Agriculture Subcommittee on Agricultural Processing

Recommendations on Barriers to Maintaining and/or Attracting Agricultural Processing in Michigan

Subcommittee members: Rep. Cindy Denby, Chair
Rep. Charles Brunner
Rep. Marcia Hovey-Wright
Rep. Joel Johnson
Rep. Bruce Rendon

The subcommittee began hearings on February 9, 2011 and continued hearings weekly until March 16, 2011. Presentations were given by many representatives of the agricultural industry in Michigan. We'd like to extend a thank you to all those involved in arranging these presentations and those taking the time to give testimony to this subcommittee. This report was approved by the subcommittee on April 27, 2011. A motion was made, seconded and passed that support for this report does not commit any member to a vote on any particular legislation.

Throughout the course of the subcommittee hearings, several concerns were heard and potential solutions given. These were gleaned through the testimony, written submissions and meetings with various stakeholders. Attached are the submissions from various sources.

Recommendations:

I. ***Establish a workgroup with a firm timeline.*** Various barriers were discussed and differing solutions presented in many different areas. Because of the broad spectrum of solutions suggested, it is recommended that a workgroup shall include representatives such as those from state agencies, the scientific community, food processing, environmental and legislators that will build consensus on the following issues and potential solutions:

A. Environmental Regulations (using Quality of Life approach)

1) Bring transparency to permitting process and fees.
2) Provide for education on permitting and compliance, such as compelling MDARD & MDEQ to hold very specific food processor workshops (i.e.,one for all the apple processors)
3) Access to water can be an important factor in locating agricultural processing facilities. In areas of the state where additional water withdrawals may result in adverse resource impacts, the department should facilitate the formation of water users committees to work toward voluntary agreements that allow agricultural processors to access water resources necessary for efficient operation (MCLA 324.32725).

4) Water discharge testing is prohibitively expensive. Reduce water discharge testing requirements to monthly or quarterly sampling frequency once a history has been established.
5) The length of time taken to receive a DEQ permit has improved greatly, but the timeline should be compared to surrounding states and steps recommended to facilitate the siting of agricultural processing facilities in Michigan. Included in those recommendations should be highlighting the value of pre-application meetings with the department to streamline the permitting process to give Michigan an edge in attracting processors .
6) Water discharge issues were many throughout the state. The investment in water treatment for a small operation is prohibitive--there's just not enough capital available. The standards for water discharge are much tougher than surrounding states. Review the "No Adverse Impact" policy to make sure common sense is being used. Adjust standards to be more in line with surrounding states, basing the standards on scientific health facts. DEQ should continue to work with processors to allow testing and study of new and advanced treatment options. The department should work to identify public water treatment facilities that have excess capacity that may provide treatment services at a reasonable cost to new agricultural processing facilities. The department should continue to update any water discharge standards to reflect the latest scientific information available.

B. Food Safety

1) Establish risk-based criteria
2) It was suggested that several state and federal inspections are duplicated, increasing costs to processors. Identify most cost efficient regulation - Federal, State, Local and/or 3rd party
3) In some cases, inspection fees, food safety audit fees and some permit fees are not scaled to the size of the operation. Determine if fees from all departments involved can be scaled to the size of the processing operation and recommend changes.
4) Lack of inspectors that understand the specific agri-processing facility or availability to inspect products in a timely manner. More availability of knowledgeable inspectors would require more funding. Looking at a system that would require less inspection for those who regularly pass inspection and focuses on those who might need inspection more frequently could be helpful.

C. Nuisance Protection

1) The Right to Process legislation (1998 PA 381 - MCL 289.821-289.825) doesn't provide enough protection against nuisance lawsuits, local zoning, etc. It also seems to try to do too much with very little. Review the Right to Process legislation so that those using the best available control technologies are offered protection with legal standing.

D. Designations

1) Agricultural processing is considered to be industrial for the sake of zoning, permits, etc. Many of the processing operations are not industrial in many ways. Being able to designate some processing in as "agricultural" or defining a new use definition would be beneficial.

2) Elimination or changing Renaissance Zones has been discussed. If Ren zones are eliminated, there will need to be a focus on restructuring to provide some type of designation or incentive for agricultural processing.

Recomendations continued:

II. The Julian-Stilles Value-Added Act has not been funded for several years. Funding incentives by allowing food processors use of the 21st Century Jobs Fund through the MEDC is imperative. (Already passed by the legislature, with expectation the Governor will sign during the last week of April.)

III. Currently food processing byproducts are classified as industrial waste. Many of these are actually usable as products to be sold or used by other producers or manufacturers. Reclassify the non-hazardous process residuals that are usuable as products from low hazard solid waste to valuable by-product and reduce testing requirements to allow for agricultural use exemptions.

IV. The district offices and the state office of the MDEQ seem to have a disconnect. Ensure that district offices and the state office are using identical, written criteria based on law and approved rules to avoid sending mixed messages.

V. Small water discharge operations pay the same fees as large operations. Modified language to the Part 22, Groundwater Quality Rules, Rule 2211 would reduce the fee from a current $1,500 to $200 for discharges under 500 gallons per day, but does not eliminate fees entirely. It places this category of discharge in line with the other low volume discharges described in Rule 2211 such as Laundromats that discharge less than 500 gallons per day. The change was suggested by MDEQ and is attached. The proposed change is in caps.

VI. Agricultural processing equipment is considered taxable under the personal property tax. The Governor has indicated he will be proposing changes to the personal property tax. After hearing those proposals, work to include eliminating agricultural processing equipment from personal property tax if possible considering the impact to municipal government.

VII. Discussion with public utilities on how they can provide resources to allow for expansion or creation of agriculture processing facilities needs to occur. Lack of utilities to support expansion or new operations was a major concern.

VIII. There needs to be real, meaningful collaboration and cooperation between state departments and agencies that work with food processors. The only way to grow agricultural processing will take a concerted effort by the state to make sure there is an attitude of teamwork throughout state efforts. Many anecdotal incidents describing

"game-playing" and a feeling of "let's see how many barriers we can put in your way" were shared. Many involved in growing food processing felt a need for an attitude from "the state" that says "Let's see how we can say YES!"

IX. A One Stop Shop for agricultural processing needs to be implemented by the state that includes all information needed to expand or start a processing operation, including timelines, potential financial incentives, permits required and who to contact. This would be implemented and managed by both MEDC and the Department of Agriculture?

Enhancements:

There were several points made that would enhance agricultural processing that are not necessarily barriers but would certainly be of benefit in expanding this sector.

- Transportation Infrastructure is important. Ensuring the state does not relinquish the many short rail spurs left in Michigan will be of great help.

- Discussion between state agencies regarding processing of privately owned forest land.

- Encourage investment to facilitate a pork processing facility.

- Recommendations from Michael W. Hamm, MSU (see attached for further information)
    - Design and engineering for smaller-scale processing.
    - Encourage establishment of food business districts and networks to serve regional buyers and sellers, and provide valuable business□to□business interaction and innovation because of A lack of regional food processing and distribution hubs and spokes.

SUMMARY:

The above issues are all very important to the expansion and/or attraction of food processing operations. The following paragraph, taken from the summary of the MSU Product Center working paper from September 2010 titled "The Economic Impact of the Michigan Food Processing Industries" sums up the testimony we heard from most stakeholders:

"However, to be successful, barriers to enhanced processing need to be addressed. While there are several barriers to enhanced processing, there appears to be only one that has a particularly adverse affect on food processing, waste water treatment and handling. Policies that would allow the effective and efficient disposal of waste water would improve the ability to expand Michigan's food processing activities. Such expansion generates new direct investment in facilities and equipment and fosters economic growth; particularly to rural areas, many of which are facing high rates of unemployment. Building up Michigan's food processing sector not only generates increased demand for Michigan farm products but also sets in motion secondary impacts that benefit all sectors of the economy"

Thank you to all those who took the time to testify before the subcommittee:
Mike DiBernardo, Economic Development Specialist, MI Department of Agriculture
Jim McBryde, MEDC on the 21st Century Jobs Fund
Ray Van Drissche, Michigan Sugar
Mitch Miller, CEO, CarbonGreen BioEnergy
Lyndon Kelly, MSUE, Irrigation Specialist
Mike Schena, General Manager, Better Made Potato Chips
Dr. Mike Hamm, MSU
Jim Byrum, MI Agribusiness
Jim Janiczek, DEQ, Water Discharge
David Hamilton, DEQ, Water Withdrawal

Attachments:

1) Recommendations for the Legislature from Michael W. Hamm, MSU
2) Statement on Food Processing submitted by:
   Michael W. Hamm, C.S. Mott Professor of Sustainable Agriculture, MSU
   Patty Cantrell, Principal, Regional Food Solutions
   Kathryn Colasanti, Academic Specialist, C.S. Mott Group for Sustainable Food Systems, MSU
3) Executive Summary of the Michigan Good Food Charter
4) MSU Product Center working paper from September 2010 titled "The Economic Impact of the Michigan Food Processing Industries"
5) Suggested changes by the DEQ for Part 22 Groundwater Quality (Jim Janiczek)
6) Food System Infrastructure: Michigan Good Food Work Group Report Series

House Subcommittee meeting on Agriculture Processing, March 9, 2011

Michael W. Hamm, C.S. Mott Professor of Sustainable Agriculture, Michigan State University

A new generation of agricultural packing, processing, and distributing is on the rise in Michigan as food markets call for greater traceability, wider variety, and new characteristics, such as locally grown. Making sure entrepreneurs in this new business pipeline get the help they need along the way is one sure way for Michigan to grow its agri-food industry for the future.

Michigan has the potential to reduce its unemployment rate by nearly 1.5 percent over three years by committing to a comprehensive support system for agri-food startup success, according to a 2006 MSU Strategic Marketing Institute study. [1] Such a commitment is also the ticket to moving quality food from Michigan producers to schools, hospitals, and other Michigan and Midwest buyers that are increasingly seeking wholesome options closer to home.

The Michigan Good Food Charter provides a roadmap to this future, including detail on food processing needs in the Charter's Food System Infrastructure report. See michiganfood.org.

Here's how the Michigan Legislature can help!

The following recommendations point to the kind of support that can build more successful Michigan companies. Detroit's Hacienda Mexican Foods is one example. Starting very small some 20 years ago, the company now has three facilities, 80-plus employees, and sales near $10 million.

Challenge: Design and engineering for smaller-scale processing.

Action: Apply the state's expertise in manufacturing to the process design and engineering challenges of small and mid-scale food processors. Consider agriculture industry-support mandates or incentives to state-sponsored technical centers to provide expertise and business development.

Example: To meet a major university's request last year for chopped Michigan lettuce, the international food service distributor Sysco had to send Michigan lettuce to a "chop shop" in Ohio first. Similarly, a farm to school initiative in Detroit last year found no facilities for packing local food products in serving sizes for school breakfasts and had to use an Indiana company instead. Designing an efficient "processing flow" is one of the challenges for a small business that could, with Detroit school breakfasts alone, generate an estimated 95 entry-level jobs, according to project partner Eastern Market Corporation. Michigan's manufacturing expertise can help grow these jobs.

Challenge: A lack of regional food processing and distribution hubs *and* spokes.

Action: Encourage establishment of food business districts and networks to serve regional buyers and sellers, and provide valuable business-to-business interaction and innovation. Consider amending legislation, such as Business Improvement Districts (PA 120, 1961), to provide needed incentives and tools, as well as a vision for hub-and-spoke regional food system development.

Example: Farmers near Bear Lake in Manistee County are preparing to retrofit an old food processing facility for the new use of freezing fruits and vegetables for sales to local schools and other buyers. Nearby Triple D Orchards, a small processing plant in Empire, Leelanau County, has invested $500,000 in an 8,500 square foot cold pack facility designed to serve the growing niche of smaller scale companies. A state meat processing review committee has identified significant opportunity for new value-added meat businesses should Michigan help existing slaughter facilities update their processes. These businesses are vital parts of the regional food processing hubs and spokes that Michigan needs to build its regional food capacity and grow new businesses and jobs across the state. Legislation for establishing food business districts is one powerful way to do that along with a comprehensive system of technical assistance and business development support.

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[1] Peterson, H.C., Knudson, W.A., Abate, G. (2006) "The Economic Impact and Potential of Michigan's Agri-Food System, Strategic Marketing Institute Working Paper." The Product Center at Michigan State University, No. 1-1606, January.

Statement Submitted to the
Michigan House Subcommittee on Agriculture Processing
April 2011

Michael W. Hamm, C.S. Mott Professor of Sustainable Agriculture, Michigan State University
Patty Cantrell, Principal, Regional Food Solutions
Kathryn Colasanti, Academic Specialist, C.S. Mott Group for Sustainable Food Systems, Michigan State University

Introduction: Michigan's Opportunity in Processing for Regional Markets

Michigan is a food-processing powerhouse compared to many states. We are home to household brand names like Kellogg, Gerber, and Eden Foods, and we have extensive processing capacity across our major commodities, from cherries, apples, and sugar beets to dry beans and dairy.

Also powerful, but often overlooked, however, are literally *hundreds* of other companies among Michigan's more than 2,200 food and agricultural processing plants.[1] They are the old Polish sausage makers, the new artisan bakers, specialty cheese makers, and everyday smaller processing facilities that serve the state's broad and diverse range of farm and food entrepreneurs.

Michigan ignores these entrepreneurs at its economic peril: the future includes important roles for these smaller, regionally-focused processors and their communities. Markets are demanding more product variety, regional identity, and customized services. Michigan's smaller scale processors, both old and new, are in prime position to help the state's farm and food entrepreneurs supply this growing demand. They have the flexibility and the specialty orientation needed to respond to new tastes while working with a diverse range of farmers and food buyers.

But Michigan must tend to these smaller scale food and agricultural processing opportunities if existing ones are to grow and new ones are to emerge. The necessary tasks of updating existing plants, developing business plans and building connections among smaller-scale food and agricultural businesses may not be headline news material; but they amount to the kind of "economic gardening" that Michigan Governor Rick Snyder, among others, knows will grow jobs, investment, and prosperity across the state.

By supporting these entrepreneurs in a more committed and comprehensive way, the MSU Strategic Marketing Institute projects that Michigan could increase the rate of agri-food startup successes[2] to a projected 851 per year and the state could generate 23,020 direct and indirect jobs per year as a result.[3] The report notes that nearly half of the jobs could

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[1] Michigan Food and Agricultural System Profiles, produced in 2009 at the Michigan Department of Agriculture and Rural Development. Available online at http://www.michigan.gov/documents/mda/Michigan_Food_System_Profile_292926_7.pdf

[2] "Startup success" here refers to the U.S. Census Bureau term "establishment births," which are establishments that have zero employment in year t and positive employment in the first quarter of year t+1.

[3] Peterson, H.C., Knudson, W.A., Abate, G. (2006) "The Economic Impact and Potential of Michigan's Agri-Food System, Strategic Marketing Institute Working Paper." The Product Center at Michigan State University, No. 1-1606, January.

come through relatively small capital investments in small businesses. The return on investment is remarkably high for small-scale ventures, representing 90 percent of the venture establishments that the report projects is possible with increased state commitment and support.

When direct and indirect effects are included, the small ventures would generate one job for every $5,714 of capital investment; whereas the large scale agri-food businesses analyzed would generate one job for every $59,537 of capital investment. Furthermore, it's important to note that small businesses do not necessarily remain small over their lifespan; many may start small but grow to become a significant employer in their community.

Feature Example: The Market Niche of Mid-Tier Processing

One example of a small processor that has grown substantially is Byron Center Meats near Grand Rapids, a 65-year-old family company that opted to reinvest and expand, rather than close down, after a fire in 2000. Thanks to the accidental opportunity to update its facilities, Byron Center Meats has been able to keep up with growth in demand for high quality meats, including the increasing demand for local products.

The company has more than doubled in size since the fire, to 40 employees and well over $8 million in sales. A key component of that growth has been Byron Center Meats' services to area livestock producers who need access to federally inspected processing facilities in order to sell retail cuts to restaurants, grocery stores and at farmers' markets. Over the last two years, this segment of Byron Center Meats' business has grown nearly 10 percent - the reason being Byron Center Meats' size and flexibility.

With capacity to process 15 head of beef cattle per day, Byron Center Meats fits into a size category that is much needed but difficult to find. "Bigger processors won't take 10 head of cattle, and other plants can't handle 10 head," said Business Development Manager Mike DeVries. "We're just right; not too small and not too big."

In addition, Byron Center Meats is willing and able to help livestock producers build their own brands and markets. The company allows for private labeling of meats and provides the differentiated processing and packaging necessary.

"We actually encourage people to self-brand their products," says DeVries of the win-win relationships the company builds with its livestock producer customers. These relationships include meeting with producers and providing information and tools they need to build their brands and businesses in the emerging market for locally produced, identity-preserved meats.

Byron Center Meats' success and services illustrate the low-cost, high-return economic development potential Michigan has in the small- and mid-scale food and farm business sector.

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http://www.productcenter.msu.edu/documents/Working/Economic%20Impact%20of%20Michigan%20Agri-Food%20Final%20010906.pdf.

According to the previously mentioned 2006 report from Michigan State University's Strategic Marketing Institute, Michigan has the potential to reduce its unemployment rate by almost 1.5 percent over three years by committing to a comprehensive support system for agri-food businesses. Ninety-seven percent of those jobs would come from small- and mid-scale startups like the livestock producers and meat product makers that benefit from Byron Center Meats' size and flexibility.

Such a system of support does not require costly incentives but rather more attention and follow-through on the business development needs of agri-food entrepreneurs. One example is the need that startup livestock operations, sausage makers, and local food distributors have for "right-size" processors like Byron Center Meats. It's an example of how Michigan's smaller scale processors are in position to provide needed pathways, or market infrastructure, between supply and demand for regional, differentiated food products.

