ability to rent land.

In order to investigate the relationship between the land base of the beginning operator and that of all operators, questions were asked concerning the number of acres farmed by the beginning operator, the number of crop acres and the mean value per acre. From the information obtained, estimates were made of the mean number of acres farmed, the mean number of

crop acres, the mean value per acre and the mean total value of land and buildings. These estimates, classified by geographic area and by the age of the operator are directly comparable to census data of the same type.

Other measures which will be used to describe the resource base of the beginning operation are operator and family labor use and total labor used on the farm.

Land base of the beginning operation

The Bureau of the Census (16, p. 3) reported that the average size of farm in Iowa was 193.6 acres in 1959. Since the census was taken in November 1959, approximately the middle of the two year observational period, no adjustment was made to this figure to allow for changes which may have occurred in farm size prior to or after the census was taken.

Operators who began farming in 1959 and 1960 reported a mean land base of only 164.7 acres. The difference between this figure and the census figure was found to be significant. On this basis, one would reject the original hypothesis concerning farm size of the beginning operator.

While the mean land base for beginning operators was much smaller than that for the population of Iowa farms, the mean land base for beginning single operators was even smaller, 142.0 acres. For beginning partners the mean land base was found to be 213.5 acres, slightly larger than that for all farm operators. This finding was not surprising since one would expect the land base of the partnership to be larger than for single operators for several reasons. One would be that the land base of the beginning partnership must support two or more families and therefore would be expected to be larger. Another would be that the farms on which

beginning partners started were going concerns and therefore many of the problems of acquiring enough land was not the problem to beginning partners that it was to beginning single operators.

Age factors associated with the land base

Several factors associated with age might be expected to affect the size of the land base. Among these are the reasons for beginning farming operations, the incidence of partnership in the younger age groups and the capital position of the beginning operator.

Of these, it might be expected that the capital position of the operator would increase with increasing age and would tend to make the land base of the beginning operation larger. There are several reasons for this. As has been argued before, landlords would probably rather rent to a man with a high capital position than to one with a low capital position. On the other hand, a large proportion of rented land was leased from relatives. In such cases, the capital position of the beginning operator may not make as much difference. Also, with higher levels of capital, the probability that the beginning operator would purchase land might be greater. Since owner-operated farms tend to be somewhat smaller on the average than tenant operated farms, this would also tend to make the land base smaller.

The considerations prompting entry may also be a factor. The desire for country living and a good place to raise children were reasons given more frequently by older operators. For these people, the income producing potential of the farm probably was less important and therefore it might be expected that the land base would be smaller. Also, the incidence of

partnerships was heavily concentrated in the youngest age group. This would lead to the expectation that a larger land base would be found among those in the younger age group and to a lesser extent in the second age group, since the proportion of partners was much smaller in the second age group than in the first. It has been shown that the land base of the beginning partner is considerably larger than that of the beginning single operator.

On balance, one might hypothesize that, as age increases, the size of the land base would decrease, since there seem to be more factors suggesting an inverse relationship than a direct relationship.

To investigate the validity of this hypothesis, the estimates of the number of acres farmed and the total value of land and buildings were compared among the groups and to census data. Table 16 shows the various means which were compared.

As can be seen in the table, the mean farm size appears to decrease with age. In the lowest age group, however, no significant difference between the mean acres operated for that age group and the census data was found. However, in the age group 24 - 33.9, the difference between the mean acres operated for that age group, 164.6 and the state mean, 193.6 acres was found to be statistically significant at the 5 percent level, computed "t" value was found as 2.74 while that tabulated for a 5 percent level of significance was 1.99. Also, the mean farm size for the highest age group was found to be significantly different from the mean for the population of Iowa farms. Thus it may be inferred that those factors which tend to cause a decrease in the mean farm size, as the age of the operator increases, outweigh those which would tend to cause an increase.

Table 16. Attributes of the land base of the beginning operation by age of the beginning operator and corresponding attributes of the population of Iowa farms

Attribute	Age		Total (n=190)	All Iowa Farms (census data)
	16-23.9 (n=74)	24-33.9 (n=75)			34+ (n=41)
Mean acres per farm	195.3	164.6	164.7	193.6
Mean crop acres per farm	155.0	134.3	131.2	158.8
Mean value per acre	\$276.14	\$308.04	\$291.93	\$254.53
Mean total value of land and buildings	\$53,300	\$45,655	\$27,727	\$50,372
Ratio: crop acres to total acres	.79	.82	.79	.82

Comparisons were also made among the three groups. When the mean acres farmed by the youngest beginning operators were compared to the mean acres farmed by the middle age group of operators, no significant difference was found. However, when the second age group was compared to the upper age group, the difference was found to be significant beyond the 5 percent level of probability.

This one set of comparisons shows that the beginning operators differed significantly from the population of Iowa farms while the other indicated that the difference among beginning operators classified by age is not so great as one would have expected.

Closely associated with the mean acres per farm which was dealt with above is the mean total value of land and buildings. Value of land and buildings usually gives a better indication of the total land input because it reflects land quality. Again this measure was compared to census data of the same type and among the three groups of beginning operators. In the first groups, those of the two youngest age groups, no statistical difference was found between the two respective means and the corresponding mean for the population of Iowa farms. However, when the highest age group was compared with census data, the difference was found to be significant.

A further examination of the data was made with a comparison of the two sample means for total value of land and buildings per farm between the two low age groups, but even though the difference amounted to \$7645, it was not found statistically significant. This same comparison between the middle age group and the highest age group showed a level of significance beyond the 5 percent level of probability.

On the basis of the above comparisons, it would seem that there was

not as such difference between the two youngest age groups as would appear from a superficial examination of the means. It is apparent, however, that the highest age group differs significantly from the two younger age groups.

Other attributes of the beginning operation are shown in the table but it was not considered that statistical analysis of these attributes would be of interest in an age classification. The mean crop acres per farm are closely associated with the mean acres per farm, and the other two attributes shown, the mean value per acre and the ratio of crop acres to total acres are more measures of the quality of the land than any other factor. It would not be expected that there would be a great deal of difference between age groups since they were drawn from all parts of the state in a manner which closely approximated randomness.

It would seem that one of the explanations for the decrease in the size of the land base with increasing age can be illustrated by means of Table 17, which shows the tenure of beginning single operators classified by age. Since it is known that tenant operated farms tend to be larger than the average for a given area, it follows that the land holdings under other forms of tenure must be smaller than average. Therefore as the incidence of owner-operatorship or part ownership increases in a particular age group, it would tend to reduce the average size of farm for that age group. Since owner-operatorship is more frequently found among older operators than among younger operators this would tend to decrease the size of farm with increasing age.

Too, partnership operations tend to be such larger than the average for a given area. Also, the incidence of partnership decreases with in-

Table 17. Mean acres in farm operated by beginning single operators by age and tenure of the operator

Tenure	16 - 23.9		Age 24 - 33.9		34 +		Total	
	Number	Mean Acres	Number	Mean Acres	Number	Mean Acres	Number	Mean Acres
Tenant	52	161.0	48	169.7	16	148.9	116	162.9
Full owner	1	160.0	13	73.2	22	75.2	36	76.8
Part owner	0	0.0	3	123.0	2	132.0	5	126.6
All single operators	53	161.0	64	147.8	40	107.5	157	142.0

creasing age and would help to decrease the size of holding with increasing age.

It can be demonstrated with the aid of Table 17 that the decrease in mean acres operated by single operators is more a function of the increase in the incidence of owner-operatorship than any other factor. Since there were only a few owner operators in the partnership category and there also were many partners who owned no land, the partners were excluded from this comparison.

It can be seen that without the owner-operatorship effect, the mean acres operated by tenant tenure classes was relatively constant. The mean acres operated by the tenants decreased slightly as age increased but was probably due to other than tenure causes.

Also, the mean number of acres in owner operated farms was nearly the same between the two highest age groups. This indicated quite clearly that older beginning operators who were owner-operators tended to have quite small acreages. It might also be hypothesized that those persons who were owner-operators on the small acreages were also the persons for whom non-income reasons were the most important ones for beginning farming.

Further investigation revealed that when the mean acres operated by all tenants and partners who owned no land and rented none was examined little difference could be found between that mean and the state mean acres per farm.

In the lowest age group, the mean acres operated by the tenant and partner group mentioned above was found to be 194.2 acres, 0.6 acres larger than the overall state mean. In the middle age group, the mean was found to be 186.9, which was 6.7 acres smaller than the overall state mean.

In the highest age group, the mean was found to be 148.9 acres, much smaller than the state mean, but the difference is probably due to factors other than the tenure effect as described here. One such factor might be the desire for country living.

It may be concluded that such differences as appear between the two lowest age groups are due primarily to the tenure effect, i.e., the increase in owner-operatorship rather than to any other factor. The fact still remains, however, that generally beginning farm operators tend to start on farms smaller than would have been expected on the basis of a priori considerations.

