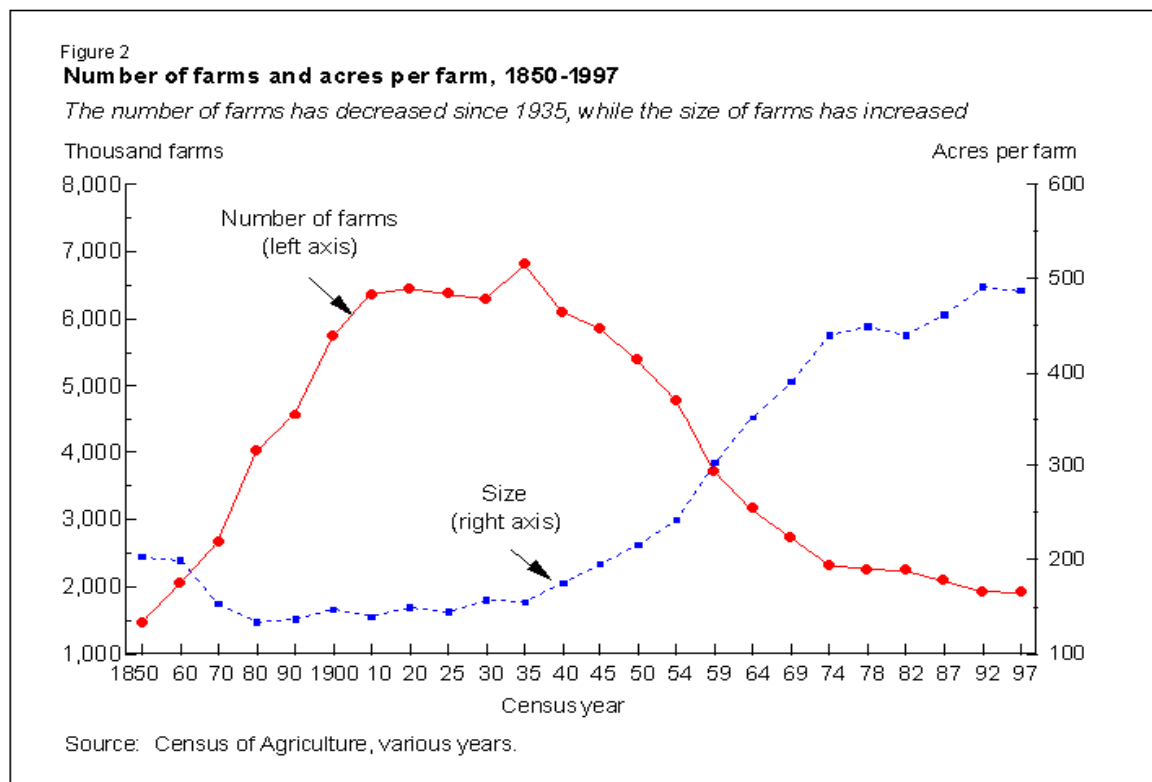


Attributes of Small and Large Farms

U.S. farms are highly diverse in their physical and production attributes, the characteristics of their operators, and in the choices of management practices and strategies that are incorporated into the farm business plan. Agricultural production is heavily concentrated in large and very large farms, although small farms produce substantial amounts of individual commodities. Small farms hold about two-thirds of farm assets, including land. Thus, they are important in any discussion regarding land use, natural resources, and the environment.

The number of farms in the United States has declined dramatically since its peak in 1935 (fig. 2). As shown by data from the census of agriculture, the number of farms decreased by two-thirds between 1935 and 1974, from 6.8 million to 2.3 million. This decline reflects growing productivity and excess capacity in agriculture that led to farm consolidation (Hoppe, 1994, pp. 1-2). Since 1974, farm numbers



have declined at a slower rate. The availability of off-farm employment undoubtedly played a role in the retention of farms in recent years. Farmers could remain on their farms, even if the farm itself was not profitable, by relying on off-farm income.

Farms today are much larger than they used to be, averaging 487 acres in 1997 versus 155 acres in 1935. Averages can be deceiving, however. The remaining farms are diverse in many ways, but most are very small in acres and sales. To show the difference between small and other farms, the various typology groups are compared with respect to the following traditional structural characteristics:²

- Share of production.
- Size of farms (in terms of sales and acres).
- Tenure.
- Specialization in production.
- Characteristics of farm operators.
- Geographic location.

Small and large farms also differ in their choices of management practices and strategies, as discussed in this section. Business organization is another structural characteristic of frequent concern to policymakers, but that topic is discussed in detail in the following section, “[Business Organization and Arrangements of Farms](#).”

Shares of Farms, Production, and Assets

Although most U.S. farms are classified as small, agricultural production is highly concentrated in large and very large family farms. These two groups together made up 8 percent of all farms in 1998, but accounted for 53 percent of the total production of agricultural products ([fig. 3](#)).

Some small farms contribute substantially to aggregate production. Small farms with high sales were responsible for 17 percent of the total value of production in 1998 (about the same as the percentage contributed by large farms), while small farms with low sales accounted for another 8 percent. As a group, small farms produced a large share of specific commodities, including 62 percent of the value of production for hay, 54 percent for tobacco, 49 percent for soybeans, 47 percent for wheat, 47 percent for corn, and 40 percent for beef. At the other extreme, small farms accounted for only 26 percent of hogs and 11 percent of vegetable, fruit, and nursery products.

Sixty-two percent of all U.S. farms were in the limited-resource, retirement, and residential/lifestyle categories, but these farms produced only 9 percent of U.S. farm output. Most farm businesses were very small, because only \$1,000 of farm sales is necessary for an establishment to be classified as a farm according to the U.S. Department of Agriculture’s official definition (see the box “[Defining Farms](#)”).

