Information on Local Food Farms from the Agricultural Resource Management Survey

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Overview

• Advantages of using ARMS for research on local food farms
• Disadvantages of using ARMS for research on local food farms
• Advisories in using ARMS
• History of data items in ARMS
• What is currently in literature
• What is in the pipeline
• Future issues
Advantages of using ARMS for research on local food farms

- National sample. Many studies in the literature are for a state or substate area so it is difficult to understand the importance of the supply chain, local demand variations, agronomic conditions, and other spatial factors.
- Many detailed questions about the farm and the farm household, e.g., other marketing channels, product mix, risk management strategies, human capital, etc.
- Relative flexible framework and relative stable annual funding. Can learn from survey design and improve in following year.
Disadvantages of using ARMS for research on local food farms

• ARMS is an annual sample of farms, not a census. Hence, as with all “rare” events, the share of farms with direct sales in the sample will be small. Sample designs must specifically oversample these farms in order to have a sufficient sample in the annual survey.
• There is not a dense sample of farms in any one local foods region in a typical year.
• Since it is a sample of farms, a panel of farms over time cannot be developed.
• Compared to the Census of Agriculture, only a small share of the possible summary statistics are published. Researchers must gain access to customize their own summary statistics.
Advisories in using ARMS

- Many farms do not have any production or marketing in a given year and are “point farms.” If comparing local farms to other farms, decide how these farms should be treated.
- Local food farms have a different size distribution. Recognize this when drawing conclusions regarding local food farms compared to other farms.
- Since the supply chain is evolving for local foods, the questionnaire items are evolving. New questions are always more likely to generate errors in data.
- Items associated with local foods can be refused. Other items on the ARMS cannot be refused, so enumerators make special efforts to obtain those responses.
- Most surveys are mail, rather than personally enumerated. Recognize that some respondents will likely not share the interpretation of a question as a researcher intended.
- Survey weights are constructed from latest Census, which are based on farm size, type, and region.
Farms and Point Farms

- A farm is any place that produced and sold—or normally would have produced and sold—at least $1,000 of agricultural products during a given year. Government payments count towards the $1,000 minimum.

- If the $1,000 minimum is not reported, then a point system is used to evaluate whether the place qualifies as a farm by assigning crops and livestock on the place points based on a NASS coding system. So, for example, 5 horses, or 2 head of cattle, or 2 acres of corn would classify a place as a farm.

- About 20% of farms are point farms, accounting for 3% of acres operated.
History of direct sales data items in ARMS

- ARMS is jointly conducted by NASS and ERS. Frequency/size:
  - Annual sample for farm-level (phase 3), about 22,000 farms/year.
  - Periodic sample (~5 years) by commodity specialization for field level/practice/production costs (phase 2) survey.

- **Background:** The 1978 Census was the first year that the direct sales question was asked on the Census of Agriculture.

- “During 1978 did you SELL any crops, livestock, or livestock products DIRECTLY to individuals FOR HUMAN CONSUMPTION – roadside stands, farmers markets, pick your own, etc?” YES/NO, If yes, “What was the gross value of these direct sales?” In 1978, 139,969 farms with $392.3 million in sales.

- The FCRS/ARMS version of the question has varied over time, sometimes (e.g., nonCensus years) only collecting information about YES/NO, were direct sales made? And in some years, no information at all was collected, such as in 1996, 2003, 2004, 2005. Other examples of differences in ARMS:
  - In 2010, 2011, and 2013 dollar values of intermediated sales were collected.
  - In 2008 and 2009 a percent of total sales for direct and intermediated sales—combined—was collected, but a reported total sales was not referenced.
  - In 1998, 2006, and 2008, the direct sales included nonfood items. In 1998 and 2008, the intermediated sales included nonfood items. In 2013, nonfood was a separate item for the first time.
Farms and their direct sales to humans and to intermediaries, 2010-11

Per farm values: $9,406 for human consumption and $67,098 for retail. (Compare to organic, $93,850 per farm (2007)).
Production Shifted Away From Small Family Farms

Production is adjusted for inflation using the Producer Price Index for Farm Products.
The US Farm Sector is composed of a very diverse group of 2.1 million farms. Small family farms (<$350,000 in sales) account for 89% of farms, 26% of production, and 60% of assets.

Note: Small family farms have gross cash farm income (GCFI) < $350,000. Midsize family farms have GFCI of $350,000-$999,999. Large-scale family farms have GFCI of $1,000,000 or more. Source: USDA, Economic Research Service and USDA, National Agricultural Statistics Service, 2011 Agricultural Resource Management Survey.
What is currently in literature using ARMS

• Park, Mishra, Wozniak (2014). Consider the role of management/marketing skills in choice of direct marketing and their role in farm financial success using direct marketing.
• Ahearn and Sterns (2013). Consider the role of the supply chain and other factors in explaining the factors affecting farm financial success.
• Detre, et al. (2011). Consider the effect of direct marketing on farm sales.
• Uematsu and Mishra (2011). Consider the factors affecting how important direct marketing is to farm businesses.
• Low and Vogel (2011). A largely descriptive report that established the large share of sales that are made through intermediated channels using 2008 ARMS data.
What is in the pipeline

- The USDA appropriations requested that ERS produce a report that summarized what is known about local food production. ARMS (and Census of Agriculture) will be used to consider farm-level characteristics. Due around September 2014.
- A USDA report to identify the research and data priorities for local foods is requested in the Farm Bill.
Possible next issues:

- What are key factors in the success of local food farms?
- How are lenders, like the FCA, serving the local food farming community?
- How will the FSMA affect local food farms?
  - Very small growers (less than $25,000 in annual production value) and certain small farmers with particular marketing characteristics (the Tester amendment), Less than $500,000 in annual production value AND Over half of farm sales are to qualified end-users
- From the KYF2 report recommendations re. ARMS development:
  - Improve the sampling design of ARMS to provide reliable coverage for local food farms
  - Focus groups to learn more about farmers’ interpretations of survey questions
The Know Your Farmer, Know Your Food Initiative

www.usda.gov/knowyourfarmer
Evidence on trends in direct sales to intermediaries

Percent of farms engaged in direct sales to intermediaries--
1998 and 2008 include nonfood and
2009 and 2010 exclude nonfood
Evidence of engagement in direct sales

Percent of farms engaged in direct sales for human consumption

Percent of farms engaged in direct sales, including nonfood

Evidence of engagement in direct sales.