Geographic factors associated with the land base

It is known from the census data and from many past studies of the state of Iowa that the type of farming, the value of land, the size of farms, proportion of tillable land and thus the total input of land per farm varies among the various parts of the state. Therefore, one might hypothesize that the farms of beginning operators would show such the same characteristics as the other farms in their particular area.

To examine this hypothesis, characteristics of the beginning operators' farms, classified by geographic area, were compared with those of census farms. Table 18 shows the results of these comparisons.

As can be seen in the table, this hypothesis holds true for some parts of the state. In Area II, no significant differences were found between the characteristics of census farms and beginning operator units. Differences between census farms and those of beginning operators in the southern part of the state and the northeastern part of the state are quite wide.

Table 18. Attributes of the land base of the beginning operation by geographic area and corresponding attributes of the population of Iowa farms of that geographic area

Attribute	Geographic Area			Total
	Northwest I	Northwest II	South III	
Mean acres per farm				
Sample	142.0 ^{NS}	205.5 ^{NS}	144.2 ^{NS}	167.7
Census	176.9	203.9	194.4	193.6
Mean crop acres per farm				
Sample	108.6*	173.4 ^{NS}	107.2 ^{NS}	131.2
Census	135.8	174.2	141.4	158.8
Mean value per acre				
Sample	\$282.95*	\$299.54 ^{NS}	\$257.54*	\$292.61
Census	239.50	302.91	191.53	254.53
Mean total value of land and buildings				
Sample	\$39,364 ^{NS}	\$62,197 ^{NS}	\$34,600*	\$44,764
Census	43,023	62,769	43,421	50,372
Ratio: crop acres to total acres				
Sample	.76	.84	.76	.79
Census	.76	.85	.73	.82

*Indicates a statistical level of significance of .05.

^{NS}Indicates a statistical level of significance of .01.

^{NS}Indicates comparison was not found significant.

The differences between the characteristics of sample and census farms were significant, in those two areas, in all cases except for the mean value of land and buildings per farm in Area I, northeast.

The differences found between the census and sample value for mean acres per farm in Areas I and III appear to be attributable to two factors. First there appears to be a tenure effect operating in the two areas where large differences were found. Whereas in Area II, where little difference between the sample and the census mean acres per farm was found, only 8 percent of the beginning operators were owners. In Areas I and III, the proportions of owners was 28 percent and 23 percent respectively. It is known that owner operated farms tended to be smaller than tenant farms. Therefore, this would effectively lower the size of the land base in those areas where a large proportion of the operators owned the land which they operated.

Second, there appeared to be an effect attributable to non-farm work. It was found that the beginning operators in those areas where a large difference was found worked such more off the farm than in the area where little difference was found.

It is possible that there is a third effect working in Area I. In this area, there was a much larger proportion of the beginning farm operators in the older age group than would have been expected had the numbers within each age group been distributed equally in a manner consistent with the division into age groups. This third effect works in the manner already described, in that older persons tended to have smaller farms, probably because non-income reasons were more important in their decision to enter farming.

Since area differences were found for mean acres per farm, it might be expected that similar differences would be found for mean crop acres per farm. As can be seen in Table 18, such is the case.

One surprising finding was the difference between the value per acre for farms operated by beginning operators and that for census farms. Since the values given by the operators in Area II are very close to those given for census farms, there is no reason to suspect a bias in the values obtained from beginning operators. There is some reason to suspect that there was some selectivity in the location of beginning operators, i.e., beginning operators tended to start on the better soil types of those areas where the large differences in value per acre were found. An examination of the location of beginning operators (see map p. 15b) shows that few beginning operators were found in the two tiers of counties in South Central Iowa, the poorer soil types of Area III and also, no beginning operators were found in either Allamakee or Clayton counties, the poorer soil types of Area I. Little concentration can be noted in Area II where little difference was observed between the average value per acre for beginning operators and the average value per acre for the population of farms in that area. Although there is a possibility that the concentrations noted are a matter of chance there is some evidence to suggest that such a selectivity occurred.

It is interesting to note that the ratio of crop acres to total acres tends to support the hypothesis in Area III. It might be argued that there is less poor land in Area I and therefore the ratio does not reflect this difference as readily as in Area III. But probably little significance can be attached to this measure.

Since other large differences were found in Areas I and III, it is surprising to observe that no significant difference was found between the sample and census value for mean total value of land and buildings per farm in Area I. It is, however, less surprising when it is remembered that the value of the land on which the beginning operators started is quite high in Area I, whereas, it is somewhat less in Area III, thus giving rise to the difference in levels of significance.

Labor input into the beginning operation

One would expect the labor input in the beginning farm business to be closely associated with the size of the land base of the operation, the financial position of the operator, labor input by other family members and the pressure for and availability of non-farm work.

On the basis of these factors, one might expect the amount of labor input to be quite high if a large number of acres were farmed. Also, one might expect that a low capital position would tend to increase the number of days work put into the farm business since labor would be substituted for capital where the capital was not available. The pressure for non-farm work, however, might tend to offset the labor-capital substitution mentioned above since the operator may prefer to work at a non-farm job to acquire capital rather than substitute labor for capital directly on the farm. Too, it may not be possible for labor to be substituted for some types of capital which may increase the pressure for off farm work. Of course, an offsetting factor to this may be the availability of non-farm work. Depending on the relative availability of non-farm work, labor may be substituted for capital in a non-farm job or directly on the farm.

It is difficult to draw inferences from the data on work on the farm since the data were not collected in a manner which allowed conversion of days as given by the beginning operator to standard days. A days work on the farm varied from "some" work to a full day of 8 - 10 hours. Unfortunately the "some" work was taken to mean even small amounts of time spent at farm jobs such as doing chores, or in other words, the day was not of standard length and could not be converted to standard length for analytical purposes.

Keeping in mind the limitations of the farm work data, it can be said that on the average, beginning operators worked on the farm 249.1 days in the first year of farming. His wife, in those cases in which the beginning operator was married, worked 29.0 days on the farm and other members of the family worked an average of 47.2 days on the farm.

Beginning partners tended to work on the farm more than beginning single operators. In addition to the beginning partner's work on the farm, the other partner tended to work about the same number of days as the beginning partner. Whereas beginning single operators worked only an average of 249.1 days on the farm during the first year of farming, beginning partners worked an average of 273.8 days and their partners worked an average of 243.6 days. It can be seen that the beginning partnership used almost twice as much labor as the beginning single operation. The high labor usage of the beginning partnership operation probably is due to the much larger land base of most partnership operations. At the same time, the high beginning partner labor input into the farm might indicate that there is a relatively heavier labor responsibility placed on the younger operator of the typical partnership since one would expect that with less capital to

put into the business more labor would be required of him.

There was little difference between the age groups regarding the labor used on the beginning operation. Even if the differences which did appear had been of sufficient magnitude to warrant further investigation, such investigation would not have been particularly appropriate since the accuracy of the data is subject to some doubt.

Non-farm work

It is believed that the accuracy of the non-farm work data surpasses that of farm work. The reason for this belief is that it is thought reasonable to assume that the beginning operator would probably not think of a few minutes spent at a non-farm job as constituting a days work whereas this is not necessarily true of farm work. On the average, beginning operators worked 88.9 days at non-farm work or nearly three months off the farm.

In examining the age differences associated with non-farm work, it was seen that older beginning operators tended to work off the farm more than younger beginning operators. The youngest of these operators worked off the farm an average of slightly less than 60 days. Those in the middle age group worked off the farm slightly more than 90 days and those in the highest age group worked off the farm somewhat more than 135 days on the average.

There seemed to be several factors at work which would help explain this difference. First, from the data on the length of time worked at non-farm jobs before farming it was seen that the older beginning operators had held non-farm jobs for long periods of time, while data on the

current non-farm employment of these persons would indicate that many were continuing their earlier non-farm job at least on a part time basis. In the case of many older beginning operators, it appeared that farming was a part time job while the non-farm employment was the major occupation.

Another factor supporting this idea is the reasons given for entering farming. There was a high proportion of the older operators giving the reason "wanted to live in the country - good place to raise children" as their main reason for beginning farming operations. (Table 14)

Further, the younger beginning operators tended to have larger farms in terms of acres than older beginning operators. This would tend to limit the amount of non-farm work which could be undertaken. Also, since the younger operators did not have established occupations, as many of the older operators did, they would not be as apt to take or have a full time non-farm job. Probably a combination of these factors accounts for the mid ground found in the middle age group.

As was noted in the discussion of the land base, there was a growth in the incidence of land ownership as age increased and at the same time the mean acres owned was nearly the same for the two upper age groups. This also might indicate that the farm was more of a residence or hobby to those who were owners than to those who were tenants. Since part-owners were rather rare, this small acreage among owners would tend to support a hypothesis of this nature.