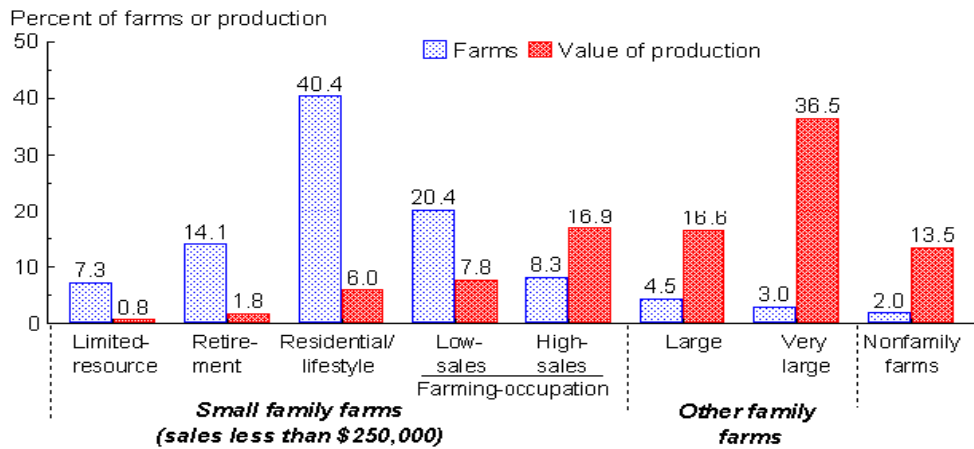
Nevertheless, small farms collectively held 69 percent of farm assets, including 68 percent of the land ([fig. 4](#)). As custodians and managers of the bulk of farm assets—including land—small farms play a large role in natural resource and environmental policy. For example, retirement farms alone accounted for

²This list of structural characteristics was drawn from Penn (1979), Babb (1979), and Stanton (1993).

Figure 3

Share of farms and value of production by farm typology group, 1998

Large and very large family farms account for 53 percent of the value of production

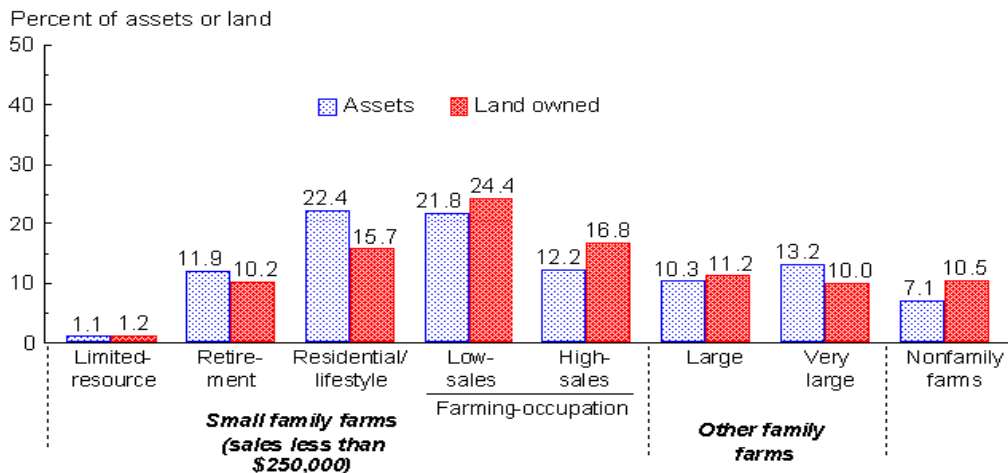


Source: USDA, Economic Research Service, 1998 Agricultural Resource Management Study, version 1.

Figure 4

Share of assets and land owned, by farm typology group, 1998

Small farms account for most of the assets (including land) owned by farms



Source: USDA, Economic Research Service, 1998 Agricultural Resource Management Study, version 1.

29 percent of the land in the Conservation Reserve Program (CRP). Given their life cycle position, many retired farmers were likely scaling back their farming activities and thus may have had land available to put to conservation uses. Alternatively, the assured and steady stream of rental payments coming from the CRP may have made retirement a more viable option for some farmers.

Sales Class and Acreage

Fifty-three percent of all U.S. farms sold less than \$10,000 worth of agricultural products in 1998 (table 1). Even among nonfamily farms, this sales class was common; approximately 31 percent of nonfamily farms sold less than \$10,000 of agricultural products. Farms with sales less than \$10,000 made up a particularly large share of farms in the limited-resource (80 percent), retirement (76 percent), and residential/lifestyle (70 percent) groups. And, the average acreage operated for these groups was small, ranging from 111 to 180 acres. Not surprisingly, households in these groups relied heavily on off-farm income (see the “Farm Household Income and Wealth” section). In contrast to limited-resource, retirement, and residential/lifestyle farms, a substantially smaller percentage of low-sales small farm operators had sales less than \$10,000. Nevertheless, households operating low-sales farms also relied heavily on off-farm income.

Defining Farms

Since 1850, when minimum criteria defining a farm for census purposes were first established, the farm definition has changed nine times, as the Nation has grown and changed. A farm is currently defined, for statistical purposes, as any place from which \$1,000 or more of agricultural products (crops and livestock) were sold or normally would have been sold during the year under consideration. This definition has been in place since August 1975, by joint agreement among the USDA, the Office of Management and Budget, and the Bureau of the Census (Sommer and others, 1998, p. 4).

Minor differences existed, however, between the Census and USDA versions of the definition. The Census Bureau excluded Christmas tree farms and farms wholly enrolled in the Conservation Program (CRP), while the USDA’s National Agricultural Statistics Service (NASS) excluded farms having five or more horses or ponies and sales of no other farm products (U.S. Department of Agriculture, National Agricultural Statistics Service, 1999b, p. 1). After the responsibility for the Census of Agriculture was transferred to NASS from the Census Bureau, the NASS and Census definitions were standardized. The 1997 Census included Christmas tree and CRP farms and NASS surveys began to include horse farms in 1995. Two new types of farms, maple syrup, and short-rotation wood crops (growing trees with a harvest cycle less than 10 years for pulp or nursery stock), were added to both counts starting in 1997, due to the implementation of the new North American Industry Classification System.

