

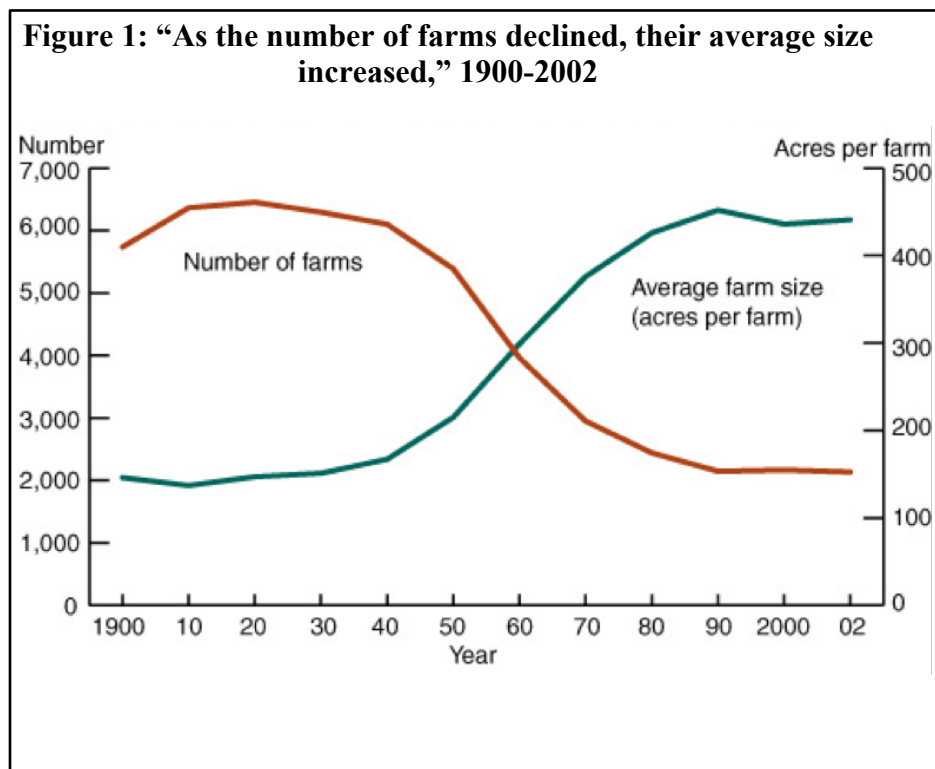
**Online Appendix for:**

**SUBSIDIES WITH RESPONSIBILITIES:  
PLACING STEWARDSHIP AND DISCLOSURE CONDITIONS ON GOVERNMENT  
PAYMENTS TO LARGE-SCALE COMMODITY CROP OPERATIONS**

*Linda Breggin & D. Bruce Myers Jr.*

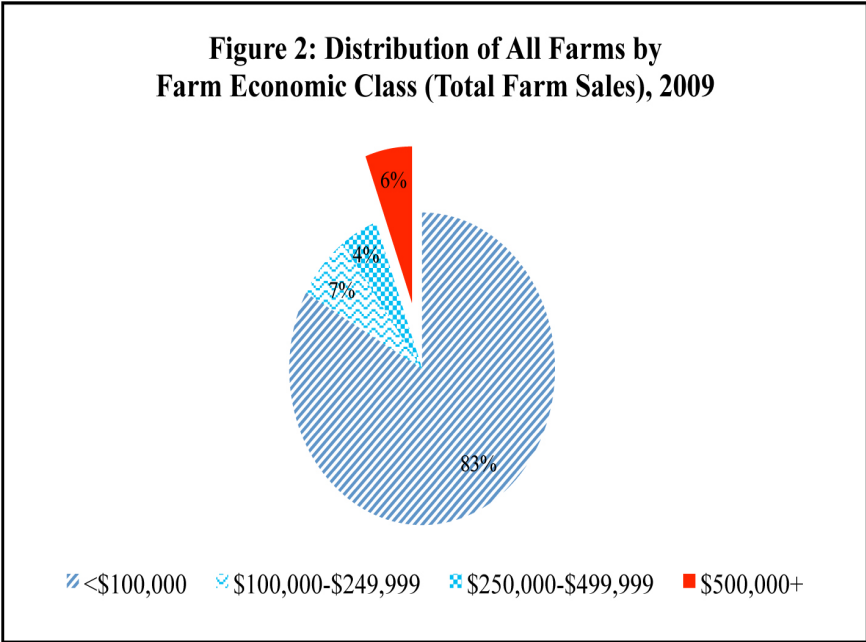
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Note: Number of farms is in the 1000's.

