

**GROWING JOBS AND ECONOMIC OPPORTUNITY:
2023 FARM BILL PERSPECTIVES FROM MICHIGAN**

HEARING

BEFORE THE

**COMMITTEE ON AGRICULTURE,
NUTRITION, AND FORESTRY**

UNITED STATES SENATE

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GROWING JOBS AND ECONOMIC OPPORTUNITY: 2023 FARM BILL PERSPECTIVES FROM MICHIGAN

FRIDAY, APRIL 29, 2022

U.S. SENATE,
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY,
Washington, DC.

The Committee met, pursuant to notice, at 10 a.m., at the STEM Teaching and Learning Facility, Michigan State University, East Lansing, Michigan, Hon. Debbie Stabenow, Chairwoman of the Committee, presiding.

Present or submitting a statement: Senators Stabenow and Boozman.

Chairwoman STABENOW. Good morning. I call to order the hearing of the U.S. Senate Committee on Agriculture, Nutrition, and Forestry. I first have to thank all of you for being here, and I particularly want to thank President Stanley and Dean Millenbah and everyone here at Michigan State University. Go Green.

All right. Okay. We have got the program, Senator Boozman. This is good.

As we kick things off I am going to turn it to Dr. Kelly Millenbah, who is the Interim Dean of the College of Agriculture and Natural Resources here at Michigan State University. She is also a professor in the Department of Fisheries and Wildlife. I appreciate you joining us to welcome us.

**STATEMENT OF KELLY MILLENBAH, Ph.D., INTERIM DEAN,
COLLEGE OF AGRICULTURE AND NATURAL RESOURCES,
MICHIGAN STATE UNIVERSITY, EAST LANSING, MI**

Dr. MILLENBAH. Chairwoman Stabenow, Ranking Member Boozman, invited guests, and witnesses here with us today, on behalf of Michigan State University I am honored to welcome all of you to the MSU campus.

I wish to thank the Committee for the opportunity to host the first 2023 Farm Bill Hearing in this new MSU STEM Teaching and Learning Facility. This facility combines historical and leading-edge elements in a transformative space for Spartan students and educators.

Our new building is built upon a 73-year-old Shaw Lane Power Plant, and is constructed of mass timber and the primary load-bearing support. Although decommissioned in 1975, the power plant has found a fitting new home. The building that once powered the campus is now empowering Spartans to innovate ways to

learn and share knowledge about science, technology, engineering, and mathematics, or STEM, and that certainly includes the College of Agriculture and Natural Resources.

There is perhaps no greater time to be involved in research pertaining to sustainable and nutritious food production and improving health and nutrition. We need solutions that will keep our food supply healthy, safe, and secure while also protecting our natural resources. Since the need is constant, the food and agriculture industries, especially in Michigan, the United States' most diverse agricultural State, with a reliable water source, provides great opportunities for economic prosperity, growth, and increased employment.

Science-based solutions to crisis issues like climate change and environmental sustainability, including access to clean water and nutritious foods, means not only providing clean water and growing food but also understanding human behavior and the myriad challenges people face across our Nation and our planet.

We need to find better ways to distribute and understand the importance of both. We also need to better communicate the economics of these challenges so that more people understand the vitality of food and agricultural sectors that feed the world.

The MSU College of Agriculture and Natural Resources, AgBioResearch, and MSU Extension work collaboratively with commodity organizations to address the issues facing growers and producers throughout the State, providing solutions on everything from disease management to food processing.

Agricultural resilience is at play here and every single day. We have recently created several new centers of excellence around food production and natural resource conservation, including the Detroit Partnership for Food, Learning, and Innovation, the MSU Center for PFAS Research, and the MSU Center for Regenerative Agriculture. These are just three examples of how MSU is responding to a changing world and addressing needs in real time.

While Michigan's agricultural production has expanded, facilities, work force development, and nimble research dollars have not kept pace. Targeted Federal investments in work force development, facilities, and research can enhance Michigan's agricultural success, prepare us for future challenges, and help us to retain the top talent.

