Trends in Indiana Specialty Agriculture
ISDA Strategic Plan
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Introduction

Agriculture is undergoing a transition in the types of crops produced and the types of people who are farming. According to the Indiana Agricultural Statistic Service, the number of Indiana farms has decreased by 10% in the last five years resulting in a decrease in over 400,000 acres in farmland. Despite this decrease in total farms, small farmers (10 to 49 acres) have increased steadily (National Agricultural Statistics). Indiana has 44,990 small farms (defined as operations with less than $50,000 in gross sales) and these small farms account for approximately 75% percent of total farms in Indiana (National Agricultural Statistics Service).

Many of the farms dedicated to specialty agriculture production are small. Specialty crop and animal production in Indiana is very diverse. Specialty crops range from tomatoes and apples to floriculture and organic agronomic crops. Specialty animal production ranges from goats to aquaculture.

Fruit and Vegetable Production in Indiana

Indiana's specialty crop production varies from small farms to larger more commercial farms. Distribution methods range from retail (for fresh market) to wholesale (fresh market and processing). It is well known that Indiana ranks among the top five in the production of tomatoes, watermelons, and cantaloupe; however, Indiana has a rich history of producing specialty crops as shown in Table 1.

Indiana's Rank for Specialty Crops in 2005

Commodity	Rank
Apples	13
Blueberries	9
Cantaloupe for fresh market	5
Cucumbers for pickles	9
Peppermint	4
Snap beans for processing	7
Spearmint	5
Tomatoes for processing	2
Watermelon for fresh market	6

Source: USDA, NASS

Indiana is home to a productive tomato, snap bean and cucumber processing industry. However, production decreased from 2004 to 2005. Most of the fruit production such as apples, watermelons, and cantaloupe in Indiana is targeted for the fresh market. Indiana's apple

production in 2005 was down 17% from 2004. Meanwhile, blueberry and watermelon production both increased 13% from 2004 to 2005.

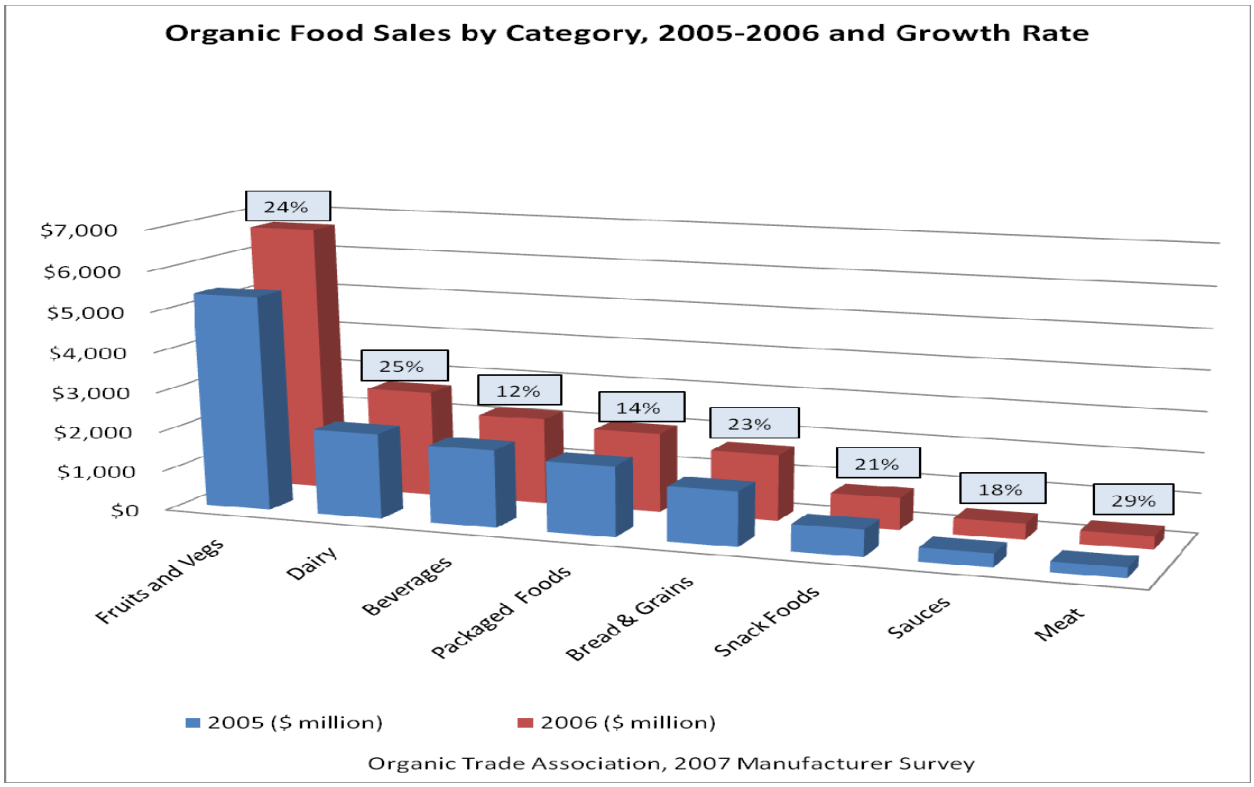
Small fruit and vegetable farms often need help to market their products and have increasingly turned to agritourism to direct market those products. Agritourism can take on many forms including: roadside stands, farmers' markets, on-site farmers' markets, festivals linked to local businesses, etc. The Horticultural Congress continues to see growth in the farm marketing section and efforts around the state show an increased amount of activity for educational programs needed to help producers create venues to market their products. In terms of on-farm sales, direct marketers need help with zoning, signage, promotion and advertising, and a well-defined view of agritourism. State efforts are needed to help these operations prosper.

