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# Envisioning the Future for Michigan's Agricultural Economy

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## Introduction

At the direction of the Michigan Farm Bureau, ten agricultural economists responded to a five-question survey in May 2020 to explore the future of the Michigan agricultural economy. Eight agricultural economists from Michigan State University, one agricultural economist from Kansas State University, and one agricultural economist from Purdue University responded.

Michigan's economy was exceptionally impacted by the COVID-19 Pandemic, leading to historic increases in unemployment rates in metropolitan and non-metropolitan counties alike. In April 2019, 628,885 Michigan households participated in the Supplemental Nutrition Assistance Program; 1,150,697 Michigan households participated by April 2020. This 83.0% increase in participation dwarfs the average change in the United States (17.9%).

The remainder of the document synthesizes responses and highlights some of the more distinctive comments. Of course, the economists interviewed all noted an important caveat: all discussions of the future are largely contingent on the outcome of COVID-19. As noted by Tonsor, "I think 'accurate' answers here hinge notably on if we are wrapping up the worst of COVID or not - that is a human health, speed of vaccine, and medicine question that we can't answer."

Furthermore, Swinton notes that ongoing macroeconomic trends make the future of agriculture largely dependent on economic growth across the world, as "economic recession/depression would lead to lower demand and lower prices for agricultural products."





## What are some positive trends in the agricultural industry that will have the greatest impact on its prosperity and opportunity for growth in the future?

### Rising Global Population and Income

Broadly, a growing world population should lead to a net increase in global demand for food via “more mouths to feed.”

Indeed, Knudson notes that globally, “demand for meat protein will increase as global poverty is reduced and the size of the global middle class increases.”

### Uniqueness of Michigan Agriculture

There was a broad consensus that the diversity of Michigan agriculture and the positive perceptions of safe, sustainably produced, family-farmed Michigan products created unique opportunities for growers.

Lusk pointed out that local, direct-to-consumer crops that might generate high value and don't sell into commodity markets represent one key opportunity. As noted by Tonsor, “perhaps ‘renewed’ interest in food (where it comes from, ability to use a wider array of products, etc.) will follow from the lockdown that leads to new products, new marketing ventures, etc., that the diverse Michigan sector is able to leverage.”

This is especially true as U.S. consumers become more ethnically diverse. As noted by Knudson, “what kind of products and crops can be developed for an increasingly diverse set of consumers who are interested in food as an experience?” Knudson and McKendree highlighted the importance of telling Michigan's agricultural “story” in its marketing and promotion of local foods. As described by McKendree, “I think Michigan producers have the opportunity to tell some cool stories to help sell their product. I could envision a Michigan beef product that was born, raised, feed Michigan grains/grass, and harvested all in Michigan.”

Hennessy went even further describing product differentiation and changing demand: “Many among the increasingly affluent portion of the population are willing to pay substantial premiums for non-commodity food. The key is for farmers to be able to capture that. Competition may limit a farm's ability to do so, but Michigan does have some competitive advantages that could allow for securing permanent surplus. Being a peninsula almost completely surrounded by a great natural wonder is in many ways a problem for Upper Peninsula and Lower Peninsula Michigan agriculture, but it can be an opportunity if marketed right and in a manner consistent with production practices. Other countries and locations have sought to take advantage of their unique location. Examples are New Zealand and Ireland, who seek to present a wholesome food image to the world.”

Consumer interest in “buy local” value-added products and higher-value alternatives provide some hope for future industry profits. As noted by Hennessy, agricultural markets will benefit from “the picky, affluent consumer willing to pay more for something different.”

Jones adds that “society appears to be more aware of the impact of agricultural production and the quite often unfair trade and price inequities. The public has always had a high regard for the efforts of the American farmer to produce our abundant and high-quality food and fiber supply. The public's awareness of the unprecedented issues facing the society is going to move our country toward implementing more sustainable policies that bode well for the future but will be difficult to ‘swallow’ The freedom of how to use the resources should still be there as long as it contributes to a long run stable environment.”

Swinton goes further describing that “COVID19 may strengthen demand for Michigan-grown foods as consumers (and supermarkets) become wary of overreliance on long supply chains from distance sources. Health concerns may make consumers prefer known, local, small-scale vendors (say at farm markets and local groceries). On the other hand, consumers with lower incomes will go for low-cost food, which may favor large-scale producers & processors.”

### Technological Innovation and Adoption





Advances in technology provide some promise for the industry's future, including increased interest in traceability of food products along with less trust of foreign production and labelling practices.