Table 19 shows the days worked on the farm and at non-farm jobs by geographic classification. The area differences are of such a magnitude as to require some explanation. As can be seen, there are considerable differences between the days worked on the farm by the respondents of

Area II (Northwest) and those of Areas I or III (Northeast and South respectively). It is probable that such differences which appear can be attributed to the tenure effect noted before, and thus to the greater incidence of non-farm work in Areas I and III. As can be seen, the respondents worked an average of 119.7 days at non-farm jobs in Area I and 99.7 in Area III while the respondents of Area II worked an average of only 49.7 days at non-farm jobs. This latter figure is less than half the average number of days for the other two areas.

This finding should not be surprising since it would be expected that there were more non-farm jobs available in Areas I and III than in Area II. Since the northeastern part of the state, Area I, had much of the state's industrial capability, one would expect the mean days worked at non-farm jobs to be highest in that part of the state. At the same time, Area II, the northwestern part of the state probably had the fewest non-farm job opportunities. It was in this area where the lowest incidence of non-farm labor was found. In Area III, the southern part of the state, it would not be expected that there would be as many non-farm job opportunities as in Area I, but this part of the state encompasses the Des Moines area, the Council Bluffs-Omaha area and the industrial areas of the southeastern part of the state which would offer substantially more non-farm job openings than Area II. Too, in Area III one would expect to find the greatest pressure for non-farm employment since it is generally thought to be the poorest land area of the state and also, the area where economic adjustments have been proceeding at the most rapid rate, leaving more people seeking non-farm employment.

Table 19. Days beginning operators and their families worked at farm and non-farm jobs by geographic area

Geographic Area	Worker	Days Worked on Own Farm	Days Worked at Non-farm job
Area I	Beginning operator	221.4	119.7
	Operator's wife	38.9	38.5
	Family members	53.6	18.3
Area II	Beginning operator	273.3	49.7
	Operator's wife	31.1	29.4
	Family members	40.4	0.0
Area III	Beginning operator	251.5	99.7
	Operator's wife	16.6	23.0
	Family members	43.7	23.3
Total	Beginning operator	249.1	88.9
	Operator's wife	29.0	30.3
	Family members	47.2	15.0

FINANCIAL POSITION OF THE BEGINNING OPERATOR

The financial position of a person entering any business venture has a direct bearing on the amount and kind of resources which can be marshaled for that venture. Even though it is possible for a person wishing to set up a business to borrow a large proportion of the necessary capital with which to purchase stock, equipment and to rent or buy the plant, lenders generally prefer to lend to those who have a large equity rather than a small equity in the business.

So it is with farming. Although the beginning operator can borrow from various sources -- commercial banks, Farmers Home Administration, Production Credit Administration, private lenders and many others -- the financial position of such an operator determines how much he can borrow within limits set by the lender.

In order to measure the financial position of the beginning operator, questions were asked concerning his assets, both farm and non-farm and about his liabilities. With these two sets of information, a net worth statement was prepared for each beginning operator. Summary results of these statements are presented in this section.

Net worth was chosen as the appropriate estimator of financial position since it takes into account both assets and liabilities. It also gives a relatively unbiased estimate of the amount of resources which could be brought to bear in the farming enterprise. It further gives a fairly good estimate of the savings amassed by the operator before he began farming.

It must be realized, however, that even net worth does not necessarily show an accurate picture of the financial position built up by the begin-

ring operator since family relationships are quite close and much of the net worth shown could have been the result of gifts received shortly before the first year of farming. At any rate, net worth was considered to be the best estimator of the financial position available.

In presenting the data, a brief investigation of the overall net worth position of all beginning operators will be undertaken first. Then the financial position of single operators will be investigated and finally that of beginning partners will be presented. The order of presentation of the items included in net worth will be, first farming assets, then non-farm assets, liabilities and finally net worth. Farm assets have been divided into two categories, operating assets which included grain, livestock and machinery and land as a separate category. Non-farm assets are treated together as are liabilities.

Net Worth of All the Beginning Farm Operators

Table 20 shows the mean beginning net worth summary for all beginning operators. It can be seen in the table that on the average, beginning operators had a net worth of \$8921 at the start of their first year in farming. Total assets amounted to \$12,135 on the average while liabilities were \$2613.

The largest asset item was real estate, both farm and non-farm. At the same time, the largest item included in the liabilities was the real estate mortgage. Thus it can be seen that real estate bulked large in the net worth position of the beginning operator although only slightly more than 23 percent of the beginning operators owned real estate.

It seems strange that the farming assets of the beginning operator

were only about five-sevenths of the non-farm assets. One would have expected that any large holding of non-farm assets would have been converted to farm assets in order that the business would have the largest possible amount of capital available for farming operations. With the low capital position beginning operators are thought to have, one would have expected a much larger farm asset to total asset ratio than was found. Part of the explanation for this probably lies in the problems attached to determining exactly when the operator started farming. For ease in obtaining the data, the date taken as having started farming was January 1 of the first year in which farming operations were carried on. In many cases, farming operations were not started until March 1 of that year. In others, operations had begun by January 1 of the first full year of farming. Thus it can be seen that the time of start would have a direct bearing on the farming assets which had been accumulated at the time the data were taken. Those who started before January 1 probably had a relatively large amount of farming assets while those who started later probably had little if any farming assets on January 1.

Net Worth of the Single Operator

Farm assets

The beginning single operator held a mean total value of \$4812 in farming assets on January 1 of the year in which he began farming. Of this, less than half, \$1963, was in the form of operating assets. Only 26 percent of the beginning single operators owned land, but these 26 percent accounted for the \$2847 difference between operating assets and total assets.

Table 20. Mean beginning net worth summary for all beginning operators

Farming Assets

Crops	\$ 117	
Livestock	785	
Machinery and equipment	1074	
Land	<u>2927</u>	
TOTAL FARMING ASSETS		\$4903

Non-farm Assets

Real Estate	\$2162	
Cash	1049	
Household furnishings	1170	
Other assets	<u>2342</u>	
TOTAL NON-FARM ASSETS		<u>6723</u>
TOTAL ASSETS		\$11,624

Liabilities

Real Estate Mortgage	\$1539	
Chattel Mortgage	337	
Promisary Notes	689	
Other	<u>138</u>	
TOTAL LIABILITIES		<u>2,703</u>
NET WORTH		<u>\$ 8,921</u>

Table 21 shows the summary mean net worth statement for beginning single operators.

Farm asset holdings ranged from none, upward to more than \$50,000 on January 1 of the year in which operations began. It is notable that the distribution of beginning assets is quite skewed to the left since 75 percent of the beginning single operators held total farming assets worth less than the mean value of total farming assets for all operators.

When beginning farming assets were classified by age of the operator, marked differences appeared among age groups. Table 22 shows this classification. These differences no doubt are the result of the higher capital position of the older beginning operators, and also, the higher incidence of land ownership in the higher age groups. Since few of the youngest beginning operators owned any land and since land was shown to be a larger proportion of the beginning farm assets, it follows that the older operators would have larger farming assets because many of them owned land.

Non-farm assets

Non-farm assets were divided into real estate, cash-on-hand, household equipment and furnishings and other non-farm assets which included stocks and bonds, the non-farm share of the automobile and any other asset which did not fit into any of the above categories.

The total value of non-farm assets held per single operator was considerably higher than that of farm assets. Whereas farm assets totaled only \$4812, these same operators reported non-farm assets of \$7323. Again, more than 70 percent of the beginning single operators held less than the mean value of non-farm assets for all operators.

Table 21. Mean beginning net worth summary for single operators

<u>Farming Assets</u>		
Crops	\$ 134	
Livestock	790	
Machinery	1039	
Land	<u>2849</u>	
TOTAL FARMING ASSETS		\$4812
<u>Non-farm Assets</u>		
Real Estate	\$2584	
Cash	1008	
Household Furnishings	1293	
Other Assets	<u>2440</u>	
TOTAL NON-FARM ASSETS		<u>7323</u>
TOTAL ASSETS		\$12,135
<u>Liabilities</u>		
Real Estate Mortgage	\$1409	
Chattel Mortgage	401	
Promissary Notes	657	
Other	<u>145</u>	
TOTAL LIABILITIES		<u>2,613</u>
NET WORTH		<u>\$ 9,522</u>

Table 22. Mean beginning net worth summary of single operators by age

Item	16-23.9 (n=52)	Age 24-33.9 (n=63)	34+ (n=39)	Total (n=154)
Farming Assets	\$2210	\$4300	\$9462	\$4812
Non-Farm Assets	2038	5902	17170	7323
Total Assets	4248	10202	26632	12135
Liabilities	1038	2941	4265	2613
NET WORTH	3210*	7261*	22367*	9522

*Indicates a statistical level of significance of .05.

