

Operator Demographics

Every farm has at least one operator, or a farmer who makes day-to-day decisions about the farm business. However, some farms—particularly the larger ones—have more than one operator who makes decisions. In such cases, one operator is designated as the principal operator, the one who is most responsible for running the farm. The others are designated as secondary operators.⁴

Principal Operators

Principal farm operators are largely White and male. Minorities account for 5 percent of all principal operators, and a similar percentage for each farm type except for limited-resource farms (table 3). About 12 percent of limited-resource farms had a minority operator, more than double the rate for all farms. Women make up 16 percent of operators on limited-resource farms, nearly double their 9-percent share of all farms.⁵ Men operate virtually all family farms with sales of \$100,000 or more (medium-sales, large, and very large farms).

Education. Educational attainment varies sharply by type of farm. One-fourth of principal operators of limited-resource farms attended or completed college, compared with half the operators of residential/lifestyle or medium-sales farms. Educational attainment also increases with farm size. About 38 percent of low-sales operators attended or completed college, a number that jumps to 60 percent for operators of very large farms. Thirty-five percent of limited-resource farmers had less than a high-school education, about three times the percentage for all operators.

Operator age. One of the most striking characteristics of U.S. agriculture is the advanced age of principal farm operators compared with other self-employed workers. About 27 percent of farm operators reported their age as 65 or older in 2004. In contrast, the Bureau of Labor Statistics (BLS) estimates that only 8 percent of self-employed workers in nonagricultural industries were that old (U.S. Dept. of Labor, 2005, p. 220). Each farm type—except residential/lifestyle farms—had a larger share of operators who were at least 65 than was true for the nonfarm self-employed. Retired operators were most likely to be 65 or more, as one would expect, but nearly 60 percent of limited-resource operators were also that old.

The age gap between farm operators and other self-employed workers has increased in recent decades (fig. 7). In 1969, 17 percent of farm operators were at least 65 years old, or 6 percentage points more than the estimate for the nonagricultural self-employed. By 2002, the difference had increased to 19 percentage points, largely due to a growing share of older farm operators.

The advanced age of farm operators is understandable, given that the farm is the home for most farmers and that farmers can phase out of farming gradually over a decade or more (Ahearn et al., 1993, p. 7). Younger farmers enter the business at a very slow rate, which tends to increase the average age for farmers as a whole. Improved health and advances in farm equipment have

⁴Traditionally, farm data sources in the United States assumed each farm had only one operator. The “one farm, one operator” assumption was dropped when the census of agriculture and ARMS collected data for 2002. Both the census and ARMS now count all operators—principal and secondary—and ask for detailed information on up to three operators.

⁵Approximately 17 percent of the operators of nonfamily farms were women, but the difference between that estimate and the 9-percent estimate for all farms is not statistically significant.

Table 3

Selected characteristics of principal operators, by farm type, 2004

Item	Small family farms					Large-scale family farms		Nonfamily farms	All farms
	Limited-resource	Retirement	Residential/lifestyle	Farming-occupation		Large	Very large		
				Low-sales	Medium-sales				
	<i>Number</i>								
Total principal operators	197,734	338,671	837,542	395,781	133,299	86,087	71,708	47,103	2,107,925
	<i>Percent of group</i>								
Race or ethnic origin of principal operator:									
White, not Hispanic	88.2	95.5	95.7	95.8	98.0	96.7	96.4	96.1	95.2
Minority ¹	11.8	4.5	4.3	*4.2	*2.0	#3.3	3.6	#3.9	4.8
Gender of principal operator:									
Male	83.6	90.4	91.3	89.0	97.9	98.4	97.5	83.1	90.7
Female	16.4	9.6	**8.7	11.0	2.1	1.6	2.5	*16.9	*9.3
Education of principal operator:									
Some high school or less	35.5	14.0	5.9	11.2	7.1	8.9	5.3	*2.2	11.1
Completed high school	40.6	38.1	39.1	50.6	42.3	38.3	35.2	32.4	41.1
Some college	17.5	24.0	26.5	18.9	29.2	29.2	28.5	21.6	24.0
Completed college	*6.4	24.0	28.6	19.3	*21.3	23.6	31.1	43.7	23.8
	<i>Years</i>								
Average age of principal operator	65	68	51	57	52	52	52	56	56
	<i>Percent of group</i>								
Age of principal operator:									
Younger than 35 years	*2.6	d	6.0	4.1	7.3	6.5	4.9	2.6	4.4
35 to 44 years	*4.7	d	19.3	9.7	18.9	17.9	18.9	15.0	13.0
45 to 54 years	15.4	5.5	37.0	20.5	34.4	35.3	37.6	21.2	26.3
55 to 64 years	19.3	24.8	30.7	40.5	*24.0	26.9	26.5	38.1	29.9
65 years or older	58.3	68.7	7.0	25.3	15.5	13.4	12.1	23.1	26.5

d = Data suppressed due to insufficient observations.