Organic Agriculture in Indiana

The U.S. organic food industry reached $16.7 billion in sales in 2006 (OTA, 2007). Organics is one of the fastest growing food sectors at 21% growth between 2005 and 2006. Because of the substantial growth in consumer demand for organics, there are opportunities for Indiana farmers. The fastest growing organic categories between 2005 and 2006 are meat at 29%, dairy at 25%, fruits and vegetables at 24% and bread and grains at 23%.

As of 2005, the most recent year with data, Indiana had 43 certified organic operations and 5,156 acres of certified organic cropland and pasture (ERS, 2005). The certified organic acreage broken down by crop included: 1,243 acres of hay, 1,147 acres of soybeans, 806 acres of corn, 491 acres of wheat, 284 acres of oats, 41 acres of vegetables, 25 acres of rye, 22 acres of sunflowers, 21 acres of miscellaneous fruit, 6 acres of sorghum, 5 acres of apples and 2 acres of greenhouse/nursery crops. In addition, Indiana had 180,300 certified organic layer hens, 167 beef cows, 237 milk cows, 70 other cows, and 2,000 hogs.

Based on discussions with organic certifiers and buyers of organic products, organic production has been increasing in Indiana since 2005 and is expected to continue to increase. There is substantial room for growth in organic field crop acreage and organic livestock in the Corn Belt overall and in Indiana. In 2005, the Corn Belt had less than half of the US supply of organic livestock but roughly 80 percent of the US supply of organic corn and soybean acreage. The Corn Belt has a clear advantage in producing organic livestock and poultry relative to the rest of the US because of its substantial feed base. Going forward, the biggest challenge in the region will be to match the growth in production of organic feed to the growth in production of organic livestock.



Indiana Floriculture

Indiana ranks twenty-third among states in floriculture production with more than 260 commercial greenhouse growers; with a wholesale value conservatively estimated at $60 million. (USDA, 2006). In 2005, the wholesale value of herbaceous perennials, bedding, propagative, potted and foliage plants grown in Indiana was $9.0, 31.2, 3.1, 5.8 and 1.3 million, respectively. The last year that floriculture data was collect for Indiana as part of the 36 state survey conducted by the USDA Agricultural Statistics Board was in 2005. The future of commercial greenhouse operations in Indiana is dependent on immigration reform and energy costs. Today, energy accounts for 50 to 85% of the total operating costs of greenhouses. The cost to heat and light a greenhouse has increased in the past decade because the cost of fuel (e.g., natural gas and heating oil) has nearly doubled. For example, the average price of natural gas sold to commercial growers in the U.S. was $20.50 per 100 m^3 in 1997, and in 2007, the average price was $39.55 per 100 m^3 (EIA, 1998; EIA, 2008).

One reason for Indiana's minimal prominence in the floriculture industry compared to surrounding states is that its growers have not had access to production and marketing information to grow new, alternative, more profitable specialty crops to replace ones that have become marginally profitable. Tremendous potential exists for Indiana to become a nationally recognized and leading producer of sustainably produced specialty floriculture crops. The Indiana floriculture industry is within 400 miles or less of 25% of the U.S. population giving it

an ideal marketplace for regionally produced specialty crops. A recent survey of floriculture businesses conducted at the Indiana Flower Grower Association Conference showed that sustainability ranked third, after production and marketing and "other" as a research topic that was important to their operations. It is imperative that we determine the perception, willingness and knowledge of growers in Indiana to adopt sustainable production practices for floriculture crops.

