Financial Position of Farm Operator Households

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This paper explores the income situation and outlook for family farms from both farm and off-farm sources. The paper analyzes 2010 estimates, the latest year for which USDA survey data exist, and forecasts for 2011 and 2012. The paper also has a focus on the 20 percent of farmers and ranchers who make up the beginning farmer and rancher population.

What is a family farm? Family farms are defined as those farming operations where the majority of farm assets are owned by the operator or by his or her relatives, whether they reside in the same household or not. This population accounted for 98 percent of all U.S. farms and 88 percent of production in 2010.[2] Historically, the fundamental characteristics of family farms are those which provide most of the management and labor of the farm and own most of the land in the operation. Diversity in management, labor, and land tenure arrangements of family farms abounds. Half of all U.S. family farms are operated by one male operator (Table 1). Another one-third of family farms are operated by a male principal operator and his spouse. For about 10 percent of the farms, females are the principal operators, in some cases operating the farm with their spouses. Although they are less likely to be operators, half of spouses in farm families contribute labor to the farm and more than 10 percent of family farms reported using unpaid labor, usually other family members. More than half (56 percent in 2010) of family farms provide all of the management, land, and labor on their farms and ranches, and 20 percent provided these factors of production and did not work off the farm at a wage or salary job.

Income Situation and Outlook

In 2012, the average income of farm operator households from all sources is projected to be $86,178 (Figure 1, Table 2). As has been the case for decades, most of this income is from off-farm sources. Average off-farm income of $77,580 in 2012 is expected to account for 90 percent of the average farm operator household's income. This is not surprising in light of the fact that most farm families operate very small farms, have negative farm income (e.g., 61 percent in 2010), and production is increasingly concentrated on large farms. For example, the latest Census of Agriculture (for 2007) reported that only 5.7 percent of all farms accounted for three-quarters of all sales of agricultural products. Although the latest estimate of income of all U.S. households is for 2010, comparison of this series with the average income of farm operator

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[2] The 2 percent of U.S. farms considered by ERS to be nonfamily farms operated 10 percent of land in farms and accounted for 12 percent of the value of production in 2010. On average, they are larger than family farms, but 77 percent are considered to be small farms, i.e., having gross value of production under $250,000. A farm is defined as any place from which $1,000 or more of agricultural products were produced and sold, or *normally would have* been sold, during the year. Since the definition allows farms to be included even if they did not have at least $1,000 in sales, but *normally would have*, a system has been developed by USDA's National Agricultural Statistics Service for determining how much a farm *normally would have* sold in a given year. Point farms are farms with fewer than $1,000 in sales but have points worth at least $1,000. More than one-quarter of farms have no production in a typical year, and at least another 30 percent have positive sales of less than $10,000, depending on the year.

households shows farm operator households' income has exceeded the average of all U.S. households since 1996.

As is true with U.S. households, the average income of farm households is greater than the median income. (The median income is that income level at which half of all households have lower incomes and half have higher incomes.) One reason that average incomes are higher than median incomes for farm and U.S. households is because a small share of households has very high incomes, raising the average, (i.e., the density function is skewed with a long right tail). In addition, unique to farm households, the majority of farm households have net losses on their farm businesses. Consequently, the median income from farm sources is negative (e.g., $-2,922 in 2012f). In the past, the median income of farm households from farm sources has been negative even in record-breaking years for aggregate farm income.[3]

Farm Household Income by Farm Size. How close the income of any particular farm operator household comes to the U.S. average for all farm operator households depends especially on what commodities they produce, their human and other capital endowments, and their allocation of resources between farming and off-farm economic activities. The wide variation in the distribution of farm household income is especially obvious when income is compared by farm size, here measured by level of gross sales (or production). Figure 2a displays the average incomes by three sizes of farms. In 2010, the majority of family farms (60 percent) had gross sales of less than $10,000. These very small farms accounted for only 1 percent of the value of product and had negative average farm incomes, receiving all of their household income from off-farm sources (Table 3). They received more than $76,252 in income from off-farm sources in 2010.

Family farms with gross sales of $10,000 to $249,999 represented 30 percent of family farms in 2010 and accounted for 17 percent of the value of production. Though still considered to be small farms, the households operating these farms earned positive returns from their operations on average. They earned less from off-farm sources compared to households operating the very smallest farms, but with their positive farm earnings, they had higher total household incomes than those operating the smallest farms in 2010. Their average household income was $78,716 in 2010.

Ten percent of family farms in 2010 had gross sales of $250,000 or more and accounted for the bulk of farm production (82 percent in 2010). While receiving less in off-farm income than those operating small farms, commercial family farm households earned significantly more on the farms they operated ($134,668 in 2010). As a result, they had average household income more

[3] Averages are featured in this paper, rather than medians, because medians of individual income sources cannot be summed to total incomes. For farm households, medians of individual income sources can be misleading indicators of well-being. For example, more than one-third of farm households do not have a member earning off-farm income and the majority of farm households lose money from their farm businesses, but oftentimes the households with negative farm income have significant off-farm incomes. Comparisons and trends of total household income for farm households provide similar understandings, whether medians or averages are considered. Neither measure is incorrect or more accurate as a measure of central tendency. Jointly considering both measures provides the user with additional insight about the underlying distribution. Most statistics provided by the USDA based on the ARMS data are provided as averages.

than twice the level of smaller farm households. The average household income of these farm families was $185,098 in 2010.

Table 3 also reports the farm household income forecasts for 2011 and 2012. Relative to 2010, off-farm income is projected to increase for all three farm sizes in both years. However, farm income is projected to decline for all three farm sizes in 2012. Because farm income is the major source of income for the largest farm class ($250,000 or more in sales), the total household income for this group of family farms is expected to decline in 2012, relative to 2010.

An alternative way to classify small farms (i.e., those with less than $250,000 in gross sales) is by the major occupation of the principal operator. This is the practice in the ERS typology. Small farms with principal operators who report either being retired from farming or having a major occupation as something other than farming are classified as "residence" farms; other small farms are classified as "intermediate" farms. Half of all midsized farms, i.e., those with sales between $10,000 and $249,999, are classified as residence farms. More than a quarter of residence farms have a principal operator who reports being retired from farming, so this is a very mixed group and accounts for two-thirds of all small farms. Since intermediate farms are small farms whose operators report having a major occupation in farming, they rely less on off-farm income and are projected to experience a decline in their household income in 2012 as the income of the farm sector as a whole declines.

Farm Component of Household Income. The average income of principal operator households from farm earnings is forecast to be $12,965 in 2011 and $8,598 in 2012, compared to the 2010 average of $11,769 (table 2). While expenses are projected to increase for nearly all expense categories in 2012, the increase is less than the 2010-2011 increase and somewhat higher for livestock-related expenses than for crop-related expenses. In the aggregate, gross returns to crop production are expected to increase slightly in 2012, but gross returns to livestock production are expected to be down slightly.[4] Net income from farming (after depreciation) to

[4] The rate of increase in the farm component of farm household income differs from the rate of increase in net cash income of the farm sector for a variety of reasons. First, the net income of the sector accrues to those who are the claimants of the net returns from agricultural production, after all expenses are paid. The principal operators of family farms and other members of their households don't necessarily receive all of the equity returns generated by the farm businesses they operate—for example, contractors and other partners might receive some, depending on their business arrangements. In addition, the sector measures of income include the income earned by nonfamily farms. In recent years, contractors received about 8-12 percent and nonfamily farms received about 7-9 percent of the estimated sectorwide income (USDA, 2010, p. 11). Another reason for differences in trends between the net cash income of the sector and the farm component of farm household income relates to the treatment of depreciation. The sector net cash farm income does not expense depreciation charges for capital consumed during the period. However, depreciation charges are included as an expense in the calculation of the net farm income to farm households. The source of the depreciation expense is that which is reported by farmers and ranchers on USDA's annual survey and is a tax-based estimate. In recent years, the tax code has increased incentives for farmers to invest in capital by increasing the amount of capital purchases that can be expensed against taxable income. In 2005, the maximum amount was $105,000. It rose to $108,000 for 2006, $125,000 for 2007, doubled to $250,000 for 2008 and 2009, and doubled again for 2010 and 2011 to $500,000. In 2012, the amount was reduced to $139,000. With the general increase in the limits, the vast majority of capital investments can be expensed in the year acquired, thereby lowering income from farming activities for that year, if a farmer or rancher so chooses. Only the largest farms benefit from increased limits because the majority of family farms make capital investments below the permitted levels.

family farms is projected to be down for all commodity specialties from 2011 to 2012. Some specialties are also projected to experience declines in their 2011 farm income compared to their 2010 income, such as wheat, poultry, crop specialties (e.g., greenhouse and nursery) and general crop and livestock farms. However, for the farm households that usually receive a small share of their income from their farm businesses, such as the general crop and livestock farms, the projected declines do not result in projected declines for total household income. In the case of households that specialize in wheat, crop specialties, and poultry, in contrast, the projected declines in their farm income has resulted in projected declines in their 2012 total household income.

