Factors affecting the establishment of young farm operators in Iowa and implications for agricultural education

Harold Reid Crawford
Iowa State University

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Agriculture, general

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FACTORS AFFECTING THE ESTABLISHMENT OF YOUNG FARM OPERATORS IN IOWA AND IMPLICATIONS FOR AGRICULTURAL EDUCATION

by

Harold Reid Crawford

A Dissertation Submitted to the Graduate Faculty in Partial Fulfillment of The Requirements for the Degree of DOCTOR OF PHILOSOPHY

Major Subject: Agricultural Education

Approved:

Signature was redacted for privacy.

In Charge of Major Work

Signature was redacted for privacy.

Head of Major Department

Signature was redacted for privacy.

Dean of Graduate College

Iowa State University
Ames, Iowa

1969
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Objectives of the Study</td>
<td>7</td>
</tr>
<tr>
<td>REVIEW OF LITERATURE</td>
<td>10</td>
</tr>
<tr>
<td>METHOD OF PROCEDURE</td>
<td>33</td>
</tr>
<tr>
<td>Sample Design</td>
<td>33</td>
</tr>
<tr>
<td>Check sections</td>
<td>37</td>
</tr>
<tr>
<td>Results</td>
<td>39</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>41</td>
</tr>
<tr>
<td>Construction of the Instrument</td>
<td>42</td>
</tr>
<tr>
<td>Data Collection and Processing</td>
<td>44</td>
</tr>
<tr>
<td>Estimation</td>
<td></td>
</tr>
<tr>
<td>FINDINGS AND DISCUSSION</td>
<td>48</td>
</tr>
<tr>
<td>Estimates of the Number of Young Farm Operators</td>
<td>48</td>
</tr>
<tr>
<td>Personal Characteristics of Young Farm Operators</td>
<td>51</td>
</tr>
<tr>
<td>Factors Affecting the First Year of Farming</td>
<td>70</td>
</tr>
<tr>
<td>Progress in Becoming Established in Farming</td>
<td>92</td>
</tr>
<tr>
<td>Participation and Interest in Education</td>
<td>145</td>
</tr>
<tr>
<td>IMPLICATIONS FOR EDUCATION</td>
<td>152</td>
</tr>
<tr>
<td>Type of Educational Programs</td>
<td>152</td>
</tr>
<tr>
<td>Content of Educational Programs</td>
<td>157</td>
</tr>
<tr>
<td>Methods in Instructional Programs</td>
<td>159</td>
</tr>
<tr>
<td>Education for Off-Farm Income</td>
<td>161</td>
</tr>
<tr>
<td>Recommendations for Young Farmer Education</td>
<td>161</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>167</td>
</tr>
<tr>
<td>LITERATURE CITED</td>
<td>177</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>180</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>181</td>
</tr>
</tbody>
</table>
### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Interviews made and schedules completed by county and farming area (stratum)</td>
<td>38-</td>
</tr>
<tr>
<td>2</td>
<td>Estimated number of young farm operators in Iowa by area, county, and township</td>
<td>49</td>
</tr>
<tr>
<td>3</td>
<td>Present age and age of young farm operators when they started to farm</td>
<td>52</td>
</tr>
<tr>
<td>4</td>
<td>Age of young farm operator's parents</td>
<td>53</td>
</tr>
<tr>
<td>5</td>
<td>Educational level of parents and young farm operators</td>
<td>54</td>
</tr>
<tr>
<td>6</td>
<td>Participation in 4-H by young farm operators</td>
<td>55</td>
</tr>
<tr>
<td>7</td>
<td>Participation in vocational agriculture by young farm operators</td>
<td>55</td>
</tr>
<tr>
<td>8</td>
<td>Highest office held in 4-H and F.F.A. by young farm operators</td>
<td>56</td>
</tr>
<tr>
<td>9</td>
<td>Benefits of 4-H projects to young farm operators by number of years of membership</td>
<td>58</td>
</tr>
<tr>
<td>10</td>
<td>Benefits of vocational agriculture projects to young farm operators by the number of years enrolled</td>
<td>58</td>
</tr>
<tr>
<td>11</td>
<td>Post high school education of young farm operators by type of institution attended and time spent</td>
<td>60</td>
</tr>
<tr>
<td>12</td>
<td>Field of study by time spent at a four-year-college or university by young farm operators</td>
<td>60</td>
</tr>
<tr>
<td>13</td>
<td>Occupation and education of fathers of young farm operators when they began farming</td>
<td>62</td>
</tr>
<tr>
<td>14</td>
<td>Present occupation and age of young farm operators' fathers</td>
<td>63</td>
</tr>
<tr>
<td>15</td>
<td>Present retirement status of young farm operators' fathers</td>
<td>64</td>
</tr>
<tr>
<td>16</td>
<td>Ownership of land and farming arrangement of fathers</td>
<td>65</td>
</tr>
<tr>
<td>17</td>
<td>Attitude of young farm operator's wife toward farm life by where she was reared</td>
<td>67</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>18</td>
<td>Assistance of young farm operator's wife with farm labor by the number of children</td>
<td>68</td>
</tr>
<tr>
<td>19</td>
<td>Off-farm work of young farm operators' wives by their gross income</td>
<td>69</td>
</tr>
<tr>
<td>20</td>
<td>Inventories of usable assets of young farm operators prior to farming and how acquired</td>
<td>71</td>
</tr>
<tr>
<td>21</td>
<td>Residence of young farm operators during their first year of farming</td>
<td>74</td>
</tr>
<tr>
<td>22</td>
<td>Assistance from relatives in establishment of young farm operators in farming</td>
<td>75</td>
</tr>
<tr>
<td>23</td>
<td>Co-signers with young farm operators of leases and bank notes during first year of farming</td>
<td>77</td>
</tr>
<tr>
<td>24</td>
<td>Number of occupations of young farm operators prior to farming</td>
<td>79</td>
</tr>
<tr>
<td>25</td>
<td>Occupations of young farm operators prior to farming by number of years elapsing between age 18 and starting to farm</td>
<td>80</td>
</tr>
<tr>
<td>26</td>
<td>Days worked off the farm by young farm operators by selected years of farming</td>
<td>82</td>
</tr>
<tr>
<td>27</td>
<td>Off-farm jobs done by young farm operators by selected years of farming</td>
<td>83</td>
</tr>
<tr>
<td>28</td>
<td>Sources of young farm operators' finance for the first year of farming by the percent provided</td>
<td>86</td>
</tr>
<tr>
<td>29</td>
<td>Borrowed machinery used by young farm operators during their first year of farming</td>
<td>88</td>
</tr>
<tr>
<td>30</td>
<td>Machinery purchased by young farm operators during their first year of farming</td>
<td>89</td>
</tr>
<tr>
<td>31</td>
<td>Borrowed machinery used by young farm operators during the current year (1968) of farming</td>
<td>91</td>
</tr>
<tr>
<td>32</td>
<td>Calendar year the young farm operators began farming by their age when they started</td>
<td>93</td>
</tr>
<tr>
<td>33</td>
<td>Mean acres operated during the first and current years of farming by individual operators and partnerships</td>
<td>96</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>------</td>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>34</td>
<td>Size of farming operation by selected years of farming</td>
<td>98</td>
</tr>
<tr>
<td>35</td>
<td>Leasing arrangement of young farm operators during their first and current (1968) years of farming</td>
<td>100</td>
</tr>
<tr>
<td>36</td>
<td>Relatives who owned land rented by young farm operators during the first and current years (1968) of farming by number of acres rented</td>
<td>103</td>
</tr>
<tr>
<td>37</td>
<td>Acres farmed by young operators in partnership during the first and current years of farming</td>
<td>106</td>
</tr>
<tr>
<td>38</td>
<td>Partnership share of labor, expense and profit for young farm operators' first and current years of farming</td>
<td>108</td>
</tr>
<tr>
<td>39</td>
<td>Acres of crops produced by young farm operators who were individual operators during their first and current years of farming</td>
<td>110</td>
</tr>
<tr>
<td>40</td>
<td>Acres of crops produced by young farm operators who were in partnership during their first and current years of farming</td>
<td>112</td>
</tr>
<tr>
<td>41</td>
<td>Livestock raised by young farmers who farmed as individual operators during their first year of farming</td>
<td>115</td>
</tr>
<tr>
<td>42</td>
<td>Livestock raised by young farmers who farmed as individual operators during the current year</td>
<td>116</td>
</tr>
<tr>
<td>43</td>
<td>Livestock raised by young farmers who farmed in partnership during their first year of farming</td>
<td>117</td>
</tr>
<tr>
<td>44</td>
<td>Livestock raised by young farmers who farmed in partnership during the current year</td>
<td>120</td>
</tr>
<tr>
<td>45</td>
<td>Total operating expenses of those in partnerships for first and current years of farming by age of operator</td>
<td>122</td>
</tr>
<tr>
<td>46</td>
<td>Total operating expenses of individual operators for first and current years of farming by age of operator</td>
<td>123</td>
</tr>
<tr>
<td>47</td>
<td>Net farm incomes of young farm operators during their first year of farming by form of farming operation</td>
<td>127</td>
</tr>
<tr>
<td>48</td>
<td>Net farm incomes of young farm operators during the current year of farming by form of operation</td>
<td>128</td>
</tr>
<tr>
<td>49</td>
<td>Young farm operator degree of establishment in farming by number of years in farming</td>
<td>130</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>50</td>
<td>Correlation coefficients between variables affecting the establishment of young farm operators in Iowa</td>
<td>133</td>
</tr>
<tr>
<td>51</td>
<td>Factors affecting the establishment of young farm operators by economic areas of Iowa</td>
<td>138</td>
</tr>
<tr>
<td>52</td>
<td>Factors affecting the establishment of young farm operators by years they started to farm</td>
<td>142</td>
</tr>
<tr>
<td>53</td>
<td>Participation by young farm operators in educational programs</td>
<td>146</td>
</tr>
<tr>
<td>54</td>
<td>Value of young or adult farmer program activities to young farm operators</td>
<td>147</td>
</tr>
<tr>
<td>55</td>
<td>Sources of technical information and their value to young farm operators for farming</td>
<td>149</td>
</tr>
<tr>
<td>56</td>
<td>Value of suggested areas of instruction in agriculture to young farm operators</td>
<td>150</td>
</tr>
<tr>
<td>57</td>
<td>Reactions by young farm operators to teaching innovations in agricultural instruction</td>
<td>151</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Farmland purchases for farm enlargement</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Age distribution of the farm population, 1960 and 1966</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Strata boundaries and location of counties drawn for sample</td>
<td>35</td>
</tr>
</tbody>
</table>
INTRODUCTION

The idea for the present study originated as a result of the experiences, work, and associations of the author with young farm operators while teaching high school vocational agriculture. During the years 1950 to 1965 he conducted a young farmer program as an integral part of his teaching duties. He observed that young men were starting to farm each year even though farm numbers were decreasing and the size of Iowa's farms were increasing. The author felt an urgency for more agricultural education programs to meet the needs of these beginning young farmers. As a result of this experience it was decided to ascertain the factors which affect the establishment of young farm operators in Iowa and to determine the implications for agricultural education.

Young men who are becoming established in farming at the present time encounter problems of a different nature than those who were starting to farm at the turn of the century. Traditionally farming has not been the type of occupation where the operator could make an abrupt beginning and would become established easily. There have always been some types of problems or barriers for the young man who was trying to become established in farming. During the pre-World-War II days the underdevelopment of transportation, marketing, communication, and farm mechanization prevented rapid expansion in the field of farming. Capital requirements have always been a limiting factor for young men starting to farm. As some of these problems were solved and more technological advances became a reality, other factors have presented problems to the
young farm operator. Therefore one can safely say, there never has been a time when getting established in farming was considered to be an easy venture. This study has been designed to point out some of the current factors which have an effect upon the establishment of young men in farming.

More recently as a result of technological developments, farmers have been able to increase their production with less land and labor. At the same time there has been a rapid growth in the population of the country creating an increase in the demand for food thus providing somewhat of a balance for the increased production. However, at the same time the technological advances have enabled the farmer to increase his farm size, the net result has been fewer farms and less need for young men to become engaged in production agriculture or farming. Since this study is limited primarily to the factors affecting the establishment in farming, it is not intended to infer that this is the only occupation in agriculture. The fact is that the technological development has created many occupations in off-farm agriculture for farm reared young men.

Iowa's farms are larger, more specialized, more productive, more mechanized and commercialized than a decade or two ago as a result of technology.

According to the United States Census of Agriculture (26), the number of farms in Iowa decreased from 203,159 in 1950 to 154,162 in 1964, representing a 24 percent decrease. During the same period, the average size of farms had increased from 168.7 to 219.0 acres, representing a 30 percent increase in size. By 1968 the estimated number of farms in Iowa (29) was 147,000 and the size of farms had increased to 234.7 acres.
per farm. Much of the decrease in the number of farms has been due to the enlargement of farms. Figure 1 indicates a steady increase in the percentage of farmland purchases for enlargement purposes in all parts of the United States with the Corn Belt having an increase of 36 to 65 percent from 1955 to 1966. These data reflect the desire of farmers to enlarge their farms which has resulted in a decrease in the number of farms.

Figure 1. Farmland purchases for farm enlargement
Other effects of these technological developments are increased output per man with less labor input. Recent developments in labor saving technology have had the effect of allowing the same amount of work to be done with fewer man hours. Concurrently, the labor saving machine will permit more work to be done with the same units of labor. The decrease in labor now required for farming has resulted in larger farms needed to utilize existing labor, and increased acreages are needed in order to take advantage of the rapid technological advances.

Economic conditions during recent years have created an increase in costs of production, and thus the young farm operator has continually been plagued with the capital requirements necessary to become established in farming. Along with this, as a result of increased agricultural production, there has been a downward trend in the prices received by farmers for their products. Man has been replaced by machinery in all types of farming operations. In 1950 labor amounted to 40 percent of the total inputs. This dropped to 19 percent for the year 1966. Machines have been built to do more work for the farmer and at a faster rate, but at the same time have become the most costly input, nearly 25 percent of the total inputs for 1966. Advances have been noticeably rapid in the agricultural chemical, fertilizer, and machinery industry.

Along with the technological advances and their effect upon capital requirements, total farm numbers, and farm size, is the change that has come about in the age distribution of farmers. Older farmers leave farming through death, retirement, and occupational change. These operators
are partially being replaced by young men who are making a start in farming. However, not all of the land given up by those leaving is available to the young beginning farm operator. As stated previously some of the acreage released by those leaving farming is used by established farmers to enlarge their farms.

The trend in age distribution of the farm population for 1960 and 1966 is shown in Figure 2. It may be noted that there has been an increase in farmers in the age bracket of 45 to 64 years of age. According

**AGE DISTRIBUTION OF THE FARM POPULATION, 1960 AND 1966**

<table>
<thead>
<tr>
<th>AGE (YEARS)</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 14</td>
<td>29</td>
</tr>
<tr>
<td>14-24</td>
<td>18</td>
</tr>
<tr>
<td>25-44</td>
<td>19</td>
</tr>
<tr>
<td>45-64</td>
<td>25</td>
</tr>
<tr>
<td>65 and over</td>
<td>10</td>
</tr>
</tbody>
</table>

**DATA FROM BUREAU OF THE CENSUS AND ECONOMIC RESEARCH SERVICE.**

U.S. DEPARTMENT OF AGRICULTURE
NEG. ERS 5339-67 (8) ECONOMIC RESEARCH SERVICE

Figure 2. Age distribution of the farm population, 1960 and 1966
to the 1964 United States Census of Agriculture (26), the number of Iowa farm operators over age 65 totaled 15,159. This is the group most likely to be replaced because of death or retirement. For the three 10-year age groups between 35 and 65 in 1964, the number of farmers in each group exceeded the number in the 65 and over age group. It has been estimated that approximately 18,000 new Iowa farmers will be required as replacements during the next 10 years. This means that each year about 1,800 to 2,000 new farmers are needed and have the opportunity to become farm operators.

While farm population and farm numbers have declined, educational programs for farmers and farm reared youth have continued to grow. The Morrill Act of 1862 provided legislation leading to the establishment of extension programs in agriculture and resident instruction at four-year colleges. The Smith-Hughes Act of 1917 provided for the development of programs of vocational education in agriculture for high school students, adult, and young farmers. Other supplemental acts, such as the George-Borden act were passed to expand vocational education. More recently the passage of the Vocational Education Act of 1963 provided for a broadened program to include training for all age groups in farming and other agricultural occupations.

Post high school educational programs in agriculture have been developed in many area vocational schools as well as in the community colleges. Four year colleges of agriculture are developing agricultural instruction programs leading to an Associate degree in agriculture. Agricultural extension has reorganized in order to provide more technical
advice and specialized service to farm operators. Adult education pro-
grams for farmers conducted by high school vocational agriculture teach-
ers have been maintained and further developed in nearly every high
school vocational agriculture department in Iowa. Young farmer programs
in Iowa have declined, but in many instances not because of lack of in-
terest or need for such a program. This has been primarily due to the
shortage of available teachers to establish two-man vocational agricul-
ture departments. Educational opportunities have been available to young
farm operators at the high school and post high school levels through
organized educational programs in about 240 of Iowa's 455 high schools.
A problem has been to develop in young farm operators an appreciation of
the value of such educational programs and to take advantage of them.

Objectives of the Study

Young men are becoming established in farming each year even though
farm numbers are declining and average farm size is increasing. In a
study conducted by Jetton (11) at Iowa State University, it was estimated
that the average number of beginning farmers in Iowa was 2,522 for the
year 1959-1960. The problem in this study was to determine the factors
which have an effect on how young entrants become established in farming.
In becoming established in farming, these young men have a need for edu-
cation in agriculture. Therefore, another problem area in this study was
to determine the implications for agricultural education. Secondary purposes
were to estimate the number of young men becoming established in farming in Iowa, and to determine how well agricultural education is now meeting the needs of young farm operators.

The major objectives of this investigation were as follows:

1. To ascertain the factors that influence the establishment of young farm operators in Iowa.
2. To estimate the number of young farm operators who become established in farming each year in Iowa.
3. To determine the needs of young farm operators for agricultural education.
4. To determine the types of educational programs in agriculture which are needed by young farm operators.
5. To distinguish the differences in establishment of young farm operators by economic areas of Iowa.
6. To determine the differences in educational needs of young farm operators by economic areas of Iowa.
7. To investigate and describe the background and personal characteristics of young farm operators in Iowa.
8. To provide a source of information which will be helpful in program planning for educators in agriculture.

The results of this investigation should be a verification of the number of young men starting to farm each year, and how they are accomplishing this feat. The findings will also be of use to personnel involved with agricultural education, persons in the field of vocational agriculture, in agricultural extension and at university level, as they
plan, develop and conduct programs to educate young men engaged in farming. Other agencies, such as commercial companies and banks, governmental lending agencies, and persons in farm management should find the results useful as they work with young farm operators in their types of educational programs. Iowa's area vocational-technical schools and four-year colleges may use the findings in planning of agricultural curricula.

This study was conducted by the author in cooperation with the Department of Agricultural Education and the Statistical Laboratory at Iowa State University. Financial assistance was provided by a research grant from the Iowa Department of Public Instruction, Division of Vocational Education (VEA-1963-4 (a) Ancillary Funds) and Agriculture and Home Economics Experiment Station Project 1734.
REVIEW OF LITERATURE

Several studies concerning the establishment of Iowa farm operators have been made, but little literature may be found on the implications for agricultural education of young farm operators. Studies have been conducted which yield indications of the value of vocational agriculture, agricultural extension and other educational programs in training of both present and prospective farm operators. A number of previous investigations show the influence of agricultural education on establishment in farming. Many of the studies had to do with the relationship between establishment in farming and the home farm during high school and following graduation. Selected literature related to the establishment of farm operators, and educational programs providing instruction and training for young farm operators has been reviewed.

Jetton (10) made a study to determine the conditions of entry into farming. Information was obtained through personal interview of 191 Iowa farm operators who were identified as having started farming in either 1959 or 1960. From this study it was estimated that on the average about 2500 persons began farming per year. Not all areas of Iowa provided the same proportion of beginning operators to farms. The northeast dairy area had the highest ratio of beginning operators to farms while the south central part of the state had the lowest ratio.

The author was not necessarily interested in young farm operators, but all those who began farming during the years 1959 and 1960. The beginning farm operators ranged in age from 16 to 64 years old with the
mean age of single operators as 29.2 and those in partnership 23.3 years old. Nonfarm work prior to farming was quite common and amounted to an average of 5.5 years. More than 80 percent of the beginning farm operators started as single operators, whereas only 17.8 percent began in some form of partnership. A small number of the respondents owned all of the land they operated. The crop-livestock share lease and the crop share-cash lease were the two types of leases found most frequently in this study. It was also found that the beginning operators' farms were significantly different from census farms in the northeastern and southern parts of Iowa. They tended to have fewer total acres, less crop acres, and a greater value per acre than census farms in these areas. Net worth for beginning operators was quite limited especially for the younger group. Gifts of all types, including machinery, cash money and inheritances, were given to the beginning farm operators, but the younger operators tended to receive larger gifts and inheritance occurred most frequently among the oldest beginning operators.

Jetton's (10) study was more of a descriptive study and items were not tested for significant differences through the use of statistics. However, some very interesting facts are brought out on some of the characteristics of beginning farm operators.

The factors affecting success of the beginning farmers were investigated by Edmond (4) in 1960. The primary objective of this study was to determine the major factors affecting income and gains in net worth of beginning farm operators in southern Iowa and northern Missouri. Fourteen counties in southern Iowa and fifteen counties in northern Missouri with
175 questionnaires completed through personal interviews comprised the study area and sample for this study. The effects of family help on progress of the beginning farm operator were studied with the following conclusions:

(1) The family provides land to the beginning operator.
(2) Gifts in various forms are provided by the family.
(3) Capital funds are made available and this helps to determine who starts farming and, in most cases, who stays in farming.

Edmond (4) also determined the factors which affected net total income (net farm income + net off-farm income + gifts - major losses) and net farm income. Edmond (4, p. 200) stated:

Factors of size and capital investments were most important in increasing net farm income and net total income. Gifts also were important. Factors thought to be indicative of managerial ability appeared to have little effect; however, one factor, realistic price expectations, appeared to affect net farm income (significant at .05 level probability).

Other factors noted which affect net income were the operator's off farm labor used to supplement low farm income. Wives working off farm added substantially to the net total income and net worth. The beginning farm operator's willingness to bear risks and adjust farm plans according to changing conditions may enhance net farm income. There were 19 farm operators in the sample who had quit farming and their primary reason for quitting was dissatisfaction with low farm income.

The major differences between the two groups, those who quit and those who stayed in farming were, those who quit had more years of formal education and made less gains in net worth.
When a multiple regression analysis was used to predict net farm income of beginning farmers, it was found that in order have a higher farm income, the operator should do the following:

(1) Start with $30,000 total capital (owned, borrowed or provided by landlord).
(2) Have more than 250 productive man work units per farm.
(3) Stress the hog enterprise.
(4) Consider carefully the loss in farm income to be counteracted by the gain in off-farm income when he contemplates off-farm work.

In Nebraska Experiment Station Bulletin 452, Kanel (13) attempts to explain why opportunities for beginning farmers have been decreasing and why they are likely to be limited in the future. These data are the result of a cooperative study by agricultural economists on the staffs of the agricultural experiment stations in 13 North Central states. He explains that the number of farmers in the 13 North Central states has been steadily decreasing since 1920 except for the depression period, 1930 to 1935, when there was an increase. The major reason for the decrease in farms is the adoption of modern technology and associated with this decrease is an increase in the average size of farms. Kanel (14, pp. 8-9) states:

(1) For every 1,000 farms in the 13 North Central states in 1945, there were 315 older farmers who left these farms in the period 1945-1954, and there were 530 farm boys who would have been old enough to become farm operators in the same period.
(2) It is likely that a majority of the older farmers who left farming would have done so even if the number of farms had not decreased. The rates at which these older farmers were leaving farming were similar to the corresponding rates in previous decades. However, some of them were undoubtedly forced to quit farming because of the increased competition for land.

(3) For each 1,000 farmers already established in 1945, about 685 (1,000 minus 315) continued farming throughout the period 1945-1954.

(4) Of the 530 farm boys, about a third (168) entered farming.

Data from this study indicated that the number of older farmers who left farming was greater than the number of younger people who entered farming. Beginning farmers were unable to compete with established farmers who wanted to enlarge their farms, and thus the decrease in total farm numbers resulted in a large decrease in opportunities for beginning farmers. The data showed that beginning farmers were in competition with many other farmers who were trying to rent or buy land. It also was reported that savings were a major factor in obtaining credit and that young farmers did not usually have as much savings, nor the farm experience or reputation to enable them to rent land. The family played an important role in assisting the beginning farmer to obtain land and credit, and acting as an intermediary with landlords. A majority of the beginning farmers started as tenants and depended heavily upon family assistance. Over one-half of the tenants started out on land leased from parents or other relatives. Labor-share leases and father-son partnerships were quite common in all of the 13 North Central states.

Part-time farming was also studied. The opportunities for part-time farming varied from state to state with a low of 2 percent in North
and South Dakota, Nebraska and Iowa, to a high of 15 percent in Indiana, Missouri, Kentucky, Ohio and Michigan. It was found that part-time farming helped some beginners get established, but was not a good substitute for family assistance nor did it give the beginner any advantage in obtaining land.

A study was made by Bondurant and Criswell (2) in 1961 on establishment of farmers in Kentucky. Farmers in this study took an average of 13 years to become established with a range of 5 to 21 years. Their major problem was to obtain the necessary capital to adequately operate a farm. The principal source of capital reported was from parents or other relatives and the average net worth of the families studied was $610 when they started to farm. The range in net worth was from $0 to $1,500. Where was no significant relationship between the initial net worth and the length of time required in becoming established in farming. For those beginning farmers who had accumulated capital prior to starting farming, the principal sources of the capital were from working on the home farm and sharing in a part of the income.

Various methods or routes that farm operators followed in order to start farming were reported. These routes were referred to by the author as the agricultural ladder. He listed them as (1) experience on the home farm as an unpaid family worker, (2) hired farm wage worker, (3) cropper, (4) farm renter (whole farm), (5) non-farm employment, and (6) farm owner-operator.

In summary, Bondurant and Criswell make this statement (2, p. 20):
However, the most important factor in becoming established in farming is to find and buy, rent or develop a farm business large enough to furnish profitable employment for the farm operator, and to provide sufficient gross income to pay operating expenses, make annual payments on indebtedness, and have enough income left for an adequate family living. This would be equivalent to the income he could have in an alternate occupation.

A publication written by Reiss (20) for the North Central Farm Management Extension Committee reported on the conditions under which young people enter farming. He reported that for the beginning farmer, the important thing is to obtain enough land and capital to make efficient use of labor for his type of farming. Management of operating capital along with the owing and borrowing constitutes a barrier to establishment in farming. In a part of this study from Indiana, nearly three-fourths of the young farm families received substantial help from their families when they started to farm. Eighty percent leased their first farm land from close relatives. Similar results were obtained from the other 12 states in this study.

It was also reported that the most difficult problem for a beginning farmer without kinship ties to land was to find an adequate farm. The majority of entrants make their start through some type of rental arrangement. Crop-share leases were the most prevalent with the cash lease being used very little by the respondents in this study.

Part-time farming is sometimes the step used by young men in becoming established in farming. In the Missouri section it was reported that 53 percent of the operators who started with less than 150 productive man-work units did off-farm work on an average of 72 days during their first year of farming. Illinois reported 18 percent of the 73 young farmers in
their study as part-time farmers, whereas Michigan had 43 percent as part-time farmers. It should be noted that not all of the part-time farmers in this study wanted to go into full-time farming. For example, in Ohio only 28 percent of 244 part-time families wanted to become full-time farm operators. The net worth of the established full-time farmers was not greatly different from that of the part-time operators. Usually the part-time farmers were holding two jobs and working long hours, and sometimes their families were doing part of the farm work. The net worths of the established full-time operators did not differ greatly from those of the part-time operators.

Studies in Michigan, Missouri, Indiana and Illinois indicated that the beginning farmers in 1948 had a net worth of $4,400, $3,500, $4,000, and $2,900 respectively. Earnings from the home farm were considered to be the most important source of savings with gifts and inheritance making a small part of the beginning farmer's net worth.

In summary, Reiss (20, pp. 51, 52) made the following statement:

As farms grow larger, more mechanized in operation, and more specialized in productive organization, the problem of getting started and getting established is largely one of meeting higher requirements in land, capital, and management.

Four trends likely to characterize farming in the near future are: (1) larger and fewer farms; (2) more capital associated with one man's labor; (3) further specialization in agricultural production; and (4) a growing complexity of managerial functions in agriculture.

In an investigation made by Hillman (8) to determine the factors influencing the lives of a group of young farm families, 150 young married farm couples in four central Ohio counties were personally interviewed.
This study was conducted in 1954. Nearly three-fourths of the men had been graduated from high school and only 18 per cent had attended college. Of the 150 men in the study, 101, or 67.3 per cent, had studied agriculture in high school and 16 of the 27 who had attended college majored in agriculture. In regard to work off the farm, 17 husbands or 11.3 per cent reported any off-farm occupational experience prior to marriage.

Sixty-four percent of the men in the study had been in military service. The majority of the families, 58 percent, lived in a house which they alone occupied, 16 percent shared a home, usually with the husband's parents, and a little over one-fourth lived in a second house on the farm they operated.

Nearly one-half of the families were operating their farm as tenant-operators, 3 had father-son agreements, 17 percent owned land and only 2 percent were farm managers. Over one-half of the families and landlords included in this study were related, with the majority being father-son relationships. Nearly one-third of those operating farms with non-related individuals were not entirely satisfied with their present farming arrangements whereas 62 percent of those who had farming arrangements with relatives were dissatisfied with their farming arrangements. Forty-eight of the fathers and sons who were farming together did not have written agreements.

An average of $5,357.00 was invested per family in machinery and equipment. Of the families interviewed, 47.3 percent did not have adequate machinery to operate the farm alone, 36 percent owned some machinery in cooperation with someone else, and 59 percent used machinery which was
owned by some other person. It was not uncommon for relatives who farmed close together to own machinery cooperatively. Approximately two-thirds of the group were in debt for farm machinery and equipment. A few families had received expensive machinery as wedding gifts.

Hillman (8) made this concluding statement about young farm families becoming established in farming and their educational needs:

It would appear that any educational program or activity which serves to develop confidence in the abilities of young farm families to achieve their goals, to meet specific needs for information relative to farm and home living, to meet their social and recreational needs, to provide opportunities for self-expression and for member participation in the planning and execution of programs, will fulfill an important need in the lives of many young farm families.

A study was conducted by Osterbur (17) in 1958 to estimate the imbalance between the number of and potential demand for future farming opportunities. He used census data for his calculations and the basis for his predictions. A pilot analysis was made in Clarke county, Iowa. Factors identified as those which affect the supply of farming opportunities were (1) changing acres in commercial farm land, (2) increasing size of farm, (3) migration out of farming, (4) retirement, (5) deaths in active labor force, (6) multiple operatorships, (7) hired labor, and (8) relocation of farm operators and labors. Factors affecting the demand for farming opportunities were (1) births of rural farm males, (2) migration of farm youth, and (3) deaths among farm youth.

Nielsen (16), 1958, studied the relationship of high school vocational agriculture and size of home farm to establishment of graduates in farming.
The data were obtained by personal interview from 120 male graduates from 20 pairs of high school in the north central cash grain and eastern livestock areas of Iowa. Farming status and the number of acres of land the graduate farmed independently when graduated were not affected by the size of the home farm. A highly significant difference was found in favor of the vocational agriculture group in the use of 24 production and management practices on farms operated by graduates in 1943 through 1955.

A summary statement made by Nielsen (16, p. 116) on the value of vocational agriculture and size of the home farm on the establishment of graduates in farming is as follows:

Subject to the conditions and limitations of this study, two conclusions appear warranted. First, farm operators who completed three or more years of high school vocational agriculture had higher crop, livestock and total gross products from their farms and had more extensively used improved production and management practices on their farms than high school graduates who did not receive such training. Second, farm operators who lived on larger home farms when graduated from high school, operated larger farms with more crop acres and had higher crop and total gross products from their farms, than high school graduates who lived on smaller home farms when graduated.

Joslin (11) in a similar study to that done by Osterbur (17) investigated the factors affecting future farming opportunities in 1958. His primary objective was concerned with estimation of the imbalance between supply of farming opportunities and the demand for farming opportunities. He estimated that by 1975, there would be a total of 120,576 farms of which 98,618 would be commercial farms, 10,960 part-time farms and 10,998 rural residences. This is an over-all decrease in the total number of farms from 1955 to 1975 of 37.5 percent. An estimate on the
percentage of farm youth who would not be able to find an opportunity on commercial farms in Iowa was 1955-60, 33.8 percent; 1960-65, 42.8 percent; 1965-70, 50.4 percent; and 1970-75, 57.8 percent.

In 1964, Pearce (19) conducted a study to determine the characteristics of beginning farm operators which had an influence upon their comprehension and competence for establishment in farming. Farmers were personally interviewed for this study.

He found a need for programs of instruction in agriculture in order for beginning farm operators to become established in farming. On the basis of certain educational characteristics, reading habits were found to be the best single criterion to predict the educational needs of farmers. Beginning farmers in New York became established by working for agricultural wages and then attaining ownership status, therefore many start farming as an owner or partner. It was emphasized that educational programs for beginning farmers should stress opportunities for decision making experiences and written partnership agreements. The most important area of educational need was in farm management with emphasis to be placed on the use of credit, analysis of the farm business, cost control and improved farm efficiency. Specific educational needs in dairy husbandry were for help to increase milk production, improve herd health, and an analysis of production records. It was also found that the progressive beginning farmers were interested in obtaining technical assistance. This assistance could best be given through structured visits involving active participation of the farmers.

Erickson (5) conducted a study with 182 high school graduates who
had been graduated during the five-year period of 1948 through 1954. The graduates had had one or more years of vocational agriculture and were employed at the time the study was conducted. His purpose was to analyze the factors affecting the establishment of North Dakota high school graduates in farming.

He found that the size of the home farm had an affect upon the number of graduates who were farming. As farm size increased, the number of graduates who were farming also increased.

A study was conducted by Strauss (24) to explore the general problem of the personal and social characteristics of farmers who indicated a preference for farming and those who had chosen a nonfarm occupation. This study involved 1,987 seniors from 35 high schools in the state of Washington. From the 1,987 seniors, 148 were sons of farmers in which this portion of this study was concerned. There were no significant differences in the physical characteristics (height, weight, and health rating) between the sons who chose to farm and those who chose nonfarm careers. It was hypothesized that those seniors who share farming would (1) come from smaller families, (2) be more often a middle or youngest child, and (3) have older parents. There were differences in these expected directions but they were not statistically significant.

It was also found that those who chose farming as an occupation came from owner-operated farms and from farms of much higher income than those who chose nonfarm occupations.
Strauss (24, p. 266) made this summary statement:

Over-all it can be said that the findings of this study show that there is little or no difference between the physical and intellectual ability of farmers' sons in the state of Washington who desire to farm and farmers' sons who express a preference for nonfarm occupations. The reasons for the choice of farming was to depend on the greater economic potential of the home farm, on the existence of a value system functionally related to farming, and on occupational decision resulting largely from direct, primary-group influences.

One of the major objectives of a study done in 1962 by Kaldor, Eldridge, Burchinal and Arthur (12) was to determine the characteristics which differentiate boys who plan to farm from boys who plan nonfarm careers. Thirty-eight percent of the 870 senior boys in this study were planning to enter farming. Boys who were planning to farm favored out-of-doors work, physical work, use of machine and tools and little contact with people. Those who planned to farm had a preference for living close to their relatives and indicated they had opportunities to begin farming with their fathers.

Boys who were planning to farm did not have the desire for as much education as those who were planning for nonfarm careers. Only 17 percent of those planning to farm intended to enter college. Those students who planned to farm indicated that under the conditions at the time of the study, 232 acres of cropland and $17,500 of capital in machinery and livestock were needed for a satisfactory income as a tenant. The value of assets owned was small in relation to the capital requirements needed for an efficient farm operation.

Two-thirds or more of the respondents expected to have difficulty in entering the occupation of their choice with financial difficulties
being mentioned most frequently. There was a significant difference in favor of those boys who planned to farm for participation in 4-H and F.F.A. Fifty-eight percent of those planning to farm were members of 4-H and 54 percent were F.F.A. members.

Family assistance was evidently quite important in the minds of the respondents because 72 percent of those planning to farm expected some family assistance in becoming established in farming. Sixty-nine percent reported they expected to have some type of farming arrangement with their fathers. An opportunity to work and share income on the home farm was given by 67 percent, thus making it the most common father-son arrangement. An arrangement to rent land and use the father's machinery was given by 26 percent. Those sources of influence considered by farm boys in making their occupational plans were work on the job, parents, F.F.A., close friends and 4-H experience. The boys planning to farm had a significantly larger number of older brothers engaged in farming than did those boys who did not plan to farm. It was felt that older brothers influenced the occupational plans of their younger brothers in the direction of their own occupation.