Michigan should help indentify locations for similar mid-tier meat processors in other areas of the state in order to open up new market opportunities for more livestock producers. Michigan should also help identify the mid-tier processing needs of other agriculture sectors.

Other Promising Examples in Michigan

❖ The Rise of Michigan Artisanal Cheese

A growing number of Michigan farmers are creating small batch cheeses, made from the milk of cows, goats or sheep. The market for their artisan cheeses is large enough that many Michigan cheese makers can't keep up with the demand.[4] Yet MDA rules and regulations are written for large cheese processors, and small-scale dairy processing equipment is expensive and hard to find.[5]

The recently formed Michigan Cheese Makers Cooperative, with 11 members, including several that are nationally recognized, has organized to promote and market Michigan-made cheeses.[6] The group works in conjunction with, and complements the growing culinary tourism and winery industries in Michigan.

Michigan should support the rise of the emerging artisan cheese sector by ensuring scale-sensitive regulations and encouraging state-sponsored technical centers to provide their expertise and business development resources to this sector.

❖ New Place-Based Brands and Products

Local personality and flavor are 21st century selling points for all sorts of products, from food to clothes to specialized equipment.[7] "Food business districts" can bring entrepreneurs together to develop new place-based products and brands, and local business-to-business connections.

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[4] Borden, J. (2009) "Cheese Artisans Renew an Age-Old Craft in Michigan." *Kalamazoo Gazette*, June 15.
[5] Moser, L. (2009) "Cheese Maker Blazes New Trail." *Michigan Farmer*, February issue.
[6] Michigan Cheese Makers Cooperative Web site. Home page. http://www.greatlakesgreatcheese.com/
[7] Arieff, A. (2011) "The Future of Manufacturing is Local." *The New York Times*, March 27.

One example is People's Pierogi Collective, which has grown in one year from a startup hot food cart at Detroit's Eastern Market to contracting with all five Whole Foods stores in Michigan and requests to franchise nationwide. Founder Kimberly Stricker is keeping the franchise potential in mind as she ramps up her new business to a projected 12 employees later this year, producing pierogis (filled dumplings) for more retail outlets and for selling fresh and frozen pierogis from carts at farmers markets and other locations.

The Detroit home of People's Pierogi Collective is key, for both product and brand development:

- Friends, neighbors, and customers think up unique pierogi fillings like peanut-butter-and-jelly and peach-cobbler that distinguish the company and its products (the "people's" part of the brand).
- Eastern Market actively helped Stricker build the business. Staff came up with the idea of a custom hot food cart, which a small manufacturer in nearby Milford, Superb Fabricating, now makes. Eastern Market also helps Stricker source local ingredients for the pierogis, which she aims to source entirely from Michigan.
- The MSU Product Center provided packaging design and business coaching.
- SHAR Inc. (Self Help Addiction Recovery), a Detroit non-profit, is helping Stricker ramp up production with a flexible ex-offender workforce and the lease of commercial kitchen space in one of the closed Detroit Public School buildings that SHAR is renovating into low-cost food business development space. Through their Recovery Park project, SHAR is also working towards developing a market garden at Eastern Market that will supply People's Pierogi Collective.

Michigan should establish and encourage "food business districts," such as Eastern Market, to provide affordable and collaborative space for entrepreneurs to develop their products and businesses, including new enterprises that will emerge from common needs, such as distribution. Food business districts also can serve as hubs of information and services, such as business coaching, and of collaboration and coordination, such as sourcing from local farms and other suppliers, like equipment fabricators.

❖ Michigan Manufacturing Meets Small Farm Challenges

Stonehedge Fiber Mill in East Jordan is a small farm-based enterprise doing big international business thanks to the manufacturing industry background and skills of founders Deb and Chuck McDermott. Rather than practically give away wool from the farm's sheep, the McDermotts decided to process and sell it on their own. That's when they discovered a huge gap in smaller scale commercial wool processing equipment available to farmers. Such gaps in smaller scale commercial equipment for farms and food businesses exist in many sectors.

The McDermotts decided in 1998 to design and build their own wool mill. Today they sell their wool mill equipment across the country and around the world. The McDermott's design the mills, and Northwest Fabrication, a small family-owned business in East Jordan, makes them. Half of Northwest Fabrication's business is now dedicated to this Stonehedge Fiber Mill business. The McDermott's employ 12 people at their own fiber mill, which processes some 2,000 pounds of raw fiber each month from customers throughout the U.S. and another 2,000 pounds for their own Shepherd's Wool brand of worsted yarn.

Michigan should encourage M-Tec and other manufacturing-oriented business centers to identify and address the smaller scale equipment and related needs of food and farm entrepreneurs, such as "process engineering," which addresses the efficient and effective flow of materials and products through processing. Attention to such needs among smaller food and farm businesses can result in new processing equipment and products for sale nationally and internationally in addition to solving problems for individual enterprises in Michigan.

❖ Farmers and Processors Renovate for Local Tastes

To meet demand for food from nearby farms, some smaller scale businesses and groups of farmers are renovating facilities to provide the scale of food and farm processing needed. To support their investments and help build markets, local and state economic development authorities can assist with financing, marketing, and other needs.

Farmers near Bear Lake in Manistee County, for example, are preparing to retrofit an old food processing facility for the new use of freezing fruits and vegetables for sales to local schools and other buyers. Nearby Triple D Orchards, a small processing plant in Empire, Leelanau County, has invested $500,000 in an 8,500 square foot cold-pack facility designed to serve the growing niche of smaller scale companies.

With the right attention and incentives, the Bear Lake facility could anchor a regional food hub that would attract related retail, distribution, and packaging businesses. Such hubs could also collaborate with potential "spokes," like Triple D Orchards, for additional services. In addition, a statewide effort to help such entrepreneurs connect and communicate could help build these businesses by helping other entrepreneurs find them.

Michigan can strengthen the emerging market for small and mid-scale farm products and related processing services by supporting peer-to-peer and region-to-region networking that can build business-to-business success. Encouraging local and state economic development authorities to identify and address this sector is key to such "economic gardening" success.

Models for Michigan from Other States

❖ On Farm Biodiesel Processing

Organic Valley, based in Wisconsin, developed an On Farm Biodiesel program in 2008 to enable farmers to process oilseed crops into fuel directly on their farms. The mobile system is housed in a trailer and has equipment to extract, filter, and refine oil into biodiesel as well as to separate out feed meal.[8] Farmers in Wisconsin who have piloted the system with camelina (a small false flax) and sunflowers have seen yields of 80-110 gallons of oil per acre and 1200-1500 pounds of feed meal per acre.[9],[10] Organic Valley studies show that with this system farmers can generate up to 70% of their fuel needs and 50% of their feed meal needs on 10% of their tillable land-base.[11] The system allows farmers to save on feed

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[8] Cahalan, S. (2009) "Organic Valley Farmers Experiment with Making Biodiesel, Feed Meal." LaCrosse Tribune. Edition: Sunday, October 11, Business News.

[9] Organic Valley Web site; About Us; Sustainability; On-Farm Sustainability. http://www.organicvalley.coop/about-us/sustainability/on-farm-sustainability/

[10] CROPP Cooperative 2009 Annual Report. http://www.organicvalley.coop/fileadmin/pdf/CROPP_Annual_Report_09.pdf

[11] Organic Valley Web site; Why Organic; Research Library; Videos; Bio Fuels. http://www.organicvalley.coop/resources/videos/bio-fuels/

and fuel costs and the unit's mobility allows multiple farmers to share equipment, greatly reducing the capital investment required and reducing the need to move large amounts of raw material on our state's roadways.

Michigan should assist farmers in the state to replicate the Organic Valley model of mobile biodiesel processing to increase farmer profitability and promote renewable energy.

❖ Processing Local Produce for Schools

Harvest Food Group in the Chicago area developed a program to flash-freeze fresh produce picked in the summer from Michigan and nearby states to sell to Chartwells Chicago, for Chicago Public School children to eat throughout the school year.[12] While the local frozen produce is slightly more expensive than the frozen produce available to schools through USDA Foods, it is significantly less than commercially available frozen foods and the improved taste and quality has encouraged students to eat more fruits and vegetables.[13] The success of the program has generated demand for frozen local foods in other school districts and other sectors of the Compass Group.[14] In our own state, a farm to school initiative in Detroit last year found no facilities for packing local food products in serving sizes for school breakfasts and had to use an Indiana company instead.

Michigan should incentivize in-state processing to meet the demands of school districts for local food, including in the flash-frozen forms and the serving sizes school food service needs.

[12] National Good Food Network. (2009) "Growing: The Supply Chain from Michigan Farms to Chicago Schools." Network News, December 2009 issue. http://www.ngfn.org/resources/networknews/december-2009#growing-the-supply-chain

[13] Modzelewski, M. (2009) "Chartwells' Bob Bloomer Redefines "Fresh" for Chicago Public Schools." School Food FOCUS Blog. http://www.schoolfoodfocus.org/?p=249

[14] Bloomer, B. (2011) Presentation at Family Farmed Expo Chicago. March 17-19.

Michigan
GOOD FOOD
Equity • Sustainability • Thriving Economies

Michigan Good Food

CHARTER EXECUTIVE SUMMARY

Barely into a new millennium, the need for a thriving economy, equity and sustainability for all of Michigan and its people rings truer than ever. As part of achieving these goals, we need to grow, sell and eat "good food" – **food that is healthy, green, fair and affordable.**

By reemphasizing our local and regional food systems, alongside the national and global ones, **we have an opportunity to create a system based on good food in Michigan and achieve a healthier, more prosperous and more equitable state.**

Consider the irony:

- *Michigan has the second most diverse agricultural production in the country, and yet 59 percent of our residents (distributed across each of our 83 counties) live in a place that has inadequate access to the food they need for a healthy daily diet.*
- *Currently, it is often easier to buy food from another continent than from a farmer in or near your community.*
- *Consumer interest in local and farm-direct foods is growing rapidly, and yet mid-sized farms are disappearing at an alarming rate and many farms cannot support themselves without off-farm work.*

GOOD FOOD
means food that is:

Healthy
It provides nourishment and enables people to thrive.

Green
It was produced in a manner that is environmentally sustainable.

Fair
No one along the production line was exploited during its creation.

Affordable
All people have access to it.

Adapted from the W.K. Kellogg Foundation

VISION AND GOALS

We envision a thriving economy, equity and sustainability for all of Michigan and its people through a food system rooted in local communities and centered on good food.

By 2020, we believe we can meet or exceed the following goals:

1. *Michigan institutions will source 20 percent of their food products from Michigan growers, producers and processors.*
2. *Michigan farmers will profitably supply 20 percent of all Michigan institutional, retailer and consumer food purchases and be able to pay fair wages to their workers.*
3. *Michigan will generate new agri-food businesses at a rate that enables 20 percent of food purchased in Michigan to come from Michigan.*
4. *Eighty percent of Michigan residents (twice the current level) will have easy access to affordable, fresh, healthy food, 20 percent of which is from Michigan sources.*
5. *Michigan Nutrition Standards will be met by 100 percent of school meals and 75 percent of schools selling food outside school meal programs.*
6. *Michigan schools will incorporate food and agriculture into the pre-K through 12th grade curriculum for all Michigan students and youth will have access to food and agriculture entrepreneurial opportunities.*

WHAT IS THE MICHIGAN GOOD FOOD CHARTER?

The Michigan Good Food Charter presents a vision for Michigan's food and agriculture system to advance its current contribution to the economy, protect our natural resource base, improve our residents' health and help generations of Michigan youth to thrive. The **charter outlines a sequence of steps we can take over the next decade to move us in this direction.**

We need to **enact policies and strategies** that make it just as easy to get food from a nearby farm as from the global marketplace and that will assure all Michiganders have **access to good food** and all Michigan farmers and food businesses have **entrepreneurial opportunities**.

Photo by Cara Maple

AGENDA PRIORITIES AT A GLANCE

SCALE	TYPE	FOOD SYSTEM ARENA	AGENDA PRIORITY
LOCAL AGENDA PRIORITIES	Community-based		1. Expand and increase innovative methods to bring healthy foods to underserved areas as well as strategies to encourage their consumption.
			2. Improve school food environments and reduce school sales of low-nutrient, high-sugar, high-fat and calorie-dense foods through snack and vending machines or competitive food sales.
			3. Maximize use of current public benefit programs for vulnerable populations, especially children and seniors, and link them with strategies for healthy food access.
			4. Provide outreach, training and technical assistance to launch new grocery stores and improve existing stores to better serve underserved people in urban and rural areas.
	Land use-based		5. Establish food business districts to encourage food businesses to locate in the same area and to support their collaboration.
			6. Use policy and planning strategies to increase access to healthy food in underserved areas.
			7. Review and seek appropriate revisions to state and local land use policies to preserve farmland and blend protection with farm viability programs.
	Market-based		8. Encourage institutions – including schools, hospitals, colleges and universities – to use their collective purchasing power to influence the food supply chain to provide healthier food and more foods grown, raised and processed in Michigan.
STATEWIDE AGENDA PRIORITIES	Business or non-profit-based		9. Expand opportunities for youth to develop entrepreneurship skills and learn about career opportunities related to good food that support youth and community economic development.
			10. Establish Michigan as "the place to be" for culturally based good food that is locally grown, processed, prepared and consumed.
	Legislation-based		11. Incorporate good food education into the pre-K-12 curriculum for all Michigan students.
			12. Implement a reimbursement program to provide an additional 10 cents per school meal, as a supplement to existing school meal funds, in order to purchase locally grown fruits and vegetables.
			13. Amend Michigan's General Property Tax Act to exempt certain on-farm renewable energy installations.
			14. Set targets for state-funded institutions to procure Michigan-grown, sustainably produced products.

Please note that agenda priority numbers do not reflect rank order.

SCALE	TYPE	FOOD SYSTEM ARENA	AGENDA PRIORITY
STATEWIDE AGENDA PRIORITIES	State agency-based		15. Direct $10 million to regional food supply chain infrastructure development investments through the Michigan state planning and development regions or other regional designations.
			16. Implement a food safety audit cost-share or reimbursement program targeted at small and medium-sized farms and work to ensure that audits are conducted in the context of the farm scale.
			17. Provide financial incentives for farmers and for development of food system infrastructure to support institutional local food purchasing programs.
			18. Develop a farm-to-institution grant program to provide planning, implementation and kitchen or cafeteria equipment grants to maximize the use of locally grown, raised and processed foods in institutional cafeterias.
			19. Direct state agencies to maximize capital access through state-sponsored programs that provide farm financing.
			20. Ensure that all state and higher education business, work force and economic development programs include farming and agriculture in their target audiences for programmatic development, training, investment and technical assistance.
			21. Contingent upon further market assessment, establish a state meat and poultry inspection program in cooperation with the federal Food Safety and Inspection Services (FSIS) to spur new meat processing infrastructure.
			22. Include Michigan food and agriculture in state marketing efforts, such as the Pure Michigan campaign, to build awareness of the state's great variety and quality of local food products and farm amenities.
			23. Charge business support entities, such as the 18 Michigan Technical Education Centers, with identifying and supporting the equipment and process engineering needs of farmers and other agri-food enterprises, and ensure that food and agriculture are included in state and local economic development plans.
	Research-based		24. Examine all of Michigan's food- and agriculture-related laws and regulations (food safety, production, processing, retailing, etc.) for provisions that create unnecessary transactions costs and regulatory burdens on low risk businesses and ensure that regulations are applied in a way that acknowledges the diversity of production practices.
			25. Develop systems for collecting and sharing production and market data and other data relevant to regional food supply chain development.

Photo courtesy of Bloomfield Nature Center

What Needs to Change?

Current policies, practices and market structures keep us from realizing these opportunities. For example, some zoning regulations limit growing food in cities; high quality, healthy food is not always available at places where people use public benefits to purchase food; and institutions, especially K-12 schools, face restrictive budgets for school meals.

Michigan buyers and farmers have limited opportunities to connect directly with one another. Regulations are typically more easily implemented by large-scale farms and markets. Food safety requirements are often inflexible and can be cost-prohibitive for small- and medium-scale growers.

Farmland is unaffordable in many cases. New farmers face challenges in accessing capital to begin their operations and thus have difficulty developing a market.

What Can We Do?

We can address these barriers through specific, strategic state and local actions, and we can forge new partnerships centered on the values of good food. We can raise public and private policymakers' awareness of these issues and make Michigan good food policies and practices a priority at all levels of decision making.

The 25 policy priorities outlined here offer specific strategies for reaching our goals in the next ten years.

By the Numbers

In 2007, the average age of Michigan farmers was over 56.

Michigan loses an average of 30,000 acres of farmland every year.

Farms between 100 and 999 acres decreased 26 percent between 1997 and 2007.

Nearly 59 percent of all Michigan residents live in what are considered "underserved areas" with limited access to healthy and affordable food.

Roughly 65 percent of adults and nearly 30 percent of youth in grades 9-12 are overweight or obese.

Only about 14 percent of Michigan farmers' markets accept Bridge Cards (which replaced food stamps) for food purchases.

It costs about $2.90 to prepare a school meal, but the current federal reimbursement for a "free" meal for qualifying students is only $2.57.

USDA food safety good agricultural practices (GAP) and good handling practices (GHP) audits cost $92/hour, including travel time for auditors to get to farm locations. Total costs in 2009 ranged from about $92 to $1,600 per farm.

