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State of the ARMS – Crop Production Practices

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2010***

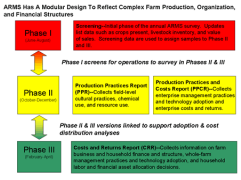
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State of the ARMS (Agricultural Resource Management Survey) — Crop Production Practices



What is ARMS – CPP? Survey Design

See the ARMS Briefing Room on the ERS website at: <http://www.ers.usda.gov/Briefing/ARMS/>
The annual Agricultural Resource Management Survey (ARMS) is USDA's primary source of information on the financial condition, production practices, resource use, and economic well-being of America's farm households. ARMS data are essential to USDA, congressional, administration, and industry decision makers when weighing alternative policies and programs that touch the farm sector or affect farm families. Sponsored jointly by ERS and the National Agricultural Statistics Service (NASS), ARMS is the only national survey that provides observations of field-level farm practices, the economics of the farm businesses operating the field (or dairy herd, green house, nursery, poultry house, etc.), and the characteristics of the American farm household (age, education, occupation, farm and off-farm work, types of employment, family living expenses, etc.)—all collected in a representative sample. In short, ARMS is the mirror in which American farming views itself.
Crop Production Practices is a data file based on information collected through a series of annual field-level commodity surveys. Also known as Phase II of the ARMS, this series is USDA's primary source of information about the current status and trends in crop production practices for several large-acreage field crops. This survey also obtains data on U.S. farmers' agricultural resource use, as well as data to assess potential environmental impacts associated with crop production practices. Crop Production Practices data also supplement ERS's Commodity Costs and Returns data.



How is ARMS - CPP data used?

Research Publications

ARMS-CPP data is used in a variety of research publications, from the ERS magazine *Amber Waves* to scholarly journals. These publications serve to inform a variety of audiences on the nature and consequences of agricultural production practices.



Fernandez-Cornejo, J. "Farmers Balance Off-Farm Work and Technology Adoption," *Amber Waves* (feature), February 2007

Various Authors, *Agricultural Resource and Environmental Indicators*, 2006



MacDonald, J.M., M.O. Ribaudo, M.J. Livingston, J. Beckman, and W. Huang, *Manure Use for Fertilizer and for Energy / Report to Congress*, June 2009

Various Authors, *Regional Environment and Agricultural Programming*, ongoing



D. Lambert, G. D. Schabale, R. Johanson, and U. Vasavada. "The Value of Integrated CEAP-ARMS Survey Data in Conservation Program Analysis." *Journal of Soil & Water Conservation*, January 2007.

McBride, W.D. and C. Greene. "The profitability of organic soybean production" *Renewable Agriculture and Food Systems*, December 2009



Survey Topics



Crops Surveyed

| Commodity | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Apples | | | | | | | | | | | | | |
| Corn | | | | | | | | | | | | | |
| Corn-soybeans | | | | | | | | | | | | | |
| Cotton | | | | | | | | | | | | | |
| Winter Wheat | | | | | | | | | | | | | |
| Spring Wheat | | | | | | | | | | | | | |
| Oat | | | | | | | | | | | | | |
| Fall Producers | | | | | | | | | | | | | |
| Rice | | | | | | | | | | | | | |
| Soybeans (soy) | | | | | | | | | | | | | |
| Tobacco | | | | | | | | | | | | | |
| Sugarcane | | | | | | | | | | | | | |
| Peanut | | | | | | | | | | | | | |
| Cardamom | | | | | | | | | | | | | |
| Onion | | | | | | | | | | | | | |
| Barley | | | | | | | | | | | | | |
| Cow-calf | | | | | | | | | | | | | |
| Hogs | | | | | | | | | | | | | |
| Dairy | | | | | | | | | | | | | |
| Beefsteers | | | | | | | | | | | | | |

✓ Phase II field-level Production Practices Report only
 ✓ Both Phase II field-level Production Practices Report and Phase III whole-farm Cost of Production survey.
 ✓ Phase III whole-farm Cost of Production survey only.

