



*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

**111 EAAE-IAAE Seminar ‘Small Farms: decline or persistence’  
University of Kent, Canterbury, UK  
26<sup>th</sup>-27<sup>th</sup> June 2009**

**U.S. Farm Policy and Small Farms**

Mary Ahearn and Anne Effland

Economic Research Service  
U.S. Department of Agriculture  
1800 M Street, NW  
Washington, DC, 20036-5831

email: [mahearn@ers.usda.gov](mailto:mahearn@ers.usda.gov) and [aeffland@ers.usda.gov](mailto:aeffland@ers.usda.gov)

**Abstract**

We begin with a brief comparison of the size distribution of US and EU-15 farms to provide the European audience a greater context to the US issues. The EU data are from the Farm Structures Survey and the US data are from USDA’s Agriculture Resource Management Survey (ARMS). We next address the reasons for the unexpected increase in the number of small farms in the US and the possible role of government policies. We draw on ARMS to provide the distribution of commodity and conservation payments by farm size. Although limits on payments to large farms have long been addressed by the periodic US Farm Acts, payments continue to be concentrated on large farms largely because of their historical ties to farm production. The most recent 2008 Farm Act included more provisions to target program participants based on the personal characteristics of the operators and to limit payments to individuals likely to be operating large farms.

Key words: small farms, EU-US farm structure comparison, farm policy, payment distribution

JEL Code: Q12

# **U.S. Farm Policy and Small Farms**

## **1. INTRODUCTION**

There are approximately 2 million farms in the U.S. and that number has been relatively stable since 1978, varying between 1.9 to 2.3 million. Although the number of farms and the land in farms has been relatively stable over the past 3 decades, there have been significant shifts in the size distribution of farms and the concentration of production over this period. The increasing concentration of production in the US had been predicted. However, leading experts did not predict the persistence of small farms in the US.

In this paper, we begin with a description of the change in the size distribution of US farms compared to the EU-15 and then briefly review reasons for the persistence of the large number of small farms in the US. We review the distribution of government program payments by farms size and describe the most recent 2008 Farm Act provisions that are the most relevant to small farms. These are the programs that target payments based on the personal characteristics of the operators, including programs for beginning farmers and ranchers, limited resource farmers, and socially disadvantaged farmers.

### **1.1 Data Sources**

We rely on USDA's Agriculture Resource Management Survey (ARMS) for our data analysis. ARMS is an annual, cross-sectional survey of US farms jointly developed and conducted by the Economic Research Service and the National Agricultural Statistics Service of USDA. For the US-EU farm structure comparison, the EU data are from the Farm Structures Survey. We use the ARMS farm-level data to develop statistics which correspond to the EU published aggregate data, including measuring Standard Gross Margins (SGM), European Size Units, and reporting land area in hectares.

The US has always had a very inclusive definition of a farm, although its technical details have changed nine times since the first official definition was established in 1850. The current farm definition was first used for the 1974 Census. The census definition of a farm is any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year (USDA, NASS, 2009). Because of the skewed size distribution of farms, statistical averages of farm performance and characteristics are generally meaningless. For example, the 2007 Census reported 499,880 farms with sales of less than \$1,000 and 5,584 with sales of \$5,000,000 or more. The solution to reporting of statistics for such a diverse sector is to report statistics by farm size. Although there has not been a consistent definition of a small farm over time, since at least 1998, small farms are commonly considered to be those with sales under \$250,000 (USDA, National Commission on Small Farms, 1998). Therefore, in this paper, when we report US statistics for sales classes, we include a break at \$250,000. Our method for reporting farms by size class in the US-EU comparison must differ to match the format reported in the EU's Farm Structures Report, as described below.

## **2. US-EU STRUCTURE COMPARISON**

In comparing the US structure to the EU-15 farm structure, we provide farm (holdings) distributions by the European Size Unit classes developed from Standard Gross Margins.

Farm definitions vary within the EU and differ from the US definition presented above, and they are not without controversy.<sup>1</sup> For an EU perspective, Poppe et al (2006) discuss the issues with the farm definition and, for the U.S., the definitional issues are discussed most recently in O'Donoghue, et al. (2009).

## **2.1 Comparative Size Distribution, 2007**

Table 1 compares the size distributions of farms in the US and EU-15 for 2007 based on the European Size Unit (ESU).<sup>2</sup> Both the US and EU data sets exclude farms of less than 1 hectare (ha) with negative standard gross margins (SGM). In recognition of any biases that could be interjected by the lack of comparability in farm definitions across the countries, we report the distributions in two ways. First, we consider all farms/holdings in calculating the share of farms in each class. We also report the share of hectares in each of the size classes. Since the cross-country definitional inconsistencies affect the populations at the small end of the distribution, we also report the distributional statistics after eliminating the small tail of the distribution. In this second way, we eliminate farms of less than 4 ESUs.