A useful way to better appreciate the wide variation in the returns from farming among farm families is through the display of a cumulative distribution of net farm income (after depreciation). Figure 3a presents a distribution for 2010. Family farms are ordered, low to high, based on their farm income; the cumulative share of households is represented on the vertical axis and their income levels on the horizontal axis. One notable observation is the very large range of income levels, even though the most extreme values were truncated in this figure.[5] Another notable observation is the large share of family farms with negative income from farming (61 percent in 2010). Since the average depreciation expense is over $10,000 in 2010, some negative farm incomes result from major capital expenditures. One-quarter of farm families reported no production in 2010, so it is not surprising that net income would be negative for this group. By definition, 50 percent of families have income from farming less than the median of $-2,020, compared to 78 percent of families with income from farming less than the average of $11,769. Eighty-seven percent of farms have farm income between -$50,000 and $50,000, 3 percent have losses greater than -$50,000 and 10 percent have farm income greater than $50,000. The negative median and the fact that 78 percent of farm households have income below the average are a reflection of the unique aspects of today's agricultural sector: (1) the farm definition is so inclusive that even farms that don't produce anything in a given year are included in the population and (2) most agricultural production is concentrated on a small share of farms.[6]

The Figure 3b shows the cumulative distributions for three farm sizes. Most farms (90 percent) are small, with gross sales under $250,000. The income distribution of the two subclasses of small farms is very similar, compared to the distribution of income of the largest 10 percent of farms. Recall that the large farms are responsible for more than 80 percent of the production, so it is not surprising that they generate a distribution that extends to much higher farm income levels. The distributions, especially by farm size, make it very clear that it is important to consider the well-being of subgroups of family farms, rather than the population as a whole.

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[5] Family farms with farm losses greater than $-200,000 and returns greater than $500,000 were excluded. The greatest losses exceeded $9 million and the highest returns exceeded $65 million.

[6] In statistical terms the distribution is skewed with a long right tail. The concentration on the left side of the distribution reflects the large number of negative farm incomes and the long right tail reflects the fewer very high income farms.

It is evident from the information on average income sources of farm families that there is not a strong correspondence between income and how farm families allocate their time to farm and off-farm endeavors. For example, in 2010, the average farm family received only 14 percent of its income from farm sources, but about half of the principal operators reported that farming was their major occupation. (Major occupation is the one to which most work time is allocated.) Time allocation varies across commodity specialization and year, but this lack of correspondence is a relatively constant feature of the profile of the average farm family. In any given year, some households likely expect to earn a better return on their time investment in farming or perhaps their time allocation is viewed as an investment to earn greater returns in future years, but it is also likely this observed behavior is due to the household receiving other returns from farming, besides cash income. For example, farming offers other financial returns, such as appreciation in farm assets and tax advantages, and for those participating in government farm programs, a degree of certainty in returns. Some farm households also value the benefits of a farm and rural lifestyle. Regardless of farm size or major occupation, about 80 percent of farm families live on or adjacent to their farming operation, so their dwelling expenses are usually considered part of farm expenses (i.e., if the dwelling is part of the operation's assets). In contrast, most nonfarm workers cover dwelling expense from their wages and salaries or nonfarm business profits.

To illustrate the importance of returns to farming other than income, it is informative to review the wealth of farm families. Most farm families have strong balance sheets, compared to other U.S. households. (ERS does not forecast net worth of farm households, so the latest information is for 2010.) In 2010, the average total wealth of farm households was $958,481, with about three-quarters of this total associated with farm assets (Table 2). Operator households typically derive most of their wealth from farm assets, the major component of farm assets is farm land. Farm real estate per acre as of January 2011 averaged $2,350, up 6.8 percent from January 2010. This is in contrast to the sluggish U.S. housing market, a major component of the asset portfolio for the average U.S. household. The latest information available on wealth of all U.S. families is for 2007 (2010 data are expected to be released by the Federal Reserve Board sometime in 2012). The median value of wealth for all U.S. households was $120,300 in 2007, compared with $534,727 for farm households. Thus, the median wealth of farm operator households was more than four times the median wealth of U.S. families. (The median wealth is the level at which 50 percent of the households are above and 50 percent are below.)

Off-farm Component of Household Income. Operators of the approximately 2 million family farms are generally self-employed, unlike the majority of U.S. employed persons. Only ten percent of U.S. employed persons were self-employed in January 2011 (US Dept. of Labor, 2011). Household members that both operate the family farm and earn off-farm wages and salaries or operate a nonfarm business are considered multiple jobholders. About 5 percent of U.S. employed persons are classified as multiple jobholders (US Dept. of Labor, 2011). In contrast, in 2010 (the latest year available) about half of principal operators of family farms were multiple jobholders. In 2010, 82 percent of principal operators reported being married and about half of their spouses (when spouses were present) held multiple jobs.

Off-farm income is the major component of the average farm family's household income and has been for decades. By diversifying incomes sources, family income is more stable over time. Farm and household accounts of family farms can be managed in a very integrated fashion. For

example, often off-farm income is used for farm purposes in low-income years for the farming operation; in higher-farm income years, farm income supplements off-farm income to help support the family's living expenses. In addition, off-farm employment is often the source of the farm family's health insurance. In 2010, farm families were just as likely to receive employer-sponsored health insurance as the general U.S. population, i.e., 55 percent. If all sources of health insurance are considered, farm families are more likely than the general U.S. population to have coverage, 87.2 compared 83.1 percent. This is largely because farm families are more likely to purchase their insurance directly from an insurance vendor, likely as a result of their higher incomes.

The recession officially began in December 2007 and ended 18 months later in June 2009. Average off-farm income in 2010, $72,671, is still below the 2007 level of $77,432. Off-farm income is expected to increase in both 2011 and 2012. The projected 2012 level is slightly above the 2007 level. About 72 percent of off-farm income for the average farm operator household in 2012 is expected to be from earned sources, such as wages/salaries and nonfarm business income. As is often the norm in economic recoveries, growth in employment is lagging.[7] In 2012, average earned income for the household is projected to be $56,132, still below the 2007 level. Average unearned income is projected at $21,448 in 2012. The average unearned incomes of farm families did not experience a 2007-2008 decline, unlike earned income sources.

The latest year for which we have information on the detailed sources of earned and unearned income is for 2010. In 2010, most off-farm income was from wages and salary jobs (54 percent), especially the principal operators' (34 percent), but this varies by size of farm and closely related to that, the major occupations of the principal operator and spouse. Retirement and other transfer income make up about 18 percent of farm household income, on average, with most coming from public sources. Other important sources of income include nonfarm business income (11 percent), especially the operators' (Figure 4).

What Do We Know about Beginning Farmers and Ranchers?

Historically, government farm programs generally targeted crops, conservation goals, and disaster relief. For about two decades, there has been some policy emphasis to target programs to beginning farmers and ranchers. When policy makers express the need to support beginning farmers for the future of American agriculture they primarily express support for individuals that intend to contribute to agricultural production and sustainability. Increasingly, beginning farmers and ranchers have received a significant amount of focus among policy makers and special interest groups, such as those focused on sustainable agriculture, the local foods movement, and rural development advocates. It is very difficult to ascertain how many beginning farmers our country might need in the future to ensure food security, sustainability of our environment and communities, and how beginning farmers might contribute to positively addressing our country's nutrition and obesity challenges (e.g., through local food production). These larger questions remain unanswered, but the growing sentiment among many is that encouraging the next generation of farmers will help advance future solutions. Since by definition they are a new group to farming, an understanding about their characteristics, motivations, and finances is still

[7] USDA does not forecast employment of farm families, only the average off-farm earned income.

emerging. This section of the paper will present an overview of what is known from our current data bases.[8]

Since 1992, USDA has provided targeted support to beginning farmers and ranchers. In 1992 farm legislation, the focus was on loan programs. With the 2002 farm legislation, support was provided through loans and higher conservation payments to beginning farmers and ranchers than to others eligible for these select programs. Most recently with the existing farm legislation, in 2008, both of those initiatives were expanded and the law established grants for training and development programs directed at beginning farmers and ranchers, as well as other initiatives. In all, 7 of the 15 titles in the 2008 legislation targeted beginning farmers and ranchers (Sureshwaran and Ritchie, 2011). In October 2011, the Beginning Farmer and Rancher Opportunity Act of 2011 (H.R.3236, S.1850) was introduced into the House and Senate on a bipartisan basis and seeks to build on and expand Federal government support for beginning farmers and ranchers.