Lusk points out that emerging technology and digital agriculture will be especially beneficial to first adopters, especially due to venture capital inflows into agriculture. Boughton notes that with these gains in technology comes a more educated workforce, precision agriculture technologies, and improved risk management tools.

Technology, including biotech and robotics/automation, provides many opportunities for Michigan's growers. As noted by Hennessy, "farms that are in a position to adapt will do well. The U.S. as a whole is well-positioned to adapt to these trends, in large part because its farms are generally comparatively well-resourced and are also less fettered by government programs and regulations. But these innovations will likely precipitate a significant decline in labor on farm and in food processing."

Loveridge echoed similar optimism about "smart implements." He was particularly optimistic that "robotics and integrating GIS into sensors and crop machinery could yield significantly reduced inputs."

With those gains from technology, Miller warns that "loose or missing personal and farm information ownership rights" may create issues.

Indeed, access to technology and information will increasingly be an important topic, Hennessy says. "Information will be a bigger issue for agriculture, with both positive and negative dimensions. How to use the wealth of information and information management opportunities that are coming on-stream via satellites, cheap electronics, and biosensors to lower costs and grow demand? How to deal with the fact that much of what goes on the farm will enter the public domain?"

## Access to New Alternative Markets

Unconventional markets might also show some promise.

As Miller notes, "This is more of a hope than an observed trend, but increasing the role of commercial fiber crops like hemp in manufacturing sector posits a positive trend with both direct (auto sector) and indirect (increase demand in Michigan food crops as other states take up hemp) benefits."

Swinton also discussed the potential for unconventional markets saying that "despite recession, stimulants like marijuana will have growing demand. That may be true too of craft alcoholic beverages—so long as they are not too costly."

Additionally, Michigan's access to water might position the state to receive some market share due to climate change. As noted by Knudson, "Access to water may put Western agriculture at a competitive disadvantage compared to agriculture in the Midwest."

## What are some negative trends in the agricultural industry that will have the greatest impact on its prosperity and opportunity for growth in the future?

### Declining Farm Incomes

Farm profitability remains a concern.

As noted by Jones, "ability to maintain profitability for the average size farm while implementing new agriculture policy demands for ag production. Farm size and costs will continue to increase, and this will increase investment needed for commercial agriculture. Environmental policy will continue to be more costly and possibly restrictive as society tries to deal with looming climate change issues and other environmental issues such as our current 'mining' of the aquifers in the plains and the allocation of diminishing snowpack runoff water."

Farm exits are likely to follow these reductions in farm incomes. As noted by Hennessy, "farms that are not in a





position to adapt in one way or another will disappear.”

According to Jones, this isn't the first time the United States has experienced widespread “farm debt and liquidity management with small and unpredictable profit margins. This reminds me of the early 1980s and the farm financial crisis. I have worked with farmers that farmed in the late 70s and 80s and have said this seems worse. It will be important for growers to maintain good credit and relationships with agricultural lenders – particularly with possibly declining land and fixed asset values.”

As mentioned by McKendree, a related key concern is “financial awareness and ability to cope with market volatility. Many producers do not have a firm grasp of their financials and tools/strategies to help them cope with increasingly volatile markets.”

These reduced farm incomes are particularly concerning for an aging rural population. As noted by Loveridge, “rural health care systems were already in trouble before COVID-19. The loss of revenue from non-COVID-19 procedures may put more providers under. With many operators over 50, the lack of health care access is a problem.”

The trend toward aging farmers was also troubling, with Loveridge wondering about a “limited willingness of next generation to take over.” This is particularly a concern given increases in foreign competition.

From Knudson, he sees a “potential for increased foreign competition, especially from Africa and Ukraine, and the potential for improved supply chain management. Right now, about 35 percent of the world's food is wasted; what happens if that figure falls to 15 or 20 percent?”

## Increased Regulations and Populism

Respondents indicated concerns regarding a shifting regulatory environment. These regulatory constraints are likely to be developed in multiple ways, including environment and climate, labor, and food safety.

As noted by Jones, regulations are likely to come from “increasing public policy pressure on the conservation and protection of natural resources – land nutrient runoff management and soil structure buildup, water use (do not exceed the replenishment rate of the aquifers as we have been) and quality protection, and CO2 emissions from all sources.”

In addition, Hennessy believes “animal welfare issues will grow. Hired labor will become more difficult to obtain and will come at greater cost due to labor and compensation laws. Both crop and animal agriculture will have to learn to adapt to lower levels of chemical use.”

Respondents also expressed concerns regarding the tension between populism, agriculture, and technology adoption in a globally competitive marketplace. These tensions have the potential to decrease the industry's credibility to outside groups. As noted by Knudson, a key threat is the, “continued loss of credibility with some sectors of society especially those who try to set the agenda.”

