

Michigan



Grow With Us

www.michigan.gov/mda



If you seek a pleasant peninsula...

Michigan's Bio Basics

Ripe with opportunity. Michigan's dynamic agri-food system generates \$60.1 billion and supports more than 1 million jobs annually. With strong public and private investment— \$8.6 billion since 2000— and the nation's second most diverse commercial crop base, this industry will continue fueling Michigan's economic development.

Michigan's Agricultural Sector

General industry facts

53,000 farms, 10.1 million acres in farmland
\$1.34 billion net farm income

Economic value of production

\$2.5 billion for field crops
\$2.4 billion for livestock/dairy
\$918 million for floriculture/ornamentals/turfgrass
\$435 million for vegetables
\$383 million for fruits

Exports

\$961 million generated through exporting, including:
\$222.4 million for soybeans and products
\$162.6 million for feed grains and products
\$26 million for processed feed

Inputs and supplies

\$304.3 million for fertilizer and lime
\$198.2 million for pesticides
\$209.5 million for petroleum fuels and oil
\$407.6 million for feed purchased
\$315.2 million for seed purchased



Sources: National Agricultural Statistics Service
MSU Product Center for Agriculture & Natural Resources

The Michigan Advantage

When it comes to creating a bio-based economy, Michigan has a natural competitive edge: a skilled work force, a solid scientific and manufacturing infrastructure, a business friendly climate and overwhelming public policy support. There's no question why companies are locating in Michigan.

Michigan is open for business:

 **Infrastructure.** Michigan supports business. Our well established infrastructure includes: toll-free highways, 29 railroads operating on nearly 4,000 miles of rail, and 18 commercial airports. Detroit Metro serves as the largest North American hub for Northwest Airlines offering regular nonstops to 16 destinations in Japan, Mexico, Europe and Canada. Forty commercial cargo ports give direct access to the Great Lakes, Mississippi barge system/Gulf of Mexico and the Atlantic.



Blue Water Bridge and Freighter: Rich Kelly

 **Quality.** Michigan can trace ingredients back to their sources, preserving product identity throughout production and distribution.

 **Environment.** Michigan boasts an unsurpassed availability of fresh water, a moderate climate and a wide variety of soils.

 **Business Investment.** Michigan is rated #1 in the nation for international automotive research and development and private R&D spending. It also has the fastest growing life sciences industry in the U.S. and ranks #3 for new and international capital investment, corporate facilities and expansions.

 **Public policy.** Michigan's academic and government institutions continue to foster an environment that supports agricultural production, research and development.



“Michigan is committed to cultivating an economic climate that allows all business to prosper.”

Jennifer M. Granholm
Governor, State of Michigan

 **Education.** Michigan's post-secondary schools score among the best in the nation, and are recognized world-wide for their research. Michigan has 15 four-year universities, more than 50 independent colleges, universities and institutes, and 29 two-year community colleges, allowing us to compete effectively in the 21st century job market.

 **Skilled workforce.** Michigan has the fourth largest high-tech workforce in nation, and boasts more automotive engineers and suppliers than any other state.

 **Safety.** Michigan protects food from farm to fork. Carver's risk assessment, an agri-food industry benchmark for grain, seed and other commodities, gives Michigan a low risk rating because of our stringent safeguards.

 **Location.** Michigan is located within 500 miles of half of North America's population/income and near important hubs like Toledo and Chicago. Michigan also boasts one of the busiest international border crossings in the nation.



Detroit Skyline: Travel Michigan



*Michigan is a great place
to live, work and play.*

A Bio New World

A bioeconomy includes the production of goods and services derived from plants, animals, wood products, and other renewable resources, often as substitutes or replacements for petroleum based goods and services. Michigan has a strong foundation for an emerging bio-based economy.

Start Fueling the Future

Biofuels. Solar energy. Wind power and more. Michigan is committed to increasing alternative energy production and use to gain energy independence, foster national security, strengthen rural economies, reduce air and water pollution, and decrease greenhouse gas emissions.

Ethanol

Michigan's first ethanol plant opened in November 2002.

The state has three corn-to-ethanol plants currently in operation, two under construction, and several more proposed.

All are in the range of generating 50 to 100 million gallons per year. Michigan continues to adopt new technologies and research cutting-edge methods of producing cellulosic ethanol from other biomass sources, including sugar beets, wood chips, switchgrass and other crops.



Biodiesel

A recent study confirms that Michigan's current soybean production and biodiesel demand can support biodiesel manufacturing plants in the state. Michigan's first biodiesel plant opened in October of 2006. Two plants are currently in operation, with production capacity of 20 million gallons per year. An additional plant is under construction, with several more proposed.

Wastewater Anaerobic Digesters

Anaerobic digesters are an effective method of producing usable energy. Farms can use anaerobic digesters to recover methane from animal manure.