The 1997 Census count of farms (1,911,859) and the 1997 NASS initial count of farms (2,057,910) still differed because of Census undercoverage of farms (U.S. Department of Agriculture, National Agricultural Statistics Service, 1999c, pp. C5-C6). The count of farms in the Agricultural Resource Management Study (ARMS) is weighted to correspond to the official NASS count, excluding “abnormal farms” (institutional, experimental, and research farms) and farms in Alaska and Hawaii.

Table 1—Selected structural characteristics of farms, by farm typology group, 1998

Item	Small family farms ¹					Large family farms ¹	Very large family farms ¹	Non-family farms ²	All farms
	Limited-resource ³	Retire-ment ⁴	Residential/lifestyle ⁴	Farming-occupation ⁴					
				Low-sales	High-sales				
	<i>Number</i>								
Total farms	150,268	290,938	834,321	422,205	171,469	91,939	61,273	42,296	2,064,709
	<i>Percent</i>								
Sales class:									
Less than \$10,000	79.8	75.5	70.2	34.6	na	na	na	31.1	52.5
\$10,000 to \$49,999	*17.6	22.3	22.9	42.1	na	na	na	26.4	22.8
\$50,000 to \$99,999	d	d	4.5	23.4	na	na	na	8.8	7.2
\$100,000 to \$174,999	na	d	2.0	na	65.7	na	na	d	6.5
\$175,000 to \$249,999	na	d	*0.4	na	34.3	na	na	d	3.1
\$250,000 to \$499,999	na	na	na	na	na	100.0	na	9.7	4.7
\$500,000 or more	na	na	na	na	na	na	100.0	15.6	3.3
	<i>Acres per farm</i>								
Land operated per farm	111	180	148	453	1,167	1,747	1,971	*1,670	453
Owned	44	189	102	313	531	661	878	*1,336	262
Rented in	71	*19	54	172	658	1,109	1,109	382	210
Rented out	*4	28	9	32	22	*23	19	*50	19
	<i>Percent</i>								
Tenure:									
Full owner	50.3	84.1	62.9	54.5	17.7	11.1	28.4	64.4	56.2
Part owner	17.9	14.4	28.7	40.0	67.5	68.3	55.3	20.9	33.8
Tenant	31.8	d	8.5	5.5	14.7	*20.6	16.3	14.7	10.0
Specialization:									
Cash grain	*10.0	7.1	14.1	22.7	42.9	44.1	20.5	25.0	18.7
Other field crops ⁵	22.1	31.6	24.5	15.8	10.6	12.5	13.3	21.9	21.5
High-value crops ⁶	d	*7.4	7.8	6.6	4.9	7.3	14.0	20.5	7.7
Beef	40.6	39.0	32.4	36.6	13.0	9.8	8.8	14.7	31.1
Hogs	d	d	d	2.3	4.2	4.8	5.9	d	2.5
Dairy	d	d	d	6.4	20.4	15.6	14.0	d	4.5
Other livestock	*15.7	*14.5	18.0	9.6	4.0	5.9	23.5	*11.5	14.0

d = Data suppressed due to insufficient observations. na = Not applicable. * = Standard error is between 25 and 50 percent of the estimate.

¹Small family farms have sales less than \$250,000. Large family farms have sales between \$250,000 and \$499,999. Very large family farms have sales of \$500,000 or more.

²Nonfamily farms include nonfamily corporations or cooperatives, as well as farms operated by a hired manager.

³Limited-resource farms have household income less than \$20,000, farm assets less than \$150,000, and sales less than \$100,000.

⁴Small farms other than limited-resource farms are classified according to the major occupation of their operators. Operators of retirement farms are retired. Operators of residential/lifestyle farms report a nonfarm occupation. Operators of farming-occupation farms report farming as their major occupation. Farming-occupation farms are further divided into low-sales (sales less than \$100,000) and high-sales (sales between \$100,000 and \$249,999).

⁵Includes tobacco, cotton, peanuts, Irish potatoes, sunflowers, sweet potatoes, sugarcane, broomcorn, popcorn, sugar beets, mint, hops, seed crops, hay, silage, and forage.

⁶Vegetables, fruits, tree nuts, and horticultural specialties.

Source: USDA, Economic Research Service, 1998 Agricultural Resource Management Study, version 1.

On average, low-sales farms operated 453 acres, or more than double the averages for the limited-resource, retirement, or residential/lifestyle groups. This 453-acre average was relatively small, however, when compared with the averages for high-sales farms (1,167 acres), large family farms (1,747 acres), and very large family farms (1,971 acres).

