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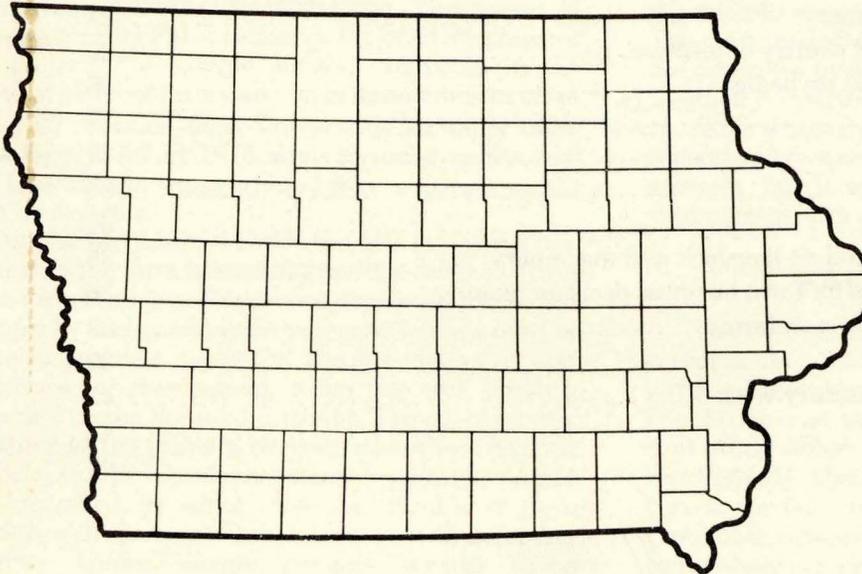
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Profile of Iowa Farms and Farm Families: 1976

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and

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Profile of Iowa Farms and Farm Families: 1976

by Eric O. Hoiberg and Wallace Huffman

This report is the first of several publications from a major research project initiated in the fall of 1976 by the Iowa Agriculture and Home Economics Experiment Station at Iowa State University with the cooperation of University Extension. The project is the Iowa Family Farm Research Project. One phase of this project is a sample survey, conducted in the spring of 1977, of farms and farm households in all of Iowa's 99 counties. Only farms with \$2,500 or more gross farm sales in 1976 were included in the survey. Information was gathered from a sample of 933 farm households.

The questionnaire was divided into two parts: one relating to the farm household, and the other relating to the farm business. The person determined to be the operator by a separate screening process responded to the farm business section of the questionnaire, and the spouse of this person, when one was present, responded to the household section. The operator was identified as the primary decision maker for the farm business, except where more than one decision maker was identified, in which case the number of days worked on the farm became the criterion for selecting between them. Seven persons within these households were identified as second operators having their own separate farming operation, and information relating to these operations was gathered also. Eleven female operators were identified out of the total of 940 farm business operations studied.

This survey was designed to provide information on the characteristics of Iowa farms and farm families, on their information sources for decision making, and on their research needs. The main impetus for the project was a desire by the administrators of the Experiment Station and Extension Service of Iowa State University to obtain a better understanding of the research and extension needs of Iowa farms and farm families. This informa-

tion will be used in deciding the direction of Experiment Station research and of Extension programs.

The objective of this report is to provide a profile of Iowa farms and farm families in 1976 obtained from the sample survey of Iowa farms and farm families. The most important characteristics of this population are described by a measure of central tendency and a frequency distribution. A few cross tabulations of characteristics of farms by size are also reported. This report may stimulate as many questions as it answers, but it will be useful to those who want a summary picture of Iowa agriculture in 1976.

FARM HOUSEHOLD

Some of the information gathered from our respondents and reported here is similar to that gathered and reported in the general Census of the Population and the Census of Agriculture. The current study differs in that information was gathered concurrently about family structure and the structure of the farm business. At the same time, general types of information were gathered to obtain a more comprehensive picture of the current state of the family farm in Iowa.

The first section of this report is devoted to an analysis of the modern farm family and includes information on family structure, occupational and residential background of the operators and spouses, educational background and aspirations for family members, attitudes, and rates of community organizational involvement. The second section reports responses related to the farm business: machinery used, crop and livestock enterprises, farm debt, labor sources, and income.

Family Size and Age Distribution

Two of the most important features of family structure are size and age composition of family members. These considerations have been especially important for analyzing farm families because of the emphasis on the family as a productive unit and its supposed intergenerational character. Table 1 is devoted to an analysis of household size and reports

Eric O. Hoiberg and Wallace E. Huffman are assistant professors of sociology and economics, respectively. They acknowledge assistance with the survey from Ronald Powers, James McGrann, Gordon Bivens, Harold Crawford, Art Johnson, Charlotte Roderuck, Regis Voss, Paul Yarbrough, and the Statistical Laboratory at Iowa State University. Mark Lange and Marynell Hollenbeck served ably as research assistants.

the total number of household members, including parents, children, other family members, and persons living in the household but not related to the head. There is a wide variation in total household size, ranging from single-person households to those households with 11 or more persons. The mean number of persons per household is 3.6.

Table 1. Household size

Number of Members	Households Reporting	Relative Frequency
1	48	5.1
2	274	29.4
3	158	16.9
4	198	21.2
5	135	14.5
6	65	6.9
7	27	2.9
8	15	1.6
9	5	0.5
10	5	0.5
11 or more	3	0.3
Total	933	100.0

Table 2 is concerned with the number of children per household. Column 2 reports the total number of children *living at home*. The mean number of children living at home is 1.7. Numbers in parentheses are the percentages that the number immediately above is of the total households interviewed; that is, in column 2, the 330 households reporting no children at home are 35.4% of the 933 households interviewed. Column 3 reports the *total* number of children for each household and includes both those children living at home and grown children living away from home. The mean number

is 2.9. These figures, of course, represent a static description of the time the survey was taken. In reality, the families interviewed were in various stages of the family life cycle, which means that additional children will be born into some families.

Table 2. Number of children

Number	Households reporting	
	Number of children at home	Total number ^{1/} of children
0	330 (35.4)	40 (4.3)
1	146 (15.6)	88 (9.4)
2	204 (21.9)	213 (22.8)
3	131 (14.0)	189 (20.3)
4	70 (7.5)	131 (14.0)
5	24 (2.6)	83 (8.9)
6	15 (1.6)	45 (4.8)
7	5 (0.5)	27 (2.9)
8	5 (0.5)	13 (1.4)
9	1 (0.1)	6 (0.6)
10	1 (0.1)	1 (0.1)
11 or more	1 (0.1)	5 (0.4)
Total	933 (100.0)	933 (100.0)

^{1/}This includes all children of the household, both at home and away from home.

Table 3 reports the age distribution of the family members in our sample. Columns 2 and 3 report the number of household heads (col. 2) and spouses (col. 3) in each age category listed. The age distribution ranges from the 16- to 20-year-old category, where we find 5 household heads and 9 spouses, to the 76-and-over-year-old category, composed of 11 heads of household and 6 spouses. The median age is 48.8 for the household head and 45.9 for the spouse.

Table 3. Age distribution

Age	Number of households reporting age of		
	Head	Spouse	Other household members
5 or younger	--	--	271 (17.1)
6-10	--	--	314 (19.8)
11-15	--	--	412 (26.1)
16-20	5 (0.5)	9 (1.0)	401 (25.3)
21-25	33 (3.5)	44 (4.7)	114 (7.2)
26-30	74 (7.9)	79 (8.5)	19 (1.2)
31-35	87 (9.3)	95 (10.2)	3 (0.2)
36-40	107 (11.5)	97 (10.0)	4 (0.3)
41-45	85 (9.2)	86 (9.2)	6 (0.4)
46-50	106 (11.5)	119 (12.8)	3 (0.2)
51-55	138 (14.8)	127 (13.6)	3 (0.2)
56-60	118 (12.8)	93 (10.0)	3 (0.2)
61-65	100 (10.7)	60 (6.4)	8 (0.5)
66-70	37 (4.0)	12 (1.3)	9 (0.6)
71-75	20 (2.1)	14 (1.5)	3 (0.2)
76 or older	11 (1.2)	6 (0.6)	8 (0.5)
No response	1 (0.1)		3 (0.2)

Column 4 presents the age distribution of all other household members and includes all children at home, other family members and persons living in the household but not related to the head. A wide variation exists in column 4, although the largest categories are the 11-15 and 16-20 age categories with the 6-10 and under-5 age categories being the third and fourth largest, respectively. The median age for this particular group is 12.9.

Education and Educational Aspirations

National statistics tell us that, while educational levels are increasing for the country as a whole, the rural population, especially the rural farm population, consistently lags behind the rest of the country in educational attainment. However, these conclusions usually represent figures based on an average of "adult" educational attainment and do not include the impact of the younger generations where mandatory school attendance laws and an increased emphasis on the value of an education are important factors.

Tables 4 and 5 demonstrate the intergenerational change in educational attainment. Table 4 reports educational levels for the parents of the household head and spouse. The second and third columns report the educational attainment of the wife or female operator's father and mother. The largest percentage of both fathers and mothers completed 8 years of formal schooling, with the next largest percentage falling in the 12-year category (high school graduate). The wife or female operators' mothers had more schooling on the average than did the fathers, with a mean educational level of 9.9 for the mothers and 9.2 for the fathers.

The last two columns report the same information for the parents of the husband or male operator. Once again, completion of the eighth grade represents the largest category for both the fathers and mothers, with the 12-year category as the second largest. The same pattern that was observed for the spouse seems to hold here, with the mothers' median educational level higher at 9.8 in comparison with the median for fathers, 9.1.

Table 5 reports educational attainment for the household head and the spouse. Intergenerational comparisons can be made with table 4, which reported educational levels for their parents. For example, the level of educational attainment is substantially higher in table 5. Whereas the largest percentage of their parents completed only an eighth grade education, the largest percentage, in fact a majority, of both household heads and their spouses completed 12 years of school, or were high school graduates. The second largest percentage of household heads completed eighth grade, but for the spouses, the second largest number had from 13 to 15 years of schooling, or some training beyond high school. The median educational level for the head is 11.3 and, for the spouse or female operator 12.1, which, when compared with their parents' levels, shows a substantial increase in educational attainment. The figures also reveal that the average educational level of the spouse is still higher than that of the household head. These figures represent a static description of the population at the time of the study. Many of the heads and spouses have plans for additional educational training. For example, when asked whether they would try to obtain any additional formal education for themselves, 39 per-

cent of the spouses and 21 percent of the household heads responded that they would like to obtain additional schooling.

Table 4. Operator and spouse's parents' educational level

Grade completed	Wife or female operator's parents		Husband or male operator's parents	
	Father	Mother	Father	Mother
0-4	21 (2.5)	18 (2.1)	22 (2.4)	14 (1.5)
5-7	81 (9.5)	44 (5.1)	73 (7.9)	47 (5.1)
8	381 (44.4)	339 (39.7)	405 (43.4)	359 (38.9)
9-11	61 (7.1)	64 (7.5)	38 (4.1)	42 (4.6)
12 (high school) grad	177 (20.7)	230 (26.8)	197 (21.4)	264 (28.7)
13-15	35 (4.1)	71 (8.4)	31 (3.4)	57 (6.2)
16 (B.S.-B.A.)	12 (1.4)	23 (2.7)	10 (1.1)	19 (2.1)
16 or more (M.A., Ph.D., etc.)	4 (0.5)	2 (0.2)	-- --	-- --
No response or don't know	85 (9.9)	65 (7.5)	146 (15.6)	120 (13.0)
Subtotal	857 (100.0)	857 (100.0)	922 (100.0)	922 (100.0)
Not Applicable	76	76	11	11
Total	933	933	933	933

Table 5. Operators' and spouses' education level

Grade completed	Number of households reporting education level of	
	Head	Spouse or female operator
0-4	-- (--)	-- (--)
5-7	18 (1.9)	6 (0.7)
8	183 (19.8)	78 (9.1)
9-11	89 (9.7)	44 (5.1)
12	481 (52.2)	538 (62.9)
13-15	95 (10.3)	130 (15.2)
16	47 (5.1)	43 (5.0)
16 or more	6 (0.6)	11 (1.3)
No response	3 (0.3)	5 (0.5)
Subtotal	922 (100.0)	855 (100.0)
Not applicable	11	78
Total	933	933

Table 6 reports the figures on educational attainment for grown children, and again, the trend towards increased years of schooling is evident. Although the largest percentage of the grown children fall into the high-school-graduate category (12 years of education), a significantly larger percentage has gone on for additional training beyond high school when compared with their parents and grandparents. When the 13- to 15-year category is combined with the 16-year category, the figure is comparable in size to the number of those completing a high school education. The median educational level for grown children is 13.7, which when compared with median levels for parents and

grandparents further documents the upward movement in educational attainment. The figures in table 6 are probably a conservative estimate because some persons reported there are still in school.

