

Female Farm Operators and Their Farms

Women operate a growing share of farms, rising from 5 percent of farmers in 1978 to 9 percent in 1997. While women manage all types and sizes of farms, they most commonly manage small farms, measured by acres or sales, and specialize in livestock. Fewer women report farming as their primary occupation than their male counterparts, indicating either a part-time focus or retirement. The average income of female-operator households was lower than that of male-operator households, with the difference resulting more from low farm earnings than from low off-farm income. But, recent data show that the average income of female operator households was higher than that of all U.S. female-headed households or females living alone.

Women in farming have generally been characterized as helpmates to male operators (e.g., farm wives), and their contributions to farming have often been underestimated. Women contribute to farm businesses in a variety of ways, with responsibilities that include production, marketing, record keeping, and financial planning activities. Some women have primary responsibility for running a farm business, though these female farm operators, just like male operators, may operate a farm alone or they may share farming responsibilities with others. This section compares the characteristics of female and male operators, their farm businesses, and their households. Spouses' involvement in the farm and in off-farm work was addressed in the previous section.

Women make up a small but growing proportion of farm operators in the United States. When the census of agriculture began collecting information on farm operator gender in 1978, women accounted for 5 percent of all operators (fig. 19). By 1997, that share had grown to 9 percent, because female-operated farms had increased by more than 52,000 while male-operated farms had dropped over 431,000. The number of female operators is likely to be understated because U.S. statistics provide for only one person associated with a farm to be named as the operator (see the box “One Farm, One Operator”).

One Farm, One Operator

The census of agriculture defines a farm operator as the person who does the farm work or who makes day-to-day decisions about the farm business. Census data collection procedures allow only one person to be identified as the operator, regardless of any shared management arrangement. Therefore, according to the census, the number of operators is the same as the number of farms.

Listing only one operator per farm has contributed to underestimating the contribution of U.S. women to farm work and farm management. For example, on operations where both husband and wife participate in running the farm, the management role of one or the other is disregarded, most likely the woman's.

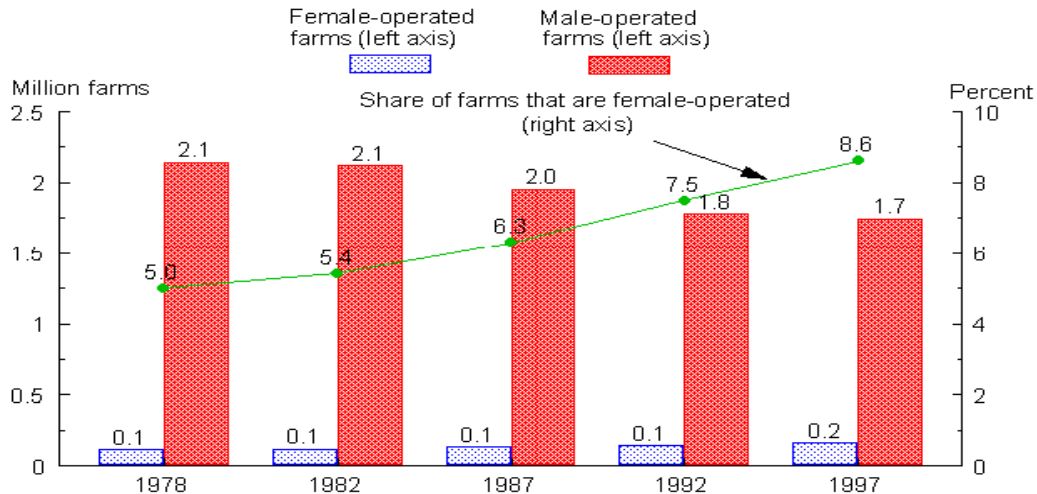
Evidence from Canada, where information on shared management of multi-operator farms is now collected, indicates that the woman's role is most likely to be disregarded. According to Cloutier and Kemp (1994), the 1991 Canadian Census of Agriculture—which historically also had listed one operator for each census farm—provided for naming as many as three operators per farming operation. Of the 100,700 female farm operators identified in that census, 84 percent farmed with their husbands and another 6 percent were also associated with multi-operator farms. Without providing for multiple operators, the management contribution of one or more of the operators would have gone unrecognized.