We look forward to continuing our tradition as the pioneer land-grant university, educating future generations to meet growing demands and discovering and sharing advancements that will benefit our State, the Nation, and the world. Agriculture is America's oldest career, and today it is arguably one of the most complex, technically driven, knowledge-based industries in the world. We have come a long way but much remains to be done. MSU is positioned as we always have been to lead the change and meet the challenges for the future.

Thank you so much for this opportunity to be with you and for your continued support.

[The prepared statement of Dr. Millenbah can be found on page 50 in the appendix.]

**STATEMENT OF HON. DEBBIE STABENOW, U.S. SENATOR
FROM THE STATE OF MICHIGAN, CHAIRWOMAN, U.S. COM-
MITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY**

Chairwoman STABENOW. Thank you very much, and, of course, I am a little biased, with two degrees from Michigan State. I cannot think of a better way to start our farm bill hearing process.

I want to also start by welcoming our MSU USDA team, and let us know where you are. You are from Farm Service Agency, State Executive Director, Dr. Tim Boring. Tim, where are you? Raise your hand. Tim, it is great to have you here.

Natural Resources Conservation Service State Conservationist, Garry Lee. Garry, where are you? All right.

Rural Development State Director Brandon Fewins. Where is Brandon? I am a little biased. Brandon was my Northern Michigan Regional Manager for 20 years, and I am excited to have him in this new position.

Welcome to Garry McDowell, our Director of the Michigan Department of Agriculture and Rural Development. Garry, I saw you come in as well, so thank you so much.

Again, thank you to the witnesses that are here.

I know that many of our producers here today are anxious about getting into the field, but we are seeing an abnormally cold and wet planting season, and I appreciate your willingness to be here today and talk about the challenges you are facing and show how the farm bill can continue to provide important support.

You know, when we began to plan the hearing it was an easy decision, as I said, to hold it at Michigan State University. The building we are sitting in is a prime example of the kind of innovation I encouraged in my Timber Innovation Act, which was included in the last farm bill, and it is the first mass timber building in Michigan showcasing technology that creates jobs while using a renewable building material that also stores carbon.

My colleague and friend who is with me today, John Boozman, from Arkansas, knows something about timber as well. Over half the State of Arkansas is covered by forestland, and forest products are incredibly important, I know, to his State's economy as well. This is an important area that we are excited to work on together.

Senator Boozman is the Republican leader on the Committee. He brings the important perspective of Arkansas farmers, ranchers, and forestland owners. He may be a Razorback but today he is an honorary Spartan, and I hope you will help me give him a big, warm welcome.

Senator BOOZMAN. Thank you, Senator Stabenow, so much.

Chairwoman STABENOW. I am honored that he would wear the tie that I gave him today.

Let me just say that having Senator Boozman here today and holding our next field hearing in Senator Boozman's home State is more than just symbolic for us. Farm bills happen only once every five years and demonstrate a tradition of bipartisanship that has become rare in today's Congress. Our most recent farm bill passed with the strongest bipartisan support ever. We want to do even better. This hearing represents a commitment to continue that bipartisanship and build an even stronger coalition of stakeholders for the 2023 Farm Bill.

Many people are unaware of the broad impact the farm bill has on our Michigan bottom line. I have always said we do not have an economy unless somebody makes something and somebody grows something, and that is what we do in Michigan. Agriculture contributes one in four Michigan jobs, and only California grows more different kinds of crops than Michigan. I like the way the dean said it better. I usually joke, "Who cares about California?" That is a joke for the national press that are here. That is a joke.

Look around the room and at our witnesses today, the farm bill impacts producers and so many different crops and commodities, forestland owners, thriving businesses. Whether you are a dairy farmer that worries about fair trade with our neighbors in Canada or expanding farmers' markets in communities across the State, the farm bill serves producers of all types, big and small, new and beginning, family farmers, veteran farmers, rural and urban. It helps small businesses thrive, meets important needs for rural communities on things like high-speed internet and health care facilities, and makes sure Americans put healthy food on the table, thanks to strong food and nutrition policies.