Table 6. Grown childrens' education level

Grade completed	Number of children	Relative frequency
0-4	5	0.4
5-7	6	0.5
8	19	1.6
9-11	44	3.7
12	525	43.8
13-15	260	21.7
16	244	20.3
16 or more	97	8.1
Total	1200	100.0

The educational levels of children still living at home are not reported because most are in different stages of schooling at present. However, a further projection of potential educational attainment can be obtained by looking at the parents' educational aspirations for those children living at home. When asked whether they had plans for any additional educational training beyond high school for their children between the ages of C and 18 and living at home, 67.9 percent of the parents responded "yes," 8.6 percent responded "no," and another 23.5 percent gave no response. If these figures accurately reflect future plans, average educational attainment will continue to increase in the future.

Background Characteristics

With the total number of farming operations continuing to decline nationwide, young persons planning to enter production agriculture are becoming increasingly interested in discovering the background characteristics of persons already involved in

farming and in trying to relate these characteristics to their own individual situations. One important variable thought to be related to farming as an occupation concerns the residential background of the farm operator. Table 7 reports the residential background of the operator and spouse when they were children. The possible response categories, listed on the extreme left-hand side of the table, refer to being raised on a farm, in the open country but not on a farm, and in a town or city. Column 2 shows the residential background of the operator's spouse (or female operator). The largest number, almost three-fourths of the total sample, come from farm backgrounds. The other fourth of the sample is primarily concentrated in the town or city category. This last category includes the entire range of community types, running from the smallest rural village to the largest metropolitan area.

Column 3 of table 7 reports on the same breakdown for the husband or male farm operator. The predominance of farm background is even more pronounced here with over 90 percent of the operators coming from a farm background and only a little over 5 percent having been raised in a town or city.

Table 7. Residential background of farm husbands and wives

Residence	Number wives or female operators reporting	Number husbands or male operators reporting
On farm	612 (71.6)	862 (93.5)
Open country, not farm	25 (2.9)	11 (1.2)
In a town or city	213 (24.9)	48 (5.2)
No response or don't know	5 (0.6)	1 (0.1)
Subtotal	855 (100.0)	922 (100.0)
Not applicable	78	11
Total	933	933

Another background dimension concerned the work history of the farm operator and spouse—whether the operator (and spouse) had worked full time at another occupation before they started farming. Table 8 reports that about two-thirds of the operators' wives (or female operators) were engaged in a full-time occupation before entering farming. On the other hand, slightly less than half of the male operators had a previous full-time occupation

before they entered farming. To summarize tables 7 and 8, the predominance of operators and spouses with farm backgrounds is unmistakable, but almost half of the male farm operators and two-thirds of their spouses (or female operators) were engaged in alternative occupational pursuits before they entered farming.

Table 8. Work experience prior to entering farming—operator and spouse

Response	Number wives or female operators	Number husbands or male operators
Yes	570 (66.7)	448 (48.6)
No	282 (33.0)	469 (50.9)
No response	3 (0.5)	5 (0.5)
Subtotal	855 (100.0)	922 (100.0)
Not applicable	78	11
Total	933	933

Quality of Life on Iowa Farms

In this section we begin to concentrate on relative satisfaction levels of farm families in several major areas of day-to-day living. We were interested in gaining information on the operators' and spouses' subjective evaluation of three main areas: farming as an occupation, family activities (amount of time spent and quality of activities), and housing. Tables 9 and 10 summarize the responses for the operator and spouse. On the extreme left of these tables are listed the three areas examined. At the top of the tables is a scale of satisfaction ranging from 1 (not satisfied) through increasing levels of satisfaction to 5 (very satisfied). The overall satisfaction levels in all three areas are quite high. For example (table 9), almost 60 percent of the farm operators rate themselves as being very satisfied (5) with farming as an occupation, 63 percent report themselves as very satisfied with their family activities, and 63 percent report themselves as very satisfied with their housing. The next largest response category in all three areas is category 4 (satisfaction level above average), with the remaining responses ranging in much smaller numbers among the other categories.

Table 9. Life satisfaction

Areas of satisfaction	Number of Operators reporting satisfaction levels					No response	Total
	1	2	3	4	5		
	(Not satisfied)				(Very satisfied)		
(a) Occupation as farming	9 (1.0)	21 (2.2)	102 (10.9)	236 (25.1)	557 (59.3)	15 (1.6)	940 (100.0)
(b) Family activities (life)	9 (1.0)	22 (2.3)	95 (10.1)	197 (21.0)	590 (62.8)	27 (2.9)	940 (100.0)
(c) Home (or housing)	33 (3.5)	40 (4.3)	94 (10.1)	166 (17.7)	590 (62.8)	17 (1.8)	940 (100.0)

Table 10 paints essentially the same picture for operators' spouses (or female operators), with almost 64 percent being very satisfied with their husbands' (or their) occupation in farming, 53 percent reporting themselves as being very satisfied with their family activities, and 51 percent as being very satisfied with their housing. As in table 9, the second largest category in each area is category 4 (above-average satisfaction), with the other responses ranging in smaller numbers in the other three categories.

It is difficult to get anything but a subjective measure of quality of family life or job satisfaction. For housing, however, it is possible to present an objective picture of some characteristics of the farm residence. For example, 98 percent of the households in our survey had hot and cold running water. Also, almost 83 percent of the households reported automatic central heating systems, and a little over 19 percent had central air-conditioning systems.

Table 10. Life satisfaction

Areas of satisfaction	Number of spouses reporting satisfaction levels					Not applicable	No response	Total
	1	2	3	4	5			
	(Not satisfied)				(Very satisfied)			
(a) Husband's occupation as farming	13 (1.4)	9 (1.0)	89 (9.4)	131 (14.1)	596 (63.9)	91 (9.8)	4 (0.4)	933 (100.0)
(b) Family activities (life)	13 (1.4)	24 (2.6)	100 (10.8)	206 (22.1)	496 (53.2)	91 (9.8)	3 (0.3)	933 (100.0)
(c) Home (or housing)	42 (4.5)	35 (3.7)	111 (11.9)	175 (18.7)	475 (50.9)	91 (9.8)	4 (0.4)	933 (100.0)

Table 11 reports the total number of rooms of the households in our sample as well as the number of rooms in daily use. To the extreme left of the table are the size categories of the houses, ranging from two rooms to homes with 13 or more rooms, excluding bathrooms, hallways, and enclosed porches. House size varies widely, but a little more than two-thirds of all the houses have from 6 to 8 rooms. The third column reports the number of rooms in daily use and shows a somewhat different picture in that over 60 percent of the households use daily from 4-6 rooms. One main reason for this difference is the adjustment that families make as they move through

Table 11. House size (number of rooms)

Number Rooms	Number of households reporting	
	Rooms in house	Rooms in daily use
2	--	3 (0.3)
3	1 (0.1)	78 (7.8)
4	30 (3.2)	159 (17.1)
5	111 (11.9)	201 (21.6)
6	220 (23.6)	211 (22.7)
7	197 (21.1)	134 (14.4)
8	213 (22.9)	91 (9.7)
9	81 (8.7)	26 (2.7)
10	45 (4.8)	24 (2.6)
11	14 (1.5)	6 (0.6)
12	9 (1.0)	1 (0.1)
13 or more	8 (9.0)	1 (0.1)
No response or don't know	4 (0.4)	3 (0.3)
Total	933 (100.0)	933 (100.0)

the various stages of the family life cycle. Adjustments are made in housing size as the number of children becomes larger and, later, as children grow and move away from home.

A final characteristic of housing concerns the age distribution of the houses in our survey. Table 12 reports these results. On the average, the houses in our sample, seem to be quite old with the largest categories being the 41-60, the 61-80, and the 81-and-over age categories, all having about equal percentages within them. The average age of all structures was 57.

Table 12. House age

Age of house, years	Households reporting age of house	
	Number	Relative Frequency
0-20	149	16.7
21-40	108	12.1
41-60	214	23.9
61-80	215	24.1
81 or more	206	23.1
	892	100.0
No response or don't know	41	
Total	933	

Family Decision Making

A large number of decisions confront members of the farm household daily. These decision-making areas include both day-to-day operational decisions as well as major decisions regarding the long-range future of the household and farm business. Decision-making patterns differ substantially from family to family, depending on the type of decision being made, the person or persons most directly affected by the decision, and the roles of the various family members.

The persons in our sample were asked questions directly related to decision making. Specifically, we were interested in the relative involvement of the husband and wife in three major decision-making areas: the household, the children, and the farm business. Table 13 reports involvement in the general decision-making areas of the household and children, and table 14 describes involvement in decision making in the farm business.

Table 13. Family decision making -- household

Household decisions	Number of households reporting decision-making pattern							
	Husband- seldom discusses	Husband- usually discusses	Both decide	Wife- usually discusses	Wife- * seldom discusses	Never talked about it	Not appro- priate	No response
When to buy major household equipment?	15 (1.6)	43 (4.6)	666 (71.4)	108 (11.6)	6 (0.6)	--	89 (9.5)	6 (0.6)
When to make household repairs?	22 (2.4)	106 (11.4)	555 (59.5)	142 (15.2)	7 (0.8)	--	89 (9.5)	12 (1.0)
When the wife takes a job off farm?	26 (2.8)	45 (4.8)	566 (60.7)	130 (13.9)	29 (3.1)	21 (2.3)	89 (9.5)	27 (2.9)
What type of discipline will be used on children?	4 (0.4)	19 (2.0)	388 (36.3)	43 (4.6)	21 (2.3)	--	478 (51.1)	30 (3.2)
Who gives permission for children to visit friends?	--	11 (1.2)	254 (27.3)	97 (10.4)	53 (5.7)	--	489 (52.3)	29 (3.1)

Table 13 lists some representative types of decisions in the general areas of household and children. Questions on the first three areas of decision making were asked of all members of the sample except when either the wife or husband was absent from the household (these cases appear in the "not appropriate" category). The decision-making areas related to children were asked only of couples having children under 12 years of age living at home (all others, including families where either the husband or wife was absent from the household, couples with all children over 12 years of age, and childless couples, appear in the "not appropriate" category). Respondents chose among five major decision-making patterns, which range from the husband making the decision with little involvement by the wife, through the middle category where both husband and wife are equally involved in decision-making, to the wife making the decision with little or no involvement by the husband.

With regard to the first two decisions relating to household matters, by far the largest percentage of responses falls into the middle category (both decide). When purchasing major household items, for example, a little over 71 percent of our respondents reported that the husband and wife make joint decisions. A similar pattern shows up on the question of making household repairs, with almost 60 percent of our respondents reporting joint decision making. The third decision listed in the table—the wife taking an off-farm job—shows essentially the same pattern, with a little more than 60 percent of the respondents reporting joint decision making. The fourth and fifth decisions—dealing with child rearing—once again demonstrate a democratic decision-making pattern, with 79.6 percent and 61.3 percent of those responding (having children under 12) reporting joint decision making. In all these areas, the second largest category was the wife making the decision but usually discussing it with the husband.