Like the U.S. census of agriculture, the USDA's Agricultural Resource Management Study (ARMS) allows only one person per farm to be identified as the operator. However, the ARMS has addressed the issue of joint management in some survey years. For example, in 1996, the survey asked the question: “Does your (the operator's) spouse also make day-to-day decisions for this farm/ranch?” in order to determine whether both spouses were operators of their farm. This, of course, limits information on shared management to married couples, but it does at least begin to acknowledge the variety of management arrangements that may exist.

Figure 19

Farms, by gender, 1978-97

The share of farms operated by women increased from 5 percent in 1978 to 9 percent by 1997



Source: Census of Agriculture, various years.

Farm Income, Sales, and Contracts

According to ARMS data, women operated nearly 155,000 U.S. farms in 1996, while men were identified as operators of more than 1.7 million farms (table 10).⁵ Female-operated farms were smaller than male-operated farms, averaging 237 acres in size and \$37,100 in gross sales, compared with 482 acres and \$88,400 in gross sales for male-operated farms. Ninety percent of female-operated farms had less than \$50,000 in gross sales, compared with only 72 percent of male-operated farms.

Fewer female-operated farms were in the higher sales classes. Only 8 percent of female-operated farms had sales of \$50,000-\$249,999 compared with 20 percent of male-operated farms. About 3 percent of female-operated farms and 8 percent of male-operated farms were in the highest sales class, \$250,000 and over. Female-operated farms with sales \$50,000-\$249,999 came nearest to the sales and income figures for the corresponding male-operated farms.

⁵The analysis in this section is limited to the 94 percent of farm operators who answered the question on operator gender. The farm typology is not used extensively in this section due to sample size considerations. Assigning the relatively few female observations in the survey to typology groups greatly reduces the statistical reliability of the resulting estimates.

Table 10—Farms, acres operated, gross cash farm income, and gross value of sales, by operator gender, farm type, and sales class, 1996

Item	Farms		Acres operated		Gross cash income	
	Male	Female	Male	Female	Male	Female
	<i>Number</i>		<i>Acres per farm</i>		<i>Dollars per farm</i>	
Total farms	1,756,426	154,845	482	237	80,546	24,193
Share of total U.S. (percent)	91.9	8.1	95.8	4.2	97.4	2.6
Sales class:						
Less than \$50,000	1,266,124	138,727	218	140	10,803	5,517
\$50,000 - \$249,999	342,519	*11,787	887	1,025	122,790	104,449
\$250,000 or more	147,783	*4,330	1,808	1,210	580,158	404,044
Farm type:						
Cash grain	344,216	3,766	736	984	133,246	131,693
Other field crops ¹	332,871	46,713	352	152	61,333	12,394
Fruit, vegetables, nursery	119,053	*6,604	140	52	176,449	122,230
Beef	603,441	*65,110	561	328	31,406	10,645
Other livestock (including dairy)	356,844	32,652	340	129	98,735	35,862

Note: Includes only farm operations for which gender question was answered. * = Standard error is between 25 and 50 percent of the estimate. ¹Other field crops category includes farms with gross farm income solely from Conservation Reserve Program (CRP) payments. Source: USDA, Economic Research Service, 1996 Agricultural Resource Management Study, all versions.

Female operators tended to specialize in livestock, with beef cattle producers outnumbering other livestock producers by 2 to 1. As pointed out in “[Attributes of Small and Large Farms,](#)” beef cattle are a common specialization for operators of small farms in general. Female beef cattle producers, along with producers of other field crops, had the lowest sales and income of all farm types, averaging just over \$10,000.

While relatively few female farm operators specialized in cash grain production, cash grain farms had higher average sales and income than most other farm types operated by women, about the same as the average for male-operated farms with the same specialization. Female-operated farms producing fruit, vegetables, and nursery and greenhouse crops also had relatively high income and sales.

A very large share of farm operators marketed their production solely through cash sales, 95 percent of female operators and 86 percent of male operators (table 11). The share of farmers producing under production contracts was the same regardless of gender, about 2 percent, but the share of female operators engaging in marketing contracts (under 4 percent) was about one-third of the share for male operators (12 percent). Although only 34 percent of female operators with contracts used production contracts, these female operators accounted for a disproportionate 71-percent share of the total value of contract production on female-operated farms.