A family farm is considered a beginning farm when a farmer or rancher has not operated a farm or ranch for more than 10 years. This 10-year requirement applies to all operators, defined as members of an entity who will materially and substantially participate in the operation of the farm or ranch. Different USDA programs, with differing goals, place additional criteria on the definition of a beginning farmer or farm.[9] So, is there a dwindling number of new entrants? The Census of Agriculture offers some trend data on the number and share of principal operators who have less than 10 years of experience farming their current farm. The Census data support the notion that both the number and share of beginning farms has been declining, at least since 1987 (Figure 5).

In 2010, beginning family farms or ranches accounted for:

- 21 percent of family farms (Figure 6),
- 10 percent of the value of production by family farms, and
- 9 percent of acres operated by family farms.

In 2010, the average income of families operating beginning farms was $92,995 (Table 4). On average, they lost money farming and relied on their off-farm income sources (Figure 7). Their household net worth, from both farm and nonfarm sources, averaged $650,930.

Beginning farmers and ranchers cannot be easily characterized because of their diversity in farm and personal characteristics. As with any young business, beginning farms are more likely to have a smaller average and median farm size than established farms, but both beginning and established farms come in a wide distribution of sizes. Demographically, beginning farmers are in all age ranges, racial and ethnic groups, and both male and female. One common view of

[8] Income forecasts are not developed by beginning farmer status.

[9] The two national sources of data on the beginning farmer population are the Agricultural and Resource Management Survey (ARMS) and the Census of Agriculture. The ability to define the beginning farmer population with these two data sources does not exactly match the program definition. See Ahearn and Newton (2009) for a detailed explanation of how they differ and a quantification of how they differ from each other. In the ARMS, the work experience of up to three operators farming their current or other farms was considered. Some farmers have 10 years or less of farming experience and operate a farm jointly with experienced operators; they are not considered as beginning farmers and ranchers in this analysis. Of all operators with 10 years or less of farming experience, less than 10 percent are jointly operating a farm with an experienced operator.

beginning farmers is that they are young (under 35), well-educated individuals (with a 4-year degree), operating farms with a positive value of farm production. However, less than 3% of all beginning principal operators meet the common view as described above, although as a group they are more likely than established farmers to be young, college-educated, and women.

Demographics. Principal operators of U.S. farms are most commonly white, male, and over 55 years or older. New entrants, as well, are likely to be white and male, but the majority is under the age of 55. Oftentimes evidence of a lack of new entrants is illustrated by referring to the age distribution of operators. About 30 percent of all principal operators are 65 years or older. Although beginning farmers are more likely to be younger than established farmers, perhaps it is surprising that one-third of beginning farmers are over 55. More than 10 percent of beginning farmers are 65 or older. There is little difference in the share of beginning farmers who are nonwhite or Hispanic (12 percent), compared to established farmers. Beginning farms are more likely to have a principal operator who is a woman (15 percent) than established farms (9 percent).

Enterprise Mix and Marketing. Beginning farms have a somewhat different farm production profile than established farms. They are more likely to not have any positive value of production. For example, in 2010, 30 percent of beginning farms did not have any positive value of production. This is true for a variety of reasons, including production failures, or newly planted crops, such as fruit and nut trees that have not yet matured. However, the majority of farms without production likely did not intend to have production because they are largely small farms whose operator earns significant off-farm income and/or who is elderly. Along with general crop and general livestock farms, the most common specialty of both established and beginning farms is beef cattle (Figure 8). Compared to established farms, beginning farms are more likely to have general crop or livestock farms and less likely to have beef cattle. They are also more likely to have poultry and fruit and tree nut specialties and less likely to have dairy and cash grain specialties than established farms.

According to the 2007 Census of Agriculture, beginning farms were slightly more likely than established farms to be engaged in selling their production directly to individual consumers, for example, at farmers' markets (8 and 6 percent, respectively). Beginning farms were less likely than established farms to use marketing contracts (7 and 11 percent, respectively, from the 2010 ARMS). Production contracts are used much less than marketing contracts in agriculture and there was no strong evidence that there was a difference in their use by farmer experience level.

Challenges in Getting Started. In recent years, while the general economy has been in a recession and slow recovery, the aggregate farm sector has been booming. For example, the change in the U.S. Housing Price Index has consistently been negative for every quarter since the 3rd quarter of 2007, while the farm asset base during this period has increased in value by more than 10 percent (FHFA, 2012; USDA, 2011). The macro trends may potentially increase the relative attraction of the farming occupation to new entrants. However, like any capital-intensive industry, entry into farming requires significant capital, including human capital.

The most common way for U.S. farmers to acquire owned land for their operation is to purchase it from a nonrelative. This is true for both beginning and established farms. Established farms at

all size classes are more likely than beginning farms to inherit or purchase their owned land from relatives (Figure 9).

At the same time that farmland values have increased, economies of size are well-established in farming. Not only should a beginning farmer expect to have low returns in the start-up phase, but even established farms must be of a significant size before they are likely to earn positive returns. For example, in recent years, with size measured by the gross value of production classes, it is not until farms are in the range of $25,000 to $30,000 in production that the majority of farms have positive net cash returns. Less than one-quarter of beginning farmers exceed $25,000 in gross sales. This measure of returns did not account for the opportunity cost of owned factors of production, like labor, management, land, and equity. And the average farm asset base for farms of $25,000 to $30,000 in value of production is over $800,000. Especially now in this strong farm real estate market, earning a positive return is critical in meeting the costs of capital.

What distinguishes beginning farmers that make money farming from those that don't? As is true for established farms, there are likely some beginning farms that are operated by a farm family because it offers a desirable residence and real estate investment and the family is not highly motivated to make a profit in production agriculture. This is more likely to be true for those that reside close to cities, have significant off-farm income, and have no production in a given year. But, some beginning farmers with significant off-farm income may be using that income to help them transition into farming over multiple years. In other words, it is difficult to know if farms are "hobby" or "residence" farms with current national data because information on motivations is not available.

But we can consider who makes money farming. In order to better characterize successful beginning farmers, using 2010 data, farms have been categorized into two groups based on whether or not the family earned a positive income on the farm, after accounting for the costs of depreciation. In 2010, 27 percent of beginning farms earned a positive return after depreciation. That successful beginning farmer subpopulation earned on average $29,433 from farming, had a household off-farm income of $83,194, and an average net worth of over $800,000. The off-farm job not only provides the household with resources to cover farm and living expenses, but often times health insurance. In contrast, the beginning farmer population who lost money farming had the following finances: -$13,646 from farming, a household off-farm income of $95,435, an average net worth of $624,717, and were more likely to hold farm debt.

Compared to beginning farmers who lost money farming, the positive-farm income farm households were more likely to (USDA, 2011):

- have a principal operator with a major occupation of farming
- operate a larger farm
- specialize in crop commodities or dairy or poultry
- participate in government direct payment programs
- engage in production and marketing contracts
- be engaged in a variety of on-farm entrepreneurial activities to generate income, such as the sale of forest products, machine hire work for others, and agritourism

The majority of beginning farmers engaged in direct sales sold directly to consumers, such as at farmer's markets, rather than to intermediaries that sold directly to consumers, such as restaurants and grocery stores. Beginning farmers who sold directly to consumers were less likely than other beginning farmers to make a profit. Another interesting finding regards the age of the principal operators. Those in the youngest age category (less than 35) and the oldest age category (65 or older) were more likely than the other age categories to earn a positive farm return in 2010.