Table 14 reports decision-making patterns for the farm business. With regard to major items linked to long-range decisions, such as changing the size of the farm business, 45.5 percent of the respondents reported joint decision making, with another 30.2 percent, the second largest response category, reporting that the husband made the decision but usually discussed it with the wife. In day-to-day operation of the farm business, the husband is more prominent as decision maker. For example, on the question of when to sell farm products, 35.9 percent of the husbands report that they make this decision while usually discussing it with the wife, and another 26.9 percent report that they make the decision alone, seldom discussing it with the wife. On the decision to try out a new crop variety, this tendency is even more pronounced, with 53.8 percent of the husbands making the decision by themselves and another 22.4 percent of the husbands making the decision but first discussing it with their wives. Finally, with respect to the husband taking a job off the farm, the joint decision-making category is the predominant response.

Table 14. Family decision making--farm business

Farm business decisions	Number of farm operations reporting decision-making pattern							
	Husband-seldom discusses	Husband-usually discusses	Both decide	Wife-usually discusses	Wife-seldom discusses	Never talked about it	Not appropriate	No response
Whether to change the size of the farm business?	112 (11.9)	284 (30.2)	428 (45.5)	2 (0.2)	--	--	97 (10.3)	17 (1.8)
When to sell farm output (grain, beans, etc.)?	253 (26.9)	337 (35.9)	236 (25.1)	1 (0.1)	--	1 (0.1)	97 (10.3)	15 (1.6)
Whether to try out a new crop variety?	506 (53.8)	211 (22.4)	102 (10.9)	1 (0.1)	--	2 (0.2)	97 (10.3)	21 (2.2)
Whether the husband takes a job off the farm?	180 (19.1)	138 (14.7)	472 (50.2)	6 (0.6)	2 (0.2)	18 (1.9)	97 (10.3)	27 (2.9)

Information Sources for Farm Household Decision Making

Making decisions usually is a fairly complicated process involving as an initial step the gathering of relevant information from various sources. For decision making in the household, we asked operators' spouses about their use of various different types of media sources and personal sources of information in two areas: (1) health, nutrition, and family care and (2) money management and consumer information. Table 15 shows that operators' spouses use a wide variety of media sources to gain information in both areas. In the area of health, nutrition, and family care, the sources with the highest reported rates of use were, in order, farm magazines, newspapers, popular magazines, and radio and TV. For money management and consumer information, the same sources of information were used, but in a different order, with farm magazines once again receiving the highest reported rate of use followed by newspapers, radio and TV, and popular magazines.

Table 15 also reports the rate of use of personal sources of information in the same two household-related areas. Once again, a wide variety of information sources are utilized. Health, nutrition, and family care is a broad area encompassing many different decisions, and this breadth is evident in the responses. The most frequently reported sources of information in this area are medical personnel (79.9 percent) and friends and relatives (77.8 percent), with druggists (48.6 percent) and demonstrations sponsored by commercial companies (41.1 percent) following in that order. With respect to money management and consumer information, the two predominant categories are (1) accountants, lawyers, and bankers, with a 68.1-percent reported rate of

use, and (2) friends and relatives, with a 55.5-percent reported rate of use. All other sources of information are below these two categories, and the rate of use is considerably less. In sum, the table demonstrates the wide variety of information sources used by family members in making household decisions.

Organizational and Community Involvement

With the rapid advances made in recent years in communication and transportation, the potential for the farm family to become closely attached to the community is greater than it has ever been. The farm family and the community are mutually dependent, and the success of one is closely tied to the other. For example, the farm family depends on community institutions and organizations to fulfill its educational, economic, recreational, and religious needs; the community, in turn, depends on the participation of those within the community as well as those within the surrounding agricultural areas.

Table 16 reports the relative rates of participation of husband and wife in four types of organizations: major farm organizations, cooperatives, producer organizations, and a general category of other community organizations. For the wife, the rate of organizational involvement is quite high, with 59 percent reporting membership in at least one community organization and almost 20 percent reporting membership in a major farm organization. The rates of participation are higher for the husband, when compared with the wife, in organizations related to the farm business, with 51.7 percent reporting membership in cooperatives and 48.4 percent reporting involvement in major farm organizations.

Table 15. Information sources--household decisions

Information source	Number of households reporting usage of sources for					
	Health, Nutrition and family care			Money management and consumer information		
	Yes	No	No response	Yes	No	No response
<u>Media</u>						
(1) popular magazines such as Better Homes and Gardens, Family Circle, Readers Digest	635 (75.2)	204 (24.2)	5 (0.6)	430 (50.9)	407 (48.2)	7 (0.8)
(2) specialty magazines such as Consumers Report, Changing Times, Moneysworth, Today's Health	169 (20.0)	670 (79.4)	5 (0.6)	166 (19.7)	670 (79.4)	8 (0.9)
(3) Farm Journal, Farm Wife, Wallaces Farmer	655 (78.8)	174 (20.1)	5 (0.6)	554 (65.6)	283 (33.5)	7 (0.8)
(4) newspapers	636 (75.4)	203 (24.1)	5 (0.6)	546 (64.7)	291 (34.5)	7 (0.8)
(5) news magazines such as Time and News-week	153 (18.1)	687 (81.4)	4 (0.5)	147 (17.4)	691 (81.9)	6 (0.7)
(6) university extension bulletins and newsletters	419 (49.6)	421 (49.9)	4 (0.5)	359 (42.5)	479 (56.8)	6 (0.7)
(7) radio and TV program	618 (73.2)	221 (26.2)	5 (0.6)	540 (64.0)	297 (35.2)	7 (0.8)
(8) pamphlets and brochures from suppliers of household products	400 (47.4)	439 (52.0)	5 (0.6)	343 (40.6)	494 (58.5)	7 (0.8)
(9) books	414 (49.1)	426 (50.5)	4 (0.5)	296 (35.1)	542 (64.2)	6 (0.7)
<u>Talking with</u>						
(1) friends and relatives	657 (77.8)	181 (21.4)	6 (0.7)	468 (55.5)	368 (43.6)	8 (0.9)
(2) medical personnel	674 (79.9)	165 (19.6)	5 (0.6)	159 (18.8)	677 (80.2)	8 (0.9)
(3) druggists or pharmacists	410 (48.6)	428 (50.7)	6 (0.7)	139 (16.5)	698 (82.7)	7 (0.8)
(4) accountants, lawyers, or bankers	136 (16.1)	703 (83.3)	5 (0.6)	575 (68.1)	261 (30.9)	8 (0.9)
(5) dealers and salesmen of household and family products	288 (34.1)	551 (65.3)	5 (0.6)	248 (29.4)	588 (69.7)	8 (0.9)
(6) county extension staff, area and state extension specialists	270 (32.0)	570 (67.5)	4 (0.5)	248 (29.4)	590 (69.9)	6 (0.7)
<u>Attending</u>						
(1) college classes or adult education classes	158 (18.7)	682 (80.8)	4 (0.4)	129 (15.3)	709 (84.0)	6 (0.7)
(2) meetings or demonstration parties sponsored by commercial companies	347 (41.1)	492 (58.3)	5 (0.5)	264 (31.3)	573 (67.9)	7 (0.8)
(3) meetings or demonstrations sponsored by the Extension Service	267 (31.6)	573 (67.9)	4 (0.4)	217 (25.7)	621 (73.6)	6 (0.7)

Husbands' rate of participation in other community organizations is also quite high, with 58.9 percent of the husbands reporting membership in one or more of these organizations. These figures do not include participation in church or church-related activities.

Table 16. Organizational involvement

Membership in	Number households reporting	
	Wife or female farm operator	Husband or male farm operator
One or more major farm organization (Farm Bureau, Grange, N.F.O., Farmers Union)	166 (19.7)	452 (48.4)
One or more cooperatives	87 (10.3)	482 (51.7)
One or more producers organizations	29 (3.4)	137 (14.7)
One or more other but non-church related participator community organizations ^{1/}	498 (59.0)	550 (58.9)
Subtotal	844 (100.0)	933 (100.0)
No wife present	89	---
Total	933	933

^{1/}This group does not include membership in any of the previous three listed types of organizations.

Attitudes on Governmental Regulation

The impact of federal, state, and local governmental regulations have been widely felt in the farming community. We asked our sample of farm operators and spouses to give their attitudes on whether there was too much, too little, or about the right amount of governmental involvement in issues related to the household and the farming operation. Table 17 reports the spouses' attitudes toward governmental control in the two areas of food additives and consumer protection. With regard to food additives, 39.4 percent responded that there was too much governmental control, with another 35.2 percent feeling that the level of governmental control in this area was about right. In consumer protection, on the other hand, 41.1 percent felt that the government was exerting the proper amount of control; feelings that there was too much or too little control accounted for the rest of the responses and were about evenly split.

Table 18 reports the attitudes of farm operators toward governmental control in areas more directly related to the farming operation. In the specific issue areas of feed additives, pesticides and their application, and solid waste disposal, there seems to be about an even split between those who think there is too much governmental control and those who feel

there is about the right amount. In the area of safety measures, however, most of the operators (51.1 percent) felt there was too much control, and another 38.9 percent felt there was about the right amount. In the area of soil conservation, most of the operators feel that governmental control is at about the right level, but a significant minority (32.8 percent) feel there is too little control exerted by the government in this area.

FARM BUSINESS

Farm Business Organization Type and Acres of Land Operated

The single-operator farm business is by far the most commonly reported type of Iowa farm business organization. In our survey, single operators accounted for 88.5 percent of farm businesses, partnerships accounted for 9.4 percent, family corporations accounted for 1.7 percent, and managers (only) accounted for 0.2 percent.

Land is one important input in agricultural production. Fifty-five percent of Iowa farm operators reported operating 160-479 acres in their farm business, and another 26 percent reported operating 159 acres or less. Only 2.7 percent reported operating more than 960 acres. The median (average) number of acres operated in 1976 was 264 (332) acres per farm (table 19).

Seventy-nine percent of Iowa farm operators reported owning some or all of the farmland they operated, and 21 percent reported that they did not own any farmland. The average acres of owned farmland by the 79 percent reporting land owned was 240 acres per farm. This average number of acres owned is less than the average number of acres operated because additional land was rented from nonfarm landowners. However, 38 percent of Iowa farm operators reported that they did not rent any farmland from others for their farming operation. The 62 percent of farm operators who reported renting land from others rented 245 acres on the average. Sixty percent of Iowa farmers reported that they did not rent any farmland to others. For those renting out farmland, the average number of acres rented was 123 acres.

Table 17. Attitudes on government regulation

Area of regulation	Number of households reporting				
	Too much	Too little	About right amount	Don't know	No response
Food additives	368 (39.4)	158 (16.9)	328 (35.2)	25 (2.7)	54 (5.8)
Consumer protection. . .	205 (22.0)	251 (26.9)	383 (41.1)	29 (3.1)	65 (6.9)

Table 18. Attitudes on government regulation

Areas of regulation	Number of farm operators reporting			
	Too much	Too little	About right amount	Don't know or no response
(a) Feed additives. . . . .	.399 (42.4)	95 (10.1)	391 (41.6)	55 (5.9)
(b) Pesticides and their application . . . . .	.378 (40.2)	126 (13.4)	386 (41.1)	50 (5.3)
(c) Safety measures (machinery, etc.) . . . . .	.480 (51.1)	62 (6.6)	366 (38.9)	32 (3.4)
(d) Soil Conservation . . . . .	.85 (9.0)	308 (32.8)	506 (53.8)	41 (4.4)
(e) Land use. . . . .	.265 (28.2)	197 (21.0)	393 (41.8)	85 (9.0)
(f) Agricultural production. . . . .	.353 (37.6)	66 (7.0)	469 (49.9)	52 (5.5)
(g) Solid waste disposal. . .	.335 (35.6)	134 (14.3)	356 (37.9)	115 (12.2)

Table 19. Acres of land operated, acres owned, and acres rented.