Tenure

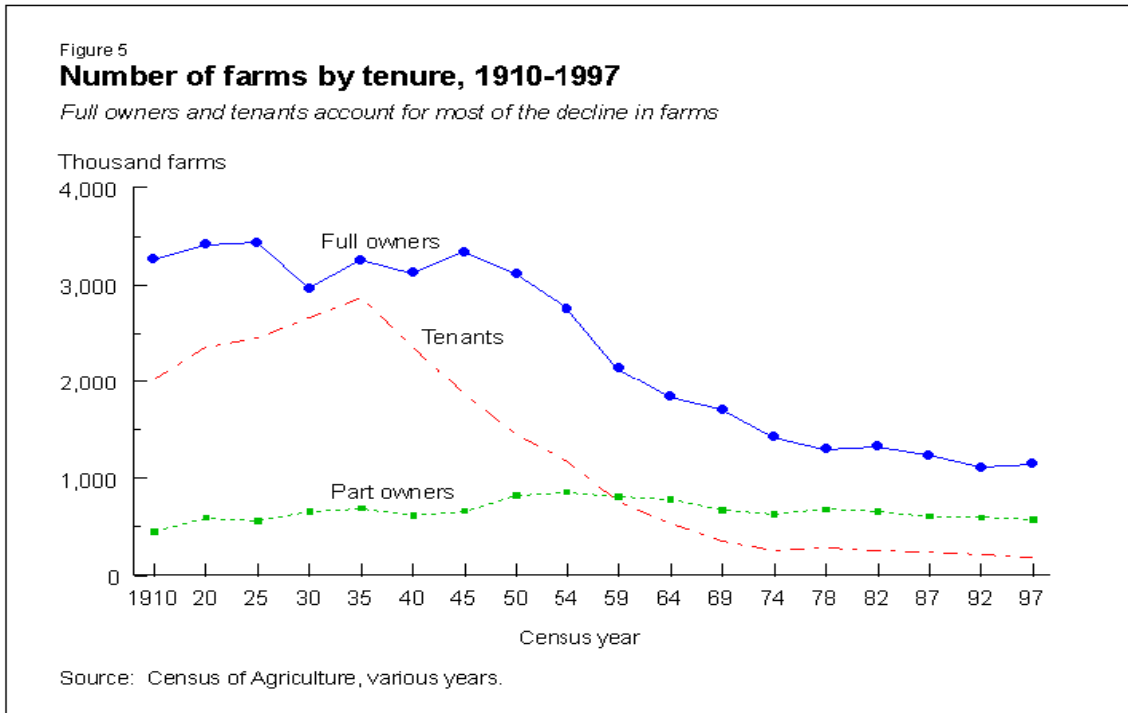
At the national level, full owners (owned all land operated) operated 56 percent of farms, part owners (owned part of the land and rented the rest) operated 34 percent, and tenants (rented all the land they operated) operated the remainder. The distribution of farms by tenure varied among the typology groups. The distribution of residential/lifestyle and low-sales farms was similar to the national distribution. In contrast, full owners operated a much larger share of farms in the retirement group (84 percent). At the other extreme, part owners operated about two-thirds of high-sales small farms and large family farms, approximately double the national rate. Tenant farmers operated 32 percent of limited-resource farms.

Renting land has changed from a method for entry into farming to a way to control additional land. Farms may rent land to avoid debt and risks of ownership (Reimund and Gale, 1992, p. 8; Wiebe and others, 1997, p. 33) and to enable rapid response to changing markets. Pinpointing when this shift occurred is difficult, but it was probably underway by the 1950's. Until the 1950's farm tenancy was considered a serious social problem and full ownership was viewed as the ideal form of tenure (Janssen, 1993, pp. 473-475). Accepting renting as a way to control land, rather than viewing it as a transitional state or a problem, facilitated expansion for many farmers by enabling them to absorb the land of farmers leaving agriculture without actually buying it. Most of the farmers leaving agriculture were full owners and tenants, with tenants beginning to leave after 1935, about 10 years earlier than full owners (fig. 5). Part owners' share of land in farms increased from 36 percent in 1950 to 55 percent by 1997.

About 263,000 farms reported renting a total of 38 million acres to others in 1998, which accounted for only a small share of the 433 million acres that farms rented in. Nonfarm landlords provided the rest of the rented land. Little information exists on the characteristics of farmland landlords. Nevertheless, the Agricultural Economics and Land Ownership Survey (AELOS) of 1988, a follow-on survey to the 1987 Census of Agriculture, gathered information about landlords. Although dated, the AELOS suggests that a large majority of the landlords (93 percent) were individuals, families, or partnerships (Hoppe and others, 1995). Just over half (52 percent) of these unincorporated landlords were retired. Twenty-six percent of landlords had retired from farming or from a farm-related job. Another 26 percent had retired from a nonfarm-related job. How many of the second group of retirees farmed before taking the nonfarm-related job is unknown. Only 12 percent of landlords were farming or working at a farm-related job.

Farm Specialization and Diversification

A relatively large percentage of farms specialized in beef cattle in the limited-resource (41 percent), retirement (39 percent), residential/lifestyle (32 percent), and low-sales (37 percent) groups (table 1). Cow-calf enterprises in particular can have relatively low labor requirements (Holcomb, 1982, pp. 6, 22-23), and are compatible with off-farm work, retirement, or an operation being scaled back in preparation for retirement.

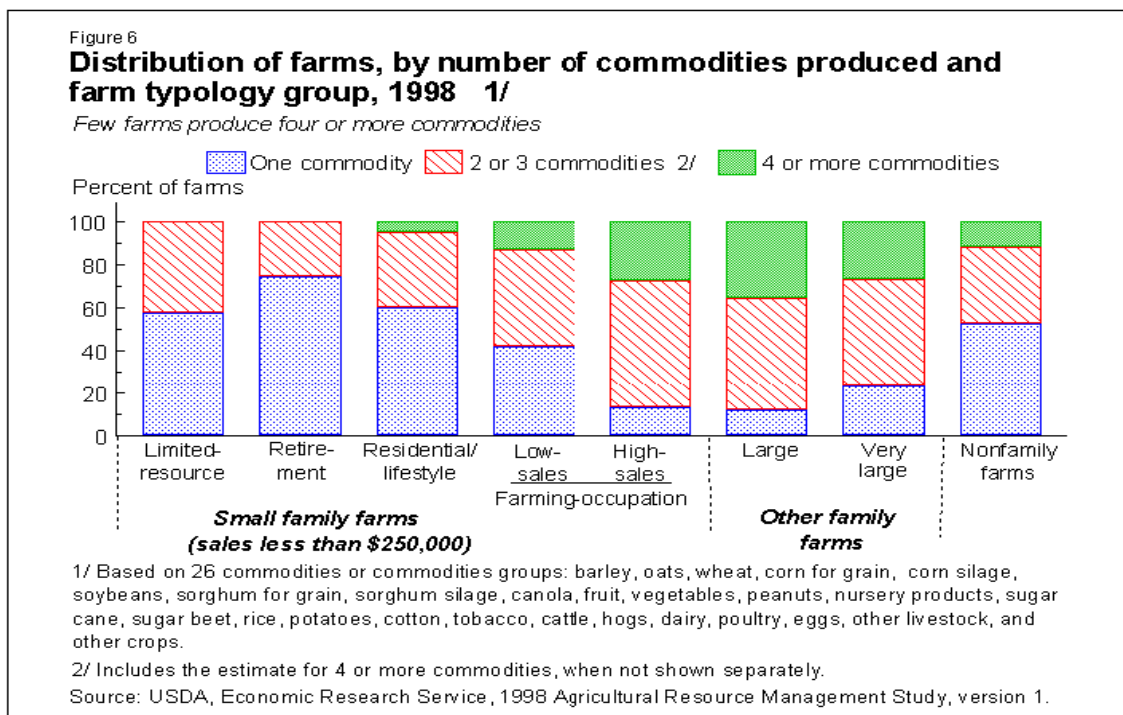


Beef cattle were less important as a specialization for the remaining groups. High-sales small farms had two major specializations: cash grain (43 percent) and dairy (20 percent). Cash grain farms and dairying accounted for similar shares of the large family farm group. Farms were more evenly distributed among the various specializations in the very large family farm group. Small farms' specialization in beef cattle and cash grain is consistent with the large share of farmland they own. Both these specializations often make extensive use of farmland (Hoppe and others, 1996, pp. 4-6).