Anaerobic digesters not only reduce energy costs but also methane emissions. Using anaerobic digestion, food processing facilities can meet environmental

regulatory requirements to protect groundwater while meeting their energy needs.





Biotechnology: Growing Innovations

Michigan is playing an exciting role in biotech--from theory to research, from practical application to full-scale manufacturing. Bio-based inputs are replacing petroleum and non-renewables in fuel additives, industrial chemicals, heat/power sources, textiles, polymers, lubricants, adhesives, automotive biocomposites, fertilizers, building materials, and more.

Core Technology Alliance

In addition to cultivating great crops, Michigan cultivates strong partnerships among government agencies, universities and the business sector.

Michigan's Core Technology

Alliance is a collaborative network of advanced technology service facilities located at major research institutions across Michigan. These commercially oriented, community-spirited, and technologically sophisticated centers of excellence are fee-for-service laboratories to support biomedical research. This alliance enables coordinated scientific leadership, marketing, strategic planning, and decision-making across the core facilities.



Public Policy Support

Michigan Renewable Fuels Commission

The Michigan Renewable Fuels Commission was created by Governor Jennifer Granholm and the Michigan Legislature as part of a seven-bill package designed to fuel the growth of the state's alternative energy industry. The package also:

- Reduced the gas tax by 36 percent on fuel that contains E-85 ethanol and by 20 percent on biodiesel blends;
- Provided grants to service station owners who renovate or expand their existing stations to make E-85 and biodiesel available; and,
- Allowed for the creation of new agriculture, forestry and renewable energy renaissance zones to help spur additional ethanol and biodiesel plants.

In addition to the renewable fuels legislation, Michigan recently enacted legislation to encourage and promote investment in anaerobic digestion facilities through tax incentives.

Governor Granholm has also set an aggressive target for 1,000 biofuel pumps available in Michigan by 2008. For more information, visit www.renewablefuelscommission.org.



The NextEnergy Zone

Michigan has created a NextEnergy Zone engaged in the research, development, and production of alternative energy sources. A 40,000-square-foot center is the catalyst of the NextEnergy initiative. It includes laboratory facilities, business incubator space, collaborative meeting space and other facilities that support the alternative energy industry.