Number of acres	Number of farm operators reporting acres				Rented in & operated & managed
	Operated	Owmed	Owmed and operated	Owmed and rented out	
None or no response	1 (0.1)	199 (21.2)	203 (21.6)	858 (91.3)	356 (37.9)
1-79	61 (6.5)	78 (8.3)	94 (10.0)	33 (3.5)	71 (7.6)
80-159	120 (12.8)	185 (19.7)	193 (20.5)	31 (3.3)	129 (13.7)
160-319	366 (38.9)	311 (33.1)	298 (31.7)	13 (1.4)	224 (23.8)
320-479	210 (22.3)	95 (10.1)	90 (9.6)	2 (0.2)	100 (10.6)
480-639	77 (8.2)	28 (3.0)	24 (2.6)	1 (0.1)	38 (4.0)
640-959	69 (7.3)	37 (4.0)	31 (3.3)	2 (0.2)	16 (1.7)
960-1,279	27 (2.9)	3 (0.3)	3 (0.3)	--	5 (0.5)
1,280-2,500	9 (1.0)	4 (0.4)	4 (0.4)	--	1 (0.1)
Total	940 (100.0)	940 (100.0)	940 (100.0)	940 (100.0)	940 (100.0)

Size of Farm, Age, and Education of Farm Operators by Size of Farm

In classifying farms by size, several different measures can be used—total acres operated, total crop acres operated, annual man-hours of labor used, gross farm sales, or gross or net farm production. For the purposes of reporting the distribution of some of the characteristics of Iowa farms by farm size, we chose, as a measure of size, the number of acres of cropland (and cropland pasture) operated during 1976. The size classes are: 1-74 acres, 75-149, 150-299, 300-499, and 500 acres or more; the distribution of sample farms across these classes is reported in table 20. Farms in some sections of the state have a sizable proportion of land in noncropland uses. Table 20 also presents the distribution of total

acres operated by cropland acres operated.

Although cropland acres operated is not a perfect measure of farm size, cropland acres are relatively homogeneous across the State of Iowa. Furthermore, at this early stage of data analysis, acres of cropland operated is a farm size variable that is much easier to tabulate than gross farm sales or net farm production.

Table 20. Acres of cropland operated, and total acres operated by acres of cropland operated.

Total acres operated in farm	Size of farm: Acres of cropland operated						Total
	1-74	75-149	150-299	300-499	≥500	None or no response	
	Number of farms reporting						
1-79	49 (5.2) ^{1/} [51.0] ^{2/}	1 (0.1) [0.5]	--	--	--	11 (1.2) [73.3]	61 (6.5)
80-159	32 (3.4) [33.3]	84 (8.9) [46.2]	1 (0.1) [0.3]	--	--	3 (0.3) [20.0]	120 (12.7)
160-319	14 (1.5) [14.6]	93 (9.9) [51.1]	255 (27.1) [74.6]	4 (0.4) [2.0]	--	--	366 (38.9)
320-479	--	3 (0.3) [1.6]	79 (8.4) [23.1]	128 (13.6) [62.4]	--	--	210 (22.3)
480-639	--	1 (0.1) [0.5]	6 (0.6) [1.8]	50 (5.3) [24.4]	20 (2.1) [20.0]	--	77 (8.1)
640-959	1 (0.1) [1.0]	--	1 (0.1) [0.3]	22 (2.3) [10.7]	56 (6.0) [56.0]	--	80 (8.5)
960-1,279	--	--	--	1 (0.1) [0.5]	15 (1.6) [15.0]	--	16 (1.7)
1,280 or more	--	--	--	--	9 (1.0) [9.0]	--	9 (1.0)
No response	--	--	--	--	--	1 (0.1) [6.7]	1 (1.0)
No. farms reporting cropland acres operated in '76	96 (10.2) [100.0]	182 (19.4) [100.0]	342 (36.4) [100.0]	205 (21.8) [100.0]	100 (10.6) [100.0]	15 (1.6) [100.0]	940 (100.0)
Mean acres oper. for size	96.5	160.0	270.0	463.0	850.8	--	

^{1/}The numbers in parentheses give relative frequency as a percentage of all 940 farms.

^{2/}The number in brackets give relative frequency as percentage of farms in particular size class (column).

It seems reasonable that the type of farm business organization and the characteristics of the farm operators might differ by size of farm operated. Table 21 shows the percentage of single-operator farm businesses decreasing as the acres of cropland (size) increases and the percentage of farms organized as partnerships and family corporations increasing as acres of cropland operated increases. Table 22 presents the distribution of farmers' age and years of schooling completed by size of farm. The distributions show an association of operators' age and years of schooling completed with size. At young ages, the acres of cropland operated tend to increase as age increases; then, after age 45-55, cropland operated tends to decline. Years of schooling by the operator tend to increase as acres of cropland operated increase.

All farmers of a given age do not have the same number of years of experience farming because of differences in their ages when they started farming on their own. Table 23 shows that 3.8 percent of the sample farm operators have been farming only 1-2 years, and 1 percent started farming on their own 53 years or more ago. Table 23 also shows that acres of cropland operated tends to first increase after an operator starts operating a farm on own; then, after 13-22 years, the acres of cropland operated tends to decline.

Table 21. Farm business organization type by acres of cropland operated.

Farm business organization type reported by farm operator	Size of farm: Acres of cropland operated						Total
	1-74	75-149	150-299	300-499	≥ 500	None or no response	
	Number of farms reporting						
Single operator	91 (9.7) [94.8]	180 (19.2) [98.9]	308 (32.8) [90.1]	175 (18.6) [85.4]	64 (6.8) [64.0]	14 (1.5) [93.3]	832 (88.5)
Partnership (on some or all)	5 (0.5) [5.2]	2 (0.2) [1.1]	32 (3.4) [9.4]	26 (2.8) [12.7]	24 (2.6) [24.0]	1 (.1) [6.7]	90 (9.6)
Family corporation	--	--	1 (0.1) [0.3]	4 (0.4) [2.0]	11 (1.2) [11.0]	--	16 (1.7)
Manager (only)	--	--	1 (0.1) [0.3]	--	1 (0.1) [1.0]	--	2 (0.2)
Total	96 (10.2) [100.0]	182 (19.4) [100.0]	342 (36.4) [100.0]	205 (21.8) [100.0]	100 (10.6) [100.0]	15 (1.6) [100.0]	940 (100.0)

Table 22. Farm operator's age and years of schooling completed by acres of cropland operated.

Characteristic	Size of farm: Acres of cropland operated						Total ^{1/}
	1-74	75-149	150-299	300-499	≥500	None or no response	
Number of farm operators reporting							
<u>Age of farm operator:</u>							
35 yrs. or less	13 (1.4) [13.5]	32 (3.4) [17.9]	63 (6.8) [18.6]	37 (4.0) [18.1]	28 (3.0) [28.0]	4 (0.4) [26.7]	177 (19.0)
35-44	14 (1.5) [14.6]	33 (3.5) [18.4]	66 (7.1) [19.5]	58 (6.2) [28.3]	28 (3.0) [28.0]	2 (0.2) [13.3]	201 (21.5)
45-54	20 (2.1) [20.8]	36 (3.9) [20.1]	85 (9.1) [25.2]	69 (7.4) [33.7]	26 (2.8) [26.0]	--	236 (25.3)
55-64	25 (2.7) [26.0]	55 (5.9) [30.7]	98 (10.5) [29.0]	35 (3.8) [17.1]	15 (1.6) [15.0]	3 (0.3) [20.0]	231 (24.8)
65 yrs. or older	24 (2.6) [25.0]	23 (2.5) [12.9]	26 (2.8) [7.7]	5 (0.5) [2.4]	3 (0.3) [3.0]	6 (0.6) [40.0]	87 (9.3)
None or no response	--	--	--	1 (0.1) [0.5]	--	--	1 (0.1)
<u>Education level of farm operator:</u>							
5-8	29 (3.11) [30.2]	54 (5.8) [30.2]	77 (8.3) [22.8]	24 (2.6) [11.7]	15 (1.6) [15.0]	5 (0.5) [33.3]	204 (21.9)
9-11	13 (1.4) [13.5]	22 (2.4) [12.3]	36 (3.9) [10.7]	15 (1.6) [7.3]	3 (0.3) [3.0]	--	89 (9.5)
12	37 (4.0) [38.5]	79 (8.5) [44.1]	173 (18.5) [51.2]	132 (14.2) [64.4]	57 (6.1) [57.0]	9 (1.0) [60.0]	487 (52.2)
13-15	8 (0.9) [8.3]	14 (1.5) [7.8]	37 (4.0) [11.0]	20 (2.1) [9.8]	16 (1.7) [16.0]	1 (0.1) [6.7]	96 (10.3)
16 or more	8 (0.9) [8.3]	8 (0.9) [4.5]	15 (1.6) [4.4]	14 (1.5) [6.8]	9 (1.0) [9.0]	--	54 (5.8)
None or no response	1 (0.1) [1.0]	2 (0.2) [1.1]	--	--	--	--	3 (0.3)
Total ^{1/}	96 (10.3) [100.0]	179 (19.2) [100.0]	338 (36.2) [100.0]	205 (22.0) [100.0]	100 (10.7) [100.0]	15 (1.6) [100.0]	933 ^{1/} (100.0)

^{1/}Note that seven second operators are not included in tabulation.

Table 23. Number of years since farm operator started farming on own by acres of cropland operated.

No. years since started farming on own	Size of farm: Acres of cropland operated						Total
	1-74	75-149	150-299	300-499	≥500	None or no response	
Number of farm operators reporting							
1-2 (1975-76)	7 (0.7) [7.3] {19.4} ^{1/}	12 (1.3) [6.6] {33.3}	11 (1.2) [3.2] {30.6}	3 (0.3) [1.5] {8.3}	3 (0.3) [3.0] {8.3}	--	36 (3.8)
3-7 (1970-74)	15 (1.6) [15.6] {12.0}	29 (3.1) [15.9] {23.2}	40 (4.3) [11.7] {32.0}	25 (2.7) [12.2] {20.0}	11 (1.2) [11.0] {8.9}	5 (0.5) [33.3] {4.0}	125 (13.3) {100.0}
8-12 (1965-73)	7 (0.7) [7.3] {7.4}	18 (1.9) [9.9] {19.1}	32 (3.4) [9.4] {34.0}	25 (2.7) [12.2] {26.6}	11 (1.2) [11.0] {11.7}	1 (0.1) [6.7] {1.1}	94 (10.0) {100.0}
13-22 (1955-64)	11 (1.2) [11.5] {5.9}	22 (2.3) [12.1] {11.8}	68 (7.2) [19.9] {36.6}	54 (5.7) [26.3] {29.0}	31 (3.3) [31.0] {16.7}	--	186 (19.8) {100.0}
23-32 (1945-54)	16 (1.7) [16.7] {6.0}	45 (4.7) [24.7] {16.9}	110 (11.8) [32.2] {41.2}	65 (6.9) [31.7] {24.3}	29 (3.1) [29.0] {10.9}	2 (0.2) [13.3] {0.7}	267 (28.4)
33-42 (1935-44)	22 (2.3) [22.9] {13.9}	35 (3.7) [19.2] {22.2}	61 (6.5) [17.8] {38.6}	26 (2.8) [12.7] {16.5}	11 (1.2) [11.0] {6.7}	3 (0.3) [20.0] {1.9}	158 (16.8)
43-52 (1925-34)	6 (0.6) [6.3] {15.0}	13 (1.4) [7.1] {32.5}	12 (1.3) [3.5] {30.0}	5 (0.5) [2.4] {12.5}	3 (0.3) [3.0] {7.5}	1 (0.1) [6.7] {2.5}	40 (4.3)
53 or more (before 1925)	4 (0.4) [4.2] {44.4}	1 (0.1) [0.5] {11.1}	2 (0.2) [0.6] {22.2}	--	--	2 (0.2) [13.3] {22.2}	9 (1.0)
No response	8 (0.9) [8.3]	7 (0.7) [3.8]	6 (0.6) [1.8]	2 (0.2) [1.0]	1 (0.1) [1.0]	1 (0.1) [6.7]	25 (2.7)
Total	96 (10.2) [100.0]	182 (19.4) [100.0]	342 (36.4) [100.0]	205 (21.8) [100.0]	100 (10.6) [100.0]	15 (1.6) [100.0]	940 (100.0)

^{1/}The numbers in { } are percentages of row total.