In classifying non-farm assets by age, the same relationships seen in farm assets are again apparent. (Table 22) The magnitude of the difference between successive age groups is somewhat larger than that found between these age groups for farm assets. Here the means differ by roughly a factor of three, in other words, approximately three times the non-farm asset total for the youngest operators nearly equals the non-farm asset total of the second group and so on.

Liabilities

Liabilities were placed into categories of the following types: real estate mortgages, chattel mortgages, promissory notes and other liabilities, which included short term consumer credit and the normal credit extended by feed companies, oil companies, etc.

A similar trend appears with liabilities as did with assets, inasmuch as liabilities appear to increase as age increases and as assets increase. One reason for this is shown in the data on land ownership. Older operators tended to own land more frequently than younger operators. Since it might be expected that at least part of the land would be mortgaged, this would tend to increase the liabilities of the older beginning operators. This expectation is supported since it was shown that a large proportion of the liabilities were related to land or other real estate.

It is difficult to draw inferences as to the proportion of the liabilities associated with the farm business since no attempt was made to separate those liabilities arising from the farm business from those which were primarily non-farm in nature in the original data. It is, however, fairly certain from an examination of the individual schedules that

in the lower age groups the proportion of liabilities arising from the farming operation was greater than that arising from non-farm activities.

Beginning net worth

As was indicated earlier, net worth is not subject to the variability with which any analysis of assets or liabilities is beset, since, if the net worth of any person is analysed at any point in time, the net effect of assets less liabilities would reflect accurately the financial position at that point in time. The beginning operators studied began farming operations at different times and had, therefore, varying amounts of farming assets and liabilities.

Table 21 shows the mean net worth statement summary for beginning single operators.

As was pointed out when both assets and liabilities were examined, there appeared to be a considerable increase in the value of beginning assets and liabilities as age increased. Although a statistical examination of the differences observed in assets and liabilities between age groups would have been possible, such an examination would not have been as good a measure of the differences as an analysis of net worth. Net worth allows comparison of the differences since it is not related to the time of starting farming and is a relatively accurate measure of financial position.

A test of the hypothesis of no difference in net worth with increasing age shows the differences to be significant beyond the 95 percent level of probability. This would indicate a rejection of the hypothesis of no difference. The result is, however, what one might expect in view of the

non-farm work data presented earlier.

In the highest age group, the respondents had done considerable non-farm work and had apparently amassed a large net worth as indicated by the high value of net worth as shown in the table. The middle age group had less opportunity for building net worth, but still had accumulated much more than the low age group, many of whom, were in many cases just out of school or the military service and consequently had little opportunity for building net worth.

In looking at the beginning net worth of single operators by geographic area, little difference is to be observed between the beginning net worth of those in areas one and two. That for area one was found to be \$10,420 while the net worth in area two was found to be \$10,313. However, in comparing area three with areas one and two a difference of slightly more than \$2600 was observed. Even so, no significant difference was found between the net worth of area three and the other two areas.

Net Worth of The Beginning Partner

Table 23 shows the mean beginning net worth summary for beginning partners. It appears that among beginning partners, non-farm assets do not form as great a part of the beginning net worth as among beginning single operators. This may be due to a difference in the time of start, that is, beginning partners may have a tendency to begin operations in the fall, before January 1 of their first year of farming. It would be expected, in such a case, to find that a greater proportion of the non-farm assets had been converted into farming assets by January 1. Although it might be difficult for a beginning single operator to convince his prede-

cessor to vacate earlier than the customary March 1, the beginning partner would not have the same problem since the partnership can be formed at any time. At the same time, housing would not be expected to be the problem with the beginning partner, which it is with the beginning single operator, since the partnership can be established de facto and the beginning partner need not live on the place. Such an arrangement as this would help explain the greater weight of farming assets in the beginning net worth of the beginning partner. Also, since the partners tended to be younger than the single operators, they may not have had as great an accumulation of non-farm assets as had the single operators.

There seemed to be little difference between the liabilities of the beginning partner and the beginning single operator, but there was a sizable difference between the net worth of the two. Whereas the beginning single operator had a mean net worth of \$9522, the beginning partner had a net worth of only \$6194, a difference of \$3328. However due to the large variance of the net worth of the beginning partners (the variance of the mean was found to be 3858) no significant difference was found even though the difference was quite large. (See Tables 22 and 23)

Some of the same relationships which appeared in an age classification of single operators was also found with partners. (Table 23) The increase in non-farm assets, total assets and net worth are in the same direction as found with single operators. It is, however, striking to note that farming assets showed a decrease from the first age group to the second.¹

The size of the business does not seem to have any relation to the

¹No attempt was made to include the third age group in the discussion since only one partner was found in this age group.

net worth differences observed between age groups since the beginning partners in the youngest age group started on a mean acreage of 279.1 whereas those in the middle age group had a mean acreage of 262.4. If there is a relationship, it is opposite to what would have been expected.

Table 23. Mean beginning net worth summary for beginning partners by age

Item	Age			Total (n=33)
	16-23.9 (n=21)	24-33.9 (n=11)	34+ (n=1)	
Farming Assets	\$4914	\$3491	\$35,000	\$5370
Non-farm Assets	2424	5991	13,400	3947
Total Assets	7338	9482	49,000	9317
Liabilities	3190	918	26,000	3123
NET WORTH	\$4147 ^{NS}	\$8564 ^{NS}	\$23,000	\$6194

^{NS} Indicates no significant differences were found.

Although the difference between the net worth of the beginning partners in the youngest age group and those in the middle age group was large, \$4417, no significant difference was found. The variance of both these groups was quite large ($s_1 = 10,420,619$; $df = 20$; $s_2 = 67,086,545$; $df = 10$) thus leading to the finding that the difference was within sampling error.

Because of the small number of partners found and the wide variation in their characteristics, it is difficult to draw inferences from the data. In a closer examination of partnerships, it may be found that relationships of the nature pointed out in the foregoing do indeed exist. Until

such an examination is made, few conclusions can be drawn concerning these relationships.

Table 24. Mean beginning net worth summary for beginning partners.

Farming Assets		
Crops	\$ 48	
Livestock	767	
Machinery	1245	
Land	<u>3309</u>	
TOTAL FARM ASSETS		\$5370
Non-Farm Assets		
Real Estate	\$ 218	
Cash	1235	
Household Furnishings	606	
Other Assets	<u>1888</u>	
TOTAL NON-FARM ASSETS		<u>3947</u>
TOTAL ASSETS		\$9317
Liabilities		
Real Estate Mortgage	\$2136	
Chattel Mortgage	42	
Promissory Notes	<u>106</u>	
TOTAL LIABILITIES		<u>3123</u>
NET WORTH		<u>\$6194</u>

GIFTS

Gifts Received by Beginning Operators

It is generally thought that beginning farm operators receive considerable family assistance in establishing themselves in farming. Strongly supporting this expectation are findings from two studies. In a study of the occupational plans of Iowa farm boys done in 1959, Kaldor, et al, (8) found that among boys planning to farm, more than 70 percent expected some help from their families. From an earlier study in Indiana, Arnold (3) found that more than two-thirds of the beginning operators studied had received family assistance in establishing the farming operation. Kanel (9) indicated that the use of family owned land may be a large source of the family assistance.

From these findings, it would seem that the beginning operator has come to rely quite heavily on family assistance. In order to investigate the magnitude and kinds of gifts which beginning operators received in establishing themselves in farming, each was asked, "Did you receive any help from your or (if married) your wife's family when you started farming in 1959 (1960)?" (Appendix). Also, each respondent was asked to estimate the value of the help had it been purchased or hired.

Many different types of gifts were reported. These ranged from a loan of livestock to the inheritance of land and in value from less than \$10 to more than \$40,000.

In the analysis, a gift was credited to the respondent if there was no apparent payment nor intended repayment in the event that an item or the use of some item was given to the beginning operator. Thus, if the beginning operator was loaned money interest free, a gift of the interest was

credited to the operator. Other cases were such clearer, such as the direct gift of cash or livestock. Still others were not so clear as was the case of the gift of the use of livestock.

Source of gifts

Most gifts were received from members of the operator's family and in some cases from the family of the operator's wife. Although no major attempt was made to determine the exact relationship of the giver, it appeared that not only parents (both the operator's and wife's) but brothers, brothers-in-law and other relatives were involved in the gift process. It is probable that parents played the most important role in the gift process, however.

The only notable exception to the general rule that family members were primarily the source of gifts was in the analysis of gifts of machine use, in which it was found that although family members played the major role, machines were borrowed quite frequently, without apparent repayment in money or exchange labor, from neighbors.

Proportion of beginning operators receiving gifts

In the study of occupational plans of Iowa farm boys, Kaldor, et al, (8, p. 634) found that among boys planning to farm 71.7 percent expected some help from their parents. Of these, 41.3 percent expected a loan of money and at the same time 67.4 percent expected gifts of land, livestock, machinery and money. Closely supporting this are data from an Indiana study which indicated that in one county (the study area) 71 percent of all operators who began farming between the years 1947 and 1953 received "substantial" family assistance (3, p. 6).