In 2007, there were 2 ½ times more farms/holdings in the EU than in the US (approximately, 5.6 compared to 2.2 million), but the US has nearly three times the land area in farms. The ESU measure of size allows us to capture the differences in the intensity of production on the land area, compared to using a size measure based on land area (acres or hectares). One reason for differences in the intensity of agriculture might be the result of differences in climate and the quality of the natural resource base. For example, large areas of the US, especially in the West, have low land quality. It is in these areas of the US that we see a large share of the largest farms in terms of land area.

Based on ESUs, a greater percent of farms are classified as large in the US than in the EU. There were 10% of US farms of 100 ESUs or more, compared to 5% of the EU holdings in 2007. Roughly one-quarter of the farms/holdings in the two territories are greater than 16 ESUs (27% in the EU and 26% in the US). However, the US has a greater share of small farms of less than 2 ESUs than does the EU, 55% compared to 28%. In fact, comparing the US to some member countries, the US' share of small farms is even larger than Italy's large share of small holdings (<2 ESU) of 34 percent.

When we eliminate the smallest farms (of under 4 ESUs), in the interest of consistency in definition, we reach the same qualitative conclusions regarding the U.S.' greater share of large farms. However, some member countries, such as the Netherlands, have a larger

---

<sup>1</sup> For the EU, a holding is a technical-economic unit under single management engaged in agricultural production. According to Eurostat (2000), p. 10: "The field of observation of the Community farm structure surveys extends to the following survey units: Agricultural holdings with a utilised agricultural area of 1 ha or more; agricultural holdings with an utilised agricultural area of less than 1 ha if they produce on a certain scale for sale or if their production unit exceeds certain natural thresholds. Member countries may introduce thresholds if certain conditions are not met."

<sup>2</sup> The disadvantage of using a land area size measure is the great variability in the productivity of the land. In the U.S., for example, there are approximately 1 billion acres classified as agricultural land, excluding forests, but less than half of that is cropland. The majority of US agricultural land is used for pasture and range. On the other hand, measurement issues are facilitated when size classes are defined by land area.

proportion of its holdings in the largest size class of 100 ESUs or more than the US, indicating the diversity within the EU.

## **2.2 Changes in the Size Distribution, 1997-2007**

By comparing the 2007 size distributions (Table 1) to the 1997 size distributions (Table 2) we get a sense of the different dynamics in the territories. The share of holdings in the EU declined in the smallest class and increased in the largest class. For the US, the most notable dynamic was the larger share of small farms in 2007 compared to 1997 and, while the share of farms in the largest size class changed little during the decade, the share of land operated by these farms increased from 36 percent of all hectares operated to 45 percent.

For the EU territories as a group, the shift represents an increase in the concentration of production in the EU. Ostensibly, during this same period, the US experienced another dynamic with the increase in the share of small farms and the decline in the share of large farms. But, this also reflects an increased concentration in production: although the number and share of large farms decreased, as a group these large farms still operated the same share of farmland and still produced the same share of production in 2007 as they did a decade before. Had the size cut off for large farms been greater, for the US, there would have been both an increase in the number of farms and the share of farms that are large.

The US result of a decline in the share of large farms, in contrast to the EU's increase in the share of large farms illustrates that this fact alone cannot be used as evidence of the concentration in production, since both territories experienced an increase in concentration. For the US, there has also been a relatively rapid increase in the number of small farms; this increase has a significant effect on the share of farms in any particular size class. A common way that concentration is reported in the US for agriculture is to report the number and share of farms that account for a certain share of the sales or production (75, 50, 25, and 10 percent). For example, in 2007, 1.5 percent or 32,886 farms accounted for half of all products sold, compared to 2.4 percent or 46,068 in 1997, and 3.6 percent or 75,682 in 1987 (USDA, NASS, 2007 and earlier censuses).

## **3. PERSISTENCE OF SMALL FARMS**

Because of the longstanding interest of US policy makers in farm structure, the US Office of Technology Assessment (OTA) developed a report which predicted, by the year 2000, there would be 1.2 million farms in the US (US Congress, 1986). The report incorrectly predicted the loss of about 500,000 small farms, about one-quarter of all farms today.<sup>3</sup>

The report offered the following explanation for this prediction:

*“The projected decline in the number of small farms is dramatic but plausible, given the strong trend in this direction and the persistently negative farm income in this class.”* (U.S. Congress, p. 96)

---

<sup>3</sup> The report also predicted that the 50,000 largest farms in 2000 would produce 75% of all farm products. In fact, in 1997, about 180,000 farms produced 75% of all product.

