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THE US ORGANIC INDUSTRY: IMPORTANT TRENDS AND EMERGING ISSUES FOR THE USDA

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- *Some important facts about the organic industry include....*
 - ◆ *Organic foods are one of the fastest growing sectors of agri-culture,*
 - ◆ *growth in sales of approximately 20% per year for the last 15 years,*
 - ◆ *similar growth in the number of acres certified as organic,*
 - ◆ *a persistent shortage resulting in an 8 to 1 trade deficit.*
- *Consumers perceive a range of food quality, environmental and social benefits which are reflected in the price premiums they pay for organic products.*

The organic sector of the US agricultural and food industry is garnering increasing interest from producers, consumers, policymakers and those interested in farm, environmental and nutrition issues. Although it is not the only emerging niche in the food sector, it is one of the pioneering market segments over the past few decades. The innovative nature of organic marketing, together with a new national organic certification program, resulted in a high consumer profile and market presence. Thus, there may also be need for enhanced research, education and extension on production, marketing, policy and food science issues related to this sector.

History of Organics

The term “organic” as applied to farming was first used in the U.S. by J. I Rodale in 1940 who developed his ideas based on the works of Sir Albert Howard in England, Rudolph Steiner in Germany, and Dr. William Albrecht of the University of Missouri. Rodale in 1947 founded the Soil and Health Foundation, which eventually became The Rodale Institute; and their Organic Farming and Gardening magazine remains a primary source of organic information and advocacy. In England, the term was developed about the same time by Lord Northbourne who described an integrated farm as a “dynamic living organic whole” (Scofield, 1986 cited in Durham, 2005). These workers shared an emphasis on the importance of soil organic matter for maintaining fertility, a rejection of chemical fertilizers and pesticides, and a reliance on livestock production as an essential component of the workings of the farm.

Now, organic farming is practiced in approximately 100 countries throughout the world, with more than 24 million hectares (59 million acres) now under organic management (OTA). Australia leads with approximately 10 million hectares (24.6 million acres), followed by Argentina, with approximately 3 million hectares (7.4 million acres); both with extensive grazing land. Latin America has approximately 5.8 million hectares (14.3 million acres) under organic

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Extension programs are available to all without discrimination.

management, Europe has more than 5.5 million hectares (13.5 million acres), and North America has nearly 1.5 million hectares (3.7 million acres).

One of the earliest US activities related to organic agriculture was the 1980 USDA Bergland Report and Recommendations on Organic Farming. It concluded that organic farming was viable and warranted increased institutional support; however, little changed for the next couple of decades. The passage of the Organic Foods Production Act in 1990 mandated the development by the USDA of national rules for organic certification programs, but a first draft was not released until 1997 and this was strongly criticized by many organic growers. Over 275,000 comments were received, with the overwhelming majority asking that the rules be made more stringent - an unexpected, and perhaps unprecedented, response to rule-making from a regulated community. The formal adoption of the USDA's revised and strengthened National Organic Program (NOP) rule in 2000 has led to a dramatic increase in USDA activity in organic agriculture in a variety of programs, a focus of the final section of this paper.