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MORE INFORMATION:
For the complete Michigan Good Food Charter, including references for the numbers cited above, supporting documents and tools, please see:
www.michiganfood.org

The following have led the process of developing the Michigan Good Food Charter:

the c.s. mott group for Sustainable Food Systems at MSU

Michigan Food Policy Council

Food Bank Council of Michigan

The Michigan Good Food Charter is made possible through principal funding from:

W.K. Kellogg Foundation
Food & Community Program

MICHIGAN STATE
UNIVERSITY

PRODUCT
CENTER
BUSINESS INNOVATION IN AGRICULTURE, FOOD AND NATURAL RESOURCES

THE STRATEGIC MARKETING INSTITUTE
WORKING PAPER

The Economic Impact of the Michigan Food Processing Industries

William A. Knudson, Steven Miller and H. Christopher Peterson

Working Paper 01-0910
September 2010

80 AGRICULTURE HALL, MICHIGAN STATE UNIVERSITY, EAST LANSING,

MICHIGAN
AGRICULTURAL

EXECUTIVE SUMMARY

This report analyzes the economic impact of Michigan's food processing industries, with a discussion on the potential and barriers to further sector growth.

Major Findings

The total economic impact of food processing in Michigan is estimated to be $25 billion and 134,000 jobs. These impacts include direct, indirect and induced economic activity. Table 1 shows the summary of the impacts.

Table 1: Summary of Economic and Employment Impact of Food Processing

	Within Sector	Total
Economic Impact ($ billions)	14.657	24.971
Impact on Employment	40,828	133,980

Sources: U.S. Census Bureau, IMPLAN, MEDC

The economic impact data is based on the 2007 Economic Census and represents the most recent data available. As such it is likely an underestimate of the current (2010) economic impact of the food processing sector. Nonetheless, the sector has shown fairly strong growth between 2002 and 2007 expanding by 19.8 percent in terms of direct (within sector) impact. This represents a compound annual growth rate of 3.7%.

The Michigan Economic Development Corporation (MEDC) provided 2007 employment counts for this sector using their in-house database of Michigan employment from Economic Modeling Specialists Inc. The MEDC data suggests that employment in food processing industries remained stable or slightly increased over the period.

Economic Potential

This study also analyzes the economic potential of various food processing activities in order to examine the growth potential of the sector. Examples considered include a dry milk power plant, a small-scale artisanal cheese manufacturer, a $20 million fruit juice facility, a small-scale fruit processor, a value-added product expansion in sugar processing, a large-scale expansion in beef processing, and a small-scale vegetable processing expansion. Total economic impact varies from $125,000 for the artisanal cheese facility to $459 million for the dry milk powder facility. Total impact on employment varies from 1 for the artisanal cheese manufacturer to 2,288 for the beef plant expansion.

Barriers to Increased Food Processing

Among the barriers mentioned by industry participants to expanded food processing are:

- Levels of taxation especially income tax, property tax and the Michigan Business Tax.
- Regulations covering wastewater disposal and the classification of food processing byproducts.

THE ECONOMIC IMPACT OF THE MIGHIGAN FOOD PROCESSING INDUSTRIES

This report analyzes the economic impact of Michigan's food processing industries, with a discussion on barriers to further sector growth. Economic impacts are estimated with industry data based on the 2007 Economic Census (the latest available data) with standard economic impact modeling approaches. To demonstrate potential economic outcomes of expanding food processing in Michigan, several hypothetical sector build-outs are modeled for their direct and secondary economic impacts on production and employment. Additionally, several food processors provide accounts of ongoing challenges for food processors and potential barriers to future growth of the food processing sector in Michigan.

Economic Impact

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The Michigan Economic Development Corporation (MEDC) provided 2007 employment counts for this sector using their in-house database of Michigan employment from Economic Modeling Specialists Inc. The MEDC data suggests that employment in food processing industries remained stable or slightly increased over the period.

Table 2 provides a detailed breakdown by processing industry. Implicit in Table 2 is the anticipated economic multiplier of 1.70. This multiplier indicates that every dollar of output in the processing sector creates an additional 70 cents through indirect and induced effects.

Table 2: Size of Food Processing in Michigan ($1,000s)		
Industry	**Within the Industry**	**Total**
Pet food manufacturing	14,420	22,836
Other animal food manufacturing	196,957	267,211
Flour milling and malt manufacturing	64,567	87,101
Soybean and other oilseed processing	64,567	65,034
Fats and oils refining and blending	64,567	76,763
Breakfast cereal manufacturing	1,241,137	1,800,280
Sugar manufacturing	459,520	913,060
Chocolate and confectionary manufacturing	21,227	35,649
Confectionary manufactguring from purchased chocolate	21,227	31,988
Nonchocolate confectionary manufacturing	229,760	394,964
Frozen food manufacturing	418,288	740,484
Fruit and vegetable canning/pickling/drying	985,837	1,582,121
Fluid milk and butter manufacturing	1,283,759	2,312,518
Cheese manufacturing	274,832	470,178
Dry/condensed/evaporated milk manufactruing	2,330,785	4,557,970
Ice cream and frozen dessert manufacturing	70,379	139,081
Animal (except poultry) slaughtering	1,059,640	1,691,548
Poultry processing	664,034	1,176,822
Meat processed from carcasses	528,799	874,742
Bread and bakery product manufacturing	1,320,977	2,422,614
Cookie/cracker/pasta manufacturing	14,983	16,481
Tortilla manufacturing	188,171	310,287
Snack food manufacturing	142,927	229,775
Coffee and tea manufacturing	71,783	104,951
Seasoning and dressing manufacturing	324,137	516,041
All other food manufacturing	346,658	613,132
Soft drink and ice manufacturing	2,155,532	3,362,239
Breweries	66,725	101,561
Wineries	30,995	53,960
Total	14,657,190	24,971,391

Sources: U.S. Census Bureau 2010, IMPLAN

Table 2 also shows that Michigan has a diversified portfolio of food processing industries. This includes some well known industrial processors such as Kellogg's, Michigan Sugar and Leprino to name a few. It also has a well developed fruit and vegetable processing sector. This diversity is likely a function of the wide range of crops produced in the state.

While Michigan has a wide range of food processing industries it does not rank particularly high relative to other states in terms of total shipments. Table 3 shows the relative size by state of food processing. Michigan ranks 19th. This is similar to its ranking in terms of farm output. Given the size of the state and its farm sector it is no surprise that California is far and away the largest food processing state in the country. North Carolina's rank shows the importance of animal processing and the fact that tobacco remains a major agri-food processing activity.

Michigan is last in the Great Lakes Region which is comprised of Ohio, Michigan, Indiana, Illinois, Wisconsin and Minnesota. Illinois, Wisconsin and Ohio rank in the top ten states in the US. Given the size of their livestock sectors, these figures reinforce the relative importance of livestock production in food processing activities. With the exception of dairy processing, Michigan does not have a large livestock processing sector, and this lowers its ranking. Conversely, Michigan's large fruit and vegetable sectors boost its ranking.

Impact on Employment

Employment appears to be holding study. Employment in the sector is estimated to be 40,828 with an overall employment impact of 133,980 jobs. It should be noted that employment includes all jobs both full-time and part-time and has not been adjusted to be full-time equivalents (FTEs). Table 4 shows the level of employment by food processing industry. It should be noted that the list of industries in table 4 is somewhat different than those in table 2 because the data sources are different and the list of industries is slightly different.

It should be noted that employment figures in Table 4 may differ from Census estimates for some industries. The MEDC provided employment estimates by industry using databases generated from Economic Modeling Specialists Inc. (emsi); emsi applies employment figures by the Census Bureau and other government statistic reporting agencies to establishment data provided by Dun and Bradstreet to generate industry profiles for the state. Industry multipliers provided by IMPLAN were then used to estimate each industry's contribution to total state employment. Such total impacts account for direct, indirect and induced employment resulting from each industry, where indirect and induced effects include employment in other sectors. While the individual sources of employment (e.g. direct, indirect, induced) for the industries listed above are estimates, the overall employment within each industry is identical to the figure provided by emsi.

Due to the use of different databases, the 2006 processing employment estimate in *The Economic Impact and Potential of Michigan's Agri-Food System* published by the MSU Product Center and the estimate in this paper are not directly comparable. However it does appear that employment in the sector is holding its own and in some industries appears to be increasing. Employment in fruit and vegetable processing appears to be increasing, as well as in the wine, beer, and distilling industries. Animal product processing appears to be holding steady and sugar processing appears to have declined.

Table 3: Ranking of Agri-Food Processing Sectors by State		
Rank	State	Value of Shipments ($ Billions)
1	California	80.79
2	North Carolina	46.97
3	Texas	43.22
4	Illinois	36.42
5	Wisconsin	32.86
6	Pennsylvania	31.58
7	Iowa	30.00
8	Georgia	27.92
9	Ohio	27.71
10	Virginia	23.07
11	Minnesota	20.62
12	Tennessee	20.47
13	Nebraska	19.74
14	New York	19.34
15	Missouri	18.96
16	Indiana	18.51
17	Kansas	17.78
18	Florida	17.44
19	Michigan	14.79
20	Arkansas	14.13
21	Washington	13.96
22	Kentucky	12.10
23	New Jersey	12.08
24	Colorado	10.69
25	Alabama	9.26
26	Maryland	8.62
27	Oregon	7.75
28	Louisiana	7.63
29	Massachusetts	7.51
30	Arizona	6.58
31	Oklahoma	6.41
32	Idaho	6.10
33	Utah	5.65
34	Mississippi	5.41
35	South Carolina	4.95
36	South Dakota	3.23
37	Connecticut	3.17
38	North Dakota	3.16
39	New Mexico	2.70
40	Vermont	2.39
41	Delaware	2.31
42	Alaska	2.28
43	Maine	2.14
44	Nevada	1.78
45	New Hampshire	1.39
46	Hawaii	1.18
47	Montana	0.90
48	Rhode Island	0.84
49	West Virginia	0.70
50	Wyoming	0.18

Source: U.S. Census, 2010

Table 4: Food Processing Employment in Michigan		
Industry	**Employment within Industry**	**Total**
Pet food manufacturing	47	223
Other animal food manufacturing	359	1,225
Flour milling and malt manufacturing	512	2,504
Starch and vegetable oil manufacturing	259	848
Breakfast cereal manufacturing	3,908	14,628
Sugar manufacturing	1,136	8,132
Chocolate and confectionary manufacturing	769	1,942
Nonchocolate confectionary manufacturing	129	288
Frozen food manufacturing	2,286	3,941
Fruit and vegetable canning/pickling/drying	4,374	15,976
Fluid milk and butter manufacturing	3,196	16,785
Cheese manufacturing	730	4,086
Ice cream and frozen dessert manufacturing	272	1,039
Animal (except poultry) processing	2,554	9,711
Poultry processing	1,762	3,305
Meat processed from carcasses	1,418	5,392
Seafood processing	156	506
Bread and Breakfast product manufacturing	6,969	12,872
Cookie, cracker and pasta manufacturing	1,300	3,542
Tortilla manufacturing	198	340
Snack food manufacturing	1,024	3,692
Coffee and tea manufacturing	680	2,781
Flavoring syrup and concentrate manufacturin	73	394
Seasoning and dressing manufacturing	853	2,389
All other food manfuacturing	904	2,173
Soft drink and ice manufacturing	4,012	12,286
Breweries	344	1,233
Wineries	568	1,623
Distilleries	36	124
Total	40,828	133,980

Sources: U.S. Census 2010, IMPLAN, MEDC

Potential of Additional Processing

To demonstrate potential economic impacts of expanding food processing in Michigan, several hypothetical sector build-outs are modeled for their direct and secondary economic impacts on production and employment. These activities point out the wide range of opportunities potentially available to food processors in Michigan. These include a large dry milk power plant, a small scale artisanal cheese manufacturing facility, a $20 million fruit juice facility, a small scale fruit processor, a value-added product expansion in sugar processing, a large scale expansion in beef processing, and a small scale vegetable processing expansion.

The results of the economic impact are shown in table 5.

Table 5: Impact of Various Food Processing Activities Economic Impact ($1,000s)

Activity	Direct	Total
Dry Milk Powder Processing Plant	206,954	459,296
Artisanal Cheese Plant	125	276
Fruit Juice Plant	20,000	33,315
Expanded Beef Plant	220,628	423,324
Small Fruit Processor	500	832
Expanded Sugar Product Processing	300	650
Expanded Frozen Vegetable Processing	500	890

Employment	Direct	Total
Activity		
Dry Milk Powder Processing Plant	250	2,011
Artisanal Cheese Plant	0	1
Fruit Juice Plant	31	115
Expanded Beef Plant	500	2,288
Small Fruit Processor	1	3
Expanded Sugar Processing	1	6
Expanded Frozen Vegetable Processing	4	7

The large scale animal product activities—dry milk powder and the expanded beef processing facility—have the greatest potential economic impact both in terms of output and employment. However, it should be noted that while these opportunities exist there is likely only room for one or two more of these types of plants in Michigan due to economies of scale. Even then it is likely that considerably more animals would have to be raised in Michigan in order to meet the raw materials needs of these activities. Nonetheless, these figures show the potential impact of expanding the state's livestock sector. Michigan is a state with abundant water supplies, and is a net exporter of feedgrains. These factors coupled with the state's high unemployment rate make the state well suited to expand the processing of livestock products.

The economic and employment impact of the other activities are smaller, as scale economies of processing facilities are not as large. However large impacts are possible if multiple firms or facilities enter these industries. This is especially true for artisanal cheese production and the fruit and vegetable processing. While the individual impact may be small, if several of these operations were to come into existence the total impact of output and employment may be quite large. It should be noted the artisanal cheese plant is integrated into an existing farm and as a result there is no additional direct employment. Additionally, Michigan's unique microclimates and its proximity to large population centers make the state well suited to expand the processing of fruits and vegetables, especially minimally processed fruits and vegetables.

In conclusion, there are demand drivers and cost considerations that place Michigan in a desirable position. Given an increase in fuel prices and further uncertainty about fuel costs, producing near large population centers has become more cost competitive. Michigan is located within a day's drive of many large cities. The growing interest in locally produced food also dovetails with the interest in reducing transportation costs, and also works to Michigan's advantage. This is particularly the case for minimally processed fruits and vegetables. It should be noted that this advantage applies primarily to areas located near major interstate highways; it is less of an advantage in Northern Michigan.

Barriers to Food Processing

A brief questionnaire was sent to food processors to determine the barriers to food processing. Among the barriers mentioned was taxation. This included income and property taxes as well as the Michigan Business Tax. While food processors rank state taxes high on their list of issues, many non-food sectors also note similar challenges generated by Michigan's tax system.

One barrier that does seem to disproportionately impact the food processing sector is wastewater treatment and regulation. Over regulation by the Department of Environmental Quality (DEQ) now part of Department of Natural Resources and Environment (DNRE) has been identified. This includes the classification of food processing byproducts. One processor believes that "non hazardous process residuals be considered a "valuable byproduct" or "a residual of value" as opposed to being designated as a low hazard solid waste." An example of this is beet process lime which can be used to lower the PH levels in highly acidic soils. Other food processing byproducts can also be used as soil conditioners provided they are applied at agronomic rates. Processors view existing regulatory treatment of such value generating byproducts as an issue to further growth of Michigan's food processing sectors.

Summary

Food processing is an important source of economic activity and employment in Michigan. The overall economic impact of the sector is estimated to be $24.97 billion and the overall impact on employment is estimated to be almost 134,000 jobs. Within the

sector itself, the economic impact is estimated to be almost $14.66 billion with an employment of nearly 41,000.

Given the state's economic situation, geographic location, the diversity and expanse of Michigan crop and feedgrain production, and access to large population centers, there is a good potential to expand processing. Both large and small scale processing activities have potential to be successful.

However, to be successful barriers to enhanced processing need to be addressed. While there are several barriers to enhanced processing, there appears to be only one that has a particularly adverse affect on food processing, waste water treatment and handling. Policies that would allow the effective and efficient disposal of waste water would improve the ability to expand Michigan's food processing activities. Such expansion generates new direct investment in facilities and equipment and fosters economic growth; particularly to rural areas, many of which are facing high rates of unemployment. Building up Michigan's food processing sector not only generates increased demand for Michigan farm products but also sets in motion secondary impacts that benefit all sectors of the economy.

Appendix: Methodology and Issues of Economic Impact Analysis

IMPLAN, a standard economic impact software package was used to generate indirect and induced employment and sales estimates. IMPLAN utilizes user supplied estimates of the direct sales and/or employment and provides associated indirect and induced effects estimates. Direct effects are the changes in the industries to which a final demand change was made; indirect effects are the changes in inter-industry purchases as the respond to demand of the directly affected industry; and induced effects generally reflect changes household spending resulting from activity generated by the directly impacted industry (MIG, p.102).

IMPLAN estimates are based on the following assumptions:

- Constant returns to scale: production functions are considered linear; if additional output is generated all inputs used to generate that output increase proportionately.
- No supply constraints: an industry has unlimited access to raw materials and its output is limited only by the demand for its products. This assumption can be an issue when unemployment is low and prices are rising. However, given the current state of Michigan's economy additional output can be generated with little, if any impact on input markets. This is especially true of labor and real estate markets.
- Fixed commodity input structure: price changes in one input do not cause a firm to buy substitute goods. Inputs are used in fixed proportion to one another. This is related to the first assumption.
- Homogeneous sector output: the proportion of all commodities produced by an industry remains the same regardless of total output in that industry. An industry won't increase the output of one product without proportionally increasing the output of all its other products. This is also related to the first assumption. (MIG, p.103).

Generally speaking, these assumptions are not excessively binding particularly when analyzing the impacts of undertaking new economic activity on a small or medium scale. Nonetheless they are estimates and the true economic impact and employment levels may be different. Generated impact estimates are at best approximations of the expected true economic impacts.