What accounts for the persistence of small farms in the US that was not predicted by experts more than 30 years ago? Undoubtedly, a major driver in keeping small farms from exiting agriculture in the US is the ability of the farm household to earn income in off-farm employment. Rather than leaving farming, many farm households operate smaller farms and engage in pluriactivity. In 2007, the average farm household received 90 percent of their income from off-farm sources (USDA, ERS, 2009b). The importance of off-farm income and off-farm work as a permanent lifestyle choice for many farm households has been documented for some time in the US, at least as far back as 1934 (Jenkins and Robison, 1934). However, the magnitude of its importance nationally was not widely recognized, including in the OTA report, until improved farm household surveys were conducted beginning with USDA's 1988 Farm Operator Resource version, Farm Costs and Returns Survey (the FCRS is the predecessor to the Agricultural Resource Management Survey).

Many US farm households choose to work off the farm for cash income, in light of their low and usually negative farm incomes. But, the larger question that is not addressed is, why do the households with continual negative farm incomes not leave the sector to reduce their losses? This is because the traditional indicator of household farm returns is an inappropriate and incomplete measure of farm returns for addressing the issue of labor allocation across sectors. Households continue to farm in spite of low farm returns because they are "earning" other farm returns not captured in traditional measures of farm income. These other returns help to explain the long hours spent working on farms, in spite of the relatively low returns, as traditionally measured.

What the 1986 OTA prediction (about the 2000 farm structure) missed was the importance of noncash returns from farming coupled with the importance of earning cash income off the farm. Low cash farm incomes over the past three decades did not, in fact, force many small farms to exit out of farming, as historically had been the case in US agriculture since 1935. Instead, many of those low-farm income households engaged in off-farm work, obviously earning off-farm income, but as a result were able to earn capital gains on farm assets and lessen their income tax on off-farm earnings. They were also able to consume the amenities associated with a rural lifestyle and, in some cases, on the farmstead that has been in the family for multiple generations.

The importance of the small farm lifestyle is supported by evidence from longitudinal census data by farm size. Small farms which stay in business over time, i.e., the survivors, are likely to stay in the same size class from one census period to another (Ahearn, Korb, and Yee). The smallest farms (under 20 hectares) have one of the highest shares of farms remaining in their size class. This size-tenure dynamic is not generally found in manufacturing industries, where the pattern is for smaller firms to increase in size over time. The small size class of farms, however, is likely dominated by those in operation largely to provide its operators with a farm residence and noncash returns from farming, rather than serve as a viable commercial operation.

#### **4. PARTICIPATION OF SMALL FARMS IN US GOVERNMENT PAYMENT PROGRAMS**

About 40 percent of all US farms receive government payments (Table 3). A contentious issue in farm programs from their inception has been the question of who benefits most from them. The amount of government payments and their importance to farm income varies by farm size. A key element of this issue is the share of benefits accruing to large, financially better-off farmers as compared to small, low-income farm operations. On average, farm households that participated in government programs have higher incomes and greater net worth than other farm households and the general U.S. population.

In 2007, 57 percent of all farms had sales of less than \$10,000 and they accounted for 7 percent of all payments (Table 3). In contrast, 9 percent of all farms had sales of \$250,000 or more and accounted for 56 percent of all payments. Million-dollar farms alone represented less than 2 percent of all farms receiving payments in 2007, but received over 22 percent of all government payments. This is not surprising given that most government payments are allocated through commodity programs based on the current or historical production of agricultural commodities. For example, the farms with \$1 million or more in sales produced 30 percent of all program commodities. In spite of the concentration of payments and high average payments on large farms, government payments are important to small farms. For the one-third of small farms (less than \$10,000 in sales) that received government payments in 2007, payments were 21 percent of their gross income. This compares to 5 percent for large farms (with sales of \$250,000 or more).

The distribution of payments under commodity and conservation programs differs by farm size. The bulk of conservation programs are paid through the Conservation Reserve Program (CRP) which is a land retirement program and so participants are generating less sales--or even no sales--when they participate in the CRP. Because CRP is not tied to current production, the distribution of conservation payments by farm size (measured by gross sales) more closely tracks the distribution of farms than do the distribution of commodity payments which are generally tied to current or historical production levels. For example, in 2007, the 57 percent of farms with sales of less than \$10,000 received about one-quarter of conservation payments (in contrast to the 7 percent of commodity payments). Farms with less than \$50,000 in sales receive more from conservation programs than commodity programs, on average. However, conservation payments are higher, on average, as farm size increases.

