Small and Large Farms Both Growing in Number

Census of Agriculture data from 1997 seem to indicate that farm numbers stabilized in the 1990's. A closer look shows that the number of full-time farms continued declining, while part-time farms surged. Many counties continued to lose farms at a steady pace, while others gained farms.

At first glance, the latest agricultural census data indicate that the number of U.S. farms stabilized in recent years, perhaps indicating an end to the trend toward fewer, larger farms. The total of 1,911,859 U.S. farms reported by the most recent Census of Agriculture in 1997 represented a decline of less than 1 percent from the 1992 total. This was the slowest rate of decline since the late 1970's. Whereas the previous three censuses reported steady decline in farm numbers averaging about 30,000 per year, the decline in farm numbers between 1992 and 1997 was only 2,700 per year. USDA farm counts based on annual sample surveys also indicate that farm numbers stabilized from 1993 to 1998. On the surface, the data indicate that perhaps the trend toward fewer, larger farms that has done much to change the character of rural America may have finally run its course.

A closer look at the data shows some important trends that are hidden in the aggregate numbers. When the data are disaggregated by age group, type of farm, and geography, we find that various segments of the farm sector are following divergent trends. While commercial-sized farms continue to consolidate into fewer, larger farms, small noncommercial farms in various regions of the country are also growing in number. This means that many rural communities (largely in the Midwest and Great Plains) are still facing loss of population, declining retail trade and services, and a shrinking tax base that often accompany the loss of farms. At the same time, other rural communities are enjoying an influx of new farms.

Surge in Farms Operated by People Principally Employed Outside Farming

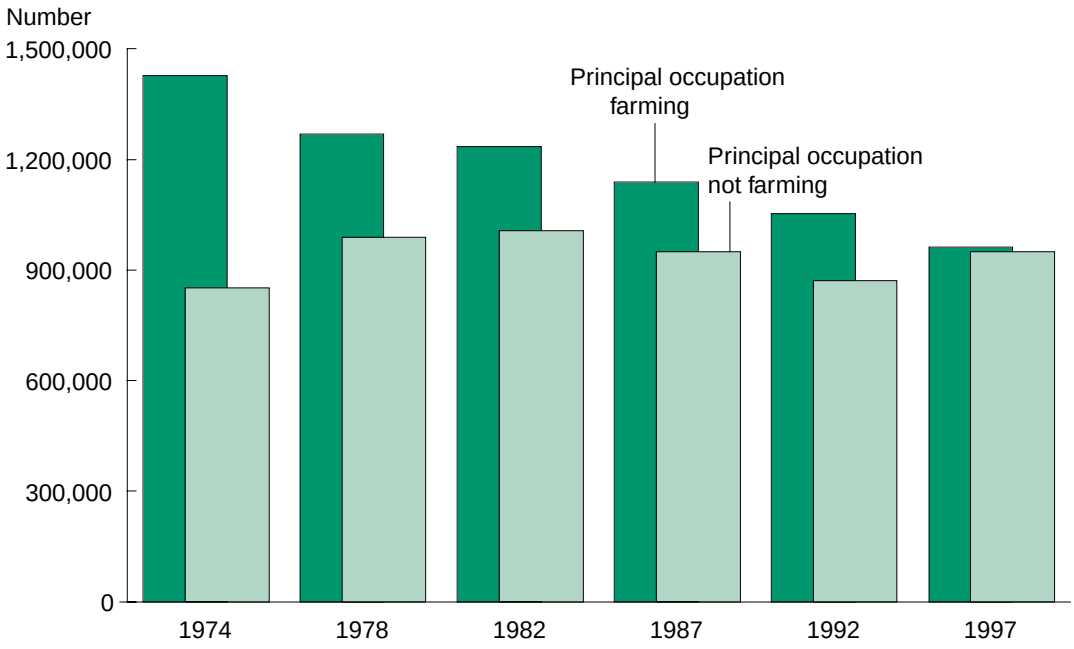
The census of agriculture asks respondents to report whether or not farming is their principal occupation. Those principally employed outside farming are largely "part-time" farmers and those pursuing dual farm-nonfarm careers. Figure 1 shows that the number of farms whose operators say farming is their principal occupation continued a trend of steady decline between 1992 and 1997. This group includes farmers who are strongly committed to a full-time farming career, as well as retirees. These farms declined in number by more than 90,000 between 1992 and 1997, comparable with the decline recorded for the two previous 5-year census intervals for this group. In contrast, the number of farms operated by people who are primarily employed outside farming has been more steady in recent decades and rose by 78,000 between 1992 and 1997.

