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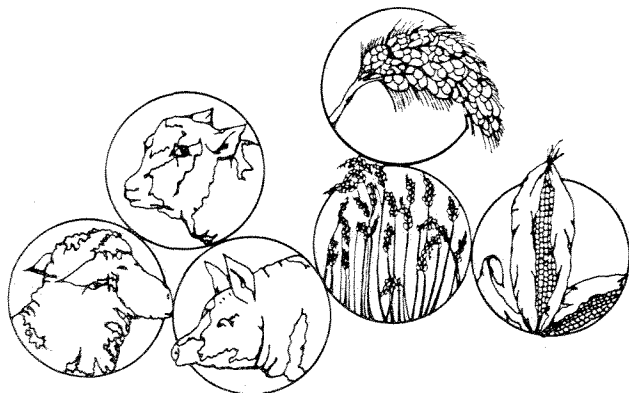
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## The organization of Colorado agriculture

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A survey of 1,123 Colorado farmers and ranchers was conducted in the spring of 1982 to provide answers to questions about the state of Colorado agriculture. This report will focus on structure—size of farms, ownership, part-time vs. full-time farming. Subsequent reports will cover finances, the role of government in agriculture and priorities.

Respondents were asked to report the number of acres owned, rented or leased from someone else, and rented or leased to someone else. The

number of acres operated was calculated, using 1978 agricultural census methods—acres rented to others were subtracted from acres owned plus acres rented from others. Respondents also were asked whether their operation was owned by a single family, a partnership or a corporation. If owned by a corporation, respondents were asked to indicate whether it was family or non-family. Employment activity was determined by asking whether the respondent worked off the farm, and, if so, whether this was full- or part-time off the farm.

Table 1 shows several characteristics of farm operations reported in the 1978 Agricultural Census and in the 1982 farm survey. The number of farms increased from 25,501 in 1974 to 29,687 in 1978. Our information does not show whether the total number of farms has continued to increase beyond 1978.

Our 1982 survey reveals a decrease since 1978 in number of farms less than 49 acres and an increase in farms larger than 1,000 acres. In the farm-size categories between 50 and 999 acres, the number of farm operations is comparable to that in the 1974 and 1978 agricultural census. This table shows that most rented or leased land is 50

**Table 1: Comparison of farm size, type and principle occupation of operation 1974 to 1982.**

Farm structure	Agricultural census				1982 Survey					
	1974		1978		Acres total		Acres owned		Acres rented	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Farms by size</b>										
Less than 10 acres	1,681	6.6	3,246	10.9	64	5.9	142	13.1	517	47.9
10 to 49 acres	2,800	11.0	4,402	14.8	87	8.1	102	9.4	31	2.8
50 to 179 acres	5,018	19.7	5,461	18.4	175	16.2	218	20.2	101	9.4
180 to 499 acres	5,192	20.4	5,766	19.4	187	17.4	216	20.0	121	11.2
500 to 999 acres	3,578	14.0	3,543	11.9	149	13.8	129	11.9	115	10.7
1000 to 1999 acres	3,171	12.4	3,246	10.9	163	15.1	128	11.8	87	8.1
2000 acres or more	4,061	15.9	4,023	13.6	253	23.4	146	13.5	107	9.9
	25,501	100.0	29,687	99.9	1,078	99.9	1,081	99.9	1,079	100.0
<b>Farms by type of ownership</b>										
Individual	17,995	86.0	24,947	84.6	788	72.9				
Partnership	2,062	10.0	3,206	10.9	208	19.2				
Corporation	931	4.0	1,344	4.5	85	7.9				
	20,988	100.0	29,497	100.0	1,081	100.0				
<b>Principal occupation</b>										
Farming	17,072	69.9	17,167	57.8	582	56.8				
Part-time farming	—	—	—	—	175	17.1				
Full-time off Farm	7,358	30.1	12,520	42.2	267	26.1 (43.2)				
	24,430	100.0	29,687	100.0	1,024	100.0				

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acres or more. The distribution of acres owned in 1982 is similar to the distribution of acres operated in 1978 except for a larger number of farms in the less than 10 acres category. In 1982 the most frequently reported category of farm size was the 2,000 or more acres category. The data suggest the average size of farm has increased in size since 1978.

Table 1 also presents data on ownership patterns in Colorado agriculture over the past several years. Among farms with sales of \$2,500 or more (the 1974 definition of a farm) the percent of individual or single family operations was 86 percent. This percent declined slightly to 84 percent by 1978 even though the definition of a farm changed to \$1,000 or more of sales. The 1982 survey shows that this percent has continued to decline to 73 percent.

Corresponding increases have occurred over this period for both partnerships and corporations. Most partnerships and corporations are family rather than non-family operations. Partnerships have nearly doubled since 1974 (from 10 to 19 percent). Corporate owned farms also have doubled from 4 to 8 percent over this period. Out of the 86 corporate farms in the sample, all but 10 are family-owned.