IMPLAN uses economic and employment figures for each industry from published sources although some estimates are systematically inferred for certain industries due to restrictions on publishing data that would identify particular firms within an industry. Past ratios of employment to sales are often used for inferring total economic activity of additional output or employment. This was done in some meat processing industries, some dairy industries and the animal food industry.

A major benefit of using a software package such as IMPLAN is that provides data for all sectors of the economy within a consistent accounting framework (Leones, Schluter and

Goldman, p.1126). It is important to be consistent when analyzing different industries or when trying to measure the economic impact of a sector on the entire economy (Leones, Schluter and Goldman, p.1126).

One important thing to remember in this analysis is that the value of food processing is backward linked to the farm and agricultural input supply sectors. That is to say these figures also include the value of the farm products that were used to produce them. In this case the additional value of on farm production is an indirect impact of having food processing in the state.

Data for the economic impact section comes from the U.S. Census Bureau's *2007 Economic Census* which was published online earlier this year, and can be directly compared to previous studies. The employment figures were provided by the MEDC using emsi data. The Michigan Department of Agriculture staff facilitated the use of emsi data as a more complete measure of employment to the Economic Census of this sector. As a result, we strongly discourage direct comparisons of employment impacts to past reports for estimating change in sector employment and employment impact.

References

Leones, J., G. Schluter, and G. Goldman. "Redefining Agriculture in Interindustry Analysis". *American Journal of Agricultural Economics*, Vol. 76, No. 5, (December 1994): 1123-1129.

Minnesota IMPLAN Group Inc. (MIG). *Users Guide, Analysis Guide, Data Guide IMPLAN Professional Version 2.0.* Stillwater: Minnesota IMPLAN Group Inc., 2004.

DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER RESOURCES PROTECTION

Filed with Secretary of State on August 11, 1999.
These rules take effect 15 days after filing with the Secretary of State.

(By authority conferred on the department of environmental quality by sections 3103 and 3106 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.3103 and 324.3106 of the Michigan Compiled Laws)

R 323.2201 to R 323.2211 of the Michigan Administrative Code are amended and R 323.2212 to R 323.2238 are added to the Code as follows:

PART 22. GROUNDWATER QUALITY

R 323.2211 Permit by rule; notification.

Rule 2211. A person may discharge any of the following if the requirements of R 323.2204 and R 323.2212 are met:

(a) Sanitary sewage if the volume of the septic tank or tanks is 6,000 gallons or more or if the flow is more than 6,000 gallons per day, but less than 10,000 gallons per day if the following provisions are complied with, if applicable:
  (i) The sanitary sewage is not mixed with other wastes.
  (ii) The disposal system is designed and constructed in accordance with the provisions of the publication entitled "Michigan Criteria for Subsurface Sewage Disposal," April 1994, and the system is approved by the county, district, or city health department that has jurisdiction. Copies of the publication may be obtained without charge at the time of adoption of these rules from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, P.O Box 30630, Lansing, Michigan 48909.
  (iii) For a disposal system constructed, reconstructed, or expanded after adoption of these rules, the discharge is monitored by a flow measurement device. The discharger shall record the average daily flow on a weekly basis and the total flow annually in a log that shall be available for review upon request by the department or the county, district, or city health department that has jurisdiction. A report of the average daily flows and annual total flow shall be submitted to the department by January 31 of each year for the preceding calendar year.

(b) Less than 500 gallons per day of wastewater from a laundromat which is open to the general public and which does not contain a dry cleaning operation if all of the following requirements are met:
  (i) The wastewater is discharged from a system that has a minimum of 2 1,000-gallon septic tanks in series followed by disposal to a tile field.
  (ii) The tanks are pumped when the sludge level reaches 25% of the tank volume.
  (iii) An operational lint filter is maintained on the laundry wastewater discharge line to the system.
  (iv) The tile field has been designed and constructed in accordance with the provisions of the publication entitled "Michigan Criteria for Subsurface Sewage Disposal," April 1994, and is approved by the local county, district, or city health department that has jurisdiction or the department. Copies of the publication may be obtained without charge at the time of adoption of these rules from the Michigan Department of Environmental Quality, Water Division,

P.O. Box 30630, Lansing, Michigan 48909.

(v) The sanitary sewage generated at the facility is routed to the same septic tank as the laundry waste.

(vi) The septic tank is equipped with an effluent filter.

(c) More than 10,000 gallons per day of noncontact cooling water if it does not contain an additive and the source of the cooling water is any of the following:

(i) A municipal water supply.

(ii) A water supply meeting state or federal criteria for use as potable water.

(iii) Another source of water meeting the standards of R 323.2222.

(iv) Another source of water approved by the department as meeting the conditions of R 323.2204.

(d) Less than 50,000 gallons per day of fruit and vegetable washwater if the following provisions are met, if applicable:

(i) The source of the water is any of the following:

(A) A municipal water supply.

(B) A water supply meeting state or federal criteria for use as potable water.

(C) Another source of water meeting the standards of R 323.2222.

(D) Another source of water approved by the department as meeting the conditions of R 323.2204.

(ii) If the wastewater contains an additive, the department is notified of the additive in the notification required in R 323.2212 and the discharge does not cause the groundwater to exceed the standard of R 323.2222 for the additive.

(e) Wastewater from a portable power washer used by a commercial operator or in a commercial or industrial setting whether or not occurring within 100 feet of the property boundary if the following requirements are met, as applicable:

(i) The source of the water is any of the following:

(A) A municipal water supply.

(B) A water supply meeting state or federal criteria for use as potable water.

(C) Another source of water meeting the standards of R 323.2222.

(D) Another source of water approved by the department as meeting the conditions of R 323.2204.

(ii) If other than a household soap or detergent readily available to the consumer is used as an additive, the additive is used for its intended purpose and according to manufacturer's recommendations and label directions.

(iii) Washing is limited to the removal of dirt and grime from the exterior of a vehicle, equipment, or stationary source. A vehicle's exterior does not include its undercarriage. Dirt and grime does not include a substance that was contained or transported in the vehicle as product or waste material.

(iv) The discharge does not cause runoff of wastewater or the deposition of waste materials onto adjacent properties.

(v) The discharge does not cause the groundwater to exceed a standard specified in R 323.2222.

(vi) The discharge is limited to 1,000 gallons of wastewater per month per acre of area in which the discharge occurs.

(vii)If the discharger is a commercial operator who discharges at various locations, a log is kept of discharges for a period of 3 years from the date of the discharge. The log shall include the date, location, and additive used for each discharge and the item washed. The log shall be readily available for inspection and copying at any reasonable time by a peace officer or, upon presentation of credentials, an authorized representative of the department or city, county, or district health department that has jurisdiction.

(f) Pump test water associated with environmental remediation that is discharged outside the plume of contamination if the discharge meets the standards of R 323.2222.

(g) Water that results from the hydrostatic testing or flushing of a new pipeline or pressure testing of a new tank if both of the following provisions have been met:
  (i) An additive has not been used.
  (ii) The source of the washwater is any of the following:
    (A) A municipal water supply.
    (B) Another water supply that meets state or federal criteria for use as potable water.
    (C) Another source of water meeting the standards of R 323.2222.
    (D) Another source of water approved by the department as meeting the conditions of R 323.2204.

(h) More than 50, but less than 1,000, gallons per day of wastewater from a commercial animal care facility if all of the following provisions have been met:
  (i) The source of the water is any of the following:
    (A) A municipal water supply.
    (B) Another water supply that meets state or federal criteria for use as potable water.
    (C) A source of water meeting the standards of R 323.2222.
    (D) Another source of water approved by the department as meeting the conditions of R 323.2204.
  (ii) The department is notified of any additive in the notification required by R 323.2212 and the discharge does not cause the groundwater to exceed the standard established by R 323.2222 for the additive.
  (iii) The discharge does not occur within 200 feet of a surface water body.

(i) DISCHARGE OF LESS THAN 500 GALLONS PER DAY, AS A DAILY MAXIMUM, OF WASHWATER WITH ADDITIVES FROM FOOD PROCESSING FACILITIES, IF ALL OF THE FOLLOWING PROVISIONS HAVE BEEN MET:
  (I) WASHWATER WITH ADDITIVES IS THE WASTEWATER WHICH RESULTS FROM CLEANING OPERATIONS, TO WHICH DETERGENTS, DISINFECTANTS, SURFACTANTS, OR OTHER CHEMICALS HAVE BEEN ADDED TO ENHANCE, ACCELERATE OR IMPROVE THE CLEANING PROCESS.
  (II) SOAPS, DETERGENTS, OR OTHER ADDITIVES MUST BE USED IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS AND ONLY FOR THE INTENDED PURPOSE DESCRIBED IN THE MANUFACTURER'S DIRECTIONS. THIS DOES NOT AUTHORIZE THE DISCHARGE OF A PRODUCT THAT CONTAINS VOLATILE ORGANIC COMPOUNDS, SUCH AS DEGREASERS.
  (III) IF THE PROCESSING INCLUDES SLAUGHTER OF ANIMALS, THE WASTE FROM SLAUGHTERING, I.E., BLOOD, PAUNCH, ETC., MUST BE SEPARATED AND TRANSPORTED OFF SITE FOR PROPER TREATMENT AND DISPOSAL.
  (IV) THE DISCHARGE OF WASTEWATER SHALL ONLY BE ON PROPERTY OWNED BY THE DISCHARGER UNLESS THE DISCHARGER HAS WRITTEN AUTHORIZATION FROM THE LANDOWNER FOR SUCH A DISCHARGE.
  (V) IF THE DISCHARGE IS BY MEANS OF SPRAY IRRIGATION, THE DISCHARGE SHALL BE TO A SITE HAVING A VIABLE VEGETATIVE GROWTH, SUCH AS A PERENNIAL FORAGE CROP. IF VIABLE VEGETATIVE GROWTH CAPABLE OF UTILIZING THE NUTRIENTS SUPPLIED BY THE WASHWATER IS NOT PRESENT AT THE TIME THE WASTEWATER IS APPLIED, AN ADEQUATELY DENSE CROP MUST BE ESTABLISHED IN THE SPRING AS SOON AFTER SNOWMELT AS POSSIBLE.
  (VI) IF THE DISCHARGE IS SUBSURFACE, THE DISPOSAL SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THE PUBLICATION ENTITLED "MICHIGAN CRITERIA FOR SUBSURFACE SEWAGE DISPOSAL," APRIL 1994.

(VII)A LOG SHALL BE KEPT ON SITE OF DAILY DISCHARGE VOLUMES, AND AVAILABLE UPON REQUEST BY AUTHORIZED DEPARTMENT PERSONNEL. RECORDS SHALL BE RETAINED FOR A MINIMUM OF FIVE YEARS.

(VIII) BY JANUARY 31 OF EACH YEAR, THE FACILITY SHALL SUBMIT TO THE DEPARTMENT AN ANNUAL FLOW REPORT THAT LISTS THE TOTAL ANNUAL FLOW AND THE NUMBER OF DAYS AND DATE OF ANY DISCHARGE ABOVE 500 GALLONS PER DAY.

R 323.2212 Discharge notification.

Rule 2212.(1) A person is authorized to discharge under R 323.2211 if the department is notified of the discharge under this rule.

(2) A person shall notify the department under this rule at the following times:
- (a) Before the discharge.
- (b) When there is a change in the information required in the notification form described in subrule (3) of this rule.
- (c) Five years from the date of the previous notification if the discharge is continuing.

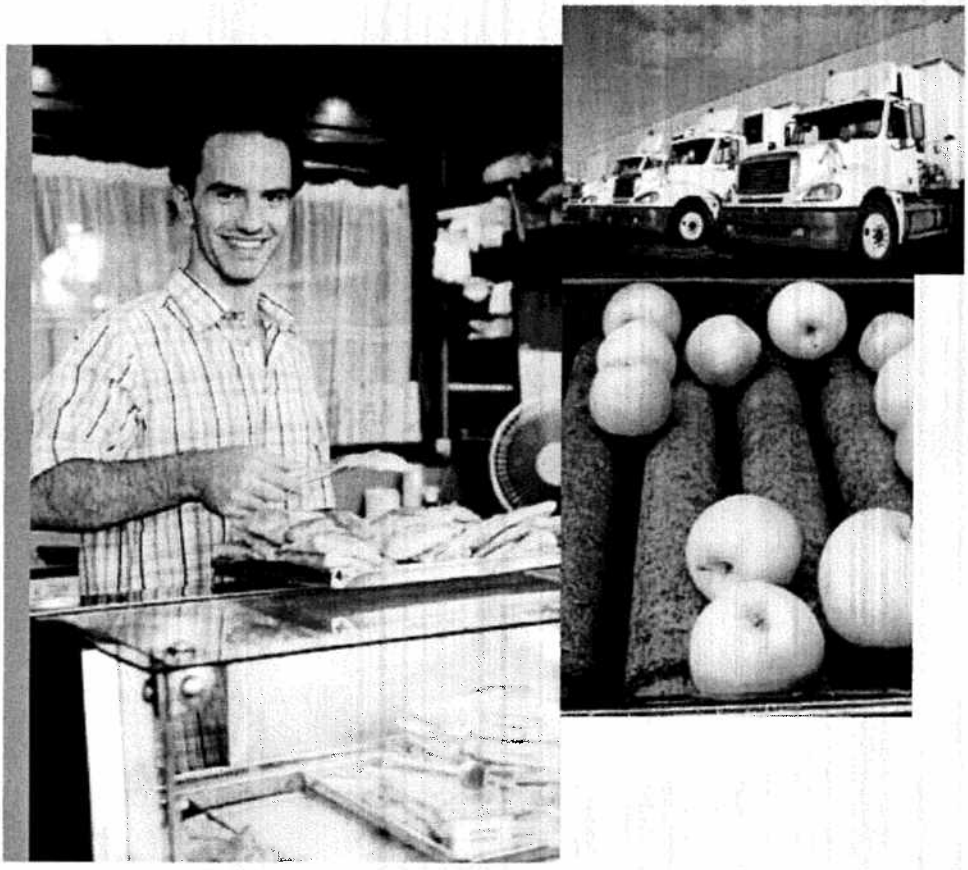
(3) A person shall provide notice on a form approved by the department. At a minimum, the notice shall contain all of the following information:
- (a) Date of the notification.
- (b) Facility name and address.
- (c) The discharge address, if different from the facility, and the location identified by county, section, township, and range.
- (d) Authorized contact person's name, address, and telephone number.
- (e) The permit or exemption number and issuance date for any groundwater discharge permit or exemption previously issued to the discharger.
- (f) The type of wastewater discharged and a description of the discharge.
- (g) For discharges authorized by R 323.2211(f) and R 323.2213(5), a description of the treatment system designed to meet the standards of R 323.2222.
- (h) Standard industrial classification (SIC) code.
- (i) Method of wastewater disposal, such as irrigation or seepage lagoon.
- (j) Any additive and the amount used.
- (k) Discharge volume or application rate in appropriate units.
- (l) Dates of discharge and schedule of discharge, as appropriate.
- (m)Two legible site maps drawn to scale that have a north orientation arrow. Site map 1 shall indicate the discharge location in relation to property boundaries on a topographic map. The township and county name in which the discharge area is located shall be included on site map 1. Site map 2 shall indicate the discharge area and the distance from property boundaries. Major roads and streets shall be included on all site maps.
- (n) Name, address, and telephone number of the owner of the property where the discharge is to occur if the owner is other than the discharger.
- (o) If the discharge is to property owned by a person other than the discharger, a written authorization to discharge signed by the property owner.
- (p) A determination of whether the discharge will occur within 1/4 mile of a known site of groundwater contamination, other than for a remedial action for which the notification form is being submitted, and an evaluation of whether the discharge will impact the existing plume of contamination at the site.
- (q) Signature and certification by the discharger or a person authorized to act for the discharger, as described in R 323.2114, that the discharger has identified and considered steps to avoid or minimize the use and discharge of pollutants, that all information submitted is true, accurate, and complete, and that the discharge meets the requirements of this part.

Michigan
GOOD FOOD
Equity • Sustainability • Thriving Economies

FOOD SYSTEM INFRASTRUCTURE:

MICHIGAN GOOD FOOD WORK GROUP REPORT SERIES

Report No. 5 of 5



December 2010

This report was developed with leadership from the C.S. Mott Group for Sustainable Food Systems at Michigan State University, the Food Bank Council of Michigan and the Michigan Food Policy Council. This report, along with the others in the series, provides the foundation for the goals and agenda priorities put forth in the Michigan Good Food Charter.

Food System Infrastructure Work Group

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Work Group Report Series

Youth Engagement and Opportunity
Good Food Access
Institutional Purchasing
Farm Viability and Development
Food System Infrastructure

FOOD SYSTEM INFRASTRUCTURE:

MICHIGAN GOOD FOOD WORK GROUP REPORT SERIES

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Vision

Food System Infrastructure Report Vision
All levels of Michigan's food system are robust and responsive to good food needs, with home and neighborhood production, direct marketing, and regional supply chains fully developed and working alongside national and global supply chains.

GOOD FOOD
means food that is:

Healthy
It provides nourishment and enables people to thrive.

Green
It was produced in a manner that is environmentally sustainable.

Fair
No one along the production line was exploited during its creation.

Affordable
All people have access to it.