Rather than consider the factors for success independently, it is useful to consider the factors in an econometric model that accounts for the complexity in relationships, and compare these factors to those for established farms (Ahearn, 2012). For established farms the following factors were found to be significant in explaining positive farm income in 2010: age and education of the farm operator, crop production, farm enterprise diversification, participating in government programs and contracting (both risk management strategies), farm size and debt-to-asset ratio. For beginning farms a smaller subset of factors were critical in explaining success. In particular, the operator's educational attainment and the commodity mix of the farm were not significant factors in explaining the likelihood for success. Perhaps that implies that formal education is less important than other practical experiences and motivations to learn and succeed. The lack of strong support that any particular commodity mix is the key to success may be due to beginning farmers finding success in a variety of agricultural niches.

Government Support. Consistent with their production choices, beginning farms are less likely than established farmers to participate in government direct payment programs, many of which are focused on cash grain production (Figure 10). In 2010, 23 percent of beginning farmers participated in government farm programs, compared to 38 percent of established farmers. And when they participate, the average payment received is lower for beginning farmers compared to established farmers. Although they represent 21 percent of all farms, they receive only 9 percent of all direct payments to farmers.

The Federal government supports farmers through a variety of programs, other than direct payment programs. In some cases, they are specifically targeted at assisting beginning farmers and ranchers. For example, in recognition of the challenges in acquiring access to farm land and capital, USDA and the Farm Credit System have special programs targeted to beginning farmers and ranchers. The most complete recent data are for 2010, fiscal or calendar year.

- USDA's Farm Service Agency (FSA) reports that they made 12,347 direct loans to beginning farmers for a total of $1.1 billion in obligations. That represents more than half of the FSA's total loans and obligations for FY 2010. In addition, FSA also guaranteed another 2,947 loans to beginning farmers for a total of $611 million. That represents 24 percent of their guaranteed loan count and 19 percent of their guaranteed loans obligated in FY 2010. The two programs combined targeted at beginning farmers represented 42 percent of the loans in FY 2010 and 33 percent of the loan funds obligated.[10]

[10] FSA loan data provided by Bruce McWilliams and Terry Hickenbotham.

- In calendar year 2010, the Farm Credit System (FCS) made 65,653 individual loans to beginning farmers, totaling $10 billion.[11] These loans represented 20 percent of the loans made and 16 percent of the loan funds in 2010.
- The 2008 Farm Bill also authorized $25 million for the USDA to establish a Transition Incentive Program (TIP) to encourage enrolled Conservation Reserve Program (CRP) participants to rent or lease their land coming into production to beginning farmers and ranchers.[12] Enrolled CRP participants must be retired or retiring farmers or ranchers within 1 year of CRP contract expiration and are then eligible to receive an additional two years of CRP rental payments under TIP. Preliminary estimates about this program will soon be available, but indications are that it has generated considerable interest (USDA, May 2010).

The 2008 Farm Bill also provided for management training programs targeted at the Beginning Farmer and Rancher population. These are competitive grants made to entities (universities and nongovernmental organizations) who then offer the training to farmers and aspiring farmers and are managed by USDA's National Institute of Food and Agriculture (NIFA).

- To date, 105 awards have been made totaling $53.5 million. Only 4 States do not have a funded project.[13]

Summary

The income forecast indicates a continuation of relatively high income levels and significant involvement of farm families in off-farm economic activities. At least that is the situation for the typical family farm household. Significant variation occurs across households, and in recent years, returns have varied significantly by the types of commodities in which family farms specialize. The majority of the management and labor on family farms is provided by the principal operator and his and her relatives and most of the land they farm is owned by the principal operator's household. The majority of land acquisition and rental arrangements are usually not among family members. The preponderance of "arms-length" transactions means many new entrants and those wishing to expand their operations will face high asset acquisition costs spawned by the favorable returns to the sector, at large, and nonfarm demands for land.

Factors for success on the farm are similar between established and beginning farms, although fewer factors were significant in explaining the likelihood for success of beginning farms. For example, the commodity mix and level of diversification were not important factors in explaining farm success for beginning farms. Perhaps, beginning farms are experiencing success in a variety of ways compared to traditional approaches and no one pathway to success is dominant as they work to find their niche. The positive findings regarding the success of young farmers to make a farm profit are noteworthy, and beginning farmers are more likely to be young. This group is obviously the future of U.S. agriculture and they experience higher returns on average and are less likely to experience negative returns than older aged farmers.

[11] It is estimated that 37 percent of the FSA's loan guarantees are for FCS loans. So, there is some overlap in the FCS loans and FSA loan guarantees reported here. FCS data provided by Steven Koening.
[12] Socially disadvantaged farmers are also eligible for TIP, excluding women. Family members of the CRP contractee are not eligible beginning farmers to rent or buy the expiring CRP land under the program.
[13] NIFA data provided by Suresh Sureshwaran.

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Figure 1.

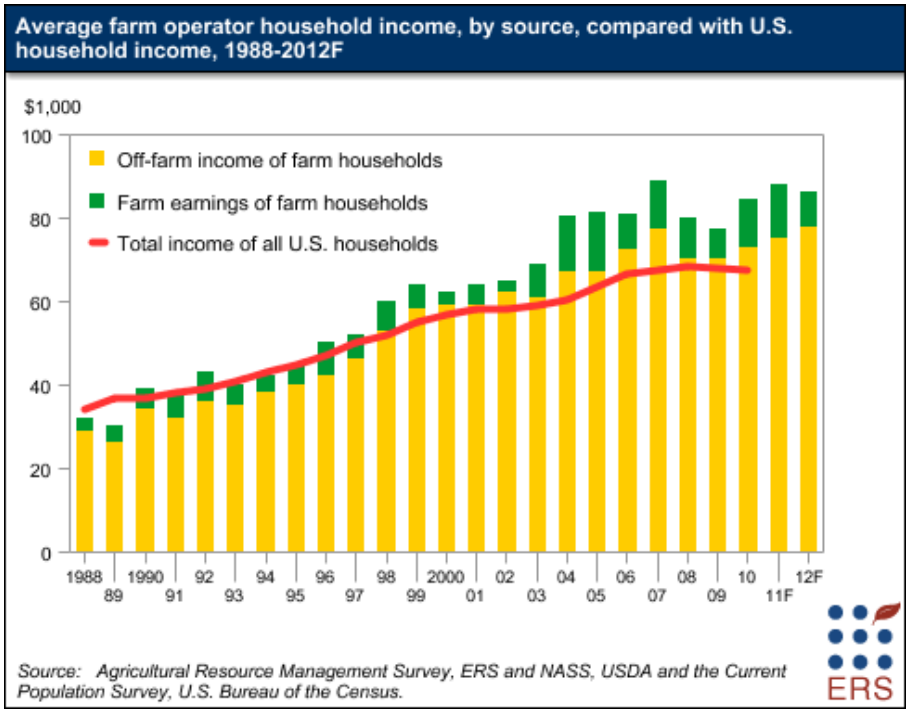

Average farm operator household income, by source, compared with U.S. household income, 1988-2012F
$1,000
100
80
60
40
20
0
Off-farm income of farm households
Farm earnings of farm households
Total income of all U.S. households
1988
89
1990
91
92
93
94
95
96
97
98
99
2000
01
02
03
04
05
06
07
08
09
10
11F
12F
Source: Agricultural Resource Management Survey, ERS and NASS, USDA and the Current Population Survey, U.S. Bureau of the Census.
ERS

Figure 2a.