The principal occupation of a majority of farm operators continues to be farming. This percentage, however, has declined between 1974 and 1982. In 1974, 70 percent reported farming as their principal occupation. This percentage declined to 58 percent and 57 percent, respectively in 1978 and 1982. With this decrease has come an increase in the amount of part-time farming from 30 percent in 1974 to 43 percent in 1982. In 1982, of those who worked off the farm, 60 percent worked full-time in another occupation.

The pattern of employment among Colorado producers is similar to a trend nationwide. Part-time farming appears to be a permanent arrangement. At one time, part-time farming was used to secure more money to buy land and equipment for expanding the operation so that the owner could farm full-time, or off-farm work was used to gain skills so that the owner could leave the farm. Currently in Colorado and nationwide many part-time operations are stable and maintained by prosperous individuals. Among the advantages of part-time farming are the continued involvement of large numbers of individuals in production and the means for small- and medium-farm families to stay out of the poverty category. (*Time to Choose: Summary Report on The Structure of Agriculture*. U.S. Department of Agriculture, Washington, D.C., 1981.)

The data in Table 2 reveal that size of farm was strongly associated with ownership, employment and farm sales. In each farm size category, the majority of farms were single family operations. The percent of single-family operations decreases, however, as the size of farm increases. Among farms of 2,000 or more acres, 57 percent are single-family operations compared with 80 percent or more among farms less than 180 acres. The average size of farm varies with type of ownership pattern. Single-family operations on

the average are smallest with 1,224 acres; partnerships reported an average of 2,273 acres and corporate farms reported an average of 3,525 acres.

Size of farm also is associated with the operator's employment. The average number of acres operated by farms with full-time operators was 2,021, for farms with part-time operators the

**Table 2: Number of acres operated and farm/farmer characteristics.**

Farm/farmer characteristics	Total acres operated							Gamma
	Less than 10	10 to 49	50 to 179	180 to 499	500 to 999	1000 to 1999	2000 or more	
Number of farms	(58)	(85)	(171)	(182)	(145)	(158)	(248)	
<b>Ownership</b>								
Individual	87.9	83.5	83.6	78.0	71.0	69.0	57.3	
Partnership	10.3	12.9	12.3	15.4	23.4	22.2	28.2	.33*
Corporation	1.7	3.5	4.1	6.6	5.5	8.9	14.5	
<b>Employment</b>								
Full-time farming	32.7	32.1	39.8	61.8	55.1	64.9	74.0	
Part-time farming	5.5	18.5	19.9	14.7	16.2	21.9	17.7	.38*
Full-time off the farm	61.8	49.4	40.4	23.5	28.7	13.2	8.2	
<b>Farm sales</b>								
Less than \$10,000	66.7	74.1	49.4	27.5	21.7	11.5	7.4	
10,000 to 49,999	18.3	17.6	30.1	34.1	44.1	44.2	21.4	.54*
50,000 or more	15.0	8.2	20.5	38.5	34.3	44.2	71.2	
<b>Age</b>								
Less than 40	19.0	24.4	19.0	20.5	27.7	23.9	21.2	
40 to 59	52.4	44.2	48.3	50.8	48.6	45.4	52.0	-.03
60 and over	28.6	31.4	32.0	28.6	23.6	30.7	26.8	
<b>Plans</b>								
Enter partnership	1.6	4.8	6.0	9.3	6.9	7.7	4.5	
Enter/form family corp	6.3	9.5	13.1	12.1	12.4	8.4	11.5	-.04
Enter/form regular corp	0	0	0	.5	0	1.9	.4	
No changes	73.0	75.0	70.2	65.9	70.3	72.9	73.7	
<b>Family income</b>								
Less than \$15,000	27.1	33.7	31.3	36.5	35.2	35.8	30.8	
\$19,000 to \$29,999	47.5	39.8	44.0	33.7	42.8	30.2	26.6	.07
\$30,000 and above	25.4	26.5	24.7	29.8	22.1	34.0	42.6	
<b>Plans for Next 5 Years</b>								
Keep the farm more or less the same	55.6	59.3	56.1	60.9	58.5	52.8	63.3	.04
Continue a non-farm job	34.9	38.4	35.3	20.7	19.7	16.0	8.5	-.39*
Take a non-farm job	3.2	1.2	3.5	5.4	5.4	5.5	4.0	.09
Limit farming to part time	14.3	17.4	11.6	10.3	6.8	8.0	2.4	-.35*
Lease my land to others	14.3	9.3	9.8	8.2	8.8	7.4	7.3	-.11*
Buy or lease more land and expand the operation	11.1	18.6	19.1	19.0	26.0	27.8	30.2	.20*

\*Gamma statistic is significant, that is it explains at least 10 percent of the variance in the predicted variable.

average acres was 1,644 and for farms where the operator worked full-time off the farm, the average was 667 acres. Larger farms tend to be run by full-time operators. Nearly twice as many large farms (2,000 or more acres) are run by full-time operators as occurs on farms with less than 180 acres.