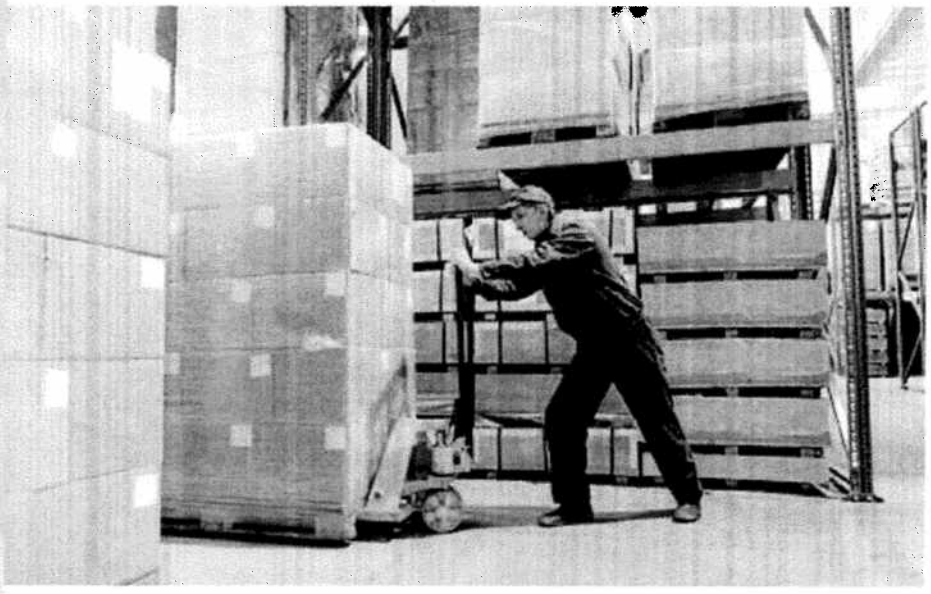
Adapted from the W.K. Kellogg Foundation

Current State of Affairs

The infrastructure section of the Good Food Charter addresses the particular need of agri-food entrepreneurs for reliable pathways to market. For Michigan to achieve the vision and goals of the charter, its agri-food entrepreneurs need a well-functioning food system infrastructure of processing, distribution, and other facilities and services.

If Michigan fails to address this need, it will miss a historic opportunity to grow jobs, build public health and attract business investment. Good food entrepreneurs are emerging in increasing numbers and moving to meet new, broad-based demand for healthy, green, fair and affordable food. But high risks and costs of doing so, due to wide gaps in food system infrastructure, which are a legacy of a different era, hinder this economic development.

Local and state leaders from every sector must champion a new good food direction for Michigan and provide key financial and programmatic support to agri-food entrepreneurs, including those equipment makers, distributors, value-added processors and others needed to build appropriate food system infrastructure. The financial investment needed is relatively small compared with other forms of economic development. Yet studies suggest it can generate significant returns for Michigan's 21st century economic progress.



What is Infrastructure?

Food system infrastructure covers everything needed in the supply chain of activity between the consumer and the producer, be that a farm, fishery or community garden (see Table 1). The supply chain involves such businesses and resources as seed, feed and compost suppliers; equipment repair and fabrication services; food processors; distributors; retail outlets; professional services such as logistics managers and waste handlers; surplus food rescue; and financial, workforce, civic, and land and energy resources. An inadequate food system infrastructure is like an inadequate transportation system of vehicles, roads and bridges - it is difficult to get where you want to go in food and farm markets without reliable food supply chain facilities and services.

Table 1. The World of Food System Infrastructure

Infrastructure covers everything needed for agri-food entrepreneurs to move food from the farm to the plate or to move products, such as compost and timber, from the farm and woodlot to the buyer of those materials. Agri-food supply chains involve:

Production
Inputs such as seed, feed, and harvesting services and equipment

Processing
Activities such as washing and bagging lettuce, bottling, drying and freezing food

Aggregation and Distribution
Things such as marketing cooperatives, storage facilities, brokerage services, logistics management and delivery trucks

Retailing
All those who sell or serve food to consumers, from restaurants, grocery stores and hospitals, to schools, prisons, caterers and fast-food outlets

Marketing
The effort that goes into promoting products such as billboards, coupons, advertising campaigns, packaging materials, branding and more

Capital
Four types of capital are involved: 1) Financial capital in the form of loans, investments and other financing; 2) natural capital of land, water and other ecological resources; 3) the human capital of creativity, labor and other talent, including education and training; and 4) social capital from churches, youth groups, chambers of commerce, etc.

The good food problem we face is that most of the infrastructure needed for local and regional markets, which are growing, has washed out over the years like neglected roads and bridges. We have invested instead in building a superhighway to large national and global markets for Michigan food and farm products. These investments came primarily since the 1940s, when public and industry policy began to focus on producing food that is, as one industry insider describes it, "fast, convenient and cheap," and government and industry leaders advised farms to "get big or get out."[1]

[1] Cantrell, P. (2009) "Sysco's Journey from Supply Chain to Value Chain: Results and Lessons Learned from the 2008 National Good Food Network/Sysco Corporation Pilot Project to Source and Sell Good Food." Wallace Center at Winrock International. Retrieved April 15, 2010 from http://www.ngfn.org/resources/research-1/innovative-models/NGFN%20Case%20Study_Syscos%20Journey%20From%20Supply%20Chain%20to%20Value%20Chain.pdf.

As a result, 75 percent of Michigan's total agricultural sales come from just 6 percent of its farms; the great majority of smaller and midsized Michigan farms are not able to compete effectively in the long and consolidated national and global supply chains that have come to dominate the food system.[2] More than half of the state's farms lose money every year, particularly those midsized farms that are too big for some of the smaller scale opportunities in direct marketing and too small to compete in national and global supply chains.[3]

Example: Schools and Potatoes

Today it is easier for a Michigan farmer to send potatoes out of state to come back home in a potato chip bag than it is to build a business selling potatoes to a school down the road.

The farm may have plenty of quality, price-competitive potatoes. The school may have strong demand for sourcing fresh farm products, a desire to support the local economy and the wherewithal to cook potatoes from scratch rather than simply open a package of processed potatoes.

Yet the lack of adequate infrastructure, such as small-scale storage, distribution and value-added processing, can stymie this potential exchange.

Supply chains in the large national and global markets are long, anonymous and concentrated; suppliers are interchangeable, commodities are commingled (one large-scale processing plant will wash 25 million servings of salad per week[4]), and market share is concentrated among a small number of dominant firms. To meet good food demand and need, entrepreneurs are working to build shorter supply chains with a scale of food processing and other infrastructure that matches the market, including the ability to verify who produced the food and where and how it was grown.

[2] *U.S. Department of Agriculture. (2007) 2007 Census of Agriculture, Farms by Concentration of Market Value of Agricultural Products Sold (Table 40).*
[3] *U.S. Department of Agriculture. (2007) 2007 Census of Agriculture, Net Cash Farm Income of Operations and Operators: 2007 and 2002 (Table 5).*
[4] *Pollan, M. (2008) "Farmer in Chief." New York Times. October 12.*

Many Layers of Entrepreneurship

Good food entrepreneurship ranges from new supply chain development at the home and neighborhood level to large-volume companies, such as Wal-Mart, reaching out to local producers to satisfy new demand for fresh and local foods.

To illustrate this range of entrepreneurship, we use the "Tiers of the Food System" schematic, which outlines the five tiers of the food system. Next, we discuss specific infrastructure challenges and opportunities that Michigan entrepreneurs are navigating and how policymakers can help.

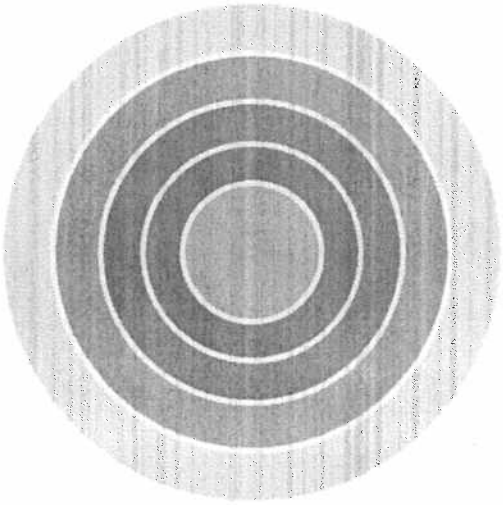
HOME AND NEIGHBORHOOD

Home and neighborhood demand for healthy, green, fair, affordable food is at the heart of the good food movement, as well as the food system infrastructure now emerging to serve it.

Home and neighborhood examples include backyard gardens and chicken coops, community gardens and community kitchens, cooking and canning classes, and youth farm stands.

These food system developments at the home and neighborhood level are multiplying every day across the country. They reflect a take-charge approach to personal and community concerns about food nutrition, safety, and security.

Figure 1. Tiers of the Food System [5]



DIRECT TO CONSUMER

The supply chain in the next level of the food system, direct-to-consumer, is very short - food is just one step removed from personal production, with exchanges taking place directly between the farm and the consumer.

Direct-to-consumer examples include farmers' markets, mail order, farm stands, community-supported agriculture (CSA) and direct-store-door sales, whereby a farmer or food manufacturer delivers product directly to a store, rather than utilizing a distribution company.

Both farms and consumers have turned to direct-to-consumer markets in recent years because the larger food system has failed to deliver many products that consumers want and the profitability that small and midsized farms need. Direct marketing among Michigan farms increased 29 percent from 2002 to 2009. The number of Michigan farmers' markets tripled to about 200 between 2000 and 2008. Michigan now has 85 community-supported agriculture (CSA) operations.[6]

[5] *Adopted from Jim Bowen, Blue Planet Partners; Ron Daetch, Michael Fields Agricultural Institute; and Steve Stevenson, Center for Integrated Agricultural Systems, University of Wisconsin.*

[6] *http://www.csafarms.org/*

STRATEGIC PARTNERSHIPS

As demand and markets for good food grow, so do the supply chains needed to serve them beyond one-to-one direct marketing. The larger volumes of food that schools, hospitals and grocery stores purchase, for example, makes a middleman or two (broker, distributor, etc.) very useful both for the buyer and the farmer. Middlemen take a share of the sale, but that's because they can help farms and food buyers, such as restaurant chefs, save time and money.

In the emerging good food system, such intermediary businesses partner with farms, retailers and others in the supply chain to build new pathways to market. These new business relationships are based on shared values, such as the value of keeping family farms and their land healthy or the social justice value of supplying low-income neighborhoods with quality food. These relationships are especially essential for building infrastructure options (distribution, processing, etc.) where few currently exist because of our past emphasis on building a global superhighway for foods instead of sustainable regional systems. High risk and costs in markets without adequate food system infrastructure require more collaboration among businesses to bridge local and regional opportunities.

Strategic partnership examples include new local food distribution businesses in Michigan, such as Cherry Capital Foods (Traverse City) and Locavore Food Distributors (Detroit); new supply chains evolving from producer cooperatives such as the Michigan Asparagus Growers Inc. (western Michigan), Organic Valley (U.S.), Country Natural Beef (Pacific Northwest) and Shepherd's Grain (eastern Washington); and brokers and farmers working together to brand and market local products, such as Red Tomato (New England).

LARGE-VOLUME

The global consolidation of food markets begins to become clear at the large-volume level, where supply chains become much longer and opportunities narrow down to those farms and food businesses that can operate at a large, national scale. In short, the big get bigger, and the smaller businesses get out.

The 20 largest food retailers, for example, continue to take market share from other retailers; they comprised 61 percent of all U.S. grocery sales in 2005, up from 41 percent in 1995.[7] Yet large-volume companies such as Wal-Mart and Meijer, for example, are now reaching out to local farm suppliers to meet consumer demand for local choices. Similarly, the $35 billion food distributor Sysco has succeeded, through pilot local food efforts in Grand Rapids, Chicago and Kansas City, in offering new products and winning new customers.

Large-volume examples include Peterson Farms (Hart, Mich.), Eden Organic (Clinton, Mich.), Sysco, Gordon's Food Service, Meijer and Wal-Mart.

GLOBAL ANONYMOUS

At the global anonymous level, supply chains are very long and complex. A key characteristic is that farmers and buyers never meet. Consumers also have no information about the origin of ingredients or how many sources are commingled in the production of one hamburger, one sack of feed or one candy bar.

This scale of operation has also produced ready supplies of inexpensive food in many parts of the world. Much of Michigan's $71 billion in agri-food economic impact is connected to the global anonymous and large-volume tiers.

Global anonymous examples include Kellogg, Gerber, ADM, Unilever, Cargill, Ajinomoto and Dean Foods.

[7] *Kaufman, P. (2007) Strong Competition in Food Retailing Despite Consolidation. Amber Waves, 5(5).*

A New Food Era

The challenge that agri-food entrepreneurs located in all counties and working with all crops face is the fact that little food system infrastructure exists between the roadside-stand direct-marketing option and the large-scale global supply chain option. Not only are facilities such as small-batch processing needed to build shorter, regional supply chains, but also services from enterprises that aggregate farm products. Aggregation allows producers to combine their products to deliver the quantity and consistency that grocers, restaurants and other buyers need. It also calls for midscale washing, grading, storage, packing and similar facilities that, for the most part, no longer exist.

Yet new market opportunities are calling for just such smaller batch, quality food and farm products from Michigan, both fresh and processed, including meats and dairy products. Entrepreneurship is growing at the food system levels of home/neighborhood, direct marketing, strategic partnerships and large-volume. It's growing because demand is growing for food that comes with greater health, environmental, economic and social benefits.

It starts at the home and neighborhood level, with such projects as Benton Harbor GROWS, an effort to build a citywide network of gardens using the knowledge and skills of residents already raising some of their own food.[8] It continues through the direct-marketing level, where restaurants and grocery stores are increasingly purchasing at the Benton Harbor Fruit Market, for example, to offer fresh and local options they cannot find elsewhere. Food system innovation and entrepreneurship are also emerging in supply chains that are longer than direct marketing, at the strategic partnership and large-volume levels, with new distributors and processors going into the local and regional food business.

Shorter regional supply chains are emerging and possible because times have changed, as explained in a 2006 report from the Land Policy Institute at Michigan State University on farmland preservation priorities for the state: "Agriculture is no longer the simple commodity industry it was long ago, when the only avenue for farmer success was increasing productivity and yield. The farmer does not have to be a price taker and can take advantage of unique market opportunities."[9] Similarly, the international food industry think tank, the Hale Group, explains: "The food marketplace has shifted from a supply-driven to a demand-driven environment."[10]

In this new environment, consumer and community demand for healthy, green, fair and affordable food is stimulating entrepreneurship across Michigan's agri-food sector. More and more farms and related food businesses are now working their way to new customers at nearby schools, grocery stores and hospitals as food demand and needs shift.

Some Examples

- New local and regional distributors, such as Locavore Food Distributors in southeastern Michigan, are starting businesses and opening new market channels for Michigan farms, such as Locavore's recent sales to Chicago Public Schools.[11]
- Urban gardeners are selling at farmers' markets and supplying restaurants in Detroit under a common "Grown in Detroit" label.[12]

[8] Bedford, C. (2010) Benton Harbor Grows: Food, Poverty and Community Resilience. Solutions, 1(2), 49-53. Retrieved May 10, 2010 from http://thesolutionsjournal.com/node/600.
[9] Adelaja, S. et al. (2006) "Acreage and Funding Goals for Farmland Preservation in Michigan." Land Policy Institute paper 2006-1, Michigan State University, p. 23.
[10] Ludwig, R. and Sisson, K. (2010) "Can the World Feed Future Generations?" AgroStrategies. Retrieved April 14, 2010 from http://www.halegroup.com/pnpwcms/download.php?f=f8815f70a7b975d4df8658bbc6b6fnd00.
[11] National Good Food Network. (2009) "Growing: The Supply Chain from Michigan Farms to Chicago Schools." National Good Food Network newsletter, December issue. Retrieved April 17, 2010 from http://www.ngfn.org/resources/network-news/december-2009#growing-the-supply-chain.
[12] Cantrell, P. (2008) "See the Local Difference: Regional Food Systems Become Essential Ingredient for Michigan's Future." Michigan Land Use Institute. Retrieved April 17, 2010 from http://www.mlui.org/downloads/SeetheLocalDifference.pdf.

Some Examples

- Michigan asparagus farmers are earning more money by selling more of their crop to fresh markets after nearly going under in recent years when imports from Peru flooded the market for asparagus sold for canned, frozen and other processed products. Michigan's asparagus growers formed a cooperative focused on the fresh market opportunity, and other entrepreneurs invested in the packing lines necessary for the shorter supply chain to work.[13]
- Recognizing a market opportunity, the Triple D fruit processing company near Traverse City recently renovated its space to accommodate entrepreneurs with products that are too small in volume for most food processing companies and too large in volume for shared-use licensed kitchens.
- The major food service distributor Sysco recently completed a two-year local foods pilot effort at its Grand Rapids hub. The regional office worked to carry and promote more sustainably produced fruits and vegetables from environmentally certified Michigan farms. Managers attribute the hub's ability to increase sales and gain customers, during a time when overall produce sales were down because of the recession and poor weather, to this local and sustainable focus. Among a number of key outcomes, the Grand Rapids hub was able to offer 12 varieties of apples to customers because local producers enabled the company to move beyond the two varieties, Red and Golden Delicious, that it typically offered.[14]

THE ROLE OF PUBLIC POLICY

The free market is moving to fix the roads and bridges that have washed out in local and regional markets. Michigan can support this market-led correction with public recognition and sustained support of these food system entrepreneurs who face high risk and high costs because of wide gaps in food system infrastructure.

In an article on global agri-food development, the Hale Group points to an important public sector role in bridging infrastructure gaps: "The key to sustainability is private sector investment. But first, public sector investment that reduces risk and creates an environment for reasonable rates of return is needed in the short and medium-term to facilitate the entry and profitability of business ventures."[15]

Michigan has the potential to stimulate its 21st century economy by making a commitment to agri-food entrepreneurs and building a comprehensive support system for them. This is the conclusion of MSU Strategic Marketing Institute researchers in a 2006 report that documents the total economic impact of Michigan's agri-food sector.[16] Recent updates to this report put the sector's total impact at $71 billion per year, making it arguably the state's largest industry.