## **5. THE ROLE OF FARM SIZE IN THE EVOLUTION OF FARM POLICIES**

As US farm policy has developed since the 1930s, policies have grown from a relatively homogenous set of policies that provided price support based on commodity production to a more complex set of policies that address a range of issues. In the process, US farm policy has over time been able to address some of the problems of small farms.

When basic commodity support policies were put in place, a large share, perhaps the majority, of US commercial farms were still small to mid-sized diversified family operations. Price support policies were expected to provide assistance to commercial farms of varying sizes without need for differentiation. Farms that did not fit the definition of commercial farms were defined as marginal and offered specialized credit

and technical assistance programs to help them become commercially viable, or assistance for the operator to move out of farming into other occupations (Brewster, 1980).

With the rapid structural change that occurred in the US between 1945 and 1970, concerns about the increasing size and falling numbers of farms led to some new policy approaches. Although a number of special commissions and government investigative reports concluded that small farms were facing special challenges, the findings did not lead to much change in traditional commodity programs. Rather, greater emphasis was placed on developing effective payment limitations for operators of very large operations who were well-off financially and received the bulk of payments. However, a report required by the 2002 Farm Act concluded that payment limits have generally been ineffective (USDA, Office of the Chief Economist, 2003).

In addition, rural development policies were established to encourage non-farm business and employment growth. Such growth was expected to provide alternative occupations or supplemental incomes for operators whose farms were too small to provide adequate family income. Again, some similar types of programs had operated earlier, but the new programs acknowledged the widespread need to find alternatives for farmers who were adversely affected by the structural change of the previous decades (Effland, 1993).

More recently, conservation policies have offered support to smaller-scale farmers whose lower production reduces their benefits from traditional commodity programs. Land retirement and working lands programs offer assistance independent of the level of production and are thus more evenly distributed across farm sizes. Special credit policies have long been available to assist lower income farmers to acquire land and expand their operations. If programs are developed to mitigate the impacts of climate change through preferred land use practices, these are likely to benefit small farmers more than commodity programs because small farms control a disproportionate share of land in farms, relative to their value of production.

In 2006, USDA issued a regulation regarding policies affecting small and beginning farmers and ranchers by establishing a framework that would help to ensure their viability (USDA, Office of the Chief Economist). The USDA regulation codifies the policy of USDA to foster marketing, development, credit, and outreach programs to improve the competitiveness of beginning farmers and ranchers. It also clarifies the support of programs that focus on the special needs of beginning farmers and ranchers and ensures that new generations of small farmers and ranchers can gain access to the resources they need. DR 9700-0001 recognizes that small farmers are a diverse group of operators and establishes USDA policy to meet the credit needs of small, socially disadvantaged, and beginning operators. Moreover, the regulation goes beyond a narrow focus on commercial competitiveness and establishes support for an agricultural system that sustains and strengthens rural communities and cultural diversity and rewards stewardship of natural resources.



Much more difficult to quantify than the distribution of payments by farm size is the indirect impact that payments and other government programs, such as price supports, have had on the structure of US agriculture. In particular, some have argued that since the majority of payments are made based on current or historical production levels, the higher payments to larger producers have given them an incentive and long term advantage to purchase additional farmland (Collins, 2001). Alternative conceptual models posit that payments do just the opposite. That is, some arguments conclude that payments act to keep small and medium-sized farms in business, slowing down the technological forces that tend to increase farm size. Unfortunately, economic theory does not offer clear direction on the critical relationships (Leathers, 1992). Empirical work, especially time-series in nature, is needed to address the question. Indeed, a body of empirical work has developed to support the view that payments contribute to farm consolidation. Key and Roberts (2006) have shown empirically that an increase in government payments has a small but statistically significant negative effect on the rate of business failure, and the magnitude of this effect increases with farm size. Ahearn, Yee, and Korb (2005) have shown that government payments have led to increasing average farm size and exits from agriculture and had a significant impact on the decisions of farm operators to allocate their labor to the farm, rather than pursue off-farm work opportunities.