Hill (7) and his associates conducted a study to determine the educational needs in dairy farm operation and management of beginning farm operators in New York. Using a stratified random cluster technique, dairy farmers were stratified into 3 groups by the number of cows they milked so that the sample represented 10 percent of the beginning dairy farmers in each of the 13 agricultural regions of New York. Data were collected by personal interviews from 223 beginning dairy farmers.
The average age of the beginning dairy farmer was 26.3 years of age and 80 percent of the respondents were married. They had completed an average of 12.4 years of school and nearly 25 percent had completed one or more years of college. One-half had had four years of vocational agriculture and two-thirds had been members of 4-H from 1 to 11 or more years. The young farmers in this study had attended young farmer classes more often than any other type of organizational meeting. A large percentage indicated that they did not watch agricultural television programs and many reported that agricultural programs were not available for viewing. Going on tours, observing demonstrations, instruction on the farm, reading farm magazines and reading farm bulletins were reported as the educational activities most used in obtaining information on farming.

Establishment patterns of the beginning farmers were 56 percent as owners, 41 percent partners and 3 percent as tenants. The most common way of attaining their status was to work for agricultural wages and the smallest percentage was through nonagricultural wages. Working as a farm laborer on the home farm was the most common agricultural occupation.

Size of business was listed as one of the most common indices of achievement in farming. The four factors used to provide an indication of the size of the farm business were work units per man, man equivalent per farm, cows per farm, and pounds of milk sold per farm. The beginning farmers in this study ranked higher than the average farmers of the state of New York. Average farm income was reported as $5,000 with a range of $1,600 to more than $12,000.
When the farmers were asked to identify the most important problems for beginning farmers, they listed increasing milk production, planning credit needs, marketing farm products, increasing soil productivity, and increasing the efficiency of the farm operation, as the five most important problems.

Martin (15) conducted a study with 350 farmers who were veterans enrolled in farm training programs in central Iowa. His purpose was to evaluate approved farm practices in relationship to labor and management earnings. A significant relationship at the 5 percent level was found between approved farm practices and labor and management earnings of the operator. Martin found that by using scores made on approved farm practices in predicting labor and management earnings of the operator that each practice was worth $6.41.

Young farmers, age 14 to 28, were used in a study by Strautman (25) to determine the needs and interests of young farmers in the Kuemper High School area. A one page questionnaire was mailed to 140 persons with 98 completing it for the study. The average age of the respondents was 23.87 and approximately one-third of them were married. Slightly less than one-half were high school graduates, and of these graduates, 32 of 46 had had one or more years of vocational agriculture in high school. In regard to the number of young farmers in the community Strautman (25, p. 65) made this statement:

This study indicated that there are sufficient numbers, of out-of-school young farmers in the Kuemper High School area to justify the offering of classes for young farmers. Only 15 of the 98 young farmers surveyed indicated that they had little or no interest in attending such meetings. Of the entire group, 40 expressed either "much" or "very much" interest in attending meetings, and 43 expressed "some" interest.
The young farmers who had the most training in agriculture and those
who were well established in farming had the most interest in attending
young farmer meetings. Previous enrollment in a similar program, such
as adult evening school class, had the greatest effect on the amount of
interest expressed in attending meetings.

Subject matter for educational programs listed by the respondents
and ranked from highest to lowest by Strautman (25, p. 66) were as
follows:

1. Shop skills
2. Livestock feeding
3. Livestock management
4. Keeping and using farm records
5. Crop and soil management
6. Getting a better start in farming
7. Getting together with young men of own age to discuss common problems
8. Rental or partnership agreements
9. Getting started in occupation related to agriculture
10. Getting started in some nonagricultural occupation.

A significant difference was found in favor of the high school
graduates in the interest in getting a better start in farming. Those
who attended young or adult farmer classes were significantly more in-
terested in obtaining a better start in farming than were nonmembers.
The type of rental arrangement or partnership agreement was affected
significantly by the age of the respondent.

In summary, Strautman found there were enough young men in his high
school area for a young farmer program and there was interest and need for
such a program.

Rhodes (21) investigated the implications for adult education in
agricultural from responses of participants in the veterans farm training
program in the central region. The following summary statement made by
Rhodes (21, pp. 86-87) has a bearing on this study:
The findings of this study indicated that young farmers would benefit from instruction in farming more than any other rural group. This may imply that more emphasis should be given to young farmer classes in agricultural education programs. Farmers over 36 years of age need instruction in farming but would not benefit as much from this instruction as would farmers under 36 years of age.

In 1956 Henderson (6) did one of a series of five studies to determine the influence of high school vocational agriculture on the status of graduates in farming. His specific study was related to the establishment of the graduates in farming with a sample of 320 high school graduates of which 160 were vocational agriculture graduates and 160 nonvocational agriculture graduates.

When status of farming by graduates was considered, 142 vocational agriculture graduates were classified as operators, whereas 18 were non-operators. A smaller number of the nonvocational agriculture graduates were operators. There were 18 more vocational agriculture graduates operating farms in 1955, on an income sharing agreement or partnership, on a livestock share lease or on a crop share lease, than nonvocational agriculture graduates. More of the nonvocational agriculture graduates were farming small farms.

As a summary statement Henderson (6, p. 100) stated:

There was a significantly larger number of vocational agriculture graduates who were operating larger farms with more crop acres, had more acres of corn, more acres of oats, more acres of legumes for hay, more acres of rotation pasture, sold more hogs for slaughter, had higher averages of pigs weaned per litter, more beef cows on January 1, 1955, sold more fat cattle, had had higher total gross products for their farm operations than had the nonvocational agriculture graduates.

A study similar to that conducted by Strautman (25) was conducted by Satorius (22). He was interested in the needs and interests of out-
of-school young farmers, age 14 to 25, in the Garnavillo and Colesburg, Iowa communities. The mean age for those in his study was 20.34 and approximately one-third were veterans. The married young farmers were better established in farming than those who were not married. Young farmers who had two or more years of vocational agriculture were more interested in attending young farmer meetings than those who had fewer years of vocational agriculture.

Satorius (22) found adequate numbers of young farmers, with no military status, to justify beginning or continuing a young farmer class. He found the following areas of interest to be considered when planning a young farmer program: crop and livestock enterprises, farm management problems, better establishment in farming, agricultural mechanics activities and social, recreational, and hobby activities.

Using the same sample as Henderson (6) and Nielsen (16), Blake (1) determined the influence of high school vocational agriculture on the rate of establishment of graduates in farming. Graduates from both the vocational and nonvocational agriculture groups were operating farms that ranged from 121 to 160 acres. Blake (1) found a highly significant difference in the rate of establishment in farming in favor of the vocational agriculture graduates. He also determined that vocational agriculture graduates had an average crop gross product of $4,407 during the first four years of farming, whereas the control group had $2,616. This same group had an average livestock gross product of $2,285 as compared to $1,804 for the nonvocational agriculture graduates for the first year of farming.
Blake (1, p. 61b) stated:

This study indicated that the high school graduates who had vocational agriculture training became established in farming at a faster rate than the high school graduates who had not had the vocational agriculture training.

The total gross product of the vocational agriculture graduates increased at a rate of $175 per year more rapidly than the nonvocational agriculture graduates.

Kasperbauer (14) working jointly with Blake (1), Henderson (6), and Nielsen (16) investigated the relationship of high school vocational agriculture and military service to establishment of graduates in farming. He found that the differences among veteran status groups were non-significant, and that the veterans and nonveterans had nearly equal mean total gross products. His study also indicated that vocational agriculture graduates were better established in farming.

The oldest study in this review was done by Hoopes (9) in 1937, to determine the factors which affected the establishment in farming of former vocational agriculture students at Muscatine, Iowa. Some of the following conclusions made by Hoopes (9, p. 120) have meaning for this study:

2. Farming with parents, whether in partnership, or on an allowance, was a safe means of advancement of the younger men.
3. The quality of the supervised practice programs affected the young men in becoming established in farming.
4. Competition of brothers was more of a retarding factor for establishment in farming than was the total size of the farm family.
5. The farming status of the father is a very definite factor affecting the establishment of the son in farming.

In 1940 a study was conducted by Dobervich (3) to investigate the problems encountered in becoming established in farming by young men
trained in vocational agriculture. The author of this study has chosen to use the study by Dobervich (3) to close his review of literature because twenty-eight years have passed since his study was written. It is interesting to note some of the similarities between the present study and the one by Dobervich. Becoming established in farming in 1930 to 1940 posed some of the same problems, namely the acquisition of land and capital, as those of today. His sample consisted of 157 young men who had had vocational agriculture in high school since 1930. He made 46 summarizing statements regarding the establishment of young farm operators. The following quotes (3, pp. 128-137) seem appropriate as background information for the present study:

(1) A mean of four years was the length of the interval between leaving school and establishment in farming.
(2) Sixty-one percent of the young farmers secured the land they are now farming from their relatives.
(4) Eighty-two percent of the fathers or these young farmers had been, or were at the time of the interview, farm owners, thirty-three percent of the fathers had experience as laborers, tenants and owners. Ninety-four percent of the fathers are still active in farming.
(5) Seventy-nine percent of the wives of the 88 young farmers who were married were farm reared and ninety-six percent indicated favorable attitudes toward farming.
(13) The mean number of years young men spent in each non-farming job after leaving school was two.
(15) Sixty-four percent of the 157 young farmers worked an average of four years on the home farm for expenses after leaving school and before becoming established in farming.
(17) Nineteen percent of the young farmers had a mean of four years of partnership experience on the home farm after leaving school. The range in years was from one to 10 years, inclusive. The mean annual income was $711. The mean income range in the areas was from $300 in the Grain Area to $1600 in the Dairy Area.

(20) Seventy-six percent of all the leases taken by the young farmers on rented acreages were share crop. Cash rent was second, with 12 percent of the farmers reporting this type of lease.
(21) Forty-one percent of all the farms rented by the tenant young farmers was rented from relatives. Twenty percent of the farms rented belonged to fathers and 11 percent to uncles. The remaining farms were rented from grandfathers, fathers-in-law, brothers and brothers-in-law.

(30) The young farmers were asked to rank in order of importance the factors which aided them in becoming established in farming; the rankings were as follows:
   (1) Experience on the home farm.
   (2) Assistance from parents and relatives.
   (3) Agricultural education.
   (4) Advice from parents.
   (5) General education
   (6) Own reading and studying.
   (7) Experience as a hired hand.

(33) Fifty-eight percent of the production difficulties reported pertained to livestock diseases. Low productivity of farms accounted for 22 percent of the difficulties.

(31) The problems which the young farmers encountered in becoming established were ranked in the order of their difficulty as follows:
   (1) Securing finances.
   (2) Production.
   (3) Securing stock.
   (4) Providing housing.
   (5) Management.
   (6) Securing land.
   (7) Securing equipment.

(36) Scarcity of desirable land, no cash or collateral security and the absence of buildings on farms accounted for 90 percent of the reported difficulties encountered in securing land.

In summary the literature reviewed for this study indicates that young men are becoming established in farming even though farm numbers are decreasing and the size of farms are increasing. There appears to be a number of factors affecting their establishment but in no case did the literature reveal that there was not a need for young farmers or that it was impossible for them to become established in farming. Few studies defined the needs, or the ways and means for educational programs of young farm operators.
METHOD OF PROCEDURE

Sample Design

The universe of interest for this study was all farm operators in Iowa who were between the ages of 18 and 30 inclusive as of December 31, 1968. They resided in the open country of the state and may have been farming by themselves or in partnership. To be classified as a young farm operator, an individual must have met the following criteria:

1. He must have received remuneration from profits (or losses) from the farm business.
2. The operator must have worked 90 or more days on the farm in 1968 in a partnership or shared management situation.
3. He was considered to be the operator if he worked less than 90 days and there was no other operator.
4. He must have made or helped to make the management decisions in the operation and management of the farm.

Criteria one and four were imposed in order to screen out those persons who had little or no responsibility for operating the farm and to exclude hired farm laborers and managers. The purpose of criteria two was to exclude those members of partnerships who did not actively participate in the farm operation.

Since the researcher intended to obtain lists of farmers meeting the age qualifications from the Agricultural Stabilization Conservation Service committeemen or other individuals having knowledge of the persons in their townships, it was decided to use townships as the sampling units
and to interview all eligible farm operators in the sample townships.

For sampling purposes, the operator was considered to be "in" the township in which he lived, provided he also operated land in that township. If he did not operate any land in the township of residence, he was considered to be "in" the township in which the northwest corner of his entire operation was located, the northwest corner being defined as that point lying farthest north of those points lying farthest west.

The state was stratified geographically as shown in Figure 3 into five areas according to the predominant type of farming - Western Livestock, Cash Grain, Dairy, Eastern Livestock, and Southern Pasture. Since primary interest was in comparing these areas, the sample was to be distributed approximately equally among the five strata. Economic considerations indicated that a total sample size of about 300 (60 per stratum) would be possible.

In order to set the sample size in terms of numbers of townships, an estimate of the average number of eligible farm operators per township was needed. An estimate of the total number of eligible operators in each stratum was obtained using data from the 1964 Census of Agriculture (25) and postulating that the decline in the number of operators since 1964 had been four percent. Next the number of townships in each stratum was determined. The townships used were legal townships rather than survey townships; in some instances very small legal townships were combined with larger neighboring townships or with each other so that all sampling units were approximately equal to the standard size of thirty-six square miles. The estimated total number of eligible operators was
Figure 3. Strata boundaries and location of counties drawn for sample
divided by the number of townships to give an average number of eligible operators per township; this average ranged from slightly less than seven in the Southern Pasture area to slightly more than ten in the Dairy area. Thus the minimum number of townships needed in order to obtain the desired 60 interviews per stratum was eight each in the Western Livestock, Cash Grain, and Eastern Livestock areas, six in the Dairy area, and nine in the Southern Pasture area. However, in order to allow for refusals, etc., and to provide a safety factor in case the estimate of the number of eligible operators was too high, it was decided to include more than the apparent minimum number of townships in the sample. As a means of conserving field costs, it was also decided to select the samples within strata in two stages, first selecting a sample of counties and then selecting townships within the sample counties. The sample was finally set at four counties and two townships per sample county in the Dairy area and four counties and three townships per sample county in each of the other areas. Within each stratum, counties were selected with probability proportional to size in terms of the number of townships they contained; within each sample county, the required number of townships was selected at random without replacement with equal probability. Thus, within each stratum, the overall probability of being selected in the sample was the same for all townships.

In each of the sample townships, lists of persons thought to be eligible were compiled using local sources of information. All persons on these lists were to be contacted and interviews obtained from all those who did, in fact, meet the eligibility requirements.
Check sections

In any sampling plan utilizing lists of individuals, some consideration must be given to the fact that the lists may fail to include some members of the population of interest or may include some persons who are not members of this population. Since in this study all persons on the list were to be contacted and their eligibility determined firsthand, the presence of names on the list that did not belong there was a problem only in that contacting these extra persons increased the field costs.

In order to check for omissions from the list, a supplementary area sample was used. Within each sample township, a sample of sections was drawn in a random manner at a rate of one out of six. The interviewer canvassed these sample sections to determine whether or not they contained any eligible operators who were not on the list. Any additional eligible persons located in this manner were to be interviewed.

Results

The lists from the sample townships contained the names of 466 individuals of whom 288 were found to be eligible farm operators. These data are presented in Table 1. A total of 33 additional eligible persons were located in the check sections. Since the sampling rate within the sample townships for the check sections was one out of six, the results indicate that a total of 198 persons were erroneously omitted from the list. Interviews were obtained from 278 of the 288 eligible operators on the lists and from 29 of the 33 located in the check segments for an overall response rate of 95.6 percent.
Table 1. Interviews made and schedules completed by county and farming area (stratum)

<table>
<thead>
<tr>
<th></th>
<th>Original list</th>
<th>Check segments</th>
<th>Schedules</th>
</tr>
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<tbody>
<tr>
<td>Western livestock (I)</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Mills</td>
<td>14</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>O'Brien</td>
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<td>17</td>
<td>2</td>
</tr>
<tr>
<td>Plymouth</td>
<td>13</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Pottawattamie</td>
<td>19</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>63</td>
<td>60</td>
<td>10</td>
</tr>
<tr>
<td>Cash grain (II)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calhoun</td>
<td>18</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>Clay</td>
<td>12</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Dallas</td>
<td>6</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Hancock</td>
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<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
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<tr>
<td>Dairy (III)</td>
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<td>Dubuque</td>
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<td>21</td>
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<td>Mitchell</td>
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<td>7</td>
<td>0</td>
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<tr>
<td>Total</td>
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<td>57</td>
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<tr>
<td>Eastern livestock (IV)</td>
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<td>2</td>
</tr>
<tr>
<td>Henry</td>
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<td>1</td>
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<td>Tama</td>
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<tr>
<td>Total</td>
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<td>62</td>
<td>5</td>
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<td>Southern pasture (V)</td>
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<td>2</td>
</tr>
<tr>
<td>Total</td>
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<td>5</td>
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<tr>
<td>Total</td>
<td>288</td>
<td>278</td>
<td>33</td>
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</table>
Definition of Terms

The major terms used throughout this study are defined below. Other terms of a specialized nature are defined where used in the text.

Farm - (General definition): A farm consisted of all the tracts of land, contiguous or noncontiguous, under the operation of a single individual or under a group of individuals in partnership. An operator was usually an owner of at least part of the assets but need not be, as in the case of the hired manager.

Farm operator - A farm operator was a person who was actively engaged in running a farm. He must have been responsible for decision making about production and marketing for that farm in addition to supplying all or part of the labor. Some farms were operated by two or more persons in partnership.

Young farm operator: A young farm operator was a person who fulfills the definition of being a farm operator and who was 30 years of age or younger on December 31, 1968. These are the individuals who were interviewed in this survey.

Farm landlord - A person or group owning a tract of land which was rented out to an operator was a farm landlord. He was paid rent, in some form, for the use of the land. Rent may have been in the form of crops, cash per acre, a share of the profits (or losses) from operation of certain given enterprises (such as livestock), or all enterprises on that tract of land.

Partnership - A partnership was a joint operation of a farm by two or more persons. Those persons did not need to have a written agreement nor
did they need be related. Partnership arrangements should not be confused with landlord-tenant arrangements in which the land was rented and the tenant was the sole operator. In some cases, the dividing line was very tenuous, particularly in the case of the livestock share lease arrangement, wherein the landlord and the tenant actually shared the decision making function but fundamentally, and by convention, were not partners.

**Hired manager** - A hired manager did not own land or capital in the farm he managed. He was hired to make decisions as to what and when to plant and when to market, as well as to do the farm work. In this study, hired managers were not interviewed.

**Farm laborer** - A farm laborer was one who receives wages for his work, did not make major decisions, and owned no part of the assets of the farm. Individuals who were only farm laborers were not interviewed.

**Tenure** - 1. Owner operator: An owner operator was a farmer who owned all of the land that he operated. 2. Tenant operator: A tenant operator rented all the land he operated. He may have rented from one person or more. 3. Part-owner: A part-owner operator owned part of the land and rented a part of the land that he operated.

**Lease types** - Tenants were further classified on the basis of their rental arrangements as follows:

1. **Crop share tenants** paid only a share of the crops.
2. **Cash tenants** paid cash as rent, such as $10 an acre or $1,000 for the use of the farm.
3. **Crop share-cash tenants** paid a part of the rent in cash and a part as a share of the crops.
4. Livestock share tenants paid a share of the livestock or livestock products and a share of the crops raised but not fed.

Construction of the Instrument

A questionnaire, or interview schedule, was developed to obtain the information from young farm operators in as easy a manner as possible. The author recognized that it was a busy time of the year for farmers and that they would not care to devote too much time in furnishing the data to the interviewer. Another purpose included in the design was to obtain accurate and complete information. It was necessary to organize the schedule in such a manner that it would be sufficiently inclusive to allow for individuals who may have been farming for a maximum of 13 years as well as to those who had started to farm in 1968.

The schedule (see Appendix) was divided in two major forms. Form I was used as a screening sheet to determine the eligibility of those farmers contacted. Form II contained several sections to obtain data on the various aspects of the young man's life while he was becoming established in farming. Section A of Form II contained items concerning the operator's family and his home background. The educational, occupational, financial, and personal family information about the respondent was obtained in Section B. Sections C and D were designed nearly identically with Section C used to secure information on the operator's first year of farming and Section D for his present (1968) year of farming. Those pages in Sections C and D used for individual farm operators were designated with blue paper, whereas those for partnerships were on yellow paper. The
responses of the respondent to questions concerning educational implications were secured in Section E. Several open-ended questions were used in Section F to obtain the personal views of young farm operators concerning farming.

Upon the completion of the first draft of the schedule by the author, the schedule was reviewed and revised with the help of staff members in the Department of Agricultural Education and personnel of the Survey section of the Statistical Laboratory. Before the final draft, the schedule was pretested with young farm operators in Story county, after which several revisions were made. The author had considerable assistance from many people to assure the accuracy and completeness of the interview schedule.

Data Collection and Processing

Data were collected for this study by personal interview with young farm operators in chosen townships of selected counties in Iowa. The author and personnel of the Statistical Laboratory conducted a two-day training school for the nine employed interviewers on November 13-14, 1968 at Iowa State University, Ames, Iowa. During this time explicit instructions were given in field procedures and interview techniques so that all interviews would be conducted in a similar manner with as little enumerator bias as possible.

Each interviewer was provided a county map with identification of the specific townships to be included in the sample. Check segment boundaries within each township were also identified on the county maps. To the extent that was possible, the respondent's forms were located and marked on
the county map by the author. In many instances the exact location of the respondent's farm was not known so the interviewer had to obtain this information while working in the area. A listing of the names and locations of each potential young farm operator to be included in the sample was supplied to the interviewer.

The basic procedure for each interviewer was rather simple with two major requirements to be met. The first was to contact every young farm operator whose name appeared on the original list and through the use of Form I determine whether or not he was eligible to be included in the study. If the operator met the requirements, he was to be interviewed by the enumerator and data were recorded on Form II. The second practice for each interviewer was to go into the specific check segment sections and by visiting with a well established farmer, make a listing of all farm operators who were thought to be under 35 years of age. The age limit was increased in this case so that no operator would be missed through false judgement by the one who was providing the information. From here the interviewer made contact with each operator found to be under 35 years of age and followed the same procedure as was done for those operators who were on the original list.

Each interviewer was contacted and given help by a supervisor during the early stages of the enumeration period. The supervisor not only provided help but also checked completed schedules and accompanied her on at least one interview to insure accuracy in interviewing and canvassing. Approximately eight weeks were required to complete the interviews and obtain the data.
The completed schedules were mailed directly to the statistical laboratory as they were completed by the enumerator. All schedules were reviewed, edited for errors, and numbered by the author in preparation for coding.

The data obtained by the personal interview and recorded on the schedules were coded and transferred to 80 column code sheets. Coding was done by the investigator and hired personnel in the Iowa State University Survey Section of the Statistical Laboratory. To be sure that the transfer of information from the schedules to the coding sheets was accurate, each schedule was checked by another person. The author is convinced that there has been an accurate transferral of data.

Data from the code sheets were then key-punched on IBM cards by the Iowa State University Computation Center. Each card was verified to insure accuracy.

**Estimation**

The following procedures were used to estimate population totals and means and the variances of those estimates. Let

\[ y_{ijkl} = \text{characteristic of interest for the } i^{th} \text{ individual interviewed in the } k^{th} \text{ sample township, } j^{th} \text{ sample county, } i^{th} \text{ stratum} \]

\[ f_i = \text{inverse of sampling fraction for townships, } i^{th} \text{ stratum} \]

\[ N_{ijk} = \text{number of eligible operators on list, } k^{th} \text{ townships, } j^{th} \text{ county, } i^{th} \text{ stratum} \]
\[ n_{ij} = \text{number of eligible operators on list who were interviewed} \]
\[ N_{2ijk} = \text{number of eligible operators located in check procedures,} \]
\[ \text{k}^{th} \text{ township, j}^{th} \text{ county, i}^{th} \text{ stratum} \]
\[ n_{2ijk} = \text{number of eligible operators located in check procedure and interviewed} \]
\[ n_{ijk} = n_{ij} + n_{2ijk} = \text{total number interviewed, i}^{th} \text{ township.} \]

Since the check sections within sample townships were sampled at a rate of 1 out of 6, an estimate of the total number of eligible operators in the ijk\(^{th}\) township is given by
\[ \hat{N}_{ijk} = n_{ij} + 6n_{2ijk} \]
and an estimate of the total number of eligible operators in the i\(^{th}\) stratum by
\[ \hat{N}_i = f_i \sum_j \sum_k N_{ijk}. \]

Estimates of stratum means for any characteristic, \(y\), were obtained directly from the simple sample mean. That is,
\[ \hat{\bar{y}}_i = \bar{y}_i = \frac{\sum_j \sum_k y_{ijkl}}{\sum_j \sum_k n_{ijk}}. \]

This estimator gives those individuals that were on the lists the same weight as those that were located in the check segments. Since the latter had only one-sixth the chance of being in the sample as had the former, the estimator is biased; however, it was felt that this estimator would have a smaller mean square error (which is the sum of the variance and the square of the bias) than would the estimator which gave the "proper" weights to the two groups.
Estimates of stratum totals were obtained by multiplying the estimated stratum mean by the estimated total number of eligible operators in the stratum. Thus,
\[ \hat{\gamma}_i = \hat{N}_i \hat{\gamma}_i. \]
Estimates of state totals were obtained by summing the estimated stratum totals.
\[ \hat{N} = \sum_i \hat{N}_i \]
\[ \hat{Y} = \sum_i \hat{Y}_i \]
Estimates of state means were obtained by dividing the estimated state totals for the \( y \)-characteristics by the estimated total number of eligible operators. Thus
\[ \hat{\bar{Y}} = \hat{Y}/\hat{N}. \]

Approximate estimates of variances can be computed based on the variation among estimated county totals within strata. Let
\[ T_{ij} = \text{number of townships in } j^{th} \text{ sample county, } i^{th} \text{ stratum} \]
\[ t_{ij} = \text{number of townships in sample from } j^{th} \text{ sample county} \]
\[ c_i = \text{number of sample counties in } i^{th} \text{ stratum.} \]
An estimate of the total for the \( y \)-characteristic for the \( ij^{th} \) county is given by
\[ \hat{Y}_{ij} = \left( \frac{T_{ij}}{t_{ij}} \right) \left( \sum_{k=1}^{t_{ij}} n_{i,j,k} \right) \sum_{k=1}^{t_{ij}} \sum_{l=1}^{k} y_{ijkl}, \]
and an estimate of the total number of eligible operators in the \( ij^{th} \) county is given by
\[ \hat{N}_{ij} = \left( \frac{T_{ij}}{t_{ij}} \right) \sum_{k=1}^{t_{ij}} n_{i,j,k}. \]
Since counties were drawn with unequal probabilities, an estimator of the stratum total for the y-characteristic based on the estimated county totals is given by

$$\hat{Y}_i' = \frac{1}{c_i} \sum_{j=1}^{c_i} \left( \frac{T_i}{T_i} \right) \hat{Y}_{ij}$$

where \( \left( \frac{T_i}{T_i} \right) \) is the probability of selecting the \( ij^{th} \) county. Similarly, an estimator of the total number of eligible operators in the \( i^{th} \) stratum is given by

$$\hat{N}_i' = \frac{1}{c_i} \sum_{j=1}^{c_i} \left( \frac{T_i}{T_i} \right) \hat{N}_{ij}$$

An estimator of the variance of \( \hat{Y}_i' \) is given by

$$\text{var}(\hat{Y}_i') = \frac{1}{c_i} (1/c_i-1) \sum_{j=1}^{c_i} \left( \frac{T_i}{T_i} \right) (\hat{Y}_{ij} - \hat{Y}_i')^2.$$  

This estimator can be used to obtain estimates of the variances of \( \hat{Y}_i' \) as defined previously. Similarly,

$$\text{var}(\hat{N}_i') = \frac{1}{c_i} (1/c_i-1) \sum_{j=1}^{c_i} \left( \frac{T_i}{T_i} \right) (\hat{N}_{ij} - \hat{N}_i')^2.$$  

An estimator of the mean per person for the \( i^{th} \) stratum is given by

$$\hat{\frac{Y_i'}{N_i'}} = \frac{\hat{Y}_i'}{\hat{N}_i'}$$

and an estimator of the variance of this mean by

$$\text{var}(\hat{\frac{Y_i'}{N_i'}}) = \frac{1}{N_i'} \left[ \text{var}(\hat{Y}_i') + \left( \hat{\frac{Y_i'}{N_i'}} \right)^2 \text{var}(\hat{N}_i') - 2 \hat{Y}_i' \text{cov}(\hat{Y}_i', \hat{N}_i') \right]$$

where \( \text{cov}(\hat{Y}_i', \hat{N}_i') = \frac{(1/c_i) (1/c_i-1) \sum_{j=1}^{c_i} (T_i/T_i)^{\hat{Y}_{ij} - \hat{Y}_i'} \hat{N}_{ij} - \hat{N}_i') (T_i/T_i) \hat{N}_{ij} - \hat{N}_i') \).

This estimator can be used to estimate the variance of \( \frac{\hat{Y}_i'}{\hat{N}_i'} \) as defined previously.
Estimates of the Number of Young Farm Operators

From the sample of 307 young farm operators who were farming in the 56 townships of 20 random selected counties stratified by economic area, the author was able to make estimates of the number of young farm operators in Iowa who were 30 years of age or younger. The estimates by township, county, economic area and state, through the use of the formulas of the preceding section are shown in Table 2. As can be seen there was a variance in the number of young farm operators by area, county and township. The estimated mean number of young farmers, 30 years of age or under, was 8.54 per township, 149.09 per county, and 2726 per economic area. There was a range of 4 young farm operators per township in Davis county to a high of 14 in Calhoun county. A contributory factor in the range of operators by county, beside the variance in the number per township, was the size of the county, namely the number of townships per county. This showed up clearly in the largest county in the study, Pottawattamie, which had an estimated mean of 12.33 young farm operators in the 27 townships. In contrast was Davis county with 14 townships and an estimated mean number of young farm operators per township of 4.0, resulting in the least number of estimated young farmers per county in Iowa. The Western Livestock Area of Iowa had the most young farm operators with 26.9 percent in that section. Only 14.6 percent of the young farmers were located in the Southern Pasture Area of Iowa.
Table 2. Estimated number of young farm operators in Iowa by area, county, and township

<table>
<thead>
<tr>
<th>Economic area</th>
<th>Est. no. per area</th>
<th>Est. % of state/area</th>
<th>County</th>
<th>Estimated Mean no./% of state/county</th>
<th>No. of interviews/sample</th>
<th>Estimated mean number/township</th>
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</thead>
<tbody>
<tr>
<td>Western Livestock</td>
<td>3669</td>
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<td>Mills</td>
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<td></td>
<td>Van Meter 4</td>
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<tr>
<td>Northeastern Dairy</td>
<td>16.6</td>
<td>16.6</td>
<td>Dubuque</td>
<td>229.50 6.3</td>
<td>Concord 17</td>
<td>13.5</td>
</tr>
<tr>
<td>(Area III)</td>
<td>2264</td>
<td></td>
<td></td>
<td></td>
<td>Iowa 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clayton</td>
<td>165.00 4.0</td>
<td>Cox Creek 8</td>
<td>7.5</td>
</tr>
<tr>
<td>Economic area (Area III) continued</td>
<td>County</td>
<td>Mean no./% of state/county</td>
<td>Township views/sample township</td>
<td>Estimated mean number/township</td>
<td></td>
<td></td>
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<tr>
<td>----------------------------------</td>
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<tr>
<td></td>
<td>Floyd</td>
<td>90.00 4.3</td>
<td>Jefferson 6</td>
<td>Rudd 6</td>
<td></td>
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<tr>
<td></td>
<td>Mitchell</td>
<td>56.00 2.0</td>
<td>Rudd 9</td>
<td>Rudd 7.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Livestock (Area IV)</td>
<td>Clinton</td>
<td>190.00 5.3</td>
<td>Bloomfield 6</td>
<td>Bloomfield 10.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tama</td>
<td>133.33 5.3</td>
<td>Sharon 10</td>
<td>Sharon 4.6</td>
<td></td>
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<tr>
<td></td>
<td>Cedar</td>
<td>138.66 4.3</td>
<td>Buckingham 5</td>
<td>Buckingham 6.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Henry</td>
<td>64.00 2.9</td>
<td>Lincoln 11</td>
<td>Lincoln 8.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Davis</td>
<td>56.00 3.0</td>
<td>Salt Creek 4</td>
<td>Salt Creek 3.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adams</td>
<td>76.00 3.5</td>
<td>Dayton 7</td>
<td>Dayton 8.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ringgold</td>
<td>122.66 3.5</td>
<td>Fairfield 4</td>
<td>Fairfield 6.3</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Springfield 5</td>
<td>Springfield 8.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Trenton 3</td>
<td>Trenton 5.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Wayne 5</td>
<td>Wayne 3.3</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>New London 3</td>
<td>New London 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southern Pasture (Area V)</td>
<td>Warren</td>
<td>160.00 4.6</td>
<td>White Oak 4</td>
<td>White Oak 10.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Davis</td>
<td>56.00 3.0</td>
<td>Jackson 8</td>
<td>Jackson 4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adams</td>
<td>76.00 3.5</td>
<td>Virginia 5</td>
<td>Virginia 4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ringgold</td>
<td>122.66 3.5</td>
<td>Soop Creek 5</td>
<td>Soop Creek 4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Marion 0</td>
<td>Marion 4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>West Grove 6</td>
<td>West Grove 6.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Colony 4</td>
<td>Colony 6.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Grant 5</td>
<td>Grant 7.6</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Mercer 4</td>
<td>Mercer 8.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Grant 3</td>
<td>Grant 7.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Athens 8</td>
<td>Athens 8.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lotts Creek 2</td>
<td>Lotts Creek 8.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>13,630 100.0</td>
<td>20 2981.90 100.00</td>
<td>56 307 170.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean no. ops.</td>
<td></td>
<td>2,726</td>
<td>149.09</td>
<td>5.48 8.54</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
From the study it was estimated there were presently 13,630 farm operators in Iowa who were 30 years of age or younger. There has been an approximate four percent reduction of farmers in the 20 to 30 year age bracket from that recorded by the 1964 Census of Agriculture (26). It appears that the number of young farm operators in the Southern pasture area has remained nearly constant, whereas the largest reduction in numbers has been in the Northeastern dairy area and the Eastern livestock area since 1964. The data indicate some increase in the number of young farmers of the 20 through 30 year age bracket in the Western livestock and Cash grain areas of Iowa.

Since the sample counties in each stratum were selected with probability proportional to size in terms of the number of townships they contained, and within each county the required number of townships were selected at random without replacement with equal probability, it was necessary to use a population raising factor for each stratum so that the data could be reported accurately on a statewide basis. The population raising factors were: Western livestock area, 52.42; Cash grain area, 56.55; Northeastern dairy area, 39.03; Eastern livestock area, 36.27 and Southern pasture area, 36.81.

The data in the study therefore was presented on the basis of 13,630 young farm operators for the state of Iowa.

Personal Characteristics of Young Farm Operators

As indicated by data in Table 3, the present mean age of all young farm operators 30 years of age or younger was 26.2 years old. Over one-
half of the operators were 27 years of age or older, whereas less than 10 percent were under 23 years of age. Only 202 operators, or 1.5 percent, were younger than 21 years of age.

Table 3. Present age and age of young farm operators when they started to farm

<table>
<thead>
<tr>
<th>Years old</th>
<th>Present age Number</th>
<th>Percent</th>
<th>Number starting to farm</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>-</td>
<td>-</td>
<td>2520</td>
<td>18.5</td>
</tr>
<tr>
<td>19</td>
<td>89</td>
<td>.7</td>
<td>1534</td>
<td>11.3</td>
</tr>
<tr>
<td>20</td>
<td>113</td>
<td>.8</td>
<td>1411</td>
<td>10.4</td>
</tr>
<tr>
<td>21-22</td>
<td>1028</td>
<td>7.5</td>
<td>3011</td>
<td>22.1</td>
</tr>
<tr>
<td>23-24</td>
<td>2451</td>
<td>18.0</td>
<td>2828</td>
<td>19.3</td>
</tr>
<tr>
<td>25-26</td>
<td>2819</td>
<td>20.7</td>
<td>1871</td>
<td>13.8</td>
</tr>
<tr>
<td>27-28</td>
<td>3502</td>
<td>25.7</td>
<td>618</td>
<td>4.6</td>
</tr>
<tr>
<td>29-30</td>
<td>3630</td>
<td>26.6</td>
<td>36</td>
<td>.3</td>
</tr>
<tr>
<td>Total</td>
<td>13630</td>
<td>100.0</td>
<td>13630</td>
<td>100.0</td>
</tr>
<tr>
<td>Mean</td>
<td>26.2</td>
<td>21.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In contrast to the present age of the operators with a majority over 25 years of age, it was reported that 50.8 percent were under age 23 when they started to farm. Less than 10 percent began farming after they were 27 years old. The mean age when young farm operators started to farm was 21.6. From the data presented one can conclude that several young men began farming when they were relatively young and had their farming operations interrupted as they increased in age from 18 through 26 years.
Table 4. Age of young farm operator's parents

<table>
<thead>
<tr>
<th>Age</th>
<th>Father Number</th>
<th>Father Percent</th>
<th>Mother Number</th>
<th>Mother Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-44</td>
<td>109</td>
<td>.8</td>
<td>382</td>
<td>2.8</td>
</tr>
<tr>
<td>45-49</td>
<td>1188</td>
<td>8.7</td>
<td>2799</td>
<td>20.5</td>
</tr>
<tr>
<td>50-54</td>
<td>3831</td>
<td>28.1</td>
<td>4399</td>
<td>32.2</td>
</tr>
<tr>
<td>55-59</td>
<td>3171</td>
<td>23.4</td>
<td>3277</td>
<td>24.0</td>
</tr>
<tr>
<td>60-64</td>
<td>2022</td>
<td>14.8</td>
<td>1659</td>
<td>12.2</td>
</tr>
<tr>
<td>65-69</td>
<td>1061</td>
<td>7.8</td>
<td>557</td>
<td>4.1</td>
</tr>
<tr>
<td>70-74</td>
<td>543</td>
<td>3.9</td>
<td>75</td>
<td>.6</td>
</tr>
<tr>
<td>75 and over</td>
<td>75</td>
<td>.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deceased or no response</td>
<td>1630</td>
<td>11.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean age</td>
<td>100.0</td>
<td></td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13630</td>
<td></td>
<td>13630</td>
<td></td>
</tr>
</tbody>
</table>

The ages of parents of the young farm operators are given in Table 4. Slightly over 25 percent of the fathers were 60 years of age or older, whereas only 16.9 percent of the mothers were 60 years or older. A larger percentage of the fathers were over age 65 than mothers, and a larger percentage of the mothers were under 45 years of age than fathers.