Future growth projections in the report, "The Economic Impact and Potential of Michigan's Agri-Food System," are based on the experience of the MSU Product Center for Agriculture and Natural Resources as a provider of technical support to agri-food entrepreneurs. By supporting these entrepreneurs in a more committed and comprehensive way, the MSU Strategic Marketing Institute projects that Michigan could increase its rate of venture establishment in the agri-food sector (firms with at least one employee after one year).

[13] *Cantrell, P. (2005) "Michigan's Newly Profitable Asparagus Alley." Great Lakes Bulletin News Service, May 22. Retrieved April 17, 2010 from http://www.mlui.org/farms/fullarticle.asp?fileid=16870.*

[14] *Cantrell, P. (2009) "Sysco's Journey from Supply Chain to Value Chain: Results and Lessons Learned from the 2008 National Good Food Network/Sysco Corporation Pilot Project to Source and Sell Good Food." Wallace Center at Winrock International. Retrieved April 15, 2010 from http://www.ngfn.org/resources/research-1/innovative-models/NGFN%20Case%20Study_Syscos%20Journey%20From%20Supply%20Chain%20to%20Value%20Chain.pdf.*

[15] *Ludwig, R. and Sisson, K. (2010) "Can the World Feed Future Generations?" AgroStrategies. Retrieved April 14, 2010 from http://www.halegroup.com/phpwcms/download.php?f=f8815f70a7b975d4d8658bbc6b6fad00.*

[16] *Peterson, H.C., Knudson, W.A., Abate, G. (2006) "The Economic Impact and Potential of Michigan's Agri-Food System, Strategic Marketing Institute Working Paper." The Product Center at Michigan State University, No. 1-1606, January. Retrieved from http://www.productcenter.msu.edu/documents/Working/Economic%20Impact%20of%20Michigan%20Agri-Food%20Final%20010906.pdf.*

MORE JOBS FOR MICHIGAN'S INVESTMENT DOLLARS

The report states that, if Michigan's agri-food sector simply matched the rate of venture establishment in other economic sectors, the state could generate more than 23,000 new jobs per year, including both direct and indirect employment effects.[17] The report notes that nearly half of the jobs could come through relatively small capital investments in small businesses.

When direct and indirect effects are included, the small ventures would generate one job for every $5,714 of capital investment; whereas the large scale agri-food businesses analyzed would generate one job for every $59,537 of capital investment.[18],[19] Furthermore, it's important to note that small businesses do not necessarily remain small over their lifespan; many maystart small but grow to become a significant employer in their community.

Neither this report's authors nor the members of the infrastructure work group suggest that small businesses should be Michigan's only concern or goal. Yet the return on investment is remarkably high for the small-scale ventures, which represent 90 percent of the total number of venture establishments that the report projects is possible with increased state commitment and support.

A consumer orientation is key, according to the report: "Fundamental to future success in the agri-food system will be the ability of businesses to innovate and to fully grasp contemporary consumption patterns, their driving forces and growth opportunities. In this regard, small-scale agri-food entrepreneurial ventures that can adapt their ideas, technologies and resources to the ever-changing consumer wants, needs and perceptions will play a significant role in promoting Michigan's economy. The experience of the MSU Product Center shows that potential ventures in this area are very diverse and consist of businesses involved in a wide range of niche products and services including agri-tourism."[20]

One recent study of Midwest sales potential for farms in six states points to promising economic development results in fresh produce marketing.[21] The study examined two scenarios: the effect of Michigan fruit and vegetable farmers supplying the state's in-season demand for 28 common produce items that grow here, and the effect of farms near metropolitan areas with population of 250,000 or more supplying the cities' in-season produce consumption.

Under the first scenario, Michigan could generate 4,448 farm and farm-related retail jobs. This job total is six times greater than the number of jobs that the same amount of land - 75,000 acres - generates from highly subsidized corn and soybean production. Under the second scenario, Michigan could generate 3,262 farm and farm-related retail jobs from just 57,000 acres, compared with 548 jobs in corn and soybean production on the same amount of land.

[17] *Ibid.*
[18] *Ibid. See Exhibit 4, Scenario B, page 41.*
[19] *Note: The peer-job investment figures are total capital investment divided by total jobs.*
[20] *Peterson, H.C., Knudson, W.A., Abate, G. (2006) "The Economic Impact and Potential of Michigan's Agri-Food System, Strategic Marketing Institute Working Paper." The Product Center at Michigan State University, No. 1 1606, January,. p.36. http://www.productcenter.msu.edu/documents/Working/Economic%20Impact%20of%20Michigan%20Agri-Food%20Final%20010906.pdf.*
[21] *Swenson, D. (2010) "Selected Measures of the Economic Values of Increased Fruit and Vegetable Production and Consumption in the Upper Midwest." R. Pirog and M. Adams (Ed.s). Leopold Center for Sustainable Agriculture, Iowa State University. Retrieved April 15, 2010 from http://www.leopold.iastate.edu/research/marketing_files/midwest.html.*

CREATING HEALTHY COMMUNITIES

Food and new jobs are only a few of the important outcomes of supporting new food system infrastructure for the state's new agri-food entrepreneurs. Michigan also gains land, water and habitat conservation when ecologically sensitive farms can compete. The state gains recreational opportunities and tourism attractions, too, when farms on the urban edge and beyond are in place to offer unique products and valuable experiences.

Developing the appropriate-scale infrastructure needed to supply fresh and processed foods from Michigan's mostly small and midsized farms can further help the state repurpose underutilized manufacturing capacity and employ skilled workers in food processing, equipment fabrication, engineering analysis and other food system infrastructure activities.

Michigan also is in better position to win new business investment when good food and strong farms help define it as a quality place to live. Economic success today is much more dependent on the health of people, communities and the environment than it was when abundant resources, such as low-cost oil, fueled our 20th century industrial expansion.

In a tightening, post-Baby Boom labor market with a premium on knowledge workers, today's businesses are beginning to locate where people want to live rather than where firms might enjoy the lowest labor costs or the least stringent regulations.[22] Good food business and infrastructure development is an underrecognized but key component of the place-making strategies that Michigan's economic development leaders are adopting to build the state's global competitiveness.

Finally, good food entrepreneurship can contribute significantly to Michigan's economic resilience in the face of declining oil supplies and rising climate instability. Agriculture has become the second largest user of fossil fuel after automobiles.[23] In voting for sustainable agriculture with their food demand and purchases, Michigan residents are also voting for a system of agriculture that has the potential to begin weaning the food system from scarce resources upon which we can no longer rely.

Photo courtesy of MSU Student Organic Farm.

[22] *Adeloja, S. et al. (2009) "Chasing the Past or Investing in Our Future: Placemaking for Prosperity in the New Economy." Land Policy Institute, Michigan State University. Retrieved March 29, 2010 from www.landpolicy.msu.edu/ChasingthePastReport.*
[23] *Pollan, M. (2008) "Farmer in Chief." New York Times. October 12.*

Infrastructure by the Numbers

"Michigan County and Region Food and Agricultural Systems Profiles," produced in 2009 and available from the Michigan Department of Agriculture, provides the most comprehensive list of current processing, warehousing and other food system infrastructure, along with production data highlights.[24] But information on the change over time in Michigan's food system infrastructure, such as the number and type of food processing facilities, is limited.

The time span and many variables involved make it difficult to collect and categorize data across the spectrum of food system infrastructure. Facilities and services range from feed stores, large animal veterinarians and seed cleaners to loan officers who handle farming financial needs and grocers who serve stressed urban and rural areas.

It's clear from the record of experiences among farms and other agri-food firms that, as producers leave the industry (Michigan lost half of its farms between 1960 and 2002[25],[26]), so do the facilities and services that make up the food system infrastructure. With this infrastructure go the linkages needed to keep food supply chains functioning.

In a 2009 survey of 14 Michigan financial institutions, loan funds and public entities, for example, the C.S. Mott Group for Sustainable Food Systems at Michigan State University found that agricultural lending was a dying function at banks. At least two of the four bank loan officers that continue to offer agriculture loan products voiced concern in the survey about the level of attention that agriculture might receive from their banks once they retired.[27] Yet the number of farms in Michigan increased 5 percent from 2002 to 2007 - that's an increase of 2,700 farms.[28] Among this number are many small farms entering relatively unconventional local and regional markets for food with good food attributes. Not only do these new farmers find few bankers who work in agriculture, but the report also found that they find practically none who are familiar with these emerging market opportunities and changing agri-food business models.

Much of the shift in food system infrastructure occurred in the 1970s, a watershed period between a more local and regional food system in the United States and the current national and global-scale system. Overall, as in other industries, the agri-food sector has experienced significant consolidation since that time, with a few companies controlling many links in their supply chains through vertical and horizontal integration.

This concentration has narrowed market access for producers and severely limited the viability of independent processors and other food system infrastructure businesses. In the seed corn sector, for example, two companies, DuPont/Pioneer and Monsanto, control 58 percent of the market.[29]

Michigan's situation with meat and poultry processing is illustrative. In a 2007 assessment of the feasibility of a new processing plant in northern Michigan, the MSU Strategic Marketing Institute identified a Catch-22 situation.[30] The authors explain: "There are not sufficient numbers of animals to support a processing plant and producers may not be willing to expand livestock production unless there is access to a processor."

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[24] *Michigan Department of Agriculture. (2009) Michigan County and Region Food and Agricultural Systems Profiles. Retrieved April, 15, 2010 from http://www.michigan.gov/mda/0,1607,7-125-1568-220573--,00.html.*

[25] *U.S. Department of Agriculture. (1964) "Number of Farms and Land in Farms." Retrieved April 17, 2010 from http://usda.mannlib.cornell.edu/usda/nass/NumbFarmLa//1960s/1964/NumbFarmLa-01-17-1964.pdf.*

[26] *U.S. Department of Agriculture. (2007) 2007 Census of Agriculture. Historical Highlights: 2007 and Earlier Census Years (Table 1). Retrieved April 17, 2010 from http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_State_Level/Michigan/st26_1_001_001.pdf.*

[27] *Cocciarelli, S. (2009) "Financing Michigan's Sustainable Agriculture: The Availability and Accessibility of Capital for Beginning Farmers." C.S. Mott Group for Sustainable Food Systems, Michigan State University.*

[28] *U.S. Department of Agriculture. (2007) 2007 Census of Agriculture. Historical Highlights: 2007 and Earlier Census Years (Table 1). Retrieved April 17, 2010 from http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_State_Level/Michigan/st26_1_001_001.pdf.*

[29] *Hendrickson, M. and Heffernan, W. (2007) "Concentration of Agricultural Markets." Department of Rural Sociology, University of Missouri, Columbia, Mo. Retrieved from http://www.foodcircles.missouri.edu/07contable.pdf*

[30] *Knudson, W. and Peterson, C. (2007) "A Feasibility Assessment of a Meat Slaughtering/Processing Plant or Feedlot in Northern Michigan." Product Center at Michigan State University, The Strategic Marketing Institute Working Paper. Retrieved April 14, 2010 from http://www.michigan.gov/documents/mda/MDA_msu_feedlot_feasability_184592_7.pdf*

Photo by Patty Cantrell.

The report goes on to examine the feasibility of a state-of-the-art processing plant and feedlot that would presumably attempt to compete in the same national and global supply chain for meat in which four firms -Tyson, Cargill, Swift and National Beef Packing - have a combined 84 percent share of the beef packing sector. The report's conclusion is predictable: not feasible.

Yet the report highlighted niche market opportunities for livestock producers in the region and Michigan. Rather than go head-to-head with Tyson chicken or Cargill beef in the supermarket, Michigan meat producers can build businesses on the basis of a completely different product - locally raised, humanely produced, free of added growth hormones, etc. They also have a growing list of customers for meat with such attributes. According to the Michigan affiliate of the international organization Health Care without Harm, one potential major customer is Northern Michigan Hospital, which is now taking steps to find and purchase local, sustainably raised meats.[31] Among such consumers' concerns are treacherous working conditions in major meat processing facilities and exploitation of vulnerable immigrant populations.

Connecting producers and consumers of such meat products will require new food system infrastructure suited to comparatively short regional supply chains, not the kind of facilities or business models typical in national and global supply chains.

Mobile meat processing units, for example, are cost-saving options that some livestock producers and processing entrepreneurs are using to meet market demand for federally inspected retail cuts of meat.[32] Similarly, the global supply chain business model of interchangeable beef producers is not suitable. New business models based on good food values are emerging in Michigan and across the country, called values-based food supply chains or food value chains.[33] In food value chains, producers and processors often work together to access or develop production standards and marketing brands, as well as aggregation, processing and distribution services.

Just as entrepreneurs are getting creative in their approach to food system infrastructure, so, too, must local and state leaders step outside of conventional economic development boxes to understand and seize good food opportunities.

[31] *Personal Communication (April 2010) Hillary Bennet, Healthy Food in Health Care Coordinator, Ecology Center, Ann Arbor, Mich.*
[32] *See http://www.nichemeatprocessing.org/*
[33] *For further information see www.agatthemiddle.org and www.ngfn.org.*

Strategies for Developing Food System Infrastructure

Bridging wide gaps in food system infrastructure for good food entrepreneurs, both social and private, and working from small-scale to large-scale, will require focused attention on building a more conducive business environment, as well as the businesses and services themselves. We group this needed support and attention in four main strategies:

1. *Communication and networking:*

   Facilitate interaction of buyers, sellers and others in new, shorter supply chains, which require more communication and collaboration than conventional, long-distance supply chains, where food producers and food buyers rarely meet. Entrepreneurs need a collaborative and supportive business environment to innovate and flourish, including a community of peers and clusters of related businesses to work with. This is how Detroit's Eastern Market, for example, originated and how it continues to operate as a hub of value-added activity. Not only do shoppers and farmers get to know one another, but small-scale retail and food processing businesses located nearby also work with the farmers and one another to develop products and pursue market opportunities.

2. *Equipment and facilities:*

   Target business incentives and investment at the new sizes and types of equipment, facilities and services that regional supply chains require to fit their midscale volumes and more identity-preserved products. For a farm to put its name on its value-added product after processing, for example, it must segregate its product through the entire process. Most of Michigan's large-scale processors are not able to accommodate this; their business model is based on mixing products from many farms together. At the same time, most farms cannot afford to set up needed storage, processing and other equipment and facilities on their own. In addition, the new scale and type of equipment they need is often not yet available in the marketplace.

3. *Information and technical assistance:*

   Provide relevant research and other assistance that entrepreneurs need to best navigate emerging good food markets that is not yet available from local and state agencies tasked with business development. Southwestern Michigan's bedding plant industry, for example, has 32 million square feet of greenhouse space sitting mostly idle in the winter. Many growers are interested in adding a winter produce crop for regional markets, but they lack sufficient market data, production research and branding expertise.

4. *Regulation:*

   Reform regulatory approaches to match the level of oversight with the level of relative risk. Small farmers with products ranging from strawberries to squash now face food safety audits that commonly cost $1,000 for each crop. Without reform, costly and confusing food safety rules can prevent farms from serving local and regional good food markets.

Food System Infrastructure Goals

The food system infrastructure work group goal is for Michigan's agri-food sector to generate new agri-food businesses at a rate that enables 20 percent of the food bought, sold and grown in Michigan to come from and stay in Michigan.

Michigan can achieve this 2020 goal by focusing on an interim goal of achieving by 2015 the same rate of agri-food business startup success, or establishment "births,"[34] as the economy as a whole. According to projections from the Michigan State University Strategic Marketing Institute, that annual rate would equal 851 agri-food startups that employ at least one person after one year. Achieving this higher rate of agri-food startup success would generate more than 23,000 new jobs per year in Michigan.

We propose that a significant number would be involved in responding to good food market demands, including distribution, processing and other business types that are fundamental to developing needed food system infrastructure. Accomplishing this agri-food venture establishment rate, therefore, could also help bridge infrastructure gaps needed to reach the Michigan Good Food Charter institutional food purchasing goal of 20 percent from local sources by 2020.

This food system infrastructure work group interim goal and projected impacts are based on the 2006 MSU Strategic Marketing Institute working paper (1-1606) "The Economic Impact and Potential of Michigan's Agri-Food System."[35] The model used shows that by committing to a comprehensive support system for matching the rate of agri-food venture establishment to that of the economy as a whole, Michigan has the potential to generate more than $7 billion in total outputs and create nearly 69,000 jobs from a total capital investment of about $1.1 billion over a three-year period. Given a potential state workforce of 4.64 million, the 69,000 new jobs would reduce the state's unemployment rate by almost 1.5 percent.

In the Strategic Marketing Institute paper, MSU researchers project that the 851 establishment "births" in the agri-food sector would:

- Consist of 90 percent small-scale businesses (766) and 10 percent medium- and large-scale businesses (85).
- Involve $380.4 million per year of business investment in structures, machinery, equipment and supplies, which would generate $964 million of direct output annually and spur another $1.5 billion of output annually from other supporting businesses, such as farms supplying new small-scale food processors.