### 5.1 The 2008 Farm Act

The latest US farm legislation includes targeting of programs based on the personal characteristics of farm operators, in addition to the more traditional focus on commodity production and conservation practices.<sup>4</sup> In particular, the 2008 Farm Act includes participation incentives and improved access to farm programs for beginning, limited-resource, and socially disadvantaged farmers and ranchers (USDA, ERS, 2009a). Farmers and ranchers that fall into these categories are more likely to operate small farms than other farmers. Definitions of these three groups vary by Title but generally are:

- **Beginning Farmer or Rancher (22% of US farms):** Includes an individual or an entity who has not operated a farm or ranch or has operated a farm or ranch for not more than 10 years. To qualify, all members of the entity must be related by blood or marriage and all must be beginning farmers or ranchers.
- **Socially Disadvantaged Farmer or Rancher (7% of US farms):** This term means a farmer or rancher who is a member of a socially disadvantaged group. "Socially disadvantaged group" means a group whose members have been subjected to racial or ethnic prejudice because of their identity as members of a group without regard to their individual qualities.<sup>5</sup>

---

<sup>4</sup> Some targeting based on personal characteristics was included for beginning farmers in 1992, but the most recent legislation expands these programs.

<sup>5</sup> Some programs for socially disadvantaged farmers include members of a group subject to gender prejudice, i.e., women. Statistics reported in this paper exclude women farmers from the group.

- **Limited-Resource Farmer or Rancher (12% of US farms):** The term "limited-resource farmer or rancher" means a farmer or rancher is one who has: low direct or indirect gross farm sales (e.g., not more than \$116,800 in each of the previous 2 years in 2005 dollars, adjusted for inflation each year) and a total household income at or below the national poverty level for a family of four or less than 50 percent of county median household income in each of the previous 2 years.

Though not all Titles address the needs of all groups, provisions appear in 9 specific Titles of the recent legislation (i.e., Commodities, Conservation, Credit, Rural Development, Research, Energy, Crop Insurance, Miscellaneous, and Trade and Tax Provisions). For example, in the Commodity Title, limited-resource and socially disadvantaged farmers and ranchers are exempted from the base-acreage minimum for receiving direct, counter-cyclical, or average crop revenue election payments; in the Conservation Title, the transfer of land in the Conservation Reserve Program from a retiring farmer or rancher to a beginning or socially disadvantaged farmer or rancher is facilitated and provides for higher cost-sharing for socially disadvantaged farmers; and in the Crop Insurance Title, there is an exemption for beginning, socially disadvantaged, and limited-resource farmers and ranchers from the minimum risk-management purchase requirement to be eligible for disaster assistance.

There is some overlap in these three groups, so combined they represent 35 percent of all US farms. Compared to their counterparts, the nontargeted farms, they are less likely to have gross sales of \$250,000 or more (3 compared to 13 percent of farms). In fact, in 2007, 30 percent of the farms in the targeted population had no sales (Table 4). The targeted population has significantly lower rates of participation in government payment programs, whether commodity, conservation, or Federal crop insurance programs, than other farmers. Limited resource farmers had the highest rates of program participation of the three targeted groups (30 percent), compared to 24 percent for beginning farmers and ranchers, and 14 percent for socially disadvantaged farmers and ranchers. Consistent with their smaller farm structure, the farmer groups targeted in the 2008 Act have lower farm income, are more likely to experience a farm loss, and have nearly 40 percent lower net worth than their counterparts. However, both the targeted and nontargeted groups of farmers have very similar rates of participation in off-farm work and corresponding off-farm earnings.

The 2008 Act, like other Farm Acts since at least 1938, includes provisions to limit payments to farmers likely to be associated with very large farms. Limits are established with respect to high farm and off-farm incomes (reported on tax forms), as well as to limit the overall payment that any individual can receive. Under the previous Act, the Farm Security and Rural Investment Act of 2002, payment limits were \$40,000 per person per crop year for direct payments, \$65,000 per person per year for counter-cyclical payments, and \$75,000 per person per crop year for marketing loan gains and loan deficiency payments. This \$180,000-limit could be doubled, allowing a husband and wife to be treated as separate persons or by utilizing the three-entity rule. Under the three-entity rule, an individual could receive a full payment directly and up to a half payment from each of two additional entities. Furthermore, marketing loan benefits were

essentially unlimited because of alternative repayment provisions not covered by the limits on marketing loan gains and loan deficiency payments. The 2002 Farm Act supplemented program payment limits with a cap on the income farmers could earn and still receive farm program payments. Producers with income (income from individual tax forms) of over \$2.5 million, averaged over 3 years, were not eligible for payments unless more than 75 percent of the income was from agriculture. The 2008 Farm Act retains the limits on direct and counter-cyclical payments but removes the cap on marketing loan benefits. It also eliminates the three-entity rule and creates a system of direct attribution to match payments with a living person while making it easier for a spouse to qualify for payments. The 2008 Farm Act also eliminates the overall income cap for payment eligibility while establishing separate income caps for both farm and nonfarm income (USDA, ERS, 2009a). The changes with regard to payment limits are expected to affect a relatively small share of program payment recipients and payments.