Table 11—Production and marketing contracts, by operator gender, 1996

Item	Operator gender	
	Male	Female
	<i>Number</i>	
Total farms:	1,756,426	154,845
Cash sales only	1,507,939	146,436
Production contracts only	32,788	*2,832
Marketing contracts only	209,344	*5,577
Production and marketing contracts	6,354	d
	<i>Percent</i>	
Share of farms:		
Cash sales only	85.9	94.6
Production contracts only	1.9	*1.8
Marketing contracts only	11.9	*3.6
Production and marketing contracts	0.4	d
Share of contract production:		
Production contracts	34.0	71.1
Marketing contracts	66.0	*28.9
Contract share of total production:		
All farms	31.1	59.8
Sales less than \$50,000	*10.7	*6.4
Sales \$50,000 - \$249,999	25.6	*41.8
Sales \$250,000 or more	36.5	71.5

Note: Includes only farm operations for which gender question was answered. d = Data suppressed due to insufficient observations.

* = Standard error is between 25 and 50 percent of the estimate.

Source: USDA, Economic Research Service, 1996 Agricultural Resource Management Study, all versions.

Female-operated farms with production or marketing contracts accounted for a large share of total value of production by female-operated farms, particularly in the highest sales class. On the largest female-operated farms, commodities produced under production and marketing contracts made up 72 percent of the total value of production, compared with 37 percent of total value on the largest male-operated farms.

Sources of Gross Cash Income and Financial Position

The sources of gross income were different for female- and male-operated farms (table 12), reflecting female-operated farms' greater specialization in livestock production. On average, the livestock share of gross cash farm income was slightly larger than the crop share for female-operated farms, in contrast to male-operated farms, where the livestock share trailed the crop share.

Government payments—which are generally associated with crops but not livestock—were smaller for female-operated farms, nearly 40 percent below the \$3,100 average for male operators, but the payments

Table 12—Sources of farm business income and farm financial position, by operator gender, 1996

Item	Operator gender	
	Male	Female
<i>Dollars per farm</i>		
Gross cash farm income:	80,546	24,193
Livestock	28,946	9,582
Crops	40,206	8,730
Government payments	3,124	1,917
Other farm income	8,269	*3,964
<i>Percent</i>		
Share of gross cash farm income from:		
Livestock	35.9	39.6
Crops	49.9	36.1
Government payments	3.9	7.9
Other farm sources	10.3	16.4
Debt/asset ratio	7.8	10.0
<i>Percent of farms</i>		
Farm financial performance: ¹		
Favorable	59.1	46.4
Marginal income	30.8	45.4
Marginal solvency	5.2	d
Vulnerable	4.9	d

Note: Includes only farm operations for which gender question was answered. d = Data suppressed due to insufficient observations.
 * = Standard error is between 25 and 50 percent of the estimate.

¹Financial performance classification based on farm income and debt/asset ratio:

- Favorable: positive net farm income and debt/asset ratio no more than 40 percent;
- Marginal income: negative net farm income and debt/asset ratio no more than 40 percent;
- Marginal solvency: positive net farm income and debt/asset ratio more than 40 percent;
- Vulnerable: negative net farm income and debt/asset ratio more than 40 percent.

Source: USDA, Economic Research Service, 1996 Agricultural Resource Management Study, all versions.

accounted for 8 percent, on average, of gross cash farm income for female operators compared with 4 percent for males.

Most farms, whether operated by women or men, had fairly low average levels of farm debt relative to farm assets. The debt/asset ratio in 1996 was 10 percent and 8 percent, respectively, for female and male operators. However, men were more likely than women to have positive net farm income and be classified in the favorable or marginal solvency groups.

The difference in financial position between male- and female-operated farms can be largely explained by differences in size. In general, farms with sales less than \$50,000 (which includes 90 percent of female-operated farms) are more likely than other farms to have negative income and thus fall in the marginal income category (Hoppe and others, 1996, p. 22).

Business Organization, Tenure, and Program Participation

Sole proprietorship was the most common type of business organization—regardless of operator gender—accounting for 81 percent of female-operated farms and 87 percent of male-operated farms (table 13). The remaining 19 percent of female-operated farms operated under formal agreements with others that could specify such elements as shares of ownership, management responsibilities, or sharing of income and expenses.