Fathers had a lower educational level than mothers as reported in Table 5. Nearly one-half of the fathers of the respondents had no more than an eighth grade education, whereas 44.1 percent of the mothers had
a high school education. A very small percentage of both parents (2.1% fathers, 2.3% mothers) were college graduates.

Nearly three-fourths of the young farm operators were high school graduates but only 3 percent had been graduated from college, however 2349, or 17.2 percent, had some post high school education.

Table 5. Educational level of parents and young farm operators

<table>
<thead>
<tr>
<th>Highest grade completed</th>
<th>Father</th>
<th>Mother</th>
<th>Young farm operator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>1-4</td>
<td>289</td>
<td>2.1</td>
<td>39</td>
</tr>
<tr>
<td>5-7</td>
<td>701</td>
<td>5.1</td>
<td>169</td>
</tr>
<tr>
<td>8</td>
<td>6200</td>
<td>45.5</td>
<td>4168</td>
</tr>
<tr>
<td>9-11</td>
<td>961</td>
<td>7.0</td>
<td>943</td>
</tr>
<tr>
<td>12</td>
<td>3471</td>
<td>26.4</td>
<td>6035</td>
</tr>
<tr>
<td>13-15</td>
<td>886</td>
<td>6.5</td>
<td>1678</td>
</tr>
<tr>
<td>16</td>
<td>290</td>
<td>2.1</td>
<td>238</td>
</tr>
<tr>
<td>Over 16</td>
<td>0</td>
<td>-</td>
<td>88</td>
</tr>
<tr>
<td>No response</td>
<td>727</td>
<td>5.3</td>
<td>272</td>
</tr>
<tr>
<td>Total</td>
<td>13630</td>
<td>100.0</td>
<td>13630</td>
</tr>
</tbody>
</table>

Slightly over one-half of the young farm operators were members of 4-H clubs and 58.2 percent of those members served as officers of their clubs. Information regarding their participation in 4-H and their highest office held is given in Tables 6 and 8.
Table 6. Participation in 4-H by young farm operators.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Percent</th>
<th>No</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member of 4-H</td>
<td>7127</td>
<td>52.3</td>
<td>6503</td>
<td>47.7</td>
</tr>
<tr>
<td>Officer in 4-H</td>
<td>4186</td>
<td>58.2</td>
<td>3014</td>
<td>41.8</td>
</tr>
<tr>
<td>Crops or livestock projects</td>
<td>7056</td>
<td>98.0</td>
<td>145</td>
<td>2.0</td>
</tr>
<tr>
<td>Projects of value</td>
<td>5485</td>
<td>76.1</td>
<td>1571</td>
<td>23.9</td>
</tr>
</tbody>
</table>

Several of the young farm operators commented on the value of their 4-H and F.F.A. experience during the interview with the enumerator. A high percentage of both the 4-H and vocational agriculture groups had crops or livestock projects while enrolled in vocational agriculture or as a member of 4-H. Approximately 75 percent of those who had crops or livestock projects indicated the projects were of help to them in getting established in farming.

The extent of participation of young farm operators in vocational agriculture and the highest office held in the F.F.A. is given in Tables 7 and 8.

Table 7. Participation in vocational agriculture by young farm operators

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Percent</th>
<th>No</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school offered vocational ag.</td>
<td>8737</td>
<td>66.4</td>
<td>4429</td>
<td>33.6</td>
</tr>
<tr>
<td>Enrolled in vocational ag.</td>
<td>7748</td>
<td>88.7</td>
<td>989</td>
<td>11.3</td>
</tr>
<tr>
<td>Crops or livestock projects</td>
<td>6552</td>
<td>89.2</td>
<td>793</td>
<td>10.8</td>
</tr>
<tr>
<td>Projects of value</td>
<td>5215</td>
<td>71.0</td>
<td>1337</td>
<td>18.2</td>
</tr>
</tbody>
</table>
Table 8. Highest office held in 4-H and F.F.A. by young farm operators

<table>
<thead>
<tr>
<th>Office held</th>
<th>F.F.A.</th>
<th>4-H</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chapter District State</td>
<td>Club County</td>
</tr>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>President</td>
<td>1383 39.5</td>
<td>1649 55.4</td>
</tr>
<tr>
<td>Vice pres.</td>
<td>532 15.2</td>
<td>403 13.5</td>
</tr>
<tr>
<td>Secretary</td>
<td>528 15.1</td>
<td>429 14.4</td>
</tr>
<tr>
<td>Treasurer</td>
<td>340 9.7</td>
<td>260 8.7</td>
</tr>
<tr>
<td>Reporter</td>
<td>225 6.4</td>
<td>128 4.3</td>
</tr>
<tr>
<td>Historian or Sentinel</td>
<td>423 12.1</td>
<td>109 3.7</td>
</tr>
<tr>
<td>Not sure</td>
<td>74 2.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3505 100.0</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2978 100.0</td>
</tr>
</tbody>
</table>

Vocational agriculture was available to 8737, or two-thirds of the young men, and 88.7 percent took advantage of this training in high school. There were 463 young men who had not attended high school.

Many young farm operators reported their highest office held in F.F.A. and 4-H was that of president of their local club or chapter. Over one-third of those who had served as officers in the F.F.A. served as president, and over 50 percent served as president of their 4-H club. Thirty-nine of the young farm operators had served as state vice president in the F.F.A. Two percent of those who served as an F.F.A. officer were not certain of their highest office. It is important to emphasize that many of those young men had held other offices, but the data in Table 8
indicate the highest office held. In all probability many of those reporting they had served as president of their local chapter or club had also held another office prior to becoming president.

An analysis of data in Tables 9 and 10 shows that the young farm operators who had been enrolled in four years of high school vocational agriculture and 7 to 8 years of 4-H had derived the most benefit from their crops and livestock projects. This should be expected since it takes a high school student three to four years to develop a good project program. Many boys become members of 4-H when they are 10 years old and in all probability need 7 to 8 years to develop a project program that would be of value to them in becoming established in farming.

Information concerning the value of projects by the young farm operators was obtained through the use of an open question in the schedule (see Appendix), therefore the items listed in Tables 9 and 10 originated from the respondents and not from a check list. It was felt that the original thoughts from the operators would be of most value in the study. Experience appeared to be the most beneficial factor from both 4-H and vocational agriculture projects. It is not surprising to note the low response in both groups for leadership as a benefit because project programs are not designed to promote leadership, but rather to provide experience, financial help, and education in agriculture. Leadership is primarily developed through other activities in 4-H and F.F.A.

A primary objective of vocational agriculture teachers in promoting supervised farming programs is to provide the student an opportunity for
Table 9. Benefits of 4-H projects to young farm operators by number of years of membership

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Years of participation</th>
<th>Total No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-2</td>
<td>3-4</td>
<td>5-6</td>
</tr>
<tr>
<td>Experience</td>
<td>317</td>
<td>529</td>
<td>644</td>
</tr>
<tr>
<td>Financial</td>
<td>37</td>
<td>169</td>
<td>495</td>
</tr>
<tr>
<td>Leadership</td>
<td></td>
<td>-</td>
<td>37</td>
</tr>
<tr>
<td>Judgement</td>
<td>96</td>
<td>75</td>
<td>-</td>
</tr>
<tr>
<td>Records</td>
<td>57</td>
<td>52</td>
<td>52</td>
</tr>
<tr>
<td>Education</td>
<td>75</td>
<td>241</td>
<td>169</td>
</tr>
<tr>
<td>Provided a start</td>
<td>150</td>
<td>73</td>
<td>109</td>
</tr>
<tr>
<td>Total</td>
<td>732</td>
<td>1139</td>
<td>1506</td>
</tr>
<tr>
<td>Percent</td>
<td>11.1</td>
<td>17.2</td>
<td>22.6</td>
</tr>
</tbody>
</table>

Table 10. Benefits of vocational agriculture projects to young farm operators by the number of years enrolled

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Years enrolled</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Experience</td>
<td>125</td>
<td>418</td>
<td>516</td>
</tr>
<tr>
<td>Financial</td>
<td>52</td>
<td>73</td>
<td>503</td>
</tr>
<tr>
<td>Leadership</td>
<td>-</td>
<td>-</td>
<td>93</td>
</tr>
<tr>
<td>Judgement</td>
<td>-</td>
<td>-</td>
<td>39</td>
</tr>
<tr>
<td>Records</td>
<td>-</td>
<td>105</td>
<td>148</td>
</tr>
<tr>
<td>Education</td>
<td>109</td>
<td>306</td>
<td>264</td>
</tr>
<tr>
<td>Provided a start</td>
<td>37</td>
<td>36</td>
<td>168</td>
</tr>
<tr>
<td>Total</td>
<td>323</td>
<td>938</td>
<td>1731</td>
</tr>
<tr>
<td>Percent</td>
<td>4.1</td>
<td>11.7</td>
<td>21.6</td>
</tr>
</tbody>
</table>
experience and financial gain. Evidence of the accomplishment of this objective is shown by 37.2 percent of the young farm operators who had had vocational agriculture in high school indicating they had obtained experience and 21.1 percent had gained financially from their project programs. Similar results were reported for the value of 4-H club projects.

Approximately one-third (32 percent) of the young farm operators had some post high school education. As reported in Table 11 the largest group (55.2 percent) of those enrolled in an educational program beyond high school attended a four year college or university. Two year colleges and trade schools accounted for 17.3 percent each. Vocational technical schools were attended by a very few (1.7 percent) of the young farm operators. It has just been in recent years that Iowa has had many vocational technical schools, therefore these results should be expected. With the passage of the Vocational Education Act of 1963, provisions were made to develop area community colleges and vocational technical programs, therefore one can expect an increased number of beginning young farm operators to enroll in these programs. Nearly two-thirds of those young farm operators who had post high school education were only enrolled for a year or less, whereas 479 out of the 4360 or 10.9 percent graduated from college.

The distribution of time spent and the field of study for young farm operators who had attended a four-year college or university is expressed by data in Table 12. A total of 1285 or 55.2 percent had attended some four-year college or university for some time and enrolled in the field of
### Table 11. Post high school education of young farm operators by type or institution attended and time spent

<table>
<thead>
<tr>
<th>Type of institution</th>
<th>0-6</th>
<th>7-12</th>
<th>13-36</th>
<th>37-48</th>
<th>48+</th>
<th>Total No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four yr. college</td>
<td>500</td>
<td>701</td>
<td>727</td>
<td>350</td>
<td>129</td>
<td>2407</td>
<td>55.2</td>
</tr>
<tr>
<td>Two yr. college</td>
<td>242</td>
<td>182</td>
<td>329</td>
<td>-</td>
<td>-</td>
<td>753</td>
<td>17.3</td>
</tr>
<tr>
<td>Voc. Tech. school</td>
<td>73</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>73</td>
<td>1.7</td>
</tr>
<tr>
<td>Trade school</td>
<td>404</td>
<td>350</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>754</td>
<td>17.3</td>
</tr>
<tr>
<td>Business school</td>
<td>132</td>
<td>241</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>373</td>
<td>8.5</td>
</tr>
<tr>
<td>Total</td>
<td>1351</td>
<td>1474</td>
<td>1056</td>
<td>350</td>
<td>129</td>
<td>4360</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>30.9</td>
<td>33.8</td>
<td>8.0</td>
<td>2.9</td>
<td>2.9</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Table 12. Field of study by time spent at a four-year college or university by young farm operators

<table>
<thead>
<tr>
<th>Field of study</th>
<th>0-6</th>
<th>7-12</th>
<th>13-36</th>
<th>37-48</th>
<th>48+</th>
<th>Total No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>409</td>
<td>271</td>
<td>399</td>
<td>149</td>
<td>57</td>
<td>1285</td>
<td>53.4</td>
</tr>
<tr>
<td>Business</td>
<td>52</td>
<td>141</td>
<td>105</td>
<td>76</td>
<td>36</td>
<td>410</td>
<td>17.0</td>
</tr>
<tr>
<td>Liberal arts</td>
<td>39</td>
<td>148</td>
<td>150</td>
<td>36</td>
<td>36</td>
<td>409</td>
<td>17.0</td>
</tr>
<tr>
<td>Engineering and mathematics</td>
<td>-</td>
<td>89</td>
<td>-</td>
<td>89</td>
<td>-</td>
<td>178</td>
<td>7.4</td>
</tr>
<tr>
<td>Journalism</td>
<td>-</td>
<td>52</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>52</td>
<td>2.2</td>
</tr>
<tr>
<td>Pre-veterinary</td>
<td>-</td>
<td>-</td>
<td>36</td>
<td>-</td>
<td>-</td>
<td>36</td>
<td>1.5</td>
</tr>
<tr>
<td>Combination</td>
<td>-</td>
<td>-</td>
<td>37</td>
<td>-</td>
<td>-</td>
<td>37</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>701</td>
<td>727</td>
<td>350</td>
<td>129</td>
<td>2407</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>20.8</td>
<td>29.1</td>
<td>30.2</td>
<td>14.5</td>
<td>5.4</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
agriculture. The largest percentage of this number had attended only three months and the course most frequently mentioned was the winter quarter farm operation program at Iowa State University. Slightly over 400 operators (31.8%) had been enrolled in each of the business and liberal arts curriculums. Fewer operators had been enrolled in engineering, mathematics, journalism and pre-veterinary medicine than in agriculture but they had longer periods of enrollments.

Table 13 using census occupation classification, shows the father's occupation and educational attainment at the time the young farm operator began farming. Few fathers had occupations other than farming regardless of their level of education. The largest group, 6148, were fathers who were farming and had only an eighth grade education. Of the fathers who were not farming, more were considered to be in operative occupations than in any other classification. This group accounted for only 2.6 percent of the total number of fathers. The education level had little effect upon the father's occupation. Only 27.8 percent of the fathers had graduated from high school, whereas 291 or 2.4 percent did have some education beyond high school. Data from this table points out the need for adult education for farmers.

The distribution of fathers age stratified by present occupation appear in Table 14. A total of 8618 fathers, or 85.2 percent, were presently farming. There appeared to be a normal distribution of fathers by age with the largest number being in the 50 through 54 age bracket. A few fathers, 75 or .7 percent, who were at retirement age or above, were
doing service work such as custodial work for schools and churches. It is interesting to note that only those fathers who were farming, or the few in service occupations, were employed after retirement age of 65, whereas 903 fathers were retired prior to their 65th birthday. Death, retirement or disablement, and age of the father appeared to have an effect upon the establishment of the young farm operators.

Table 13. Occupation and education of fathers of young farm operators when they began farming

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Years of school completed</th>
<th>Total No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-8</td>
<td>9-11</td>
<td>12</td>
</tr>
<tr>
<td>Profession</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmer</td>
<td>6148</td>
<td>797</td>
<td>3072</td>
</tr>
<tr>
<td>Manager</td>
<td>53</td>
<td>39</td>
<td>89</td>
</tr>
<tr>
<td>Salesman</td>
<td>-</td>
<td>36</td>
<td>-</td>
</tr>
<tr>
<td>Craftsman</td>
<td>37</td>
<td>-</td>
<td>37</td>
</tr>
<tr>
<td>Nonfarm laborer</td>
<td>167</td>
<td>-</td>
<td>36</td>
</tr>
<tr>
<td>Operative</td>
<td>146</td>
<td>52</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>6551</td>
<td>924</td>
<td>3323</td>
</tr>
<tr>
<td>Percent</td>
<td>54.6</td>
<td>7.8</td>
<td>27.8</td>
</tr>
</tbody>
</table>

^a Total does not include 1643 fathers who were deceased, retired or disabled and the no responses.
Table 14. Present occupation and age of young farm operators' fathers

<table>
<thead>
<tr>
<th>Present occupation</th>
<th>40-49</th>
<th>50-54</th>
<th>55-59</th>
<th>60-64</th>
<th>65+</th>
<th>Total No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profession</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmer</td>
<td>52</td>
<td>52</td>
<td></td>
<td></td>
<td>89</td>
<td>.9</td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td>177</td>
<td>93</td>
<td>91</td>
<td>39</td>
<td>-</td>
<td>400</td>
<td>4.0</td>
</tr>
<tr>
<td>Clerical</td>
<td>-</td>
<td>-</td>
<td>73</td>
<td>-</td>
<td>-</td>
<td>73</td>
<td>.7</td>
</tr>
<tr>
<td>Salesman</td>
<td>-</td>
<td>39</td>
<td>-</td>
<td>57</td>
<td>-</td>
<td>96</td>
<td>.9</td>
</tr>
<tr>
<td>Craftsman</td>
<td>-</td>
<td>-</td>
<td>57</td>
<td>36</td>
<td>-</td>
<td>73</td>
<td>.7</td>
</tr>
<tr>
<td>Operative</td>
<td>57</td>
<td>113</td>
<td>36</td>
<td>52</td>
<td>-</td>
<td>311</td>
<td>3.1</td>
</tr>
<tr>
<td>Service worker</td>
<td>-</td>
<td>-</td>
<td>52</td>
<td>-</td>
<td>75</td>
<td>75</td>
<td>.7</td>
</tr>
<tr>
<td>Farm laborers</td>
<td>-</td>
<td>39</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>39</td>
<td>.4</td>
</tr>
<tr>
<td>Nonfarm laborers</td>
<td>36</td>
<td>185</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>347</td>
<td>3.4</td>
</tr>
<tr>
<td>Total</td>
<td>1298</td>
<td>3790</td>
<td>-</td>
<td>1634</td>
<td>504</td>
<td>10121</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>12.8</td>
<td>37.5</td>
<td>28.6</td>
<td>16.2</td>
<td>4.9</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

*Does not include 3509 fathers who were deceased, retired or disabled, and no responses.*

The majority of the fathers of the young farm operators were not retired as is recorded in Table 15. Quite often it has been hypothesized that in order for a young man to become established in farming, he must have had a father who had a farm and either died or retired, thus providing the son an opportunity to farm. Such was not the case in this study as
evidenced by 87.4 percent of the fathers who were not retired or deceased. A more real hypotheses would be that the fathers helped their sons become established in farming through their own farming operations. Of those fathers who retired, the largest group, 313 or 2.3 percent retired during the year that the young farm operator began to farm. It was not uncommon during an interview, if the father happened to be present with the young farm operator, for him to make the remark that he had been waiting for the time when his son could take over the farming operation so that he could retire.

Table 15. Present retirement status of young farm operators’ fathers

<table>
<thead>
<tr>
<th>Retirement status</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not retired</td>
<td>11,926</td>
<td>87.4</td>
</tr>
<tr>
<td>Retired prior to time the young farm operator started to farm</td>
<td>301</td>
<td>2.2</td>
</tr>
<tr>
<td>Retired the year the young farm operator began farming</td>
<td>313</td>
<td>2.3</td>
</tr>
<tr>
<td>Retired after the young farm operator began farming</td>
<td>109</td>
<td>.8</td>
</tr>
<tr>
<td>Retired from occupation other than farming</td>
<td>75</td>
<td>.6</td>
</tr>
<tr>
<td>Deceased</td>
<td>867</td>
<td>6.4</td>
</tr>
<tr>
<td>No response</td>
<td>39</td>
<td>.3</td>
</tr>
<tr>
<td>Total</td>
<td>13,630</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Nearly two-thirds of the fathers of the young farm operators were farming alone and the same percentage owned all the land they operated. As evidenced in Table 16, few fathers (12.5 percent) rented all the land operated. The fact that a majority of the fathers owned all or part of the land they operated has relevance to the establishment of their sons in farming. One can assume that the fathers were rather well established in farming if they owned land and thus they could be of assistance to their sons in their becoming established. In many cases where the father was not farming, as reported for 3997 or 29.4 percent of the fathers, the son was now farming the "home" place because his father had died, retired, become disabled, or left the farm for another occupation.

Some fathers were farming both as a single proprietor and as a partnership. The number, however, was very small, 57, or .4 percent. In this instance the father was usually in partnership with another son. A relatively small number (761, 5.5 percent) of the fathers were farming in partnership operations, as compared to those who were farming alone, 8815, or 64.6 percent.

Table 16. Ownership of land and farming arrangement of fathers

<table>
<thead>
<tr>
<th>Land ownership</th>
<th>Alone</th>
<th>Partnership</th>
<th>Both</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Owned all land</td>
<td>4218</td>
<td>30.9</td>
<td>382</td>
<td>2.8</td>
</tr>
<tr>
<td>Rented all land</td>
<td>1590</td>
<td>11.6</td>
<td>128</td>
<td>0.9</td>
</tr>
<tr>
<td>Owned and rented</td>
<td>3007</td>
<td>22.1</td>
<td>251</td>
<td>1.8</td>
</tr>
<tr>
<td>Not farming</td>
<td>3997</td>
<td>29.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8815</td>
<td>64.6</td>
<td>761</td>
<td>5.5</td>
</tr>
</tbody>
</table>

a Deceased, retired, left farming or no response to the question.
When the respondents were asked how they ranked in age to their brothers, they indicated that 3979, or 29.3 percent, were only sons, whereas 4386, or 32.2 percent, were the oldest sons and 3389, or 24.5 percent, were the youngest sons. Some operators had both older and younger brothers and 1876 or 14.1 percent of the young farm operators ranked in this category. Of the respondents who had brothers, 4086, or 30 percent, reported they had brothers who were farming.

When education level of brothers over age 18 was compared to that of young farm operators, it was found that 1087, or 10.5 percent, had an eighth grade education or less. This is somewhat of a greater percent than was reported for the respondents. Brothers who had 9 to 12 years of formal education comprised the largest number (62.5 percent). Twenty-six percent of the brothers had education beyond high school as compared to 17.2 percent of the young farm operators interviewed in the study. A comment made by some of the respondents was that their brothers went on to college while they chose to begin farming.

Information regarding the role of the young farmer’s wife and her help toward establishment in farming is provided in Tables 17, 18 and 19. There were only 2063, or 15.1 percent, of the young farm operators who were single at the time the study was made. One-third of the married men were married before they started to farm, and 19.6 percent were married during the year they began farming. Thirty-six men had been married and were divorced or separated.

Young farmers were asked to express what they thought their wife’s attitude was toward farm life. As recorded in Table 17, 80 percent had a
positive attitude and liked living on a farm. Wives who had been reared on a farm as a girl had slightly (10 percent) more favorable attitudes about farm life. Evidently farm boys who began farming had a tendency to marry farm reared girls since nearly twice as many wives were farm girls. It was encouraging to note that a very small percentage of the young farm operators thought their wives had a negative attitude toward farm life. Several young farmers mentioned that their wives contributed greatly toward their start in farming.

Nearly 60 percent of the married respondents indicated their wives assisted with the farm labor. Table 18 reveals that 33.6 percent of the wives did various jobs. Work in this category consisted of helping with the livestock, washing the bulk tank, going to town for machine parts, and serving as the young farm operator's helper for many miscellaneous jobs on the farm. Doing chores was a major category and listed by 15.1 percent of the respondents.

Table 17. Attitude of young farm operator's wife toward farm life by where she was reared

<table>
<thead>
<tr>
<th>Attitude</th>
<th>On farm</th>
<th>Off farm</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Positive</td>
<td>6273</td>
<td>2966</td>
<td>9239</td>
</tr>
<tr>
<td>Neutral</td>
<td>734</td>
<td>779</td>
<td>1513</td>
</tr>
<tr>
<td>Negative</td>
<td>294</td>
<td>109</td>
<td>403</td>
</tr>
<tr>
<td>Does not live</td>
<td>219</td>
<td>157</td>
<td>376</td>
</tr>
<tr>
<td>on farm now</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7520</td>
<td>4011</td>
<td>11531</td>
</tr>
</tbody>
</table>

^aDoes not include 36 young farm operators who were divorced or separated.
Table 18. Assistance of young farm operator's wife with farm labor by the number of children

<table>
<thead>
<tr>
<th>Type of help</th>
<th>No. of children</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-2</td>
<td>3-4</td>
</tr>
<tr>
<td>None</td>
<td>1004</td>
<td>2605</td>
</tr>
<tr>
<td>Chores</td>
<td>206</td>
<td>917</td>
</tr>
<tr>
<td>Field work</td>
<td>295</td>
<td>436</td>
</tr>
<tr>
<td>Gen. labor</td>
<td>-</td>
<td>96</td>
</tr>
<tr>
<td>Grain harvest</td>
<td>-</td>
<td>36</td>
</tr>
<tr>
<td>Various jobs</td>
<td>494</td>
<td>2112</td>
</tr>
<tr>
<td>No response or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>divorced</td>
<td></td>
<td>92</td>
</tr>
<tr>
<td>Total</td>
<td>1999</td>
<td>6294</td>
</tr>
</tbody>
</table>

Children in the family did not have much effect upon whether or not the wife helped to do any of the farm labor since more wives with children helped than those with no children. As family size increased beyond two children, the number of wives doing farm labor decreased. Slightly over one-half of the married operators had 1 to 2 children, whereas only 3.7 percent had 5 to 8 children. Small families would be expected of the young farm operators in this study because many of them had just recently been married.

Only 2282, or 19.8 percent, of the wives worked off the farm to supplement farm income. Of this number the largest group worked as
secretaries or in clerical work. These occupations accounted for 40.5 percent of the total working wives. Those wives in professional work were mostly teachers and nurses. Sixteen percent of this group had gross incomes of $5000 to $7499 for the current year. A few wives were in operative occupations which consisted mostly of driving school buses or trucks.

As one reviews the data in Tables 17, 18 and 19, he can conclude that most wives were needed at home and do assist with the farm labor in many different ways.

Table 19. Off-farm work of young farm operators' wives by their gross income

<table>
<thead>
<tr>
<th>Type of work</th>
<th>Less than $1000</th>
<th>$1000-$2499</th>
<th>$2500-$4999</th>
<th>$5000-$7499</th>
<th>Total No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretarial or clerical</td>
<td>110</td>
<td>320</td>
<td>404</td>
<td>91</td>
<td>925</td>
<td>40.5</td>
</tr>
<tr>
<td>Sales</td>
<td>72</td>
<td>57</td>
<td>57</td>
<td>52</td>
<td>238</td>
<td>10.4</td>
</tr>
<tr>
<td>Profession</td>
<td>52</td>
<td>112</td>
<td>73</td>
<td>166</td>
<td>403</td>
<td>17.7</td>
</tr>
<tr>
<td>Service</td>
<td>497</td>
<td>125</td>
<td>-</td>
<td>-</td>
<td>622</td>
<td>27.3</td>
</tr>
<tr>
<td>Manager or proprietor</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>57</td>
<td>57</td>
<td>2.5</td>
</tr>
<tr>
<td>Operative</td>
<td>-</td>
<td>37</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>731</td>
<td>651</td>
<td>534</td>
<td>366</td>
<td>2282</td>
<td>100.0</td>
</tr>
<tr>
<td>Percent</td>
<td>32.1</td>
<td>28.5</td>
<td>23.4</td>
<td>16.0</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Factors Affecting the First Year of Farming

An attempt was made to obtain an estimate of the assets (usable for farming) which the young farmers had on hand prior to their first year of farming. Kaldor et al. (13) did a study in 1959 of the occupational plans of Iowa farm boys and found that more than 70 percent of the boys who planned to farm expected family help. It was decided therefore to determine how the young farm operators had obtained their assets. Data concerning the inventory of young farm operators and how the items were obtained are presented in Table 20.

A total of 9607, or 70.4 percent of the 13,630 young farm operators, had some cash on hand before starting to farm. Nearly two-thirds of the respondents had $1000 or more, whereas 37.7 percent had more than $2000. Some individuals, 1698 or 17.7 percent, had enough cash, namely $4000 or more, to provide collateral for additional credit to finance the first year's farming operation. Of the 9607 who had cash on hand, 92 percent had obtained their money from earnings. This was to be expected since the mean number of years elapsing from age 18 to the time the young farm operator began farming was 5.5 years. Approximately 30 percent of those who had up to $500 in cash, had obtained it from their 4-H or F.F.A. projects. It is possible that more of the respondents may have earned their money through projects because the question in the interview schedule was somewhat confusing. Only 57 men reported they had received their cash as a gift. Several individuals had purchased livestock, seed, or machinery prior to their start in farming from money they had earned previously, therefore the cash used for this purchase would be reflected in another
Table 20. Inventories of usable assets of young farm operators prior to farming and how acquired

<table>
<thead>
<tr>
<th>Item</th>
<th>How acquired</th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Earned</td>
<td>Gift</td>
<td>Project</td>
</tr>
<tr>
<td>Cash on hand:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-499</td>
<td>1753</td>
<td>130</td>
<td>1883</td>
</tr>
<tr>
<td>500-999</td>
<td>1711</td>
<td>150</td>
<td>1861</td>
</tr>
<tr>
<td>1000-1999</td>
<td>2049</td>
<td>57</td>
<td>2238</td>
</tr>
<tr>
<td>2000-3999</td>
<td>1834</td>
<td>93</td>
<td>1927</td>
</tr>
<tr>
<td>4000-5999</td>
<td>978</td>
<td></td>
<td>978</td>
</tr>
<tr>
<td>6000-9999</td>
<td>348</td>
<td>57</td>
<td>405</td>
</tr>
<tr>
<td>10,000-20,000</td>
<td>263</td>
<td>52</td>
<td>315</td>
</tr>
<tr>
<td>Total</td>
<td>8936</td>
<td>57</td>
<td>614</td>
</tr>
<tr>
<td>Crops on hand:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td>747</td>
<td>174</td>
<td>57</td>
</tr>
<tr>
<td>Soybeans</td>
<td>238</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td>326</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1311</td>
<td>288</td>
<td>57</td>
</tr>
<tr>
<td>Livestock:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef cattle</td>
<td>2203</td>
<td>130</td>
<td>307</td>
</tr>
<tr>
<td>Dairy cattle</td>
<td>775</td>
<td>243</td>
<td>169</td>
</tr>
<tr>
<td>Swine</td>
<td>2748</td>
<td>153</td>
<td>293</td>
</tr>
<tr>
<td>Sheep</td>
<td>825</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>313</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6864</td>
<td>565</td>
<td>808</td>
</tr>
</tbody>
</table>
Table 20. (Continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>Earned</th>
<th>Gift</th>
<th>Project</th>
<th>Total No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-4 pieces</td>
<td>1738</td>
<td>238</td>
<td>114</td>
<td>2090</td>
<td>78.4</td>
</tr>
<tr>
<td>5-8 pieces</td>
<td>333</td>
<td>39</td>
<td></td>
<td>372</td>
<td>14.0</td>
</tr>
<tr>
<td>Complete line</td>
<td>57</td>
<td>146</td>
<td></td>
<td>203</td>
<td>7.6</td>
</tr>
<tr>
<td>Total</td>
<td>2128</td>
<td>423</td>
<td>114</td>
<td>2665</td>
<td>100.0</td>
</tr>
</tbody>
</table>

area of the inventory.

Crops on hand was reported by only 12.2 percent of the young farmers, with corn being the most common inventory crop item. In some instances the respondents had raised some crops before they became 18 years of age, or left high school, which may or may not have been on hand as a result of 4-H or F.F.A. projects. The number of bushels on hand reported by the various individuals was quite small.

It was not surprising to note that 60 percent of the young farm operators owned some type of livestock prior to farming. Many men commented they had some of their beef and dairy cows since they were children. This fact is substantiated by 565 reporting they had acquired some of their livestock from gifts. All species of farm livestock were represented except poultry and more respondents reported having swine and beef than other species.

The tractor, cultivator and plow were the pieces of machinery most often listed in the inventory of the young farm operator prior to farming.
A large number purchased machinery during their first year as reported later in Table 30, whereas 2665, or 19.5 percent, had one or more pieces of machinery prior to farming. It was not uncommon for the beginning farmers to have received machinery as gifts since 423, or nearly 16 percent, acquired machinery in this manner. In several situations where the respondent's father was deceased, the mother had given the complete line of machinery to the son.

The amount of cash, number of bushels of grain, number of livestock, or value of the machinery listed in the inventory in Table 20 is not shown, however in most instances the inventory of the young farm operator in the study was not considered to be appreciable.

Over one-half of the young farm operators in the study lived at home with their parents during their first year of farming. Since only one-third of the respondents were married prior to the time they began farming, it was expected that a large percentage lived with their parents. Data concerning the place of residence of the respondents during the first year of farming are found in Table 21. The second largest group, 4744, or 34.8 percent, lived on the farm they rented or operated during their first year. A few of the young farmers lived in town, or in another rented farmstead.

Relatives contributed in various ways toward the establishment of young farm operators in farming. These are listed in Table 22. Parents served as the most frequent contributor in each type of help provided to the respondents. The beginning farmers were asked in an open question:
Table 21. Residence of young farm operators during their first year of farming

<table>
<thead>
<tr>
<th>Place of dwelling</th>
<th>Young farm operators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>At home with parents</td>
<td>6894</td>
</tr>
<tr>
<td>On farm rented or operated</td>
<td>4744</td>
</tr>
<tr>
<td>On parents farm in another house</td>
<td>676</td>
</tr>
<tr>
<td>Owned or rented house or apartment in town</td>
<td>491</td>
</tr>
<tr>
<td>On the 2nd tract (in partnership)</td>
<td>56</td>
</tr>
<tr>
<td>Rented farm home (not on own farm)</td>
<td>487</td>
</tr>
<tr>
<td>On one of farms owned by father</td>
<td>206</td>
</tr>
<tr>
<td>No information</td>
<td>73</td>
</tr>
<tr>
<td>Total</td>
<td>13630</td>
</tr>
</tbody>
</table>

"Did they receive any help in getting established in farming, and if so, who provided the assistance?" Many indicated they had not received help from anyone, but more respondents listed they had help and of more than one type, and from several persons.

Capital and machinery were mentioned more often than any other type of assistance received, and parents ranked first among all relatives as sources of assistance. Of those relatives who provided assistance, 75.5 percent were parents who provided capital, and 84 percent were parents who provided machinery. Parents helped with labor but to a lesser degree
<table>
<thead>
<tr>
<th>Type help provided</th>
<th>Parents No.</th>
<th>Parents %</th>
<th>Father-in-law No.</th>
<th>Father-in-law %</th>
<th>Grandparents No.</th>
<th>Grandparents %</th>
<th>Brothers No.</th>
<th>Brothers %</th>
<th>Combination&lt;sup&gt;a&lt;/sup&gt; No.</th>
<th>Combination&lt;sup&gt;a&lt;/sup&gt; %</th>
<th>Total No.</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land and bldgs.</td>
<td>2283</td>
<td>70.6</td>
<td>240</td>
<td>7.4</td>
<td>493</td>
<td>15.3</td>
<td>216</td>
<td>6.7</td>
<td>3232</td>
<td>13.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital</td>
<td>3857</td>
<td>75.5</td>
<td>463</td>
<td>9.1</td>
<td>275</td>
<td>5.4</td>
<td>514</td>
<td>10.0</td>
<td>5109</td>
<td>21.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor</td>
<td>1194</td>
<td>40.6</td>
<td>239</td>
<td>8.2</td>
<td>36</td>
<td>1.3</td>
<td>576</td>
<td>19.6</td>
<td>887</td>
<td>30.3</td>
<td>2932</td>
<td>12.3</td>
</tr>
<tr>
<td>Machinery</td>
<td>5923</td>
<td>84.0</td>
<td>125</td>
<td>1.8</td>
<td>56</td>
<td>0.8</td>
<td>220</td>
<td>3.1</td>
<td>727</td>
<td>10.3</td>
<td>7051</td>
<td>29.6</td>
</tr>
<tr>
<td>Livestock and crops</td>
<td>1219</td>
<td>76.8</td>
<td>200</td>
<td>12.6</td>
<td></td>
<td></td>
<td>112</td>
<td>7.0</td>
<td>1587</td>
<td>6.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advice</td>
<td>866</td>
<td>47.8</td>
<td>129</td>
<td>7.2</td>
<td>56</td>
<td>3.1</td>
<td>757</td>
<td>41.9</td>
<td>1808</td>
<td>7.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Countersigned loans</td>
<td>579</td>
<td>83.7</td>
<td>75</td>
<td>11.0</td>
<td>36</td>
<td>5.3</td>
<td>90</td>
<td>2.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backed me</td>
<td>1160</td>
<td>89.2</td>
<td>52</td>
<td>4.0</td>
<td></td>
<td></td>
<td>88</td>
<td>6.8</td>
<td>1300</td>
<td>5.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>95</td>
<td>100.0</td>
<td>52</td>
<td>4.0</td>
<td></td>
<td></td>
<td>88</td>
<td>6.8</td>
<td>1300</td>
<td>5.5</td>
<td>95</td>
<td>0.4</td>
</tr>
</tbody>
</table>

<sup>a</sup>Help from uncles, cousins and combinations of other relatives such as brothers-in-law, and father-in-law.
than in providing other assistance. This was expected since it usually is the son who helps the parents with labor rather than vice versa. Nearly 20 percent of the respondents reported they had help with labor from brothers. In the case of partnerships, labor was a joint venture. Quite often brothers and the father had helped each other with labor, and shared use of machinery even though they were farming separate farms.