Tractors and Machinery

Tractors and machinery are a sizable investment on many Iowa farms. Seventy-eight percent of sample farm operators reported having and using 2-4 tractors on their farms in 1976. Three tractors was the most frequently reported number (table 24). Although 35 percent of the tractors were reported to be 6 years of age or less, 40 percent of the tractors were 16 or more years old. Sixty-three percent of the farm tractors are concentrated in the 20-79 horsepower size range, and only 20 percent are in the 100 horsepower or more size category (table 25). About 20 percent of the tractors on hand Jan. 1, 1976, but 38 percent of tractors acquired after Jan. 1, 1976, were reported to have 100 horsepower or more. Tables 26 and 27 present the distribution of tractors on farms and tractor size by acres of cropland operated. As expected, the number of tractors and proportion of large tractors on farms increase with farm size.

Table 24. Number of tractors on farms.^{1/}

Number of tractors on hand Jan. 1, 1976, and used in 1976	Farms reporting	
	Number	Relative frequency
None	12	1.3
1	100	10.6
2	235	25.0
3	321	34.1
4	165	17.6
5	70	7.4
6	13	1.4
7	7	0.7
8 or more	4	0.4
No response	13	1.4
Total	940	100.0

^{1/} Tractors with 20 horsepower or more.

Table 25. Size (PTO horsepower) of tractors on farms.

PTO horsepower of tractors on hand Jan. 1, 1976, and used in 1976	Tractors reported	
	Number	Relative frequency
20-49	828	30.5
50-79	877	32.3
80-99	316	11.7
100-119	274	10.1
120-150	222	8.2
151 or more	46	1.7
No response	148	5.5
Total	2711	100.0

Table 26. Number of tractors on farms by acres of cropland operated.^{1/}

Number of tractors on hand Jan. 1, 1976 and used in 1976	Size of farm: Acres of cropland operated					None or no response	total
	1-74	75-149	150-299	300-499	≥500		
	Number of farms reporting						
1	29 (3.1) [30.2]	34 (3.6) [18.7]	23 (2.5) [6.7]	8 (0.9) [3.9]	--	6 (0.6)	100 (10.6)
2	39 (4.2) [40.6]	56 (6.0) [30.8]	92 (9.8) [26.9]	34 (3.6) [16.6]	9 (1.0) [9.0]	5 (0.5)	235 (25.0)
3	20 (2.1) [20.8]	62 (6.6) [34.1]	133 (14.2) [38.9]	78 (8.3) [38.1]	28 (3.0) [28.0]	--	321 (34.2)
4	2 (0.2) [2.1]	20 (2.1) [11.0]	62 (6.6) [18.1]	53 (5.6) [25.9]	28 (3.0) [28.0]	--	165 (17.6)
5	1 (0.1) [1.0]	4 (0.4) [2.2]	21 (2.2) [6.1]	23 (2.5) [11.2]	21 (2.2) [21.0]	--	70 (7.5)
6	--	--	1 (0.1) [0.3]	6 (0.6) [2.9]	6 (0.6) [6.0]	--	13 (1.4)
7	--	1 (0.1) [0.6]	1 (0.1) [0.3]	1 (0.1) [0.5]	4 (0.4) [4.0]	--	7 (0.7)
8 or more	--	1 (0.1) [0.6]	1 (0.1) [0.3]	--	2 (0.2) [2.0]	--	4 (0.4)
None or no response	5 (0.5) [5.2]	4 (0.4) [2.2]	8 (0.9) [2.3]	2 (0.2) [1.0]	2 (0.2) [2.0]	4	25 (2.7)
Total	96 (10.2) [100.0]	182 (19.4) [100.0]	342 (36.4) [100.0]	205 (21.8) [100.0]	100 (10.6) [100.0]	15 (1.6)	940 (100.0)

^{1/} Tractors with 20 horsepower or more.

Table 27. Size of tractors by acres of cropland operated.

PTO horsepower of tractors on hand Jan. 1, 1976 and used in 1976	Size of farm: Acres of cropland operated					None or no response	total
	1-74	75-149	150-299	300-499	≥500		
	Number of tractors reported						
20-49	77 (3.0) [61.1]	181 (7.1) [44.1]	312 (12.2) [33.0]	174 (6.8) [26.0]	74 (2.9) [18.5]	10 (0.4)	828 (32.3)
50-79	39 (1.5) [31.0]	154 (6.0) [37.6]	373 (14.6) [39.4]	214 (8.3) [32.0]	94 (3.7) [23.6]	3 (0.1)	877 (34.2)
80-99	3 (0.1) [2.4]	39 (1.5) [9.5]	115 (4.5) [12.2]	107 (4.2) [16.0]	52 (2.0) [13.0]	--	316 (12.3)
100-119	6 (0.2) [4.8]	26 (1.0) [6.3]	89 (3.5) [9.4]	92 (3.6) [13.8]	61 (2.4) [15.3]	--	274 (10.7)
120-150	1 (--) [0.8]	8 (0.3) [2.0]	52 (2.0) [5.5]	72 (2.8) [10.8]	89 (3.5) [22.3]	--	222 (8.7)
151 or more	--	2 (0.1) [0.5]	5 (0.2) [0.5]	10 (0.4) [1.5]	29 (1.1) [7.3]	--	46 (1.8)
Total	126 (4.9) [100.0]	410 (16.0) [100.0]	946 (36.9) [100.0]	669 (26.1) [100.0]	399 (15.6) [100.0]	13 (0.5)	2563 ^{1/} (100.0)

^{1/}Total number tractors on sample farms for which horsepower was reported.

Table 28. Row size of row crop planter used and row size of planter by acres of cropland operated.

Row size of row crop planter used	Size of farm: Acres of cropland operated					None or no response	Total
	1-74	75-149	150-299	300-499	≥ 500		
	Number of farms reporting						
2	16 (1.7) [16.7]	15 (1.6) [8.2]	7 (0.7) [2.1]	--	--	1 (0.1)	39 (4.2)
4	46 (4.9) [47.9]	143 (15.2) [78.6]	275 (29.3) [80.4]	129 (13.7) [62.9]	39 (4.2) [39.0]	1 (0.1)	633 (67.3)
6	1 (0.1) [1.0]	3 (0.3) [1.7]	25 (2.7) [7.3]	40 (4.3) [19.5]	22 (2.3) [22.0]	--	91 (9.7)
8	2 (0.2) [2.1]	3 (0.3) [1.7]	12 (1.3) [3.5]	26 (2.8) [12.7]	26 (2.8) [26.0]	--	69 (7.3)
12	--	--	1 (0.1) [0.3]	1 (0.1) [0.5]	8 (0.9) [8.0]	--	10 (1.1)
None or no response	31 (3.3) [32.3]	18 (1.9) [9.9]	22 (2.3) [6.4]	9 (1.0) [4.4]	5 (0.5) [5.0]	13 (1.4)	98 (10.4)
Total	96 (10.2) [100.0]	182 (19.4) [100.0]	342 (36.4) [100.0]	205 (21.8) [100.0]	100 (10.6) [100.0]	15 (1.6)	940 (100.0)

Although some think there has been a rapid switch to large row-crop equipment, 67 percent of our survey farm operators reported 4-row as the row size of their row-crop planter. Eighteen percent reported a 6-row or larger planter (right most column of table 28). Only 37 percent of all row-crop planters were reported to be 6 years of age or less. Table 28 presents the size distribution of row-crop planters by acres of cropland operated.

Combines are a machine for which the switch to large relatively expensive types has occurred. Eighty percent of the combines were reported as self-propelled, and 46 percent were reported as 6 years of age or less. For combines with a grain head, 62 percent were reported as having a 13-15 foot width. A 4-row was the most frequently reported size of corn head for combines (tables 29 and 30). Ta-

ble 31 presents the size distribution of combine corn heads by acres of cropland operated.

Table 29. Width of grain head for combines used on farms.

Width of grain head (feet)	Combines reported	
	Number	Relative frequency
5 - 6	60	10.4
7 - 9	43	7.5
10 - 12	55	9.6
13 - 15	356	61.9
16 - 21	42	7.3
No response	19	3.3
Total	575 ^{1/}	100.0

^{1/}Note that 392 farms reported no combine.

Table 30. Row size of corn head on combines used on farms.

Row size of corn head*	Combines reported	
	Number	Relative frequency
2	142	30.8
3	32	6.9
4	236	51.2
6	41	8.9
8	4	0.9
No response	6	1.3
Total	461 ^{1/}	100.0

^{1/}Note that 499 farms reported no corn head.

Table 31. Row size of corn head on (newest) combine used by acres of cropland operated.

Combine size (rows)	Size of farm: Acres of cropland operated						Total
	1-74	75-149	150-299	300-499	>500	None or no response	
	Number of farms reporting						
2	7 (0.7) {5.1} ^{1/}	28 (3.0) {20.4}	60 (6.4) {43.8}	33 (3.5) {24.1}	9 (1.0) {6.6}	--	137 (14.6) {100.0}
3	--	1 (1.0) {3.7}	7 (0.7) {25.9}	14 (1.5) {51.9}	5 (0.5) {18.2}	--	27 (2.9) {100.0}
4	1 (0.1) {0.4}	12 (1.3) {5.3}	69 (7.3) {30.4}	92 (9.8) {40.5}	52 (5.5) {22.9}	1 (0.1) {0.4}	227 (24.1) {100.0}
6	--	--	6 (0.6) {15.0}	12 (1.3) {30.0}	22 (2.3) {55.0}	--	40 (4.3) {100.0}
8	--	--	--	3 (0.3) {75.0}	1 (0.1) {25.0}	--	4 (0.4) {100.0}
None or no response	88 (9.4)	141 (15.0)	200 (21.3)	51 (5.4)	11 (1.2)	14 (1.5)	505 (53.7)
Total	96	182	342	205	100	15	940

^{1/}The number in { } in this table is the percentage of farms in the row total.

Crop, Livestock, and Poultry Enterprise

Most Iowa farm businesses are engaged in a combination of crops and livestock (and poultry) producing enterprises (table 32). Almost all farms in the sample, 97 percent, produced some type of crops in 1976; 94 percent of all farms surveyed produced corn, and 68 percent produced soybeans. A smaller percentage, 87 percent, of the farms produced some livestock or poultry. Sixty-two percent of all farms were engaged in cattle production and in swine production. Eighteen percent of the farms had a poultry enterprise, 14 percent a dairy enterprise, and 10 percent a sheep enterprise. Thirteen percent of the farms produced crops only while 2 percent produced

Table 32. Farm enterprise combinations.

Enterprise combinations 1976	Farm operators reporting	
	Number	Relative frequency
Crops, swine, cattle, sheep, poultry	10	1.1
Crops, poultry	10	1.1
Crops, cattle, sheep	11	1.2
Crops, cattle, dairy	12	1.3
Crops, sheep	12	1.3
Crops, swine, sheep	12	1.3
Crops, swine, cattle, dairy, poultry	15	1.6
Crops, swine, cattle, sheep	20	2.1
Crops, dairy	21	2.2
Crops, swine, poultry	22	2.3
Crops, cattle, poultry	24	2.6
Crops, swine, cattle, dairy	26	2.8
Crops, swine, dairy	36	3.8
Crops, swine, cattle, poultry	53	5.6
Crops, swine	85	9.0
Crops only	122	13.0
Crops, cattle	139	14.8
Crops, swine, cattle	255	27.1
Other combinations	55	5.9
Total	940	100.0

livestock and (or) poultry only. Thus, 85 percent of the farms reported some type of crop production combined with some type of livestock and poultry production.