On the basis of the high correspondence found between the percent who expected to receive family assistance from the Iowa study and the percent who actually received assistance from the Indiana study, one would expect to find a similar proportion of the beginning operators receiving gifts in the current investigation.

It was not surprising when investigation showed that more than 67.5 percent of the beginning operators interviewed received some assistance.

Size of the gift received by beginning operators

Beginning operators who received gifts got an average of \$1672 in gifts of various kinds. As was mentioned before, the gifts ranged in size from the very small, less than \$10 upwards to more than \$40,000. Only in three instances were there gifts which could be considered atypical in the sense that they were non-voluntary. These three instances involved inheritance. In one of them the inheritance amounted to \$42,099 and included land, farm machinery, livestock and grain. In another, the total inheritance amounted to \$18,500 and included farm machinery, land, livestock and non-farm real estate. In the third the inheritance was in the form of cash in the amount of \$5000.

It is interesting to note that all instances in which inheritance was a factor were found among beginning single operators, all three were in the northeastern part of the state and two of the three were in the highest age group, that above 34 years of age. The third, (the inheritance of cash) was found in the middle age group.

Types of gifts received

Table 26 shows the categories into which the gifts received by be-

Table 25. Number of beginning operators, percent of total and mean value of gifts made to beginning operator

Types of Gift	Number who received gifts	Percent of total (n = 188)	Mean amount of gift ^a
Livestock	28	14.9	\$1224
Hay, grain & pasture	21	11.2	691
Machine use	76	40.4	580
Gasoline, seed & fertilizer	11	5.8	211
Interest on borrowed funds	27	14.4	181
Farm machinery	11	5.8	1240
Cash	15	8.0	1316
Non-farm goods & services	28	14.9	600
Real estate	2	1.1	23,300
ALL GIFTS	127	67.6	1,672

^aGiven as the mean amount of gift received by each beginning operator receiving that type of gift.

ginning operators were placed as well as the number of beginning operators who received gifts of each type. In the last two columns of the table is shown the percentage of operators who received gifts of each type and the mean size of the gift for those operators receiving each type of gift.

Livestock gifts refer only to outright gifts of animals. The use of an animal was included in the category "interest on borrowed funds". In such cases, the loan of an animal was considered to be the same as the loan of funds with which to purchase the animal, repayment of the loan occurring when the animal was returned to its owner. Any decrease in the value of the animal was disregarded since the relative age of the animal and its physical condition were unknown.

Receipt items included the gifts of hay, grain and pasture and were classified as outright gifts. If repayment was indicated, that is, if the gift of hay, grain or pasture was to be repaid, it was handled in the same manner as the loan of livestock and is included under "interest on borrowed funds".

Machine use was by far the most frequent gift received by beginning operators. To calculate this gift a schedule of custom work rates was adapted from the "Iowa Farm Custom Rate Guide" (1) and (2) and applied on an hourly, daily or per acre basis¹ as applicable to the information on machine use given by the beginning operator. It might be pointed out that the gift of machine use did not involve the transfer of title to the machine. Such cases in which the actual title to the machine passed are included in the category "farm machinery".

¹ With the assistance of Mr. Ray E. Armstrong the data of the Iowa Farm Custom Rate Guide were adapted to per day and per acre costs where hours used were not given.

Gifts of non-farm goods and services included any item or service which did not pertain to the farm business directly (except cash) and covered a wide range of items as diverse as the payment of a grocery bill, payment of an electrical bill, furniture and other miscellaneous items.

The number and percent of operators receiving gifts is shown at the bottom of the table as well as the mean total gift for all operators receiving gifts.

Factors affecting the amount and kind of gifts

Two factors might be expected to exert an influence on the amount and kind of gifts made to beginning operators. Both the business form under which the operator begins operations and the age at which these operations begin might be expected to have a bearing on the gifts which the operator receives.

Factors associated with the business form One might expect that gifts made to beginning partners would be larger than those made to beginning single operators since in a partnership between father and son, as most beginning partnerships were, the family ties would be quite close.

As can be seen from Table 26 the above expectation is supported for some types of gifts but is not supported for others. Part of this divergence stems from the fact that the three cases in which inheritance was a factor were among single operators. At the same time, for the category "machine use", the low figure shown for beginning partners is probably due to the reduced necessity for borrowing since the other partner would normally be expected to have most of the machinery required for the operation of the farm.

Table 26. Number of beginning operators receiving gifts, percent of total operators and mean value of gifts made to beginning operators by business form

Type of gift	Business Form				Mean Amount of gifts ^a	Number who received gifts	Partner Percent of total (n=33)	Mean Amount of gifts ^a	Number who received gifts	Partner Percent of total (n=33)
	Single Percent of total (n=155)	Number who received gifts	Mean Amount of gifts ^a	Partner Percent of total (n=33)						
Livestock	13.5	21	\$ 867	21.2	7	21.2	\$2294			
Hay, grain and pasture	9.7	15	482	18.2	6	18.2	1215			
Machine use	45.2	70	625	18.2	6	18.2	58			
Gasoline, seed and fertilizer	6.4	10	202	3.0	1	3.0	300			
Interest on borrowed funds	12.9	20	186	21.2	7	21.2	166			
Farm machinery	5.2	8	1546	9.1	3	9.1	423			
Cash	8.4	13	1418	6.1	2	6.1	650			
Non-farm goods and services	14.8	23	503	15.2	5	15.2	676			
Real estate	1.3	2	23,300 ^b	..	0	..	..	
ALL GIFTS	70.3	109	\$1662	54.5	18	54.5	\$1734			
ALL GIFTS (LESS INHERITANCE)	68.4	106	\$1090	54.5	18	54.5	\$1734			

^aGiven as the mean amount of gift received by each beginning operator receiving that type of gift.

^bDue entirely to inheritance.

It is true, however, that in the categories "livestock" and "receipt items" that beginning partners did receive greater gifts than beginning single operators. While the reasons for this were not immediately apparent, an investigation of the individual cases showed that the beginning partner may have an opportunity to buy a share of the livestock and feed at a reduced rate or he may have been given a share of the livestock and feed. Six of the seven livestock gifts made to beginning partners were made under one of these situations.

It is possible that some intangible consideration may have been given by the beginning partner for these concessions or outright gifts but none were reported. It is also interesting to speculate whether or not these beginning partners were only sons. It would seem that the probability of an arrangement of this nature occurring would be greater if the beginning operator were an only son. However, information concerning other brothers and sisters was not available.

Age factors On the basis of the relationships concerning time of start and age found in the Indiana study (3, p. 7) one might expect to find the same relationships in the present study, that is, one would expect to find that younger operators receive larger gifts than older operators, other things being equal.

Table 27 shows the number of beginning operators receiving gifts, the percentage of the total and the mean amount of gift made to those who received gifts by the age of the beginning operator. If one discounts the effects of inheritance which bulk large in the upper age group, it can be seen that the expectation is generally upheld since the younger operators do show larger gifts than the older operators.

Table 27. Number of beginning operators receiving gifts, percent of total and mean value of gifts made to beginning operators by age

Type of Gift	Age Groupings								
	15-23.9 Percent of total (n=73)	Number receiving gifts	Mean amount of gift	Number receiving gifts	24-32.9 Percent of total (n=74)	Mean amount of gift	Number receiving gifts	34+ Percent of total (n=41)	Mean amount of gift
Livestock	16.4	12	\$1531	13	17.6	\$ 734	3	7.3	\$2120 ^a
Hay, grain & pasture	21.9	16	682	3	4.0	390	2	4.9	1220 ^b
Machine use	50.7	37	706	33	44.6	469	6	14.6	417
Gasoline, seed & fertilizer	8.2	6	167	5	6.8	264	0	..	..
Interest on borrowed funds	17.8	13	138	11	14.9	243	3	7.3	143
Farm machinery	6.8	5	1476	2	2.7	280	4	9.8	1425 ^c
Cash	12.3	9	876	6	8.1	1977	0	..	..
Non-farm goods & services	12.3	9	990	16	21.6	414	3	7.3	417
Real estate	..	0	..	0	..	..	2	4.9	23,300 ^b
ALL GIFTS	80.8	59	\$1521	55	74.3	\$1026	13	31.7	\$5095
ALL GIFTS (LESS INHERITANCE)	80.8	59	\$1521	54	73.0	\$ 952	11	25.8	\$ 512

^aDue to inheritance except for \$120.

^bDue entirely to inheritance.

^cDue to inheritance except for \$515.

Since nearly two-thirds of the beginning partnership cases are in the lowest age group, the question arises: Is the greater gift made to younger operators because they are young or because a high proportion of the young operators are partners?