Indicators

Key indicators of Michigan's progress in developing needed food system infrastructure are whether midscale farms are finding new economic opportunity as a result and whether infrastructure-related facilities and services are increasing as more farms and food businesses begin to serve good food needs. Specifically, we propose tracking such progress through the following indicators:

Number of Midscale Farms

- Increases over time in the number of midscale farms in Michigan, measured by market value of sales, would be a significant indicator of progress in developing the food system infrastructure needed for business success. The ongoing loss of midsized farms is a trend that extends from

[34] *The number of new firm births is one of the most popular measures of entrepreneurship activity, according to Advanced Research Technologies. The U.S. Census Bureau issues annual data on establishment births for major industries and services in each state. According to the U.S. Census Bureau, births are establishments that have zero employment in year t and positive employment in the first quarter of year t+1.*

[35] *Peterson, H.C., Knudson, W.A., Abate, G. (2006) "The Economic Impact and Potential of Michigan's Agri-Food System, Strategic Marketing Institute Working Paper." The Product Center at Michigan State University, No. 1-1606, January. Retrieved from http://www.productcenter.msu.edu/documents/Working/Economic%20Impact%20of%20Michigan%20Agri-Food%20Final%20010906.pdf*

coast to coast and beyond. The USDA Agricultural Census records have documented the changes in five-year cycles for all states.[36]

- The infrastructure work group categorized Michigan midsized farms as those between 50 and 999 acres. Census figures from the 2007 USDA Agricultural Census Historical Highlights show a consistent pattern of declining numbers of Michigan farms in this acreage range over a 35-year period.[37] Michigan had 44,965 farms in the 50- to 999-acre category in 1978. The state had 29,100 in 2007, a 35 percent decline.

AGRI-FOOD REUSE OF COMMERCIAL PROPERTY IN MICHIGAN

- New agri-food distribution, processing, equipment manufacturing, storage and other food system infrastructure will show up in the sale and development of commercial properties.
- Several possible sources of information exist. In each case, specific information about agri-food property use will require sources to begin monitoring purchases and redevelopment efforts for agri-food components.
- One source of information is the Michigan Brownfield Redevelopment Program, which involves designation and redevelopment of contaminated, abandoned and blighted properties by a local brownfield redevelopment authority.
- Currently, sources at the Michigan Economic Development Corporation (MEDC) and the Michigan Department of Natural Resources and Environment indicate that neither agency maintains a statewide database of brownfield properties. To date, the responsibility for and task of maintaining lists of qualified and/or funded properties has been left to local and county governments, brownfield redevelopment authorities or other economic development agencies in Michigan's 83 counties.
- A representative of the MEDC recently confirmed, however, that a new and updated Brownfield Redevelopment Authority (BRA) contact list is under development. The expanded and improved visibility could result in an increase in the redevelopment of the properties. The new list is an opportunity for state leaders to encourage BRAs to monitor and report agri-food uses of properties.
- A second source is the Commercial Property Information Exchange (CPIX) with Michigan's Commercial Board of Realtors. The statewide listings are now included in Catalyst, a national listing service and software provider. According to the MEDC, the majority of the properties receiving special treatment or attention tend to be auto manufacturing-related.

INDICATORS OF SEASON-EXTENSION DEVELOPMENT

- Progress in supplying more high-quality Michigan food to Michigan and nearby markets will include installation of more season-extension technology so producers can build revenue with year-round or nearly year-round sales.
- One indicator of season-extension efforts is the number of passive solar greenhouses, or hoophouses, in use. A current baseline estimate of operating hoophouses in Michigan from Adam Montri, outreach specialist at MSU who works with hoophouse farmers across the state is 40 to 45.
- Another potential future source is the USDA Census of Agriculture, which collects information about greenhouse operations. Current data collected, however, mix all greenhouse uses, both floriculture and vegetable production, into one number. Interest in or requests for more detail about greenhouse uses could result in the USDA collecting additional detailed information in the future. The agency has responded to past requests by providing new information, such as in the areas of direct marketing and organic production.

[36] *U.S. Department of Agriculture. (2007) 2007 Census of Agriculture. U.S. State Level Data: Economic Class of Farms by Market Value of Agricultural Products Sold and Government Payments: 2007 and 2002 (Table 3). Retrieved April 17, 2010 from http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_State_Level/Michigan/st26_1_003_003.pdf*

[37] *U.S. Department of Agriculture. (2007) 2007 Census of Agriculture, Historical Highlights: 2007 and Earlier Census Years (Table 1). Retrieved April 17, 2010 from http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_State_Level/Michigan/st26_1_001_001.pdf.*

FEDERALLY INSPECTED MEAT PROCESSING FACILITIES

- Currently livestock producers can sell meat in retail cuts only if they have access to a federally inspected meat processing facility. Increases in such facilities would indicate increases in production and marketing of Michigan-raised meats.
- Positive indicators should reflect both a change in the number of processors involved in commercial beef/red meat slaughter located in the state and an increase in the total weight of beef/red meat produced by small to midsized farms.
- The USDA Food Safety and Inspection Service is the source for information on the status of federally inspected plants in Michigan. The District 45 office covers Michigan and Wisconsin and is located at 2810 Crossroads Dr., Suite 3500, Madison, WI 53718-7969; phone: (608) 240-4080.
- In Michigan in 2007 and 2008, 65 plants were reported in operation as follows: 30 federally inspected and 35 non-federally inspected. Individual plant volume is difficult to establish because of efforts by plant owners and operators not to divulge competitive information.[38]
- Using agricultural census figures, Michigan's market share of red meat by weight amounted to slightly more than 1 percent of total red meat production with an estimate of nearly 30,000 head in 2008 and slightly more than 27,000 in 2007.
- A 2007 working paper by members of the MSU Product Center reported that, as in other agri-food categories, most of the market for beef cattle is concentrated in the hands of a few producers, with market share of the four largest beef processors growing between 1980 and 2004 from 28.4 percent to 70.9 percent.[39]

AGENDA PRIORITIES

2012 Agenda

1. Establish food business districts to encourage food businesses to locate in the same area and to support their collaboration.

Spur new businesses and enable supply chain development by establishing food business districts that recognize and support the co-location and collaboration of farmers' markets, food processors, wholesalers, retailers and other related businesses. Such districts build clusters of products and services, which attract buyers and spur productive interaction of entrepreneurs. Food business districts can serve as local and regional hubs for good food entrepreneurship and infrastructure development.

Detroit's Eastern Market, as a centerpiece of the city's original development and more recent redevelopment, is an example of how food business clustering leads to food business growth. Another example is a new project in Grand Rapids to build a major retail/wholesale urban market as part of the city's downtown revitalization. Less urban locations could also use this food district strategy to boost town centers and local commerce. The strategy combines well with other redevelopment efforts such as brownfield redevelopment efforts and incentives for reuse of vacant commercial properties.

[38] *U.S. Department of Agriculture. (2008) Livestock Slaughter. Retrieved from http://usda.mannlib.cornell.edu/usda/nass/LiveSlau/2000s/2008/LiveSlau-02-22-2008.pdf*

[39] *Knudson, W.A. and Peterson, H.C., (2007) "A Feasibility Assessment of a Meat Slaughtering/Processing Plant or Feedlot in Northern Michigan." Product Center at Michigan State University, The Strategic Marketing Institute Working Paper. Retrieved April 14, 2010 from http://www.michigan.gov/documents/mda/MDA_msu_feedlot_feasability_184592_7.pdf*

Ideally, the proposed food business districts would involve local and regional authorities working with state-level programmatic support. The resulting designation and plan for organizing a food business district can help communities draw local and federal funding for such projects.

The Michigan Main Street Program for downtown areas pursuing redevelopment is one model of a combined state and local effort.[40] Administered by the Michigan State Housing Development Authority, the program offers state-level criteria and recognition along with technical assistance and convening of local and regional stakeholders to develop plans and pursue resources.

Another model comes from Michigan's experience with its Agricultural Processing Renaissance Zones. Businesses compete for designations out of a limited number available, which come with property tax incentives for a period of time. To better fit good food business and infrastructure development, Michigan could adapt this model to include incentives that work for small and midscale businesses and apply it to groups of businesses and locations beyond industrial zones, such as mixed-use retail areas.

Implementation: Local and regional entities can initiate such food business district designations and programs. State-level leadership, however, would provide important recognition of local and regional food hubs as a valuable economic development strategy. This vision and leadership must also come from the places where most local and regional leaders go for economic development guidance: the Michigan Department of Labor, Energy and Economic Growth and/or the Michigan Economic Development Corporation.

With a vision, a champion and a clear step-by-step program, state leaders could spur and support local and regional investment of time and resources to create food business districts and generate jobs and local and federal investment as a result.

Resistance will come from those in economic development who do not see food and agriculture investments leading to the job growth that Michigan needs. Overcoming that resistance requires recognition and communication of the aforementioned agri-food economic impacts and linking of agri-food entrepreneurship to other economic development strategies, such as the well-accepted "regional place-making" approach to retaining and attracting talent in the knowledge economy era.[41]

The link to regional place-making makes sense, given the power of agri-food entrepreneurship generally and regional food hubs specifically to build amenities in town centers and adjacent rural areas. Urban markets, for example, are destinations that make town centers attractive. As a support to the local farm economy, food business districts and hubs can also help towns gain a competitive edge through agri-tourism and other recreational opportunities on the urban edge and in their region. Quality, place-identified food products in schools, restaurants and home refrigerators further add to pride of place that keeps and brings household and business investments. Food business districts support these amenities as well as the development of new products, sales and services that build local commerce and jobs.

2. *Charge business support entities, such as the 18 Michigan Technical Education Centers (M-TEC) and Michigan State University Extension, with identifying and supporting the equipment and process engineering needs of farmers and other agri-food enterprises, and ensure that food and agriculture are included in state and local economic development plans.*

The state's many business and technical assistance entities have capacities in engineering, logistics and other fields that are needed in the food system arena. Existing equipment and processes are designed almost exclusively for the large-scale and global anonymous tiers of the food system. Shorter supply chains require different types and scales of equipment and processes. Technical assistance providers can support food system entrepreneurs in their work to develop equipment and process solutions.

Forms of support could include retrofitting equipment for new uses, designing a mobile meat processing unit for area livestock producers or analyzing the flow of a packing line so a business can introduce a new product to the line cost effectively.

[40] *For further information see http://www.michiganmainstreetcenter.com/Program.aspx*

[41] *Adelaja, S. et al. (2009) "Chasing the Past or Investing in Our Future: Placemaking for Prosperity in the New Economy." Land Policy Institute, Michigan State University. Retrieved March 29, 2010 from www.landpolicy.msu.edu/ChasingthePastReport.*

The business support entities could identify needs and develop responses by consulting with agri-food entrepreneurs in the region, such as through roundtable discussions or task forces that a regional chamber of commerce or economic development corporation could host. The support entities could also solicit proposals or launch competitions by which entrepreneurs could present their challenges for agency or student and faculty response.

Such an outreach process would be valuable not just to solve individual agri-food businesses' technical problems but also to establish relationships between the support entities and a sector with which many, outside of Extension, have had relatively little contact. From these new relationships, additional region- and market-appropriate food system infrastructure initiatives can grow.

Implementation: Local business and economic development leaders can take the lead by requesting that various technical assistance entities investigate and support food system infrastructure development needs. State-level leadership and direction of such entities is important, however, to make food system infrastructure support a priority.

Limited budgets will naturally deter such entities from adding another group of entrepreneurs and business issues to their plates. This item will require local, regional and state leaders to both recognize the need for this attention and request it from the taxpayer-supported agencies.

3. *Examine all of Michigan's food- and agriculture-related laws and regulations (food safety, production, processing, retailing, etc.) for provisions that create unnecessary transaction costs and regulatory burdens on low-risk businesses and ensure that regulations are applied in a way that acknowledges the diversity of production practices.*

Most of the state's food and agriculture regulations put farms and food businesses of all sizes and types under the same rules irrespective of their relative risk. The typical one-size-fits-all approach is generally geared to higher risk situations and forces less risky operations to comply with requirements for equipment, processes, and other investments of time and money that exceed real needs. For example, a regulatory requirement for a bathroom for workers is reasonable, but requiring a family to add portable restrooms in the 2-acre garden, when the house bathroom will do, is not. This regulatory mismatch can stymie food system infrastructure development because unduly burdensome regulations present significant barriers to market entry and thus to market development.

Local and state authorities charged with protecting public health and natural resources must develop more equitable and rational enforcement so that the level of oversight matches the level of relative risk.

Implementation: Under the auspices of the Michigan Food Policy Council, regulators from the Michigan Department of Agriculture, the Michigan Department of Natural Resources and Environment, and the Michigan Department of Community Health should convene a task force to assess current laws, rules and policies related to food- and farm-related oversight. The task force should include representatives of food and farm business interests as well as public health and natural resources interests.

Specifically, the task force should examine current laws and rules, develop recommendations for rationalizing them to fit relative risk, prioritize the recommendations, and provide an action-oriented report to the Michigan Food Policy Council, the three departments involved and the Michigan Legislature. The report should include specific wording and steps required for making legislative and rule changes that the task force has prioritized.

Opposition to this agenda item will come from state departments that, because of the state's fiscal situation, have little capacity to take on an extra task. Other opposition will claim that many laws and rules are federal in nature and out of the state's hands.

Overcoming opposition that comes from fiscal considerations will require recognition that the task force can build on analyses that some in the departments have already undertaken, and a cost-benefit approach to communicating the return to state government and the return in economic development for taking this business-building step. State commitment to local and regional food system development is required, along with motivational leadership from top officials in the state's legislature and administration.

Overcoming opposition based on the federal nature of many food- and farm-related rules and regulations will require recognizing the state's role as administrator of many federal laws, such as the Clean Water Act, and the extent to which the state already writes rules in compliance with these laws; and recognizing the need for state involvement in developing and/or administering federal rules so that they fit the state's food and farm business reality.

Pending changes in federal food safety rules for produce are an example of opportunities for local and state leaders to both influence final rules and develop a shared position on them that keeps relative risk in the forefront. As of late 2010, Congress was working to finalize the Food Safety Modernization Act (S-510). The pending legislation addresses major problems with food safety in the produce industry but, without the inclusion of amendments to address differences in scales of production, could be onerous for small and medium size farms.[42] Proactive state involvement in final rule development and administration is needed on behalf of small and midsized farms in short supply chains, which pose relatively low risk.

4. *Include Michigan food and agriculture in state marketing, such as the Pure Michigan campaign, to build awareness of the state's great variety and quality of local food products and farm amenities.*

Integrate food and agriculture marketing into existing programs with the objective of developing longer term regional branding and programmatic support along the lines of the successful Select Michigan effort, which is now practically defunct because of state budget cuts.[43]

Much of the new food system infrastructure needed to achieve the Michigan Good Food Charter vision will develop out of potential sales of Michigan products to Midwest neighbors, including Canada. Consumers in those areas do not know that Michigan peaches, plums, asparagus and other produce rival any they currently purchase from other places. Even Michigan consumers are largely in the dark on this fact. Good food entrepreneurs are changing these perceptions, but state and local marketing support is needed to help them tell the Michigan story in food markets.

Implementation: Implementation of this agenda priority starts with the natural agri-tourism draw that is already a small part of the state Pure Michigan campaign and local efforts by such entities as convention and visitor bureaus. Growing this food and agriculture component in tourism marketing will require recognition of the extent to which tasty, local food is an attraction for visitors in addition to the typical agri-tourism experience of farm stands and hayrides.

National coverage of Michigan's urban gardening movement, as well as coverage of the state's restaurants, chefs[44] and local foods, will help build involvement by state and local marketing leaders as they recognize Michigan's national good food leadership. Michigan's new Culinary Tourism Alliance is another positive development around which state tourism marketing and food system promotion may come together.[45]

Opposition could come because of limited funding for state promotional campaigns. But the relationship between Michigan marketing and Michigan food and agriculture is growing and, with encouragement from local and state leaders, could expand into creative and collaborative approaches that can benefit Michigan food sales as well as the hospitality industry.

[42] *National Sustainable Agriculture Coalition. (2010). "Senate Passes Food Safety Modernization Act." Blog, November 30. Retrieved December 6, 2010 from http://sustainableagriculture.net/blog/senate-passes-food-safety-bill/.*

[43] *Cantrell, P., Conner, D. S., Erickcek, G., & Hamm, M. W. (2006). Eat Fresh and Grow Jobs, Michigan. Retrieved from http://www.mattgroup.msu.edu/Portals/0/downloads/EatFresh.pdf*

[44] *Absolute Michigan. (2010). "James Beard Likes Michigan Chefs!" Retrieved March 29, 2010 from http://www.absolutemichigan.com/dig/michigan/james-beard-likes-michigan-chefs/*

[45] *For further information see http://mich.gov/som/0,1607,7-192-45414-227220--,00.html.*

5. Amend Michigan's General Property Tax Act to exempt certain on-farm renewable energy installations.

Currently, Michigan taxes on-farm installations of renewable energy technologies as personal property. Yet reducing energy costs through renewable energy generation is a key survival strategy for farms, particularly greenhouses with the potential to raise vegetables year round.

The Michigan Legislature has already exempted eligible methane digester electric generating systems. Also exempt should be geothermal, micro-hydro, wind and solar installations to encourage innovation on farms, particularly in pursuit of reducing energy costs and carbon emissions, which both contribute to profitability through increased efficiency and marketability.

The third-generation Elzinga-Hoeksema Greenhouses in Portage is one example of an agri-food business that took significant energy-saving, business-building initiative only to receive a discouraging personal property tax bill for the on-farm installations.

Owner Mark Elzinga invested $4 million in geothermal, solar, wind and other energy-efficiency technologies at his 12-acre New Millennium Greenhouses site, one of four greenhouse complexes that his company operates. The investment was part of building long-term energy security for his existing floriculture business and his new winter vegetable business.[46] "We were watching gas prices go up every year, electricity prices go up every year," he said. "We decided to take a chance; we'd seen it done successfully in Europe." Because only methane digesters are exempt, Mr. Elzinga received a six-digit personal property tax bill.

Implementation: This item should receive support from those involved in Michigan's sustainable business arena, particularly the new green energy sector, which counts farms among its customers. Similarly, Michigan's strategy to become a manufacturing hub for renewable energy equipment is also conducive.