Changes in farm numbers by size of farm show a surge of very small farms (usually operated by people primarily employed outside farming). Farm numbers grew among very small farms (less than $10,000 in annual sales) and among larger farms that have sales of $250,000 or more (table 1). Few farms earn significant profits with less than $10,000 in sales, so these data show again that much of the growth in farm numbers came from part-time "recreational" or "retirement" farms. (The definition of a farm is any place that sold, or normally would sell, at least $1,000 of agricultural products. See box, "Farm Definition Affects Farm Numbers.") Farm operators whose primary occupation is farming generally try to expand the size of their farms (although this group also includes retirees who operate small farms and generally do not expand their size). Since fixed costs are such an important part of total costs and per unit profit margins are slim, large operations are needed for most operators to earn significant income. The number of farms with sales between $10,000 and $250,000 per year fell by 100,000 between 1992 and 1997. Many farms that were in this sales class in 1992 probably moved to larger sales classes as they expanded their operations. (USDA's National Commission on Small Farms classified farms with less than $250,000 as "small farms.") However, many of them apparently left

Figure 1

Number of farms by operator's principal occupation 1974-97

The number of farms with operations whose principal occupation is farming fell steadily



Source: U.S. Bureau of the Census, Census of Agriculture.

Table 1

Number of farms by sales class, 1992-97

The smallest and largest farms grew in number

Value of sales	Number of farms, 1997	Change, 1992-97
Under $10,000	962,966	56,449
$10,000-$39,999	391,236	-45,150
$40,000-$99,999	211,669	-36,863
$100,000-$249,999	189,417	-18,988
$250,000-$499,999	87,777	9,231
$500,000-$999,999	42,860	11,836
$1 million or more	25,934	10,044

Source: ERS analysis of 1997 Census of Agriculture.

the business. The 100,000 farms lost from these classes far exceeds the increase of 31,000 in the larger sales classes.

Farm Loss Continues in Many Counties

Trends in farm numbers vary considerably across the country. Between 1992 and 1997, 1,287 counties lost at least 10 farms. Together these counties lost over 74,000 farms. Another 1,125 counties gained at least 10 farms. Every State except Arizona had at least one county where farm numbers increased. The total gain for those counties was 61,000. The remaining 665 counties had stable farm numbers (they gained or lost less than 10 farms). Thus, the stability in farm numbers portrayed by aggregate numbers hides the loss of farms that continued in many areas between 1992 and 1997. Figure 2 shows loss or gain of farms for each county in the 48 contiguous States. A striking feature of this map is

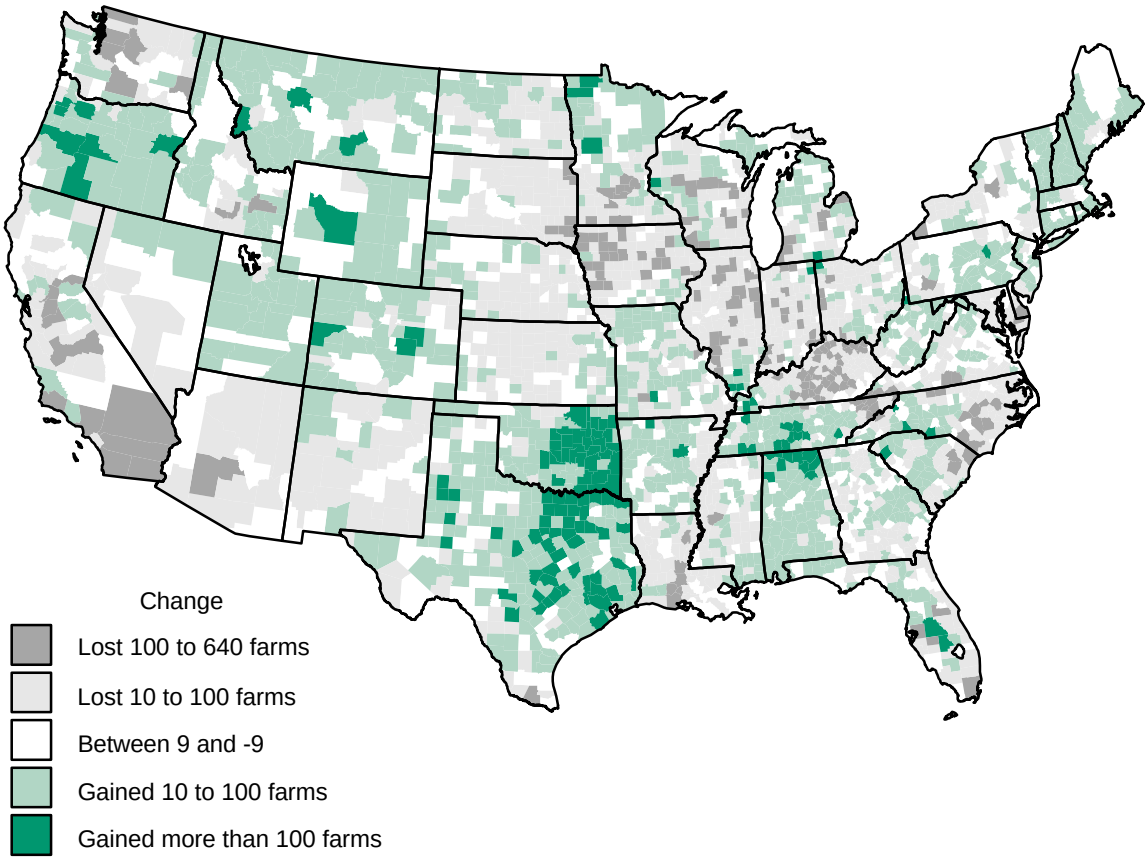
the diversity of farm gain and loss across the country and even within States. Most States had counties that lost farms and counties that gained farms.