Since the passage of the 2008 Farm Act, the Administration has proposed a 2010 budget with implications for farm policy affecting payment limits (Executive Office of the President). The budget proposes to reform payments to high income farmers by limiting farm commodity payments to \$250,000 per person. The Administration proposes to phase out direct payments over three years to farmers with sales revenue of more than \$500,000 annually. The Budget also proposes a Department of Agriculture (USDA) and Internal Revenue Service (IRS) agreement to increase compliance with farmer income eligibility tests by verifying that only eligible individuals are receiving farm commodity payments. Under the new agreement, those seeking assistance will have to sign a document giving the IRS permission to verify their eligibility.

## **6. CONCLUSIONS**

Small farms in the United States are impacted by farm policies in a number of distinct ways: through participation in commodity and conservation programs, through specialized credit and rural development programs, and through dedicated small farms policies. If future programs are focused on rewarding multifunctionality in agriculture, small farms may benefit more than from traditional commodity production-based policies. Small farms are also likely to be indirectly affected by program payments to large farms to the extent that they bid up the cost of farm land, but the magnitude of this impact is difficult to quantify.

Despite the importance of income from government farm programs for some small farms, off-farm income is clearly most important for small farm households and has provided them the means of entering and staying in farming. Consequently, rural development policies and general economic and tax policies, are likely to affect small farms considerably through the availability of off-farm employment opportunities.

We expect that the sizable small farm sector will continue to be a stable feature of the US size distribution of farms. Perhaps, the number of small farms will even grow in the future as retiring “baby boomers” choose the farm lifestyle in warm southern areas adjacent to metropolitan areas, after spending their careers in congested cities and suburbs.

## REFERENCES

- Ahearn, Mary Clare, Penni Korb, and Jet Yee. "Producer Dynamics in Agriculture: Empirical Evidence," *Producer Dynamics: New Evidence from Micro Data*, Timothy Dunne, J. Bradford Jensen, and Mark J. Roberts (eds.), Chicago: University of Chicago Press and National Bureau of Economic Research, chapter 10, 2009.
- Ahearn, Mary, Jet Yee, and Penni Korb. 2005. "Effects of Differing Farm Policies on Farm Structure and Dynamics". *American Journal of Agricultural Economics*, Vol. 87. No. 5, pp. 1182-1189.
- Brewster, David. "Changes in the Family Farm Concept." Pp, 18-23 in *Farm Structure: A Historical Perspective on Changes in the Number and Size of Farms*. Committee on Agriculture, Nutrition, and Forestry, U.S. Senate, 96<sup>th</sup> Cong, 2<sup>nd</sup> Session. April 1980.
- Collins, Keith. "Statement before the U.S. Senate Committee on Appropriations Subcommittee on Agriculture, Rural Development and Related Agencies." Washington, D.C. May 17, 2001.
- Effland, Anne B. W. "When Rural Does Not Equal Agricultural." *Agricultural History* 74(2, 2000):489-501.
- Eurostat. "Farm Structure" 1987, 1997, 2007 Surveys (various years). Office of Official Publications of the European Communities, Luxembourg.
- Executive Office of the President of the United States. Office of Management and Budget. "Terminations, Reductions, and Savings: Budget of the U.S. Government Fiscal Year 2010." <http://www.whitehouse.gov/omb/budget/fy2010/assets/trs.pdf>.
- Jenkins, W. and H. Robison. "Part-Time Farming in the United States." 1935 Census of Agriculture, Special Study, Bureau of the Census, U.S. Dept. of Commerce. Wash., DC: 1937, pp. 5-33.
- Key, Nigel and Michael Roberts. Government Payments and Farm Business Survival. *American Journal of Agricultural Economics*, Vol. 88, No. 2, pp. 382-392, May 2006.
- Leathers, Howard. "The Impact for Land and the Impact of Farm Programs on Farm Numbers." *Amer. J. of Agric. Econ.* (May) 1992, pp. 291-298.
- O'Donoghue, E., R. Hoppe, D. Banker, and P. Korb. "Explaining Alternative Farm Definitions." U.S. Dept. of Agric., Economic Research Service, EIB No. 49, March 2009.
- Poppe, K., H. Vrolijk, K. van Bommel, and H. van der Veen. "Observations on Farm Structure in Europe." Paper presented at the Intl. Assoc. of Agric. Econ. Meeting, Brisbane, Australia, August 2006.

