

*michigan agricultural experiment station*  
**general information**





*Photo by University of Nebraska - Institute of Agriculture and Natural Resources*

## the early years

**F**or many, the words “agricultural experiment station” conjure images of rural test plots of wheat, corn and soybeans, and pasture lands spotted with grazing, ear-tagged livestock. Indeed, when the Hatch Act was passed in 1887 to establish a nationwide network of agricultural experiment stations through the U.S. land-grant college system, its main goal was to provide federal aid to support the research and education outreach activities necessary to improve American agriculture and the life of the farmer.

The Michigan Agricultural Experiment Station (MAES) was created on February 26, 1888. It consisted of an on-campus laboratory, a few rented or donated off-campus properties for field experiments and a handful of scientists. Early research efforts contributed to the development of hybrid corn, which doubled farmers’ yields; the development of the Red Haven peach, one of the most widely grown varieties in the world; the establishment of Michigan’s sugar beet industry; the creation of a botanical garden with more than 5,000 plant species and varieties; and a program to help eradicate bovine tuberculosis in the United States.

## expanding horizons

**M**ore than 120 years later, the MAES remains true to its broader mission in support of Michigan agriculture while creating the research base to address new programs and initiatives that will drive Michigan into a prosperous future.

In on-campus research facilities and at 14 outlying field stations located across Michigan, more than 300 MAES scientists from six colleges (Agriculture and Natural Resources, Engineering, Natural Science, Communication Arts and Sciences, Social Science and Veterinary Medicine) at Michigan State University (MSU) provide answers to questions that are important to Michigan residents.

The mission of today's MAES is to engage in innovative, leading-edge research that ensures the wise use of agricultural, natural and community resources and enhances the quality of life in Michigan, the nation and the world. In addition to agricultural production research, MAES scientists are investigating topics that range from alternative energy and biofuel production to childhood obesity, community development, environmental stewardship, food safety and the quality of life of Michigan youth and families.

The MAES has one goal – to make Michigan's economy as viable, environmentally sound and as sustainable as possible. The leading-edge research coming out of its field stations and on-campus research facilities will keep the MAES competitive and able to leverage the additional expertise and resources necessary to accomplish this objective.



*Photo by Carrie Scheele*

## located across michigan

One of the unique and perhaps most important features of the MAES is its field stations. Although the MAES on-campus laboratories generate significant, cutting-edge research, its outlying field stations have the added advantage of focusing research and outreach activities on the agricultural and natural resource needs of particular parts of the state.

Michigan's climate, soil profile and growing conditions vary dramatically from north to south and east to west. For example, recommendations for growing alfalfa in the Upper Peninsula are different from those for growing the crop in the Lower Peninsula. The west side of the state is home to a thriving horticulture and specialty crop industry, and growing conditions in the Saginaw Valley are ideal for dry beans and sugar beets. With much of the Upper Peninsula covered by trees, field stations there support a large forest products industry.

All this research is aimed at providing growers and commodity groups with the critical information they need to remain viable and competitive in the global economy while conserving Michigan's vast array of natural resources.



*Photo by Natalie Ebig Scott*

## funding resources

MAES research projects are funded through a mixture of state, federal and private funds. In Michigan, state contributions represent more than 80 percent of the total MAES base budget. MAES scientists use this state funding as leverage to compete for additional research dollars from foundations, industries and organizations such as the National Science Foundation and the National Institutes of Health. Michigan's commodity organizations, long-time supporters of MAES research, have partnered with its scientists on numerous research initiatives to improve production, processing and marketing of their products.

Complementing the agricultural experiment station system is another key land-grant university player - Extension - which was created in 1914 by the Smith-Lever Act. Today, MSU Extension educators, in concert with on-campus faculty members and MAES field stations, serve every Michigan county with programming focused on agriculture and natural resources; children, youth and families; and community and economic development.

## research priorities

**B**ecause Michigan's agricultural and natural resources are in a constant state of transition, MAES research priorities and educational goals must remain fluid and flexible. Research goals are continually evaluated for relevance and impact. Through strategic planning with MAES-affiliated colleges, MSU Extension and key stakeholder groups, the MAES has developed five priority areas:

- **Food and Health:** Microbial and chemical food safety, nutritional enhancement of foods (functional foods), nutritional immunology, consumer choice and diet, food security, general nutrition and epidemiology.
- **Environmental Stewardship and Natural Resources Policy and Management:** Land use policy and management, air quality, soil conservation, waste management and use of waste products, landscape ecology, ecosystem management and water research (quality, watershed management, and water use for agriculture and natural resources businesses).
- **Enhancing Profitability in Agriculture and Natural Resources:** Basic research in the plant and animal sciences to reduce dependency on chemicals and enhance resistance to diseases, insects and environmental stresses; integrated crop management; and the identification and development of value-added agriculture opportunities for Michigan.
- **Secure Food and Fiber System:** Basic and applied research on new, emerging and reemerging infectious diseases, invasive species (insects, plants, pathogens and aquatic animals) and agrosecurity.
- **Families and Community Vitality:** Community and economic development, recreation/tourism, youth, aging, family dynamics, demographics, and rural and urban community security.

## ongoing innovation

**B**alancing the conservation of Michigan's natural resources with the growing needs of the state's people and industry of Michigan requires continual research on new methods, technologies and management strategies. MAES researchers strive to maintain balance between the industrial, agricultural, recreational and residential uses of the state's natural resources while protecting the environment. MAES research also focuses on the human resources of the state through initiatives like Families and Communities Together, a multi-disciplinary coalition



*Photo by Rufus Isaacs*

linking researchers and resources with community partners and initiatives to support the health and well-being of Michigan's children, families and communities.

Field research and Extension programs also help drive Michigan's 21st century economy by supporting alternative energy and biofuels research and investigating food safety and security issues. Urban issues such as rehabilitation of brownfield sites, public health programs, entrepreneurial consulting and nutrition issues are also an important research focus.

## value-added impact

**R**esearch and education activities are fundamental to the future success of Michigan. Collectively, the MAES and MSU Extension represent programs that serve hundreds of thousands of Michigan residents with a \$1.062 billion impact on the state. Every dollar that the state invests in these two organizations leverages an additional \$2.33 in federal funds and external contracts, grants and other revenues to serve the state's residents.

The economic, environmental and societal challenges facing the state require fundamentally sound research and continuing education in order to ensure a viable, sustainable future. Agriculture and tourism are leading segments of Michigan's economy.

Strengthening the productivity and diversity of these industries through innovative research builds strong industries and strong communities. Research identifying toxins in food protects families; research to develop new varieties fortifies our agricultural industry; research on water quality enhances the state's natural resources and people's health; and research on human and animal diseases enhances quality of life. Combined, these research endeavors give Michigan a competitive edge for current and future generations.



*Photo by Kurt Stepnitz*

### For more information, contact:

**MAES**  
**109 Agriculture Hall**  
**Michigan State University**  
**East Lansing, MI 48824-1039**

**Phone: 517-355-0123**  
**Web: [www.maes.msu.edu](http://www.maes.msu.edu)**  
**E-mail: [maesdir@msu.edu](mailto:maesdir@msu.edu)**