The term "backed me" was used by many young farm operators. By this term they meant they had received assistance from others in obtaining capital, equipment, collateral for bank notes, and in making management decisions. This type of assistance was provided by parents almost exclusively. Advice was listed as having been provided by several relatives.

A similar response was obtained for the ways that nonrelatives had assisted the young farmer. A total of 625, or 21.5 percent, of the nonrelatives who helped the young farm operator were friends and were credited with providing all types of assistance listed in Table 22 except for livestock and crops. Banks, commercial companies, government lending agencies, wife and friends were mentioned as sources of financial help. Of these sources of financial aid, the local bank was named by 1569, or 53.8 percent, of 2065 young farmers.

A few farm operators had co-signers for their farm lease as is revealed in Table 23. There were only 873 respondents who had a co-signer for their lease. Of this group 83.3 percent were parents and 8.4 percent were fathers-in-law. A landlord usually requests that the young farmer has backing but does not necessarily require a co-signer for the farm lease.
Parents once again were the key individuals when co-signers were needed for bank notes. In this case 3856 farm operators indicated they had someone co-sign with them for their bank note and 90.5 percent of this group were parents. Grandparents and fathers-in-law did co-sign for bank notes but in relatively small numbers.

A total of 10,956 young farm operators had a number of occupations prior to the time they began farming, whereas 2675 or 19.7 percent did not have another occupation before they began farming. Some occupations were agricultural and others nonagricultural as presented in Table 24. There was nearly an equal distribution among those who went directly to farming, 2674, those who held only

<table>
<thead>
<tr>
<th>Co-signer</th>
<th>Farm lease No.</th>
<th>%</th>
<th>Bank note No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>727</td>
<td>83.3</td>
<td>3492</td>
<td>90.5</td>
</tr>
<tr>
<td>Grandparents</td>
<td>-</td>
<td>-</td>
<td>93</td>
<td>2.4</td>
</tr>
<tr>
<td>Father-in-law</td>
<td>73</td>
<td>8.4</td>
<td>111</td>
<td>2.9</td>
</tr>
<tr>
<td>Cousin</td>
<td>-</td>
<td>-</td>
<td>52</td>
<td>1.4</td>
</tr>
<tr>
<td>Friend</td>
<td>36</td>
<td>4.2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Landlord</td>
<td>-</td>
<td>-</td>
<td>52</td>
<td>1.4</td>
</tr>
<tr>
<td>Combination of above</td>
<td>36</td>
<td>4.2</td>
<td>56</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>873</td>
<td></td>
<td>3856</td>
<td></td>
</tr>
</tbody>
</table>
agricultural occupations, 2008, and those who held only nonagricultural occupations, 2404. The remaining number of young farm operators, 5883, in the study held combinations of agricultural and nonagricultural occupations. Slightly over 40 percent had participation in a combination of occupations.

The largest group of those who were employed prior to farming were those who had one agricultural and one or more nonagricultural occupations. It may be noted that 7698, or 70.2 percent, were classified in this category. The combination of occupations reported by most respondents was those who had one agricultural occupation and one to two nonagricultural occupations.

This information plus the time lapse of a mean of 5.5 years from age 18 until starting to farm may substantiate why the general public has the image that relatively few young men are entering the occupation of farming. It appears that the young farm operators had not more than two agricultural occupations and this was a relatively small number, 854 or 7.8 percent of those who had occupations prior to farming, but they may have had as many as nine different nonagricultural occupations before they began farming.

Since young farm operators have a variety of occupations prior to farming this is evidence there is a need for a broad based vocational agricultural program at the high school level to be supplemented with an agricultural occupation employment experience program. This type of program is being conducted at the present time and is centered on those young men who have an interest in agricultural occupations other than farming. Those young farm operators in this study would have benefited from such a program be-
Table 24. Number of occupations of young farm operators prior to farming

<table>
<thead>
<tr>
<th>Non-agric. occupation</th>
<th>None</th>
<th>One</th>
<th>Two</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>None</td>
<td>2357</td>
<td>30.6</td>
<td>311</td>
<td>36.4</td>
</tr>
<tr>
<td>One</td>
<td>870</td>
<td>36.2</td>
<td>2320</td>
<td>30.2</td>
</tr>
<tr>
<td>Two</td>
<td>770</td>
<td>32.0</td>
<td>1857</td>
<td>24.1</td>
</tr>
<tr>
<td>Three</td>
<td>330</td>
<td>13.7</td>
<td>834</td>
<td>10.8</td>
</tr>
<tr>
<td>Four</td>
<td>182</td>
<td>7.6</td>
<td>294</td>
<td>3.8</td>
</tr>
<tr>
<td>Five</td>
<td>126</td>
<td>5.2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Six or more</td>
<td>126</td>
<td>5.3</td>
<td>36</td>
<td>0.5</td>
</tr>
<tr>
<td>Total</td>
<td>2404</td>
<td>100.0</td>
<td>7698</td>
<td>100.0</td>
</tr>
<tr>
<td>Percent</td>
<td>21.9</td>
<td>70.3</td>
<td>7.8</td>
<td></td>
</tr>
</tbody>
</table>

*aDoes not include 2674 who went directly into farming.

cause they did have a variety of occupations prior to farming.

Table 25 presents data concerning the kinds of occupations of young farm operators from the time they were 18 years of age until they began farming. By far the largest group were those who worked on the home farm. This group constituted 29.1 percent of those who had been employed prior to farming. Serving in military service was listed as an occupation by 17.2 percent, whereas 2908, or 13.2 percent, had been a student in some type of post-high-school educational program prior to farming.

Serving as a farm laborer other than on the home farm was also a common occupation (12.4 percent) for many of the young men. Several (6.9 percent)
Table 25. Occupations of young farm operators prior to farming by number of years elapsing between age 18 and starting to farm

<table>
<thead>
<tr>
<th>Occupation</th>
<th>1 - 2</th>
<th>3 - 4</th>
<th>5 - 6</th>
<th>7 - 8</th>
<th>9 or more</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Professional</td>
<td>36</td>
<td>33.0</td>
<td>73</td>
<td>66.9</td>
<td>109</td>
<td>0.5</td>
</tr>
<tr>
<td>Farm work (home farm)</td>
<td>1721</td>
<td>26.9</td>
<td>1956</td>
<td>30.5</td>
<td>1410</td>
<td>1111</td>
</tr>
<tr>
<td>Managerial</td>
<td>-</td>
<td>-</td>
<td>36</td>
<td>24.3</td>
<td>36</td>
<td>24.3</td>
</tr>
<tr>
<td>Clerical</td>
<td>39</td>
<td>9.2</td>
<td>145</td>
<td>34.3</td>
<td>94</td>
<td>22.2</td>
</tr>
<tr>
<td>Sales</td>
<td>75</td>
<td>23.9</td>
<td>109</td>
<td>34.7</td>
<td>130</td>
<td>41.4</td>
</tr>
<tr>
<td>Craftsman</td>
<td>215</td>
<td>14.3</td>
<td>347</td>
<td>23.0</td>
<td>617</td>
<td>40.9</td>
</tr>
<tr>
<td>Operative</td>
<td>429</td>
<td>20.1</td>
<td>550</td>
<td>25.8</td>
<td>713</td>
<td>33.5</td>
</tr>
<tr>
<td>Service</td>
<td>-</td>
<td>-</td>
<td>52</td>
<td>41.6</td>
<td>36</td>
<td>28.8</td>
</tr>
<tr>
<td>Farm labor (not home farm)</td>
<td>689</td>
<td>22.4</td>
<td>636</td>
<td>24.2</td>
<td>547</td>
<td>20.9</td>
</tr>
<tr>
<td>Non-farm labor</td>
<td>298</td>
<td>21.2</td>
<td>248</td>
<td>16.9</td>
<td>421</td>
<td>30.0</td>
</tr>
<tr>
<td>Student</td>
<td>468</td>
<td>15.8</td>
<td>944</td>
<td>32.5</td>
<td>831</td>
<td>28.6</td>
</tr>
<tr>
<td>Military</td>
<td>298</td>
<td>7.9</td>
<td>748</td>
<td>19.7</td>
<td>1323</td>
<td>34.9</td>
</tr>
<tr>
<td>Total</td>
<td>4157</td>
<td>18.9</td>
<td>5649</td>
<td>25.9</td>
<td>6153</td>
<td>27.9</td>
</tr>
</tbody>
</table>
respondents performed in craftsman occupations, such as carpenters, welders, plumbers, electricians, and masons. In many instances they were not the craftsman themselves but served as an apprentice or helper. A similar number were classified in operative occupations (9.7 percent) which may be defined as one engaged in a manual pursuit, usually routine, for which only a short period of preliminary training was necessary. Young farm operators in this category were doing such work as driving trucks for lumber, feed and fertilizer companies, operating a machine in a factory or using heavy construction equipment.

In most instances the number who were employed from age 18 until beginning to farm declined after the sixth year which was expected. From the data in Tables 24 and 25 one may conclude that young men do a variety of things and engage in a number of occupations before they begin farming. This may be explained in a number of ways. Some need to earn money, others do not care to farm at the young age of 18, military and schooling usually come first so that a start in farming must be delayed, and quite often it is the experience in another occupation which helps a young man to definitely decide upon farming as a career. In some instances land does not become available for some years, or the young farmer gets married and decides he then should go into farming because of family responsibilities.

Not only did the young farmers work in occupations other than farming before they began farming, but several did off-farm work to supplement their income after beginning to farm. Tables 26 and 27 are companion tables which show the distribution of days worked and occupations held by respondents grouped by selected numbers of years of farming. The first, third, sixth,
Table 26. Days worked off the farm by young farm operators by selected years of farming

<p>| Days worked/ | First | Third | Sixth | Ninth | Twelfth | Total |</p>
<table>
<thead>
<tr>
<th>year</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-15</td>
<td>838</td>
<td>12.9</td>
<td>684</td>
<td>13.4</td>
<td>367</td>
<td>14.0</td>
<td>271</td>
<td>28.8</td>
<td>52</td>
<td>20.6</td>
<td>2212</td>
<td>14.3</td>
</tr>
<tr>
<td>16-30</td>
<td>910</td>
<td>14.0</td>
<td>808</td>
<td>15.8</td>
<td>385</td>
<td>14.7</td>
<td>223</td>
<td>23.7</td>
<td>89</td>
<td>35.1</td>
<td>2415</td>
<td>15.7</td>
</tr>
<tr>
<td>31-60</td>
<td>503</td>
<td>7.7</td>
<td>534</td>
<td>10.4</td>
<td>257</td>
<td>9.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1294</td>
<td>8.4</td>
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<tr>
<td>61-90</td>
<td>671</td>
<td>10.3</td>
<td>653</td>
<td>12.8</td>
<td>291</td>
<td>11.1</td>
<td>129</td>
<td>13.7</td>
<td>73</td>
<td>29.0</td>
<td>1817</td>
<td>11.8</td>
</tr>
<tr>
<td>91-120</td>
<td>721</td>
<td>11.1</td>
<td>343</td>
<td>6.7</td>
<td>206</td>
<td>7.9</td>
<td>75</td>
<td>8.0</td>
<td>39</td>
<td>15.3</td>
<td>1384</td>
<td>8.9</td>
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<tr>
<td>121-180</td>
<td>846</td>
<td>13.0</td>
<td>436</td>
<td>8.5</td>
<td>461</td>
<td>17.6</td>
<td>149</td>
<td>15.8</td>
<td>-</td>
<td>-</td>
<td>1892</td>
<td>12.3</td>
</tr>
<tr>
<td>181-240</td>
<td>386</td>
<td>5.9</td>
<td>329</td>
<td>6.6</td>
<td>52</td>
<td>2.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>767</td>
<td>4.9</td>
</tr>
<tr>
<td>241-300</td>
<td>1044</td>
<td>16.1</td>
<td>889</td>
<td>17.4</td>
<td>526</td>
<td>20.1</td>
<td>36</td>
<td>3.8</td>
<td>-</td>
<td>-</td>
<td>2495</td>
<td>16.2</td>
</tr>
<tr>
<td>301-365</td>
<td>580</td>
<td>8.9</td>
<td>441</td>
<td>8.6</td>
<td>73</td>
<td>2.8</td>
<td>56</td>
<td>6.0</td>
<td>-</td>
<td>-</td>
<td>1150</td>
<td>7.5</td>
</tr>
<tr>
<td>Total</td>
<td>6499</td>
<td>14.3</td>
<td>5117</td>
<td>33.1</td>
<td>2618</td>
<td>17.0</td>
<td>939</td>
<td>6.1</td>
<td>253</td>
<td>1.7</td>
<td>15426</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>42.1</td>
<td>17.0</td>
<td>28.8</td>
<td>6.1</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 27. Off-farm jobs done by young farm operators by selected years of farming

<table>
<thead>
<tr>
<th>Occupation</th>
<th>First No.</th>
<th>First %</th>
<th>Third No.</th>
<th>Third %</th>
<th>Sixth No.</th>
<th>Sixth %</th>
<th>Ninth No.</th>
<th>Ninth %</th>
<th>Twelfth No.</th>
<th>Twelfth %</th>
<th>Total No.</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional</td>
<td>148</td>
<td>75</td>
<td>52</td>
<td>17.6</td>
<td>56</td>
<td>17.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>331</td>
<td>1.9</td>
</tr>
<tr>
<td>Custom farm work</td>
<td>1279</td>
<td>75</td>
<td>1382</td>
<td>32.1</td>
<td>748</td>
<td>17.6</td>
<td>336</td>
<td>6.3</td>
<td>89</td>
<td>1.9</td>
<td>3834</td>
<td>21.7</td>
</tr>
<tr>
<td>Managerial</td>
<td>272</td>
<td>52</td>
<td>161</td>
<td>32.1</td>
<td>92</td>
<td>17.6</td>
<td>39</td>
<td>6.3</td>
<td>-</td>
<td>-</td>
<td>564</td>
<td>3.2</td>
</tr>
<tr>
<td>Clerical</td>
<td>350</td>
<td>52</td>
<td>255</td>
<td>32.1</td>
<td>56</td>
<td>17.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>661</td>
<td>3.7</td>
</tr>
<tr>
<td>Sales</td>
<td>52</td>
<td>52</td>
<td>92</td>
<td>17.6</td>
<td>160</td>
<td>32.1</td>
<td>104</td>
<td>6.3</td>
<td>52</td>
<td>1.9</td>
<td>460</td>
<td>2.6</td>
</tr>
<tr>
<td>Craftsman</td>
<td>974</td>
<td>52</td>
<td>536</td>
<td>32.1</td>
<td>286</td>
<td>17.6</td>
<td>36</td>
<td>6.3</td>
<td>36</td>
<td>1.9</td>
<td>1868</td>
<td>10.6</td>
</tr>
<tr>
<td>Farm laborer</td>
<td>1055</td>
<td>75</td>
<td>688</td>
<td>32.1</td>
<td>129</td>
<td>17.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1872</td>
<td>10.6</td>
</tr>
<tr>
<td>Non farm labor</td>
<td>876</td>
<td>75</td>
<td>559</td>
<td>32.1</td>
<td>237</td>
<td>17.6</td>
<td>111</td>
<td>6.3</td>
<td>39</td>
<td>1.9</td>
<td>1822</td>
<td>10.3</td>
</tr>
<tr>
<td>Operative</td>
<td>2360</td>
<td>1360</td>
<td>1974</td>
<td>17.6</td>
<td>443</td>
<td>32.1</td>
<td>36</td>
<td>6.3</td>
<td>252</td>
<td>1.9</td>
<td>6173</td>
<td>34.8</td>
</tr>
<tr>
<td>Service</td>
<td>104</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>104</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>7470</td>
<td>5722</td>
<td>3120</td>
<td>17.6</td>
<td>1125</td>
<td>6.3</td>
<td>252</td>
<td>1.9</td>
<td>17689</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>42.1</td>
<td>32.1</td>
<td>17.6</td>
<td>6.3</td>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ninth, and twelfth years of farming clearly show the trend of young farm operators working off their farms. In most instances these men would not be classified as part-time farmers because they were fully engaged in farming and their supplemental jobs were performed during the off season such as in the winter months.

Custom farm work was a common way for the young farm operators to supplement their incomes. They needed good equipment to operate their own farms and quite often would do custom work with their machines to help make it pay for itself. Jobs done on a custom basis were plowing, combining grain, trucking and forage handling.

Over one-third of those who did off-farm work held operative types of occupations. As mentioned previously in the description of this type of occupation, a wide range of jobs were done, but driving truck and school buses were mentioned frequently. Very few young farmers held jobs in professional fields such as teaching or farm management along with their farming. The number diminished as the operator had farmed for a number of years and became fully established.

As the years of farming increased, the days worked off the farm decreased from 42 percent in the first year to only 1.7 percent in the twelfth year. This was to be expected because as the young farm operator became established in farming he had less time for off-farm work. Sales work was the only off-farm occupation which remained rather constant over the years, which was done by only a few operators.

Over 25 percent of those who worked off the farm during the selected years had worked 191 days or more per year, whereas 30 percent had only
worked 30 days or less. It was surprising to note the large number who had worked six months or more per year off their farms. Respondents who worked that much of the time away from their farms were usually located near cities such as Des Moines, Council Bluffs, Spencer, Mason City and Davenport where there was more opportunity for off-farm jobs.

Since becoming established in farming is costly as well as a gradual and usually a long time process, it was expected that young farm operators would do some off-farm work and their jobs would vary according to their location and ability.

Respondents were asked how they financed their first year of farming and a summary of their responses is in Table 28. Three major sources of finance for the first year's farming operation were the young farm operator himself, his father, and a lending agency. Over one-half of the respondents provided up to 25 percent of the needed finances and borrowed the remainder, whereas approximately one-third provided 75 to 100 percent of the finances. As shown in Table 28 the 51 to 75 percent level of financial help was not needed as often as a lesser amount, or the full amount. In other words the respondents either had very limited capital, or they had enough to finance the first year of farming.

When young farm operators needed to borrow 75 to 100 percent of their capital, the most used source was a lending agency. Commercial banks and production credit associations were mentioned most frequently in this category.

The young farm operators' fathers provided financial help for 25 percent of those who needed it. Other relatives contributed very little of
Table 28. Sources of young farm operators' finance for the first year of farming by the percent provided

<table>
<thead>
<tr>
<th>Source of finance</th>
<th>0 - 25</th>
<th>26 - 50</th>
<th>51 - 75</th>
<th>76 - 100</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Respondent</td>
<td>3816</td>
<td>53.7</td>
<td>2334</td>
<td>33.5</td>
<td>2648</td>
</tr>
<tr>
<td>Father</td>
<td>1326</td>
<td>18.7</td>
<td>1992</td>
<td>28.6</td>
<td>717</td>
</tr>
<tr>
<td>Relatives</td>
<td>481</td>
<td>6.8</td>
<td>504</td>
<td>7.3</td>
<td>37</td>
</tr>
<tr>
<td>Inheritance</td>
<td>225</td>
<td>3.2</td>
<td>174</td>
<td>2.5</td>
<td>74</td>
</tr>
<tr>
<td>Friend</td>
<td>169</td>
<td>2.4</td>
<td>219</td>
<td>3.1</td>
<td>-</td>
</tr>
<tr>
<td>Lending agency</td>
<td>1081</td>
<td>15.2</td>
<td>1738</td>
<td>25.0</td>
<td>1198</td>
</tr>
</tbody>
</table>

Total            | 7098   | 6961    | 2435    | 8056     | 24550 |
Percent          | 28.9   | 28.4    | 9.9     | 32.8     |       |
the needed finance. Of the 1111 young farmers who had obtained financial help from relatives other than their fathers, grandparents contributed 26.3 percent, brothers 21 percent, and mothers and fathers-in-law 16.5 percent each.

A limited number obtained financial assistance from friends or through inheritance. It was reported by several young farm operators that they started with little or no capital. They used their fathers' equipment and obtained credit for items such as feed, seed, fuel, and fertilizer until they harvested their crops or sold livestock. This type of financial help is not reflected in Table 28.

Young farm operators borrowed all types of machinery and equipment during their first year of farming as reflected by data in Table 29. The parents were nearly the sole provider of machinery. The young farmer borrowed all types of machinery and 833 used the fathers' complete line of machinery. Planting and harvesting equipment were borrowed more than any other pieces of machinery. In fact, 27.8 percent of the equipment borrowed was classified as planting and harvesting, whereas 25.3 percent was tillage machines such as plows, harrows and discs.

In recent years much of the farm equipment has become portable through the use of wheels, carts, two- and three-point hitches on tractors, and hydraulics, therefore the young farmer can easily exchange equipment with his father even if they live some distance apart.

As the young farmers began to farm, they also started to purchase machinery and equipment. Table 30 shows that the tractor was the machine
Table 29. Borrowed machinery used by young farm operators during their first year of farming

<table>
<thead>
<tr>
<th>Source of machinery</th>
<th>Complete line</th>
<th>Tractor or truck</th>
<th>Tillage equip.</th>
<th>Planting-harvesting</th>
<th>Forage handling</th>
<th>Materials process.</th>
<th>No.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>833</td>
<td>2992</td>
<td>4277</td>
<td>4665</td>
<td>1930</td>
<td>1936</td>
<td>16,633</td>
<td>78.8</td>
</tr>
<tr>
<td>Grandparents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>232</td>
</tr>
<tr>
<td>Father-in-law</td>
<td>52</td>
<td>88</td>
<td>181</td>
<td>220</td>
<td>207</td>
<td>184</td>
<td>932</td>
<td>4.5</td>
</tr>
<tr>
<td>Brother and brothers-in-law</td>
<td>36</td>
<td>92</td>
<td>145</td>
<td>36</td>
<td>95</td>
<td>404</td>
<td>1.9</td>
<td></td>
</tr>
<tr>
<td>Uncles and cousins</td>
<td>-</td>
<td>-</td>
<td>91</td>
<td>148</td>
<td>141</td>
<td>-</td>
<td>380</td>
<td>1.8</td>
</tr>
<tr>
<td>Friends</td>
<td>56</td>
<td>330</td>
<td>419</td>
<td>404</td>
<td>169</td>
<td>292</td>
<td>1670</td>
<td>7.9</td>
</tr>
<tr>
<td>Combination of relatives</td>
<td>-</td>
<td>111</td>
<td>184</td>
<td>246</td>
<td>182</td>
<td>132</td>
<td>855</td>
<td>4.1</td>
</tr>
<tr>
<td>Total</td>
<td>941</td>
<td>3593</td>
<td>5332</td>
<td>5864</td>
<td>2701</td>
<td>2675</td>
<td>21,106</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>4.5</td>
<td>17.0</td>
<td>25.3</td>
<td>27.8</td>
<td>12.8</td>
<td>12.6</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Table 30. Machinery purchased by young farm operators during their first year of farming

<table>
<thead>
<tr>
<th>Machine</th>
<th>Pieces purchased</th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>1 - 2</td>
<td>3 - 5</td>
</tr>
<tr>
<td>Tractor or truck</td>
<td>8679</td>
<td>4330</td>
<td>280</td>
</tr>
<tr>
<td>Percent</td>
<td>33.2</td>
<td>7.6</td>
<td>19.3</td>
</tr>
<tr>
<td>Tillage equipment</td>
<td>8732</td>
<td>2514</td>
<td>2006</td>
</tr>
<tr>
<td>Percent</td>
<td>19.3</td>
<td>53.4</td>
<td>7.3</td>
</tr>
<tr>
<td>Planting and harvesting</td>
<td>10963</td>
<td>2062</td>
<td>264</td>
</tr>
<tr>
<td>Percent</td>
<td>15.8</td>
<td>7.3</td>
<td></td>
</tr>
<tr>
<td>Forage handling</td>
<td>11128</td>
<td>1843</td>
<td>318</td>
</tr>
<tr>
<td>Percent</td>
<td>14.2</td>
<td>8.4</td>
<td></td>
</tr>
<tr>
<td>Material processing</td>
<td>10000</td>
<td>2280</td>
<td>884</td>
</tr>
<tr>
<td>Percent</td>
<td>17.5</td>
<td>23.4</td>
<td>25.1</td>
</tr>
<tr>
<td>Complete line</td>
<td>12957</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13029</td>
<td>3752</td>
<td>494</td>
</tr>
</tbody>
</table>
most often purchased during the first year of farming. This stands to reason because a farmer must have a source of power for his equipment and quite often he may be able to borrow equipment if he has an available tractor. Tillage equipment such as plows and cultivators are often purchased with the tractor, therefore this may be the reason that tillage equipment ranked second in numbers in the one to two piece category. The majority of the respondents had not purchased any machinery during their first year of farming but several had purchased one to two pieces.

The borrowing of machinery seemed to be a common practice during the current year (1968) of farming just as it was the first year of farming for the young farm operators. Data in Table 31 indicate that parents were the most common source in borrowing machinery during the first and current years, however only one-half as many reported borrowing machinery during the current year of farming. Percentages were nearly identical but the number was reduced to one-half for nearly every category of machinery and for each relative who loaned it during the current year. Planting and harvesting equipment were borrowed more than other machines. These pieces of machinery are expensive and used for relatively short periods of time during the year and therefore were likely to be the ones shared by fathers with their sons.
Table 31. Borrowed machinery used by young farm operators during the current year (1968) of farming

<table>
<thead>
<tr>
<th>Source of machinery</th>
<th>Complete line</th>
<th>Tractor or truck</th>
<th>Tillage equip.</th>
<th>Planting-harvesting</th>
<th>Forage handling</th>
<th>Materials process.</th>
<th>Total No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>439</td>
<td>1123</td>
<td>1974</td>
<td>2684</td>
<td>1030</td>
<td>1068</td>
<td>8318</td>
<td>72.2</td>
</tr>
<tr>
<td>Grandparents</td>
<td>56</td>
<td>-</td>
<td>39</td>
<td>-</td>
<td>-</td>
<td>39</td>
<td>134</td>
<td>1.2</td>
</tr>
<tr>
<td>Father-in-law</td>
<td>52</td>
<td>52</td>
<td>52</td>
<td>108</td>
<td>36</td>
<td>108</td>
<td>408</td>
<td>3.5</td>
</tr>
<tr>
<td>Brothers and brother-in-law</td>
<td>111</td>
<td>129</td>
<td>131</td>
<td>88</td>
<td>152</td>
<td>611</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Uncles and cousins</td>
<td>-</td>
<td>52</td>
<td>78</td>
<td>219</td>
<td>91</td>
<td>-</td>
<td>440</td>
<td>3.8</td>
</tr>
<tr>
<td>Friends</td>
<td>-</td>
<td>346</td>
<td>294</td>
<td>377</td>
<td>128</td>
<td>396</td>
<td>1541</td>
<td>13.4</td>
</tr>
<tr>
<td>Combination of relatives</td>
<td>-</td>
<td>36</td>
<td>-</td>
<td>-</td>
<td>36</td>
<td>-</td>
<td>72</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>547</td>
<td>1720</td>
<td>2566</td>
<td>3519</td>
<td>1409</td>
<td>1763</td>
<td>11524</td>
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<tr>
<td>Percent</td>
<td>4.7</td>
<td>14.9</td>
<td>22.4</td>
<td>30.5</td>
<td>12.2</td>
<td>15.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Progress in Becoming Established in Farming

The distribution of young farm operators in the study according to their chronological age and the calendar year they began farming is presented in Table 32. The data from this study reveal a changing pattern in the age of young farm operators at the time of entry into farming. It can be observed from the data in Table 32 that in the years 1957-1958 there were 991 beginning farm operators who were 18 and 19 years of age. In 1962 and 1963 the number, 989, of 18 and 19 year olds had remained nearly the same as it was in 1957-1958. More recently in the years 1966-1967 the number of beginning farm operators who were 18 and 19 years of age had declined to 169. The number of 22 and 23 year olds, 679, who entered farming in 1962-1963 was less than the number, 989, in the 18 and 19 age bracket, but in later years there was a sharp increase in the number of older operators beginning farming. In 1966-1967 the number of men who were 24 and 25 years of age that entered farming was 1077 in contrast to the 169 farm operators who were 18 and 19 years of age for the same period of years. Therefore, the data in Table 32 show that in recent years beginning young farm operators were older than those who began farming in 1962 and earlier.

Factors that appear to affect the age of entry into farming are military service, advanced education and capital requirements for farming. Each young man knows that he has a military obligation to fulfill after he reaches age 19 and therefore may choose to complete this
<table>
<thead>
<tr>
<th>Calendar year</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
<th>24</th>
<th>25</th>
<th>26</th>
<th>27</th>
<th>28</th>
<th>29</th>
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<tr>
<td>1956</td>
<td>144</td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>1957</td>
<td>382</td>
<td>199</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1958</td>
<td>241</td>
<td>169</td>
<td>171</td>
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<td></td>
<td></td>
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<td></td>
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<td>1959</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>1960</td>
<td>146</td>
<td>149</td>
<td>93</td>
<td>386</td>
<td>168</td>
<td></td>
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<td></td>
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<td></td>
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<td>1961</td>
<td>181</td>
<td>152</td>
<td>315</td>
<td>75</td>
<td>200</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1962</td>
<td>294</td>
<td>202</td>
<td>36</td>
<td>164</td>
<td>129</td>
<td>187</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1963</td>
<td>312</td>
<td>181</td>
<td>130</td>
<td>210</td>
<td>148</td>
<td>215</td>
<td>260</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1964</td>
<td>214</td>
<td>109</td>
<td>126</td>
<td>141</td>
<td>105</td>
<td>193</td>
<td>275</td>
<td>125</td>
<td>184</td>
<td></td>
<td></td>
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<tr>
<td>1965</td>
<td>217</td>
<td>96</td>
<td>114</td>
<td>202</td>
<td>198</td>
<td>226</td>
<td>89</td>
<td>243</td>
<td>283</td>
<td>73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1966</td>
<td>96</td>
<td>37</td>
<td>93</td>
<td>109</td>
<td>148</td>
<td>167</td>
<td>141</td>
<td>378</td>
<td>36</td>
<td>126</td>
<td>93</td>
<td></td>
</tr>
<tr>
<td>1967</td>
<td>36</td>
<td>52</td>
<td>276</td>
<td>357</td>
<td>258</td>
<td>300</td>
<td>75</td>
<td>93</td>
<td>52</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1968</td>
<td>-</td>
<td>52</td>
<td>37</td>
<td>37</td>
<td>189</td>
<td>52</td>
<td>171</td>
<td>112</td>
<td>57</td>
<td>141</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2520</td>
<td>1534</td>
<td>1411</td>
<td>1450</td>
<td>1561</td>
<td>1398</td>
<td>1230</td>
<td>1236</td>
<td>635</td>
<td>433</td>
<td>185</td>
<td>36</td>
</tr>
<tr>
<td>Percent</td>
<td>18.5</td>
<td>11.3</td>
<td>10.4</td>
<td>10.6</td>
<td>11.5</td>
<td>10.3</td>
<td>9.0</td>
<td>9.1</td>
<td>4.7</td>
<td>3.2</td>
<td>1.4</td>
<td>0.3</td>
</tr>
</tbody>
</table>
training before starting to farm. The increasing importance of post high school education for farming may influence young men to obtain some advanced education prior to farming. In some instances military service has complemented education through the provision of monetary benefits provided to the young man who chooses to obtain more education after discharge from the military. This has had a tendency to extend the age of beginning young farmers even more. Capital requirements for farming have increased in more recent years and the young farmer may choose to work in another occupation for a mean of 5.5 years, as given in Table 24, before entry in farming.

The mean age of all young farm operators in the study was 21.6 years of age when they began farming. As shown by the data in Table 32, the largest group in the study (18.5 percent of 13,630, or 2520 young farmers) began farming when they were 18 years of age. There was an even distribution (10 percent) of the young farmers who started to farm in each age level of 19 through 23 years of age. Only 18.7 percent of the respondents began farming after they were 25 years of age. A mean of 1048.4 of the young farm operators studied began farming each year according to the study. This figure is meaningless, however, because it does not take into account all those young men who may have begun farming when they were 18 years of age or older, but left the occupation prior to the time of the study.

Only 1270 or 9.6 percent of the 13,630 young farm operators reported their farming operation had been interrupted since they had started to farm. Military service was by far the largest reason for an interruption
in farming with 794 of 1270 giving this response. The largest group who gave military service as the reason for an interruption was composed of those who had been in the service for 4 to 6 months. Several, 241, had been in the service for 19 to 24 months. The other reason given for farming interruption by a few of the respondents was other agricultural and nonagricultural work.

Data in Table 33 provides a comparison of young farm operators who were farming in partnership and as individual operators during their first and current years of farming. The number of men who were farming as individual operators during their first year increased from 9543, or 70.0 percent, to 10,607, or 77.8 percent, during their current year of farming, whereas, those who were farming in partnership during the first year, 3748 or 27.5 percent, decreased to 2278, or 16.7 percent, during their current year of farming.

Some young farmers were operating farms as a combination operation, that is, they had some land or livestock in partnership, and another tract of land or livestock in which they operated as an individual operator. The number of young farm operators in this category was small for both years of farming, but increased from 339, or 2.5 percent, in the first year to 745, or 5.5 percent, during the current year of farming.

As expected more land was owned and operated in partnership operations than in single proprietorships. The data recorded for acres owned in partnerships may be misleading because it does not necessarily refer to the young farm operator; another member of the partnership may have
Table 33. Mean acres operated during the first and current years of farming by individual operators and partnerships

<table>
<thead>
<tr>
<th></th>
<th>Mean acres</th>
<th>Young farm operators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Owned</td>
<td>Rented</td>
</tr>
<tr>
<td><strong>First year farming</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indv. operators</td>
<td>18</td>
<td>147</td>
</tr>
<tr>
<td>Partnership</td>
<td>212</td>
<td>105</td>
</tr>
<tr>
<td>Combination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indv.</td>
<td>48</td>
<td>151</td>
</tr>
<tr>
<td>Partnership</td>
<td>150</td>
<td>94</td>
</tr>
<tr>
<td><strong>Current year farming</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indv. operators</td>
<td>50</td>
<td>189</td>
</tr>
<tr>
<td>Partnership</td>
<td>288</td>
<td>173</td>
</tr>
<tr>
<td>Combination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indv.</td>
<td>26</td>
<td>120</td>
</tr>
<tr>
<td>Partnership</td>
<td>108</td>
<td>151</td>
</tr>
</tbody>
</table>

owned the land. The mean number of acres owned by partnerships increased from 212 acres in the first year of farming to 288 in the current year, which was a 35.8 percent increase. Mean acres operated by partnerships increased 45.4 percent from the first year (317 acres) to (461 acres) in the current year.

The mean numbers of acres owned by young farm operators who were farming as single proprietors was 18 acres during their first year, and increased to a mean of 50 acres for their current year of farming. This represented a 178 percent increase in mean acres owned by young farm
operators. There was a 44.2 percent increase in mean number of acres operated by young farmers as individual operators from the first year of farming to the current year. During the current year of farming the respondents who were farming as single proprietors were operating a mean number of 238 acres which was nearly equal to the average sized farm (235.7 acres) of all farms in Iowa during 1968.

Young farm operators who had combination farming operations were involved with larger farms than those who farmed as individuals, or in partnerships during the first or current years of farming, except for partnership operations during the first year. It was expected that young farm operators would purchase land as they became established in farming. Some may have inherited land as a result of death or retirement of a relative between the time they began farming and the current year.

Table 34 presents the distribution of acres owned and operated by young farm operators during their first, third, sixth, ninth, and twelfth years of farming. These years were chosen since they show clearly the distribution of acres operated over the period of time which the respondents had been farming.