Farmers can be viewed as having two alternative sources of businesses for purchasing farm supplies, cooperatives and independent dealers. Forty-three percent of the farm operators reported that they bought most of their farm supplies from co-ops. Forty-five percent reported independent dealers as the source of most farm supplies; 11 percent reported that co-ops and independent dealers were used as a source about equally (table 33).

Table 33. Type business where farm operators purchase farm supplies.

Business type	Farm operators reporting	
	Number	Relative frequency
Co-op(s)	401	42.7
Independent dealers	426	45.3
Co-op(s) and independent dealers about equal	107	11.4
No response	6	0.6
Total	940	100.0

Crops—Corn and Soybeans. Corn and soybeans are the two most important crops grown on the sample farms. In 1976, 22 percent of the farms reported 100-149 acres of corn for all purposes, and 62 percent of the farms reported between 50 and 199 acres of corn. Fewer than 1 percent of the farms reported more than 650 acres of corn. For soybeans, the number of acres of beans per farm is distributed rather uniformly over the range of 1 to 149 acres (table 34).

The sharp rise in the relative price of petroleum products in 1973 stimulated interest in minimum-tillage practices, especially for corn. The use of the moldboard plow and associated cultural practices have come under new scrutiny. For this survey, an index of reduced tillage practices was the *nonuse* of the moldboard plow in preparing the fields for planting of corn and soybeans.

Our survey shows that reduced tillage is more frequently used in preparing land for corn than for soybeans. However, corn frequently follows soybeans in crop rotations, and there is relatively little trash to turn under in these cases. In preparing land for corn, 38 percent of the farmers reported no reduced-tillage acres (i.e., they used a moldboard plow to prepare all their corn land). For soybeans, 67 percent of the

Table 34. Acres of corn and soybeans.

Acres in 1976	Number of farm operators reporting	
	Corn for all purposes	Soybeans
1-24	41 (4.6)	85 (13.1)
25-49	79 (8.9)	126 (19.5)
50-74	122 (13.8)	112 (17.3)
75-99	102 (11.5)	82 (12.7)
100-149	198 (22.3)	123 (19.0)
150-199	127 (14.3)	55 (8.5)
200-249	82 (9.3)	24 (3.7)
250-349	59 (6.7)	22 (3.4)
350-449	43 (4.9)	8 (1.2)
450-649	26 (2.9)	8 (1.2)
650-999	3 (3.0)	--
1,000-1,499	2 (0.2)	--
1,500-2,250	1 (0.1)	--
No response	1 (0.1)	2 (0.3)
Total	886 (94.3) (100.0)	647 (68.8) (100.0)
None of crop reported in 1976	54 (5.7)	293 (31.2)
	940 (100.0)	940 (100.0)

farmers reported no reduced-tillage acres (i.e., they used moldboard plow to prepare all their land for soybeans). About the same percentage of farmers raising corn and raising soybeans reported the use of reduced tillage on all their corn acres and all their soybean acres (table 35).

Cattle. Most beef-cow herds in Iowa are relatively small. The relative frequency distribution of beef-cow numbers per farm is most concentrated over the range of 10-39 cows per farm, and farms with those numbers of beef cows accounted for 54 percent of the sample farms reporting beef-cow herds. The median size herd was 33 cows, and the average size herd was 42 cows for farms having beef cows in 1976 (table 36). Table 37 presents the distribution of beef-cow herd size by acres of cropland operated. About 40 percent of the farms in each farm size class reported having beef cows. Fifty percent of all sample farms reported a net decrease and 12 percent an increase in beef-cow herd size between the beginning and end of 1976.

Table 35. Reduced tillage on 1976 crop corn acreage and soybean acreage.

Percent of acreage on which reduced tillage was used	No. of farm operators reporting reduced tillage for:	
	Corn	Soybeans
0	337 (38.1)	435 (67.4)
Positive but not greater than 20%	42 (4.7)	11 (1.7)
Greater than 20 but not greater than 40%	64 (7.2)	19 (2.9)
Greater than 40 but not greater than 60%	99 (11.2)	18 (2.8)
Greater than 60 but not greater than 80%	85 (9.6)	13 (2.0)
Greater than 80 but less than 100%	45 (5.1)	4 (0.6)
100%	213 (24.1)	145 (22.5)
Number of operators reporting crop raised	885 (94.1) (100.0)	645 (68.6) (100.0)
Others	55 (5.9)	295 (31.4)
	940 (100.0)	940 (100.0)

Table 36. Beef cow herd size.

Number of cows in beef cow herd January 1, 1976	Farm operators reporting size of beef cow herd	
	Number farms	Relative frequency
1-9	28	7.4
10-19	72	19.0
20-29	61	16.1
30-39	70	18.5
40-49	35	9.2
50-74	41	10.8
75-99	24	6.3
100-149	18	4.7
150-199	3	0.8
200-350	3	0.8
No response or don't know	24	6.3
Total	379	100 (40.3)
No beef cows	561	(59.7)
	940	(100.0)

Table 37. Size of beef cow herd by acres of cropland operated.

Number of beef cows Jan. 1, 1976	Size of farm: Acres of cropland operated						Total
	1-74	75-149	150-299	300-499	≥500	None or no response	
	Number of farms reporting						
1 - 9	9 (1.0) [9.4]	9 (1.0) [4.9]	8 (0.9) [2.3]	3 (0.3) [1.5]	--	1 (0.1)	30 (31.9)
10 -19	9 (1.0) [9.4]	12 (1.3) [6.6]	25 (2.7) [7.3]	11 (1.2) [5.4]	3 (0.3) [3.0]	4 (0.4)	64 (6.8)
20 -29	9 (1.0) [9.4]	17 (1.8) [9.3]	32 (3.4) [9.4]	7 (0.7) [3.4]	1 (0.1) [1.0]	--	66 (7.0)
30 -39	7 (0.7) [7.3]	12 (1.3) [6.6]	22 (2.3) [6.4]	15 (1.6) [7.3]	6 (0.6) [6.0]	1 (0.1)	63 (6.7)
40 -74	2 (0.2) [2.1]	6 (0.6) [3.3]	39 (4.1) [11.4]	25 (2.7) [12.2]	11 (1.2) [11.0]	2 (0.2)	85 (9.0)
75 -99	1 (0.1) [1.0]	--	7 (0.7) [2.0]	12 (1.3) [5.9]	6 (0.6) [6.0]	--	26 (2.8)
100 -149	1 (0.1) [1.0]	2 (0.2) [1.0]	3 (0.3) [0.9]	4 (0.4) [2.0]	7 (0.7) [7.0]	--	17 (1.8)
150 or more	--	--	--	4 (0.4) [2.0]	4 (0.4) [4.0]	--	8 (0.9)
None or no response	58 (6.2) [60.4]	124 (13.2) [68.1]	206 (21.9) [60.2]	124 (13.2) [60.5]	62 (6.6) [62.0]	7 (0.7)	581 (61.8)
Total	96 (10.2) [100.0]	182 (19.4) [100.0]	342 (36.4) [100.0]	205 (21.8) [100.0]	100 (10.6) [100.0]	15 (1.6)	940 (100.0)

Twenty-one percent of sample farms reported selling cattle as feeders in 1976, and 37 percent reported selling fed cattle for slaughter. For feeder cattle, the median and average numbers sold per farm were 35 and 55, respectively. For fed cattle, the median and average numbers sold per farm were 54 and 108, respectively (table 38). Thus, measured by number of head sold, the size of the fed-cattle activity on farms is generally larger than the feeder-cattle activity. Table 39 presents the distribution of fed cattle sold during 1976 by acres of cropland operated. The percentage of farms by size reporting fed cattle sold in 1976 increases as farm size increases, from 16.3 percent of the smallest farms to 55 percent for the largest farms.

Table 38. Number of fed cattle marketed and number of cattle marketed as feeders during 1976.

Number head	Number of farm operators reporting	
	Fed cattle sold	Cattle sold as feeders
1-24	89 (25.8)	86 (43.7)
25-49	72 (20.9)	59 (29.9)
50-99	71 (20.6)	34 (17.3)
100-199	46 (13.3)	6 (3.0)
200-349	30 (8.7)	7 (3.6)
350-749	26 (7.5)	1 (0.5)
750 or more	3 (0.9)	--
No response	8 (2.3)	4 (2.0)
Total	345 (36.7) (100.0)	197 (21.0) (100.0)
None	595 (63.3)	743 (79.0)
	940 (100.0)	940 (100.0)

Table 39. Number of fed cattle sold by acres of cropland operated.

Number of fed cattle sold	Size of farm: Acres of cropland operated					None or no response	Total
	1-74	75-149	150-299	300-499	≥500*		
	Number of farms reporting						
1 - 24	11 (1.2) [11.5]	24 (2.6) [13.2]	34 (3.6) [9.9]	17 (1.8) [8.3]	3 (0.3) [3.0]	--	89 (9.5)
25 - 49	3 (0.3) [3.1]	10 (1.1) [5.5]	32 (3.4) [9.4]	19 (2.0) [9.3]	7 (0.7) [7.0]	1 (0.1)	72 (7.7)
50 - 99	1 (0.1) [1.0]	7 (0.7) [3.9]	27 (2.9) [7.9]	24 (2.6) [11.7]	12 (1.3) [12.0]	--	71 (7.6)
100 - 199	1 (0.1) [1.0]	1 (0.1) [0.6]	16 (1.7) [4.7]	16 (1.7) [7.8]	11 (1.2) [11.0]	--	45 (4.8)
200 - 349	--	--	10 (1.1) [2.9]	11 (1.2) [5.4]	9 (1.0) [9.0]	--	30 (3.2)
350 - 749	--	1 (0.1) [0.6]	3 (0.3) [0.9]	11 (1.2) [5.4]	11 (1.2) [11.0]	--	26 (2.8)
750 or more	--	--	--	1 (0.1) [0.5]	2 (0.2) [2.0]	--	3 (0.3)
None or no response	80 (8.5) [83.3]	139 (14.8) [76.4]	220 (23.4) [64.3]	106 (11.3) [51.7]	45 (4.8) [45.0]	14 (1.5)	604 (64.3)
Total	96 (10.2) [100.0]	182 (19.4) [100.0]	342 (36.4) [100.0]	205 (21.8) [100.0]	100 (10.6) [100.0]	15 (1.6)	940 (100.0)

Swine. Of the 563 sample farms having 10 or more hogs during 1976, 83 percent farrowed sows in 1976. The number of litters of pigs farrowed per farm for the whole year (December 1975-November 1976) has a wide range—1 to about 600 (table 40). Although the relative frequency distribution is not concentrated in any particular range, 50 percent of the farms reported farrowing only 1 to 48 litters for the year. The average and the median numbers of litters farrowed were 66 and 50, respectively, for farms farrowing sows. Spring (March-May) was the season when the largest percentage (74 percent of those farrowing during 1976) of farmers farrowed sows. Fall (September-November) was the second most frequently reported season for farrowing sows (68 percent). The winter season (December 1975-February 1976) was the least frequently reported season for farrowing sows (60 percent). Table 41 presents the distributions of litters of pigs farrowed by acres of cropland operated. The percentage of farms reporting any litters farrowed increases as farm size increases except for the largest size class where there is a slight reduction.

Table 40. Number of litters of pigs farrowed.