More than three-fourths of female farmers owned all the land they operated, compared with half of male farmers. This correlates with the observation that operators of small farms, in general, are less likely to rent land.

Table 13—Business organization and land tenure, by operator gender, 1996

Item	Operator gender	
	Male	Female
<i>Number of farms</i>		
Total farms	1,756,426	154,845
Business organization:		
Sole proprietorship	1,532,967	125,386
Partnership	114,859	*7,666
Family corporation	94,148	d
Nonfamily corporation or cooperative	14,452	d
Land tenure:		
Full owner	873,874	121,041
Part owner	726,169	*27,994
Tenant	156,382	*5,809
<i>Percent of farms</i>		
Business organization:		
Sole proprietorship	87.3	81.0
Partnership	6.5	*5.0
Family corporation	5.4	d
Nonfamily corporation or cooperative	0.8	d
Land tenure:		
Full owner	49.8	78.2
Part owner	41.3	*18.1
Tenant	8.9	*3.8

Note: Includes only farm operations for which gender question was answered. d = Data suppressed due to insufficient observations.

* = Standard error is between 25 and 50 percent of the estimate.

Source: USDA, Economic Research Service, 1996 Agricultural Resource Management Study, all versions.

Women also play an important role as farm landlords, even if they do not farm. The most current comprehensive data on farm landlords is for 1988 from the 1987 AELOS. Although AELOS is dated, it does indicate the importance of female landlords. About 40 percent of landlords were women, which reflects widows retaining ownership of farmland after the death of their husbands and leasing it out for income (Hoppe and others, 1995, p. 3).

Relatively few female and male farm operators reported receipt of government payments, but the programs in which they participated differed (table 14). Of farms receiving government payments, one-fourth of those operated by women received transition payments compared with three-fourths of those operated by men. The opposite was true with regard to enrollment in the CRP, i.e., three-fourths of female operators and one-fourth of male operators receiving government payments were enrolled in the CRP. Among women whose farms received income solely from CRP enrollment, two-thirds were 65 years old or older.

Table 14—Participation in government programs, by operator gender, 1996

Item	Operator gender	
	Male	Female
	<i>Number</i>	
Total farms	1,734,819	155,532
Farms receiving:		
Any government payment(s)	640,877	46,401
Transition payments	473,708	12,075
Farms enrolled in the Conservation Reserve Program (CRP)	166,214	*35,132
Farms w/ CRP sole source of gross farm income	65,095	*30,546
Under 65	35,250	*10,276
65 or over	*29,845	*20,270
	<i>Dollars per farm</i>	
Government payments per farm	3,559	1,901
Government payments per participating farm	9,635	6,371
	<i>Percent</i>	
Share of farms:		
Receiving any government payments	36.9	29.8
Receiving transition payments	27.3	7.8
Enrolled in CRP	9.6	22.6
With CRP sole source of gross farm income	3.8	19.6

Note: Includes only farm operations for which gender question was answered. * = Standard error is between 25 and 50 percent of the estimate.
Source: USDA, Economic Research Service, 1996 Agricultural Resource Management Study, all versions.

Operator Characteristics

Female operators were less likely than males to report farming as their major occupation. While 28 percent of female operators reported farming as their primary occupation and an equal share reported they were “retired,” the largest share of female farm operators—45 percent—reported “something else” as their primary occupation (table 15). In contrast, almost half of male operators reported farming as their primary occupation, and only one-third reported “something else.”

About half of female operators were married, compared with over 90 percent of male operators. While the share of married male operators was fairly consistent across all age groups (90 percent or higher after age 35), the share of married female operators ranged from a high of 91 percent for female operators aged 35-44 to a low of 27 percent for female operators 65 or over. Many women are not identified as operators of their farms until later in life after their husbands’ deaths.

Operator Household Income

Generally speaking, female-operator households experienced relatively low incomes (table 16). Their average household income was lower than that of male-operator households. On the other hand, the average household income of female-operator households was higher than that of all U.S. female-headed households (\$28,300) or females living alone (\$21,900).

The lower average income for female-operator households resulted more from low farm earnings than from low off-farm income. Average farm earnings were about \$11,500 lower for female-operator households than for male-operator households. In contrast, off-farm income for the households of both female and male operators was about the same.