Organic Production and Demand are Growing Rapidly

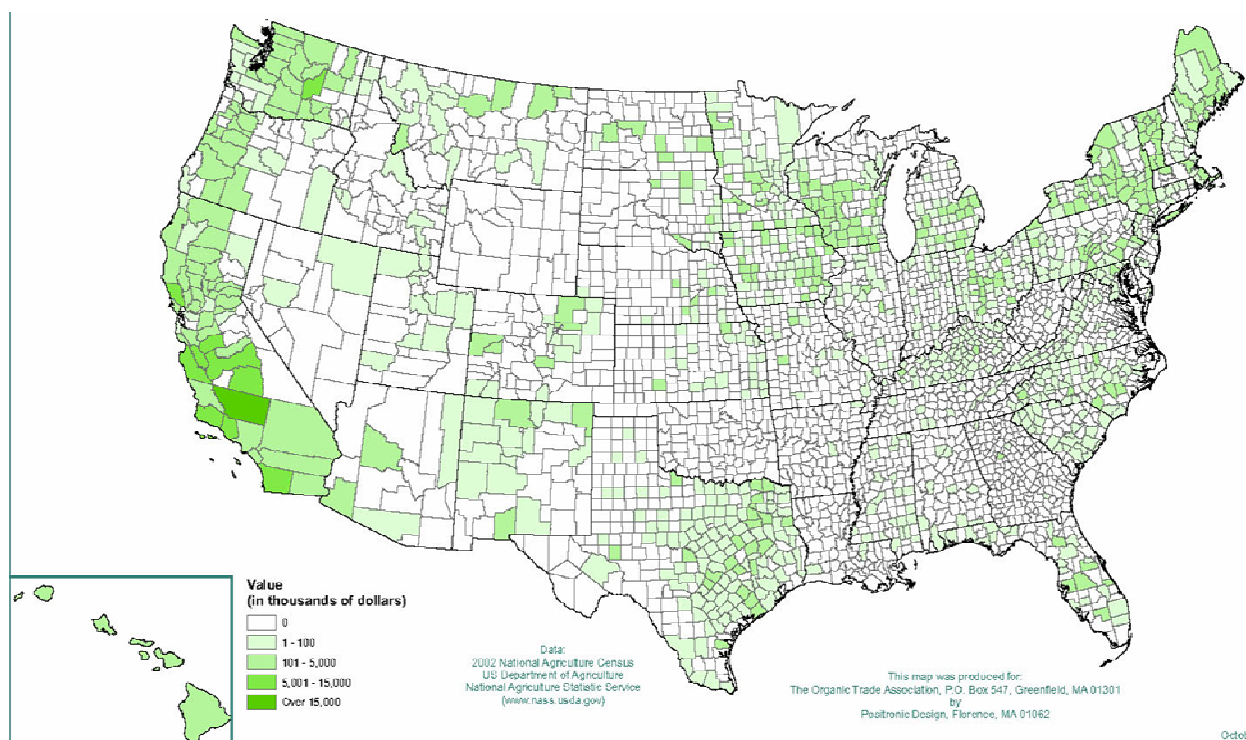
The status of organic agriculture has changed dramatically since USDA-NOP standards were finalized in

2002. The most recent estimates show that organic crop and pasture land doubled between 1997 and 2001 to 2.3 million acres, with production in almost every state (Figure 1). Yet, available estimates of number of farms, acreages certified, imports and exports are highly variable and insufficient reliable data are available to track other recent changes.

Organic agriculture is economically important; it is one of the fastest growing sectors of U.S. agriculture, with sustained growth of approximately 20% per year for the last 15 years (Oberholtzer, et al. 2005). Sales were estimated at \$1 billion in 1990 and reached \$10 billion in 2003 (Figure 2) or around 1.8% of total US food market. The Nutrition Business Journal estimates that sales growth will continue at 9-16% through 2010, when organic will reach over 3% of the US food market.

Organic foods are increasingly found in more mainstream retail establishments. In 2003, 44 percent of total organic food sales were handled through supermarkets and grocery stores, mass merchandisers, and club stores. Meanwhile, independent natural product and health food stores and natural grocery chains accounted for 47 percent of sales. Direct sales through farmers' markets, co-ops, foodservice operations, and exports represent the remaining 9 percent (Organic