Although small farm analysts often suggest high-value crop enterprises to boost the earnings of small farmers, less than 10 percent of each small farm group in the typology specialized in the production of these crops. The groups most frequently specializing in high-value crops were nonfamily farms (21 percent) and very large family farms (14 percent). The two groups together accounted for 80 percent of the production of these crops in 1998.

U.S. farms tended to be specialized in production, rather than diversified, with over half of farms producing just one commodity. Three-fourths of the retirement farms and three-fifths of limited-resource and residential/lifestyle farms produced only one commodity (fig. 6). As indicated in table 1, these most often were beef cattle or field crops.

High-sales small farms, large family farms, and very large family farms tended to produce a larger number of commodities, but two-thirds of these farms still produced fewer than four commodities. Analysis of the profitability of small farms indicates that diversification is a significant factor explaining differences in the level and variability of income between higher and lower performing small farms. Financially successful small farms tend to be more diversified.



Operator Characteristics

Operator characteristics help explain the variation in production accounted for by the various groups discussed above. Very few operators of limited-resource, retirement, or residential/lifestyle farms worked 2,000 or more hours per year on their farms (table 2), the equivalent of a full-time job. As a result, their contribution to the value of agricultural production was small.

On low-sales small farms, however, operators averaged 2,100 hours of farm work per year, and 51 percent of operators worked at least 2,000 hours. Average hours per year and share of operators working full-time were even higher for the remaining groups, except for operators of nonfamily farms. Nonfamily farms were also unique in that more than half of the operators reported that their principal occupation was hired manager.

Operators of retirement farms had the highest average age (70 years), as one would expect. The average age for limited-resource farms and for low-sales farms (both 58 years) was also high when compared with the averages for the other groups of family farms, which centered around 50 years. In addition, the limited-resource, retirement, and low-sales groups had a relatively large percentage of operators at least 65 years old. These three groups also had the highest percentage of operators with less than a high school education. Bellamy (1992) found that—like the rest of the population—farmers more than 65 years of age were less likely to have finished high school.

The average age level of retirement, low-sales, and limited-resource farms raises questions about potential land use and transfer that cannot be answered with existing data. While economic data are

Table 2—Characteristics of farm operators, by farm typology group, 1998

Item	Small family farms ¹				Large family farms ¹	Very large family farms ¹	Non-family farms ²	All farms	
	Limited-resource ³	Retirement ⁴	Residential/lifestyle ⁴	Farming-occupation ⁴					
				Low-sales					High-sales
Total operators	150,268	290,938	834,321	422,205	171,469	91,939	61,273	42,296	2,064,709
	<i>Number</i>								
	<i>Percent</i>								
Occupation:									
Farming	35.4	na	na	100.0	100.0	95.1	96.3	20.6	38.8
Hired manager	na	na	na	na	na	na	na	57.7	1.2
Something else	30.1	na	100.0	na	na	*3.9	3.0	*14.9	43.2
Retired	34.6	100.0	na	na	na	d	d	d	16.8
	<i>Hours per year</i>								
Operator's onfarm work	1,111	817	880	2,051	3,045	3,114	3,055	1,697	1,488
	<i>Percent</i>								
Hours worked onfarm per year by operator:									
Less than 500	31.7	40.0	30.5	*8.0	d	d	d	*20.6	22.4
500 to 999	25.4	27.0	32.0	10.2	d	d	2.1	*17.5	21.3
1,000 to 1,999	25.5	24.5	32.2	30.5	9.9	9.3	*11.5	*21.2	26.6
2,000 or more	17.4	8.5	5.3	51.3	87.9	87.8	85.2	40.7	29.7
	<i>Years</i>								
Average age	58	70	49	58	50	50	49	53	54
	<i>Percent</i>								
Age:									
Younger than 35 years	d	0.0	7.1	3.8	9.8	8.5	7.3	*9.0	6.3
35 to 44 years	*12.7	d	27.8	16.6	27.6	27.7	30.8	17.6	20.4
45 to 54 years	13.3	d	39.4	16.9	28.1	29.7	31.2	30.0	26.1
55 to 64 years	9.7	19.8	20.5	26.7	20.5	24.3	21.3	21.7	21.1
65 years or older	49.2	75.9	5.2	36.0	14.0	9.8	9.4	21.7	26.1
Education:									
Less than high school	46.9	25.2	6.2	21.5	8.8	7.9	7.5	d	15.3
High school	32.6	40.8	42.9	43.3	43.6	33.0	32.7	33.3	41.0
Some college	10.8	17.8	29.0	21.5	28.7	31.0	34.7	25.6	24.7
Completed college	d	16.2	21.9	13.7	18.9	28.1	25.1	34.8	18.9

d = Data suppressed due to insufficient observations. na = Not applicable. * = Standard error is between 25 and 50 percent of the estimate.

¹Small family farms have sales less than \$250,000. Large family farms have sales between \$250,000 and \$499,999. Very large family farms have sales of \$500,000 or more.

²Nonfamily farms include nonfamily corporations or cooperatives, as well as farms operated by a hired manager.

³Limited-resource farms have household income less than \$20,000, farm assets less than \$150,000, and sales less than \$100,000.