Number of litters of pigs farrowed Dec. 1975 - Nov. 1976	Farm operators reporting litters of pigs farrowed	
	Number farms	Relative frequency
1-12	49	10.4
13-24	71	15.0
25-36	61	12.9
37-48	54	11.4
49-60	41	8.7
61-80	69	14.6
81-100	24	5.1
101-150	56	11.8
151-200	20	4.2
201-250	5	1.1
251-300	5	1.1
301-450	4	0.8
451-600	1	0.2
Rented sows, don't know or no response	13	2.7
Total	473	100.0 (50.3)
No litters farrowed	467	(49.7)
	940	(100.0)

Table 41. Number of farms reporting number of litters of pigs farrowed Dec. 1, 1975 to Nov. 30, 1976, by acres of cropland operated.

Number of litters farrowed	Size of farm: Acres of cropland operated						Total
	1-74	75-149	150-299	300-499	≥500	None or no response	
	Number of farms reporting						
1-25	17 (1.8) [17.7]	26 (2.8) [14.3]	48 (5.1) [14.0]	22 (2.3) [10.7]	5 (0.5) [5.0]	2 (0.2) [13.3]	120 (12.8)
25-48	6 (0.6) [6.3]	29 (3.1) [15.9]	45 (4.8) [13.2]	23 (2.5) [11.2]	11 (1.2) [11.0]	1 (0.1) [6.7]	115 (12.2)
49-80	1 (0.1) [1.0]	21 (2.2) [11.5]	48 (5.1) [14.0]	35 (3.7) [17.0]	5 (0.5) [5.0]	-- --	110 (11.7)
81-150	2 (0.2) [2.1]	6 (0.6) [3.3]	33 (3.5) [9.7]	22 (2.3) [10.7]	16 (1.7) [16.0]	1 (0.1) [6.7]	80 (8.5)
151-300	2 (0.2) [2.1]	2 (0.2) [1.1]	7 (0.7) [2.1]	8 (0.9) [3.9]	11 (1.2) [11.0]	--	30 (3.2)
300 or more	--	--	--	1 (0.1) [0.5]	4 (0.4) [4.0]	--	5 (0.5)
None or no response	68 (7.2) [70.8]	98 (10.4) [53.9]	161 (17.1) [47.1]	94 (10.0) [45.9]	48 (5.1) [48.0]	11 (1.2) [73.3]	480 (51.1)
Total	96 (10.2) [100.0]	182 (19.4) [100.0]	342 (36.4) [100.0]	205 (21.8) [100.0]	100 (10.6) [100.0]	15 (1.6)	940 (100.0)

The distribution of farms by number of market hogs sold in 1976 is spread over a wide range (table 42). Fifty-three percent of the farms sold fewer than 300 market hogs in 1976, and the average number of market hogs sold per sample farm was 399 head. Table 43 presents the distribution of market hogs sold by acres of cropland operated.

Twenty-nine percent of the farms that had 10 or more hogs in 1976 reported purchasing feeder pigs. Thus, most farmers who raise hogs for market farrow their own pigs. Eight percent of farms reported selling pigs as feeders.

Table 42. Number of market hogs sold.

Number of market hogs sold during 1976	Farm operators reporting market hogs sold	
	Number farms	Relative frequency
1-99	77	17.9
100-199	82	19.0
200-299	54	12.6
300-399	50	11.6
400-499	39	9.0
500-649	40	9.3
650-799	26	6.0
800-949	18	4.2
950-1,199	13	3.0
1,200-1,499	10	2.3
1,500-1,999	5	1.2
2,000 or more	7	1.6
No response	10	2.3
Total	431	100.0 (45.9)
No market hogs sold in '76	509	(54.1)
	940	(100.0)

Table 43. Number of market hogs sold by acres of cropland operated.

Number of market hogs sold in 1976	Size of farm: Acres of cropland operated						Total
	1-74	75-149	150-299	300-499	≥500	None or no response	
	Number of farms reporting						
1-99	13 (1.4) [13.5]	20 (2.1) [11.0]	30 (3.2) [8.8]	12 (1.3) [5.9]	1 (0.1) [1.0]	1 (0.1)	77 (8.2)
100-199	7 (0.7) [7.3]	18 (1.9) [9.9]	34 (3.6) [9.9]	19 (2.0) [9.3]	3 (0.3) [3.0]	1 (0.1)	82 (8.7)
200-299	1 (0.1) [1.0]	15 (1.6) [8.2]	16 (1.7) [4.7]	14 (1.5) [6.8]	7 (0.7) [7.0]	1 (0.1)	54 (5.7)
300-399	--	8 (0.9) [4.4]	26 (2.8) [7.6]	13 (1.4) [6.3]	3 (0.3) [3.0]	--	50 (5.3)
400-499	--	4 (0.4) [2.2]	16 (1.7) [4.7]	14 (1.5) [6.8]	5 (0.5) [5.0]	--	39 (4.1)
500-649	--	6 (0.6) [3.3]	19 (2.0) [5.6]	9 (1.0) [4.4]	6 (0.6) [6.0]	--	40 (4.3)
650-799	--	2 (0.2) [1.1]	9 (1.0) [2.6]	6 (0.6) [2.9]	8 (0.9) [8.0]	--	26 (2.8)
800-1,199	1 (0.1) [1.0]	1 (0.1) [0.5]	14 (1.5) [4.1]	10 (1.1) [4.9]	6 (0.6) [6.0]	--	31 (3.3)
1,200 or more	--	2 (0.2) [1.1]	3 (0.3) [0.8]	6 (0.6) [2.9]	11 (1.2) [11.0]	--	22 (2.3)
None or no response	74 (7.9) [77.1]	106 (11.3) [58.2]	175 (18.6) [51.2]	102 (10.9) [49.8]	50 (5.3) [5.0]	12 (1.3)	519 (55.2)
Total	96 (10.2) [100.0]	182 (19.4) [100.0]	342 (36.4) [100.0]	205 (21.8) [100.0]	100 (10.6) [100.0]	15 (1.6)	940 (100.0)

Dairy. Fourteen percent of the farms reported having dairy cows for the production of milk for sale on Jan. 1, 1976. The number of dairy cows per herd was rather uniformly distributed between 10 and 49 cows. Only three dairy cow herds on sample farms exceeded 100 cows (table 44). Between the beginning and end of 1976, the number of sample farms having dairy cows for the production of milk for sale declined by 1 percent.

Table 44. Number of dairy cows.

Number dairy cows on hand Jan. 1, 1976	Farm operators reporting dairy cows for production of milk for sale	
	Number	Relative frequency
1-9	6	4.4
10-19	28	20.7
20-29	23	17.0
30-39	29	21.5
40-49	23	17.0
50-74	15	11.1
75-100	8	5.9
101 or more	3	2.2
Total	135	100.0 (14.4)
No dairy cows	805	(85.6)
	940	(100.0)

The quantity of milk sold in 1976 is measured in 100-pound units. Fifteen percent of the farms that sold milk reported selling less than 1,000 units (100,000 pounds), and 72 percent of the farms reported selling less than 5,000 units (500,000 pounds). The average number of units of milk sold per farm with dairy cows was 4,500 (450,000 pounds) (table 45).

Sheep. Only 6.7 percent of the survey farms reported having breeding ewes (and 10 or more sheep during 1976), and 75 percent of these farms had 24 or fewer ewes (table 46). Fed lambs were reported as frequently as breeding ewes on the survey farms. Seven percent of the survey farms reported selling slaughter lambs during 1976. Fifty-seven percent of these farms reported selling 34 or fewer head, and the average number of fed lambs sold was 53 (table 47).

Table 45. Quantity of milk sold.

Pounds of milk sold during 1976 (100's)	Farm operators reporting milk sold	
	Number	Relative frequency
1-999	21	15.2
1,000-1,999	25	18.1
2,000-2,999	21	15.2
3,000-3,999	17	12.3
4,000-4,999	16	11.6
5,000-7,499	8	5.8
7,500-9,999	6	4.3
10,000-14,999	6	4.3
15,000-40,000	1	0.7
Sold cream only, gave milk away, no response or don't know	17	12.3
Total	138	100.0 (14.7)
No. reporting none in 1976	802	(85.3)
	940	(100.0)

Table 46. Breeding ewe flock size.

Number of ewes Jan. 1, 1976	Farm operators reporting	
	Number	Relative frequency
1-9	5	7.9
10-24	7	11.1
25-49	1	1.6
50-99	2	3.2
100-199	--	--
200-399	1	1.6
Yes, size not reported	47	74.6
Total	63	100.0 (6.7)
None or no response	877	(93.3)
	940	(100.0)

Table 50. Information sources used by farm operators for farm business decision making.

Information sources	Number of farm operators reporting usage of sources for								
	Market information			Information on existence of new products or procedures			Information on how to use products & procedures in your farming operation		
	Yes	No	response	Yes	No	response	Yes	No	response
<u>Media</u>									
(1) Wallaces' Farmer, Farm Journal or Successful Farming.	711 (75.6)	221 (23.5)	8 (0.9)	799 (85.0)	133 (14.1)	8 (0.9)	739 (78.6)	192 (20.4)	9 (1.0)
(2) Dealers magazines (such as Furrow, Ford Farming, Farm Profit) or pamphlets and brochures put out by farm suppliers.	365 (38.8)	567 (60.3)	8 (0.9)	548 (58.3)	383 (40.7)	9 (1.0)	516 (54.9)	415 (44.1)	9 (1.0)
(3) University extension bulletins and newsletters.	425 (45.2)	508 (54.0)	7 (0.7)	548 (58.3)	385 (41.0)	7 (0.7)	466 (49.6)	466 (49.6)	8 (0.9)
(4) Private information and management services such as Doanes	237 (25.2)	698 (74.3)	5 (0.5)	165 (17.6)	770 (81.9)	5 (0.5)	163 (17.3)	771 (82.0)	6 (0.6)
(5) Crops & Soils, Feed Stuffs, Farm futures or Hog Farm Management	342 (36.4)	593 (63.1)	5 (0.5)	372 (39.6)	563 (59.9)	5 (0.5)	349 (37.1)	585 (62.2)	6 (0.6)
(6) Drovers Journal.	77 (8.2)	858 (91.3)	5 (0.5)	63 (6.7)	872 (92.8)	5 (0.5)	61 (6.5)	874 (93.0)	5 (0.5)
(7) Newspapers	722 (76.8)	211 (22.4)	7 (0.7)	567 (60.3)	366 (38.9)	7 (0.7)	530 (56.4)	402 (42.8)	8 (0.9)
(8) Television programs	659 (70.1)	274 (29.1)	7 (0.7)	552 (58.7)	381 (40.5)	7 (0.7)	511 (54.4)	421 (44.8)	8 (0.9)
(9) Radio programs	811 (86.3)	122 (13.0)	7 (0.7)	600 (63.8)	333 (35.4)	7 (0.7)	557 (59.3)	375 (39.9)	8 (0.9)
<u>Talking with</u>									
(1) farm dealers, elevator personnel, salesmen, or buyers	808 (86.0)	126 (13.4)	6 (0.6)	774 (82.3)	160 (17.0)	6 (0.6)	752 (80.0)	182 (19.4)	6 (0.6)
(2) county, area & state extension personnel.	345 (36.7)	589 (62.7)	6 (0.6)	419 (44.6)	515 (54.8)	6 (0.6)	412 (43.8)	522 (55.5)	6 (0.6)
(3) other farmers	692 (73.6)	241 (25.6)	7 (0.7)	698 (74.3)	235 (25.0)	7 (0.7)	679 (72.2)	254 (27.0)	7 (0.7)
(4) relatives	460 (48.9)	473 (50.3)	7 (0.7)	444 (47.2)	489 (52.0)	7 (0.7)	440 (46.8)	493 (52.4)	7 (0.7)
(5) veterinarians, bankers, professional farm managers	516 (54.9)	416 (44.3)	8 (0.8)	524 (55.7)	408 (43.4)	8 (0.9)	504 (53.6)	428 (45.5)	8 (0.9)
(6) vocational agriculture teacher	125 (13.3)	810 (86.2)	5 (0.5)	141 (15.0)	794 (84.5)	5 (0.5)	140 (14.9)	794 (84.6)	5 (0.5)
<u>Attending meetings, field days, or demonstrations sponsored by</u>									
(7) extension service	321 (34.1)	612 (65.1)	7 (0.7)	410 (43.6)	524 (55.7)	6 (0.6)	418 (44.5)	516 (54.9)	6 (0.6)
(8) farm supply companies or co-ops	483 (51.4)	450 (47.9)	7 (0.7)	617 (65.6)	317 (33.7)	6 (0.6)	619 (65.9)	315 (33.5)	6 (0.6)
(9) attending college classes or agricultural night school	114 (12.1)	820 (87.2)	6 (0.6)	125 (13.3)	809 (86.1)	6 (0.6)	125 (13.3)	809 (86.1)	6 (0.6)

LABOR AND INCOME SOURCES ON FARMS

Farm Work

Work on Iowa farms is performed largely by farm household members and by hired workers. On 71 percent of the farms where a wife was present in the household, the operator's wife reported doing farm work during 1976. Only 50 percent of the farms had children 10 years of age or older who might be a source of farm work, and 64 percent of these farms reported that one or more children worked more than 100 hours per child in 1976.