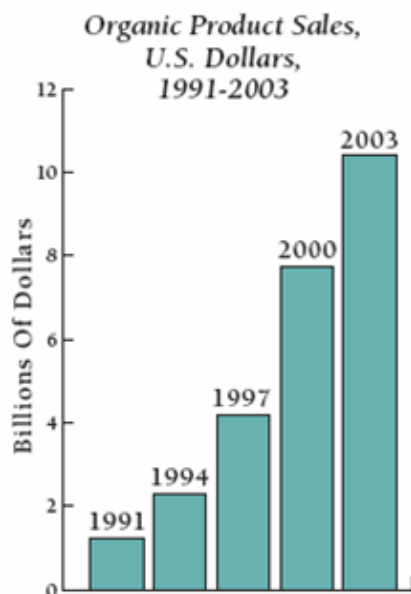
Figure 1: Sales of Organic Agricultural Products by County



Trade Association (OTA), 2004). Thirty-nine percent of the U.S. population uses organic products. U.S. organic consumers can be categorized in three segments (NMI, 2002):

- The Organic Integrated Group (37 percent of all organic users) consumes organic products more than once a day.
- The Organic Middle Group (39 percent of all organic users) consumes organic products at least weekly.
- The Organic Fringe Group (24 percent of all organic users) eats organic products occasionally.

Figure 2: Growth in US Organic Food Sales



Although organic production is increasing rapidly in the US, demand by consumers is growing even faster. The US had been a net exporter of organic foods for many years, but by 2002, imports of organic products exceeded organic exports by a ratio of at least 8 to 1, primarily due to the rapid increase in domestic demand (USDA, 2005). Research and education programs for organic production, in many cases, were established earlier in Europe than in the US, and there is broader public and governmental support for organic agriculture in Europe as well.

Emerging Issues in Organic Agriculture

Many believe organic agriculture is also scientifically

important; presenting unique opportunities for advancements in ecological approaches to agroecosystem management; this is essential because organic growers inherently rely on ecological synergies that are ignored in other agriculture research endeavors. Organic agriculture also provides a range of perceived food quality, environmental and social benefits valued by society as a whole and reflected in the price premiums consumers are willing to pay for organic products.

A significant shift in the trajectory of modern agricultural development is underway as community, government, and market support for organic agriculture grows around the world. As agricultural policy increasingly emphasizes issues such as environmental sustainability, nutritional and social impacts, organic agriculture provides a readily identifiable segment of products and processes that strives to encompass these ideals.

If competitiveness of American organic agriculture is to be maintained, the USDA needs to understand the differences in the policy environment facing US versus foreign producers, and must take advantage of the unique niche provided by CSREES and the Land Grant system. A quick overview of what foreign competitors are doing, and how other regions have promoted the transition to organics, may put the USDA programs into context.

USDA's National Organic Program recognizes the market demand aspect, but does not acknowledge organic as inherently superior in delivering public goods, and thus defines "organic" simply as a marketing differentiation defined by a set of production practices. Hence the level of public support is based on the economic benefits of serving a growing market and under this policy approach would be, at best, a "fair share" allocation proportional to the size of the organic sector. Public financial support in the US for organic agriculture is not currently tied to specific environmental, health, or social goals.

Strategies Used in Europe to Promote Organic Agriculture

In Europe, 3.5% of total agricultural land is already certified organic, with organic acreage reaching 10% in Switzerland, and 11% in Austria. Industry experts surveyed by the Organic Trade Association (OTA, 2005) expect US organic production to reach 5-10% of the US food market within 10-20 years (with expanding sales of organic products such as clothing, personal

care products, pet food, etc.), but only if research, education, and policy initiatives continue to remove barriers to organic agriculture.

The EU Action Plan (Commission of the European Communities, 2004) recognizes a dual societal role for organic farming: 1) Meet market demand for specific food choices, financed by consumers through price premiums. 2) Deliver public goods such as environmental benefits, public health, social welfare, etc. financed by public means through government supports. The EU does not set specific targets for market share, but:

“intends to provide the conditions that will allow the sector to develop and thereby make the most of its market potential.”

“The general principle is that where farmers provide services to the environment beyond the reference level of good agricultural practices, these should be adequately remunerated.”