An investigation of gifts made to beginning single operators in an age classification would indicate that the youngest beginning single operators received a greater amount of gifts than older beginning single operators if again the effect of inheritance is disregarded. The same treatment of gifts made to beginning partners shows the same result. Thus it seems that younger operators, regardless of business form, tend to receive larger gifts than older beginning operators and the incidence of a partnership framework tends to increase the size of the gift further.

SUMMARY, CONCLUSIONS AND SUGGESTIONS FOR FURTHER STUDY

Summary and Conclusions

The rapid advances in agricultural technology over the past three decades and the persistent natural increase in farm population over maintenance needs has produced an acute population adjustment problem in the agricultural sector of the economy.

Thus, the objective of this study was concerned with gaining some insight into the conditions of entry of those who enter farming and to describe their initial farm operation.

This broad objective was broken down into five specific objectives. These were: (1) to determine the number of persons who began farming operations in the years 1959 and 1960; (2) to investigate and describe the background and personal characteristics of the beginning farm operator; (3) to investigate and describe the characteristics of the beginning farm operation with regard to business form, tenure, family arrangements and resource base; (4) to investigate the financial position of the beginning operator and the amount of resources he controlled at or near the time he began farming; (5) to determine the role gifts and other family assistance played in helping the beginning farm operator get started in farming.

The universe sampled was the open country zone of Iowa as delineated on the current Master Sample materials for the state. A proportional sampling scheme was used in which each stratum and each segment was sampled proportional to size in terms of the number of farms as given by the 1959 Census of Agriculture. An approximately uniform sampling fraction of 1/24,255 was used.

As a result of the field work, 191 interviews were obtained from a total

of 206 operators who were identified as having started farming in either 1959 or 1960.

In order to study differences among beginning operators, three major classifications were used. These were the business form of the beginning operation, i.e., whether single operatorship or partnership, age of the beginning operator and the geographic area where the operator started farming.

Below is a summary of the major points covered in the study along with conclusions by objective.

Objective 1

It was found that approximately 5000 persons began farming in the two year study period in the universe sampled. In 1959, 2304 operators were found to have started farming and in 1960, 2692 operators were found to have started. Since no statistical difference was found between these two estimates, it was concluded that the number of beginning operators did not differ between years. Also, it was found that not all parts of the state provide the same proportion of opportunities to beginning operators per farm. ✓

Objective 2

Although beginning operators varied widely in age, from 16 to 64 years, on the average, they were, however, relatively young. Few had not been raised on a farm and the majority had completed high school. Older beginning operators, however, tended to have somewhat less schooling than the younger operators.

More than three-quarters of the beginning operators interviewed had

done non-farm work before farming. On the average, these persons had worked 5.5 years at non-farm jobs. It was apparent that non-farm work played an important part in the lives of most beginning operators before they began farming.

Participation in those activities which might be thought to contribute to a high level of management skill was found to be quite low. Only 61.6 percent of the beginning operators had taken any high school agricultural training. Also, participation in 4-H and FFA activities was quite low.

The reasons given for beginning farming varied widely. It was found that the younger beginning operators had a greater desire for independence than did older operators. Older operators, on the other hand, tended to give reasons which were associated with retirement and a rural atmosphere. Also, in the youngest age group, lack of knowledge of other employment opportunities was found to be an important factor in the decision to farm.

Objective 3

Although the partnership would seem to be advantageous to the beginning operator with limited capital, only 17.8 percent of the beginning operators began under this business form while more than 80 percent began as single operators. Not all operators, however, had the same opportunity to begin in partnership. Also, some may not have wanted to start in a partnership framework.

Tenancy was the most common land tenure arrangement among beginning operators. However, many of the beginning partners farmed on land which was owned entirely by their partners and thus they were not required to own or rent land. In only about one-fourth of the cases was the land fully

owned by the beginning operator. Although some cases of part ownership were found, the numbers were too small to provide a basis for inference.

The crop-livestock share lease and the crop share-cash lease were the two types of leases found most frequently. The popularity of these two types of leases probably reflects the risk sharing feature inherent in these types of leases. Also, the popularity of the crop-livestock share lease probably reflects the ease of entry into livestock enterprises presented by this type of lease.

In cases of tenancy, land was rented most frequently from non-relatives, however, nearly 30 percent of the beginning operators used land owned by family members.

Beginning operators, on the average, started farming on farms with smaller land bases than would have been expected on the basis of a priori considerations. It was expected that the land base of the beginning operator would be larger than the average for the population of Iowa farms.

The smaller size of the beginning operator's farm was found to be primarily the result of tenure effects. Owner-operators, especially in the two older age groups, tended to have rather small land bases. When the mean size of farm for all operators was examined without these tenure effects, little difference was to be observed between it and the mean for the population of Iowa farms.

Beginning operators' farms differed significantly from census farms in the northeastern part of the state and in the southern part of the state. They tended to have fewer total acres, fewer crop acres and a greater value per acre than census farms in these areas. There was evidence to indicate that beginning operators tended to start on the better land types of these

areas. Also, it was believed that the availability and incidence of non-farm work in these two areas had some effect on the size of the land base.

Objective 4

Net worth was chosen as the best estimator of financial position since it was not affected by the time of start as much as other estimates. The net worth of the beginning operator, on the average, was found to be slightly less than \$9000, however, the distribution of net worth was quite skewed to the left since more than 70 percent of the operators had less than the mean net worth value for all operators. Much of the net worth value was found to be the result of land ownership, although only about one-fourth of the beginning operators owned land.

The youngest beginning operators tended to have only about one-half as great a net worth as the middle age group of beginning operators. Also, the oldest beginning operators had approximately three times as great a net worth as the middle age group. Although not exactly in these proportions, these relationships were reflected in assets and liabilities in much the same manner.

Thus, it can be concluded that the beginning operator, on the average had a fairly limited financial position. Younger beginning operators did not have as great a capital accumulation as older operators. Since the amount of time spent at non-farm work increased with increasing age, much of the larger net worth for older operators was probably the result of savings while employed at non-farm jobs.

Objective 5

Beginning operators received gifts of many types, from machine use to

real estate. Most gifts were made voluntarily, that is, inheritance made up only a small part of the gifts in numbers, however, these gifts tended to be quite large. Inheritance occurred most frequently among the oldest beginning operators.

Younger operators tended to receive larger gifts than older operators if the effects of inheritance are ignored. Also, partners tended to receive greater gifts than single operators. Further, it was found that partners in the same age group as single operators tended to receive greater gifts. Thus, it may be concluded that younger operators, regardless of business form, receive greater gifts than older operators and the incidence of partnership tends to increase the size of the gift still further.

Suggestions for Further Study

Limitations of the present study suggest several areas for possible further investigation. Since many of them were noted in previous discussions, they will be briefly presented here. These areas were thought to be:

1. Evidence from this study indicates that non-farm work has replaced the "farm laborer rung" in the "agricultural ladder". However, further evidence is needed in order to substantiate this conclusion.

2. Further inquiry is needed into the reasons why beginning operators start farming and into the nature of the information and values that lead to this decision.

3. The reasons for the low participation in activities which would lead to a high level of management skill were not clear from the data. Further study should be undertaken in order to understand why beginning operators did not participate more heavily in these activities.

4. Since the labor data was of questionable value, it was not known how much labor was actually used on the beginning operation. Also, little is known about the effects of non-farm work and the availability of non-farm work on the decision to farm and the characteristics of the beginning operation. This area of suggested further study is closely related to that of 1 and 2 above.

5. Another rewarding area for investigation would be to study the progress of these beginning operators at the end of a time period, say, three years and possibly again at the end of five years. Since the data are available concerning their first year of farming, it would be of great value to know how the operation and the operators change over time.

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APPENDIX

New Operator Schedule
(For 1959 beginning operators)

County _____

Segment No. _____

Household No. _____

Single operatorship _____

Partnership _____

Interviewer _____

Date _____

I. General operator and family information

1. Name of beginning operator (respondent) _____

2. Complete following table for respondent's household:

<u>Household member</u>	<u>Relation to respondent</u>	<u>Age</u>	<u>Sex</u>	<u>Marital status</u>	<u>Last grade in school</u>
Respondent	xxx	_____	_____	_____	_____
_____	Wife	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

3. (If married) What year were you married? _____

4. Did you have any agricultural training in high school or college before you started farming? Yes ___ No ___

If yes

<u>School</u>	<u>Kind of training</u>	<u>Amount of time spent</u>	
		<u>Semester</u>	<u>Quarter</u>
_____	_____	_____	_____
_____	_____	_____	_____

5. Were you a member of 4-H? Yes ___ No ___ If yes, number of years _____

6. Were you a member of FFA? Yes ___ No ___ If yes, number of years _____

7. How many years did you live on a farm before you started farming on your own? _____ years.

8. Did you do any nonfarm work before you started farming? Yes ___ No ___
(Include only full time work over 3 months duration performed after 18 years of age.)