⁴Small farms other than limited-resource farms are classified according to the major occupation of their operators. Operators of retirement farms are retired. Operators of residential/lifestyle farms report a nonfarm occupation. Operators of farming-occupation farms report farming as their major occupation. Farming-occupation farms are further divided into low-sales (sales less than \$100,000) and high-sales (sales between \$100,000 and \$249,999).

Source: USDA, Economic Research Service, 1998 Agricultural Resource Management Study, version 1.

collected for the whole farm, demographic data have traditionally been collected only for its primary operator or partner associated with the farm. Thus, we do not know if there are other operators or persons associated with the farm who might take it over in the future.

Operators' Management Strategies

Farmers use a variety of production, marketing, and financial strategies (table 3). Production strategies involve such practices as precision farming and diversification. Marketing strategies concern when, how, and under what conditions commodities are marketed. Financial strategies include record keeping, budgeting, and insurance. Farmers integrate all three strategies to create a management plan to improve their operations' effectiveness and overall financial performance.

While the largest proportion of farms in each typology group reported using budgeting and debt management, the proportions rose with farm size. Operators of high-sales, large, and very large farms tended to use more financial and production strategies, since they depended on the farm for their livelihood to a larger extent than smaller farms. In contrast, operators of the smaller farms tended to make limited use of management strategies, as they relied on off-farm income. As the household depends more heavily on income from the farm business, there was a shift toward more intensive use of all three types of management strategies.

Regardless of typology group, most farmers either agreed or strongly agreed that it was important to have adequate insurance (for liability more than hail/fire) and sufficient backup labor. Having new machinery or at least machinery in good repair was also important, but more so to the high-sales, large, and very large farms. The larger farms were also more likely to agree with the importance of relying on market information from government reports or private market new services in making marketing decisions. Farmers' use of management strategies will become increasingly critical as future farm legislation affects government involvement in the sector, and as technological and organizational responses to the market affect the structure of agriculture.

Location of Farms

As one would expect from their specialization in dairy and cash grain, 66 percent of high-sales farms are located in the Northern Crescent, Heartland, and Northern Great Plains (table 4). (See the box, "Geographic Units," for a description of the geography used in this report.) Similarly, 64 percent of large farms were located in the Heartland, Northern Great Plains, and Prairie Gateway, which reflects the large farm specialization in cash grain. One-fifth of very large and nonfamily farms were in the Fruitful Rim, consistent with the groups' specialization in high-value crops.

About two-thirds of all U.S. farms were located in nonmetro counties, with the remaining third located in metro counties. The distribution of farms by metro-nonmetro location differed from the national distribution for some of the typology groups. About three-fourths of farming-occupation small farms and large family farms were located in nonmetro counties, a higher share than the national average. These farms typically account for two-thirds of major grain and row crop commodities, a farming focus that makes extensive use of land. In addition, over 40 percent of high-sales small farms and large family farms were located in nonmetro counties that were not adjacent to a metro area, compared with one-third of all farms. In other words, large family farms and small farms with high sales were more likely to be located in less densely settled rural areas.

Table 3—Farmers choice of management strategies, by farm typology group, 1998

Item	Small family farms ¹				Large family farms ¹	Very large family farms ¹	Non-family farms ²	All farms	
	Limited-resource ³	Retirement ⁴	Residential/lifestyle ⁴	Farming-occupation ⁴					
									Low-sales
<i>Number</i>									
Total farms	150,268	290,938	834,321	422,205	171,469	91,939	61,273	42,296	2,064,709
<i>Percent of farms</i>									
Precision farming techniques	d	d	*2.5	2.9	11.1	18.8	17.8	9.8	4.3
Diversifying production	*12.0	11.8	18.2	29.8	48.1	48.6	47.1	35.2	24.3
Multiple production practices	*7.6	11.3	16.1	27.1	55.5	60.5	49.6	37.7	23.7
Options to forward price	d	6.9	8.2	8.4	20.9	29.2	25.6	*15.5	10.3
Debt management to expand, or cash flow	41.6	33.5	45.6	57.3	77.8	80.4	83.6	55.9	51.6
Flexibility in acquiring inputs, organizing production	*22.5	31.5	37.9	57.4	77.8	84.7	70.9	53.3	46.6
Budgeting/records to manage cash flow/control cost	43.0	46.3	58.6	67.4	84.2	87.8	87.8	65.0	62.0
<i>Percent of operators</i>									
Operators agreed or agreed strongly with the importance of:									
Spreading sales of commodities over the year	27.0	24.1	25.8	46.5	59.6	62.8	55.1	36.2	35.4
Relying heavily on market information for decisions	*18.5	15.4	19.2	34.8	41.1	50.4	45.7	36.7	26.2
Adequate insurance:									
Liability	40.6	49.9	52.0	64.6	78.9	84.3	82.8	71.0	58.4
Hail/fire	*15.6	22.1	18.5	31.3	49.4	53.1	47.7	26.3	26.6
Most machinery new or in good repair	28.4	40.7	44.2	49.6	58.6	64.5	71.2	54.9	46.8
Sufficient backup labor/management	45.6	41.8	48.9	53.7	47.6	57.9	67.7	58.2	49.7

d = Data suppressed due to insufficient observations. na = Not applicable. * = Standard error is between 25 and 50 percent of the estimate.

¹Small family farms have sales less than \$250,000. Large family farms have sales between \$250,000 and \$499,999. Very large family farms have sales of \$500,000 or more.

²Nonfamily farms include nonfamily corporations or cooperatives, as well as farms operated by a hired manager.

³Limited-resource farms have household income less than \$20,000, farm assets less than \$150,000, and sales less than \$100,000.

⁴Small farms other than limited-resource farms are classified according to the major occupation of their operators. Operators of retirement farms are retired. Operators of residential/lifestyle farms report a nonfarm occupation. Operators of farming-occupation farms report farming as their major occupation. Farming-occupation farms are further divided into low-sales (sales less than \$100,000) and high-sales (sales between \$100,000 and \$249,999).