Nevertheless, individual EU countries have adopted a variety of incentives under this framework (Dimitri and Oberholtzer, 2005) including:

- conversion and support payments for organic lands (62% of organic lands received some level of support in 2001),
- targets for land under organic management (ranging from 3% in France, to 20% in Germany and Sweden),
- marketing programs, and
- support for organic research and education (estimated at 70-80 million Euros annually)

...and the Rest of the World

Australia has the world's largest number of certified organic acres in absolute terms, mostly in pasture. Organic beef is a major export, but significant production occurs in fruits and vegetables, rice, grapes and dairy as well. Further expansion is hindered by the limited government support in research and outreach, and by the long and complex marketing chains.

The Canadian General Standards Board adopted voluntary standards for organic in 1999. While demand has grown at rates comparable to those in the US, 85-90% of the market is supplied by the US (USDA, 2002), making Canada the largest market for US organic exports (USDA, 2005). Japan represents one of the world's largest and most complex food markets. The market was estimated at \$3 billion in the late 1990's,

but the 2001 introduction of the stringent Japan Agricultural Standard regulating organic products (not including animal products which are unregulated) caused many products to lose organic certification, creating an apparent shrinkage of the market to around \$350 million (Yuseffi, 2004).

China's organic agriculture is organized either by individual farmers, farmer associations, or companies contracting with small-holders. Organic is attractive because of the availability of low cost labor and traditional knowledge, significant export markets, and the relative scarcity of capital-intensive high-productivity technologies that make traditional agriculture less competitive. India and Thailand export moderate amounts of organic spices, fruits and vegetables, tea, coffee, cotton, cereals and honey. Organic production in these countries is limited by certification requirements and record-keeping demands in poor rural populations with limited literacy, small land holdings, and little awareness of organic opportunities.

Argentina has a well-developed organic market with 3 million hectares under organic management, of which 225,000 are in crop production. This makes Argentina second only to Australia in absolute land area certified as organic. Approximately 90% of the production is oriented toward the export market. Brazil ranks fifth internationally in total area under organic management (Yuseffi, 2004), including increasing production in coffee, bananas, soybeans and corn. A regional organizational effort known as GALCI (Grupo de America Latino y el Caribe de IFOAM) has struggled to promote and harmonize organic efforts over recent years, and has developed a Latin American Network of Researchers in Ecological Agriculture. The Agroecological Movement of Latin America and the Caribbean (MAELA) has done extension work throughout the region, focusing on self-sufficiency skills.

Cuba warrants more attention as a special case. When imports of fossil fuels, fertilizers and pesticides collapsed with the break up of the Soviet Union, the Cuban government began to place a high priority on food self-sufficiency. Organic practices have been widely adopted in a few crops, and in urban agriculture settings, but in traditional rural agricultural areas the use of synthetic fertilizers and pesticides is again increasing. Still, the agricultural land area under certified production is actually at a lower percentage than in the United States (Yuseffi, 2004).

Current roles of USDA agencies

There is significant growth in the production and consumption of organics, as well as expanding public support for organic agriculture among our major trading partners. Moreover, there are arguments that research benefiting the organic industry may have positive spillovers to producers, food processors and agribusinesses in the other sectors, suggesting great potential for many industries to benefit from more public support. Given these arguments, there has been a call from numerous stakeholders to increase USDA and the Land Grant capacity to provide research, extension and education to the organic agriculture and food sector.

Many types of public support are available for organic agriculture, as listed below. But the primary investment in research, education and extension is within CSREES and the Land Grant system of colleges and universities. Because organic agriculture is knowledge-intensive, research, education and extension advisory services are essential to meet organic grower needs.