Farm size also is directly associated with amount of farm sales. Three-fourths of the farms under 50 acres report less than \$10,000 in farm sales. Among large farms, the situation is reversed; only 12 percent of those farming 1,000 acres or more report less than \$10,000 in farm sales.

Table 2 also shows the impact of farm size on the operator's plans for the farm's future operation. The majority of all farm operators plan to keep their farm more or less the same for the next five years. However, plans to continue non-farm jobs varies with size of operation. Those on smaller farms plan to stay on non-farm jobs significantly more often than do those on larger farms.

On the other hand, plans to take a non-farm job is not related to size perhaps because most of these operators already are employed in non-

**Table 3: Type of employment and farm/farmer characteristics.**

Farm/farmer characteristics	Type of employment			Gamma
	Full-time farming	Part-time farming	Full time off the farm	
<b>Total acres operated</b>				
Less than 10	3.2	1.7	13.1	
10 to 49	4.7	8.7	15.4	
50 to 179	11.8	19.2	25.9	
180 to 499	18.8	14.5	15.4	.38*
500 to 999	13.4	12.8	15.1	
1000 to 1999	17.5	19.2	7.7	
2,000 or more	30.6	23.8	7.3	
<b>Ownership</b>				
Individual or single	68.4	73.4	81.9	
Partnership	20.3	12.3	15.4	.20*
Corporation	11.4	5.3	2.7	
<b>Farm sales</b>				
Less than \$10,000	14.5	26.3	61.2	
\$10,000 to \$49,999	27.8	41.3	30.2	.47*
\$50,000 and over	57.7	32.3	8.6	
<b>Age</b>				
Less than 40	19.0	28.1	28.4	
40 to 59	45.0	49.7	62.1	.29*
60 and over	36.0	22.2	9.6	
<b>Plans</b>				
Enter partnership	6.9	6.5	4.3	
Enter/form family corp.	10.0	13.6	12.2	.07
Enter/form regular corp.	0.1	0.1	0.0	
No changes	70.3	70.4	74.9	
<b>Plans for the next five years</b>				
Keep the farm more or less the same	61.9	54.3	53.2	-.14*
Continue a non-farm job	0.5	33.1	64.5	.74*
Take a non-farm job	3.7	6.9	4.2	.20*
Quit a non-farm job and farm full-time	0.0	4.0	8.3	.67*
Limit farming to part-time	4.2	11.0	17.4	.43*
Buy or lease more land and expand the operation	22.9	26.9	24.5	.07

\*Gamma statistic is significant, that is it explains at least 10 percent of the variance in the predicted variable.

farm occupations. Operators on small farms report they plan to limit their farming to part-time more often than do those operating larger farms. Finally, plans to expand operations are more characteristic of operators from large farms.

Table 3 reveals that type of employment (whether full-time or part-time farming) is associated with the size of a farming operation. Full-time farmers operate larger farms than do either part-time farmers or owners who work off the farm full-time. The difference in percent of large farms operated by full- and part-time farmers, however, is not large. The major difference occurs between these categories of farmers and those who work full-time off the farm. In the latter case, the size of the operations tends to be considerably smaller.

An association exists between amount of time spent farming and ownership patterns. More of the full-time operations are partnerships or corporations and more of the part-time operations are partnerships than are the cases of operators employed full-time off the farm.

A strong positive association exists between the amount of time a farmer spends on the farm and the amount of sales realized. More than half of those employed full-time in farming report \$50,000 or more in farm sales compared to less than one-third of the part-time farmers and only 9 percent of those working full-time off the farm.

Full-time farmers are older than part-time farmers. Those working full-time off the farm are the youngest; only 10 percent are 60 years or older compared with 22 percent and 36 percent, respectively, of those involved in either part-time or full-time farming.

Employment activity is not associated with plans for changing or maintaining the ownership pattern of the farm operation. It is, however, associated with the operator's employment plans for the next five years. Sixty-four percent of those working off the farm plan to continue a non-farm job.

Table 3 shows that a slightly higher percentage of those involved in part-time farming (6.9) plan to take a non-farm job than do those in full-time farming (3.7). A small percentage (8.3) of the off-farm workers plan to quit their jobs and farm full-time. A few of the part-time or less operators plan to limit their farming to part-time activity. About one-fourth of those involved in part-time farming (26.9) or in off-farm employment (24.5) plan to buy or lease more land and to expand their operations. However, the differences between these groups and full-time farmers are not significant.