Source: USDA, Economic Research Service, 1998 Agricultural Resource Management Study, version 1.

Table 4—Location of farms, by farm typology group, 1998

Item	Small family farms ¹				Large family farms ¹	Very large family farms ¹	Non-family farms ²	All farms	
	Limited-resource ³	Retire-ment ⁴	Residential/lifestyle ⁴	Farming-occupation ⁴					
				Low-sales					High-sales
Number									
Total farms	150,268	290,938	834,321	422,205	171,469	91,939	61,273	42,296	2,064,709
Percent									
Resource region:									
Heartland	d	15.2	22.0	21.1	34.7	31.0	20.1	18.5	22.0
Northern Crescent	*16.9	10.8	16.7	14.9	19.4	16.5	10.5	15.3	15.5
Northern Great Plains	d	d	2.1	5.7	11.6	8.5	3.3	d	4.3
Prairie Gateway	d	12.8	14.6	15.7	10.8	*16.5	10.3	*10.8	13.6
Eastern Uplands	20.2	20.4	14.8	12.7	5.3	3.5	*11.2	d	14.0
Southern Seaboard	*10.1	13.7	9.9	*11.0	5.0	9.6	16.2	*5.8	10.4
Fruitful Rim	d	9.1	12.8	10.7	7.0	8.5	19.6	20.8	11.3
Basin and Range	d	*10.9	3.9	4.3	3.7	2.4	2.5	7.9	4.8
Mississippi Portal	*9.5	*4.8	3.3	*3.9	2.4	3.5	6.2	**7.3	4.2
Metro-nonmetro status:									
Metro counties	34.0	40.9	37.0	26.1	23.0	26.5	31.5	49.2	33.5
Nonmetro counties	66.0	59.1	63.0	73.9	77.0	73.5	68.5	50.8	66.5
Adjacent	32.3	32.3	32.3	38.5	35.2	30.7	31.5	22.2	33.5
Nonadjacent	33.8	26.9	30.7	35.4	41.8	42.8	36.9	28.6	33.0
Economic specialization:									
Farming-dependent counties	*7.5	10.8	7.8	17.0	26.8	28.0	19.5	12.8	13.0
Other nonmetro counties	58.5	48.3	55.2	56.9	50.2	45.5	48.9	38.1	53.4

Note: For definitions of the geographic units used in this table, see the box "Geographic Units."

d = Data suppressed due to insufficient observations. * = Standard error is between 25 and 50 percent of the estimate. ** = Standard error is between 51 and 75 percent of the estimate.

¹Small family farms have sales less than \$250,000. Large family farms have sales between \$250,000 and \$499,999. Very large family farms have sales of \$500,000 or more.

²Nonfamily farms include nonfamily corporations or cooperatives, as well as farms operated by a hired manager.

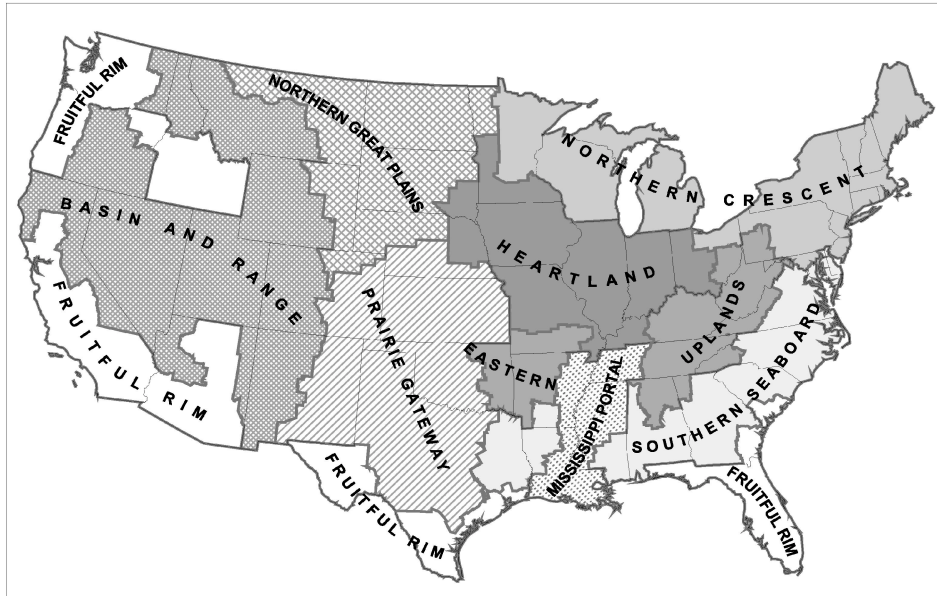
³Limited-resource farms have household income less than \$20,000, farm assets less than \$150,000, and sales less than \$100,000.

⁴Small farms other than limited-resource farms are classified according to the major occupation of their operators. Operators of retirement farms are retired. Operators of residential/lifestyle farms report a nonfarm occupation. Operators of farming-occupation farms report farming as their major occupation. Farming-occupation farms are further divided into low-sales (sales less than \$100,000) and high-sales (sales between \$100,000 and \$249,999).

Source: USDA, Economic Research Service, 1998 Agricultural Resource Management Study, version 1.

Geographic Units

Resource Regions. The Economic Research Service (ERS) has developed new resource regions based on characteristics of the land and the commodities produced (Heimlich, 2001). These regions cross state boundaries, but are more homogeneous with respect to resources or production than regions based on combinations of States. See the map below for delineation of the regions.



Metro-Nonmetro Status. *Metro* areas are defined by the U.S. Office of Management and Budget (OMB) as geographic areas with a large population nucleus (generally at least 50,000 inhabitants), plus adjacent communities that are socially and economically integrated with that nucleus (U.S. Dept. Comm., Cen. Bur., 1993, pp. A8-A9). Metro designations as of 1993, which identified 813 metro counties, are used in this report.