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

**Standard error is between 51 percent and 75 percent of the estimate.

= Standard error is greater than 75 percent of the estimate.

¹Includes American Indians or Alaska Natives, Asians, Blacks or African Americans, Hispanics or Latins, and Native Hawaiians and other Pacific Islanders. Also includes operators who reported more than one racial or ethnic group. Small sample size for individual minority groups prevents separate estimates for each group.

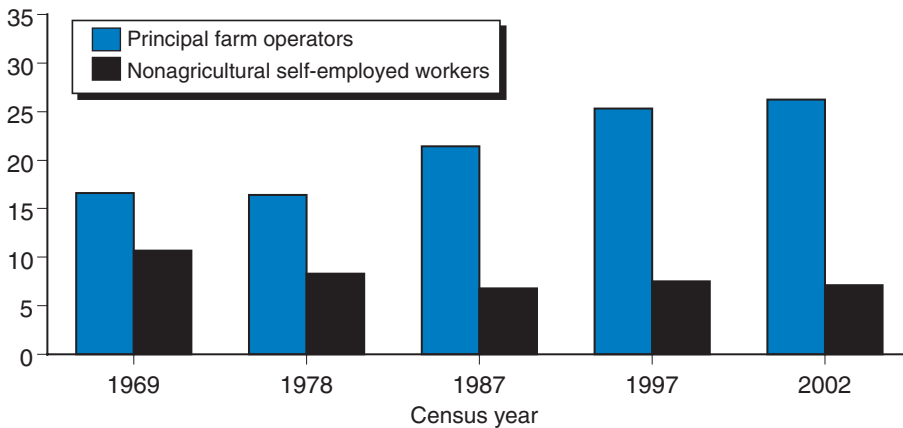
Source: USDA, Economic Research Service, 2004 Agricultural Resource Management Survey, Phase III.

Figure 7

Principal farm operators and self-employed workers in nonagricultural industries who were at least 65 years old, selected census years, 1969-2002

Principal farm operators are increasingly likely to be at least 65 years old

Percent 65 or older



Source: USDA, Economic Research Service, compiled from agricultural census data and from Bureau of Labor Statistics data published in various January issues of *Employment and Earnings*.

also allowed farmers to farm later in life than in previous generations (Mishra et al., 2005, p. 14).

The advanced age of farmers raises concerns about a mass exit of farmers from agriculture in the near future (Gale, 2002, p. 30) and finding younger farmers to replace them. Finding replacement operators, however, may not be as hard as it seems (Hoppe and Banker, 2006, p. 36). Older farmers can be replaced with younger farmers producing more on larger farms, and some replacement farmers already work as secondary operators on their families' farms. In addition, about one-fifth of farm operators report they are retired. Any replacement of these operators by younger operators has already occurred.

Secondary Operators and Their Farms

In addition to principal farm operators, there are secondary operators on 967,730 multiple-operator farms (table 4). Because farms are generally family businesses, one would expect family members to serve as secondary operators. In fact, 65 percent of the secondary operators—720,000 out of 1.1 million—are spouses.

The number of operators per farm tends to increase with size. Commercial-sized farms often require more management and labor than an individual can provide. The number of operators per farm reaches 1.9 operators—on average—for very large family farms. Sixty-five percent of farms that size have two or more operators, versus 46 percent for all U.S. farms. About 16 percent of all multiple-operator farms are multiple-generation farms, with at least 20 years' difference between the ages of the oldest and youngest operators.

Table 4

Multiple-operator farms, by farm type, 2004

Item	Small family farms					Large-scale family farms		Nonfamily farms	All farms
	Limited-resource	Retirement	Residential/lifestyle	Farming-occupation		Large	Very large		
				Low-sales	Medium-sales				
	<i>Number</i>								
Total operators	273,308	511,094	*1,268,612	590,099	204,683	146,199	136,763	89,290	3,220,048
Principal operators ¹	197,734	338,671	837,542	395,781	133,299	86,087	71,708	47,103	2,107,925
Secondary operators	75,574	172,423	*431,070	194,318	71,384	60,112	65,055	42,187	1,112,123
Spouses	53,754	110,054	*314,752	134,549	45,415	26,804	23,946	*10,542	719,816
Other	*21,820	*62,369	*116,318	59,769	25,968	33,308	41,109	31,645	392,307
Operators (principal and secondary) per farm	1.4	1.5	1.5	1.5	1.5	1.7	1.9	1.9	1.5
Multi-operator farms ²	71,347	142,740	*392,904	176,010	62,327	48,332	46,841	27,230	967,730
	<i>Percent of group</i>								
Multiple-operator farms as share of all farms	36.1	42.1	46.9	44.5	46.8	56.1	65.3	57.8	45.9
	<i>Number</i>								
Multi-generation farms ³	*13,524	**33,892	*41,879	19,004	11,855	13,447	12,487	*5,936	*152,025
	<i>Percent of group</i>								
Multiple-generation farms as share of multiple-operator farms	*19.0	*23.7	10.7	10.8	19.0	27.8	26.7	21.8	15.7

Note: ARMS counts all operators—principal and secondary—and asks for detailed information on up to three operators.

