



MICHIGAN STATE
UNIVERSITY
EXTENSION

Outcomes for Michigan's Future

Agriculture as a Force for Economic Growth in Michigan

In Brief

Today's Successes

- MSUE is helping establish an ethanol plant in southeastern Michigan that will employ **more than 200 laborers and skilled-trades employees** during construction and **40 high-wage workers and more than 50 truck drivers** upon completion.
- In a 2002 national survey, agricultural and horticultural producers were asked, "To whom would you turn if you discovered a crop disease outbreak on your farm that you didn't recognize?" **Eighty percent** stated that Extension would be their first contact.
- According to surveys by the Sugarbeet Advancement Program, growers who participate in the program realize a **\$30 per acre enhancement of their revenue**, a total increase of \$1 million each year.

Tomorrow's Results

- The goal of the MSU Product Center for Agriculture and Natural Resources is development of **100 initial business plans** resulting in 50 detailed feasibility studies that will lead to the start-up of **25 new businesses** or new product lines.
- The MSU Floriculture College of Knowledge will build the skills of 80 to 100 Michigan greenhouse workers. These programs support Michigan's \$342 million floriculture industry.
- The MSU Dairy Team estimates that MSUE programming will help farmers generate a profit of **\$35 per cow or about \$10 million in 2005-06**.
- The MAES and MSUE are working with cover crop systems that will **save up to \$250 per acre** in production costs.
- With help from MSUE and MAES, 20 percent of Michigan's 3,000 dairy farms practice managed rotational grazing for their stock. All Michigan beef cow/calf and sheep operations graze their livestock. There are 7,000 beef and 1,600 sheep farms in Michigan.

Michigan's Priorities in the Agricultural Industry

Maintaining agriculture as a major economic driver in Michigan: Ranking second to manufacturing, agriculture is a major industry that is increasing its contribution to Michigan's economy. For every farmer nationally six other people are connected to the agricultural industry--in the processing, transportation and restaurant industries. The value of the total agricultural industry, including processing, is estimated at \$37 billion per year.

Enhancing economic value and expanding market and export potential: Michigan agricultural and related industries have the potential to produce an even wider variety of products and services if backed by the necessary research, education and technical information.

Protecting the industry from threats: It is vital to have continued research and education to help protect an industry that is vulnerable to weather, emerging disease and other threats. Agrosecurity is also a critical component of homeland security.

MSU Capacity:

- **Reach:** The MAES and MSUE conduct research and deliver information quickly and efficiently to a wide range of agricultural audiences. Research conducted on the MSU campus and at 15 field stations across the state is disseminated to farmers, businesses and individuals by MSUE offices serving every Michigan county.
- **Experience:** The MAES and MSUE have well-established track records of helping Michigan's agricultural industry remain economically viable. From research efforts aimed at helping farmers increase crop yields to educational programs that help them market their crops to improve profits, farmers have long looked to MSU research and Extension programs to improve their economic viability.
- **Expertise:** The MAES and MSUE draw on the wealth of knowledge across the university, including agricultural marketing experts, leaders in the world's foremost packaging school, food science and human nutrition innovators, and nationally recognized plant and animal scientists.
- **Track record:** The seamless movement of information from the laboratory to the classroom and the field means the difference between profit and loss time and time again.
- **"Feet on the street":** MAES scientists conduct research not only on the MSU campus but at field stations around the state to study plant and animal responses under the same weather, soil and seasonal conditions that Michigan producers face. MSUE educators transfer this knowledge through a network reaching every Michigan county.
- **Trust:** In a 2002 national survey, agricultural and horticultural producers were asked, "To whom would you turn if you discovered a crop disease outbreak on your farm that you didn't recognize?" Eighty percent stated that Extension would be their first contact.
- **Content:** MSUE educational programs are set apart from other informational sources by their foundation in MAES-generated research. Researchers rigorously adhere to the scientific method, and their work faces strenuous peer review before it is considered for dissemination or publication.

Sampler of Success:

Michigan farmers produce the second most diverse agricultural bounty in the nation. Michigan has the opportunity to add critical value through new product development and niche marketing for such crops as blueberries, tart cherries, pickles and bedding plants. Cherries and blueberries, which have documented human health benefits, are examples of "functional foods" and part of the exciting new field of nutraceuticals. Here are a few examples of MSU's success and capacity to produce desirable outcomes for the agriculture industry.