U.S. Congress. Office of Technology Assessment. "Technology, Public Policy, and the Changing Structure of American Agriculture." Wash., D.C.: US GPO, OTA-F-285, March 1986.

U.S. Dept. of Agriculture. Economic Research Service. 2008 Farm Bill Side-by-Side Briefing Room. <http://www.ers.usda.gov/farmbill/2008/>, June 2009a.

U.S. Dept. of Agriculture. Economic Research Service. Farm Household Economics and Well-Being Briefing Room. <http://www.ers.usda.gov/Briefing/WellBeing/>. June 2009b.

U.S. Dept. of Agriculture. Economic Research Service. Farm Income and Costs Briefing Room. <http://www.ers.usda.gov/Briefing/FarmIncome/> June 2009c.

U.S. Dept. of Agriculture. National Agricultural Statistics Service. 2007 Census of Agriculture. United States Summary and State Data. Vol. 1, Geographic Area Series, Part 51, Feb. 2009.

U.S. Dept. of Agriculture. National Commission on Small Farms. *A Time to Act, A Report of the USDA Commission on Small Farms*. January, 1998.

U.S. Dept. of Agriculture. Office of the Chief Economist. Commission on the Application of Payment Limitations for Agriculture. 2003. *Report of the Commission on the Application of Payment Limitations for Agriculture, Submitted in Response to Section 1605, Farm Security and Rural Investment Act of 2002*. Washington, DC (August), 2003.

U.S. Department of Agriculture. Office of the Chief Economist. *Small and Beginning Farmers and Ranchers Policy*, Departmental Regulation 9700-001, August 3, 2006.

**Table 1. Comparison of farm/holding size distribution measured in ESU, EU-15 and the U.S., 2007**

	Holdings (1000)			Land area (1000 hectares)		
	No.	% of all	%, exc. Small	No.	% of all	%, exc. Small
<b>European Union</b>						
0 to <2	1.565	28		6.932	6	
2 to <4	928	17		4.282	3	
4 to <8	887	16	28	7.073	6	6
8 to <16	704	13	23	10.404	8	9
16 to <40	720	13	23	22.476	18	20
40 to <100	514	9	16	33.159	27	29
100 or more	291	5	9	40.220	32	35
Total	5.608	100	100	124.546	100	100
<b>U.S.</b>						
< 0	668	31		36,138	10	
0 to <2	515	24		24,664	7	
2 to <4	159	7		9,213	3	
4 to <8	160	7	19	11,885	3	4
8 to <16	123	6	15	14,682	4	5
16 to <40	187	9	22	40,488	11	14
40 to <100	147	7	18	57,134	16	20
100 or more	219	10	26	161,545	45	57
total	2,179	100	100	335,750	100	100

For U.S., includes all except 17,946 holdings with less than 1 hectare and with negative SGM.

Sources: For EU, Farm Structure Surveys. For US, USDA, NASS and ERS, Agriculture Resource Management Survey.

**Table 2. Comparison of farm/holding size distribution measured in ESU, EU-15 and the U.S., 1997**

	Holdings (1000)			Land area (1000 hectares)		
	No.	% of all	%, exc. Small	No.	% of all	%, exc. Small
<b>European Union</b>						
0 to <2	2.357	34		7.422	6	
2 to <4	1.174	17		5.448	4	
4 to <8	1.039	15	30	8.719	7	8
8 to <16	840	12	24	13.067	10	11
16 to <40	843	12	24	27.429	21	24
40 to <100	536	8	15	35.432	28	31
100 or more	201	3	6	31.196	24	27
total	6.991	100	100	128.712	100	100
<b>U.S.</b>						
< 0	556	27		35,652	9	
0 to <2	389	19		24,389	6	
2 to <4	158	8		10,555	3	
4 to <8	161	8	17	15,874	4	5
8 to <16	143	7	15	19,911	5	6
16 to <40	226	11	24	52,220	14	17
40 to <100	221	11	23	81,733	22	27
100 or more	190	9	20	137,328	36	45
total	2,044	100	100	377,662	100	100

For U.S., includes all except 5,155 holdings with less than 1 hectare and with negative SGM.

Sources: For EU, Farm Structure Surveys. For US, USDA, NASS and ERS, Agriculture Resource Management Survey.