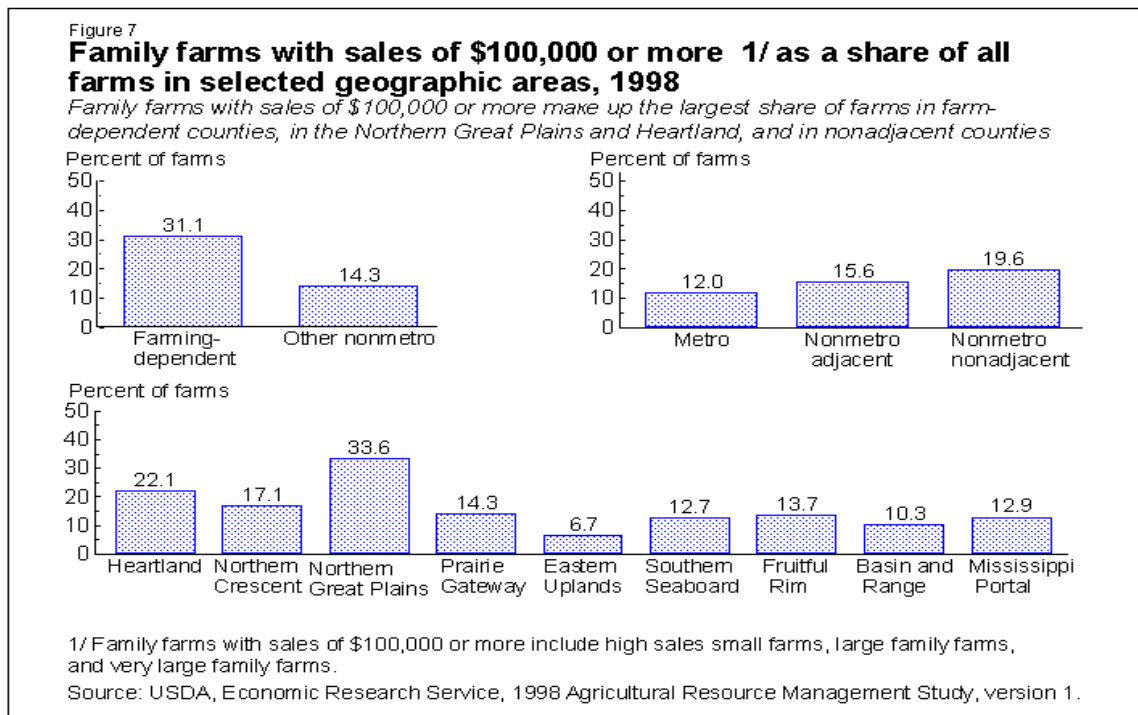
Nonmetro counties are a residual, the part of the Nation lying outside metro areas. Nonmetro counties are diverse, however, and the 2,276 nonmetro counties can be categorized into smaller groups with common characteristics. Nonmetro counties are sorted into two groups: those *adjacent* to metro areas (991 counties) and those that are *not adjacent* (1,285 counties) (Butler and Beale, 1994). One would expect urban influences to be stronger in adjacent counties than in nonadjacent counties.

Economic Specialization. Nonmetro counties can also be categorized according to their economic specialization. There are 556 *farming-dependent* counties where farming accounted for at least 20 percent of earned income over the three years from 1987 to 1989 (Cook and Mizer, 1994, pp. 6-7).

Two-thirds of residential/lifestyle and limited-resource farms were located in nonmetro counties, with the location of these farms being about evenly divided between adjacent and nonadjacent counties. The heavy dependence of these farmers on off-farm employment to underpin household incomes highlights the importance of a vibrant rural nonfarm economy and transportation system to U.S. farms and farm households.

By definition, farming-dependent counties have a large local farm sector relative to other types of business activity. Not surprisingly, family farms with sales of \$100,000 or more were more likely than farms in general to be located in farming-dependent counties. Between 20 and 28 percent of high-sales small farms, large farms, and very large farms were located in these counties. In contrast, only 13 percent of all U.S. farms were located in farming-dependent counties.

This section has emphasized the distribution of particular typology groups across geographic units. However, it is also important from an economic development perspective to examine the composition of farms within particular geographic areas. Thirty-one percent of all farms were family farms with sales of at least \$100,000 in farming-dependent counties, compared with about 12 percent in metro counties and 14 percent in the remaining nonmetro counties (fig. 7). The Northern Great Plains and Heartland also had a high percentage (34 and 22 percent, respectively) of their farms with sales of \$100,000 or more. Farm size seemed to increase as the density of settlement declined. Fewer off-farm job opportunities combined with any cost economies that may exist in grain, row crops, and livestock production may help explain why farms were larger in farming-dependent counties, in the Northern Great Plains and Heartland, and in nonadjacent counties.



Summary

Great diversity exists in U.S. farms. In part, this occurs because only \$1,000 in product sales is necessary for an establishment to qualify as a farm, and most family farms classified as limited-resource, retirement, and residential/lifestyle have sales less than \$10,000. At the other extreme, very large family farms have sales of at least \$500,000. A large share of family farms are too small for the farm to do more than supplement off-farm income, either with cash or with in-kind items, such as food, fuel, or housing.

Agricultural production is concentrated in large and very large farms. However, low- and high-sales small farms account for about 25 percent of all agricultural production. Small farms as a group also produce substantial portions of specific commodities, including hay, tobacco, soybeans, wheat, corn, and beef.

Small farms hold about 69 percent of farm assets, including 68 percent of the land. Thus, small farms are important in any discussions regarding land use, natural resources, or the environment. Retirement farms alone account for 29 percent of the land enrolled in the CRP.

Direct payments from commodity programs may have limited relevance to most small farms, except high-sales small farms. Direct payments—including transition payments under the 1996 Farm Act—focus on grain and cotton, while many small farmers specialize in beef cattle. Commodity programs are most relevant to high-sales small farms, since 43 percent of them specialize in cash grain production. Commodity programs also are an important source of income to the 44 percent of large family farms that specialize in cash grain production.

Currently, high-sales, large, and very large farms are more likely to use production, marketing, and financial strategies to manage their businesses. Use of these strategies in the future is likely to become more critical as farm structure and farm programs evolve.