- MSUE is part of the team that is establishing an ethanol plant in southeastern Michigan. Construction of the Great Lakes Ethanol facility is scheduled to begin in spring 2005. During construction the new facility will **employ more than 200 laborers and skilled-trades employees**. Upon completion, the plant will **employ 40 high-wage workers and more than 50 truck drivers**. It will process about 18 million bushels of corn into 50 million gallons of ethanol per year.
- In 2004, when rainy spring and cold summer weather wreaked havoc on field crops, **MAES generated research information was quickly dispatched** via MSUE's statewide Field Crop Area of Expertise Team and Crop Advisory Team to help farmers select and plant varieties that would **provide adequate yields** under trying conditions.
- Two-thirds of Michigan sugar beet growers responding to a 2001 survey reported that they considered the **Sugarbeet Advancement Program the most credible and/or reliable source of sugar beet production information** available. Nearly three-fourths of respondents said they gained research-based information and skills for improving sugar beet production. MSUE and MAES are partners in the program, which **supports Michigan's \$111 million sugar beet industry**.
- The MSU Product Center has worked closely with the west Michigan apple industry to conduct market and production research for fresh cut apple slices. In April 2004, McDonald's announced that it would offer fresh cut apple slices on its children's meals and allow restaurants to offer the product on their adult menu. **A Michigan processor was one of three chosen to produce the slices. McDonald's reports that movement of fresh cut apple slices** is exceeding expectations, with **annual consumption of 35 million pounds**. MSU research has identified an additional seven potential market channels for the Michigan product.
- MAES food scientists are studying which food nutrients might **help reduce risk of cardiovascular disease and heart attacks**. One food being researched is Michigan tart cherries, which contain antioxidants that help lower cholesterol levels. Michigan is the nation's largest producer of tart cherries, supplying 80 percent of the U.S. market annually. **The 2003 crop was valued at nearly \$58 million**.
- MAES research provides information that supports existing agribusiness ventures and can generate new jobs and businesses. In 2003-04 MAES research contributed to the start-up of **three new Michigan businesses**.
- MAES researchers and others garnered a **\$1 million grant** from the U.S. Department of Agriculture to study DNA markers and gene expression patterns to determine components that control lean growth and meat quality traits.
- Consumer awareness of animal welfare issues led to the development of the Swine Welfare Assurance Program (SWAP). SWAP helps consumers understand pork producers' practices that protect animal health and lead to wholesome and safe food products. An MSUE specialist has certified five veterinarians and three Extension specialists to offer this program to farmers. **More than 200 producers representing 60 percent of the swine produced in Michigan** have participated in SWAP.

Outcomes for Michigan's Future

The potential for expansion of the Michigan agricultural industry is strong because the state is within 500 miles of half of the U.S. population and produces agricultural products that readily lend themselves to value-added production.

The state's \$93.2 million general fund investment in research development, educational outreach and regulatory infrastructure is made through funding the MAES, MSUE and the Michigan Department of Agriculture. This investment essentially represents the research and development arms of this decentralized but vital \$37 billion industry in Michigan. This is a small price to pay to retain and support Michigan's No. 2 industry.

Agriculture as a Force for Economic Growth

MAES research initiatives over the next year will focus on:

- Studying Michigan fruit and vegetable supply chain management, developing innovations and enhancing global competitiveness.
- Researching financial decision-making and investment tools for agricultural producers and processors.
- Developing best practices in human resources management skills for agricultural industry leaders to increase labor retention and reduce labor costs.
- Examining consumer preferences for foods and services.
- Developing fruit and vegetable postharvest technology to enhance quality and value.
- Optimizing the design and operation of commercial cooking systems for ready-to-eat meat and poultry products.
- Developing innovative production systems for Michigan commodities to increase market share and increase grower profit.
- Developing improved genetic material in animal and plant species that match Michigan markets and production conditions.

MSUE educational priorities and outcomes for 2005-06 will include:

- The MSU Product Center for Agriculture and Natural Resources works through a network of 28 certified innovation counselors across the state. This year, these counselors will generate **400 contacts** to investigate the potential for new products or business concepts. They will help develop about 100 initial business plans and 50 detailed feasibility studies **leading to 25 new businesses** or new product lines.
- MSUE will hold six business succession planning workshops across the state to help guarantee survival of family farm businesses. Up to **180 individuals representing about 90 farms** will attend these programs, which **can save them in total about \$1 million in taxes and penalties**.
- MSUE programs will support **Michigan's \$60 million Christmas tree industry**, the nation's third largest. Programs will involve **more than 300 Christmas tree growers** in activities related to helping them produce Fraser fir, a popular high-value tree, and to identify and manage insects and diseases.
- The MSU Floriculture College of Knowledge will be offered to help build the skills of **80 to 100 greenhouse workers and support Michigan's \$342 million floriculture industry**. This year, 20 or more greenhouse managers will also attend business management courses for floriculture companies.
- The MSUE Farm Management team will work with more than 250 farmers in tax management programs to help them better handle their records and avoid penalties totalling **\$1 million to \$3 million annually**.
- In 2005, producers who take part in MSUE dairy programs will **realize \$10 million in profits or \$35 per cow**.

Spotlight on Success

"MSUE is doing exactly what we need from a farmer perspective. We have to have better markets for our products if we are going to survive as farm businesses. It's great how MSUE has been able to work in partnership with county governments, University of Michigan and business groups from all parts of our regional economy to help us identify new opportunities for value-added agriculture."

John Tuckerman, Lenawee County farmer

MSU is an affirmative-action, equal-opportunity institution.

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