The annual hours of on-farm work reported by farm operators and wives varied widely. Eighteen percent of the farm operators reported working at farm work on their farms 2,500-2,999 hours in 1976; 59 percent reported working between 2,000 and 3,999 hours; and 70 percent reported working 2,000 hours or more (table 51). The median and average numbers of reported hours of farm work by operators were 2,774 and 2,648 respectively. Table 52 shows that the annual hours of farm work by the farm operator tend to increase as the number of acres of cropland increases. Cropland acres, however, do not reflect labor requirements for livestock enterprises of the farms. For wives, the annual hours of on-farm work (excluding housework) is generally small, with median and average annual hours of 448 and 690, respectively, but their work tends to be concentrated during the peak farm labor demand periods of spring and fall.

Children (age 10 or older) of the farm households are a source of farm labor on many farms. Five percent of farmers reported a total of 1,500-1,999 hours of farm work and 22 percent reported 500-2,999 hours of farm work by their children. The per-farm average total annual hours of farm work reported for working children of survey households was 1,821 (table 51).

Hired laborers (nonhousehold), both regular and occasional, are the final major source of farm labor. Sixty percent of the survey farms reported hired farm labor during 1976; 41 percent, however, reported an annual total of only 249 hours or less. Also, 2.7 percent of the farms reported annual hired farm labor hours of 3,000 or more, which could be viewed as one full-time man-year equivalent (table 51). Ten percent of the survey farms reported having regular hired farm labor during some season of 1976. Farms reporting hired labor averaged 569 hours of hired labor per farm.

Table 51. Annual hours of farm work for farm operators, wives, children, and hired labor.

Annual hours reported	No. of farm households and businesses reporting annual hours of on-farm work by			
	Farm operator	Wife	All Children ^{1/}	Hired labor (non household)
None or no response	17 (1.8)	243 (28.6)	167 (35.8)	378 (40.2)
1-249	22 (2.3)	195 (22.9)	20 (4.3)	382 (40.6)
250-499	27 (2.9)	102 (12.0)	24 (5.2)	61 (6.5)
500-749	32 (3.4)	70 (8.2)	32 (6.9)	23 (2.4)
750-999	22 (2.3)	45 (5.3)	21 (4.5)	11 (1.2)
1,000-1,499	75 (8.0)	121 (14.2)	54 (11.6)	15 (1.6)
1,500-1,999	85 (9.0)	42 (4.9)	46 (9.9)	15 (1.6)
2,000-2,499	113 (12.0)	19 (2.2)	34 (7.3)	20 (2.1)
2,500-2,999	165 (17.6)	11 (1.3)	26 (5.6)	10 (1.1)
3,000-3,499	152 (16.2)	2 (0.2)	10 (2.1)	3 (0.3)
3,500-3,999	125 (13.3)	--	7 (1.5)	7 (0.7)
4,000-4,499	62 (6.6)	1 (0.1)	9 (1.9)	4 (0.4)
4,500-5,999	43 (4.6)	--	8 (1.7)	5 (0.5)
6,000-8,999	--	--	6 (1.3)	2 (0.2)
9,000-11,999	--	--	2 (0.4)	3 (0.3)
12,000 or more	--	--	0	1 (0.1)
Total	940 (100.0)	851 (100.0)	466 (100.0)	940 (100.0)
No person in household	-- 940	89 940	474 940	-- 940

^{1/} Hours of work data were obtained only for children 10 years of age and older and only when the annual total for a child was larger than 100 hours.

Table 52. Annual hours of farm work for farm operators by acres of cropland operated.

Annual hours of on-farm work by farm operator in 1976	Size of farm: Acres of cropland operated						Total
	1-74	75-149	150-299	300-499	≥500	None or no response	
	Number of farm operators reporting						
1-999	35 (3.7) [36.5]	31 (3.3) [17.0]	18 (1.9) [5.3]	7 (0.7) [3.4]	3 (0.3) [3.0]	9 (1.0)	103 (11.0)
1,000-1,999	30 (3.2) [31.3]	38 (4.0) [20.9]	64 (6.8) [18.7]	20 (2.1) [9.8]	5 (0.5) [5.0]	3 (0.3)	160 (17.0)
2,000-2,499	8 (0.9) [8.3]	20 (2.1) [11.0]	37 (3.9) [10.9]	31 (3.3) [15.1]	17 (1.8) [17.0]	--	113 (12.0)
2,500-2,999	9 (1.0) [9.4]	24 (2.6) [13.2]	65 (6.9) [19.0]	49 (5.2) [23.9]	16 (1.7) [16.0]	2 (0.2)	165 (17.6)
3,000-3,499	5 (0.5) [5.2]	23 (2.5) [12.6]	64 (6.8) [18.7]	39 (4.2) [19.0]	21 (2.2) [21.0]	--	152 (16.2)
3,500-3,999	3 (0.3) [3.1]	22 (2.3) [12.1]	45 (4.8) [13.2]	32 (3.4) [15.6]	23 (2.5) [23.0]	--	125 (13.3)
4,000 or more	1 (0.1) [1.0]	17 (1.8) [9.3]	46 (4.9) [13.5]	25 (2.7) [12.2]	15 (1.6) [15.0]	1 (0.1)	105 (11.2)
None or no response	5 (0.5) [5.2]	7 (0.7) [3.9]	3 (0.3) [0.9]	2 (0.2) [1.0]	--	--	17 (1.8)
Total	96 (10.2) [100.0]	182 (19.4) [100.0]	342 (36.4) [100.0]	205 (21.8) [100.0]	100 (10.6) [100.0]	15 (1.6)	940 (100.0)

Off-farm Wage and Salary Work

Farm household members sometime spend part of their time working off their farms for wages or salary. Twenty-five percent of the farm operators and 28 percent of the wives reported off-farm wage work in 1976. Only 6.1 percent of the operators and 3.4 percent of wives reported annual hours of off-farm wage work equivalent to a full-time off-farm job ($\geq 2,000$ hours of work) (table 53). The median number of hours of off-farm wage work was 1,032 hours for operators and 904 hours for wives for those reporting off-farm wage work.

Table 53. Annual hours of off-farm work for wage or salary.

Annual hours reported for 1976	Number of farm households reporting hours of off-farm work for	
	Farm operator	Wife
None or no response	708 (75.3)	616 (72.4)
1-249	49 (5.2)	44 (5.2)
250-499	27 (2.9)	32 (3.8)
500-749	26 (2.8)	25 (2.9)
750-999	7 (0.7)	23 (2.7)
1,000-1,499	31 (3.3)	27 (3.1)
1,500-1,999	33 (3.5)	51 (6.0)
2,000-2,999	45 (4.8)	32 (3.8)
3,000 or more	14 (1.3)	1 (0.1)
Total	940	851 (90.5)
No wife	--	89 (9.5)
	940	940 (100.0)

Income

Farm households receive a significant amount of income from nonfarm sources. In general, off-farm wage and salary income is the largest source of this income. Forty-one percent of the survey households reported off-farm wage and salary income earned by one or more household members in 1976. The average amount for the year was \$6,544 for

households reporting such income (table 54). Table 55 presents the distribution of household off-farm wage and salary income by acres of cropland operated. Off-farm wage and salary income is more frequently reported and reported in larger amounts for small than for the large farms. Eleven percent of the households reported retirement income received by some household member. This percentage is not surprising because there was no upper age limit for households in the survey. Approximately 2.5 percent of the sample households reported disability, unemployment, or welfare payments. Custom and contract farm work was a reported source of income for 20 percent of the farm households.

Table 54. Household income from off-farm wages and salaries.

Income received in 1976	Farm households reporting off-farm wage & salary income	
	Number	Relative frequency
\$1-1,249	93	9.9
1,250-2,499	39	4.1
2,500-4,999	60	6.4
5,000-9,999	77	8.2
10,000-14,999	54	5.7
15,000-19,999	32	3.4
20,000-24,999	11	1.2
\$25,000 and over	5	0.5
None	501	53.3
No response	68	7.2
Total	940	100.0

Farm households (or its members) also own non-farm sources of income. Thirty-one percent of the households reported ownership of stocks, bonds, or mutual funds; 8.5 percent reported ownership of a professional practice (veterinary, law, etc.) or a business other than farming (e.g., grain elevator, machinery dealership, clothing store, etc.), and 7.4 percent reported ownership of nonfarm real estate (table 56).

Table 55. Household off-farm wage and salary income by acres of cropland operated.

Household wage and salary income during 1976	Size of farm: Acres of cropland operated						Total
	1-74	75-149	150-299	300-499	≥500	None or no response	
	Number of farms reporting						
\$1-1,249	7 (0.7) [7.3]	18 (1.9) [9.9]	37 (3.9) [10.8]	21 (2.2) [10.2]	10 (1.1) [10.0]	--	93 (10.0)
1,250-4,999	10 (1.1) [10.4]	14 (1.5) [7.7]	45 (4.8) [13.2]	20 (2.1) [9.8]	9 (1.0) [9.0]	1 (0.1) [6.7]	99 (10.5)
5,000-9,999	8 (0.9) [8.3]	18 (1.9) [9.9]	24 (2.6) [7.0]	17 (1.8) [8.3]	7 (0.7) [7.0]	3 (0.3) [20.0]	77 (8.2)
10,000-14,999	10 (1.1) [10.4]	18 (1.9) [9.9]	13 (1.4) [3.8]	10 (1.1) [4.9]	1 (0.1) [1.0]	2 (0.2) [13.3]	54 (5.7)
\$15,000 or more	20 (2.1) [20.8]	9 (1.0) [5.0]	13 (1.4) [3.8]	5 (0.5) [2.4]	1 (0.1) [1.0]	--	48 (5.1)
None or no response	41 (4.4) [42.7]	105 (11.2) [57.7]	210 (22.3) [61.4]	132 (14.0) [64.4]	72 (7.7) [72.0]	9 (1.0) [60.0]	569 (60.5)
Total	96 (10.2) [100.0]	182 (19.4) [100.0]	342 (36.4) [100.0]	205 (21.8) [100.0]	100 (10.6) [100.0]	15 (1.6)	940 (100.0)

Table 56. Ownership of selected nonfarm sources of income.

Sources of income	Number of farms reporting source		
	Yes	No	No response
A professional practice or business other than farming	80 (8.5)	849 (90.3)	11 (1.2)
Nonfarm real estate	70 (7.4)	856 (91.1)	14 (1.5)
Stocks, bonds, or mutual funds	291 (31.0)	630 (67.0)	19 (2.0)

MORE TO COME . . .

This is the first in a series of reports based on the Iowa Farm Family Survey. In the months ahead, College of Agriculture and Home Economics staff members will be analyzing, organizing, and reporting additional information gathered in the survey.

Persons interested in receiving announcements of the availability of subsequent reports should write:

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