**Source:** Compiled by USDA Econ. Research Serv., using data from Census of Agriculture, Census of Population, and Census of the United States. Carolyn Dimitri et al., U.S. Dep't of Agric., Econ. Info. Bull. No. 3, *The 20th Century Transformation of U.S. Agriculture and Farm Policy 2* (June 2005), available at <http://www.ers.usda.gov/publications/eib3/eib3.pdf>.

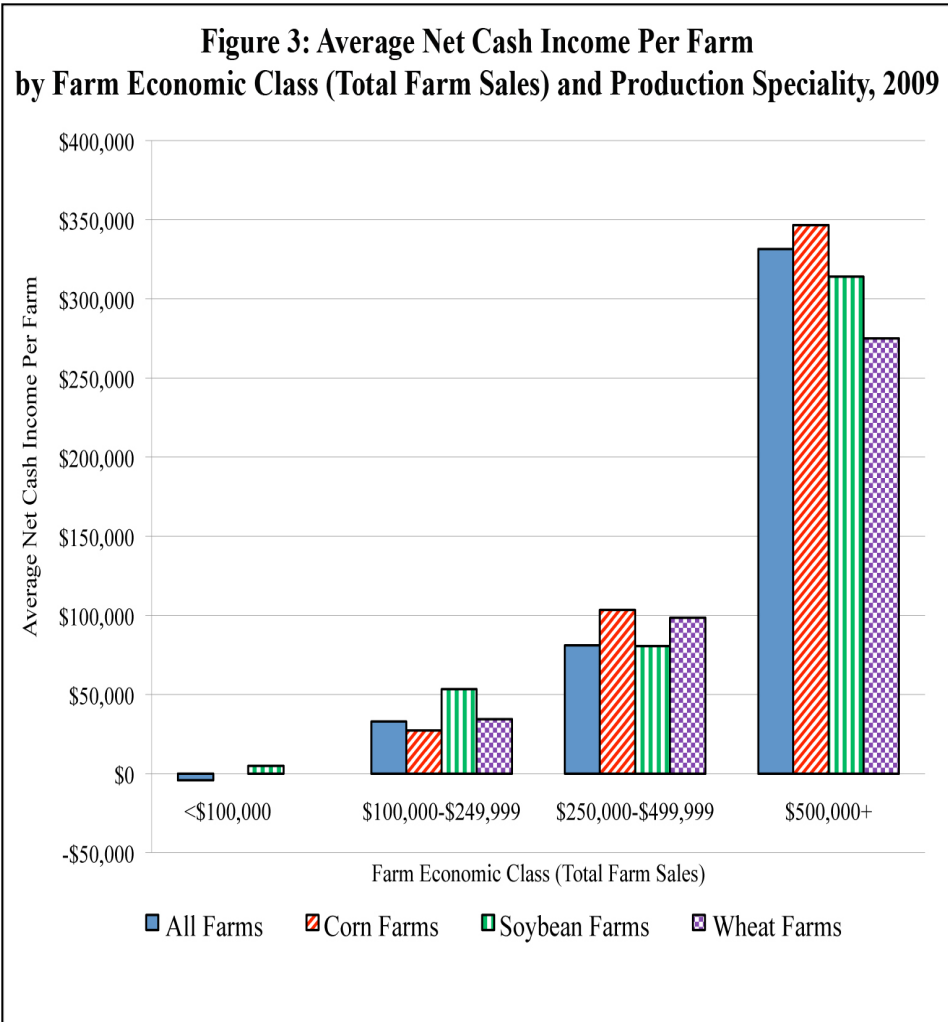


**Source:** Econ. Research Serv., U.S. Dep’t of Agric., *ARMS Financial and Crop Production Practices: Farm Structure and Finance, Tailored Reports* (data compiled by the authors, 2012) (2009), available at [http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey\\_abb=FINANCE](http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey_abb=FINANCE).