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

** = Standard error is between 51 percent and 75 percent of the estimate.

¹The number of principal operators equals the number of farms. Each farm has one principal operator.

²Multiple-operator farms report more than one operator.

³Farms reporting a difference of at least 20 years between the ages of the youngest and oldest operators.

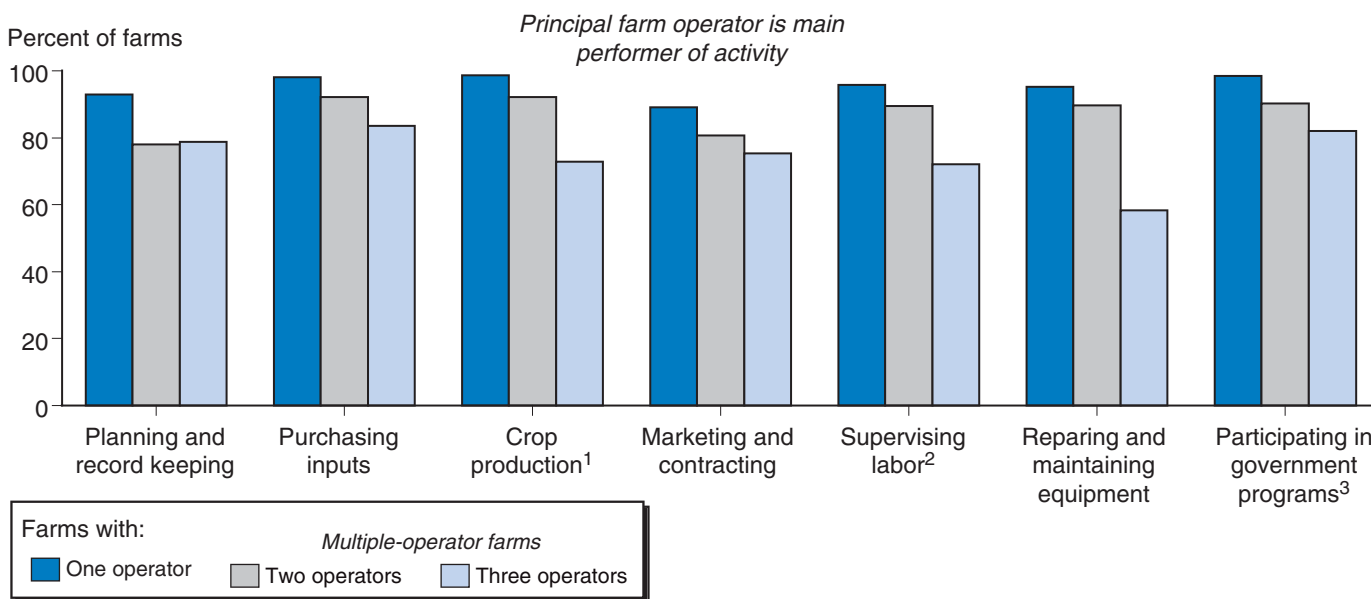
Source: USDA, Economic Research Service, 2004 Agricultural Resource Management Survey, Phase III.

The tasks that principal operators perform—like buying inputs, marketing, and maintaining equipment—change as the number of operators increases (fig. 8). When there is only one operator on large-scale farms, that operator is the main performer of each activity for 89 to 99 percent of the farms. As the number of operators increases, the percentages fall. For farms with three operators, the principal operator is the main performer for only 58 to 84 percent of the farms, depending on the activity.

As more operators are added, individual operators can specialize in different activities. Or, older operators can scale back and allow younger operators to assume more responsibilities. This appears to be the case on large-scale farms with three operators. The average age of the principal operator on these farms is 59, and 74 percent of the farms are multiple-generation.

Figure 8
Principal farm operators' responsibility for selected activities on large-scale family farms, by number of operators, 2004

Principal operators' responsibilities lessen on multiple-operator farms



Note: The Agricultural Resource Management Survey collects detailed information on up to three farm operators for each farm.

¹Estimated only for farms producing crops.

²Estimated only for farms hiring labor.

³Estimated only for farms receiving government payments.

Source: USDA, Economic Research Service, 2004 Agricultural Resource Management Survey, Phase III, version 1.