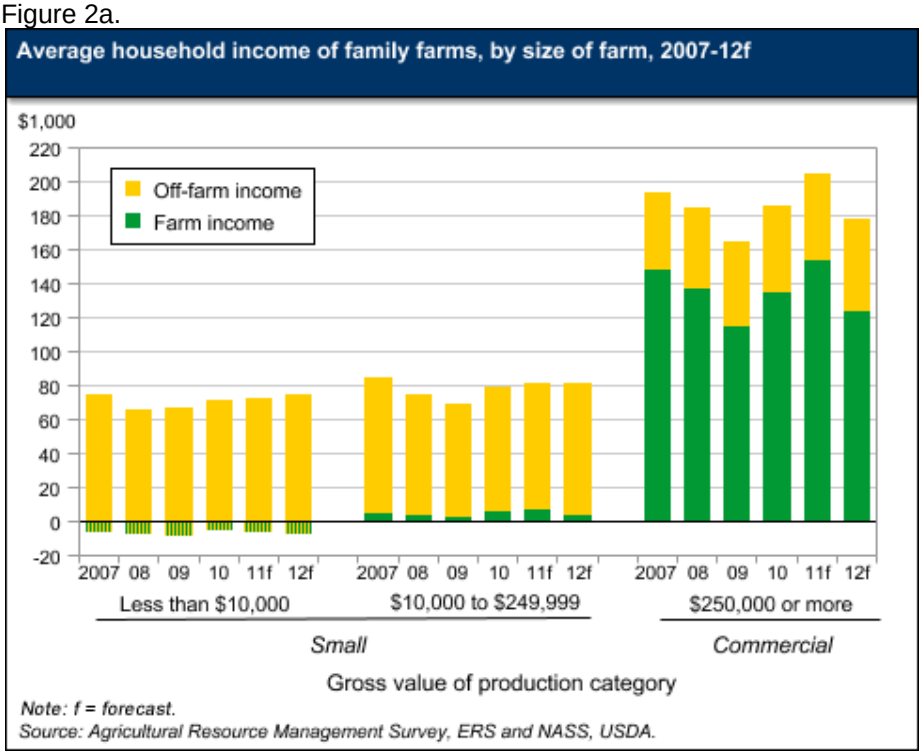

Average household income of family farms, by size of farm, 2007-12f
$1,000
220
200
180
160
140
120
100
80
60
40
20
0
-20
Off-farm income
Farm income
2007 08 09 10 11f 12f
2007 08 09 10 11f 12f
2007 08 09 10 11f 12f
Less than $10,000
$10,000 to $249,999
$250,000 or more
Small
Commercial
Gross value of production category
Note: f = forecast.
Source: Agricultural Resource Management Survey, ERS and NASS, USDA.

Figure 2b.

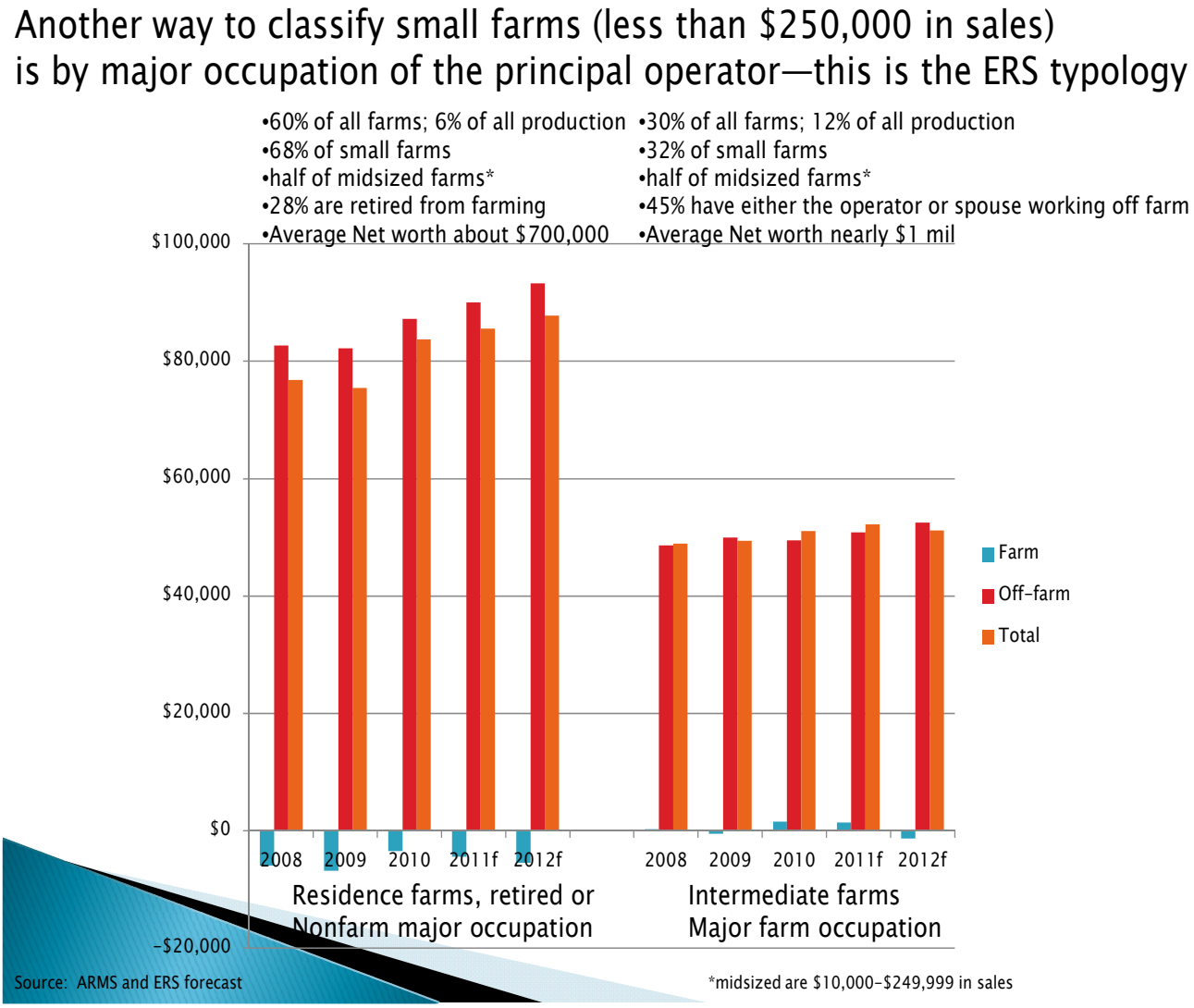
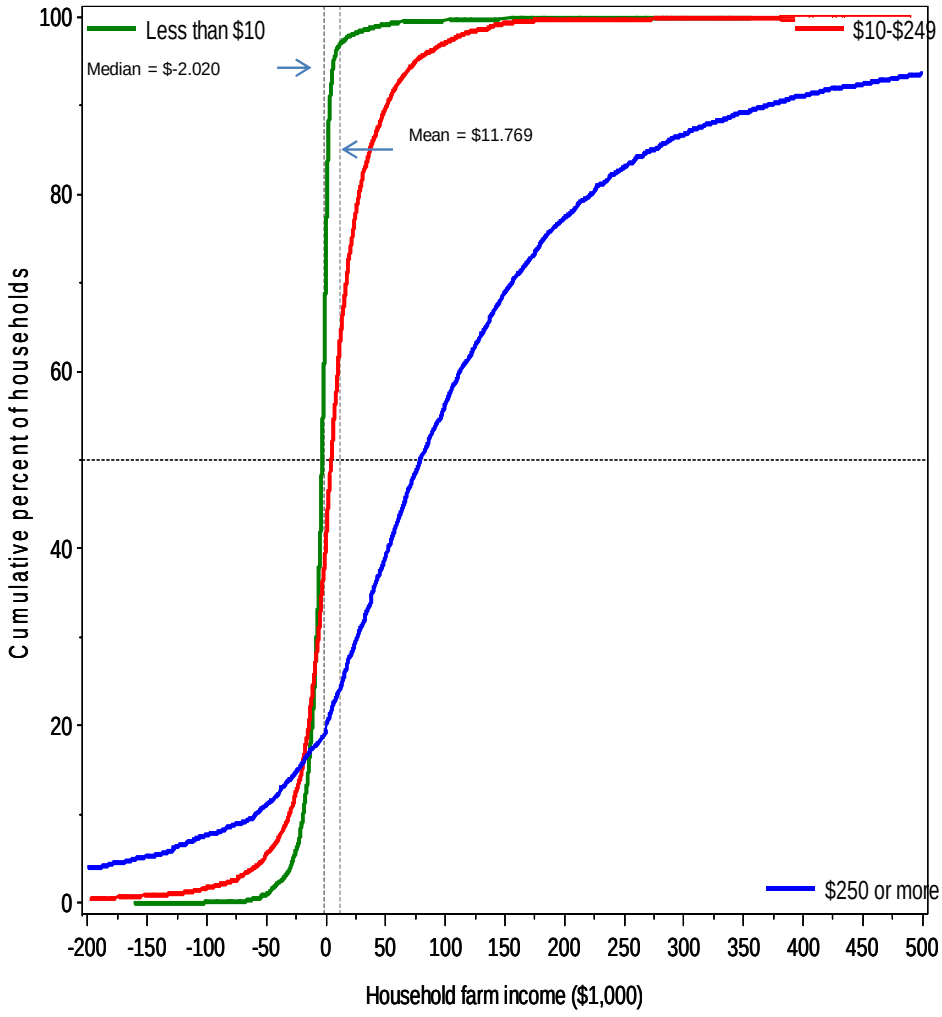