**Table 1: Size of Large-Scale Commodity Crop Operations  
Total Farm Sales of \$500,000 or more (2009)**

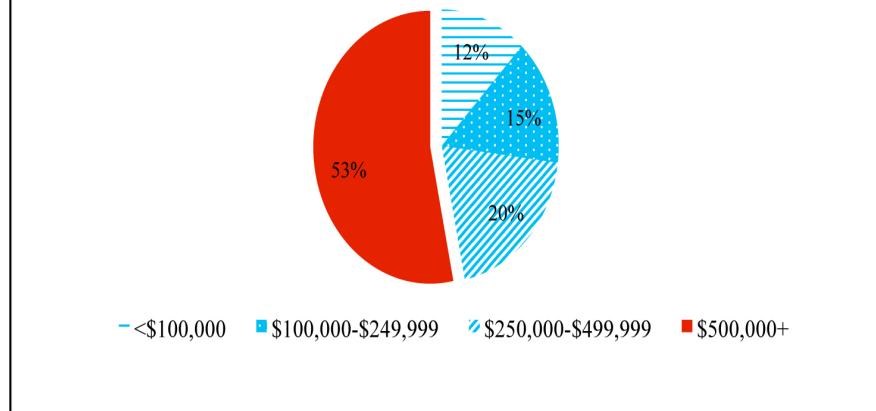
|                                       | <i>Corn</i> | <i>Soybean</i> | <i>Wheat</i> |
|---------------------------------------|-------------|----------------|--------------|
| Average Acres Operated per Farm       | 2,000       | 2,100          | 4,900        |
| Percent of Total U.S. Acreage of Crop | 50%         | 40%            | 30%          |

Acres values in this table are rounded to the nearest hundred acres and percentages are rounded to the nearest 5%.



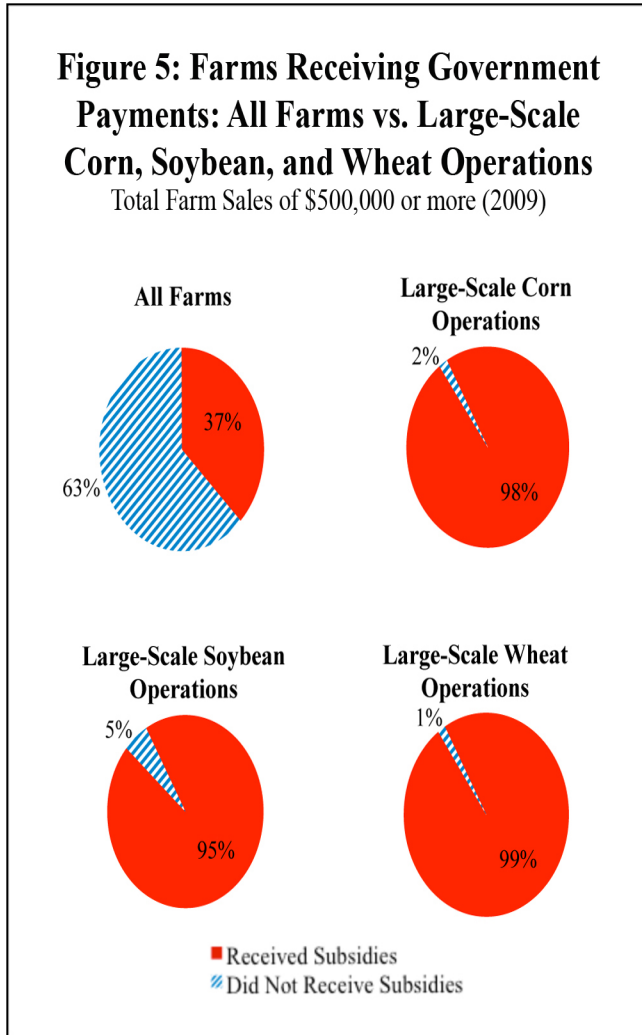
**Source:** Econ. Research Serv., U.S. Dep't of Agric., *ARMS Financial and Crop Production Practices: Farm Structure and Finance, Tailored Reports* (data compiled by the authors, 2012) (2009), available at [http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey\\_abb=FINANCE](http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey_abb=FINANCE).