Cost of Production

See the Cost of Production Information on the ERS website at <http://www.ers.usda.gov/Data/CostsAndReturns/>. USDA has estimated annual production costs and returns and published accounts for major field crop and livestock enterprises since 1975. Cost and return estimates are reported for the United States and major production regions for corn, soybeans, wheat, cotton, grain sorghum, rice, peanuts, oats, barley, sugar beets, milk, hogs, and cow-calf. These cost and return accounts are "historical" accounts based on the actual costs incurred by producers. The costs and returns estimation program uses ARMS surveys conducted about every 4-8 years for each commodity, and methods that conform to standards recommended by the American Agricultural Economics Association (AAEA).

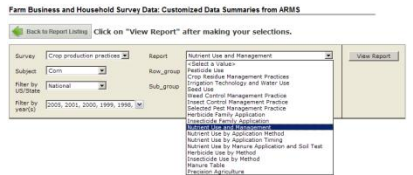
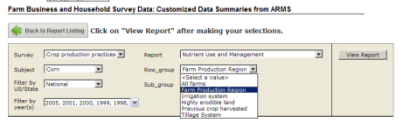
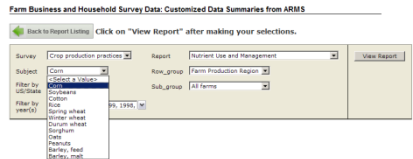
Accessibility for Researchers

Access to ARMS micro data is limited to qualified university researchers and other nonregulatory government agency researchers who have collaborative projects with ERS or NASS that contribute to USDA's public sector mission. These projects must be formally administered through a cooperative research relationship between ERS and the responsible research organization. The following steps are required to get approval to access ARMS micro data:
 Complete a Memorandum of Understanding (MOU) between ERS/NASS and your organization, which grants access to ARMS data exclusively for statistical purposes under a pledge of confidentiality.
 Amend the MOU with a separate Project Agreement for each research project that will access ARMS under that MOU. Include a brief project description and objective, a detailed description of the data needed, and the planned uses of the data. Fill-in-the-blank MOU and Project Agreement forms are available.
 Sign the NASS Agreement of Confidentiality (ADM-043) in the presence of a NASS official (required for all individuals who may view any unpublished information). Users must participate in a Security Briefing on the security and confidentiality requirements of using ARMS data.

What is new?

ARMS Data Delivery Application

See the ARMS data delivery application at <http://www.ers.usda.gov/data/arms/> (taken directly from ERS website) The database queries tools provide custom delivery and analysis. The "Tailored Reports" option enables custom queries, where users can select among survey data sets to build custom reports, refine queries with specific samples/populations, group summary statistics for comparisons, and choose among output options for results (tables, charts, etc.) (original writing) While there has been a data delivery application for years, the new generation provides significant advantages, such as a revised parameter selection interface.



| All farms | Metric | 2009 | |
|---|----------------------|-------|---------------------|
| | | Value | Estimated % of 2007 |
| Treated with manure | Percent of practices | 19 | 14.4 |
| Cow treated with lime | Percent of practices | 84 | 1.9 |
| Treated with chemical fertilizer and manure | Percent of practices | 8 | 14.9 |
| Wagon fertilizer use | Percent of practices | 14 | 16.8 |
| Soil tested for N/P/K/S/G/D | Percent of practices | 22 | 18.2 |
| Soil tested for S | Percent of practices | 15 | 14.4 |
| Plant tissue test used | Percent of practices | 54 | 33.5 |
| Acres treated with N | Percent of practices | 94 | 1.8 |
| Acres treated with P2O5 | Percent of practices | 82 | 2.9 |
| Acres treated with K2O | Percent of practices | 76 | 3.4 |
| N applied | Pounds per acre | 148 | 2.2 |
| P2O5 applied | Pounds per acre | 76 | 3.9 |
| K2O applied | Pounds per acre | 121 | 3.4 |

Organics

A dedicated production practices survey has now been completed for the following crops: Organic Soybeans (2006), Organic Apples (2007), Organic Wheat (2009). Each crop is selected based on which conventional survey is being conducted during that year, allowing for direct comparison between results. The organic surveys sample from solely organic producers, providing a higher number of responses than previous years. During 2010, a production practices and costs survey will be conducted for Organic Corn (as well as conventional corn).