Another way to classify small farms (less than $250,000 in sales) is by major occupation of the principal operator—this is the ERS typology
•60% of all farms; 6% of all production
•68% of small farms
•half of midsized farms*
•28% are retired from farming
•Average Net worth about $700,000
•30% of all farms; 12% of all production
•32% of small farms
•half of midsized farms*
•45% have either the operator or spouse working off farm
•Average Net worth nearly $1 mil
$100,000
$80,000
$60,000
$40,000
$20,000
$0
-$20,000
2008 2009 2010 2011f 2012f
2008 2009 2010 2011f 2012f
Farm
Off-farm
Total
Residence farms, retired or Nonfarm major occupation
Intermediate farms Major farm occupation
Source: ARMS and ERS forecast
*midsized are $10,000-$249,999 in sales

Figure 3a

Figure 3b

Cumulative distributions of farm income by size of farm ($1,000 in farm sales), 2010



Data source: 2010 ARMS

Figure 4

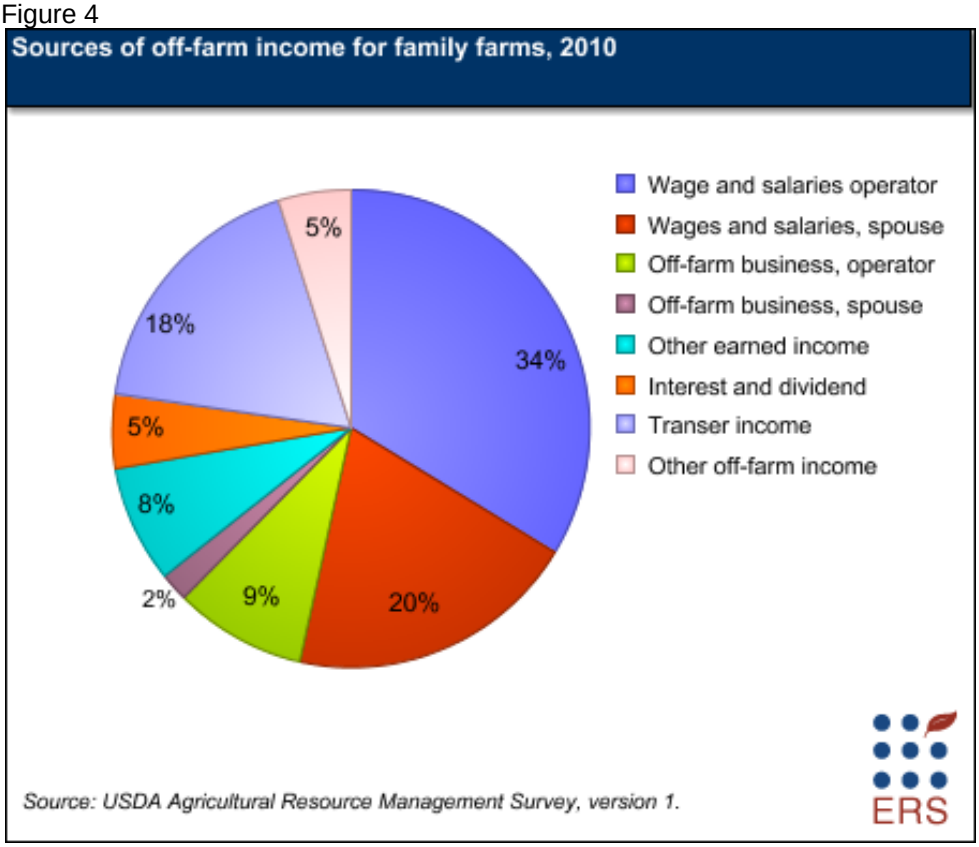
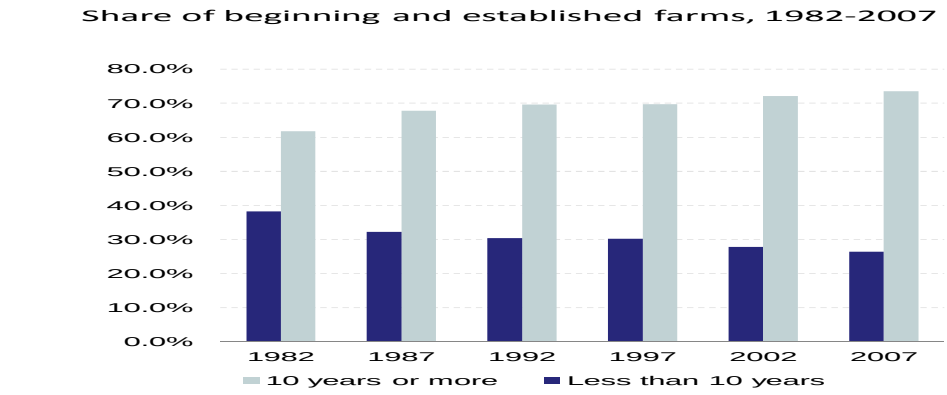