There was a decline from 12,630 young men who were farming during the current year (1968) to 399 who had been farming for 12 years. The largest break was between the third and sixth years of farming. The number of young men who owned some land during their first year of farming was 1539, or 11.3 percent, whereas 37.2 percent of the operators owned some of the land operated in their ninth year of farming.
Table 34. Size of farming operation by selected years of farming

<table>
<thead>
<tr>
<th>Acres</th>
<th>First Operated</th>
<th>First Owned</th>
<th>Third Operated</th>
<th>Third Owned</th>
<th>Sixth Operated</th>
<th>Sixth Owned</th>
<th>Ninth Operated</th>
<th>Ninth Owned</th>
<th>Twelfth Operated</th>
<th>Twelfth Owned</th>
<th>Total Operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>12091</td>
<td>9286</td>
<td>4524</td>
<td>1636</td>
<td>258</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13630</td>
</tr>
<tr>
<td>%</td>
<td>88.7</td>
<td>84.0</td>
<td>70.5</td>
<td>62.8</td>
<td>64.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-80</td>
<td>2593</td>
<td>607</td>
<td>1299</td>
<td>690</td>
<td>493</td>
<td>702</td>
<td>52</td>
<td>243</td>
<td></td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>19.0</td>
<td>4.5</td>
<td>11.8</td>
<td>6.2</td>
<td>7.7</td>
<td>10.9</td>
<td>2.0</td>
<td>9.3</td>
<td></td>
<td>13.1</td>
<td></td>
</tr>
<tr>
<td>81-160</td>
<td>5133</td>
<td>629</td>
<td>3486</td>
<td>499</td>
<td>1567</td>
<td>373</td>
<td>376</td>
<td>281</td>
<td></td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>37.7</td>
<td>4.6</td>
<td>31.5</td>
<td>4.5</td>
<td>24.4</td>
<td>5.8</td>
<td>14.5</td>
<td>10.8</td>
<td></td>
<td>13.1</td>
<td></td>
</tr>
<tr>
<td>160-240</td>
<td>2679</td>
<td>229</td>
<td>2530</td>
<td>380</td>
<td>1483</td>
<td>416</td>
<td>385</td>
<td>148</td>
<td>56</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>19.7</td>
<td>1.7</td>
<td>22.9</td>
<td>3.4</td>
<td>23.1</td>
<td>6.5</td>
<td>14.8</td>
<td>5.7</td>
<td>14.2</td>
<td>9.1</td>
<td></td>
</tr>
<tr>
<td>241-320</td>
<td>1151</td>
<td>36</td>
<td>1349</td>
<td>72</td>
<td>888</td>
<td>201</td>
<td>685</td>
<td>145</td>
<td>52</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>8.4</td>
<td>0.3</td>
<td>12.2</td>
<td>0.7</td>
<td>13.8</td>
<td>3.1</td>
<td>26.3</td>
<td>5.6</td>
<td>14.2</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>321-400</td>
<td>651</td>
<td>-</td>
<td>1027</td>
<td>75</td>
<td>850</td>
<td>36</td>
<td>328</td>
<td>36</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>4.8</td>
<td>-</td>
<td>9.3</td>
<td>0.7</td>
<td>13.3</td>
<td>0.6</td>
<td>12.6</td>
<td>1.4</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>401-560</td>
<td>849</td>
<td>36</td>
<td>681</td>
<td>-</td>
<td>591</td>
<td>75</td>
<td>386</td>
<td>73</td>
<td>180</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>6.2</td>
<td>0.3</td>
<td>6.2</td>
<td>-</td>
<td>9.2</td>
<td>1.2</td>
<td>14.9</td>
<td>2.8</td>
<td>45.2</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>561-720</td>
<td>408</td>
<td>-</td>
<td>431</td>
<td>-</td>
<td>290</td>
<td>36</td>
<td>218</td>
<td>-</td>
<td>73</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>3.0</td>
<td>3.9</td>
<td>4.5</td>
<td>0.6</td>
<td>8.4</td>
<td>-</td>
<td>18.3</td>
<td>-</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Over 720</td>
<td>161</td>
<td>-</td>
<td>250</td>
<td>52</td>
<td>253</td>
<td>52</td>
<td>168</td>
<td>39</td>
<td>36</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>1.2</td>
<td>2.2</td>
<td>0.5</td>
<td>4.0</td>
<td>0.8</td>
<td>6.5</td>
<td>1.5</td>
<td>9.2</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13630</td>
<td>13630</td>
<td>11056</td>
<td>11056</td>
<td>6420</td>
<td>6420</td>
<td>2604</td>
<td>2604</td>
<td>399</td>
<td>399</td>
<td></td>
</tr>
</tbody>
</table>

operators
As one examines data in Table 34, it appears that it was in the sixth year of farming that the highest percentage of the operators were farming larger farms and had purchased land. For the first year of farming the largest percentage (37.7 percent) of the young farm operators were farming 80 to 160 acres, whereas, in the 12th year the greatest percentage (45.2 percent) were farming 401 to 560 acres. This information is evidence of the increased farm size of farm operators in Iowa. In several instances the increase was enhanced through the purchase of land by the young farm operator.

A very small percentage of the respondents owned more than 320 acres of land. This was expected since the average size of Iowa farms in 1968 was 235.7 acres and the younger men would not be expected to own as much land as the older, more established farmers. It was surprising that 1236, or 9.1 percent, of the first year young farmers owned from 1 to 160 acres of land. Some young farmers may have acquired this land as a result of parents seeking a way to transfer property to alleviate as much inheritance tax as possible.

One type of lease was being used more than any other by young farm operators during both their first and current years of farming. Data in Table 35 show that two-thirds of the operators used the crop share lease their first year and 61.8 percent during the current year of farming. The percentage of usage did, however, decline by 4.4 percent from the first year to the current year of farming. The number of respondents who used cash share leases nearly doubled between the first year
Table 35. Leasing arrangement of young farm operators during their first and current (1968) years of farming

<table>
<thead>
<tr>
<th>Type of lease</th>
<th>First year No.</th>
<th>First year %</th>
<th>Current year No.</th>
<th>Current year %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop share</td>
<td>6273</td>
<td>66.2</td>
<td>6526</td>
<td>61.8</td>
</tr>
<tr>
<td>Cash share</td>
<td>398</td>
<td>4.1</td>
<td>785</td>
<td>7.4</td>
</tr>
<tr>
<td>Crop and cash</td>
<td>1424</td>
<td>15.0</td>
<td>1852</td>
<td>17.5</td>
</tr>
<tr>
<td>Livestock</td>
<td>1382</td>
<td>14.7</td>
<td>1397</td>
<td>13.3</td>
</tr>
<tr>
<td></td>
<td>9477</td>
<td></td>
<td>10560</td>
<td></td>
</tr>
</tbody>
</table>

and the current year of farming, however, it was still the least used of all leases. The cash share lease is considered to be unpopular with beginning farm operators because it calls for a fixed amount of cash payment no matter what type of crop harvest the young farmer may have had. Also young farmers do not normally have the necessary capital to pay cash rent and would rather make payment through a share of the crop which in turn tends to reduce the risk borne by him. In recent years there has been a great amount of competition for farm land and quite often the young farmer must accept a cash rent type of lease, if he is to obtain enough land for a profitable sized farming unit.

No attempt was made to analyze the number of acres rented with the type of lease, but it is surmised that if this had been done the crop-cash share lease and livestock share lease would be more pronounced.

Nearly 30 percent of the young farmers used crop-cash or livestock share
leases during their first year of farming as compared to 30.8 percent, during the current year. Almost equal percentages used livestock share leases during the first year (14.7 percent) and current year (13.3 percent). While the percentage of young farmers who used crop-cash share leases their first year of farming (15.0 percent) was about equal to the percentage who used livestock share leases, the percentage who were using crop-cash leases at the time of the study had increased to 17.5 percent. The livestock share lease may be attractive to the young farmer because the risk is somewhat reduced since the landlord assumes a portion of the risk for the livestock enterprises. In some instances the landlord may provide all the livestock and take a note from the beginning farm operator for one-half of the livestock.

Young farm operators were asked if they had a written lease. The number reporting written leases was only 50 percent of the total number who had leases. The fact that only one-half of the young men had written leases may be partially explained by the fact that several beginning farmers were renting from relatives and they did not feel that a written lease was necessary.

An attempt was made to determine how many of those young farmers involved in a partnership arrangement had written agreements. It was reported that only 14.5 percent of the total partnerships had written agreements. Some of the respondents said they wanted a written agreement but had been lax in bringing it about.
Not one operator in the study reported that his farm was incorporated. Evidently this practice is too new to have been used very extensively by young farm operators. Another explanation may be that since the young men in this study were just beginning to farm and many of their fathers were still very active in farming, the father was not ready to incorporate the family farm. In other words, the father may have wanted their sons to have time to become better established. More education on incorporating family farms needs to be provided before this practice will be adopted by farmers.

Nearly 50 percent of the young farm operators in the study rented some land from relatives during their first and current years of farming. As can be seen in Table 36 more young farmers rented from their fathers than from any other relative during both the first and the current years of farming. Fathers accounted for 41.4 percent of the landlords who were relatives of the respondent for the first year of farming, and 45.7 percent for the current year. Grandparents were also landlords for 1314, or 25.1 percent, of the young farm operators who rented from relatives their first year of farming, and 961, or 15.0 percent, for the current year of farming. Mothers rented land to 533 young farmers, or 11.2 percent of the relatives who were landlords during the first year, and 1190, or 18.7 percent, for the current year. The largest increase among types of relatives as landlords, 7.5 percent, occurred in this category and was expected because several fathers had died between the time the young farm operator began farming and the
Table 36. Relatives who owned land rented by young farm operators during the first and current years (1968) of farming by number of acres rented

<table>
<thead>
<tr>
<th>Relatives</th>
<th>0-160</th>
<th>161-320</th>
<th>321-480</th>
<th>481-640</th>
<th>Over 640</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father</td>
<td>1286</td>
<td>617</td>
<td>261</td>
<td>-</td>
<td>-</td>
<td>2164</td>
<td>41.4</td>
</tr>
<tr>
<td>Mother</td>
<td>228</td>
<td>277</td>
<td>36</td>
<td>52</td>
<td>-</td>
<td>593</td>
<td>11.2</td>
</tr>
<tr>
<td>Grandparent</td>
<td>803</td>
<td>385</td>
<td>126</td>
<td>-</td>
<td>-</td>
<td>1314</td>
<td>25.1</td>
</tr>
<tr>
<td>Father-in-law</td>
<td>104</td>
<td>109</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>213</td>
<td>4.1</td>
</tr>
<tr>
<td>Other relatives</td>
<td>278</td>
<td>127</td>
<td>-</td>
<td>-</td>
<td>37</td>
<td>442</td>
<td>8.4</td>
</tr>
<tr>
<td>Estates of relatives</td>
<td>234</td>
<td>200</td>
<td>78</td>
<td>-</td>
<td>512</td>
<td>9.8</td>
<td>307</td>
</tr>
<tr>
<td>Total</td>
<td>2933</td>
<td>1715</td>
<td>501</td>
<td>52</td>
<td>37</td>
<td>5238</td>
<td>100.0</td>
</tr>
<tr>
<td>Percent</td>
<td>56.0</td>
<td>32.7</td>
<td>9.6</td>
<td>1.0</td>
<td>0.7</td>
<td>42.8</td>
<td>37.5</td>
</tr>
</tbody>
</table>
current year. It would be expected that sons would rent land from their mothers, if their father was deceased. Estates of relatives were a source of rental property for nearly equal numbers of young farm operators -- 512, or 9.8 percent, in the first year, and 472, or 7.5 percent, in the current year of farming.

The number of young farmers who were renting more than 320 acres of land from relatives was limited. In fact this group comprised 11.3 percent during the first year, and 19.7 percent during the current year of farming. Only .7 percent of the respondents who rented from relatives, rented over 640 acres during the first year, and 1.2 percent during the current year. Since farm size has increased in recent years it was anticipated there would be an increase in the number of young farm operators renting larger farms during the current year.

Thirty percent (4,087) of the respondents were involved in partnership operations during their first year of farming, in contrast to 3,023 or 22.1 percent for their current year of farming. Data concerning the number of acres operated by the members of the partnership are shown in Table 37.

There were relatively few (213 first year and 287 current year) three-man partnerships among the respondents. In most cases the young farmer was in partnership with his father, and in situations where the partnership consisted of three persons, it was usually with father and a brother. Some of the respondents were in partnership with their father-in-law.

It was surprising to note that 31.6 percent of the two-man partner-
ships during the first year, and 23.3 percent during the current year were operating farms not larger than 160 acres. This would be approximately 75 acres under the average size farm for the state of Iowa (235.7 acres). As one compared the acres operated by partnerships during the first year with the current year, there were 45.7 percent of the first year partnerships operating over 240 acres, whereas, 65.1 percent operated more than 240 acres during the current year. This trend is in agreement with the increased size of farms in recent years.

For instance where the partnership was composed of three persons, 83.1 percent were farming over 400 acres of land during their first year's operation, whereas 67.6 percent were farming more than 640 acres during the current year. One should be hesitant in assuming that the number of acres operated by a partnership should increase with the number of members in the partnership because acres operated are only one criteria for measuring the size of business. Many times partnerships may be larger since there are more members in the partnership. Where the young men were just beginning to farm, the father may have included the son in a partnership to help him get started in farming rather than because of the volume of his farming operation.

Young operators were asked if their form of farming operation changed from their first year to the current year of farming. A total of 11,147, or 82.1 percent, reported they had not changed their form of operation. There were 1232, or 9.0 percent, who began in a partnership and later changed to be an individual operator. Reasons for this type
Table 37. Acres farmed by young operators in partnership during the first and current years of farming

<table>
<thead>
<tr>
<th>Acres operated</th>
<th>First year farming</th>
<th>Current year farming</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Two No.</td>
<td>%</td>
</tr>
<tr>
<td>0 - 160</td>
<td>1223</td>
<td>31.6</td>
</tr>
<tr>
<td>161-240</td>
<td>961</td>
<td>24.9</td>
</tr>
<tr>
<td>241-320</td>
<td>424</td>
<td>10.9</td>
</tr>
<tr>
<td>321-400</td>
<td>275</td>
<td>7.1</td>
</tr>
<tr>
<td>401-480</td>
<td>366</td>
<td>9.4</td>
</tr>
<tr>
<td>481-560</td>
<td>353</td>
<td>9.1</td>
</tr>
<tr>
<td>561-640</td>
<td>162</td>
<td>4.2</td>
</tr>
<tr>
<td>Over 640</td>
<td>110</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>3874</td>
<td>213</td>
</tr>
<tr>
<td>Percent</td>
<td>94.8</td>
<td>5.2</td>
</tr>
</tbody>
</table>
of change were (1) the father or other partner had either died or retired or (2) the young farm operator had an opportunity to farm land by himself after he had started as a partner. Only 229, or 1.7 percent, of the young farm operators had changed from a single proprietorship to a partnership. The remaining 7.2 percent made a combination of changes in their farming operations from the time they began until their current year of farming.

The division of labor, operating expenses and profits of partnership operations in this study was quite variable. The data in Table 38 provide an analysis of how the young farmers and their partners shared these items in their partnerships during their first and current years of farming. Similar trends prevailed in the sharing of labor, expenses, and profits for both the first and current years of farming in partnership. There were, however, fewer two-man partnerships and more three-man partnerships in 1968 than there were for the first year of farming.

It appeared that labor was divided nearly 50-50 between the respondent and his partner. In no instance did the partners of the respondent contribute more than 75 percent of the labor. Over 400 of the young farm operators contributed more than 75 percent of the labor. In order to get started in farming, the young farm operator sometimes used his labor to match his partner's capital. During the current year all of the respondents in the partnerships contributed 25 percent or more of the labor and 1136 of the 3023, or 37.5 percent, of the respondents provided over 50 percent of the labor. The first, and second partners in three-way partnerships did not contribute more than one-half of the
<table>
<thead>
<tr>
<th></th>
<th>First year of farming</th>
<th>Current year of farming</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent contributed or received (%)</td>
<td></td>
<td>Percent contributed or received (%)</td>
</tr>
<tr>
<td></td>
<td>0-25 26-50 51-75 76-100 Total</td>
<td></td>
<td>0-25 26-50 51-75 76-100 Total</td>
</tr>
<tr>
<td><strong>Labor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent</td>
<td>52 2781 845 409 4087</td>
<td>-</td>
<td>1887  706  430  3023</td>
</tr>
<tr>
<td>Percent</td>
<td>4.4 48.1 82.3 100.0 48.7</td>
<td>-</td>
<td>44.1 100 100 47.7</td>
</tr>
<tr>
<td>1st partner</td>
<td>1069 2836 182 - 4087</td>
<td>817 2206 - - 3023</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>91.2 49.0 17.7 48.7</td>
<td>88.6 51.6 - - 47.7</td>
<td></td>
</tr>
<tr>
<td>2nd partner</td>
<td>52 162 - - 214</td>
<td>105 183 - - 288</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>4.4 2.9 - - 2.6</td>
<td>11.4 4.3 - - 4.6</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1173 5779 1027 409 8388</td>
<td>922 4276 706 430 6334</td>
<td></td>
</tr>
<tr>
<td><strong>Operating Expenses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent</td>
<td>654 3280 153 - 4087</td>
<td>201 2674 96 52 3023</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>92.6 49.4 21.4 48.7</td>
<td>56.1 48.2 39.4 28.9 47.7</td>
<td></td>
</tr>
<tr>
<td>1st partner</td>
<td>- 3197 562 328 4087</td>
<td>52 2695 148 128 3023</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>48.2 78.6 100.0 48.7</td>
<td>4.6 48.5 60.6 71.1 47.7</td>
<td></td>
</tr>
<tr>
<td>2nd partner</td>
<td>52 162 - - 214</td>
<td>105 183 - - 288</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>7.4 2.4 - - 2.6</td>
<td>29.3 3.3 - - 4.6</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>706 6639 715 328 8388</td>
<td>358 5552 244 180 6334</td>
<td></td>
</tr>
<tr>
<td><strong>Profits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent</td>
<td>471 3559 57 - 4087</td>
<td>178 2845 - - 3023</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>63.9 51.3 8.4 48.7</td>
<td>62.9 49.0 - - 47.7</td>
<td></td>
</tr>
<tr>
<td>1st partner</td>
<td>52 3380 618 37 4087</td>
<td>105 2674 244 - 3023</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>7.1 48.7 91.6 100.0 48.7</td>
<td>37.1 46.0 100.0 47.7</td>
<td></td>
</tr>
<tr>
<td>2nd partner</td>
<td>214 - - - 214</td>
<td>- 288 - - 288</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>29.0 - - - 48.7</td>
<td>- 4.9 - - 4.6</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>737 6939 675 37 8388</td>
<td>283 5807 244 - 6334</td>
<td></td>
</tr>
</tbody>
</table>
The majority of the young farm operators provided 26 to 50 percent of the operating expenses in both the first and current years of farming. Few young farm operators shared 75 percent or more of the operating expenses for either year. The first partner's portion was usually 26 to 50 percent, but it was not uncommon for him to provide up to 100 percent of the operating expenses. The second partner never shared in more than one-half of the operating expenses during either the first or current years of farming.

During the first year of farming, the young farmer never received more than 25 percent of the profits from the partnership operation, and the second member of a three-way partnership did not share in more than 25 percent of the profits. In the two-man partnerships, there was nearly an even distribution of profits between the young farm operators (51.3 percent) and the partners (48.7 percent) at the 26 to 50 percent level of profits. During the current year of farming, the only members of partnerships to receive over one-half of the profits were 244 second partners.

There were partnerships in this study in which there was unequal division of labor, operating expenses, and profits, but in most instances the partners shared equally.

Data concerning crop acres during the first and current years of farming of men who farmed as individual operators are presented in Table 39. Similar information is provided in Table 40 for those young farm operators who were farming in partnership.
Table 39. Acres of crops produced by young farm operators who were individual operators during their first and current years of farming

<table>
<thead>
<tr>
<th>Crops produced</th>
<th>Individual operators</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>1-20</td>
<td>21-40</td>
<td>41-80</td>
<td>81-120</td>
<td>121-160</td>
<td>Over 160</td>
<td>Mean acres</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>First year (9881 respondents)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td>979</td>
<td>558</td>
<td>2467</td>
<td>3792</td>
<td>1336</td>
<td>612</td>
<td>319</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td>8.1</td>
<td>5.6</td>
<td>24.9</td>
<td>38.5</td>
<td>13.5</td>
<td>6.2</td>
<td>3.2</td>
<td>11.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td>3957</td>
<td>2647</td>
<td>780</td>
<td>1861</td>
<td>315</td>
<td>233</td>
<td>89</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hay and pasture</td>
<td>40.0</td>
<td>26.6</td>
<td>8.1</td>
<td>18.8</td>
<td>3.2</td>
<td>2.4</td>
<td>0.9</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per. pasture</td>
<td>4942</td>
<td>2563</td>
<td>1871</td>
<td>505</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. land</td>
<td>50.0</td>
<td>25.9</td>
<td>18.9</td>
<td>5.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current year (11352 respondents)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td>932</td>
<td>483</td>
<td>1417</td>
<td>3838</td>
<td>2309</td>
<td>1369</td>
<td>959</td>
<td>86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td>8.2</td>
<td>4.3</td>
<td>12.5</td>
<td>34.2</td>
<td>20.3</td>
<td>12.1</td>
<td>8.4</td>
<td>49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td>2766</td>
<td>1613</td>
<td>1923</td>
<td>2750</td>
<td>1288</td>
<td>583</td>
<td>429</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hay and pasture</td>
<td>24.4</td>
<td>14.2</td>
<td>16.9</td>
<td>24.3</td>
<td>11.3</td>
<td>5.1</td>
<td>3.8</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per. pasture</td>
<td>5772</td>
<td>2845</td>
<td>2180</td>
<td>440</td>
<td>115</td>
<td>-</td>
<td>-</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. land</td>
<td>50.1</td>
<td>25.3</td>
<td>19.7</td>
<td>3.9</td>
<td>1.0</td>
<td>-</td>
<td>-</td>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mean acres</strong></td>
<td>969</td>
<td>545</td>
<td>2447</td>
<td>3832</td>
<td>1322</td>
<td>602</td>
<td>317</td>
<td>62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As expected corn was the crop produced by the largest number of operators. There were only 797, or 8.1 percent, of the first year individual operators, 105, or 2.6 percent, of the first year partnerships, and 89, or 2.9 percent, of the current year partnerships that did not produce corn on their farms during these years. Acres of corn raised were greater for the partnership operations than for individual operators, and they had increased from the first to the current year of farming. For example only 9.4 percent of the first year individual operators reported more than 80 acres of corn, whereas 20.5 percent of the current year individual operators, 32 percent of the first year partnerships, and 50.4 percent of the respondents in current year partnerships had produced more than 80 acres of corn. Nearly 40 percent of the farm operators who in their first year farmed as individuals and as in partnerships, had 40 to 80 acres of corn. During the current year, partnership operations produced 160 acres or more (34.1 percent).

As one compares the first with the current year of farming, it may be noted that a larger number of operators did not start out with soybeans during their first year. This trend was especially true of those respondents who farmed as individual operators. Forty percent for the first year and 24.4 percent of the current year operators did not produce soybeans. This cash crop has become more profitable in recent years, and as young farm operators increased their size of farm, it was expected that soybean acreage would increase. Less than 30 percent of the respondents reported producing more than 80 acres of soybeans during either their first or current years of farming.
Table 40. Acres of crops produced by young farm operators who were in partnership during their first and current years of farming

<table>
<thead>
<tr>
<th>Crops produced</th>
<th>Individual operators</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>1-20</td>
</tr>
<tr>
<td><strong>First year (4087 respondents)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td>105</td>
<td>37</td>
</tr>
<tr>
<td>Soybeans</td>
<td>1266</td>
<td>410</td>
</tr>
<tr>
<td>Oats</td>
<td>1403</td>
<td>787</td>
</tr>
<tr>
<td>Hay and pasture</td>
<td>1129</td>
<td>955</td>
</tr>
<tr>
<td>Per. pasture</td>
<td>1539</td>
<td>621</td>
</tr>
<tr>
<td>Govt. land</td>
<td>2299</td>
<td>305</td>
</tr>
<tr>
<td></td>
<td>56.3</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>Current year (3023 respondents)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td>89</td>
<td>94</td>
</tr>
<tr>
<td>Soybeans</td>
<td>794</td>
<td>230</td>
</tr>
<tr>
<td>Oats</td>
<td>883</td>
<td>921</td>
</tr>
<tr>
<td>Hay and pasture</td>
<td>840</td>
<td>709</td>
</tr>
<tr>
<td>Per. pasture</td>
<td>828</td>
<td>348</td>
</tr>
<tr>
<td>Govt. land</td>
<td>1023</td>
<td>346</td>
</tr>
<tr>
<td></td>
<td>33.8</td>
<td>11.4</td>
</tr>
</tbody>
</table>
The percentages of individuals who grew no oats during the current year ranged from 29.2 percent of those in partnership to 50.1 percent of the individual farm operators. Individual operators did not produce as many acres of oats as did those in partnerships. The numbers who produced oats, however, were nearly equal for the first and the current years of farming for both partnership and individual operators. The mean numbers of acres of oats produced by young farm operators were 12 acres for individual operators during their first year, their current year, 13 acres; partnership operators, first year 24 acres, and current year partnership operators, 28 acres.

Over 25 percent of the young farm operators did not have hay or rotation pasture during either their first or current years of farming. Fewer of those who were farming in partnership raised oats. One to 20 acres of hay and rotation pasture was reported by more young farm operators than any other acreage, whether during the first and current years of farming, or by both those farming as individuals or in partnership. The mean numbers of acres, however, were 18, 23, 44, and 47 acres respectively, for first year individual, current year individual, first year partnership, and current year partnership operators.

The mean number of acres of permanent pasture reported by young farm operators was greater than expected by the author. It is understood, however, because several counties in the sample, such as Dubuque, Clayton, Davis, Pottawattamie and Mills were considered to be counties with large acreages of uncultivated land which may have had an effect on the acres
of permanent pasture reported. A few respondents had very large acreages of permanent pasture. This may have caused the mean number of acres to be enlarged, and not a meaningful measure for the sample. Over 25 percent of the respondents in partnership operations had no permanent pasture, whereas nearly 50 percent of the individual operators had no permanent pasture. In some instances the beginning farm operator may have started farming on land which had a high percentage of uncultivated land because it was available and in proximity to his father's farm. This may be another reason for the high percentage of permanent pasture reported by beginning farm operators.

Young farm operators increased their acreages in the government feed grain program from the first to the current year of farming. This trend was the same for those in partnerships and for individual operators. Few respondents had more than 80 acres in the feed grain program. The mean numbers of acres were 16 and 23 respectively for the first and current year individual operators and 21 and 40 acres respectively for the first and current year partnership operations.

In summary more respondents had corn than any other crop. Approximately 75 percent of the farm operators raised soybeans. Oat acreage was greater for partnerships than for individual operators, and young farm operators participated in the feed grain program to a greater extent as they became established in farming.

Discussion of data in Tables 41, 42, 43, and 44 concerning the livestock programs of young farm operators follows. Approximately one-third
Table 41. Livestock raised by young farmers who farmed as individual operators during their first year of farming

<table>
<thead>
<tr>
<th>Livestock enterprise</th>
<th>None</th>
<th>1-10</th>
<th>25</th>
<th>50</th>
<th>100</th>
<th>200</th>
<th>300</th>
<th>500</th>
<th>750</th>
<th>1000</th>
<th>1000</th>
<th>Mean no. head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litters farrowed</td>
<td>3762</td>
<td>2652</td>
<td>1987</td>
<td>1222</td>
<td>259</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>38.1</td>
<td>26.8</td>
<td>20.1</td>
<td>12.4</td>
<td>2.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hogs raised</td>
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<td>99</td>
<td>363</td>
<td>817</td>
<td>1811</td>
<td>1936</td>
<td>715</td>
<td>318</td>
<td>89</td>
<td>-</td>
<td></td>
<td>36</td>
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<td></td>
<td>38.8</td>
<td>0.9</td>
<td>3.7</td>
<td>8.3</td>
<td>18.1</td>
<td>19.4</td>
<td>7.2</td>
<td>3.2</td>
<td>0.9</td>
<td></td>
<td></td>
<td>105</td>
</tr>
<tr>
<td>Beef cows</td>
<td>7997</td>
<td>1157</td>
<td>815</td>
<td>113</td>
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<td></td>
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</tr>
<tr>
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<td>78.9</td>
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<td>1.1</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Feeder cattle</td>
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<td>1138</td>
<td>924</td>
<td>755</td>
<td>439</td>
<td>236</td>
<td>-</td>
<td>-</td>
<td>36</td>
<td>-</td>
<td></td>
<td>15</td>
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<td></td>
<td>64.3</td>
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<td>1011</td>
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<td>10.2</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Young dairy stock</td>
<td>7833</td>
<td>1313</td>
<td>697</td>
<td>39</td>
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<td>8156</td>
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<td>750</td>
<td>440</td>
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<td></td>
<td></td>
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<td>109</td>
<td>570</td>
<td>260</td>
<td>291</td>
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<td>37</td>
<td></td>
<td>36</td>
<td>57</td>
<td></td>
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<td>238</td>
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</tr>
</tbody>
</table>

*aIncludes 73 individual operators who had 10,000 or more turkeys. 9882 individual operators during the first year.
Table 42. Livestock raised by young farmers who farmed as individual operators during the current year

<table>
<thead>
<tr>
<th>Livestock enterprise</th>
<th>None</th>
<th>1-10</th>
<th>26-</th>
<th>51-</th>
<th>101-</th>
<th>201-</th>
<th>301-</th>
<th>501-</th>
<th>751-</th>
<th>Over</th>
<th>Mean no. head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litters farrowed</td>
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<td>861</td>
<td>1715</td>
<td>3122</td>
<td>1292</td>
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<td>36.2</td>
<td>7.6</td>
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<td>11.4</td>
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<td>-</td>
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<td>37</td>
<td>222</td>
<td>582</td>
<td>696</td>
<td>2137</td>
<td>1627</td>
<td>1341</td>
<td>485</td>
<td>200</td>
<td>124</td>
</tr>
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<td>34.4</td>
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<td>1.9</td>
<td>5.2</td>
<td>6.1</td>
<td>18.8</td>
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<td>11.8</td>
<td>4.3</td>
<td>1.8</td>
<td>1.1</td>
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<td>735</td>
<td>242</td>
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<td>-</td>
<td>-</td>
<td>41</td>
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<td>1206</td>
<td>1445</td>
<td>972</td>
<td>570</td>
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<td>387</td>
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<td>10.6</td>
<td>12.7</td>
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<td>5.0</td>
<td>1.9</td>
<td>3.4</td>
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<td>Milk cows</td>
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<td>1033</td>
<td>1024</td>
<td>887</td>
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</tr>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
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<td>788</td>
<td>625</td>
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</tr>
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<td>6.9</td>
<td>5.6</td>
<td>1.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
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<td>445</td>
<td>449</td>
<td>273</td>
<td>326</td>
<td>184</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6</td>
</tr>
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<td>85.2</td>
<td>3.9</td>
<td>4.0</td>
<td>2.4</td>
<td>2.9</td>
<td>1.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Feeder lambs</td>
<td>9858</td>
<td>386</td>
<td>304</td>
<td>182</td>
<td>403</td>
<td>146</td>
<td>37</td>
<td>36</td>
<td>-</td>
<td>-</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>86.8</td>
<td>3.4</td>
<td>2.7</td>
<td>1.6</td>
<td>3.6</td>
<td>1.3</td>
<td>0.3</td>
<td>0.3</td>
<td>-</td>
<td>-</td>
<td>41</td>
</tr>
<tr>
<td>Poultry</td>
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<td>-</td>
<td>57</td>
<td>135</td>
<td>445</td>
<td>292</td>
<td>311</td>
<td>202</td>
<td>57</td>
<td>57</td>
<td>206(^{a})</td>
</tr>
<tr>
<td></td>
<td>84.5</td>
<td>0.5</td>
<td>1.2</td>
<td>3.9</td>
<td>2.6</td>
<td>2.7</td>
<td>1.8</td>
<td>0.5</td>
<td>0.5</td>
<td>1.8</td>
<td>95</td>
</tr>
</tbody>
</table>

\(^{a}\) Includes 130 operators who had 10,000 or more turkeys; 11,352 individual operators during the current year.
Table 43. Livestock raised by young farmers who farmed in partnership during their first year of farming

<table>
<thead>
<tr>
<th>Livestock enterprise</th>
<th>None</th>
<th>1-10</th>
<th>11-25</th>
<th>51-100</th>
<th>101-200</th>
<th>301-500</th>
<th>501-750</th>
<th>.751-1000</th>
<th>Over 1000</th>
<th>Mean no. head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litters farrowed</td>
<td>1520</td>
<td>278</td>
<td>848</td>
<td>1037</td>
<td>295</td>
<td>109</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>25</td>
</tr>
<tr>
<td>Hogs raised</td>
<td>1323</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>57</td>
<td>218</td>
<td>1095</td>
<td>518</td>
<td>421</td>
<td>237</td>
</tr>
<tr>
<td>Beef cows</td>
<td>2944</td>
<td>57</td>
<td>592</td>
<td>384</td>
<td>110</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Feeder cattle</td>
<td>2384</td>
<td>-</td>
<td>569</td>
<td>317</td>
<td>422</td>
<td>193</td>
<td>-</td>
<td>145</td>
<td>-</td>
<td>52</td>
</tr>
<tr>
<td>Milk cows</td>
<td>2953</td>
<td>508</td>
<td>337</td>
<td>289</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Dairy stock</td>
<td>3152</td>
<td>385</td>
<td>282</td>
<td>231</td>
<td>37</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Ewes</td>
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<td>-</td>
<td>39</td>
<td>36</td>
<td>39</td>
<td>39</td>
<td>-</td>
<td>-</td>
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<td>2</td>
</tr>
<tr>
<td>Feeder lambs</td>
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<td>-</td>
<td>39</td>
<td>-</td>
<td>-</td>
<td>39</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Poultry</td>
<td>3570</td>
<td>-</td>
<td>91</td>
<td>-</td>
<td>132</td>
<td>91</td>
<td>146</td>
<td>-</td>
<td>57</td>
<td>45</td>
</tr>
</tbody>
</table>

*4087 partnership operators during the first year.
of the operators did not raise any hogs during either their first or current years of farming. The mean numbers of litters farrowed and hogs raised doubled from the respondents' first to their current years of farming, for both individual and partnership operators. During the first year, 26.8 percent of the individual operators who farrowed litters of pigs had 1 to 10 litters. Currently 27.5 percent had 26 to 50 litters. Of those in partnership, 25.4 percent of the first year, and 18.2 percent of the current year operators who raised hogs had 26 to 50 litters farrowed per year. Thirty-six operators who were in partnership had produced 4000 or more hogs during the current year of farming. There were 3747 individual operators, or 37.5 percent, who raised 50 to 200 pigs during the first year and 3764 operators, or 33.1 percent, who raised 100 to 300 pigs during the current year. One-half of the respondents in partnerships produced 100 to 500 hogs during their first year of farming, whereas, one-third produced 200 to 750 during the current year. Hogs were raised more than any other species of livestock by the young operators in the study.

Next to the production of hogs, feeder cattle was the livestock enterprise most frequently reported by the young farmers. Over 50 percent of the respondents did not have feeder cattle, except for the current year partnerships in which 45.6 percent did not have feeder cattle. It was expected that during the first year individual operators would not have the volume of cattle they would during their current year of
farming. The majority of those individuals who had feeder cattle had 50 head, or less, during their first and current years of farming. The majority of partnership operations had over 50 head of cattle the first year and 181, or 5.9 percent, of the operators indicated they had 750 to 1000 head in the current year of farming. The mean number of feeder cattle per operator increased from 15 the first year to 41 during the current year for the individual operator. Those in partnership increased their feeder cattle from a mean of 46 head their first year to 162 during the current year.

Approximately one-fourth of the farm operators had beef cows. Individual operators had a mean number of 2 cows their first year and 7 cows for their current year of farming. Operators in partnerships reported a mean number of 9 cows their first year and 16 for the current year. Very few operators had over 50 beef cows in either their first or current years of farming.

There was about the same percentage (25 percent) of young operators who had dairy cows as there was with beef cows. The largest percentage of both individual and partnership operators during the first and current years of farming reported their dairy herd to be 1 to 10 cows. The number of respondents who had young dairy stock was very similar to those who had dairy cows.

Only 15 percent of the individual operators had ewe flocks or feeder lambs. The percentage was even less for partnership operations. In fact, there were only 1.8 percent of the respondents in partnership who had feeder lambs during their first year of farming. The number of
Table 44. Livestock raised by young farmers who farmed in partnership during the current year

<table>
<thead>
<tr>
<th>Livestock enterprise</th>
<th>None</th>
<th>1-10</th>
<th>11-25</th>
<th>26-50</th>
<th>51-100</th>
<th>201-300</th>
<th>301-500</th>
<th>501-750</th>
<th>751-1000</th>
<th>Over 1000</th>
<th>Mean no. head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litters farrowed</td>
<td>1095</td>
<td>222</td>
<td>490</td>
<td>551</td>
<td>512</td>
<td>161</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>35.9</td>
<td>7.3</td>
<td>16.4</td>
<td>18.2</td>
<td>16.9</td>
<td>5.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Hogs raised</td>
<td>815</td>
<td>37</td>
<td>-</td>
<td>114</td>
<td>148</td>
<td>538</td>
<td>281</td>
<td>327</td>
<td>415</td>
<td>255</td>
<td>93</td>
</tr>
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<td>27.0</td>
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<td>4.9</td>
<td>17.8</td>
<td>9.3</td>
<td>10.8</td>
<td>13.7</td>
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</tr>
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<td>96</td>
<td>9.5</td>
<td>251</td>
<td>292</td>
<td>37</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>16</td>
</tr>
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<td></td>
<td>68.1</td>
<td>3.2</td>
<td>284</td>
<td>8.3</td>
<td>9.7</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Feeder cattle</td>
<td>1379</td>
<td>57</td>
<td>9.4</td>
<td>76</td>
<td>255</td>
<td>378</td>
<td>157</td>
<td>256</td>
<td>-</td>
<td>181</td>
<td>162</td>
</tr>
<tr>
<td></td>
<td>45.6</td>
<td>1.9</td>
<td>210</td>
<td>2.5</td>
<td>8.6</td>
<td>12.5</td>
<td>5.2</td>
<td>8.4</td>
<td>5.9</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Milk cows</td>
<td>2277</td>
<td>307</td>
<td>6.9</td>
<td>193</td>
<td>36</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>75.3</td>
<td>10.2</td>
<td>166</td>
<td>6.4</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Young dairy stock</td>
<td>2305</td>
<td>248</td>
<td>5.4</td>
<td>156</td>
<td>148</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>76.2</td>
<td>8.2</td>
<td>140</td>
<td>5.1</td>
<td>5.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Ewes</td>
<td>2680</td>
<td>52</td>
<td>4.7</td>
<td>75</td>
<td>76</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>88.3</td>
<td>1.7</td>
<td>52</td>
<td>2.4</td>
<td>2.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Feeder lambs</td>
<td>2755</td>
<td>140</td>
<td>1.7</td>
<td>39</td>
<td>-</td>
<td>37</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>91.1</td>
<td>4.7</td>
<td>-</td>
<td>1.3</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>2584</td>
<td>-</td>
<td>148</td>
<td>36</td>
<td>219</td>
<td>36</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>85.4</td>
<td>-</td>
<td>4.8</td>
<td>1.3</td>
<td>7.2</td>
<td>1.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)3023 partnership operators during the current year.
feeder lambs or ewes reported by both groups of operators was evenly distributed with a range of 1 to 200 lambs. Ninety-three respondents exceeded 500 feeder lambs during their first year of farming, and no operator reached this level of production during the current year.