Despite relatively low income from farming, the average net worth for female-operator households with sales under \$50,000 approached a quarter million dollars, about \$60,000 less than the value for households of male-operated farms in the same sales class. For households with farms in the \$50,000 - \$249,999 sales class, household net worth was about the same, regardless of gender. For households with farms realizing gross sales of \$250,000 or more, average net worth of female operators exceeded a half million dollars, compared with nearly a million dollars for male operators.

Farm Typology

There were few important gender differences among the typology groups. Residential/lifestyle farms made up the largest share of both male- and female-operated farms (fig. 20). Female-operated farms, however, were less likely than male-operated farms to be in the high-sales group or in the large and very large group.

Regardless of typology group, average household income for female operators did not exceed the average for all U.S. households by a statistically significant amount (fig. 21). In contrast, three typology groups—the residential/lifestyle group and the large and very large group—showed male-operator households with average household income exceeding the U.S. average by a statistically significant margin. For all farm typology groups, female-operator households showed the same general pattern of dependence on off-farm income as male-operator farms (not shown). Regardless of gender, only operators of large and very large farms reported less than half of their household income came from off-farm sources.

Table 15—Occupation, age, education level, and marital status of farm operators, by gender, 1996

Item	Operator gender	
	Male	Female
	<i>Number</i>	
Total operators	1,756,426	154,845
Operator occupation:		
Farming	859,165	43,615
Something else	565,838	*69,124
Retired	331,423	42,105
	<i>Years</i>	
Average age	55.8	56.5
	<i>Percent of operators</i>	
Operator age:		
Under 35	6.9	d
35 to 44	18.8	*11.2
45 to 54	22.4	36.1
55 to 64	18.5	18.2
65 or over	33.3	28.8
Operator occupation:		
Farming	48.9	28.2
Something else	32.2	44.6
Retired	18.9	27.2
Operator education level:		
Less than high school	19.4	*9.9
Completed high school	41.8	42.0
Some college	20.9	*24.2
Completed college or more	17.9	23.9
Married operators ¹	91.4	48.6
Under 35 years of age	81.2	d
35 to 44 years of age	90.8	90.5
45 to 54 years of age	95.6	*42.5
55 to 64 years of age	93.3	59.6
65 years of age or more	89.9	*26.9

Note: Includes only farm operations for which gender question was answered. d = Data suppressed due to insufficient observations. * = Standard error is between 25 and 50 percent of the estimate.

¹ Based on operators with data on gender and marital status in version 1 only.

Source: USDA, Economic Research Service, 1996 Agricultural Resource Management Study, all versions.

Table 16—Farm household income and net worth, by operator gender, 1996

Item	Operator gender	
	Male	Female
		<i>Number</i>
Total households	1,689,481	153,633
		<i>Dollars per household</i>
Total household income	52,550	38,318
Farm earnings	8,539	** -3,017
Off-farm income	44,010	41,335
		<i>Percent</i>
Share from:		
Farm earnings	16.2	** -7.9
Off-farm sources	83.8	107.9
Operator household income compared with U.S. average ¹	111.5	81.3
Households with:		
Positive household income and—		
Loss from farming	48.3	67.9
0 - 49 percent from farming	27.4	21.5
50 percent or more from farming	17.2	8.4
Negative household income	7.0	*2.2
		<i>Dollars per household</i>
Operator household income by sales class:		
Less than \$50,000	44,185	36,959
\$50,000 - \$249,999	56,688	*45,653
\$250,000 or more	115,233	63,575
Operator household net worth	418,910	281,262
Operator household net worth by sales class:		
Less than \$50,000	310,621	248,551
\$50,000 - \$249,999	574,758	577,078
\$250,000 or more	997,252	*532,618

Note: Includes only farm operations for which gender question was answered. * = Standard error is between 25 and 50 percent of the estimate. ** = Standard error is between 51 and 75 percent of the estimate.