Because of this diversity, it is difficult to draw conclusions about geographic patterns of farm gains and losses. However, a couple of general trends emerge from figure 2. First, areas dominated by commercial grain farming tended to lose farms (such as the Corn Belt, much of the eastern Great Plains, the Mississippi River delta, the Southern Coastal Plain). This suggests a continued trend toward consolidation in commercial agriculture. Southern Florida and central and southern California are dominated by industrialized agriculture where high-value crops are grown. Loss of farms in these areas could have been due to consolidation, but urbanization may have also played a role as farmland was converted to residential, commercial, or industrial uses. Second, many of the places where farm numbers grew were areas with high amenities (popular retirement destinations) and/or access to growing urban areas (New England, Oregon, the Rocky Mountain region, the Northern Great Lakes, parts of the Eastern seaboard). This suggests that much of the gain in farms was due to establishment of retirement and "lifestyle" farms in the mid-1990's. In these areas, retirees or other migrants seeking a better quality of life used assets accumulated from nonfarm work or investment to establish small farms. In other counties, commuters who established farm residences on the outskirts of metropolitan areas may have bolstered farm numbers. The slowdown in loss of farms coincided with population gains in rural areas during the 1990's (see Kenneth M. Johnson and

Figure 2

Change in farm numbers by county, 1992-97

At the same time many counties were gaining farms, many other counties continued to lose farms during the 1990's



Source: Estimated by ERS using Census of Agriculture data.

Calvin L. Beale, "The Continuing Population Rebound in Nonmetro America," *Rural Development Perspectives*, April 1999, pp. 2-10). There is not a clear link between 1992-97 farm number changes and population growth, urbanization, or amenities. For example, farm numbers fell in some metro areas while they rose in others. But it is probably no coincidence that the last stabilization in farm numbers came during an earlier "rural-urban turnaround" when rural population boomed in the 1970's.

Some geographic patterns remain difficult to explain. Kentucky lost more farms than any other State, perhaps due to hard times for its numerous small tobacco farms. Arizona and New Mexico also lost farms. Farm numbers grew strongly in eastern Texas and Oklahoma. Nearly all counties in Alabama and most of neighboring Tennessee gained farms.

Fewer Young Farm Entrants

Insight about the future structure of farming can be gained by looking at the two components of the change: entry by new farm operators and exit by those retiring or leaving the business for other reasons. Entry and exit can be further broken down by age group and principal occupation. There is concern about whether young people are entering farming in adequate numbers (see "Bureau of Labor Statistics Data Provide More Complete Count of Young Farmers" in this issue). Traditionally, young people raised on farms acquired their own farm in their 20's or 30's, built the size of the operation over the course of their career, and passed their farm to an heir after reaching retirement age. However, in recent years many young potential farm entrants have been dissuaded from a farm career by low earnings, high risk, and hard physical labor. Many observers are concerned about whether young people can obtain sufficient financial resources to enter today's capital-intensive farm sector. In 1997, 924,000 farms were operated by people age 55 or older, and those farms controlled about half of U.S. farmland. If historical patterns continue, we can expect about half of those operators to leave farming within 10 years, making their land available for younger operators or nonfarm development.