Eight USDA agencies have started or expanded programs on organic agriculture in recent years. These include:

- Agricultural Marketing Service (home to the National Organic Program)
 - ◇ Regulatory oversight on Organic Certification
 - ◇ Expansion into price reporting for organic produce (in process)
 - ◇ Direct marketing support to farmers markets and other institutions
- Agricultural Research Service, including its National Agricultural Library,
 - ◇ Increasing share of research on organic or equivalent lands
 - ◇ New program leader for systems-based research
 - ◇ Targeted publication lists and electronic products on production and marketing topics of relevance to organic and alternative farms (NAL)
- Economic Research Service
 - ◇ Research on production and market trends in US organics
 - ◇ Development new data and statistics on organics with USDA partners (NASS, RMA)
 - ◇ Leadership in assessing economic and policy agenda through international conferences on organics
- Foreign Agricultural Service
 - ◇ Monitoring of international trading partners' position in organic production and marketing, equivalency in certification programs
- National Agricultural Statistics Service
 - ◇ Increasing number of data products that integrate organic production, marketing and financial performance questions
- Natural Resources Conservation Service
 - ◇ Financial assistance for transition and certification
- Risk Management Agency, and
- Cooperative State Research, Education, and Extension Service.
 - ◇ Organic Transitions grants program and the Organic Research and Extension Initiative, funding research since 2004
 - ◇ Established National Program Leader for Organics in 2005
 - ◇ Numerous state partners (57 in 42 states) have initiated programs to support organic research and education, including land grant institutions or 1890 colleges, state agriculture departments, or other agencies using CSREES administered dollars

Emerging Research, Education and Extension Needs for the Organic Food Sector

This section outlines some of the areas that are priorities outlined by producers, agribusinesses and others interested in the growth of the organic sector.

Future Research Needs

1. Facilitate organic production, including improved understanding and management of soil fertility, pest management, livestock production and health, development and evaluation of adapted cultivars and breeds, and improved post-harvest handling.
2. Assess long term impacts of whole-farm systems, both for their impact on farm productivity and economics, and as they relate to social and environmental benefits including: rural community stability, biodiversity conservation, energy use and efficiency, carbon sequestration, soil conservation, and air and water quality.
3. Evaluate economic, business and social aspects of various organic production systems to improve grower returns, reduce market barriers, marketing strategies to increase consumer demand,

address emerging supply chain management issues and assess potential community benefits. The market analysis should address the impact of the likely decline in price premiums for organic products as organic production becomes an increasing share of US agriculture and competitive market forces bid up input prices or lower prices received.

4. Improve the scientific basis for organic regulations, thereby assuring rational regulation, providing options to overcome current constraints, and assisting in negotiations on the increasing number of nontariff technical barriers to foreign trade.

5. Assess how differential production and processing practices impact consumer valuation of various attributes such as identifying: varieties with enhanced flavor and nutrition, improved practices to add value and enhance shelf life and quality, effects of production systems on product nutrition and quality, and mechanisms to minimize GMO intermingling with organic products.

6. Identify marketing and policy constraints on the expansion of organic agriculture, especially among conventional growers who would otherwise transition to organic and how bottlenecks in the organic food supply chain could best be addressed. Predict impacts of alternative agricultural policies and programs as the organic share of the US agriculture market increases.

7. Inform policy-makers with science-based information to support optimal policies, laws and regulations, both to encourage growth in organics in order to overcome the current trade deficit for organic foods and to minimize any policy barriers limiting the organic industry.

Future Extension Needs

1. Increase organic training for extension agents and specialists so that they can become recognized as useful sources of organic production information. Explore the development of new Regional Extension committees or encourage existing production and marketing committees to integrate organic-related activities and goals.

2. Develop new tools to aid extensions agents and specialists in identifying production problems unique to organic growers and provide organically approved recommendations. Or, assist in development of organic crop consultant programs to fill the void left

when organic certification inspectors were prohibited from consulting due to conflict of interest rules under the NOP.

3. Establish grower mentoring programs, expert panels, and other practices to facilitate grower-to-grower production, marketing and business information transfer, using professional development grant and funding programs when available.

4. Increase technology transfer (e.g., precision pest and fertility monitoring, disease epidemiology models, improved seeds and breeds, bio-based pest management, etc.) to organic growers to expedite and show greater returns to science-based approaches to organic production.