Those young farmers who were farming as individual operators had more poultry than those in partnerships. Approximately 15 percent of both individual and partnership operators had some poultry on their farms. There were 73 first year and 130 current year individual operators in the study who produced 10,000 or more turkeys, whereas, no partnership operators had turkeys.

From the study one may conclude that hogs were produced to the greatest extent of any species of livestock by young farm operators. Two-thirds of the respondents raised hogs during their first and current years of farming. The mean number of hogs raised ranged from a low of 105 head per year for those operators who farmed as individuals their first year to a high mean number of 434 head for partnership operations during their current year. Young farm operators increased their livestock programs from the first year to the current year of farming. Approximately 50 to 60 percent of the young farmers had feeder cattle, 25 percent had dairy and beef cows, 15 percent had sheep, and 15 percent had poultry.

Operating expenses of individual and partnership farming operations during the respondents' first and current years of farming by age of the young farm operators are presented in Tables 45 and 46. During the first year of farming there were 3748, or 27.5 percent, of the 13,630
Table 45. Total operating expenses of those in partnerships for first and current years of farming by age of operator

<table>
<thead>
<tr>
<th>Present age of young farm operator</th>
<th>First year farming</th>
<th>Current year farming</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18- 21- 23- 25- 27- 29- Total</td>
<td>18- 21- 23- 25- 27- 29- Total</td>
</tr>
<tr>
<td></td>
<td>(Number)</td>
<td>(Number)</td>
</tr>
<tr>
<td>Less than</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000</td>
<td>52 109 278 157 293 291 1180</td>
<td>52 - 58 - 91 52 253</td>
</tr>
<tr>
<td>Percent</td>
<td>4.4 9.2 23.5 13.3 24.8 24.7 31.5 20.6</td>
<td>22.5 36.0 20.6 11.1</td>
</tr>
<tr>
<td>5000-9999</td>
<td>141 57 331 438 289 1256</td>
<td>- 52 76 96 91 182 497</td>
</tr>
<tr>
<td>Percent</td>
<td>11.2 4.5 26.4 24.9 23.0 33.5</td>
<td>10.5 15.3 19.3 18.3 36.6 21.8</td>
</tr>
<tr>
<td>10000-19999</td>
<td>- - 153 128 238 352 871</td>
<td>- - 117 194 235 146 692</td>
</tr>
<tr>
<td>Percent</td>
<td>- - 17.7 14.6 27.3 40.4 23.2</td>
<td>16.9 28.1 34.1 21.0 30.3</td>
</tr>
<tr>
<td>20000-29999</td>
<td>- - 128 37 - 73 238</td>
<td>- - 52 36 53 207 348</td>
</tr>
<tr>
<td>Percent</td>
<td>- - 54.1 15.6 30.8 6.3</td>
<td>14.9 10.3 14.9 59.4 15.6</td>
</tr>
<tr>
<td>30000-39999</td>
<td>- 37 - - 57 94</td>
<td>- - 52 53 - 105</td>
</tr>
<tr>
<td>Percent</td>
<td>39.8 - 61.3 2.5</td>
<td>49.5 49.5 44.6</td>
</tr>
<tr>
<td>40000-49999</td>
<td>- - 52 - 57 - 109</td>
<td>- 37 36 - 36 129 238</td>
</tr>
<tr>
<td>Percent</td>
<td>- - 47.7 52.3 3.0</td>
<td>15.5 15.1 15.1 54.2 10.4</td>
</tr>
<tr>
<td>50000-99999</td>
<td>- - - - - - - - - - -</td>
<td>- 52 57 - - 109</td>
</tr>
<tr>
<td>Percent</td>
<td>- - - - - - - - - - -</td>
<td>47.7 52.3 4.6</td>
</tr>
<tr>
<td>60000-149,999</td>
<td>- - - - - - - - - - -</td>
<td>- 36 36</td>
</tr>
<tr>
<td>Percent</td>
<td>- - - - - - - - - - -</td>
<td>100.0 1.6</td>
</tr>
<tr>
<td>Over 150,000</td>
<td>- - - - - - - - - -</td>
<td>- 36 36</td>
</tr>
<tr>
<td>Total operators</td>
<td>52 287 668 653 1026 1062 3748 52 89 391 378 652 716</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>1.4 7.7 17.9 17.5 27.3 28.4</td>
<td>2.3 3.9 17.1 16.6 28.6 31.4</td>
</tr>
</tbody>
</table>
Table 46. Total operating expenses of individual operators for first and current years of farming by age of operator

<table>
<thead>
<tr>
<th>Amount ($)</th>
<th>Present age of young farm operator</th>
<th>First year of farming</th>
<th>Current year of farming</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18-</td>
<td>21-</td>
<td>23-</td>
<td>25-</td>
</tr>
<tr>
<td>Less than 1000</td>
<td>112</td>
<td>235</td>
<td>270</td>
<td>381</td>
</tr>
<tr>
<td>Percent</td>
<td>5.3</td>
<td>11.2</td>
<td>13.0</td>
<td>18.2</td>
</tr>
<tr>
<td>1000-2499</td>
<td>241</td>
<td>490</td>
<td>522</td>
<td>526</td>
</tr>
<tr>
<td>Percent</td>
<td>11.5</td>
<td>24.4</td>
<td>24.9</td>
<td>25.1</td>
</tr>
<tr>
<td>2500-4999</td>
<td>151</td>
<td>531</td>
<td>552</td>
<td>382</td>
</tr>
<tr>
<td>Percent</td>
<td>5.8</td>
<td>20.4</td>
<td>21.3</td>
<td>14.7</td>
</tr>
<tr>
<td>5000-9999</td>
<td>114</td>
<td>239</td>
<td>502</td>
<td>730</td>
</tr>
<tr>
<td>Percent</td>
<td>5.8</td>
<td>12.3</td>
<td>25.9</td>
<td>37.7</td>
</tr>
<tr>
<td>10,000-19,999</td>
<td>37</td>
<td>164</td>
<td>39</td>
<td>76</td>
</tr>
<tr>
<td>Percent</td>
<td>7.6</td>
<td>33.7</td>
<td>8.0</td>
<td>15.6</td>
</tr>
<tr>
<td>20,000-29,999</td>
<td>-</td>
<td>-</td>
<td>89</td>
<td>171</td>
</tr>
<tr>
<td>Percent</td>
<td>20.7</td>
<td>39.7</td>
<td>18.2</td>
<td>21.2</td>
</tr>
<tr>
<td>30,000-49,999</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>92</td>
</tr>
<tr>
<td>Percent</td>
<td>56.4</td>
<td>44.2</td>
<td>1.7</td>
<td>7.3</td>
</tr>
<tr>
<td>50,000-69,999</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Percent</td>
<td>100.0</td>
<td>0.5</td>
<td>100.0</td>
<td>0.4</td>
</tr>
<tr>
<td>70,000 or more</td>
<td>36</td>
<td>39</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Percent</td>
<td>100.0</td>
<td>0.4</td>
<td>14.3</td>
<td>66.7</td>
</tr>
<tr>
<td>Total operators</td>
<td>149</td>
<td>741</td>
<td>1783</td>
<td>2167</td>
</tr>
<tr>
<td>Percent</td>
<td>1.5</td>
<td>7.5</td>
<td>18.0</td>
<td>21.9</td>
</tr>
</tbody>
</table>
young farm operators in the study who were involved in a partnership operation. By the current year of farming (1968), partnership operations had been reduced to 2278, or 16.7 percent, of the operators in the study.

The range in age of first year farm operators involved in partnership operations was from 1.4 percent who were 18 to 20 years of age, to 28.4 percent who were 29 to 30 years of age, whereas the range was from 2.3 percent of 18 to 20 year olds to 31.4 percent of the 29 to 30 year old operators during the current year. The distribution of ages during the first year was very similar to that of the current year for both those young men who were operating farms as single proprietors or as partners.

As one compares the total operating expenses of the first and current years of partnership farming operations, there was an increase in expenses for the current year over the first year of farming. In the first year nearly one-third (31.5 percent) had expenses of less than $5,000, whereas in the current year only 11.1 percent of the operators involved with partnerships had less than $5,000 of operating expenses. For those young farm operators who had $40,000, or more of operating expenses, 5.5 percent were in this category their first year, but the number had increased to 21.2 percent for the current year of farming. In fact there were no young farmers in partnerships who had more than $100,000 in expenses during their first year, whereas 93 of the 2278, or 6.2 percent, had over $100,000 of operating expenses during their current year of farming. A large cluster of young farm operators in partnerships during their first year was composed of those who were
27 to 30 years of age who had operating expenses of $5,000 to $20,000. A similar cluster during the current year was composed of operators of the same age but who had expenses of $10,000 to $40,000. This increase in operating expenses shows that the capital requirement for farming had increased over the years.

The data in Table 45 provide the distribution of operating expenses by age of single proprietors for the first and current years of farming. As was expected the operating expenses for individual operators was not as great as that of those in partnerships for either the first or current years of farming. For single proprietorships the largest group of young farm operators consisted of those who were 27 to 30 years of age who had operating expenses of $2,500 to $10,000 for the first year of farming, whereas for the current year the largest group was the group in the same age bracket who had operating expenses in the $5,000 to $20,000 bracket. Only 683, or 7.0 percent, of the respondents who were farming as individuals had operating expenses over $20,000 during their first years of farming. During the current year there were 2116, or 18.6 percent, whose operating expenses were over $20,000.

The data in Tables 45 and 46 indicate there were increases in operating expenses from the first to the current years of farming for both single proprietors and partnerships. The operating expenses were greater for the older young farm operators. This stands to reason because the men were becoming better established in farming with larger farming operations which required more operating expense.

Data in Tables 39 through 44 indicated that the young farmers had
increased their crops and livestock programs from their first to their current year of farming. They also increased the number of acres farmed each year. The increased size of the young farm operators farming programs along with higher capital requirements for farming in recent years was evidence of the increased operating costs of the respondents.

A comparison of the young farm operators' net farm incomes for the first and current years (1968) is presented in Tables 47 and 48. The net farm income data is given for individuals, partnerships, and young farm operators who were involved in both partnerships and single proprietorships. It was gratifying to discover that more young men in the study (12.5 percent) had net farm incomes of $10,000 or more during the current year of farming, whereas only .6 percent had reached this level of income in their first year of farming. There were 9.6 percent of the farm operators who indicated a loss in net income during the first year whereas only 2.4 percent reported a loss during the current year of farming. The young farm operators had made progress in net farm income as they became better established. Two-thirds of the respondents had net farm incomes of $1,000 to $5,000 during their first year of farming, whereas nearly one-half (49.3 percent) had net farm incomes of $2,500 to $7,500 during the current year.

A higher percentage of the young operators in partnerships had net incomes above $5,000 than those farming as individual operators during both the first and current years of farming. Those operators who were farming in a combination operation, that is a partnership and individual operation, did not appear to have higher net farm incomes than those who
Table 47. Net farm incomes of young farm operators during their first year of farming by form of farming operation

<table>
<thead>
<tr>
<th>Net income</th>
<th>Individual No.</th>
<th>Individual %</th>
<th>partnership No.</th>
<th>partnership %</th>
<th>combination Individual No.</th>
<th>combination partnership %</th>
<th>Total No.</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss</td>
<td>1232</td>
<td>12.9</td>
<td>112</td>
<td>3.0</td>
<td>-</td>
<td>-</td>
<td>1344</td>
<td>9.6</td>
</tr>
<tr>
<td>001-999</td>
<td>1409</td>
<td>14.8</td>
<td>334</td>
<td>8.9</td>
<td>36</td>
<td>10.6</td>
<td>1779</td>
<td>12.7</td>
</tr>
<tr>
<td>1000-2499</td>
<td>3506</td>
<td>36.7</td>
<td>1780</td>
<td>47.5</td>
<td>178</td>
<td>52.5</td>
<td>5553</td>
<td>39.9</td>
</tr>
<tr>
<td>2500-4999</td>
<td>2539</td>
<td>26.6</td>
<td>955</td>
<td>25.5</td>
<td>36</td>
<td>10.6</td>
<td>3655</td>
<td>26.2</td>
</tr>
<tr>
<td>5000-7499</td>
<td>561</td>
<td>5.9</td>
<td>421</td>
<td>11.2</td>
<td>53</td>
<td>15.3</td>
<td>1108</td>
<td>7.9</td>
</tr>
<tr>
<td>7500-9999</td>
<td>260</td>
<td>2.7</td>
<td>89</td>
<td>2.4</td>
<td>36</td>
<td>10.6</td>
<td>437</td>
<td>3.1</td>
</tr>
<tr>
<td>10,000 or more</td>
<td>36</td>
<td>0.4</td>
<td>57</td>
<td>1.5</td>
<td>-</td>
<td>-</td>
<td>93</td>
<td>0.6</td>
</tr>
<tr>
<td>Total operators</td>
<td>9543</td>
<td></td>
<td>3748</td>
<td></td>
<td>339</td>
<td>339</td>
<td>13969a</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>68.4</td>
<td></td>
<td>26.8</td>
<td></td>
<td>2.4</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

"a339 operators had a combination operation."
Table 48. Net farm incomes of young farm operators during the current year of farming by form of operation

<table>
<thead>
<tr>
<th>Net income</th>
<th>Individual</th>
<th>Partnership</th>
<th>Combination</th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Loss</td>
<td>346</td>
<td>3.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>001-999</td>
<td>954</td>
<td>9.0</td>
<td>161</td>
<td>7.1</td>
<td>96</td>
</tr>
<tr>
<td>100-2499</td>
<td>1560</td>
<td>14.7</td>
<td>165</td>
<td>7.2</td>
<td>254</td>
</tr>
<tr>
<td>2500-4999</td>
<td>2986</td>
<td>28.2</td>
<td>544</td>
<td>23.9</td>
<td>125</td>
</tr>
<tr>
<td>5000-7499</td>
<td>2112</td>
<td>19.2</td>
<td>801</td>
<td>35.2</td>
<td>270</td>
</tr>
<tr>
<td>7500-9999</td>
<td>1301</td>
<td>12.3</td>
<td>198</td>
<td>8.7</td>
<td>-</td>
</tr>
<tr>
<td>10,000 or more</td>
<td>1348</td>
<td>12.8</td>
<td>409</td>
<td>18.0</td>
<td>-</td>
</tr>
<tr>
<td>Total operators</td>
<td>10607</td>
<td>73.8</td>
<td>2278</td>
<td>15.8</td>
<td>745</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>745</td>
</tr>
</tbody>
</table>

*745 operators had a combination operation.*
were farming as individual operators or in a partnership.

It should be noted that the number of men who were farming in partnerships declined from the first year (3748) to the current year (2278), whereas the number who were involved in a combination operation increased from 339 for the first year to 745 in the current year. In all probability more respondents were operating additional land by themselves outside their partnership as they became more experienced and established in farming.

As land became available, the young farm operators acquired it to supplement their existing farming operation. Some operators purchased land, others rented for themselves or in partnership. In most instances the young operators were able to add more land to their farming programs without large additional investments for machinery or labor. This increased acreage may have enabled the respondents to increase their net income.

Young farm operators were asked to express their opinion as to how well they were established in farming. Table 49 presents their opinions on establishment by the number of years they had been farming. There was rather an even distribution of young farmers who had been farming two, three, four, five and six years each. This group accounted for 58.4 percent of the total young farmers. Of the total number of young farmers, 887, or 6.6 percent, had been farming just during the current year. Those respondents (39 or .3 percent) who had farmed for 13 years began farming when they were 18 years of age and continued without interruption.

Approximately equal numbers of the young farm operators indicated they were just getting started, or were partially established in farming.
Table 49. Young farm operator degree or establishment in farming by the number of years in farming

<table>
<thead>
<tr>
<th>Years of farming</th>
<th>Well established No. %</th>
<th>Partially established No. %</th>
<th>Just starting No. %</th>
<th>Total No. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>37 0.7</td>
<td>850 16.3</td>
<td>887 6.6</td>
<td></td>
</tr>
<tr>
<td>Two</td>
<td>364 7.1</td>
<td>1211 23.2</td>
<td>1687 12.5</td>
<td></td>
</tr>
<tr>
<td>Three</td>
<td>353 6.9</td>
<td>908 17.4</td>
<td>1366 10.1</td>
<td></td>
</tr>
<tr>
<td>Four</td>
<td>847 16.4</td>
<td>573 11.0</td>
<td>1704 12.6</td>
<td></td>
</tr>
<tr>
<td>Five</td>
<td>394 7.7</td>
<td>432 8.3</td>
<td>1457 10.8</td>
<td></td>
</tr>
<tr>
<td>Six</td>
<td>925 18.0</td>
<td>431 8.3</td>
<td>1682 12.4</td>
<td></td>
</tr>
<tr>
<td>Seven</td>
<td>510 9.9</td>
<td>334 6.4</td>
<td>1101 8.2</td>
<td></td>
</tr>
<tr>
<td>Eight</td>
<td>462 9.0</td>
<td>330 6.3</td>
<td>1033 7.7</td>
<td></td>
</tr>
<tr>
<td>Nine</td>
<td>539 10.5</td>
<td>-</td>
<td>963 7.1</td>
<td></td>
</tr>
<tr>
<td>Ten</td>
<td>310 6.0</td>
<td>57 1.1</td>
<td>666 4.9</td>
<td></td>
</tr>
<tr>
<td>Eleven</td>
<td>264 5.1</td>
<td>96 1.8</td>
<td>485 3.7</td>
<td></td>
</tr>
<tr>
<td>Twelve</td>
<td>146 2.8</td>
<td>-</td>
<td>413 3.1</td>
<td></td>
</tr>
<tr>
<td>Thirteen</td>
<td>-</td>
<td>-</td>
<td>39 0.3</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3110</td>
<td>5151</td>
<td>5222 38.7</td>
<td>13483 a</td>
</tr>
</tbody>
</table>

aDoes not include 147 non respondents.
Slightly less than one-fourth stated they were well established in farming. The largest group who rated themselves as well established (20.3 percent) had been farming five years.

As can be observed by the distribution in Table 49 the number of years that the young farmer had farmed was not directly related to the degree of establishment. Some young men (112) said they were well established in farming when they had only farmed two years, whereas 96 indicated they were just getting started even though they had farmed for 11 years. Of the 5222 young farmers who indicated they were just starting to farm 15.6 percent had been farming 7 or more years. A contrast to this situation is noted for those (501 or 15.6 percent) young farmers who stated they were well established when they had only farmed 1 to 3 years. There was a more even distribution of the young farm operators (5151) who responded they were partially established by years of farming.

The author believes that the response to the question on farming establishment was partially related to the attitude of the young farmer toward his future in farming, which may account for some of the variation in the responses.

When respondents were asked to name some of the obstacles they met in becoming established in farming, they quite often listed the availability of land to farm. Some operators would rent an additional 30 acres as it became available in the community even though they were in partnership on other land. It was used to supplement their net farm income and could be done without extensive capital outlay for additional machinery.

A correlation matrix with 18 variables concerning the factors which
may have an influence on the establishment of young farm operators appears in Table 50. Pearson coefficients of correlation were used to indicate such interrelationships.

Among the variables studied, the highest correlation was that between total acres operated the first year and total crop acres the first year (.76). A similar relationship existed between total acres operated in 1968 and total crop acres in 1968 (.75). This is a natural relationship and was expected that young farmers would have more crop acres if they increased their total acres. There was also a high relationship between the total acres the respondent had his first year and the total acres operated in 1968 (.69). There was, however a smaller r value (.44) when total acres operated in the first year was compared to the total crop acres for 1968. Young farmers increased their total acreage from their first to the current year of farming as reflected by this relationship.

The variable which had the smallest r value and thus the least relationship with any other variable was the father's age. There was, however, some relationship between the father's age and the number of days the respondent worked off his farm (-.15). This was a negative relationship in that the older the father was, the less the young farm operator worked off farm.

Among the variables concerning education of the young farm operator, findings indicate that the highest grade completed by the respondent was directly related to years as a member of 4-H (.24); participation in extension clinics or meetings (.25) and participation in Iowa State University short courses. The relationship between the highest grade completed
Table 50. Correlation coefficients between variables affecting the establishment of young farm operators in Iowa

<table>
<thead>
<tr>
<th>Characteristic variable</th>
<th>Correlation coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1. Age of op.</td>
<td>1.00</td>
</tr>
<tr>
<td>2. Highest grade completed</td>
<td>.00</td>
</tr>
<tr>
<td>3. Father's age</td>
<td>.12</td>
</tr>
<tr>
<td>4. Yrs. 4-H</td>
<td>.05</td>
</tr>
<tr>
<td>5. Yrs. in voc. ag.</td>
<td></td>
</tr>
<tr>
<td>6. Cash on hand</td>
<td></td>
</tr>
<tr>
<td>prior to farm.</td>
<td>.01</td>
</tr>
<tr>
<td>7. Yr. start. farm.</td>
<td></td>
</tr>
<tr>
<td>age</td>
<td></td>
</tr>
<tr>
<td>8. Age start farm.</td>
<td>.34</td>
</tr>
<tr>
<td>9. No. jobs held</td>
<td>.19</td>
</tr>
<tr>
<td>10. No. days worked</td>
<td></td>
</tr>
<tr>
<td>off farm(1968)</td>
<td>.03</td>
</tr>
<tr>
<td>11. No. times farm.</td>
<td></td>
</tr>
<tr>
<td>interrupted</td>
<td>.10</td>
</tr>
<tr>
<td>12. Acres operated</td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>.02</td>
</tr>
<tr>
<td>13. Crop acres</td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>.09</td>
</tr>
<tr>
<td>14. Acres op. 1968</td>
<td>.09</td>
</tr>
<tr>
<td>15. Crop acres 1968</td>
<td>.11</td>
</tr>
<tr>
<td>16. Partic. young or adult farm class</td>
<td>-.02</td>
</tr>
<tr>
<td>17. Partic. ext.</td>
<td></td>
</tr>
<tr>
<td>clinics-meets</td>
<td>.10</td>
</tr>
<tr>
<td>18. Partic. ISU</td>
<td></td>
</tr>
<tr>
<td>short courses</td>
<td>.04</td>
</tr>
</tbody>
</table>
and years of vocational agriculture (.03) and participation in young or adult farmer courses (.08) was much less. It is difficult to explain this limited relationship since one would assume that the more years of education, the more vocational agriculture the respondent would have had. Not all schools offered vocational agriculture and a very small number of schools provided young farmer classes so there was limited opportunity for some respondents to participate in such programs.

If a young farmer participated in one type of post high school educational program, then it may be expected that he was active in others. The relationship is shown by the following correlation coefficients: participation in young and adult farmer classes with participation in extension clinics or meetings (.39); participation in young and adult farmer classes with participation in Iowa State University short courses (.16); and participation in extension clinics or meetings with participation in Iowa State University short courses (.35).

The year the respondent started to farm when compared with other variables produced negative values in nearly all instances. The reason for this negative relationship was that the year started to farm was inversely related to the other variables.

It was expected that the relationship between the year when starting to farm and the age of the young farm operator would be rather high (.61); also when the year starting to farm was compared to the number of jobs held prior to farming (.49). There was also a high relationship between the age of the respondent and the number of jobs held prior to
farming (.49). There was also a high relationship between the age of the respondent and the number of jobs held prior to farming (.72). The older the respondent was before he began farming the more possibility he had to have jobs before farming.

Moderate relationships were found to exist when the number of days worked off the farm in 1968 was compared to: (1) total acres operated first year (-.27); (2) total crop acres first year (-.30); (3) total acres operated in 1968 (-.33) and (4) total crop acres for 1968. As expected the days worked off the farm in 1968 would be less as total and crop acres increased.

The cash on hand by the respondent when compared to various variables produced the following r values: (1) year started to farm (.25); (2) age when starting to farm (.30), and (3) number of jobs held (.19).

As the author reviewed the correlation matrix, he failed to find a high relationship among any of the variables except the obvious ones such as total acres operated with total crop acres. Young farmers begin and become established in farming through a variety of ways and situations, therefore it was expected that there may not be high relationships among the variables.

A comparison of factors affecting the establishment of young farm operators by economic area of the state is presented in Table 51. The Western Livestock Area (I) had the largest percentage, 3669, or 26.9 percent, of young farm operators in the state, whereas the Southern Pasture Area (II) had the smallest percentage, 1987, or 14.6 percent. The
Northeast Dairy Area (III) with 2264, or 16.6 percent, and the Eastern Livestock Area (IV) with 2430, or 17.8 percent, were nearly equal in numbers of young farm operators. A total of 3280, or 24.1 percent, of the respondents were located in the Cash Grain Area (II) of Iowa. Differences in the numbers of operators were due to overall population differences, size of counties, and size of farms within the counties. There was a range in size of counties from 14 to 27 townships per county. In the Southern Pasture Area the mean farm size was 44 acres larger than the average of the state for the respondents' first year of farming, and 60 acres larger during the current year of farming.

There were no differences among areas of the state in the education attainment level of the young operators. The mean number of years of education was the same (12 years) for all areas with a mean of 12 years for the state of Iowa.

The mean number of years that the farm operators were members of 4-H was 2 for the state, but this varied from 2 to 3 years by the various areas. Young farmers who resided in Areas III, IV, and V had more mean years of 4-H (3 years) than those who resided in Areas I and II (2 years).

Of those young farm operators who had been enrolled in high school vocational agriculture, those who were located in the Cash Grain Area (II) had more years of training (3 years) than any other. The mean number of years of vocational agriculture for respondents in Areas I, III, and IV was only one year, whereas, it was two years for the state average, and for those who farmed in Area V.
It was interesting to note that in all areas of the state, except the Southern Pasture and Cash Grain Areas, young farmers had a mean age of 22 years when they began farming. They were 21 years old in these two areas, and there was a mean age of 21.6 years for the state. Evidently young men begin farming at an older age when they had a livestock operation as was expected in Areas I, III, and IV. Since the respondents did not begin farming until they were 22 or 23 years of age, there would naturally be a lapse of three to four years from the time they were 18 years of age until they started farming.

Young men in all areas of the state had a mean number of 2 occupations from the time they were 18 years of age until they began farming. As was reported in Table 25, there was a range of 0 to 9 occupations held by the young men before they began farming. Young operators who resided in the livestock areas of the state did not work off the farm to supplement their income as much as those who lived in the Cash Grain Area and the Southern Pasture Area. The mean number of years that respondents had been farming was 5.5 years. Those who farmed in the Southern Pasture Area had worked off their farms while farming for a mean of 4 years. Due to the unequal distribution of the number of respondents in the various areas, the mean number of off-farm jobs resulted in 2 for the state of Iowa, even though there was a range in the mean of 2 to 4 occupations. Off-farm custom work was the most reported occupation by the respondents.

The mean number of years that young farmers in this study (5.5 years) operated a farm was similar for all areas of the state. Fewer respondents
Table 51. Factors affecting the establishment of young farm operators by economic areas of Iowa

<table>
<thead>
<tr>
<th>Factor</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>State</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. operators</td>
<td>3669</td>
<td>3280</td>
<td>2416</td>
<td>2264</td>
<td>166</td>
<td>2430</td>
<td>178</td>
<td>1987</td>
</tr>
<tr>
<td>Present age</td>
<td>26</td>
<td>26</td>
<td>27</td>
<td>27</td>
<td>26</td>
<td>26</td>
<td>26.2</td>
<td></td>
</tr>
<tr>
<td>Highest grade</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Years of 4-H</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Years voc.ag.</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Age start.farm.</td>
<td>22</td>
<td>21</td>
<td>22</td>
<td>22</td>
<td>21</td>
<td>21</td>
<td>21.6</td>
<td></td>
</tr>
<tr>
<td>Yrs. between age 18 and start. to farm</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jobs from age 18 and start. farm</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yrs. worked off farm</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jobs done off farm while farm.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yrs. op. a farm</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>5.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>As indiv.</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>As partner</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>As owner</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
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<td>Part owner</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acres op. 1st yr</td>
<td>202</td>
<td>167</td>
<td>219</td>
<td>215</td>
<td>249</td>
<td>205</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acres op. 1968</td>
<td>281</td>
<td>238</td>
<td>248</td>
<td>270</td>
<td>331</td>
<td>271</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. partic. in young farm.</td>
<td>996</td>
<td>23.5</td>
<td>1414</td>
<td>33.3</td>
<td>703</td>
<td>16.6</td>
<td>762</td>
<td>17.9</td>
</tr>
<tr>
<td>Ext. meetings</td>
<td>1363</td>
<td>21.9</td>
<td>1866</td>
<td>30.6</td>
<td>1015</td>
<td>16.4</td>
<td>1378</td>
<td>22.2</td>
</tr>
<tr>
<td>ISU short course</td>
<td>105</td>
<td>9.3</td>
<td>283</td>
<td>24.8</td>
<td>273</td>
<td>24.0</td>
<td>254</td>
<td>20.4</td>
</tr>
<tr>
<td>Com.Co. Meetings</td>
<td>2778</td>
<td>26.8</td>
<td>2488</td>
<td>23.9</td>
<td>1795</td>
<td>17.3</td>
<td>2176</td>
<td>21.0</td>
</tr>
</tbody>
</table>
(mean of 3 years) in the Northeast Dairy Area farmed as individual operators and more farmed in partnership (mean of 2 years) than in the remaining areas of the state. The Northeast Dairy Area had the largest mean (5 years) for the average years farmed by young men who had farmed as individual operators. The respondents who had farmed in partnership did not have exceptionally large dairy enterprises. Since Northeast Iowa is considered to be the dairy area of the state, the large dairy partnerships may have not been included, or possibly, dairy farmers do not farm in partnership as much as do other farmers. The Northeast Dairy and Southern Pasture Area were the only areas in which some of the respondents operated their entire farms as owners. This may also account for the greater number of individual operators. Some young men farming as part-owners were reported in all areas of the state except in the Western Livestock Area. The respondents who were part-owners had farmed for a mean of one year as part-owners in the other areas of the state.

The mean farm size of the young operators in this study was above the state average for the respondents' current year of farming in all areas of the state. The largest farms were reported by young farm operators who resided in the Southern Pasture Area with a mean of 249 acres during the first year, and 331 acres during the current year. The smallest farms were located in the Cash Grain Area of Iowa. Young farmers in the Northeast Area increased their mean number of acres operated between their first year to the current year by only 29 acres, whereas, young farm operators in the Southern Pasture Area increased their acreage by 82 acres during the same period.
As one made a comparison within areas of the state of those young farm operators who had participated in educational programs, striking differences were found. The respondents who resided in the Cash Grain Area of Iowa participated to a greater extent in all types of programs listed except those conducted by commercial companies. Those who lived in the Southern Pasture Area participated less than those in the other areas in all the programs listed. One may conclude that the young farmers in the Cash Grain Area had more time to participate in such educational programs; however, the author does not have evidence in this study to prove this conclusion right or wrong. Only 9.3 percent of those participants in Iowa State University short courses lived in the Western Livestock Area which was the smallest group for this educational activity.

The major differences among economic areas of the state were (1) the number of young farm operators per area, (2) years of vocational agriculture in high school, (3) years worked off the farm while farming, (4) years farmed as an individual operator, (5) size of farms in acres, and (6) participation in educational programs.

Information pertaining to factors which affected the establishment of young farm operators by the years they started to farm is presented in Table 51. Comparisons were made of the young operators stratified by the year they began farming, 1956-1960, 1961-1964, and 1965-1968. Those respondents who began farming during the 1965 to 1968 period comprised 41.6 percent, or 5,662 of the 13,630 young men. The 1961 to 1964 group consisted of 4978, or 36.5 percent, whereas the 1956 to 1960 group had 2990,
or 21.9 percent, of the total respondents.

There were no differences in the means among groups concerning their educational attainment. Due to the uneven distribution of young farmers in the groups, the data show that the respondents who started to farm in the 1956 to 1960 period did not have any post high school education, but the others had a mean of one year. The young farmers who started to farm between 1956 and 1960 had a mean of 3 years of membership in 4-H, whereas those who began farming after 1960 had a mean of 2 years of 4-H membership. Young farm operators who started to farm during the 1965 to 1968 period had a mean of one year of vocational agriculture in high school which was less than had by the other groups.

The largest difference found in comparing the young farm operators by years they started to farm, was found in their age when they began farming. Those who started to farm between 1956 and 1960 had a mean age of 19 years; the 1961 to 1964 group had a mean of 21 years of age, whereas the 1965 to 1968 respondents had a mean age of 23 years when they began farming. In recent years many of the young men served in the military, or had some post high school education before they started to farm. They also had more years in agricultural and nonagricultural occupations. The respondents who began farming between 1956 and 1960 held only one occupation prior to farming while those who began farming in the 1965 to 1968 period had a mean of 3 occupations. After starting to farm those who began between 1965 and 1968 had a mean of 2 years of work off their farm, whereas the other two groups had a mean of 3 years of off-farm work.
Table 52. Factors affecting the establishment of young farm operators by years they started to farm

<table>
<thead>
<tr>
<th>Factors</th>
<th>Years started to farm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>56-60 %</td>
</tr>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Number of operators</td>
<td>2990</td>
</tr>
<tr>
<td>Form of farming operation first year</td>
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</tr>
<tr>
<td>Individual operators</td>
<td>1971</td>
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<tr>
<td>Partnership</td>
<td>982</td>
</tr>
<tr>
<td>Combination</td>
<td>36</td>
</tr>
<tr>
<td>Form of farming operation 1968</td>
<td></td>
</tr>
<tr>
<td>Individual operators</td>
<td>2401</td>
</tr>
<tr>
<td>Partnerships</td>
<td>516</td>
</tr>
<tr>
<td>Combination</td>
<td>73</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
</tr>
<tr>
<td>Highest grade completed</td>
<td>12</td>
</tr>
<tr>
<td>Post high school education</td>
<td>0</td>
</tr>
<tr>
<td>Years as a 4-H member</td>
<td>3</td>
</tr>
<tr>
<td>Years enrolled in Voc. Ag.</td>
<td>2</td>
</tr>
<tr>
<td>Age when starting to farm</td>
<td>19</td>
</tr>
<tr>
<td>Jobs done before farming</td>
<td>1</td>
</tr>
<tr>
<td>Years worked off the farm</td>
<td>3</td>
</tr>
<tr>
<td>Number of off-farm jobs</td>
<td>1</td>
</tr>
<tr>
<td>Acres operated first year</td>
<td>185</td>
</tr>
<tr>
<td>Acres owned first year</td>
<td>67</td>
</tr>
<tr>
<td>Acres rented first year</td>
<td>118</td>
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</tbody>
</table>
Table 52. (Continued)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Years started to farm</th>
<th>Mean</th>
<th>Mean</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>56-60 %</td>
<td>61-64 %</td>
<td>65-68 %</td>
<td></td>
</tr>
<tr>
<td>Acres operated in 1968</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>346</td>
<td>290</td>
<td>229</td>
<td></td>
</tr>
<tr>
<td>Acres owned in 1968</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>106</td>
<td>97</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td>Acres rented in 1968</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>240</td>
<td>193</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Number of hogs fed (first year)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>117</td>
<td>182</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td></td>
<td>298</td>
<td>265</td>
<td>156</td>
<td></td>
</tr>
<tr>
<td>Number of corn acres (first year)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>82</td>
<td>81</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td></td>
<td>122</td>
<td>107</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td>Gross farm income first year:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(individuals)</td>
<td>5,594</td>
<td>12,352</td>
<td>8,314</td>
<td></td>
</tr>
<tr>
<td>(partnership)</td>
<td>18,043</td>
<td>22,105</td>
<td>25,644</td>
<td></td>
</tr>
<tr>
<td>Total operating expenses first year:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(individuals)</td>
<td>5,502</td>
<td>8,955</td>
<td>5,320</td>
<td></td>
</tr>
<tr>
<td>(partnership)</td>
<td>10,132</td>
<td>9,586</td>
<td>17,768</td>
<td></td>
</tr>
<tr>
<td>Net farm income first year:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(individuals)</td>
<td>1,917</td>
<td>3,023</td>
<td>2,147</td>
<td></td>
</tr>
<tr>
<td>(partnership)</td>
<td>2,562</td>
<td>2,925</td>
<td>2,943</td>
<td></td>
</tr>
<tr>
<td>Gross farm income 1968:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(individuals)</td>
<td>27,575</td>
<td>24,109</td>
<td>12,851</td>
<td></td>
</tr>
<tr>
<td>(partnership)</td>
<td>41,962</td>
<td>55,609</td>
<td>52,914</td>
<td></td>
</tr>
<tr>
<td>Total operating expenses 1968:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(individuals)</td>
<td>17,568</td>
<td>15,771</td>
<td>7,580</td>
<td></td>
</tr>
<tr>
<td>(partnership)</td>
<td>15,930</td>
<td>26,464</td>
<td>33,268</td>
<td></td>
</tr>
<tr>
<td>Net farm income 1968: (individuals)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6,208</td>
<td>6,440</td>
<td>3,871</td>
<td></td>
</tr>
<tr>
<td>(partnership)</td>
<td>6,391</td>
<td>6,451</td>
<td>5,651</td>
<td></td>
</tr>
</tbody>
</table>
There was no difference in the mean number of off-farm jobs done by the young farm operators after they began farming.