Indeed, Boughton notes, “consumer (and taxpayer) confidence in agriculture” has the potential to significantly disrupt the agricultural economy moving forward.

Labor, especially in the dairy and specialty crop sectors, remain a concern. As noted by Loveridge, “the labor shortage is likely to get worse. There's a rapid demographic shift happening in Mexico, that will reduce the available agricultural workforce, and of course U.S. policy will likely continue to tighten irrespective of who wins in November.”

Miller adds that “distributional effects of technological change – tech adoption favors larger producers further dividing between family farms and corporate farms.”

## Changing Climate

Another negative trend is the growing uncertainty in climate, possibly leading to some unexpected plant or animal disease. This is especially concerning for a state as diverse as Michigan due to its unique growing climate.







As stated by Hennessy, “climate change and associated disease issues may undercut some horticultural crops, but crops may also relocate here because of problems elsewhere.”

Jones recommends that it’s imperative we “react innovatively to the more volatile weather phenomena and carbon use impacts. Getting ahead of the carbon emissions issues and implementing workable solutions will bode well for the future as the issues with carbon use increase.”

## Trade Conflicts

Changing demand was also listed as grounds for concern, especially as it relates to the protein sector and the potential for international trade disruptions.

Knudson mentioned that other demand concerns include “exports in an era with a permanently high value of the dollar, permanent loss of markets as well as the possible collapse of the ethanol industry.”

McKendree wrote about the importance of “finding new markets for products (this came up a lot on the beef producer needs assessment). This could now include issues with exports markets.”

Jones recommends “making trade policies stable and dependable in as many areas as possible, including fruit, and grains. Risk management and changing markets as the supply and demand shifts create larger and more pronounced price swings like we have seen recently. I don’t see them going away.”

Regardless, there is some promise in more stabilized trade in the near term, as noted by Swinton, “the United States-Mexico-Canada Agreement (USMCA) will maintain market opportunities in Mexico & Canada.”

## Misinformation

There were additional concerns regarding the future of consumer demand, particularly given the growing disconnect between producers and consumers.

Knudson warned of the pitfalls of “social media and the threat of the spread of false or misleading information about agriculture.”

Miller even posited a consumer “rebellion” against the government’s historic role in setting dietary standards and consumer adoption of unfounded dietary science.

Lusk believes plant-based and cell-cultured meat seem poised to disrupt animal agriculture.

Ultimately, COVID-19 further complicates the potential for understanding the impacts of misinformation in the long term.

As noted by Swinton, “COVID-19 as a health threat is likely to stick around for 2-3 years. Social distancing by consumers (even if not mandated) will mean less in-restaurant meals and less ag expo-style gatherings. Consumers may also become wary of food processed at plants where COVID-19 has been a problem (even if medically, they should not be worried). The economic damage from the COVID-19 recession is just beginning. Good news is that people need to eat, so agriculture will be hit less hard than other sectors. The bad news is that consumers will spend less—meaning that they will eat out less and buy less expensive foods, such as fine cuts of meat and premium beverages.”

## What do you believe should be the strategic focus of Michigan agriculture?

**Boughton:** “Strengthen linkages with local, regional, international buyers around a Michigan brand concept. Increase citizen awareness of agriculture and its contribution to society.”

**Hennessy:** “Facilitating a pro-business environment while also seeking to promote Michigan as a location that produces wholesome food.”





**Jones:** “Taking advantage of the abundant, clean water and look to maintain production of high-water use crops such as alfalfa, corn, and fruit and vegetables in sustainable methods. As for livestock production, maintain the development of energy conservation and carbon capture facilities. DTE has done some remarkable work in this area for dairy farms. I have seen methane production go back into the gas pipeline and heat farms and houses. Don’t fight the ultimate higher cost of carbon usage on society. It needs to happen.”

**Knudson:** “Maintaining and capturing increased market share, especially for more affluent consumers who may be less price sensitive. How do you promote exports in an era of a high value of the U.S. dollar?”

**Loveridge:** “Solve the labor problem.”

**Miller:** “Focus on consumer trends and brand the state to those trends.”

**Swinton:** “Work with Congress and the Federal Crop Insurance Corporation (FCIC) to protect Michigan farmers against revenue slumps. Build brand recognition for Michigan as home to quality food products. Reinforce MAEAP certification as a marketing tool to assure consumers of the healthfulness and environmental benefits of Michigan-raised ag products.”

**Tonsor:** “Know your comparative advantage, have it externally validated somehow (e.g. don’t just tell yourself what you want to hear), and leverage it with focus in positioning each crops/sector for success.”

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