Education Action Items

1. Incorporate training in organic production methods to curricula with the goal of educating high school agriculture instructors.

2. Expand undergraduate organic training in college agriculture education programs through integration in existing majors, new minor programs, or ultimately, organic system major programs.

3. Currently, a high proportion of future organic farmers are coming from urban and suburban backgrounds and do not have direct on-farm experience. An increase in internship opportunities and other practical experiences in whole-farm organic operations that incorporate whole production cycles from planning, to production, to marketing may be the most effective way to support classroom education.

4. Increase consumer awareness of the organic option by including information on organic products in already existing food and nutrition training (EFNEP, FSNEP).

Summary and Conclusions

Although organic agriculture has a fairly long history in the world and US, but recent consumer demand growth has led to concerns about the organic food supply chain. Some would argue that, for production agriculture to keep pace, producers must be given incentives and support to convert acres and meet the requirements of consumers and the food processors who need organic ingredients. The types of programs and policies in place or consideration globally would suggest there is increasing concern about the ability of the

organic sector to function and grow well without more public support. For USDA, there are great opportunities to increase market information, conduct agronomic research, provide extension materials and programs and enhance the educational opportunities for industry participants, with the expectation that these activities will have the returns to research historically seen for other agriculture research and education programs.

This publication provides a small glimpse of current trends, emerging issues and potential roles of the public sector in the organic agriculture sector. In hopes of providing a succinct summary of issues of greatest interest to organic producers and Land Grant stakeholders, industry statistics were used to motivate the need for, and potential slate of, topics where industry, government and Universities can work together to support a growing, vital sector of the agriculture and food industry.

Resources for Organic Producers, Agribusinesses, Researchers and Students

- **USDA-Cooperative State Research, Education and Extension Service (CSREES)**
<http://csrees.usda.gov/>, 202-401-4879
- CSREES addresses organic agriculture through competitive funding, creating partnerships with Land Grant universities through research projects, Extension programs. This agency funds many of Colorado State University's programs, and has some grant programs available for research in this area.
- **Organic Farming Research Foundation (OFRF)**
www.ofrf.org, 831/426-6606
- A nonprofit foundation that sponsors research related to organic farming practices, publishes research results for organic farmers and growers interested in adopting organic production systems, and educates the public and decision-makers about organic farming issues.
- **Organic Trade Association (OTA)**
www.ota.com, Phone: 1-(413)-774-7511,
info@ota.com
- Organic Trade Association (OTA) is a membership-based business association that focuses on the organic business community, including processors,

wholesalers, brokers and retailers. OTA's mission is to promote and protect the growth of organic trade to benefit the environment, farmers, the public and North American economy.

- The Organic Pages Online—The Organic Trade Association offers a searchable online directory of its members, at www.theorganicpages.com.
- The O'Mama Report—The Organic Trade Association's consumer web site, this provides many resources and articles of interest to consumers interested in organic agriculture and products. The site: www.theorganicreport.org.
- **Sustainable Agriculture Research and Education (SARE) Program**
<http://www.sare.org/>, 202/720-6527
- Administered by USDA-CSREES, SARE sponsors grants that advance farming and ranching systems that are profitable, environmentally sound, and good for families and communities.
- **Midwest Organic and Sustainable Education Service (MOSES)**
www.mosesorganic.org, 715/772-3153
- A farmer-run nonprofit educational outreach organization dedicated to organic farming. Organizes Upper Midwest Organic Farming Conference (UMOFC), offers booklist, and free resources. Provides organic production and certification workshops to agricultural education professionals.
- **Appropriate Technology Transfer for Rural Areas (ATTRA)**- a project of NCAT
www.attra.ncat.org, 800/346-9140
- Provides free publications on specific organic and sustainable production methods, crops, marketing, and organizations. Has an extensive website full of information. Technical specialists will prepare custom resource packets for subjects not currently in print.

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