Figure 5



Source: 2007 Census of Agriculture

Figure 6

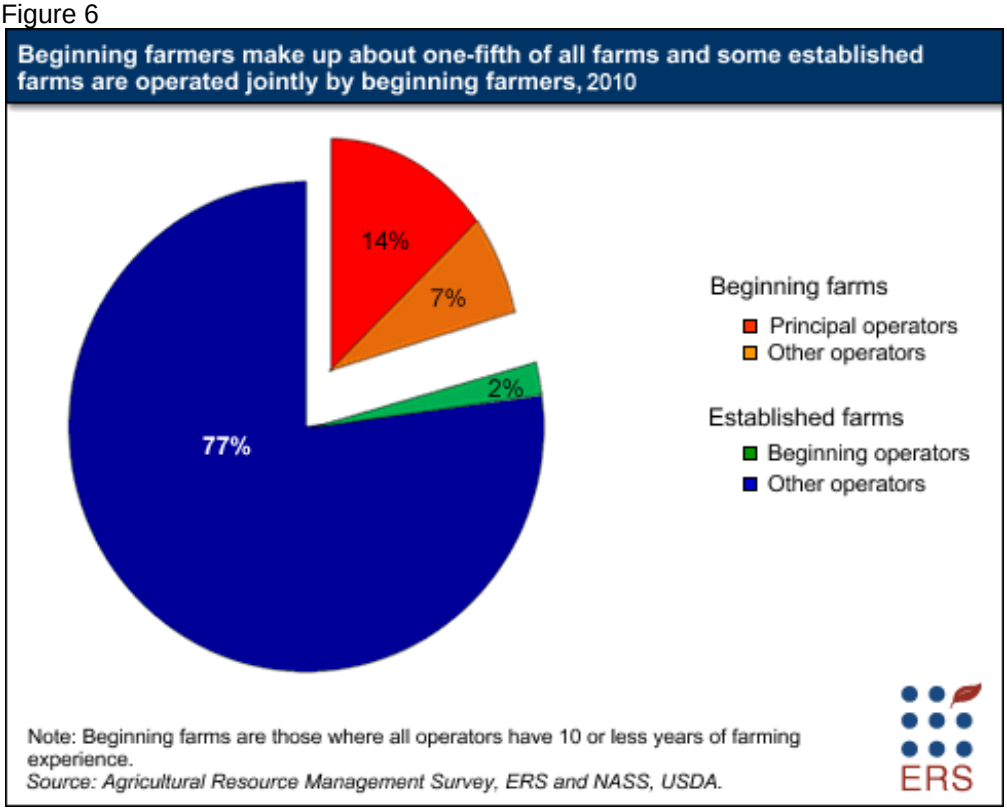


Figure 7

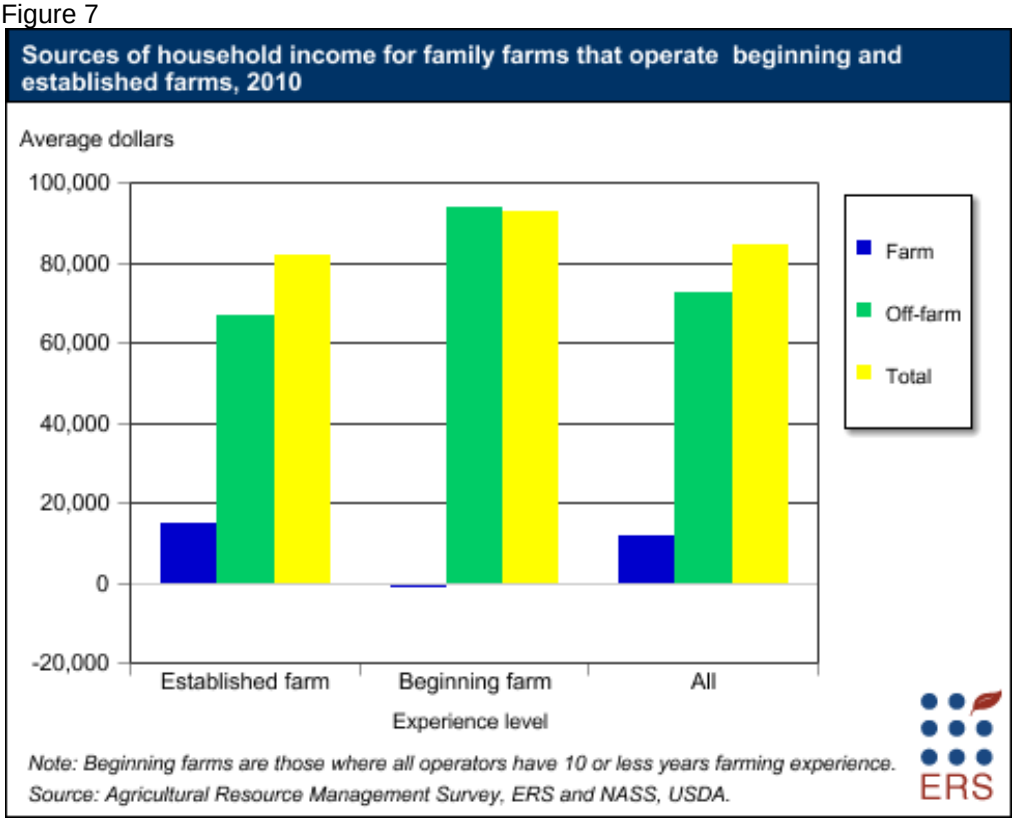
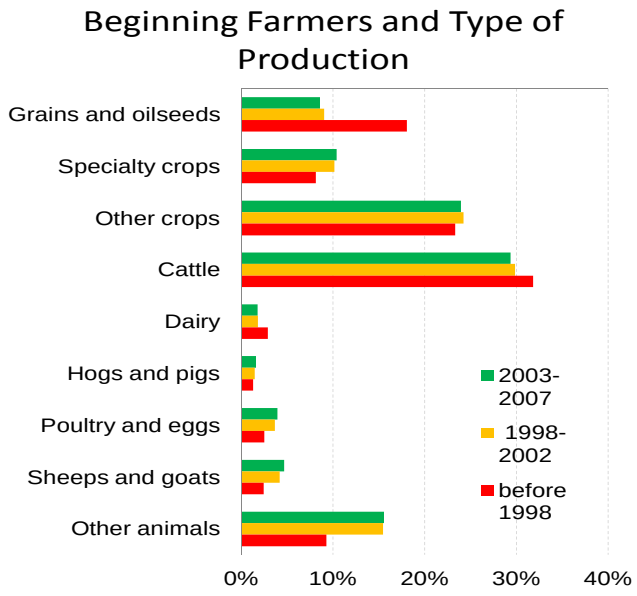


Figure 8



2007 Census of Agriculture

Figure 9

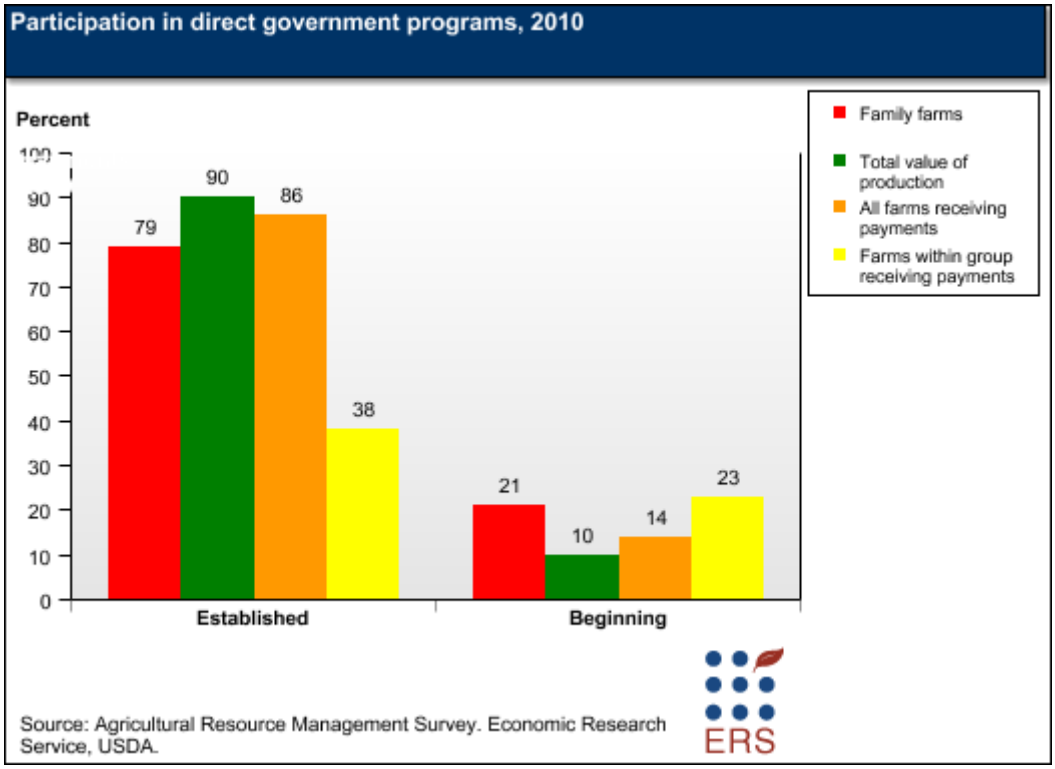


Figure 10

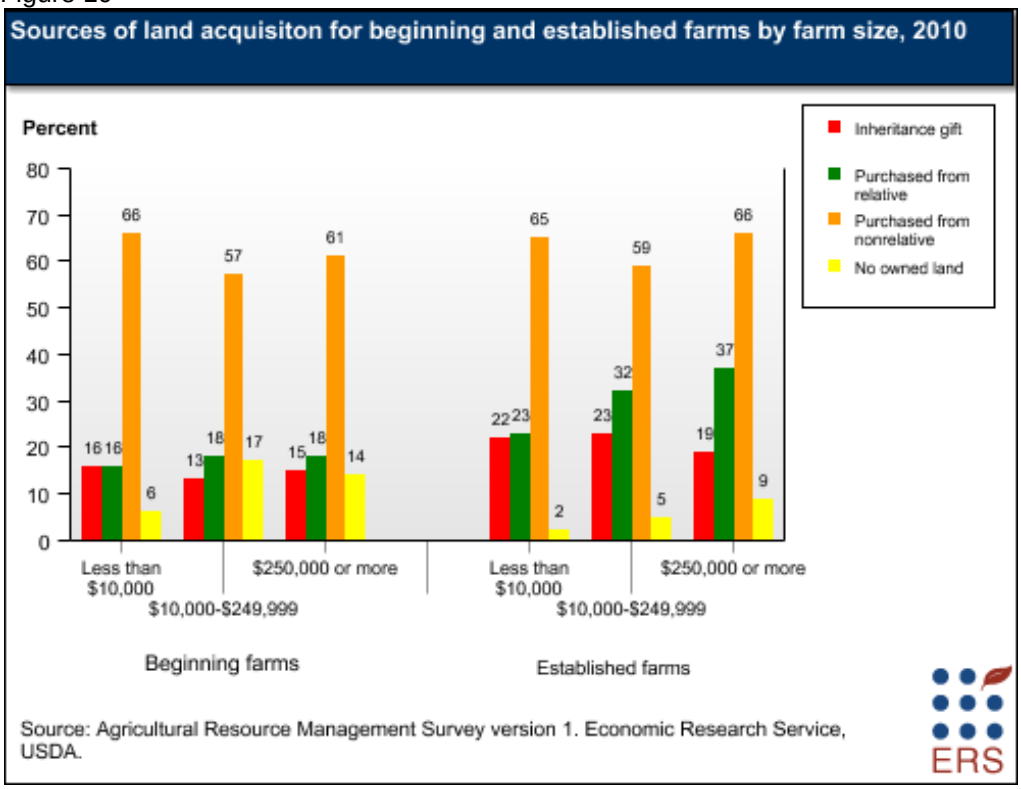

Sources of land acquisiton for beginning and established farms by farm size, 2010
Percent
80
70
60
50
40
30
20
10
0
Inheritance gift
Purchased from relative
Purchased from nonrelative
No owned land
16 16 66 6
13 18 57 17
15 18 61 14
22 23 65 2
23 32 59 5
19 37 66 9
Less than $10,000
$10,000-$249,999
$250,000 or more
Less than $10,000
$10,000-$249,999
$250,000 or more
Beginning farms
Established farms
Source: Agricultural Resource Management Survey version 1. Economic Research Service, USDA.
ERS