**Figure 4: Distribution of Commodity Crop Payments to All Farms by Farm Economic Class (Total Farm Sales), 2009**



**Source:** Econ. Research Serv., U.S. Dep't of Agric., *ARMS Financial and Crop Production Practices: Farm Structure and Finance, Tailored Reports* (data compiled by the authors 2012) (2009), available at [http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey\\_abb=FINANCE](http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey_abb=FINANCE).

**Figure 5: Farms Receiving Government Payments: All Farms vs. Large-Scale Corn, Soybean, and Wheat Operations**  
Total Farm Sales of \$500,000 or more (2009)



**Source:** Econ. Research Serv., U.S. Dep't of Agric., *ARMS Financial and Crop Production Practices: Farm Structure and Finance, Tailored Reports* (data compiled by authors 2012) (2009), available at [http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey\\_abb=FINANCE](http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey_abb=FINANCE).

**Table 2: Government Payments to Large-Scale Corn, Soybean,  
and Wheat Operations  
Total Farm Sales of \$500,000 or more and \$1,000,000 or more  
(2009)**

|  | <i>Total Farm Sales</i> | <i>Corn</i>   | <i>Soybean</i> | <i>Wheat</i>  |
|--|-------------------------|---------------|----------------|---------------|
| Total Government Payments for Commodity                      | \$500,000+              | \$770,373,000 | \$340,945,000  | \$212,968,000 |
|  | \$1,000,000+            | \$350,361,000 | \$155,351,000  | \$59,746,000  |
| Percentage of All Government Payments Received for Commodity | \$500,000+              | 50.78%        | 45.47%         | 37.36%        |
|  | \$1,000,000+            | 23.10%        | 20.72%         | 10.48%        |
| Average Government Payment Per Farm                          | \$500,000+              | \$32,120      | \$47,059       | \$65,549      |
|  | \$1,000,000+            | \$51,152      | \$105,133      | \$124,841     |
| Number of Farms Receiving Payments                           | \$500,000+              | 23,984        | 7,245          | 3,249         |
|  | \$1,000,000+            | 6,849         | 1,478          | 479           |

**Source:** Econ. Research Serv., U.S. Dep't of Agric., *ARMS Financial and Crop Production Practices: Farm Structure and Finance, Tailored Reports* (data compiled by the authors 2012) (2009), available at [http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey\\_abb=FINANCE](http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey_abb=FINANCE).

## Methodology

The authors generated data for this article by using the Agricultural Resources Management Survey (ARMS) Farm Structure and Finance Tailored Reports database, available on the U.S. Department of Agriculture (USDA) web site at: <http://www.ers.usda.gov/Data/ARMS/FarmsOverview.htm>.

ARMS is an annual research survey of farmers and ranchers that is administered by USDA's Economic Research Service (ERS) and National Agricultural Statistics Service (NASS). ARMS is USDA's primary source of data for all research related to farm finances, production practices, resource use, and economic well-being.<sup>1</sup> The Tailored Reports database allows the user to manipulate data by changing variables within certain predetermined fields.

The authors conducted the underlying research for this article in reliance on 2009 ARMS data, which at the time of the research was the most current data. 2010 data is now available. Also, it is important to remember that key farm sector indicators like sales and income can fluctuate from year to year, as they are subject to a range of factors (*e.g.*, weather, market supply and demand, government policy (such as biofuels policy), and broader economic pressures). This means that while the data from any one year can provide a useful snapshot, it will not necessarily reveal all relevant trends.