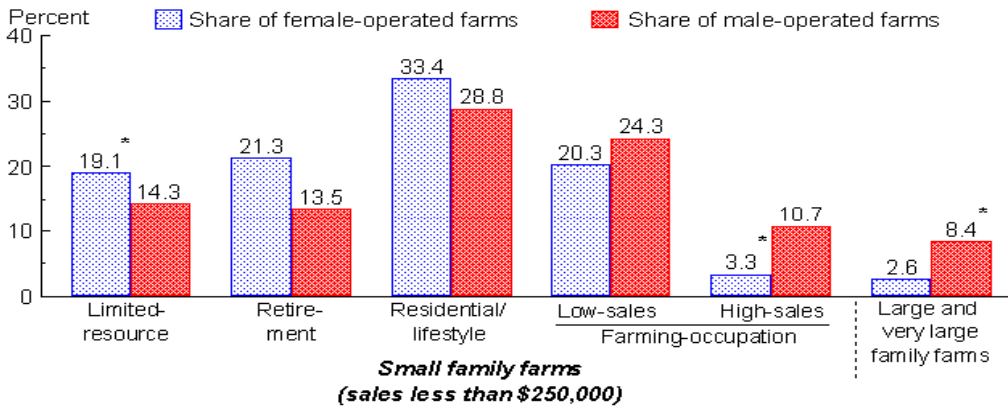
¹In 1996, income for all U.S. households averaged \$47,123.

Source: USDA, Economic Research Service, 1996 Agricultural Resource Management Study, version 1.

Figure 20

Distribution of farm operator households, by gender and farm typology, 1996

Residential lifestyle farms predominated regardless of the operator's gender



Note: Includes only farms for which operator gender was reported. Because of small sample size, large and very large farms are combined.

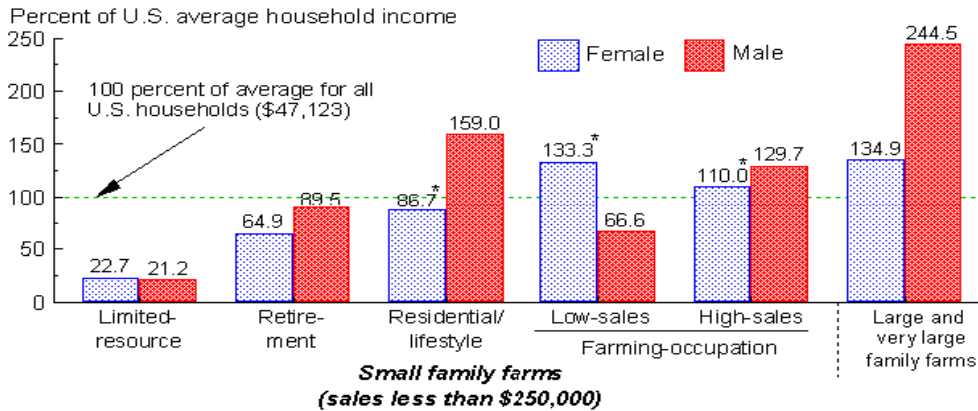
* = Standard error is between 25 and 50 percent of the estimate.

Source: USDA, Economic Research Service, 1996 Agricultural Resource Management Study, version 1.

Figure 21

Operator household income compared with U.S. average household income, by gender and farm typology, 1996

Male farmers operating a residential/lifestyle or a large or very large farm received household income exceeding the U.S. average by a statistically significant amount



Note: Includes only farms for which operator gender was reported. Because of small sample size, large and very large farms are combined.

* = Standard error is between 25 and 50 percent of the estimate.

Source: USDA, Economic Research Service, 1996 Agricultural Resource Management Study, version 1.

Summary

Nearly 155,000 female-operated farms accounted for 4 percent of the more than \$160 billion in agricultural sales as measured by the ARMS in 1996. Farms operated by women are generally smaller, both in sales and acres, than male-operated farms, and female operators control a relatively small share of resources used in agricultural production. Nevertheless, the trend in the farm sector, as in the Nation, indicates a growing presence of women.

Because of their small size relative to male-operated farms, female-operated farms are more likely to have negative net farm income and thus are less likely to be in a favorable financial position. Like most households with small farms, households of female operators rely heavily on off-farm income.

Largely because of low farm earnings, average total household income of female-operator households is less than the average for male-operator households and below the average for all U.S. households. Nevertheless, the average household income of female-operator households was higher than that of all U.S. households with a female head or females living alone.

Female operators are less likely than males to produce commodities under contract, but among those who contract, females are more likely to have production contracts and males are more likely to engage in marketing contracts. Female operators are less likely than males to receive transition payments, but females are more likely than males to be enrolled in the CRP.