Table 1. Factors of production provided by farm operator household, family farms, 2008–2010

Item	2008	2009	2010
Number of family farms	2,148,052	2,155,787	2,157,487
Percent of principal operators married	82	82	82
Farm management structure, percent			
One operator, male	52	50	48
One operator, female	7	7	6
More than one operator:			
Male principal operator and spouse an operator	33	34	36
Female principal operator and spouse an operator	3	3	3
Spouse is not an operator	6	6	6
Farm labor, percent with any of type			
Principal operator	100	100	100
Spouses[1]	48(59)	50(61)	51(62)
Other operators[1]	5(100)	6(100)	7(100)
Hired workers	20	19	19
Other unpaid workers	16	11	13
Farm land and farm sales			
Average acres operated	382	395	382
Average acres owned	242	239	237
Percent in tenure class			
Full owner	64	65	67
Part owner	30	29	27
Full tenant	6	6	6
Percent in value of sales class			
$9,999 or less	60	60	60
$10,000-$249,999	30	30	30
$250,000 or more	10	10	10
Multiple Jobholding			
Major occupation of principal operator, percent			
Farm or ranch work	46	46	46
Work other than farming/ranching	41	42	41
Currently not in the workforce	14	12	13
Major occupation of spouse, percent			
Farm or ranch work	16	16	18
Work other than farming/ranching	40	41	40
Currently not in the workforce	26	25	25
No spouse	18	18	18
Joint multiple jobholding of household, percent			
Operators only	21	21	21
Spouses only	14	13	12
Both	30	31	31
Neither	35	35	36

Source: 2008–2010 USDA Agricultural Resource Management Survey, version 1 only. [1]Numbers in parentheses indicate the share working on the farm as a percent of the total on the farm, i.e., not all operators have a spouse and not all farms have other operators.

Table 2. Farm operator household finances, 2007-2012f

Item	2007	2008	2009	2010	2011f	2012f
Number of family farms	2,143,398	2,129,869	2,131,007	2,143,063	n.a.	n.a.
Family farm income	Median dollars per household--*Components cannot be summed to total*					
Farm income	-2,005	-3,040	-2,740	-2,020	-2,458	-2,922
Off-farm income, average	50,632	46,524	47,500	49,490	50,951	52,720
Earned income	35,321	28,526	30,161	31,779	32,903	34,198
Unearned income	6,750	8,750	9,250	8,750	8,916	9,150
Total income	54,428	51,431	52,235	54,162	55,025	55,451
U.S. household income	50,233	50,303	49,777	49,445	n.a.	n.a.
Family farm income	Average dollars per household--*Components can be summed to the total*					
Farm income	11,364	9,764	6,866	11,769	12,965	8,598
Off-farm income, average	77,432	70,032	70,302	72,671	74,906	77,580
Earned income	58,933	50,761	50,852	52,161	54,007	56,132
Unearned income	18,499	19,271	19,450	20,510	20,899	21,448
Total income	88,796	79,796	77,169	84,440	87,871	86,178
U.S. household income	67,609	68,424	67,976	67,530	n.a.	n.a.
	Income ratios (percent)					
Median farm household income as a percent of U.S. household income	108.4	102.2	104.9	109.5	n.a.	n.a.
Average farm household income as a percent of U.S. household income	131.3	116.6	113.5	125.0	n.a.	n.a.
Average farm income as a percent of total farm household income	12.8	12.2	8.9	13.9	14.8	10.0
Balance sheet of family farms	Median dollars per household--*Components cannot be summed to total*					
Total assets	606,470	593,632	616,290	660,873	n.a.	n.a.
Farm assets	392,625	399,750	398,852	425,500	n.a.	n.a.
Nonfarm assets	137,500	137,500	147,500	150,403	n.a.	n.a.
Total debt	26,525	28,600	27,800	31,925	n.a.	n.a.
Farm debt	705	803	850	771	n.a.	n.a.
Nonfarm debt	0	750	250	750	n.a.	n.a.
Total net worth	534,727	525,879	541,544	576,745	n.a.	n.a.
	Average dollars per household--*Components can be summed to the total*					
Total assets	1,006,020	988,156	1,030,993	1,082,121	n.a.	n.a.
Farm assets	739,905	749,190	761,887	799,317	n.a.	n.a.
Nonfarm assets	266,115	238,966	269,106	282,804	n.a.	n.a.
Total debt	106,874	112,705	115,980	123,640	n.a.	n.a.
Farm debt	56,859	61,131	66,148	67,404	n.a.	n.a.
Nonfarm debt	50,015	51,574	49,832	56,235	n.a.	n.a.
Total net worth	899,146	875,451	915,013	958,481	n.a.	n.a.

Source: USDA Agricultural Resource Management Survey and ERS forecasts. n.a. = Not available.

Table 3. Farm and off-farm income of family farms by size of farm, 2010-2012f

Item	Gross sales of farm			
	Less than $10,000	$10,000 to $249,999	$250,000 or more	All
2010		*Dollars*		
Farm income, average	-5,694	5,814	134,668	11,769
Off-farm income, average	76,252	72,902	50,430	72,671
Total income, average	70,558	78,716	185,098	84,440
Total income, median	49,719	56,196	117,758	54,162
2011f		*Dollars*		
Farm income, average	-6,942	6,236	152,889	12,965
Off-farm income, average	78,603	75,142	51,955	74,906
Total income, average	71,661	81,378	204,844	87,871
Total income, median	50,692	58,187	133,000	55,025
2012f		*Dollars*		
Farm income, average	-7,759	3,161	123,286	8,598
Off-farm income, average	81,414	77,824	53,789	77,580
Total income, average	73,655	80,985	177,075	86,178
Total income, median	52,240	58,123	123,346	55,451

Source: USDA Agricultural Resource Management Survey and ERS forecasts.

Table 4. Characteristics of principal farm operator households, by experience of operators, 2010

Item	Experience of principal operator		48-State total
	Established farm	Beginning farm	
Percent of family farms	79	21	100
Percent of total value of production	90	10	100
Distribution of value of production			
Percent crop value of production	54	42	53
Percent livestock value of production	46	58	47
Distribution by gross value of production			
Less than $10,000	56.4	74.1	60.1
$10,000 to $249,999	32.1	21.7	29.9
$250,000 or more	11.5	4.2	10.0
Farm size (operated acres)	440	169	383
Percent of acres	91	9	100
Percent of all farms receiving government payments	86	14	100
Percent of farms within group receiving payments	38	23	35
Major occupation of principal operator			
Farm or ranch work	48	24	43
Work other than farming/ranching	37	66	43
Currently not in the workforce	15	10	14
Age of principal operator			
Less than 35 years old	1	16	4
35-54 years old	29	50	34
55-64 years old	34	22	32
65 years old or more	35	12	30
Education of principal operator			
Less than high school	9	9	9
High school and some college	69	64	68
4-year college degree or more	23	27	24
Race and origin of principal operator			
White, not Hispanic	88	88	88
Nonwhite or Hispanic	12	12	12
Gender of principal operator			
Male	91	85	90
Female	9	15	10
Farm location			
Northeast	7	7	7
Midwest	38	31	37
South	41	48	42
West	14	15	14
Farm household finances			
Farm income, average	15,147	-888	11,769
Off-farm income, average	67,010	93,883	72,671
Total income, average	82,157	92,995	84,440
Total income, median	51,748	63,145	54,162
Net worth, mean	1,040,556	650,930	958,481
Net worth, median	647,501	370,444	576,745
Farm net worth, mean	815,405	419,050	731,912
Farm net worth, median	443,193	250,765	395,370
Non-farm net worth, mean	225,151	231,880	226,568
Non-farm net worth, median	112,500	83,750	103,816

Source: 2010 USDA Agricultural Resource Management Survey.