**Table 3. Distribution of farms and government payments by sales classification, 2007**

Item	Sales class							
	All	Less than \$10,000	\$10,000 -\$49,999	\$50,000 -\$99,999	\$100,000 -\$249,999	\$250,000 -\$499,999	\$500,000 -\$999,999	\$1,000,000 or more
All farms	2,069,346	1,185,701	400,909	140,434	164,912	92,869	47,252	37,269
Average gross cash income (\$)	112,073	6,284	28,721	85,924	168,752	351,458	643,311	2,952,025
Average government payments(\$)	3,948	479	2,372	5,231	7,643	17,056	26,683	48,611
Payments as a % of gross	4	8	8	6	5	5	4	2
Farms receiving no government payments	1,235,007	907,509	199,582	46,217	38,378	18,363	11,653	13,305
Percent of all farms (%)	60	77	50	33	23	20	25	36
Average gross cash income (\$)	76,434	7,145	26,384	85,540	164,063	304,499	468,053	3,316,267
Farms receiving government payments	834,339	278,192	201,327	94,217	126,533	74,507	35,599	23,963
Percent of all farms (%)	40	23	50	67	77	80	75	64
Percent of all payments (%)	100	7	12	9	15	19	15	22
Percent of program production	100	0	3	5	16	23	23	30
Average gross cash income (\$)	187,768	9,877	31,203	86,112	170,174	363,031	700,680	2,753,973
Average government payments(\$)	9,792	2,040	4,724	7,797	9,962	21,259	35,418	75,601
Percent of gross cash income (%)	5	21	15	9	6	6	5	3
Direct payments	4,810	139	865	3,132	5,918	12,184	23,030	42,957
Counter-cyclical payments	1,225	26	298	430	935	2,618	5,495	16,910
Loan deficiency payments	101	d	d	139	16	291	798	728
Milk income loss contract	87	0	3	80	87	300	159	1,050
Disaster and emergency	433	16	198	574	453	1,205	1,552	2,513
Conservation Program payments	2,305	1,666	2,704	2,746	1,506	2,975	3,458	5,056
Tobacco Transition Program	354	121	384	246	334	727	286	2,281
Other Federal program payments	256	41	103	147	402	625	351	2,419
State and local program	222	28	167	303	312	333	290	1,687

Source: USDA, ERS, 2009c.

d=disclosure issue.



**Table 4. Characteristics of farms and households targeted under the 2008 Farm Act (Beginning, Socially Disadvantaged and Limited Resource), 2007**

Item	Non-targeted family farms				Targeted family farms			
	Sales class				Sales class			
	No production	\$1-\$249,999	>=\$250,000	All	No production	\$1-\$249,999	>=\$250,000	All
Number of farms	246,427	911,350	176,664	1,334,441	217,601	486,119	22,825	726,546
Percent of all US farms	12	44	9	65	11	24	1	35
Percent of farms in group	18	68	13	100	30	67	3	100
Average acres operated	159	317	1,711	472	81	194	1,447	199
<b>Specialization</b>	<i>Percent</i>							
Grain, oilseed, cotton, tobacco	na	19	48	19	na	10	26	8
High value crops	na	8	7	6	na	8	16	6
Beef cattle	na	44	10	31	na	44	11	30
Hogs, poultry, dairy	na	5	28	7	na	5	43	5
General commodities	100	25	7	36	100	32	4	51
<b>Farm program participation rate</b>								
Any farm program	36	42	81	46	31	22	51	25
Commodity program	10	39	79	39	6	19	48	16
Conservation program	32	12	29	18	27	4	17	11
Enrollment in CRP	32	10	24	16	27	3	10	11
Enrollment in Federal crop insurance	0	18	66	21	1	8	45	7
	<i>Dollars per farm</i>							
<b>Government payments</b>								
All program payments	1,922	2,129	25,075	5,128	1,213	697	10,235	1,151
Commodity program	232	1,573	22,370	4,078	190	557	8,070	683
Conservation program	1,690	556	2,705	1,050	1,023	140	2,165	468
<b>Household finances</b>	<i>Percent</i>							
Share with non-farm earnings	79	73	60	72	71	66	54	67
Share with farm loss	77	57	7	54	74	65	6	66
	<i>Dollars per principal operator household</i>							
Farm income	-4,050	-1,777	139,337	16,485	-7,326	-6,201	139,178	-1,971
Off-farm income, all household members	110,465	74,621	42,345	76,968	71,527	75,000	44,122	72,990
Household income	106,415	72,845	181,682	93,453	64,201	68,799	183,301	71,019
Farm net worth	484,916	695,871	1,944,915	822,273	375,681	504,326	1,029,727	482,303
Nonfarm net worth	312,265	276,567	312,944	287,975	186,967	217,836	219,704	208,649
Household net worth	797,181	972,438	2,257,859	1,110,248	562,648	722,162	1,249,431	690,953

Source: 2007 Agriculture Resource Management Survey, USDA, NASS and ERS