The number of new entrants can be estimated from census data by using the reported number of years that operators have been on their present farm. If we define a new entrant as a farmer who has been on his current farm for 5 years or less, estimates based on the census data indicate that entry by young farmers declined steadily during the 1990's. During 1992-97, people under age 35 entered farming at about half the rate estimated 10 years earlier for 1982-87 (fig. 3). There was also a small decline for the 35- to 44-year-old group of full-time farmers, but entry by age groups 45 and older remained steady. Entry by young part-timers under age 35 also fell over the 1982-97 period. Entries increased mainly among part-time farmers (those who say farming is not their principal occupation) ages 45 and older. Between the 1987-92 and 1992-97 periods, entries increased for every part-time age group over age 34. The largest increase was for ages 45-54. The share of farm entrants who farmed part-time increased from 58 to 66 percent from 1987 to 1997. Among full-time farmers, new entrants still tend to be relatively young (under 45 years old), as new farmers start their career, but the data show a steady decline in the number of young entrants.

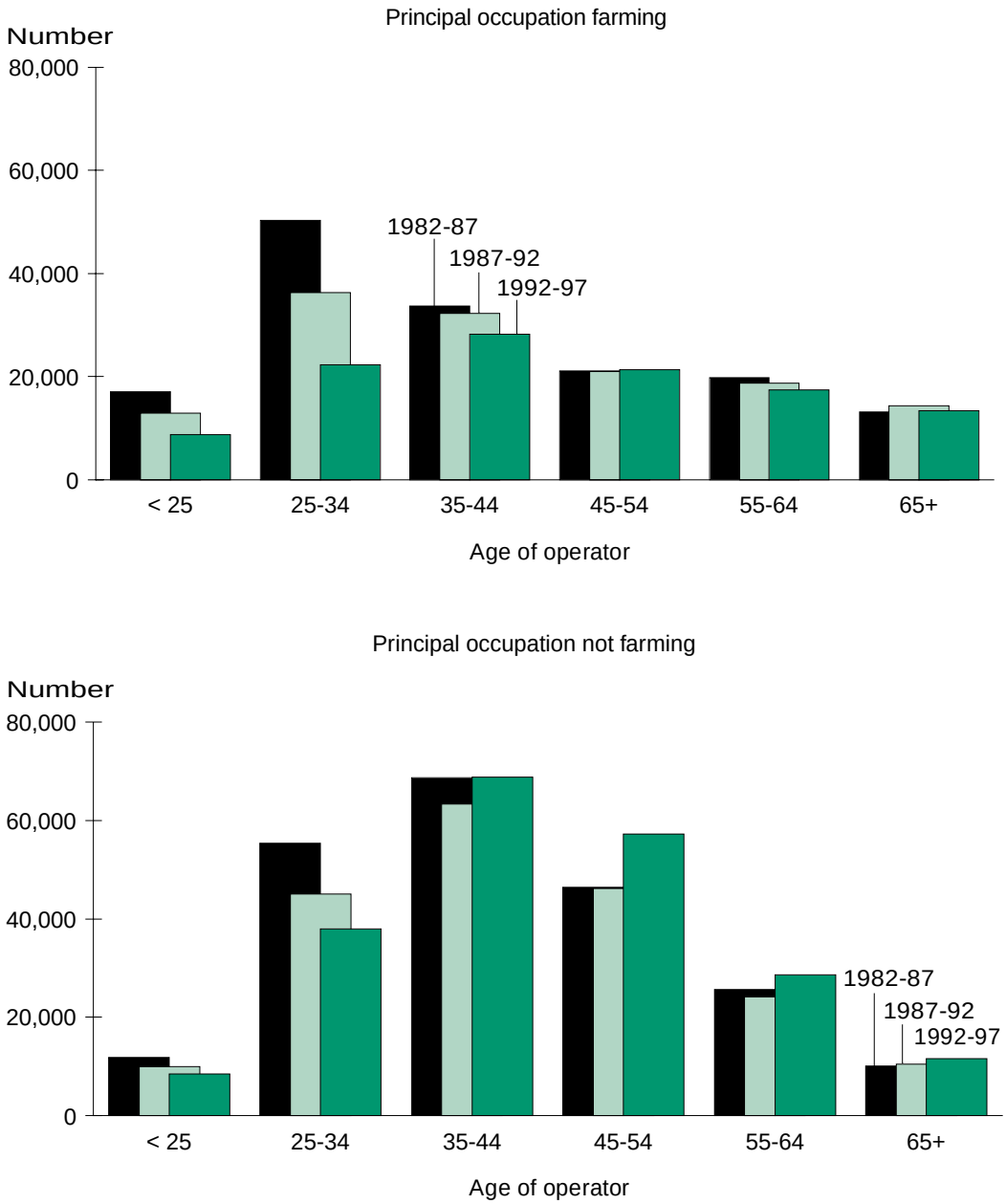
Recent Problems Will Speed the Process

Since 1997, falling agricultural prices have led to economic difficulties in the farm sector. These difficulties could be expected to further retard the rate of entry and accelerate exit rates. While census data for the years since 1997 are not available, sample survey data collected by the Bureau of Labor Statistics show a decline in the number of young farmers between 1997 and 1998 (see "Bureau of Labor Statistics Data Provide More Complete Count of Young Farmers" in this issue). Media accounts suggest that many farms have been forced to exit farming. But this cannot be confirmed or denied because currently available statistics do not measure farm exits. Informed observers point out that most people leaving farming in 1998-99 did so voluntarily, not as a result of foreclosure (for example, Mark Drabenstott, "Consolidation in U.S. Agriculture: The New Rural Landscape and Public Policy," Federal Reserve Bank of Kansas City *Economic Review*,

Figure 3

Estimated farm entry by age group and principal ocupation, 1982-97

Entry by young farm operators fell steadily



Source: Estimated by ERS using U.S. Department of Commerce Census of Agriculture data.

First Quarter, 1999). Research on farm entry and exit during the 1980's farm financial crisis found that financial stress affected the number of farm entrants more than the number of exits. Thus, the recent problems in the farm economy will do even more to discourage young full-time potential farm entrants. But most established farm operators will have sufficient equity to survive a period of low prices. Meanwhile, the booming nonfarm economy will encourage farm entry by people who derive their income from nonfarm jobs or investments.