For our calculations based on the Economic Classes of All Farms, we used the following variables:

**Survey:** Farm Finances

**Report:** Government Payments

**Filter by US/State:** All States

**From Year:** 2009

**Subject:** All Farms

**Row Group:** Economic Class

**Sub Group:** All Farms

ARMS divides farms into *Economic Classes* based on total farm sales,<sup>2</sup> and uses the following six categories: *All farms, less than \$100,000*, *\$100,000-\$249,999*, *\$250,000-\$499,999*, *\$500,000-\$999,999*, and *greater than \$1,000,000*. For purposes of our analyses, we combined the *\$500,000-\$999,999* and *\$1,000,000 or more* categories into a single *\$500,000 or more in total sales* category. We refer to this group of farms as

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<sup>1</sup> Econ. Research Serv., U.S. Dep't of Agric., *What is ARMS?* (updated Sept. 2006), available at <http://www.ers.usda.gov/Briefing/ARMS/WhatIsArms.htm>. See also Econ. Research Serv., U.S. Dep't of Agric., *How Are ARMS Data Used?* (updated Sept. 2006), available at <http://www.ers.usda.gov/Briefing/ARMS/Howisused.htm>.

<sup>2</sup> Within ARMS, USDA defines "total farm sales" (also referred to as gross cash income) as "the total amount of cash received by the farm operations from the sale of agricultural products, services rendered, or government payments received during a given calendar year. Gross cash income of farm operations excludes the value of products provided to landlords under share rental arrangements and any government payments received by landlords. Commodities produced or marketed through contractual arrangements are treated separately so as to properly account for income and expenses associated with the farm operation." Econ. Research Serv., U.S. Dep't of Agric., *ARMS Financial and Crop Production Practices: Farm Structure and Finance, Tailored Reports Data Dictionary* (updated Nov. 30, 2011), available at [http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey\\_abb=FINANCE](http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey_abb=FINANCE).

“*large-scale commodity crop operations.*” We primarily looked at data for corn, soybean, and wheat operations.

For our calculations on the Economic Class of All Farms sorted by Production Specialty, we selected the following variables:

**Survey:** Farm Finances

**Report:** Government Payments

**Filter by US/State:** All States

**From Year:** 2009

**Subject:** All Farms

**Row Group:** Production Specialty

**Sub Group:** Economic Class

In the ARMS dataset, USDA assigns a production specialty (*e.g.*, corn, soybean, wheat) to a farm when a commodity reaches 50% or more of that farm’s total production value. Throughout this article, when we refer to ARMS data and make statements about corn, soybean, and wheat farms, we are using the ARMS data definition of a farm production specialty.<sup>3</sup> If sales of corn, soybeans, or wheat do not individually constitute 50% of a farm’s total production value, ERS tests whether the sum of all three commodities is greater than 50% of the total value of farm production. If so, then they are classified as “general cash grain” farms; if not, they are classified as “other field crop” farms.

Accordingly, statements made in this article using ARMS data pertaining to corn, soybean, and wheat farms’ harvested acres, total sales, and net cash income may be over- or under-estimates. For example, since ARMS classifies a farm as a corn farm when 50% or more of its production value is constituted by corn sales, it was not possible to determine: a) how many of the farm’s total harvested acres are dedicated to corn production; b) the exact percentage of a corn farm’s sales that come from selling corn (only that the percentage of the farm’s production value is 50-100% corn sales); or c) the exact percentage of a corn farm’s net income that derives from corn sales. Similarly, because ARMS classifies a farm as a cash grain farm when the combined sales of corn, soybean, and wheat constitute 50% or more of the farm’s production value (without the sales of any individual commodity equaling 50% or more of the production value), it was not possible to determine: a) how many of the cash grain farm’s total acres are dedicated to corn, soybean, or wheat production; b) the exact percentage of a cash grain farm’s sales that comes from corn, soybean, or wheat sales (only that the farm’s production value is less than 50% corn, soybean, or wheat sales, individually); or c) the exact percentage of a cash grain farm’s net income that derives from selling corn, soybeans, or wheat.

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<sup>3</sup> The definition of a “production specialty” as used in the ARMS data was provided in an email from the Deputy Director for Data & Staff Analysis, Res. & Rural Econ. Div. (RRED), Econ. Research Serv., U.S. Dep’t of Agric. (November 1, 2011).