Table 4 shows the association between farm ownership structure and several other characteristics. The data reveal an association between ownership patterns and number of acres operated. The largest farms are operated by partnerships and corporations. In contrast, the number of farms in different size categories is fairly evenly distributed among single-family operations except for the smallest farms. The majority of farms operated as partnerships and

corporations are 1,000 acres or more compared to 33 percent of the single-family farms.

Ownership patterns also are associated with the amount of time spent operating a farm. On farms that are owned by corporations, the operator is more likely to be full-time on the farm than occurs among those operated as partnerships or single-family farms. Among each of the ownership categories, a majority are full-time operators. Nearly one-third of the single family operators are employed full-time off the farm.

**Table 4: Organizational structure and farm/farmer characteristics.**

Farm/farmer characteristics	Ownership structure			Gamma
	Single or individual farm	Partnership	Corporation	
<b>Total acres operated</b>				
Less than 10	6.7	2.9	1.2	
10 to 49	9.3	5.4	3.7	
50 to 179	18.8	10.2	8.6	
180 to 499	18.7	13.7	14.8	.33*
500 to 999	13.5	16.6	9.9	
1000 to 1999	14.3	17.1	17.3	
2000 or more	18.7	34.1	44.4	
<b>Employment</b>				
Full-time farming	53.7	60.4	80.2	
Part-time farming	17.1	18.8	11.1	.20*
Off the farm	29.2	20.8	8.6	
<b>Farm sales</b>				
Less than \$10,000	33.9	16.0	8.8	
\$10,000 to \$49,999	32.5	36.0	7.5	.45*
\$50,000 and over	33.6	48.0	83.7	
<b>Age</b>				
Less than 40	19.0	31.4	31.3	
40 to 59	51.2	45.9	42.2	.19*
60 and over	29.9	22.7	26.5	
<b>Plans</b>				
Enter partnership	7.8	2.5	1.2	
Enter/form family corp.	11.0	15.5	0.0	
Enter/form regular corp.	0.4	0.0	1.2	.15*
No changes	70.1	70.0	88.9	
<b>Plans for the Next Five Years</b>				
Keep the farm more or less the same	58.1	57.7	66.7	.06
Turn farm over to a member of my family	12.2	17.8	11.9	.13*
Buy or lease more land and expand operation	22.3	27.9	26.5	.12*

\*Gamma statistic is significant, that is it explains at least 10 percent of the variance in the predicted variable.

The ownership pattern is associated with amount of farm sales. A larger percentage of corporate farms report over \$50,000 in farm sales than is the case for partnerships or single-family operations. Nearly a majority of partnerships fall in the \$50,000 or more farm sales, and 84 percent of the corporate farms fall in this category. Single-family operations are about equally divided among the three farm sales categories.

Operators involved in either partnerships or corporations are much more likely to be under 40

years of age than are their individual family farm counterparts; 31 percent for the former, only 19 percent for the latter.

Plans for maintaining or changing ownership patterns and plans for changes in farm operations over the next five years are associated with ownership. Slightly more partnership operators (18 percent) are considering turning the farm over to a member of the family than are corporate operators perhaps because most corporate farms are family operations and already provide for the transfer of the farm within the family. Slightly more partnerships and corporate farms expect to either buy or lease more land in the future.

## Summary

The survey presents the distribution of Colorado farms by size, ownership, and employment of operators. It reveals a diversity in size of farm operations from less than 10 acres (6 percent) to over 2,000 acres (23 percent), and that the size of farms is increasing. It reveals that although single-family operations continue to be the major type of ownership pattern, there is a small increase in the number of farms that are partnerships or corporations. It also reveals that the principal occupation of farm operators is farming. However, more than 40 percent of the operators reported that they were part-time farmers.

## The Sample

Mail questionnaires were sent to 2,520 respondents who were randomly selected from a list of all Colorado farm operations. Of the original sample, 391 questionnaires did not reach farm operators either because they were not in farming, were deceased or could not be reached through the U.S. Postal Service. From the remaining 2,129 farm operators, 1,123 completed, usable questionnaires were returned for a response rate of about 53 percent.

The degree of error for a sample of this size is approximately three percent either side of the values presented in this report. To illustrate: if 70 percent of the farm operators in our sample fell into a particular category, the actual percentage of all farm operators in the state would fall between 67 and 73 percent.

Random sampling was used to assure that those selected were representative of all farm operations in the state. We compared certain characteristics of the sample to those gathered by the U.S. Census of Agriculture in 1974 and 1978. Our data were similar to those obtained by the census regarding size of farm, type of farm organization, percent of operators who farm full time and gender of the respondent. The comparability of these findings coupled with the random sampling method used assure us that the present study's results can be generalized to the total population of Colorado farm operations.