The farm bill provides tools to protect our Great Lakes, ensuring we can keep our land and water clean for hunting and fishing and outdoor recreation, which is at the core of our Michigan way of life.

We have seen unprecedented challenges since the last farm bill was passed in 2018. The pandemic exposed vulnerabilities in our farm and food economy, as we know. Farmers were whiplashed by low prices and breakdowns in processing, while Americans across the board saw empty shelves and skyrocketing prices. Just as our country has been recovering now economically, Putin's war in Ukraine is threatening the worldwide food supply.

The good news is that our farmers have seen commodity prices go up, but that has been offset by rising costs of fertilizers and other essential inputs that they need to do their business. Our next farm bill must address the economic security of our farmers, our families, and our rural communities, by supporting a more resilient and sustainable food supply chain.

We can do more to improve competition, expand opportunities for small, mid-sized, and local producers that grow things at home to prevent shortages and reduce cost spikes when a crisis occurs.

We have to acknowledge that the climate crisis is real and that we are seeing it every day in Michigan. It worries me greatly that the Great Lakes are now warming faster than the oceans, and that Lake Superior is one of the top five fastest-warming lakes in the world, which threatens cold-water fishing and a whole lot of other things.

Fortunately, Michigan farmers are already stepping up to address the climate crisis, and we need to help them do more. We have seen the overwhelming popularity of voluntary conservation programs. In the Regional Conservation Partnership Program, which I created in the 2014 Farm Bill, for example, local leaders are leveraging scheduled dollars to expand conservation practices. Our leading researchers at Michigan State and beyond are collaborating with farmers to help them adapt to the severe changes in the weather.

The most recent farm bills have been successful because of the ideas and feedback we get at hearings, just like this, where we can hear what is working, what is not working, and how we can meet new challenges facing our farmers, our families, and our rural communities.

Thank you again to our witnesses and the many people who have taken time to submit their written testimony, and I am also so grateful for our staffs, both mine and Senator Boozman's, who have worked so hard to put this all together. As we begin our work on the 2023 Farm Bill I am committed to supporting all of our farmers and families, and creating new jobs, and ensuring that Michigan is represented on every page.

Now I would like to turn to my friend and partner, Senator Boozman. Welcome.

**STATEMENT OF HON. JOHN BOOZMAN, U.S. SENATOR FROM
THE STATE OF ARKANSAS**

Senator BOOZMAN. Well, thank you so much, and it is great to be with you all, and I appreciate the hospitality so much and making me so welcomed. I had the opportunity to walk from the hotel over and explore the campus this morning, and again, you all can be so, so very proud of what you have here. My staff gets very nervous when I am out wandering around by myself, but I made it.

I needed to take the walk, though, because I think I probably gained five pounds. Senator Stabenow has inundated me with the local delicacies, which again, you all can be so, so very proud of. I have got my MSU tie on, and I am very proud of that. I can say that because this is not an SEC school so we do not have to deal with that.

It is good to be with you, and again, congratulations, especially to this facility.

Chairwoman Stabenow is a veteran of the farm bill process and I understand the hard work it takes to pass this legislation. In fact, she and then Chairman Pat Roberts were so effective that they ushered the current farm bill through the Senate with a record number of yes votes on the floor, which really is a great achievement. My goal is for us to do better than that on the next go-around, with you all's help.

I look forward to working with her as we craft a bipartisan proposal that meets the needs of farmers, ranchers, forestland owners, rural communities, and other beneficiaries and participants in USDA's programs in Michigan, Arkansas, and every other State.

As we kick off this process we are in an unprecedented time to write a farm bill. Just think about the issues that we are confronting that truly are daunting—a receding pandemic, a brutal war in the breadbasket of Europe, record-high inflation, record-high fertilizer and input costs, high crop prices, high food costs, labor shortages, drought, delayed planting, and transportation and supply chain bottlenecks.