Opposition to reducing tax revenues may come from lawmakers and others concerned about Michigan's fiscal crisis. Yet proponents can overcome these objectives by making the case that encouraging such innovation will build the state's tax base through new business investment. Farm entrepreneurs will be more likely to make green energy investments if the state stops penalizing such innovation by taxing on-farm renewable energy installations as personal property.

Proponents can also point out that lawmakers have already given one exemption to a narrow set of agribusiness interests (methane digesters benefit a small number of large livestock operations almost exclusively) and should consider the energy and economic benefits of encouraging other types of farms to install other green energy technologies.

2015 AGENDA

6. Direct $10 million in state funding to regional food supply chain infrastructure development investments through the Michigan State Planning and Development Regions or other regional designations.

"Regional" is the keyword in this agenda item. Public investments in regional food system infrastructure are best made as part of fulfilling a regional plan and in collaboration with regional entrepreneurs and citizen leaders involved in that planning.

Most of the limited public funding available to food system entrepreneurs is granted on an individual basis. It is not connected to any plan for the region's food system development, and it often results in one-off grants to businesses and organizations that can manage the highly complicated federal grant application process. Past state funding for agricultural innovation (Julian-Stille grants) was also based on an individual application process, not a strategic investment effort. Michigan agriculture has since lost half of the total $10 million available for the Julian-Stille grant program after the state legislature directed the remaining $5 million to improvements at Detroit's Cobo Hall.

[46] Cantrell, R. (2009) "Summer Flowers, Winter Vegetables, Year-Round Success." Great Lakes Bulletin News Service, March 26. Retrieved April 19, 2010 from: http://www.mlui.org/farms/fullarticle.asp?fileid=17329.

This agenda priority of a strategic regional food system infrastructure investment program would:

- Work through Michigan State Planning and Development Regions or other regional designations. These regional entities would administer the program, oversee development of a strategy for regional food system infrastructure development and authorize proposed regional development authorities.
- Qualified regional development authorities would have demonstrated understanding of and capacity in regional food system development. They would make funds available to public and private initiatives in the region on the basis of a regional strategy informed by food, farm, and other business and community development interests. Competitive applications would require business investment and collaboration that fit the regional strategy.
- Regional authorities would also grant other incentives that come available for food system infrastructure, such as tax credits for equipment purchases.

Michigan's brownfield redevelopment authorities provide a model, with qualified entities and groups of stakeholders working together on a plan for cleanup and re-use of contaminated and blighted properties. They make funds available to competitive projects that carry out those plans.

Michigan State Planning and Development Regions could designate and house the proposed regional food system development authorities, which would apply for and receive authorization on the basis of qualification criteria. These authorities would then work to further private and public projects that fit the region's food system development plan and leverage other dollars as well.

Implementation: Implementation has two parts: moving money to the regional food system infrastructure development initiative and building the program itself, including establishing the process and criteria for development authorities.

Transfer of $10 million from state revenues will require top-level state commitment to food system infrastructure development as an economy- and job-building strategy. Like the implementation strategy for the first agenda priority, this requires demonstrating how food system infrastructure investments will pay off for related economic development efforts such as regional place-making.

State leadership on this idea is also needed to spur the regional food system planning that will form the base of the strategies that regional development authorities will pursue. Groundwork is strong in many areas of Michigan. State recognition, investment and step-by-step program development can bring many budding efforts and projects to fruition. Implementation of 2012 agenda priorities (food business districts, technical assistance to shorter food supply chains) will also generate regional focus on planning for food system infrastructure needs.

7. Develop systems for collecting and sharing market and other data relevant to regional food supply chain development.

The purpose of this priority is to assist agri-food entrepreneurs and technical assistance providers with information about the size, potential and status of markets for food that has local, regional and other good food attributes.

The Michigan Department of Agriculture can use its long-standing collaboration with the USDA National Agricultural Statistics Service (NASS) to initiate a series of surveys that provide benchmark and ongoing information such as the number of farms engaged in local and regional food markets and the market value of sales and production volume involved. Increasing interest at the USDA in collecting this information will be helpful, such as the agency's addition in recent years of statistics in the Census of Agriculture on direct marketing and organic farming.

Lawmakers and MDA officials can also work with Michigan State University, as the land grant university for the state, to establish benchmarks and ongoing information about local and regional food demand, including what attributes consumers are looking for and whether supply is meeting that demand. Federal funding for agricultural research could be leveraged for the upfront cost of developing and establishing such data collection.

Implementation: Support from researchers at the MDA, the NASS and MSU will be needed to both advocate for and develop the new data collection. The challenge for researchers is twofold: the local and regional data needed are more difficult to collect than statewide data, and much of the information may be proprietary (e.g., sales information). New systems for collecting the new data in a way that does not compromise private businesses may be required.

Nevertheless, many research approaches exist to collect needed information, and interest among agri-food entrepreneurs may be strong enough for private businesses in the emerging good food sector to become involved in developing needed data collection systems with state and university researchers.

Another opportunity for covering the time and cost of implementation is for the MDA, NASS and university researchers to assess current data collection efforts to determine whether some existing investments of time and money are perhaps less needed (e.g., outdated or serving few rather than many).

Finally, it will help to hear from technical assistance providers and others in economic development agencies, etc., about the kinds of data they need in their business development work. Their involvement and specification of needs can also help overcome obstacles to initiating new data collection.

2020 AGENDA

3. Contingent upon further market assessment, establish a state meat and poultry inspection (MPI) program in cooperation with the federal Food Safety and Inspection Services (FSIS) to spur new meat processing infrastructure by providing more proactive and responsive service to small and midsized meat and poultry processors.

The meat and poultry inspection (MPI) program allows states to provide inspection services that are "at least equal to" federal inspection so that meat slaughtered under state inspection can also be sold as retail cuts. A new provision in the 2008 federal Farm Bill allows for such state-inspected meat to be sold for the first time across state lines.[47]

The need and opportunity for Michigan to reinstate meat inspection services will grow by 2020 as the number of food and farm entrepreneurs serving markets for local and regional food grows. Quantifying this need in 2020 and the cost-benefit of reinstating state meat inspection, however, is a prerequisite for moving forward with this agenda priority.

Michigan can target limited funding for a state MPI program by focusing on gaps in service across the state and on particular market needs and opportunities in meat processing. Steps to take include assessing the capacity and geographic accessibility of existing meat processing facilities and estimating the number of new processing facilities, including lower cost mobile units, that markets would support and the scale at which they could operate profitably.

Minnesota, North Dakota and other states that have reinstated federal-equivalent state meat inspection services in recent years have experienced increases in the number of small and midsized plants that go into business or expand.[48] The success of and support for such state meat inspection developments culminated recently in the new 2008 Farm Bill provision to allow interstate shipment of state-inspected meat and poultry products.

[47] Baker, E., Hoelmer, E., Noble, M. and Witteman, A. (2008) "Interstate Shipment of State-Inspected Meat" in Grassroots Guide to the 2008 Farm Bill. National Sustainable Agriculture Coalition. Retrieved March 29, 2010 from http://sustainableagriculture.net/publications/grassrootsguide/local-food-systems-rural-development/interstate-shipment-of-state-inspected-meat/.

[48] New Rules Project. (2001) "State Inspection Revives Local Markets." Institute for Local Self Reliance. Retrieved March 29, 2010 from http://www.newrules.org/agriculture/article/state-inspections-revive-local-markets

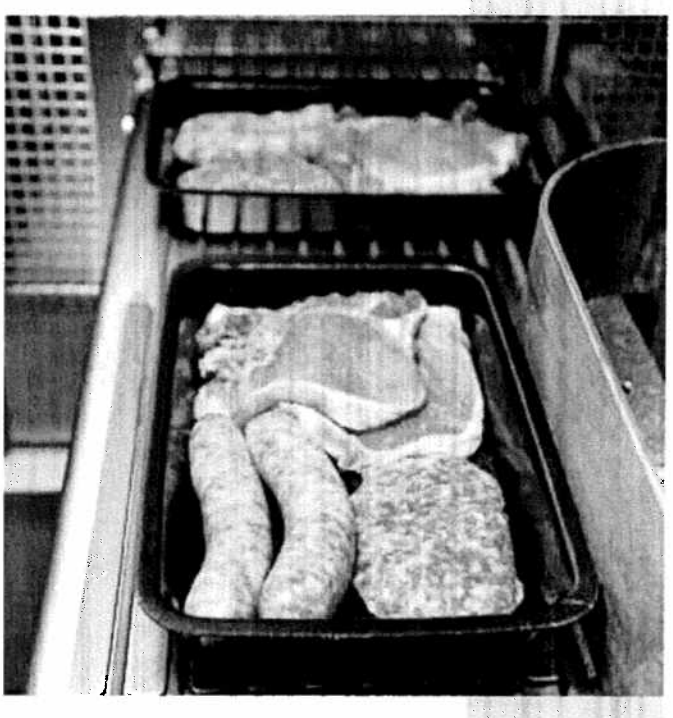
State inspectors can provide one-on-one service to small and midscale meat processing businesses that do not have the ability to hire the technical and legal expertise needed to navigate highly complicated regulations. A state inspection service offers a business development benefit by providing more responsive service than the USDA can provide.

Because federally inspected meat and poultry processing plants are few and far between, many of Michigan's smaller scale livestock producers use "custom-exempt" slaughter plants, which means they must pre-sell (sell prior to slaughter rather than after) meat by halves and quarters. The growth of local and sustainable meat and poultry businesses in Michigan is limited without more federal inspection or equivalent state inspection at slaughter, whether in a fixed facility or in a mobile processing unit.

Mobile units are emerging across the country as a cost-saving option for meat processing entrepreneurs and livestock producers, who often work together to bring about such infrastructure needed to build shorter meat supply chains. In any case, federal inspection is now needed in Michigan for producers to sell the meat retail, unless and until the state reinstates a state meat inspection program.

Implementation: FSIS provides guidelines for states in their establishment of MPI programs that are "at least equal to" federal inspection and reviews such programs regularly to assure they meet this standard.[49] Michigan can, therefore, establish an MPI program by using these guidelines to develop a program that meets federal requirements. The Michigan Department of Agriculture is the primary candidate for operating the program.

Opposition to this proposal will certainly arise because the program will require state funding to operate. The opposition, likely from budget-minded lawmakers, will question whether the investment will generate enough return in meat processing business growth to warrant the outlay. Opposition will also question the need for state inspection if federal inspection is technically available.



Overcoming this opposition will require developing an MPI program that builds on existing MDA expertise and field operations for a moderate-cost program. It is important also to note that the cooperative arrangement with FSIS includes the federal agency covering up to half of the program cost.[50] In a 2002 interview, Dr. Lee Jan, then president of the National Association of State Meat and Food Inspection Directors, explained that the average cost to states after the federal cost share was $1.8 million per year.[51]

Finally, overcoming opposition will also require substantiating the demand and need for such meat inspection services, including the failure of federal inspection services to adequately meet the demand from potential new meat processing businesses. The seventh agenda priority, collection of more local and regional market data, could by 2020 help substantiate that demand, as well as the business and market development value of Michigan investing in state meat inspection.

[49] *U.S. Department of Agriculture Food Safety and Inspection Service. (2010) Regulations and Policies. State Inspection Programs. Retrieved April 17, 2010 from http://www.fsis.usda.gov/regulations/state_inspection_programs/index.asp*

[50] *U.S. Department of Agriculture Food Safety and Inspection Service. (2004) FSIS Directive 5720.2 Revision 3: State Cooperative Inspection Programs. Retrieved March 29, 2010 from http://origin-www.fsis.usda.gov/OPPDE/rdad/FSISDirectives/5720-2Rev3.pdf*

[51] *Cantrell, P. (2003) "States Get Back into Meat Business." Great Lakes Bulletin News Service, January 30. Retrieved March 29, 2010 fromhttp://www.mlui.org/farms/fullarticle.asp?fileid=16414*

CONCLUSION

Michigan's food and agriculture sector is large and successful, with an estimated annual economic impact of $71 billion, including the agri-energy arena. Yet when it comes to measures of success beyond sheer yields and sales, Michigan's food and agriculture sector has many challenges.

One measure is whether quality fruit and vegetables are available to and affordable by every citizen. Another is whether farmland around cities is economically viable enough to provide local food, as well as build a region's attractiveness and resilience by protecting water and wildlife. Our capacity for regional food supplies in the face of rising oil prices, national emergencies and shifting weather patterns is yet another.

Michigan is challenged on these and many other good food indicators. "Food deserts," neighborhoods without quality grocery options, are common across the state. According to the Michigan Department of Agriculture, there are areas in each of Michigan's 83 counties that qualify for a state tax incentive for supermarket investment because the retail infrastructure for good food access is deficient.[52] At the same time, fully 55 percent of the state's farms lost money in 2007, according to the last national agriculture census.

Digging deeper, we find that Michigan agriculture has mixed agri-food results because the various pathways or market channels between food production and consumption are mixed, too. Some pathways are well-developed for food and farm businesses in Michigan; others are not. The resulting gaps in food system infrastructure block access to new agri-food opportunities, such as sales from local farms to nearby hospitals, schools and restaurants.

Yet entrepreneurship, innovation and opportunities are growing in these channels, despite the unevenness in infrastructure, because consumers, farmers and others are seeking ways to reach one another. Indeed, across Michigan and the nation, a new good food system is showing up. It is linking not just food growers and food eaters interested in getting more of certain food attributes (healthy, green, fair, affordable) but also health professionals, educators, business developers and environmentalists. They are finding common purpose in leveraging the power of good food to grow jobs, protect land and build health.

As Michigan struggles to reinvent its economy in the 21st century, this food revolution is becoming a strategic economic development asset. It is proving to be an integral part of building more successful urban and rural areas.

That, according to experts such as Dr. Soji Adelaja, one of the state's economic revitalization gurus, is a true, fundamental element of Michigan's overall future success.

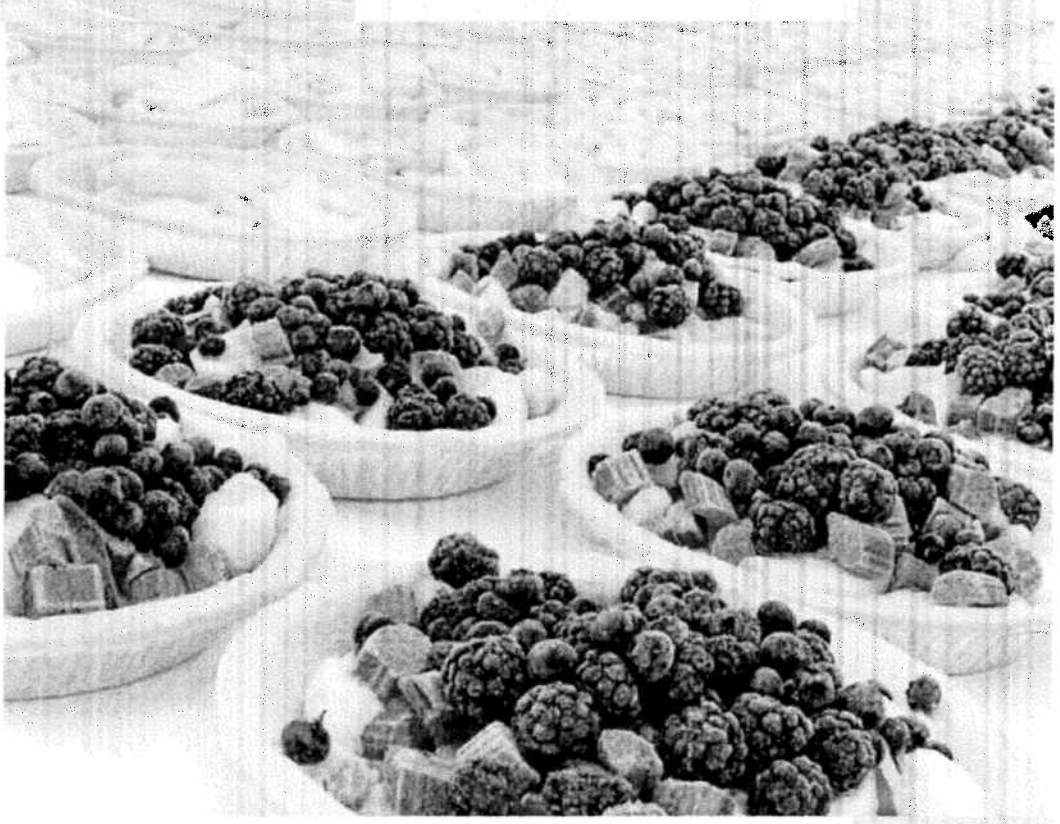
"Michigan's historical lock on prosperity - industrial infrastructure, capital, auto plants, skilled labor, etc. - counts for less in the new, global economy," says Dr. Adelaja, the director of the Michigan State University Land Policy Institute and Hannah distinguished professor. "The rules of success have changed."[53]

In this new era, those rules for success are much more about becoming a place where young people want to live. Attracting them means offering a great quality of life, which will also make our state a powerful magnet for companies competing to hire those young people.

If we help build infrastructure for private and social entrepreneurs now, forging the regional supply chains that good food needs, Michigan can reach a triple bottom line: new jobs, healthier people and stronger urban-rural connections.

[52] *Michigan Department of Agriculture. (2008) "Increasing Access to Healthy Foods: Michigan's New Property Tax Incentive for Retail Food Establishments (Public Act 231 of 2008)." Retrieved May 10, 2010 from http://www.michigan.gov/mda/0,1607,7-125--220744--,00.html*

[53] *Personal Communication. (2008) Soji Adelaja, Director, Land Policy Institute at Michigan State University, East Lansing, Mich.*



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