Indiana's Green Industry

The Indiana Green industry is an important part of the state's agricultural sector. The "Green Industry" consists of wholesale, nursery and sod growers; landscape architects; designers and builders; contractors and maintenance firms; retail garden centers; home centers and mass merchandisers with lawn and garden departments; and marketing intermediaries such as brokers and horticultural distribution centers known as re-wholesalers. Nationally, this industry is one of the fastest growing sectors in the nation's agricultural economy; often experiencing growth and expansion even during recessionary periods. The industry complex includes input suppliers; production firms such as nursery, greenhouse, and sod growers; wholesales distribution firms including importers, brokers, re-wholesalers and transporters; and horticultural services firms providing landscape and urban forestry services such as design, installation, and maintenance.

According to the National Green Industry Survey, the output impact of the Indiana green industry was $3.01 billion for all sectors combined based on 2002 data that is expressed in 2004 dollars. The Horticultural service sector accounts for $1.44 billion of Indiana's Green Industry and the trade sector accounts for the other $1.34 billion in sales. The landscaping services sector is the leader in value added impact for Indiana with an impact of $746 million followed by the lawn and garden sector at $412 million, and followed by the nursery & greenhouse sector at $156 million. The Indiana green industry has supplied 41,714 jobs in 2002. Indiana's green industry ranks 7th amongst Midwestern states for economic impact and 5th for employment impact. Ohio, Michigan, and Illinois are all leaders in this area. Indiana's green industry is behind their neighboring states and is in need of production and marketing practices that will help them become competitive with their neighbors. Education is needed on trends of the industry, trade flow practices, understanding consumer preferences, and solid production practices.

Indiana Aquaculture

The aquaculture industry in the state is growing with an estimated total product value of $3.1 million, though it accounts for only 0.3% of the $1.1 billion US aquaculture industry (USDA-NASS, 2003, 2006). The 2005 Census of Aquaculture indicated 18 Indiana aquaculture farms, which included 9 food fish, 3 sport fish, 7 ornamental fish, 6 crustaceans and 2 miscellaneous, and an undisclosed farm sales value (USDA-NASS, 2006). Indiana's aquaculture industry represents the diversity present in today's aquaculture economy. Fish are grown for human

consumption, recreational fishing, and ornamental display. Culture methods include low density pond production, intensive cage culture and high tech, intensive indoor re-circulating systems.

There is increasing emphasis on food fish production, though many farms specialize in the production of sport fish such as bass, bluegill, and catfish for private stocking, minnows for baitfish, and ornamental fish. Martinsville, Indiana is home to one of the largest ornamental fish (goldfish) farms in the US. A number of food fish production facilities mainly largemouth bass, hybrid striped bass, yellow perch, and tilapia, as well as crustaceans (e.g., freshwater prawn) have been established in the state in recent years increasing the production capacity of Indiana's aquaculture industry. In 2007, Bell aquaculture began operation in Albany, Indiana as the largest yellow perch operation in the US.

Seafood is America's second largest trade deficit behind oil. About 83% of all seafood consumed in the US is imported, and 40% of that is farmed (USDOC-NMFS. 2007). In addition, concerns about bio-terrorism and safety in the seafood supply system provide Indiana with tremendous opportunities to grow the aquaculture industry. Indiana's potential to increase aquaculture production lies with accessibility to major metropolitan seafood markets, and opportunities to supply the market with fresh and processed quality food fish products. The next five years will experience a modest expansion in Indiana's aquaculture industry as producers cautiously explore aquaculture to diversify their farm and ranch operations.

Implications

Even though producers have been successful at marketing their products, there is room to help them improve production systems and business management strategies especially marketing. Marketing and financial risks are one of the biggest concerns for small-scaled producers. Although some producers sell directly, identifying markets and understanding pricing and costs of production relative to calculating a break-even point can be challenging. Producers often do not have the knowledge and skills to identify new opportunities provided by export markets and new production practices and threats from new competitors or government regulation. It is imperative that producers learn how to effectively manage opportunities and threats to increase their profitability. Research and educational programs that address the problems faced by the specialty agriculture industries in Indiana are limited.

Specialty agriculture producers would benefit from applied research and Extension programming in sustainable production practices and market development. Purdue University has various programs that help producers in such a way. For example, the Small Farms Team is dedicated to helping producers improve production practices. Another example is the New Ventures Team, which helps producers improve their management and marketing strategies with tools such as *INVenture* an online business planner. Market development tools such as *Indiana MarketMaker* are also very beneficial to specialty agriculture producers. *Indiana MarketMaker* is an interactive

mapping system that locates businesses and markets of agricultural products in Indiana, providing an important link between producers and consumers. Both teams use applied research in their Extension programming and collaborate extensively with the Indiana State Department of Agriculture as well as other state and national agencies and institutions. New initiatives by Purdue University such as the Specialty Crops Center that will help specialty crop producers improve production practices through applied research activities are invaluable to the sustained growth of specialty crops in Indiana.

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