The pandemic and Russia's unprovoked invasion of Ukraine have exposed the vulnerabilities of our domestic and international supply chains. This requires us to rethink the nature of our relationships across the globe, strengthening bonds with countries who

share similar values and minimize reliance on those who violate norms. We have an opportunity in this farm bill to ensure we have in place the tools necessary to make American agriculture the trusted supplier for global markets. Farm bill programs and investments not only help American farmers continue to do what they have always done—provide the most abundant, lowest-cost, and safest food supply in the world—but they also help the developing world. I have no doubt that our farmers and ranchers can meet the moment if given the right tools and the right conditions. The farm bill is your opportunity to do that.

I look forward to hearing from two panels of witnesses the Chairwoman has invited to testify today. Senator Stabenow is truly a strong advocate for you and reminds all of her colleagues about the tremendous diversity of agriculture production in Michigan. That is an understatement.

I am excited to learn about the diversity and want to hear about the needs of Michigan's farmers and rural communities. What is working for you in your operations? What is not? How can we make things easier for you to access the programs that we have created? How can USDA be a partner to help strengthen your communities? What are the things the Federal Government is doing that are helping you? How can we protect and bolster the vital farm safety net?

Over the next year and a half I look forward to hearing from all of you who are touched by USDA—our farmers, large and small, organic and convention, our ranchers, our forestland owners, sportsmen and women, rural community leaders, and those assisted by our nutrition programs which are so very important. These perspectives are critically important to assure that we get this right.

Again, I thank and congratulate Chairwoman Stabenow for kicking off the 2023 Farm Bill process. I am excited to hear from our witnesses. With that I yield back.

Chairwoman STABENOW. Thank you so much, Senator Boozman.

Because of the great diversity in Michigan we have invited a number of people to join us today, on two different panels. All of their voices, all of your voices are very important, so we appreciate so much your time being here.

Let me go through the introductions. First Juliette King McAvoy is the Vice President of Sales and Marketing at King Orchards in Central Lake, Michigan, where she grows 250 acres of tart and sweet cherries and apples as well as many other fruits and vegetables. I was pleased to be with President Biden when we visited Juliette's operation last summer. It was really a great opportunity to showcase Michigan.

Jack Isley owns and operates Stewardship Farms in Blissfield, Michigan, where he grows soybeans and corn. He is a member of the Michigan Soybean Association and has been recognized by several conservation organizations for his outstanding work promoting soil health and implementing a variety of innovative practices on his farm. Welcome.

Ashley Kennedy owns and manages Sheridan Dairy, a third-generation, 240-cow dairy near Bad Axe, with her husband Eric and two girls. Recently they added specialty Wagyu beef herd that they

sell direct to consumer through Sheridan Meat & More, a farm market they established in 2021.

Tom Vear owns and operates The Delft Bistro and Donckers Chocolatier in Marquette, Michigan. He is already our favorite witness because he has given us chocolates this morning. You know how to go right to it, Tom. This is fantastic. I have to tell you, I have been to the store many times and it is amazing.

Senator BOOZMAN. He knows the key to my heart.

Chairwoman STABENOW. Yes, exactly. It is an amazing store. It is an amazing operation. Tom also serves on the board of Northern Initiatives (NI), a USDA rural development re-lender and technical assistance provider for small businesses.

Dr. Phil Knight is the Executive Director of the Food Bank Council of Michigan, which is located right here in Lansing. The council represents the seven food banks that serve Michiganders in all 83 counties through a network of almost 3,000 community partners. Phil chairs Governor Whitmer's Food Security Council and hosts Food First Michigan on WJR radio in Detroit.