If yes

<u>Kind of work</u>	<u>Approximate amount of time</u>	
	<u>No. of days worked</u>	<u>No. of hours per day</u>
<u>Military service</u>	_____	_____
_____	_____	_____
_____	_____	_____

9. Before you decided to farm, did you give any thought to a nonfarm occupation as a career? Yes ___ No ___

If yes, what nonfarm occupation did you give most thought to? _____

10. What would you say were the three most important reasons why you decided to farm? List in order of importance.

1st reason _____

2nd reason _____

3rd reason _____

II. Land input and tenure arrangements for 1959

(Respondent's first year of farming)

1. For single operatorship only

a) How many of the acres you operated in 1959 were owned by you? _____

b) How many of the acres you operated in 1959 were rented? _____

Total acres operated in 1959 _____

bl) If rented land was operated in 1959:

a. Acres rented for share crop and cash _____

b. Acres rented for cash only _____

c. Acres rented for share of crop only _____

d. Acres rented for crop-livestock share basis _____

(Interviewer: acres in bla-d must match acres in b)

2. For partnerships only (joint operatorship)

a) How many of the acres operated by the partnership in 1959 were owned by you? _____

b) How many of the acres operated by the partnership in 1959 were owned by your partner(s)? _____

c) How many of the acres operated by the partnership in 1959 were rented? _____

Total acres operated in 1959 _____

cl) If rented land operated by partnership in 1959:

a. Acres rented for share crop and cash _____

b. Acres rented for cash only _____

c. Acres rented for share of crop only _____

d. Acres rented for crop-livestock share basis _____

(Interviewer: acres in cla-d must match acres in c)

III. Cropping program for 1959 farm unit (respondent's first year of farming) (total amounts should include all landlord and partnership shares)

A. Land use and crop production for 1959 farm unit (use bushels for grains, tons for silage, bales or tons for hay for unit of production used)

	All owned land operated			Rented land operated				Total acres operated	
	Acres	Landlord I (Lease)		Landlord II (Lease)		Average weather yield/A	Landlord's* rent	Pro-duction	Total acres
		Pro-duction	Average weather yield/A	Pro-duction	Average weather yield/A					Total Pro-duction
Field corn: For grain									
For silage		XXXXX		XXXXX		XXXXX		XXXXX	
Hogged off		XXXXX		XXXXX		XXXXX		XXXXX	
For seed		XXXXX		XXXXX		XXXXX		XXXXX	
Oats									
Soybeans									
Other grain		XXXXX		XXXXX		XXXXX		XXXXX	
		XXXXX		XXXXX		XXXXX		XXXXX	112
Clover hay**									
Alfalfa hay**									
Other hay**									
Rotation pasture**	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX
Permanent pasture**	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX
Woods not pastured**	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX
Soil bank land	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX
Other idle land	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX
House and lots	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX
Roads	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX
Total	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX	XXXXX	XX

*Indicate crop-share rent in per cent or bushels and cash rent in dollars per acre or total dollars paid.

**If hay or pasture land was rented for less than the growing season, indicate the number of acres so rented and the amount of time or per cent of total production on this land during the period rented.

IV. Crop inventories and use for 1959 (first year respondent farmed)

	Corn (bu.)		Oats (bu.)		Soybeans (bu.)		Other grain crops		Silage (ton)		Hay (ton)	
	Farm	Resp.* share	Farm	Resp.* share	Farm	Resp.* share	Farm	Resp.* share	Farm	Resp.* share	Farm	Resp.* share
1. On hand, 1/1/59 (exclude sealed)												
2. 1959 production												
3. 1959 purchases (exclude seed)**												
4. Total (1 + 2 + 3)												
5. 1959 sales***												
6. Home-grown grain for seed									XX	XX	XX	XX
7. Landlord's share of production****												
8. On hand 12/31/59 (exclude sealed)												
9. Total (5 + 6 + 7 + 8)												
10. Used for feed (4 - 9)												

*In quantity or per cent of farm total.

**Include sealed grain redeemed and gifts received.

***Include market sales, grain placed under loan, and purchase agreement grain delivered to government during 1959.

****Use only for crop-share land.

Note: For crop share leases include landlord's share in 2 and 7, but exclude landlord's share in 1, 3, 5, 6 and 8.

V. Livestock inventories and movements for 1959 (Respondents first year of farming)

A. Hogs for 1959

Type	On Hand, 1/1/59			On Hand, 12/31/59		
	Number		Average Value	Number		Average Value per head
	Farm	Resp. share (no. or %)		Farm	Resp. share (no. or %)	
Breeding Stock: Sows & gilts						
Boars						
Market hogs: Under 6 months						
Over 6 months						
Total			XXXXXXXX			XXXXXXXX

In Movement

	Number		Value	
	Farm	Resp. Share No. or %	Farm	Resp. Share No. or \$
On hand Jan. 1, 1959			XXXXXXXX	XXXXXXXX
Sows or gilts purchased in '59	**	**	**	**
Boars purchased in 1959	**	**	**	**
Feeder pigs purchased in 1959	**	**	**	**
Spring pigs born during 1959			XXXXXXXX	XXXXXXXX
Fall pigs born during 1959			XXXXXXXX	XXXXXXXX
Total *			XXXXXXXX	XXXXXXXX

Out Movement

Sows sold in 1959				
1958 pigs sold in 1959				
1959 pigs sold in 1959				
Other hogs sold in 1959				
Hogs died during 1959			XXXXXXXX	XXXXXXXX
Hogs for home use in 1959				
On hand Dec. 31, 1959			XXXXXXXX	XXXXXXXX
Total*			XXXXXXXX	XXXXXXXX

*Total under "In Movement" should equal total under "Out Movement"

** Include gifts

B. Cattle for 1959 (First year respondent farmed)

Type	On hand, 1/1/59			On hand, 12/31/59		
	Number		Av. value per head	Number		Av. value per head
	Farm	Resp. share No. or %		Farm	Resp. share No. or %	
Milk cows						
Beef cows						
Heifers						
Calves						
Feeding cattle						
Bulls						
Total			XXXXXX			XXXXXX
In Movement	Number		Value			
	Farm	Resp. share No. or %	Farm	Resp. share No. or \$		
On hand 1/1/59			XXXXXX	XXXXXXXXXX		
Feeders bought in '59(age _____)						
Feeders bought in '59(age _____)						
Cows bought in '59						
Other cattle purchased in '59						
Calves born in 1959			XXXXXX	XXXXXXXXXX		
Cattle received as gifts in 1959						
Total*			XXXXXX	XXXXXXXXXX		
Out Movement						
Fed cattle sold in '59						
Feeders sold in '59						
Cows sold in '59						
Calves & vealers sold in '59						
Other Cattle sold in '59						
Cattle for home use in '59						
Cattle died in '59			XXXXXX	XXXXXXXXXX		
On hand Dec. 31, '59			XXXXXX	XXXXXXXXXX		
Total*			XXXXXX	XXXXXXXXXX		

*Total "In Movement" should equal total "Out Movement"

C. Sheep for 1959 (First year farmed)

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Type.	On hand 1/1/59			On hand 12/31/59		
	Number		Average Value Per head	Number		Average Value Per head
	Farm	Resp. Share No. or %		Farm	Resp. Share No. or %	
Ewes						
Lambs						
Rams						
Feeders						
Total			XXXXXX			XXXXXX
In Movement	Number		Value			
	Farm	Resp. Share No. or %	Farm	Resp. Share No. or %		
On hand 1/1/59			XXXX	XXXX		
Bought in '59	**	**	**	**		
Raised in '59			XXXX	XXXX		
Total*			XXXX	XXXX		
Out Movement	Number		Value			
	Farm	Resp. Share No. or %	Farm	Resp. Share No. or %		
Lambs sold in '59						
Sheep sold in '59						
Sheep died in '59			XXXX	XXXX		
Butchered in '59						
On hand 12/31/59			XXXX	XXXX		
Total*			XXXX	XXXX		

*Total "in movements" should equal total "out movements".