When the forms of farming operation were compared to the years the respondents started to farm, the major differences were in the numbers of combination operators. Thirty-six of the operators who began farming between 1956 and 1960 were combination operators in contrast to 162 of those who started farming in the 1965 to 1968 period. In 1968, 173 of those who started farming between 1956 and 1960 were combination operators, compared to 421 combination operators who started to farm during the 1965 to 1968 period. The numbers of individual operators and partnerships were in proportion to the number of operators who began farming during each of the time periods. The same pattern prevailed for both the first and current years of farming.

Those young farmers who started to farm between 1965 and 1968 operated, owned, and rented more land their first year of farming than those who began farming in the 1956 to 1960 period. The men who started to farm in the 1961 to 1964 period had the largest farms their first year of farming. As expected, the young farmers who started to farm between 1956 and 1960 operated, owned, and rented the largest farms of all operators during 1968.

The mean numbers of hogs fed and corn acres produced were slightly greater for the respondents who began farming in the 1956 to 1960 period. The mean numbers of hogs fed and mean acres of corn produced increased for all groups between the first and current years.
There was no set pattern in the differences in gross incomes, operating expenses, or net farm incomes among groups. In general the young farm operators who started to farm in the mid-period (1961 to 1964) had the largest gross incomes, operating expenses and net incomes. This was especially true for net farm income for both individual operators and partnerships during the first and current years of farming. Gross farm incomes and total operating expenses increased considerably from the first to the current years of farming for all three groups of operators, for those who farmed in partnership, and those who were individual operators.

Participation and Interest in Education

It may be observed from Table 53 that young farm operators were not very active in educational programs that were primarily designed to aid them in making farm management decisions. Over one-third had never attended young or adult farmer meetings conducted by the high school vocational agriculture teacher under the auspices of the public high school. More (45.7 percent) had attended extension meetings and clinics, but of this group 25 percent seldom attended. Slightly less than 10 percent had participated in Iowa State University short courses. Commercial companies appeared to have had the largest attendance of young farm operators of those programs listed in Table 53. This may be expected because many companies conduct educational meetings and therefore the respondents had several opportunities for giving an affirmative reply to this part of the schedule. No attempt was made to differentiate between a strict educational meeting by companies and one in which the motive was combined with
sales and education.

From 1958 to 1968 the mean number of vocational agriculture departments that conducted young farm programs was 56.4, therefore it was expected that participation in these programs would be limited. Young farm operators did, however, have greater opportunity to participate in adult farmer classes because the mean number of vocational agriculture departments conducting these classes were 251.8 during the years 1958-1968.

Respondents who had attended young or adult farmer meetings (4241 or 31.1 percent of the total young farm operators in the study) were asked to evaluate various activities of such programs. A summary of their evaluations is given in Table 54. They responded "not applicable" if the activity was not conducted by the teacher of their young farmer program. For example if the vocational agriculture teacher had not made visits to the farms of young farm operators, the "not applicable" column was checked.

Table 53. Participation by young farm operators in educational programs

<table>
<thead>
<tr>
<th>Type of program</th>
<th>Frequency of attendance</th>
<th>Regular %</th>
<th>Frequent %</th>
<th>Seldom %</th>
<th>Never %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young or adult farmer classes</td>
<td>Regular %</td>
<td>11.7</td>
<td>7.5</td>
<td>11.9</td>
<td>68.9</td>
</tr>
<tr>
<td>Extension meeting and clinics</td>
<td>Frequent %</td>
<td>1024</td>
<td>1623</td>
<td>9389</td>
<td></td>
</tr>
<tr>
<td>ISU short courses commercial</td>
<td>Seldom %</td>
<td></td>
<td>1681</td>
<td>3411</td>
<td>7383</td>
</tr>
<tr>
<td>Company meetings</td>
<td>Never %</td>
<td></td>
<td></td>
<td>25.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23.4</td>
<td></td>
</tr>
</tbody>
</table>
Table 54. Value of young or adult farmer program activities to young farm operators

<table>
<thead>
<tr>
<th>Activity</th>
<th>Much</th>
<th>%</th>
<th>Some</th>
<th>%</th>
<th>Little or no</th>
<th>%</th>
<th>Not applicable</th>
<th>%</th>
<th>No response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>On farm visits</td>
<td>227</td>
<td>5.4</td>
<td>867</td>
<td>20.6</td>
<td>1973</td>
<td>46.9</td>
<td>1084</td>
<td>25.8</td>
<td>52</td>
<td>1.2</td>
</tr>
<tr>
<td>Group tours or trips</td>
<td>751</td>
<td>17.9</td>
<td>1767</td>
<td>42.0</td>
<td>1106</td>
<td>26.3</td>
<td>543</td>
<td>12.9</td>
<td>36</td>
<td>0.9</td>
</tr>
<tr>
<td>Class meetings by instructor</td>
<td>1344</td>
<td>32.1</td>
<td>2470</td>
<td>59.0</td>
<td>371</td>
<td>8.9</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Agricultural mechanics meetings</td>
<td>1522</td>
<td>36.2</td>
<td>2164</td>
<td>51.5</td>
<td>373</td>
<td>8.9</td>
<td>145</td>
<td>3.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>917</td>
<td>21.5</td>
<td>1211</td>
<td>28.3</td>
<td>1400</td>
<td>32.7</td>
<td>696</td>
<td>16.3</td>
<td>52</td>
<td>1.2</td>
</tr>
</tbody>
</table>

It has long been accepted that visits to the home farm of participants in vocational agriculture programs is a desirable activity. The response of young farm operators lead one to question this theory for only 25 percent indicated that farm visits by the instructor were of some to much value. This percentage may have been improved if more young farm operators had been actually visited by their vocational agriculture instructor. Twenty-five percent reported this activity not applicable because they had not been visited by their instructor. Instructors need to make more visits to young farm operators as well as improve the effectiveness of their visits if the practice is to provide benefit to young farm operators.

A high percentage (91.1 percent) indicated class meetings by the instructor were of some or much value to them. A similar response (87.7
percent) was obtained in the evaluation of speakers at meetings. Evi-
dently the problem with young farmer education is in getting the young
farmers to attend meetings because those who had attended meetings rated
them quite well.

Agricultural mechanics meetings were rated as some to much value by
49.8 percent of those reporting. The enumerator explained this inclusive
term to the respondent so that he would understand the term meant more
than just mechanics. It included meetings on such items as feedlot
mechanization, water systems, welding, machinery management, electricity,
and others.

Various sources of technical information in agriculture were evalu-
ated by the young farm operators. Their responses are recorded in Table
55. Farm magazines were rated as being the source of most value to the
young farmer for technical information. The vocational agriculture teacher
was rated as the source of least value for technical information. This
response may be reflected by the small number of young farmer programs in
Iowa. Similar results were obtained for Farmers Home Administration per-
sonnel which may be verified through the limited number of young farm
operators who had F.H.A. loans. Several young farmers commented that
television did not provide many agricultural programs and therefore was of
more value for entertainment than as a source of technical information in
agriculture.

Those sources of technical information which were rated by 50 per-
cent or more of the young farmers as providing some or much value were
farm magazines, agricultural bulletins, radio, daily newspaper, county
Table 55. Sources of technical information and their value to young farm operators for farming

<table>
<thead>
<tr>
<th>Sources</th>
<th>Much %</th>
<th>Some %</th>
<th>Little or no %</th>
<th>None %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm magazines</td>
<td>6391</td>
<td>5699</td>
<td>1504</td>
<td>36</td>
</tr>
<tr>
<td>Agr. bulletins</td>
<td>2209</td>
<td>6898</td>
<td>4197</td>
<td>325</td>
</tr>
<tr>
<td>Radio for agr.</td>
<td>2318</td>
<td>5662</td>
<td>5235</td>
<td>413</td>
</tr>
<tr>
<td>TV for agr.</td>
<td>555</td>
<td>4222</td>
<td>8184</td>
<td>667</td>
</tr>
<tr>
<td>Daily newspaper</td>
<td>2618</td>
<td>5919</td>
<td>4721</td>
<td>370</td>
</tr>
<tr>
<td>Co. ext. personnel</td>
<td>595</td>
<td>4903</td>
<td>7364</td>
<td>767</td>
</tr>
<tr>
<td>Voc. Ag. teacher</td>
<td>504</td>
<td>1361</td>
<td>9870</td>
<td>1893</td>
</tr>
<tr>
<td>S.C.S. personnel</td>
<td>1349</td>
<td>4671</td>
<td>6659</td>
<td>950</td>
</tr>
<tr>
<td>County A.S.C. personnel</td>
<td>2493</td>
<td>6508</td>
<td>4051</td>
<td>576</td>
</tr>
<tr>
<td>F.H.A. personnel</td>
<td>568</td>
<td>732</td>
<td>9514</td>
<td>2815</td>
</tr>
<tr>
<td>Commercial cos.</td>
<td>3489</td>
<td>6953</td>
<td>3083</td>
<td>104</td>
</tr>
</tbody>
</table>

A.S.C.S. personnel, and commercial companies. Those sources rated by less than 50 percent of the respondents as providing some to much value were television, county extension personnel, vocational agriculture teachers, soil conservation service personnel, and F.H.A. personnel.

Data concerning needed areas of instruction in agriculture is presented in Table 56. When the young farm operators were asked to present their thoughts on the value of certain areas of instruction in agriculture, livestock and crops production were desired by the greatest percentage of respondents. All topics presented were thought to be of some or much
Table 56. Value of suggested areas of instruction in agriculture to young farm operators

<table>
<thead>
<tr>
<th>Area of instruction</th>
<th>Much</th>
<th>Value to respondent</th>
<th>Some</th>
<th>Little or no</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money mgt.</td>
<td>6188</td>
<td>45.4</td>
<td>5598</td>
<td>41.1</td>
<td>1843</td>
</tr>
<tr>
<td>Agr. marketing</td>
<td>4744</td>
<td>34.8</td>
<td>7200</td>
<td>52.8</td>
<td>1686</td>
</tr>
<tr>
<td>Crop prod.</td>
<td>7362</td>
<td>54.0</td>
<td>5526</td>
<td>40.5</td>
<td>741</td>
</tr>
<tr>
<td>Livestock prod.</td>
<td>7616</td>
<td>55.9</td>
<td>4780</td>
<td>35.1</td>
<td>1233</td>
</tr>
<tr>
<td>Agr. mechanics</td>
<td>4135</td>
<td>30.4</td>
<td>6932</td>
<td>51.0</td>
<td>2525</td>
</tr>
<tr>
<td>Legal transactions</td>
<td>4835</td>
<td>35.5</td>
<td>6187</td>
<td>45.4</td>
<td>2607</td>
</tr>
<tr>
<td>Farm record analysis</td>
<td>6864</td>
<td>50.4</td>
<td>5362</td>
<td>39.3</td>
<td>1404</td>
</tr>
</tbody>
</table>

value by 80 percent of the young farmers. Here again it seems that emphasis needs to be placed upon ways and means of organizing programs and getting young farm operators to participate because the areas of instruction evaluated in the study are those that are now being used and young farm operators are not attending even though they rate the area of instruction quite high.

It was thought by the author that there may have been some misunderstanding by the young farm operators on the area of instruction titled "legal transactions" because some respondents would contradict themselves concerning this topic during the interview. However very few had written agreements for their partnership arrangement which would be classified as a legal transaction.

Four innovations for instruction were presented to the young farm operators for their reactions. The results are presented in Table 57.
Table 57. Reactions by young farm operators to teaching innovations in agricultural instruction

<table>
<thead>
<tr>
<th>Teaching innovation</th>
<th>Favor %</th>
<th>Disfavor %</th>
<th>No reaction %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed circuit TV</td>
<td>9345</td>
<td>2153</td>
<td>2131</td>
</tr>
<tr>
<td>Winter meeting, daytime</td>
<td>4991</td>
<td>7588</td>
<td>1050</td>
</tr>
<tr>
<td>Early evening meet., summer</td>
<td>3717</td>
<td>8995</td>
<td>1117</td>
</tr>
<tr>
<td>Area short courses</td>
<td>10581</td>
<td>1378</td>
<td>1669</td>
</tr>
</tbody>
</table>

One may conclude that the majority of the young farmers favor having night meetings and not day-time meetings for agricultural instruction no matter when they are conducted. Slightly over one-third favored day meetings during the winter, whereas 27.3 percent favored early evening meetings during the summer. Possibly the respondents did not understand the intention behind early evening meetings in the summer. It was to promote more on-farm instruction and an opportunity to observe experimental results on farms.

Young farmers favored agricultural instruction being conducted through area short courses. In other words they would like a concentrated area of instruction for a short period of time and for it to be conducted in their farming area. This is the pattern now being used by the Extension service.

Sixty-eight percent of the young farmers favored the use of closed circuit television or video tape as a means for instruction in agriculture. There were 15.6 percent who had no reaction to this topic.
IMPLICATIONS FOR EDUCATION

The author determined that young men started and made progress toward establishment in farming each year during the 1956 to 1968 period. In 1968, this group of young men who were 30 years of age or less accounted for approximately 10 percent of the total number of farmers in Iowa. They had a need for post high school education in agriculture but relatively few took advantage of the opportunities that were available to them. As was reported in Table 5, the mean number of years of formal education of the operators studied was 12.1 years. They engaged in a number of activities between age 18 and entry into farming. There seemed to be no set pattern in the methods used in becoming established in farming. It was learned, however, that the father of the young farmer played a very important role in the young man's establishment. In this section the author presents implications for types of educational programs, content of educational programs, and methods of administering them to meet the educational needs of young farm operators.

Type of Educational Programs

There is a definite need for increased emphasis by vocational agriculture teachers in Iowa to make young farmer educational programs an integral part of their overall vocational agriculture program. The vocational agriculture teacher may have had the young farmer as a student in high school during previous years and thus knows him personally and his occupational needs. Data in Table 7 indicate that 66.4 percent of the young
farmers had access to vocational agriculture in high school, and 88.7 percent of this number took advantage of such training.

As shown in Table 2, there was a mean number of 8.54 young farm operators per township in this study. In 1968-1969 the median square miles per public school district in Iowa encompassed 103 square miles of land or approximately 3 townships, therefore approximately 25 men would be available for young farmer programs in each school district. Twenty five percent or less of the school districts in Iowa during 1968 had 71 square miles whereas 75 percent had 141.2 square miles in the school districts. For this reason the number of young farmers estimated per school district may be conservative.

The number of high school districts per county varied from a mean of 2.7 districts in the Southern Pasture Area to 6.5 in the Cash Grain Area of Iowa. In certain counties there would be many more than 25 young farmers per school district available for instruction in agriculture. In addition to those who were operators in this study would be those young men who were employed in occupations related to farming or those who were working on farms but were not classified as a farm operator. It was estimated that this number would vary by areas of the state, but one could expect an additional 5 men per school district. This would provide a total estimated number of 30 young men per school district for young farmer programs. Not all young farmers would participate in such educational programs, but the number should be adequate for effective programs.

The number of vocational agriculture departments conducting young farmer programs has been limited. During the 11-year period 1957 through
1967, the mean number of young farmer classes in Iowa conducted by voca-
cational agriculture instructors was 55. The average enrollment per class
was 17.6. There was a high of 85 classes in 1959-60 and a low of 31
classes in 1968. Reasons for the lack of emphasis on young farmer pro-
grams by vocational agriculture at the present time are: (1) the voca-
tional agriculture teachers are now conducting programs or classes for
adult farmers in which young farmers have been included, (2) the number
of young men under 30 years of age who were farming was limited as com-
pared to the number of high school students and adult farmers and voca-
tional agriculture teachers felt there was not sufficient men in their com-
munity for an effective program, and (3) in most instances, the vocational
agriculture teacher has a full-time teaching load without additional work.
More two-teacher vocational agriculture departments may help to alleviate
this situation.

The cooperative extension service also has a role to play in further-
ing the education of young farm operators. In past years the Cooperative
Extension Service conducted a program titled the Farm and Home Development
Program for young farm families. This program was reorganized in 1968 and
is now titled the Farm and Home Business Management Program. The objec-
tives for this extension sponsored program are to assist young farm fami-
lies (40 years of age and under) to more systematically (a) assess their
farm business resources and income potential, (b) assess their family re-
sources and conditions conducive to the development and maintenance of
a healthy home environment, (c) determine their best course of action,
ranging from full-time farming to entering a different occupation and (d)
manage their farm business and personal affairs to more effectively reach their goals. It is an organized program to include 10 to 20 couples enrolled each year or a total of 30 to 60 families in the program at any one time. Young farmers also have the opportunity to participate in clinics and meetings conducted in their local communities by the extension service. Data in Table 53 revealed that 45.9 percent of the young farmers had attended such meetings.

Over three-fourths of the 13,630 young farmers in this study participated in meetings conducted by commercial companies. More respondents had attended this type of meeting than either those conducted by the extension service or vocational agriculture teachers. Usually feed, fertilizer, and implement companies conduct such meetings and serve the purpose of assisting the young farmer by keeping him informed on technological developments in agriculture.

Opportunities have been enlarged in recent years for young farm operators to further their education in agriculture. As a result of the passage of the Vocational Education Act of 1963, Area Vocational Technical schools have been developed in Iowa. During 1968-1969 Iowa had 11 centers offering 8 different vocational programs in agriculture with a total enrollment of 554 persons. Four centers were offering farm management programs for young men to attend on a full-time basis for a 1 to 2 year period. Another center offered a farm management program for veterans who were farming and attended classes for 6 to 12 hours per week. Young farmers have an opportunity to participate in area school agricultural programs prior to farming or even while farming.
Iowa State University has sponsored a special program for a number of years for young men who are farming or who plan to farm. Students (usually young farmers) enroll for six agricultural courses and are admitted as special students. Enrollment in this program has ranged from 39 to 169 students per quarter in recent years. Some students, approximately 10 percent, return for additional training after completing the Winter Quarter Farm Operation program. A few obtain a bachelor of science degree as a result of their initial enrollment in this program.

In 1967 a new curriculum was initiated at Iowa State University for young men who had an interest in agriculture but were not candidates for a degree program. This program is the Technical Institute in Agriculture curriculum. It was designed for young men who intended to be engaged in the occupation of farming or other agricultural occupations. The initial enrollment in 1967-1968 was 28 students and has grown to 51 students for the year 1968-1969. Most of the students enrolled in this program have the long time goal of being a farm operator.

Short courses have been sponsored by Iowa State University for young farmers for several years. Young farmers may attend those short courses held on the campus or the Farm Operation short courses conducted throughout the state. During 1968-1969 four such courses were held in 4 locations in the state with a total enrollment of 104 farm operators.

During recent years enrollment at all post high school educational institutions has increased and more young farmers are seeking advanced education. It is assumed that this trend will continue.

All educational agencies need to explore new and additional ways and means for assisting with the education of young farm operators of Iowa.
This heterogenous group of young men may be difficult to reach but have a need for more education than they are receiving at the present time.

Content of Educational Programs

Two of the critical problems revealed by young farmers in this study were financial assistance and availability of land. Since it was next to impossible for the young farmer to accumulate enough capital to begin farming by himself, he had to rely upon some individual to assist him with financial backing. The person referred to for this assistance by nearly every young farm operator was the father. Fathers loaned machinery, capital and shared with the labor. For this reason educational agencies should do what is possible in their programs to promote desirable father-son relationships. Vocational agriculture and 4-H project programs for youth while they are in high school are means of promoting good father-son relationships as well as providing the young farmer with experience.

Capital requirements for establishment in farming are great. Young farmers in this study indicated that the cost of machinery and obtaining financial assistance were major obstacles for them. Parents were credited as being the most common source and provided the greatest amount of financial help, while banks and production credit associations were mentioned most frequently as commercial sources of credit. Young farmers need a source of financial backing as well as educational programs on money management. Evidently few young farmers have been candidates for Farmers Home Administration loans because it was not listed by many respondents as a source of financial help. Farmers Home Administration personnel
disclose their biggest problem is to have adequate government appropriations available for loan to young farm operators. Priority for loans is given to the young man who has farming experience which may account for the limited use by some farm operators in this study. In some instances young farmers are not aware of the availability of this type of loan. Education can help bridge this gap and assist the young farmer with his capital needs.

Machinery was the most costly item needed by the young operators. Several respondents borrowed a complete line of machinery during their first year and others borrowed various pieces of equipment. They also purchased machinery during their first year of farming. Custom work was done by a majority of young farmers to supplement their income while farming. Machinery management, therefore, is an area of needed instruction by young farmers.

Nearly all respondents in the study were involved with crops and livestock programs. In some instances the young farmer had limited crop acreage but an extensive livestock program; in others they had little or no livestock. Some programs were specialized, such as a few in turkey production, but the majority had diversified farming operations. Educational agencies need to provide instruction in technical agriculture to assist the young farmers as they develop their farming programs.

Slightly over 25 percent of the young farm operators began farming in partnership operations. This number declined to 16.7 during the current year of operation. Several respondents were farming the home farm, or land owned by a relative, and some had inherited land between the time
they began farming and the current year. Approximately 50 percent of the individual young operators in the study had written leases, and 14.5 percent of those in partnership, had written agreements. There were 35.5 percent of the respondents who said that instruction on legal transactions would be of "much" value to them. The author believes there are implications from this study for education on this topic. Instruction on legal transactions by the educational agencies mentioned previously would encompass such areas as transfer of property, incorporating the family farm, partnership arrangements and agreements, and the use of written leases which would be beneficial to the young farm operators.

Methods in Instructional Programs

It was clearly demonstrated by the young operators that they were a group of young men with definite goals and purposes. If they were not fully occupied with their farming operations, and even sometimes if they had full scale programs, they worked off their farms to supplement their incomes. Young farmers, therefore, are ambitious, energetic people who need to have educational programs that will be of value and interest to them.

The personal visit to the young operator's farm by agricultural education personnel should be of vital importance to him in solving his real farm problems. Only 5.4 percent of those respondents in this study who were members of a young farmer program indicated that farm visits by the vocational agriculture instructor would be of much value, whereas 25.8 percent reported they had not had a visit from their instructor so they had no way to measure this activity.
Programs need to be developed on a year round schedule in order that the young farmers receive assistance on their problems as they arise. Only 15 percent of the young farmers in this study were not married; therefore, programs need to be organized in such a manner as to be of benefit and interest to the young man and his wife who are not only becoming established in farming but also is starting a home and family. As indicated by the young farmer response to suggested types of instructional activities, they considered field trips and tours as well as meetings conducted by the instructor or speakers as valuable to them. It may be noted by the data in Tables 39, 40, 41, 42, 43 and 44 that young farm operators were conducting extensive crops and livestock programs. They, therefore, have a need for educational programs which will assist them with these enterprises as well as record analysis of their farming operation.

New instructional media may be used in the teaching of young farm operators. Over two-thirds of the respondents in this study indicated they favored the use of video tape for instructional purposes. This media was used by Iowa State University in the conducting of the Farm Operators Short courses during the winter of 1968-1969 at four locations in Iowa. The purpose of using video tape for these short courses was to reduce the time and travel of resident teaching staff as well as present unusual items for instructional purposes. When farmers were asked to evaluate the use of video tape in instruction, their reactions ranged from dislike to full approval. Suggestions made for the use of video tape were (1) the farmer audience should be prepared for this type of instruction, (2) video tapes should not be used for lengthy periods (60 minutes) without a break.
for discussion and (3) teaching materials need to be prepared especially for television use.

Education for Off-Farm Income

Young farm operators reported they worked in a variety of occupations from the time they were 18 years of age until they began farming. This interim accounted for a mean of 3 to 4 years. During this period nearly one-third of the respondents worked on the parental home farm while the remainder were students, serving in the military, or involved with an agricultural or nonagricultural occupation.

As a result of the passage of the Vocational Education Act of 1963, provisions were made for agricultural occupation employment experience programs in high school vocational agriculture. In this program conducted by the vocational agriculture instructor, students have the opportunity to gain experience in agricultural occupations related to farming. Since some young men are employed in occupations other than farming, this experience program would be beneficial to the young farm operators in preparation for that occupation as well as for farming. Young men who definitely know they would be farming may be employed on a farm that would provide a more specialized education.

Recommendations for Young Farmer Education

Young farm operators need more attention and instruction from educational agencies. Some educators believe the young farmer could attend general agricultural education functions which are now being held in the
various communities, so that it is not necessary to develop special pro-
grams for this age group. The author believes that young farmers have
need for an organized instructional program to which they can be affiliated.
Many of the men have been together as high school students and perhaps have
a close association with one another. They share similar problems in that
they are becoming established in farming and are starting a home and
family.

A general feeling of optimism and a positive attitude toward farming
was prevalent in the interviews with the young farmers of this study. They
like farming. They want to succeed and are anxious for educational as-
sistance. This age group of young men are eager to use innovations and
keep abreast of technological developments. Their capital is limited,
but they are willing to use management ideas that will produce profitable
returns. Young farmers are a group that will make use of the ideas,
theories, and practices presented to them. As a group they are a challenge
to agricultural educators.

Before making recommendations for educational programs for the young
farm operators of Iowa, it is necessary to list and clarify some basic
assumptions and facts. They are as follows:

1. There were 13,630 young farm operators, 30 years of age or under,
in Iowa during 1968.

2. There is a need for organized educational programs for these
young farm operators.

3. The number of young farmers who will continue their education
after high school will increase in future years. It is assumed that Land Grant Universities, Area Community Colleges, and Vocational Technical schools will continue to develop and expand their curriculums to meet the needs of young farm operators.

4. The number of young farmers varies among areas of the state, counties, townships, and school districts; there are, however, adequate numbers in each county and school district to permit effective programs.

5. Not all young farm operators will be interested or willing to participate in such educational programs. It is estimated that at least 20 to 25 percent of the young men will not participate.

6. Two educational agencies, namely the county extension service and the public school vocational agriculture departments, (high school and area vocational-technical school) already have limited organized programs for young farmers. These two should be the ones to expand and further develop needed programs for those young men who are farming.

7. It is assumed that the above named agencies would utilize the services of and cooperate with the other educational agencies, such as Production Credit Association, Farmers Home Administration, Iowa Farm Business Association, Soil Conservation Service, Agricultural Stabilization Conservation Service, and others.

8. In order for the public high school vocational agriculture departments to expand their educational programs to include young farmer education, additional teachers of vocational agriculture
will be needed. It will be necessary for an increase in the number of multiple teacher vocational agriculture departments.

Recommendations for young farm operator educational programs follow:
1. Land Grant Universities should continue to provide educational programs for training of young farm operators. These young men need a post high school formal educational program prior to their entry in farming. Enrollments have risen in recent years and should continue to increase in these programs. The Winter Quarter Farm Operation curriculum at Iowa State University should emphasize courses which will be practical and applicable to the young farm operator. The two and four year curriculums should be beneficial to those young men who desire a more comprehensive education. The newly developed 2 year Technical Institute in Agriculture program at Iowa State University should be appropriate for the young men who are not suited for a college credit program but desire advanced education for farming.
2. Area vocational technical schools have been and should continue to develop programs for young farm operators. Their programs may be designed to prepare the young man for farming or to assist him while farming. Veterans classes, which are now sponsored by the area vocational technical schools, should be continued and expanded to meet the needs of these young men.
3. Each high school vocational agriculture department (234 departments) in Iowa should have a young farmer program. It is esti-
mated there are sufficient numbers in each school district to provide a group of 20 to 30 young men.

4. Each county in Iowa under the direction of the county extension director and with the assistance of area extension personnel should develop a Farm and Home Business Management program for young farm operators in their county. It is estimated that each county may expect to enroll 30 to 40 young men in this program. In counties with few or no vocational agriculture departments, it is imperative that the extension service provide this program.

5. Programs need to be organized on a year around basis in order to meet the problems of young farmers as they arise.

6. The year around program should include group educational projects, tours or trips, recreational activities, family events, on farm instruction, as well as instruction in agricultural mechanics and technical agriculture.

7. Emphasis of these programs should be in the areas of money management, record analysis, crops and livestock management, machinery management, legal transactions, and family living.

In order to implement the above educational program recommendations for young farm operators, the following considerations need to be made:

1. Land Grant Universities and Area Vocational Technical schools need to keep current with the problems and needs of young farm operators and develop their programs and curriculums accordingly.

2. Emphasis must be given to this program by the Agricultural Education Section of the State Department of Public Instruction. Young
farmer programs need the same emphasis as do adult farmer pro-
grams. Possibly there should be changes in the requirements for
these programs relating to (1) age of enrollees, (2) number of
meetings, (3) time and place of meetings, (4) types of activities
and (5) reimbursement policies.

3. The Agricultural Education Department at Iowa State University can
assist by training more teachers of vocational agriculture, and
make it possible for student teachers to obtain training in cen-
ters where effective young farmer programs are being conducted.

4. Public school administrators need to recognize the need and ap-
preciate the value of such educational programs. Provisions need
to be made for multiple teacher vocational agriculture depart-
ments.

5. The Iowa Cooperative Extension Service will need to set priorities
on their Farm and Home Business Management program and achieve
the goal of one program per county. Staff may need to be trained
especially for these programs.

For too many years the educational programs for young farm operators
have been neglected. They are a formative group who need educational help.
SUMMARY

The objectives of this investigation were: (1) to ascertain the factors that influence the establishment of young farm operators in Iowa; (2) to estimate the number of young farm operators who become established in farming each year; (3) to determine the needs of young farm operators for agricultural education; (4) to determine the types of educational programs in agriculture that are needed by young farm operators; (5) to distinguish the differences in establishment of young farm operators by economic area of Iowa; (6) to determine the differences in educational needs of young farm operators by economic areas of Iowa; (7) to determine the background and personal characteristics of young farm operators in Iowa; and (8) to provide a source of information which will be helpful in program planning for educators in agriculture.

The study was conducted in cooperation with the Department of Agricultural Education and the Statistical Laboratory at Iowa State University. Financial assistance was provided by a research grant from the Iowa Department of Public Instruction, Division of Vocational Education (VEA-1963-4 (a) Ancillary Funds) and Agriculture and Home Economics Experiment Station Project 1734.

The universe of interest for this study was all farm operators in Iowa who were between the ages of 18 and 30 inclusive as of December 31, 1968. They resided in the open country of the state and may have been farming by themselves or in partnership. To be classified as a young farm operator, an individual must have met the following criteria: (1) must have
received remuneration from profits (losses) from the farm business; (2) must have worked 90 or more days on the farm in 1968 in a partnership or shared management situation; (3) he was considered to be the operator if he worked less than 90 days and there was no other operator; and (4) he must have made or helped to make the management decisions in the operation and management of the farm.

Since the researcher intended to obtain lists of farmers meeting the age qualifications from the Agricultural Stabilization Conservation Service committeemen or other individuals having knowledge of the persons in their townships, it was decided to use townships as the sampling units and to interview all eligible farm operators in the sample townships. The state was stratified geographically into five areas according to the predominant type of farming - Western Livestock, Cash Grain, Northeast Dairy, Eastern Livestock, and Southern Pasture. As a means of conserving field costs, it was decided to select the samples within areas (strata) in two stages, first selecting a sample of counties and then selecting townships within the sample counties. The sample area consisted of four counties and two townships per sample county in the Northeast Dairy Area and four counties and three townships per sample county in each of the other areas. Within each stratum counties were selected with probability proportional to size in terms of the number of townships they contained; within each sample county the required number of townships was selected at random without replacement with equal probability. Within each sample township a sample of sections was drawn in a random manner at a rate of one out of six. The
interviewer canvassed the sample sections to determine whether or not they contained any eligible operators who were not on the original list.

Data were collected by personal interview from 307 young farm operators for an overall response rate of 95.6 percent. A questionnaire, or interview schedule, was developed to obtain accurate and complete information.

From the sample of 307 young farm operators who were farming in the 56 townships of 20 random selected counties stratified by economic area, the author was able to make estimates of the number of young farm operators in Iowa. The estimated mean number of young farmers, 30 years of age or under, was 8.54 per township, 149.09 per county, and 2726 per economic area. The Western Livestock Area of Iowa had the most young farm operators with 26.9 percent in that section. Only 14.6 percent of the young farmers were located in the Southern Pasture Area of Iowa. A population adjustment factor was used for each area so that the data could be reported accurately on a statewide basis. The data, therefore, was presented on the basis of 13,630 young farm operators for the state of Iowa.

The present mean age of all young farm operators was 26.2 years of age. Over one-half of the operators were 27 years of age or older, whereas less than 10 percent were under 23 years of age. The mean age when young farm operators started to farm was 21.6 years. Nearly three-fourths of the young men were high school graduated, but only 3 percent had been graduated from college; however 4360, or 32 percent, had some post high school education. The largest group (55.2 percent) of those who enrolled in educational programs beyond high school attended a four year college or university. Two year colleges and trade schools accounted for 17.3
percent each.

Slightly over one-half of the young men were members of 4-H clubs and 58.2 percent of those members served as officers of their clubs. Vocational agriculture was available to 8737, or two-thirds of the young farmers; and 88.7 percent took advantage of this training in high school. There were 463 young men who did not attend high school. Young farm operators who had been enrolled for four years of high school vocational agriculture and 7 to 8 years of 4-H had derived the most benefit from their crops and livestock projects.

A total of 8618 fathers of the respondents, or 85.2 percent, were presently farming. There appeared to be a normal distribution of fathers by age with the largest number being in the 50 through 54 age bracket. Few fathers had occupations other than farming and 54.6 percent had an eighth grade education.

There were only 2063, or 15.1 percent, of the young farm operators who were single at the time the study was made. One-third of the married men were married before they started to farm, and 19.6 percent were married during the year they began farming. Eighty percent of the wives had a positive attitude toward farming and liked living on a farm. Nearly 60 percent of the married respondents indicated their wives assisted with the farm labor. Only 2282, or 19.8 percent, of the wives worked off the farm to supplement the farm income.

A total of 9607, or 70.4 percent of the 13,630 young farm operators, had some cash on hand before starting to farm. Nearly two-thirds of the respondents had $1000 or more, whereas 37.7 percent had more than $2000.
Sixty percent of the young farm operators owned some type of livestock prior to farming. Over one-half of the respondents in the study lived at home with their parents during their first year of farming; and the second largest group, 4744 or 34.8 percent, lived on the farm they rented or operated.

Relatives contributed in various ways toward the establishment of young farm operators in farming. Capital and machinery were mentioned more often than any other type of assistance received, and parents ranked first among all relatives as sources of assistance. Parents were also the key individuals when co-signers were needed for bank notes.

A total of 10,956 young farm operators had a number of occupations prior to the time they began farming, whereas 2675 or 19.7 percent did not have another occupation before they began farming. There was nearly an equal distribution among those who went directly to farming, 2674; those who held only agricultural occupations, 2668; and those who held only nonagricultural occupations, 2404. The remaining number, 5883 or 40.9 percent, held combinations of agricultural and nonagricultural occupations. Respondents had a mean number of two occupations prior to the time they began farming. Not only did the young farmers work in occupations other than farming before they began farming, but many men did off-farm work to supplement their income after beginning to farm. Custom farm work was a common way for the young farm operators to supplement their incomes. As the years of farming increased, the days worked off the farm decreased from 42 percent in the first year to only 1.7 percent in the twelfth year.

Three major sources of finance for the first year's farming operation
were the young farm operator himself, his father, and a lending agency. Over one-half of the respondents provided up to 25 percent of the needed finances and borrowed the remainder; whereas approximately one-third provided 75 to 100 percent of the finances. Young farm operators borrowed all types of machinery and equipment during their first year of farming. The parents were nearly the sole provider of machinery, and the young farm operator borrowed planting and harvesting equipment more than any other pieces of machinery. A majority of the respondents did not purchase any machinery their first year of farming.

The data from this study reveal a changing pattern in the age of young farm operators at the time of entry into farming. The mean age of all young farm operators was 21.6 years of age when they began farming. The largest group in the study (18.5 percent of 13,630 or 2520 young farmers) began farming when they were 18 years of age. There was an even distribution (10 percent) of the young farmers who started to farm in each age level of 19 through 23 years of age. Only 18.7 percent of the respondents began farming after they were 25 years of age.

The number of men who were farming as individual operators during their first year increased from 9543, or 70.0 percent, to 10,607, or 77.8 percent, during their current year of farming; whereas those who were farming in partnership during the first year, 3748 or 27.5 percent, decreased to 2278, or 16.7 percent, during their current year of farming. The number of men who farmed in a combination operation increased from 339, or 2.5 percent, in the first year to 745, or 5.5 percent, during the current year of farming. More land was owned and operated in partnership operations than in
a single proprietorship. Mean acres operated by partnerships increased 45.4 percent from the first year (317 acres to 461 acres) to the current year. There was a 44.2 percent increase in mean number of acres operated by young farmers as individual operators from the first year of farming to the current year. Single proprietors were operating a mean number of 238 acres which was nearly equal to the average sized farm (235.7 acres) in Iowa during 1968. It was in the sixth year of farming that the highest percentage of operators were farming larger farms and had purchased more land. The number of young men who owned some land during the first year of farming was 1539, or 11.3 percent; whereas 37.2 percent of the operators owned some of the land they operated in their ninth year of farming.