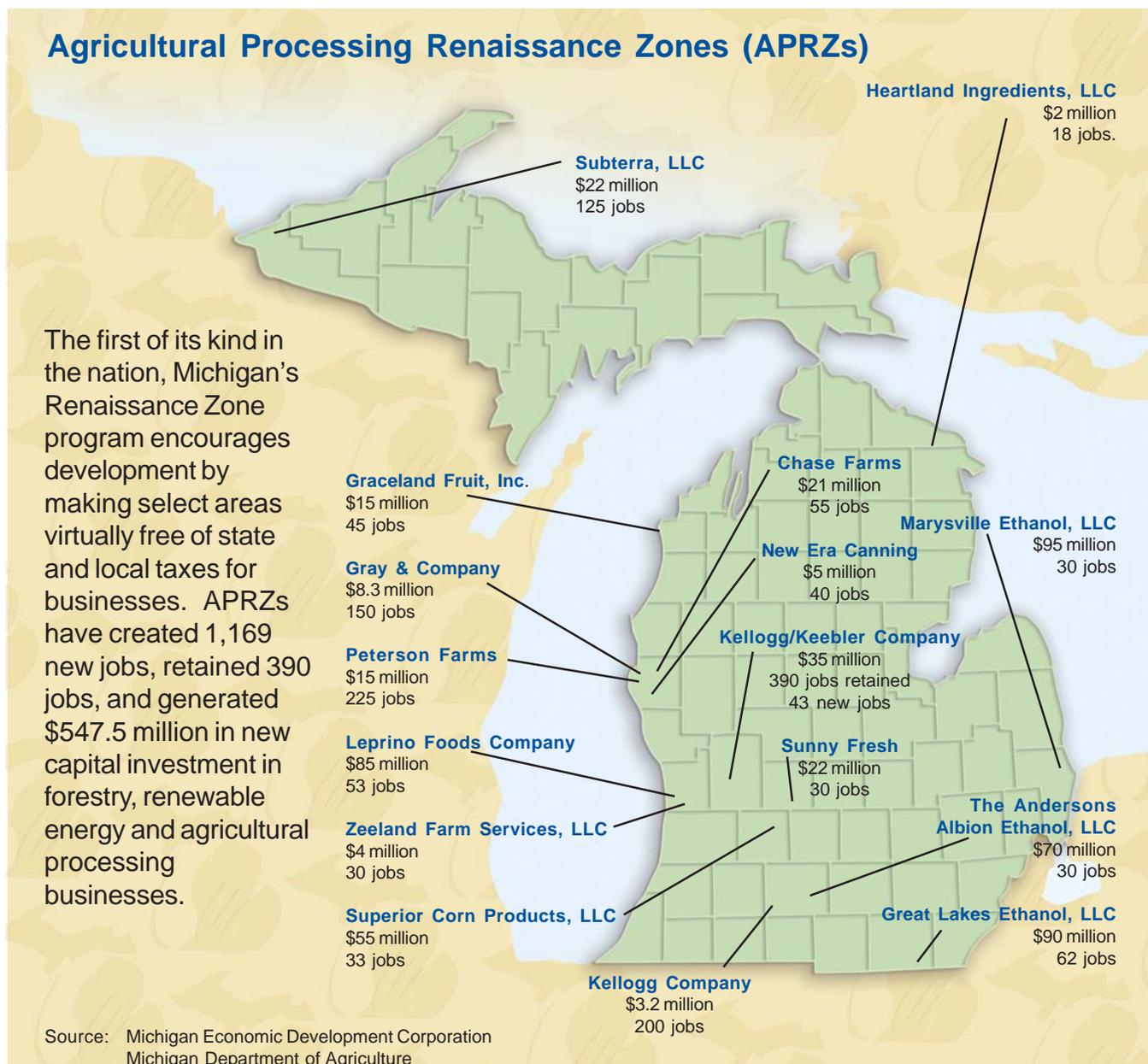
The Competitive Edge

Now is the perfect time to begin your business relationship with Michigan. Our state offers incentives for companies relocating here and those that choose to grow and expand here, paving the way for Michigan's economic future.

Michigan's 21st Century Jobs Fund

The 21st Century Jobs Fund is a \$2 billion, ten-year initiative created by Michigan Governor Jennifer Granholm and the Michigan Legislature to accelerate the diversification of Michigan's economy by increasing the amount of capital available to Michigan companies. Approximately \$800 million of the fund is devoted to competitive-edge technologies in the targeted sectors of **life sciences, alternative energy, advanced automotive** and **homeland security**.

The fund is expected to create tens of thousands of new jobs in the next 10 years.



Julian-Stille Ag Innovation Grants

Agricultural Innovation is the heart of Michigan's growth potential. These grants are designed to establish, retain, expand, attract and develop valued-added agricultural operations in Michigan.

Key Facts:

- 40 projects awarded nearly \$5 million in 27 Michigan counties
- Expected to generate \$43 million in capital investment and create 267 new jobs



Sample of projects funded include:

Ag Pro Specialty Products

Oilseed extrusion plant in Hillsdale County to supply oil for an integrated biodiesel plant at the same location.

Geerlings Hillside Farms

Renewable energy from hog manure in Allegan County utilizing anaerobic digestion.

Harley Sietsema Farm and Feeds, LLC

Energy for a feed manufacturing facility in Montcalm Country through direct gasification and combustion of turkey litter from multiple Michigan turkey farms.

For a complete list, visit www.michigan.gov/mda.



*“Michigan’s agricultural industry is robust,
our entrepreneurial spirit is alive,
and there are
unlimited opportunities to grow.”*

Mitch Irwin, Director
Michigan Department of Agriculture

Quality of Life

Pure Michigan: At the end of a technology-inspired work day, Michigan is the unsurpassed place to live and raise a family. Whether you like to camp, fish, hunt, hike, canoe, ski, snowmobile or swim, or if bright lights, big cities, museums, concerts, restaurants, casinos, and spa treatments are more your style, Michigan offers year-round recreational opportunities for everyone.

The Great Outdoors

In Michigan, we work hard when there is work to do, and play even harder when the work is done. Michigan is the Midwest's premier outdoor vacation destination. With the longest freshwater shoreline in the world, 11,037 inland lakes, and 36,350 miles of rivers, you are never more than six miles from a body of water or 85 miles from a Great Lake. With its abundance of fresh water, Michigan has earned its nickname, the Great Lakes State.



Our state offers four seasons of scenic beauty and recreational amenities, including sandy freshwater beaches, 99 state parks, 3 national forests, 5 national parks and shorelines, a national marine sanctuary and underwater preserve, more public golf courses per capita and more boat registrations than any other state. Michigan is also the top ski destination in the Midwest.

A Great Lifestyle

Pure life, pure fun: In Michigan, you can live in a great community and still be just a short commute from work. Michigan has fabulous, affordable mid-sized cities that offer low housing costs, competitive land prices, strong schools and low property taxes. Metropolitan areas offer many unique, vibrant communities, each with its own flavor and personality. We treasure our cultural experiences through outdoor concerts, festivals and events, and support our hometown sports teams from Pee Wee, high school and college teams, to minor and major league teams.

Find out what pure feels like.

PURE MICHIGAN
Your trip begins at michigan.org

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Mackinac Bridge at Night: Randall McCune



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