**Include gifts

D. Poultry for 1959 (first year farmed)

	On hand 1/1/59			On hand 12/31/59		
	Number		Ave. Value per head	Number		Ave. Value per head
	Farm	Resp. share No. or %		Farm	Resp. share No. or %	
Hen & Pullets						
Roosters						
Other poultry						
Total						

	Farm		Resp. share		Farm		Resp. share	
	No.	**	No.	**	Cost \$	**	\$	**
Baby chicks bought in '59	No.	**	No.	**	Cost \$	**	\$	**
Other chickens bought in '59	No.	**	No.	**	Cost \$	**	\$	**
Chickens sold in '59	No.		No.		Rec'd \$		\$	
Other poultry bought in '59	No.	**	No.	**	Cost \$	**	\$	**
Other poultry sold in '59	No.		No.		Rec'd \$		\$	
Poultry eaten in '59	No.		No.		Value \$		\$	

** Include gifts.

VI. Livestock product sales for 1959 (Respondent's first year of farming)

Item	Value of sales	
	Farm	Resp. share
Butterfat	\$	\$
Milk		
Eggs		
Wool		
Honey		
Other		

Total		

VII. Miscellaneous farm income for 1959

<u>Item</u>	<u>Farm Receipts</u>	<u>Resp. share</u>
Machine work off farm	\$ _____	\$ _____
Cash sale of old machinery*	_____	_____
Wood and lumber	_____	_____
Soil Bank payment	_____	_____
ACP payment	_____	_____
Gas tax refund	_____	_____
Wool subsidy	_____	_____
Crop or livestock insurance indemnity	_____	_____
Cooperative dividends	_____	_____
Other _____	_____	_____
Total	_____	_____

* Exclude value of machinery traded in on other machinery.

VIII. Farm expenses for 1959 (First year respondent farmed)
(Include only expenses connected with farm business)

Item	Farm (\$)	Resp. share (\$)
Cash rent		
Labor hired		
Commercial feed purchased*		
Seeds purchased		
Machine hire		
Fertilizer and lime		
Veterinary expense include all animal medicinal's		
Gasoline, fuel and oil, include farm share for auto		
License fees for truck and farm share of auto		
Commercial storage		
Taxes, real and personal, excluding household		
Insurance on truck & farm share of auto		
Farm insurance for crops, livestock & machinery		
Real estate insurance, excluding house		
Interest on <u>farm</u> borrowings		
Farm supplies purchased		
Utilities, farm only		
Building repair and maintenance, exclude house		
Machine repair and maintenance		
Breeding fees		
Trucking (if not already deducted from sales)		
Other (specify)		
Total		

*Exclude farm grain or hay purchased for feed.

IX. Farm machinery and equipment inventory (First year respondent farmed)

1. Inventory on Dec. 31, 1959

Item	Size	On Dec. 31, 1959		
		Age	Market Value	
			Farm	Resp. share
			(\$)	(\$)
Tractor No. 1				
Tractor No. 2				
Combine				
Corn picker				
Hay baler or chopper				
Truck or pickup				
Spreader and wagons	XX	XXX		
Auto (% farm share _____) Makes _____	XX			
Other fixed machinery	XX	XXX		
Moveable livestock equipment	XX	XXX		
Motors	XX	XXX		
Tools	XX	XXX		
All other farm equipment	XX	XXX		
Total	XX	XXX		

2. Did you (beginning operator) use any farm machinery or equipment in your 1959 farming operation that was not owned or hired and paid for by you (or your partner)? Yes _____ No _____

If Yes:

Who provided the machinery?
(relation to respondent)

Kind of Machinery

Days used

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Did you (beginning operator) own any farm machinery or equipment on January 1, 1959? Yes _____ No _____ If Yes: What do you estimate would have been the market value of this machinery & equipment on January 1, 1959? \$ _____

X. Labor use during 1959
 (Exclude vacations and time not regularly employed at work for income)

1. Work by members of respondent's household

	Respondent	Respondent's wife	Other members (specify)		
a) Days farm work on 1959 farm	_____	_____	_____	_____	_____
b) Days farm work on other farms in 1959	_____	_____	_____	_____	_____
c) Days worked at nonfarm jobs in 1959	_____	_____	_____	_____	_____
Total days	_____	_____	_____	_____	_____

2. Other labor used on 1959 unit

<u>Kind</u>	<u>Days worked</u>
Farm work by other partners (if partnership only)	_____
Farm work by family of other partners (if partnership only)	_____
Landlord labor	_____
Labor hired by month	_____
Labor hired by day	_____
Total	_____

XI. Real Estate

A. For single operatorship only

1. Rented land

a. Was there a set of buildings on the land you rented and operated in 1959? Yes _____ No _____

1. (If "yes" in "a") what would this land, including buildings, sell for per acre in today's land market?
 \$ _____

2. (If "yes" or "no" in a) what would the bare land sell for per acre in today's land market? \$ _____

2. Owned land

a. Was there a set of buildings on the land you owned and operated in 1959? Yes _____ No _____

1. (If "yes" in a) what would this land, including buildings, sell for per acre in today's land market? \$ _____

2. (If "yes" or "no" in a) what would the bare land sell for per acre in today's land market? \$ _____

B. For partnerships only

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1. Rented land

a. Was there a set of buildings on the land you and your partner(s) rented and operated in 1959? Yes _____ No _____

1. (If "yes" in a) what would this land, including buildings, sell for per acre in today's land market? \$ _____

2. (If "yes" or "no" in a) what would the bare land sell for per acre in today's land market? \$ _____

2. Land owned by respondent

a. Was there a set of buildings on the land you owned and operated in partnership in 1959? Yes _____ No _____

1. (If "yes" in a) what would this land, including buildings, sell for per acre in today's land market? \$ _____

2. (If "yes" or "no" in a) what would the bare land sell for per acre in today's land market? \$ _____

3. Land owned by other partner(s)

a. Was there a set of buildings on the land your partner(s) owned and which you and your partners operated in 1959? Yes _____ No _____

1. (If "yes" in a) what would this land, including buildings, sell for per acre in today's land market? \$ _____

2. (If "yes" or "no" in a) what would the bare land sell for per acre in today's land market? \$ _____

C. For all respondents

1. Did you (respondent) own any other real estate (other than the land you farmed) on Dec. 31, 1959? Yes _____ No _____

If yes

a. What would be your estimate of the current total market value of this real estate? \$ _____

XII. Respondents (new operator) other assets and debts:

(Include only respondent's amounts in case of partnership and livestock share leases)

1. Other assets	Amt. Jan. 1, 1959	Amt. Dec. 31, 1959
Cash on hand or in bank	\$ _____	\$ _____
Stocks and bonds owned	_____	_____
Accounts receivable	_____	_____
Loan value of insurance	_____	_____
Household furnishings & equip.	_____	_____
Other assets owned	_____	_____

2. Debts	Amt. Jan. 1, 1959	Amt. Dec. 31, 1959
Real estate mortgage	\$	\$
Mortgage on personal farm property		
Promissory notes		
Store, elevator and feed bills		
Unpaid rent and taxes (excl. income tax)		
Gasoline, gas and oil bills		
Veterinary bills		
Other money owed include household debts		
Total debts		

3. Did you receive any help from your or (if married) your wife's family when you started farming in 1959? Yes _____ No _____

If yes, complete the following table:

	<u>Kind of help</u>	<u>Dollar value of help*</u>
Respondent's family	_____	_____
	_____	_____
Wife's family	_____	_____
	_____	_____

XIII. Nonfarm income during 1959 (First year of farming)

1. If respondent earned income from nonfarm work in 1959
(See X-1-c, page 11)

- a. How much did you earn (take home pay) at nonfarm work in 1959? \$ _____
- b. What kind of work did you do? _____
- c. How far did you have to go to work? _____ miles.

* Respondent's estimate of what he would have had to pay out for the help if it had not been provided.

2. Did you (new operator) have any other income from nonfarm sources in 1959? Yes _____ No _____

If yes, complete the following table:

<u>Source</u>	<u>Amt. of income</u>
_____	\$ _____
_____	_____
_____	_____

3. If married
Did any other members of your (new operator's) family have any income from nonfarm sources in 1959? Yes _____ No _____

If yes, complete the following table:

<u>Family member</u>	<u>Source of income</u>	<u>Amt. of income</u>
Wife	_____	\$ _____
_____	_____	_____
_____	_____	_____

A. Personal views of beginning operators

1. Based on your experience up to now, would you say the rewards from farming have been greater, about the same or less than what you expected when you decided to farm?

Greater _____ Same _____ Less _____

2. If you had known when you started farming what you know today, would you still have decided to farm?

Yes _____ No _____ Don't know _____

3. Since you started farming, have you given any thought to quitting and getting a nonfarm job? Yes _____ No _____

If yes

- a) What would you say is the main reason why you have not quit and gotten a nonfarm job?

4. Looking ahead for the next 20 years, do you expect the income earning opportunity in farming to increase, stay about the same as now or decrease?

Increase _____ Same _____ Decrease _____

5. What do you consider to be the three biggest obstacles to increasing your income from farming? (List in order of importance)

6. Under what conditions, if any, would you advise a young man to start farming in 1962?

7. Do you think the Government should undertake some special programs to help young people get started in farming? Yes _____ No _____ Don't know _____

8. What would be your advice to a typical farm boy immediately upon graduating from high school in 1961? (Use card) Check only one:

- a) Get more education and training for farming _____
 b) Get more education and training for nonfarm work _____
 c) Start farming on his own _____
 d) Start farming with his father _____
 e) Get a nonfarm job _____
 f) Hire out as a farm worker _____
 g) Other (specify) _____