Two-thirds of the operators used a crop share lease their first year and 61.8 percent during the current year of farming. The number of respondents who used cash share leases nearly doubled between the first and current year of farming. It was still, however, the least used of all leases. The number reporting written leases was only 50 percent of the total number who had leases. Only 14.5 percent of the total partnerships had written agreements. Not one operator in the study reported that his farm was incorporated.

Fathers accounted for 41.4 percent of the landlords who were relatives of the respondent for the first year of farming and 45.7 percent for the current year.

Thirty percent (4,087) of the respondents were involved in partnership operations during their first year of farming in contrast to 3,023 or 22.1 percent, for their current year. There were relatively few (213 first
year and 287 current year) three-man partnerships. Less than one-third of the two-man partnerships during the first year and 23.3 percent during the current year were operating farms not larger than 160 acres. A total of 11,187, or 82.1 percent, reported they had not changed their form of farming operation from the first year to the current year of farming. The division of labor, operating expenses, and profits of partnership operations in this study was quite variable. Labor was divided nearly 50-50 between the respondent and his partner. The majority of the men provided 26 to 50 percent of the operating expenses in both the first and current years of farming. In the two-man partnerships there was nearly an even distribution of profits between the young farm operators (51.3 percent) and the partners (48.7 percent) at the 26 to 50 percent level of profits.

There were only 696, or 8.1 percent, of the first year individual operators; 105, or 2.6 percent, of the first year partnerships; and 89, or 2.9 percent, of the current year partnerships that did not produce corn on their farms during these years. Forty percent for the first year and 24.4 percent of the current year operators did not produce soybeans. Individual operators did not produce as many acres of oats as did those in partnerships. The mean number of acres of permanent pasture reported by young farm operators was greater than expected. Young farm operators participated in the feed grain program to a greater extent as they became established in farming.

Hogs were produced to the greatest extent of any species of livestock by young farm operators. Two-thirds of the respondents raised hogs and the number ranged from a low of 105 head per year for those operators who farmed
as individuals their first year to a high mean number of 434 head for partnership operations during their current year. Approximately 50 to 60 percent of the young farmers had feeder cattle, 25 percent had dairy and beef cows, 15 percent had sheep, and 15 percent had poultry.

Operating expenses increased from the first to the current years of farming for both single proprietors and partnerships. Two-thirds of the respondents had net farm incomes of $1,000 to $5,000 during their first year of farming; whereas nearly one-half (49.3 percent) had net farm incomes of $2,500 to $7,500 during the current year.

Pearson coefficients of correlation were used to indicate interrelationships. There was not a high relationship among any of the variables except the obvious ones such as total acres operated with total crop acres.

The Western Livestock Area had the largest number, 3669 or 26.9 percent, of young farm operators in the state; whereas the Southern Pasture Area had the smallest number, 1987 or 14.6 percent. The Northeast Dairy Area with 2264, or 16.6 percent, and the Eastern Livestock Area with 2430, or 17.8 percent, were nearly equal in numbers of young farm operators. A total of 3280, or 24.1 percent, of the respondents were located in the Cash Grain Area of Iowa. The major differences among economic areas of the state were (1) the number of young farm operators per area, (2) years of vocational agriculture in high school, (3) years worked off the farm while farming, (4) years farmed as an individual operator, (5) size of farms in acres, and (6) participation in educational programs.

The largest difference found in comparing the young farm operators by years they started to farm was found in their age when they began farm-
ing. Those who started to farm between 1956 and 1960 had a mean age of 19 years; the 1961 to 1964 group had a mean of 21 years of age; and the 1965 to 1968 respondents had a mean age of 23 years when they began farming.

Young farm operators were not very active in educational programs. Over one-third never attended young or adult farmer meetings, but several did not have the opportunity since there was only a mean of 56.4 vocational agriculture departments in Iowa that offered young farmer programs in the years 1958 to 1968. Nearly one-half attended extension meetings and clinics while less than 10 percent had participated in Iowa State University short courses.

The educational implications of these results and the recommendations made were as follows: (1) Land Grant Universities should continue to provide educational programs for training of young farm operators, (2) Area vocational technical schools need to develop programs for young farm operators, (3) each high school vocational agriculture department in Iowa should have a young farmer program, (4) each county extension director should develop a Farm and Home Business Management Program, (5) programs need to be organized on a year around basis, (6) the year around program should include group educational projects, tours or trips, recreational activities, family events, on-farm instruction, as well as instruction in agricultural mechanics and technical agriculture, and (7) emphasis of these programs should be in the areas of money management, record analysis, crops and livestock management, machinery management, legal transactions, and family living.


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A special thank you to my wife, Rachel, and my sons for their understanding and moral support throughout the period this research was in progress.
APPENDIX
The University is studying the patterns of establishment of young men in farming. The primary objective is to determine how young farmers enter and become established in farming, and to identify the characteristics of their farming operations. May we have your cooperation?

1. a. Did you have any crops in 1968? Yes No
   b. Did you have any livestock in 1968? Yes No
   c. Did you have 100 or more chickens, turkeys, or other poultry in 1968? Yes No
   d. Did you have any vegetables, nursery, or greenhouse products, fruit, grapes or nuts grown for sale in 1968? Yes No

   If NO to all questions above, TERMINATE INTERVIEW

2. Would you give me the date of your birth Month Day Year, then that makes you ________ years old.
   If year of birth is before 1938 (born in 1937 or earlier) TERMINATE INTERVIEW

3. Now we would like to talk about the land from which these agricultural products come. If you are in partnership, consider all land in which you are involved.

   Acres owned in 1968
   Acres rented in 1968
   Acres rented out in 1968

   Of the acres rented out (if any)
   ________ acres are owned
   ________ acres are rented in
   ________ total acres = entry in c.

   Total acres farmed in 1968 (a + b - c = d)
4. Please give me the names of all persons who either own, manage or work the _______ acres in the place? (Do not include wife or children under 18 years of age)

<table>
<thead>
<tr>
<th>Name</th>
<th>Owns land in place</th>
<th>Makes (or helps make) decisions</th>
<th>Days worked on farm 1968</th>
<th>How Paid</th>
<th>Is person on line a/an operator*</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Yes</td>
<td>No</td>
<td>(2)</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

1. Respondent

2.

3.

4.

(7) Interviewer: Complete for operators only

<table>
<thead>
<tr>
<th>Age of Operator(s)</th>
<th>Is the operator on line 30 years of age or younger?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Yes</td>
</tr>
<tr>
<td>2.</td>
<td>Yes</td>
</tr>
<tr>
<td>3.</td>
<td>Yes</td>
</tr>
<tr>
<td>4.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*To be an operator, the person on the line must make (or help to make) decisions, work 90 days or more on the farm in 1968, and be paid by profits.

If a person worked less than 90 days and there are no other operators, consider this person to be the operator.

5. Yes/No  a. Is there more than one eligible operator (30 years of age or younger)?

   b. Does the eligible operator live in the sample township?
      Yes | No  
      Complete Form II  c. Does the operator have land in the township in which he lives?
      Yes | No  
      TERMINATE  d. Does the operator have land in a township other than the sample township?
      Yes | No  
      Complete Form II  e. Does the operator's land in the sample township include the northwest corner of all land operated?
      Yes | No  

6. a. Does the youngest eligible operator (partner) live in the sample township?

   b. Is there any land in the partnership located in the township in which the youngest eligible operator (partner) lives?
      Yes | No  
      TERMINATE  c. Does the partnership's land in the sample township include the northwest corner of all land operated?
      Yes | No  

   Complete a separate Form II with each eligible partner.
ESTABLISHMENT OF YOUNG FARM OPERATORS IN IOWA

QUESTIONNAIRE

184

County __________________________

Name of Operator __________________________

Starting Time __________________________

SECTION A - General Information

1. Now we would like to ask you some questions about your father, your mother, and their family.

<table>
<thead>
<tr>
<th>Family Member</th>
<th>Relationship to Respondent</th>
<th>Living</th>
<th>Age (if living)</th>
<th>Marital Status</th>
<th>Highest Grade Completed</th>
<th>Present Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. During the time that you have been farming, have any of your relatives also been farming? Yes / / No / A ^ Go to (b)

(a) Relative | Yes | No | N.A. | How many | Present Age(s)
-------------|-----|----|------|----------|-------------------|
(1) Grandfather(s) |     |    |      |          |                   |
(2) Father |     |    |      |          |                   |
(3) Father-in-Law |     |    |      |          |                   |
(4) Brother(s) |     |    |      |          |                   |
(5) Brother(s)-in-Law |     |    |      |          |                   |
(6) Uncles |     |    |      |          |                   |
(b) Which, if any, of your relatives has been of considerable help to you in getting started in farming?

(c) In what way did (he) (they) help you?

(d) Is there anyone else who has been of considerable help to you in getting started? Yes____ No____
If Yes, who and how?

3. What was your father's occupation at the time you started farming?

(a) _____Farmer
   (1) Was he farming alone? _____or in partnership?_____
   (2) Did (he) (partnership): _____own all the land operated? 
       _____rent all the land operated? 
       _____own some and rent some? 
       _____retired ______ (year)

(b) _____Other
     Specify type of occupation

(c) _____Retired (Other than from farming)

(d) _____Deceased

SECTION B - Education and Occupation

Now let's talk about your background.

4. Were you ever a member of 4-H? Yes [ ] No [ ]
   Go to Q. 5

   (a) How many years?_________

   (b) Were you an officer in 4-H? Yes____ No____

   (c) If YES: What was highest office held?____________________________________

   (d) Did you have livestock or crops projects for 4-H? Yes____ No____

   (e) If YES: Were these projects of help to you in getting started in farming? 
       Yes____ No____

   (f) If YES: In what way(s)_________________________________________________

   ________________
5. Was vocational agriculture offered in your high school? Yes □ No □ Go to Q. 6
(a) Did you take vocational agriculture? Yes □ No □ Go to Q. 6
(b) How many years? ____________
(c) What was the highest degree attained in the F.F.A?
   _______ greenhand _______ state farmer
   _______ chapter farmer _______ American farmer
(d) Were you ever an officer in the F.F.A? Yes _____ No _____
(e) If YES: State the highest office ___________________________
(f) Did you have livestock or crops projects in connection with this class?
   Yes _____ No _____
(g) If YES: Were these projects of help to you in getting started in farming?
   Yes _____ No _____
(h) If YES: In what way(s)? __________________________________________________________________________

6. Have you attended a junior college or a four-year college or university? 
Yes _____ No _____

7. Have you attended a vocational, technical, or trade school? Yes _____ No _____
   If NO to both Q. 6 and 7, go to Q. 9

8. Would you give me some information about your schooling other than high school?

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of School or College</td>
<td>Dates Attended</td>
<td>Field of Study</td>
<td>Certificate or Degree Attained</td>
</tr>
<tr>
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</tr>
</tbody>
</table>

9. Where did you spend the majority of your life while in grade school and high school?

Grade  High School
_____ _____
Farm (outside incorporated town or city)
_____ _____
Town (population less than 4,000)
_____ _____
City (population greater than 4,000)
10. (a) In what year were you married?__________

(b) Do you have any children? Yes [ ] No [ ] Go to Q. 11

Number of sons____ Ages: ________
Number of daughters____ Ages: ________

11. (a) Was your wife raised on a farm? Yes [ ] No [ ]

(b) How does your wife feel about living on a farm?______________________________

(c) Does your wife assist you with the record keeping for your farm? Yes [ ] No [ ]
   If YES, how?______________________________________________________________

(d) Does your wife assist you with any of the farm labor? Yes [ ] No [ ]
   If YES, how?______________________________________________________________

(e) Does your wife work off the farm for income? Yes [ ] No [ ] Go to (f)

(f) What kind of work does she do?______________________________________________

(g) In which of the following categories will her gross income for 1968 fall?

   Hand respondent cherry card

(1) _____ Less than $499
(2) _____ $500 to $999
(3) _____ $1,000 to $2,499
(4) _____ $2,500 to $4,999
(5) _____ $5,000 to $7,499
(6) _____ $7,500 and Over
12. We would like some information about what you have done from the time you were 18 years old up to the time you started farming. Please include those occupations in which you worked six months or longer. (Include college and military, if applicable).

Enter "farming" in table below on line corresponding to year given

Col. 3 Starting with your first job after you became 18, what kind of work did you do?

Col. 4 How long did you work at this job?

<table>
<thead>
<tr>
<th>Present Age</th>
<th>Year</th>
<th>Job Description</th>
<th>Duration If Less Than One Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>1956</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>1957</td>
<td></td>
<td></td>
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<tr>
<td>28</td>
<td>1958</td>
<td></td>
<td></td>
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<tr>
<td>27</td>
<td>1959</td>
<td></td>
<td></td>
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<tr>
<td>26</td>
<td>1960</td>
<td></td>
<td></td>
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<tr>
<td>25</td>
<td>1961</td>
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<td>24</td>
<td>1962</td>
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<td></td>
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<td>23</td>
<td>1963</td>
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<tr>
<td>22</td>
<td>1964</td>
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<td>21</td>
<td>1965</td>
<td></td>
<td></td>
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<tr>
<td>20</td>
<td>1966</td>
<td></td>
<td></td>
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<tr>
<td>19</td>
<td>1967</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>1968</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
13. Since you started farming, have you worked off your farm to supplement your farm income? Yes ☐ No ☐ Go to 0.14

Beginning with respondent's first year of farming, enter consecutive calendar years through 1968 in column 1

<table>
<thead>
<tr>
<th>(1) Calendar Year</th>
<th>(2) Year of Farming</th>
<th>(3) Job Description</th>
<th>(4) No. Days Worked Per Year</th>
<th>(5) Avg. Hrs. Per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3rd.</td>
<td></td>
<td></td>
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<tr>
<td>4th.</td>
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<tr>
<td>5th.</td>
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<tr>
<td>6th.</td>
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<td>7th.</td>
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<td>8th.</td>
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<td>9th.</td>
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<tr>
<td>10th.</td>
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<tr>
<td>11th.</td>
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<tr>
<td>12th.</td>
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</tbody>
</table>
14. We would like to get an idea of what you owned just prior to the time you started farming, and how you acquired it. This would be at the beginning of (first year farmed)

<table>
<thead>
<tr>
<th>Asset</th>
<th>Amount</th>
<th>How Acquired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash on hand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crops on hand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Livestock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinery &amp; equipment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION C - First Year as a Farm Operator

Now let's go back and think about your first year as a farm operator.

We would like to talk just about that one year.

15. During the first year of farming, did you operate your farm individually or in partnership with someone else?

- Individually [ ] Complete blue form
- Partnership [ ] Complete canary form
- Both [ ] Complete both blue and canary forms
16. Size of farming operation
   (a) How many acres did you operate this first year? ______ acres
       (1) How many acres did you own? ______ acres
       (2) How many acres were rented? ______ acres

       *If no land rented, go to Q. 18*

17. What type of rental arrangement(s) did you have on this land?
   Col. 1 Enter name or number for each tract of land farmed.
   Col. 2 Enter number of acres corresponding to each tract.
   Col. 3 Enter owner of the tract of land. If a relative, specify relationship.
   Col. 4 Check type of rental arrangement for each tract.
   Col. 5 What was the landlord's share?
   Col. 6 Did you have a written agreement on this rented land?

<table>
<thead>
<tr>
<th>Tract</th>
<th>Acres</th>
<th>Owner If relative (specify)</th>
<th>Rental Arrangement</th>
<th>Written Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Crop Share</td>
<td>Cash Rent</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

Total Acres Rented
18. Did you hire machine work done on a custom basis? Yes____  No____

19. Did you borrow any machinery? Yes____  No____

If YES: Complete the table below.

<table>
<thead>
<tr>
<th>(1) Machine</th>
<th>(2) Owner</th>
<th>(3) Relationship of Owner to Respondent</th>
<th>(4) No. of Days Used</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

20. During your first year of farming, did you purchase any machinery? Yes____  No____

(a) If Yes, what machines?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

21. As you think back upon your first year in farming, we would like to have some information about your livestock enterprises.  

(a) Did you have any hogs?  

(1) Number of litters farrowed

(2) Number of hogs fed for slaughter

(b) Did you have any beef cattle?  

(1) Number of beef cows

(2) Number of feeder cattle

(c) Did you have any dairy cattle?  

(1) Number of milk cows

(2) Number of young stock

(d) Did you have any sheep?  

(1) Number of ewes

(2) Number of lambs on feed
22. Of the ________ acres that you operated the first year, how many were in corn, soybeans, oats, etc.?

<table>
<thead>
<tr>
<th>Crops</th>
<th>Approximate Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td></td>
</tr>
<tr>
<td>Hay &amp; rotation pasture</td>
<td></td>
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<tr>
<td>Permanent pasture</td>
<td></td>
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<tr>
<td>Govt. program land</td>
<td></td>
</tr>
<tr>
<td>Other (bldgs., roads, wasteland)</td>
<td></td>
</tr>
<tr>
<td>Total acres operated</td>
<td></td>
</tr>
</tbody>
</table>

23. Which of the following categories best represents your gross farm income for your first year of farming? Include income from sale of crops, livestock, livestock products and any government payments. Do not include any income you may have received from off-farm sources. (Hand respondent green card.)

(a) ________ Less than $1,000
(b) ________ $1,000 - $2,499
(c) ________ $2,500 - $4,999
(d) ________ $5,000 - $9,999
(e) ________ $10,000 - $19,999
(f) ________ $20,000 - $39,999
(g) ________ $40,000 - $59,999
(h) ________ $60,000 - $79,999
(i) ________ $80,000 or More

24. Which category most closely represents your total operating expenses for this first year? (Hand respondent canary card.)

(a) ________ Less than $1,000
(b) ________ $1,000 - $2,499
(c) ________ $2,500 - $4,999
(d) ________ $5,000 - $9,999
(e) ________ $10,000 - $19,999
(f) ________ $20,000 - $29,999
(g) ________ $30,000 - $49,999
(h) ________ $50,000 - $69,999
(i) ________ $70,000 or More

25. Which category most closely represents your net income for your first year in farming? (Hand respondent blue card.)

(a) ________ Loss
(b) ________ $001 - $999
(c) ________ $1,000 - $2,499
(d) ________ $2,500 - $4,999
(e) ________ $5,000 - $7,499
(f) ________ $7,500 - $9,999
(g) ________ $10,000 - $14,999
(h) ________ $15,000 - $19,999
(i) ________ $20,000 or More
26. Size of farming operation (partnership)

(a) How many acres were operated by the partnership this first year? ________ acres

(1) Acres owned by partnership ________ acres

(2) Acres rented by partnership ________ acres

If no land rented by the partnership, go to 0. 28

27. What type of rental arrangement(s) did the partnership have on this land?

Col. 1 Enter name or number for each tract of land farmed.

Col. 2 Enter number of acres corresponding to each tract.

Col. 3 Enter owner of the tract of land. If a relative, specify relationship.

Col. 4 Check type of rental arrangement for each tract.

Col. 5 What was the landlord's share?

Col. 6 Did the partnership have a written agreement on this rented land?

<table>
<thead>
<tr>
<th>(1) Tract</th>
<th>(2) Acres</th>
<th>(3) Owner If relative (specify)</th>
<th>(4) Rental Arrangement</th>
<th>(5) Landlord's Share</th>
<th>(6) Written Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Total Acres Rented
28. Let's look at the composition of your partnership.

Col. 1 What persons, other than yourself, were members of the partnership?

Col. 2 Which members of the partnership owned these acres?

Col. 3 Of the total amount of labor furnished by the members of the partnership, what percent did each member contribute?

Col. 4 Of the total amount of operating expenses by the members of the partnership, what percent did each member contribute?

Col. 5 Of the total amount of profits for the partnership, what percent did each member receive?

<table>
<thead>
<tr>
<th>(1) Members of Partnership (If related to respondent, indicate in what way)</th>
<th>(2) Number of Acres Owned</th>
<th>(3) Labor %</th>
<th>(4) Operating Expenses %</th>
<th>(5) Profits %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent</td>
<td></td>
<td></td>
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</tbody>
</table>

Totals 100% 100% 100%

29. Did you have a written partnership agreement? Yes____ No____

30. Was the farm incorporated? Yes____ No____
31. As you think back upon the partnership's first year in farming, we would like to have some information about your livestock enterprises.

(a) Did the partnership have any hogs? .................................. Yes No
(1) Number of litters farrowed ........................................
(2) Number of hogs fed for slaughter .................................

(b) Did the partnership have any beef cattle? ...................... Yes No
(1) Number of beef cows ..............................................
(2) Number of feeder cattle ..........................................

(c) Did the partnership have any dairy cattle? ...................... Yes No
(1) Number of milk cows ..............................................
(2) Number of young stock ...........................................

(d) Did the partnership have any sheep? ............................. Yes No
(1) Number of ewes ...................................................
(2) Number of lambs on feed ........................................

32. Of the _________ acres that the partnership operated the first year, how many were in corn, soybeans, oats, etc.?

<table>
<thead>
<tr>
<th>Crops</th>
<th>Approximate Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td></td>
</tr>
<tr>
<td>Hay &amp; rotation pasture</td>
<td></td>
</tr>
<tr>
<td>Permanent pasture</td>
<td></td>
</tr>
<tr>
<td>Govt. program land</td>
<td></td>
</tr>
<tr>
<td>Other (bldgs., roads, wasteland)</td>
<td></td>
</tr>
<tr>
<td>Total acres operated</td>
<td></td>
</tr>
</tbody>
</table>
33. Which category most clearly represents the gross farm income for the partnership for your first year of farming? (Hand respondent buff card.)

(a) ______ Less than $10,000
(b) ______ $10,000 - $24,999
(c) ______ $25,000 - $49,999
(d) ______ $50,000 - $99,999
(e) ______ $100,000 - $149,999
(f) ______ Over $150,000

34. Which category most closely represents the total operating expense for the partnership during this first year of farming? (Hand respondent salmon card.)

(a) ______ Less than $5,000
(b) ______ $5,000 - $9,999
(c) ______ $10,000 - $19,999
(d) ______ $20,000 - $39,999
(e) ______ $40,000 - $59,999
(f) ______ $60,000 - $99,999
(g) ______ $100,000 - $149,999
(h) ______ Over $150,000

35. Which category most closely represents your share of the net income for the partnership for your first year of farming? (Hand respondent white card.)

(a) ______ Loss
(b) ______ $001 - $999
(c) ______ $1,000 - $2,499
(d) ______ $2,500 - $4,499
(e) ______ $4,500 - $7,499
(f) ______ $7,500 - $9,999
(g) ______ $10,000 - $14,999
(h) ______ Over $15,000
36. Let us now discuss how you financed your first year of farming.

Col. 1 What were the sources of your total operating capital?

Read sources from Col. 1 and check Yes or No in Col. 2

Col. 3 Of the total operating capital used during this first year, what percent was provided by each of the sources you mentioned?

<table>
<thead>
<tr>
<th>(1) Source</th>
<th>(2) Sources Used</th>
<th>(3) Percent of Total Operating Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self (past earnings and savings)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father or Guardian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inheritance (gifts or property)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative Other Than Father (specify who)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lending Agency</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

37. During your first year of farming, did anyone sign or countersign for

<table>
<thead>
<tr>
<th>(1) Source</th>
<th>(2) Sources Used</th>
<th>(3) If Yes, Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Lease on land rental</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>(b) Note on bank loans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Government farm program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Other (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

38. Did you live with your parents the first year you operated a farm? Yes____ No____

If NO; where did you live?_________________________________________________________
39. We would now like to have a brief history of the years during which you have farmed.

Col. 2 Since you began farming in ________ , what years have you operated a farm? (year started)

Col. 3 For each of the years you farmed, did you operate on your own (single proprietor) or in partnership with someone else?

Col. 4 How much land did you (you and your partner) operate during each of these years?

Col. 5 How much land did you own during each of these years?

<table>
<thead>
<tr>
<th>Year</th>
<th>(2) Operated a Farm?</th>
<th>Yes</th>
<th>No</th>
<th>(3) Form of Operation</th>
<th>Individual</th>
<th>Partnership</th>
<th>(4) Total Acreage Operated</th>
<th>(5) Acres Owned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1956</td>
<td></td>
<td></td>
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<td>1957</td>
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<td>1958</td>
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<td>1960</td>
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<td>1961</td>
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<td>1968</td>
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</tbody>
</table>

If the respondent did not farm continuously from the time he started until the present time, ask:

Why was your farming operation interrupted? ____________________________________________________________
______________________________________________________________________________________________
SECTION D - Present Year of Farming

Complete only if respondent was individual operator during 1968

40. Size of farming operation: Enter acres operated and owned from Q. 39

(a) How many acres did you operate in 1968? ________ acres

(1) How many acres did you own? ________ acres

(2) How many acres were rented? ________ acres

If no land rented, go to Q. 42

41. What type of rental arrangement(s) did you have on this land?

Col. 1 Enter name or number for each tract of land farmed.

Col. 2 Enter number of acres corresponding to each tract.

Col. 3 Enter owner of the tract of land. If a relative, specify relationship.

Col. 4 Check type of rental arrangement for each tract.

Col. 5 What was the landlord's share?

Col. 6 Did you have a written agreement on this rented land?

<table>
<thead>
<tr>
<th>(1) Tract</th>
<th>(2) Acres</th>
<th>Owner If relative (specify)</th>
<th>Rental Arrangement</th>
<th>(5) Landlord's Share</th>
<th>Written Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Crop Share</td>
<td>Cash Rent</td>
<td>Crop &amp; Cash</td>
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</tbody>
</table>

Total Acres Rented
42. Did you hire machine work done on a custom basis? Yes  No  

43. Did you borrow any machinery? Yes  No  

If YES: Complete the table below.

<table>
<thead>
<tr>
<th>(1) Machine</th>
<th>(2) Owner</th>
<th>(3) Relationship of Owner to Respondent</th>
<th>(4) No. of Days Used</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

44. We would like to have some information about your livestock enterprises for 1968.

(a) Did you have any hogs? ......................................................... Yes  No  

(1) Number of litters farrowed  
(2) Number of hogs fed for slaughter  

(b) Did you have any beef cattle? ................................................. Yes  No  

(1) Number of beef cows  
(2) Number of feeder cattle  

(c) Did you have any dairy cattle? ............................................... Yes  No  

(1) Number of milk cows  
(2) Number of young stock  

(d) Did you have any sheep? ......................................................... Yes  No  

(1) Number of ewes  
(2) Number of lambs on feed  


45. Of the ______ acres that you operated this year, how many were in corn, soybeans, oats, etc.?  

<table>
<thead>
<tr>
<th>Crops</th>
<th>Approximate Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td></td>
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<tr>
<td>Oats</td>
<td></td>
</tr>
<tr>
<td>Hay &amp; rotation pasture</td>
<td></td>
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<tr>
<td>Permanent pasture</td>
<td></td>
</tr>
<tr>
<td>Govt. program land</td>
<td></td>
</tr>
<tr>
<td>Other (bldgs., roads, wasteland)</td>
<td></td>
</tr>
<tr>
<td><strong>Total acres operated</strong></td>
<td></td>
</tr>
</tbody>
</table>

46. Which of the following categories will best represent your gross farm income for this year? (1968) Include income from sale of crops, livestock, livestock products and any government payments. Do not include any income you may have received from off-farm sources. (Hand respondent green card.)

(a) Less than $1,000  
(b) $1,000 - $2,499  
(c) $2,500 - $4,999  
(d) $5,000 - $9,999  
(e) $10,000 - $19,999  
(f) $20,000 - $39,999  
(g) $40,000 - $59,999  
(h) $60,000 - $79,999  
(i) $80,000 or More

47. Which category will most closely represent your total operating expenses for this year? (Hand respondent canary card.)

(a) Less than $1,000  
(b) $1,000 - $2,499  
(c) $2,500 - $4,999  
(d) $5,000 - $9,999  
(e) $10,000 - $19,999  
(f) $20,000 - $29,999  
(g) $30,000 - $49,999  
(h) $50,000 - $69,999  
(i) $70,000 or More

48. Which category will most closely represent your net income for this year? (Hand respondent blue card.)

(a) Loss  
(b) $001 - $999  
(c) $1,000 - $2,499  
(d) $2,500 - $4,999  
(e) $5,000 - $7,499  
(f) $7,500 - $9,999  
(g) $10,000 - $14,999  
(h) $15,000 - $19,999  
(i) $20,000 or More
49. Size of farming operation (partnership)
   (a) How many acres were operated by the partnership this year? ________ acres
       (1) Acres owned by partnership ________ acres
       (2) Acres rented by partnership ________ acres

       If no land rented by the partnership, go to Q. 51

50. What type of rental arrangement(s) did the partnership have on this land?
   Col. 1 Enter name or number for each tract of land farmed.
   Col. 2 Enter number of acres corresponding to each tract.
   Col. 3 Enter owner of the tract of land. If a relative, specify relationship.
   Col. 4 Check type of rental arrangement for each tract.
   Col. 5 What was the landlord's share?
   Col. 6 Did the partnership have a written agreement on this rented land?

<table>
<thead>
<tr>
<th>(1) Tract</th>
<th>(2) Acres</th>
<th>(3) Owner if relative (specify)</th>
<th>(4) Rental Arrangement</th>
<th>(5) Landlord's Share</th>
<th>(6) Written Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Crop Share</td>
<td>Cash Rent</td>
<td>Crop &amp; Cash</td>
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</table>

Total Acres Rented

Total Acres

Written Agreement

Yes | No
51. Let's look at the composition of your partnership.

Col. 1 What persons, other than yourself, are members of the partnership?

If no acres owned by partnership, go to Col. (3)

Col. 2 Which members of the partnership own these acres?

(acres owned)

Col. 3 Of the total amount of labor furnished by the members of the partnership, what percent does each member contribute.

Col. 4 Of the total amount of operating expenses by the members of the partnership, what percent does each member contribute?

Col. 5 Of the total amount of profits for the partnership, what percent does each member receive?

<table>
<thead>
<tr>
<th>(1) Members of Partnership (If related to respondent, indicate in what way)</th>
<th>(2) Number of Acres Owned</th>
<th>(3) Labor %</th>
<th>(4) Operating Expenses %</th>
<th>(5) Profits %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent</td>
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</tbody>
</table>

Totals

100%  100%  100%

52. Do you have a written partnership agreement? Yes _____ No _____

53. Is the farm incorporated? Yes _____ No _____
54. We would like to have some information about your livestock enterprises for 1968.

(a) Did the partnership have any hogs?  _____  ____
   (1) Number of litters farrowed
   (2) Number of hogs fed for slaughter

(b) Did the partnership have any beef cattle?  _____  ____
   (1) Number of beef cows
   (2) Number of feeder cattle

(c) Did the partnership have any dairy cattle?  _____  ____
   (1) Number of milk cows
   (2) Number of young stock

(d) Did the partnership have any sheep?  _____  ____
   (1) Number of ewes
   (2) Number of lambs on feed

55. Of the ________ acres that the partnership operated this year, how many were in corn, soybeans, oats, etc.?

<table>
<thead>
<tr>
<th>Crops</th>
<th>Approximate Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td></td>
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<tr>
<td>Oats</td>
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<tr>
<td>Hay &amp; rotation pasture</td>
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<td>Permanent pasture</td>
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<tr>
<td>Gcvt. program land</td>
<td></td>
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<tr>
<td>Other (bldgs., roads, wasteland)</td>
<td></td>
</tr>
<tr>
<td>Total acres operated</td>
<td></td>
</tr>
</tbody>
</table>
56. Which category will most clearly represent the gross farm income for the partnership for this year? (Hand respondent buff card.)

(a) _____ Less than $10,000
(b) _____ $10,000 - $24,999
(c) _____ $25,000 - $49,999
(d) _____ $50,000 - $99,999
(e) _____ $100,000 - $149,999
(f) _____ Over $150,000

57. Which category will most closely represent the total operating expense for the partnership this year? (Hand respondent salmon card.)

(a) _____ Less than $5,000
(b) _____ $5,000 - $9,999
(c) _____ $10,000 - $19,999
(d) _____ $20,000 - $39,999
(e) _____ $40,000 - $59,999
(f) _____ $60,000 - $99,999
(g) _____ $100,000 - $149,999
(h) _____ Over $150,000

58. Which category will most closely represent your share of the net income from the partnership this year? (Hand respondent white card.)

(a) _____ Loss
(b) _____ $001 - $999
(c) _____ $1,000 - $2,499
(d) _____ $2,500 - $4,499
(e) _____ $4,500 - $7,499
(f) _____ $7,500 - $9,999
(g) _____ $10,000 - $14,999
(h) _____ $15,000 - $19,999
(i) _____ $20,000 or More
Now we would like to turn from your farming operation to your ideas about education for young farm operators.

59. To what extent have you participated in the following educational programs? Have you attended regularly, frequently, seldom or never?

<table>
<thead>
<tr>
<th>(a) Young or adult farmer classes by Voc. Ag. instructors</th>
<th>Regular</th>
<th>Frequent</th>
<th>Seldom</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Meetings and clinics by extension personnel</td>
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<tr>
<td>(c) Short courses by Iowa State University</td>
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<tr>
<td>(d) Special meetings by commercial companies</td>
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</tbody>
</table>

If respondent has never participated in (a), skip to 61.

60. If you have attended a young or adult farmer class, please rate the value of the following items. Have they been of much, some, little or no value to you?

<table>
<thead>
<tr>
<th>(a) On farm visits by the instructor</th>
<th>Much Value</th>
<th>Some Value</th>
<th>Little or No Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Group tours and trips</td>
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<tr>
<td>(c) Class meetings by the instructor</td>
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<tr>
<td>(d) Speakers at class meetings</td>
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<td></td>
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<tr>
<td>(e) Agriculture mechanics activities</td>
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</tbody>
</table>
In this day and age, there are many sources of technical information for farming. Please indicate the extent of your use of the following sources. Do you make much, some or little use of these sources?

<table>
<thead>
<tr>
<th>Source</th>
<th>Much</th>
<th>Some</th>
<th>Little</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Farm magazines</td>
<td></td>
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<td></td>
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<tr>
<td>(b) Agricultural bulletins</td>
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<td></td>
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<tr>
<td>(c) Radio programs on agriculture</td>
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<tr>
<td>(d) Television programs on agriculture</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(e) Daily newspaper</td>
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<tr>
<td>(f) County extension personnel</td>
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<td></td>
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<tr>
<td>(g) Vocational Agriculture teacher</td>
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<td>(h) Soil Conservation personnel</td>
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<td>(i) County A.S.C. personnel</td>
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<tr>
<td>(j) Farmers Home Administration personnel</td>
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<tr>
<td>(k) Commercial companies</td>
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</tbody>
</table>
62. If you were to attend agricultural education meetings that are designed to help farmers in this community, how would you rank the following areas of instruction? Are they of great, some or little value to you?

<table>
<thead>
<tr>
<th>Areas of Instruction</th>
<th>Great Value</th>
<th>Some Value</th>
<th>Little Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Money Management</td>
<td></td>
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<tr>
<td>(b) Agricultural Marketing</td>
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<td></td>
<td></td>
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<tr>
<td>(c) Crop Production</td>
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<td></td>
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<tr>
<td>(d) Livestock Production</td>
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<td></td>
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<tr>
<td>(e) Agricultural Mechanics</td>
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<tr>
<td>(f) Legal Transactions</td>
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<td></td>
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<tr>
<td>(g) Farm Record Analysis</td>
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</tr>
</tbody>
</table>

63. If some of the following ideas were used in educational programs for farmers of this community, how favorable would you be for them. Would you favor or disfavor:

<table>
<thead>
<tr>
<th>Teaching Innovations</th>
<th>Favor</th>
<th>Disfavor</th>
<th>No Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Closed circuit TV agricultural programs</td>
<td></td>
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<tr>
<td>(b) Winter meetings held during days instead of at night</td>
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<tr>
<td>(c) Early evening meetings on farms in the summer</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(d) Area short courses for farmers</td>
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</table>
SECTION F - Personal Views of Young Farm Operators

64. Do you consider yourself to be:
   (a) _____ Well established in farming
   (b) _____ Partially established
   (c) _____ Just getting started in farming

65. Did you have any unusual circumstances (unplanned income, losses, or expenses) that affected your being established in farming? (For example: gifts, inheritance, sickness, accidents, storms, or such)
   Yes_____ No_____  
   If YES: specify what________________________________________
__________________________________________________________________
__________________________________________________________________

66. 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 ________

67. If you had known when you started farming what you know today, would you still have decided to farm?
   Yes_______  No_______  Don't know_______

68. Since you started farming, have you given any thought to quitting and getting a nonfarm job? Yes_______ No_______

69. Under what conditions, if any, would you advise a young man to start farming.
   ____________________________________________
   ____________________________________________

70. Do you think the government should undertake some special programs to help young people get started in farming?
   Yes_______ No_______ Don't know_______

71. What would be your advice to a farm boy immediately upon graduating from high school? Check only one:
   (a) _____ Get more education
   (b) _____ Go into military service first
   (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)__________________________
72. What do you consider to be the biggest obstacles in getting established in farming?


73. What do you consider to be the major things that have had an influence upon you in getting started in farming?


Are there any others?


Thank you very much for your help.

Ending Time_________________________