Research Activities on Organic Production and Marketing in USDA’s Economic Research Service

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The Economic Research Service (ERS), USDA's principal social science research agency, began examining organic production and marketing issues in the 1980s. ERS initially studied the emerging organic produce sector, and then initiated a US statistical reporting series on certified organic acreage and livestock in the 1990s based on information from organic certifiers. During the last decade, ERS has substantially expanded research on the organic industry, examining the adoption of organic farming systems, production costs and returns in major crop and livestock sectors, and the characteristics of organic supply chains and consumer demand.

ERS research shows that in the United States, growth in the organic food and agriculture sectors has been driven primarily by consumer demand. During the last decade, industry estimates show that organic food sales more than tripled from $7 billion in 2001 to over $26 billion in 2011 (7). Market penetration has also grown steadily and organic food products accounted for more than 3.5% of total US food sales in 2011. Consumer demand has also spurred extensive trade in this sector, and the US recently began tracking trade statistics for a pilot set of organic products (10).

Recent Organic Programs and Activities

ERS collaborates with over 50 State and private certification organizations, the National Agricultural Statistics Service, and other partners to make estimates of the extent of certified organic farmland acreage and livestock. These data are presented by commodity, and by State, beginning in 1997 (9). Between 2002, when USDA implemented national organic standards, and 2008, certified organic cropland acreage more than doubled in the United States, and certified pasture grew even faster. These data show that nearly 9% of the vegetable crop acres in the United States, 3% of the fruit and tree nut acres, and 4% of the dairy cows were managed under certified organic farming systems in 2008. However, the data also reveal that the organic adoption rate is still low for grain crops, and organic grain shortages remain a bottleneck for expansion of the US organic livestock sector.

Although the overall organic farm sector continues to be one of the fastest growing segments of US agriculture, the economic research on this sector has mostly been conducted in experimental settings. In 2005, ERS and NASS expanded USDA’s annual economic producer survey to include a targeted oversample of organic producers in order to enable side-by-side comparisons between organic and conventional production systems. This annual survey, the Agricultural Resource Management Survey (ARMS), collects detailed information about farmer’s production practices, as well as costs and returns in major farm sectors.

Since the mid-2000s, ERS has included targeted organic oversamples in the ARMS survey to examine the dairy sector (in 2005 and 2010), soybeans (in 2006), apples (2007), wheat (2009), and corn (2010). ERS uses data from these surveys to compare the practices used in organic and conventional production systems (3). ERS has also used these data to compare the production costs and returns of organic and conventional operations in the dairy, soybean, wheat and
corn sectors, and found that economic costs were generally higher for the organic operations than for the conventional operations (5,6,8). However, the organic operations were generally more profitable than the conventional operations because the price premiums compensated for their higher cost of production.

In 2005 and 2008, ERS conducted nationwide surveys of organic handlers in order to examine how handlers and retailers procure and market organic products and ingredients. Findings show that US organic-industry growth is evident in an expanding number of retailers selling a wider variety of foods, as well as a broader range of consumers buying more varieties of organic food (1). ERS also found that contracting is widespread in the organic sector, and that firms used contracts most frequently to secure organic products essential to their business and source products in short supply (2). Large firms were more likely to use contracts for procurement, and these firms contracted for a larger share of their procurement needs. Nearly all contracts required suppliers to provide evidence of organic certification. While firms using contracts rarely assisted suppliers with obtaining organic certification, most included contract provisions regarding quality and quality verification. Prices were determined in a variety of ways and depended on delivered quality for some products.

For consumer research, ERS purchases retail scanner data to analyze the characteristics of organic consumers, what they buy, how much they spend, and the price premiums they pay for organic products. Findings from this research indicated that organic produce and milk, the two top organic food sales categories, receive significant price premiums over conventionally grown products. In 2006, organic price premiums for a half-gallon container of milk ranged from 60% for private-label organic milk above branded conventional milk to 109% for branded organic milk above private-label conventional milk (4). In contrast, the organic premium as a share of the corresponding conventional price was less than 30% for over two-thirds of the top fruits and vegetables examined using 2005 data on produce purchases.

ERS currently has a number of organic research projects underway, including projects to update estimates of certified organic crop acreage and livestock, examine current retail price premiums for processed as well as fresh organic products, examine changes organic dairy sector between 2005 and 2010, and study the costs and risks of coexistence among organic, genetically modified (GE), and non-GE conventional production in the United States.

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Literature Cited