It appears that the historical role of farms as the backbone of the rural economy will continue to erode. In areas where commercial farming is important, farms are continuing to grow in size and shrink in number. Farm residents will be able to support fewer local businesses and government services. Rural farm communities will become increasingly integrated with the rest of the economy as farmers go further afield to purchase inputs, obtain capital, and market their products. In exurban or high amenity areas dominated by small retirement and lifestyle farms, the farm sector is more affected by the nonfarm economy than vice versa (see "Urbanization Affects a Large Share of Farmland" in this issue). In these areas, farms have the characteristics of consumption goods or residential real estate. As such, they are affected by local population growth, earnings, interest rates, and accumulation of financial assets. *[Fred Gale, 202-694-5349, fgale@ers.usda.gov]*

Farm Definition Affects Farm Numbers

In 1997, the agricultural census began covering a broader range of farm operations. This and other minor changes may have resulted in counting operations in 1997 that were missed in previous censuses. That would make the loss of farms appear slower than it actually was, but the effect was probably modest. The responsibility for conducting the census was transferred from the Census Bureau to USDA's National Agricultural Statistics Service (NASS) beginning with the 1997 census. Implementation of the North American Industrial Classification Standard (NAICS) broadened the scope of operations counted as farms.

The definition of a farm is "any establishment from which $1,000 or more of agricultural products were sold or would normally be sold during the year." Under the new guidelines, places with five or more horses were counted as farms even if they had less than $1,000 in sales. (The number of farms classified as horse farms increased by nearly 24,000 between 1992 and 1997.) Christmas tree farms (6,565 farms) and maple syrup producers (1,209 farms), formerly placed in several different forest products and food preparations categories, were counted as farms in 1997 to accommodate NAICS. Farms that were wholly enrolled in the Conservation Reserve Program (60,846 farms) were counted as farms, even if they had no agricultural sales in 1997. Most of these farms would have also been counted in 1992 if they had at least $1,000 of agricultural sales in that year.

Some observers have suggested that NASS also found farms that were missed by earlier census counts. The 1997 census was able to take advantage of the network of local USDA offices that have records and contacts with farms in their area through enforcement of regulations and disbursement of Federal program benefits. But this factor should have been accounted for in Census' published farm number totals. Revised NASS numbers (reflecting changes needed to make NASS and census numbers comparable) parallel census numbers, with a decline of 11,000 between 1993 and 1997. This suggests that the small change between 1992 and 1997 does reflect a slowing of the decline in farm numbers and is *not* due primarily to definition changes or other statistical aberrations.