Rosie Florian is the Food Hub Manager at the ValleyHUB Food Hub at Kalamazoo County Community College. Rosie has over two decades of food systems experience, serving previously as a sales and logistics coordinator at Cinzori Farms, a certified organic vegetable farm in Ceresco, and as a produce manager at the People's Food Coop of Kalamazoo. Welcome.

Steve Ewald owns and operates Ewald Farms, a nearly 2,200-acre certified organic commodity farm in Unionville, where he grows beans, corn, and wheat. Steve is also Chairman of the Organic Farmers of Michigan, a group of over 70 certified organic bean and grain producers to help market their crops.

Glen Chown is the Executive Director of the Grand Traverse Regional Land Conservancy in Traverse City, a very, very active organization, so pleased to partner with. Among other projects, the Conservancy is one of the lead partners of the Regional Conservative Partnership Program (RCP) Tribal Stream and Michigan Fruit Belt Partnership. Glen lives in a historic farmhouse on the Old Mission Peninsula where he grows Riesling grapes. Do you have any wine for us today? It would go well with the chocolates. Glen, you missed it. Okay. All right. Here we go.

All right. I am going to turn it over to Ms. King.

Welcome, and thank you so much for all your efforts.

STATEMENT OF JULIETTE KING McAVOY, VICE PRESIDENT OF SALES AND MARKETING, KING ORCHARDS, CENTRAL LAKE, MI

Ms. McAVOY. Good morning, Senators, and thank you so much for the introduction.

We need the 2023 Farm Bill to take bold action to protect privately owned and family farm operations and our Nation's food security. The farm bill has many programs that create value at the producer level and increased sales opportunity to marketing and innovation. Market access programs and specialty crop block grants provide vital funding to support marketing initiatives with the goal of differentiating specialty crops and driving demand.

The MAP-funded Food Export Midwest helped King Orchards connect with foreign buyers and establish a branded marketing

campaign abroad. Cost-share programs like the Value-Added Producer Grant are important for rural job creation and retaining earnings on the farm and in the local community.

Bonus procurements by the USDA were a lifeline for the tart cherry industry as we suffered market imbalances. Despite our industry efforts, imports have been rapidly and stealthily stealing market share within specialty crops and driving prices below what is sustainable. I have experienced this first-hand with tart cherry juice. Specialty crop producers ask the farm bill to help stop the erosion of our market share and price points. The Buy American provision with USDA-administered programs needs to be enforced and loopholes closed.

Whether in school lunches or at the store, I believe consumers want to purchase USA-grown and support American farmers. However, lack of transparency on the label makes it nearly impossible to know where the products are grown, especially when importers are using the USDA organic certification as a marketing tool, betting on the consumer's confusion and the USDA's excellent reputation.

Biggest ask that I am going to make today is for the Committee members to take bold action to mitigate climate change. Volatile spring weather is just one effect we are seeing on our farm, most recently causing back-to-back crop failures in cherries. The farm bill has the opportunity to help mitigate the consequences of the changing climate through not only adaptive and survival tactics but also proactive tactics to slow and possibly even reverse greenhouse gas emissions through carbon sequestration and regenerative agriculture.

To adapt we need to fund research. The future of specialty crops in our region and beyond depend on our ability to adjust to the changing conditions, whether that is through breeding programs to select cultivars that are more drought-, frost-, and disease-resistant, or with more effective and safe chemistries to combat increased pressures of pests, bacteria, and fungus.

MSU Extension has been an exceptional partner, but the tasks ahead are great and they need more resources. To survive, we need specialty crop insurance Senator Stabenow worked so diligently to provide. I cannot imagine operating without it at this point.

To be proactive, we need the farm bill to usher in a transition to clean energy infrastructure and incentivizing conservation and sustainable practices. Agriculture is in the unique and empowering position to be a solution to the problem. Let's own it.

Thank you for your time.

[The prepared statement of Ms. McAvoy can be found on page 58 in the appendix.]

Chairwoman STABENOW. Thank you so much, Juliette. I very much appreciate it.

We will now turn to Jake Isley. Welcome.

**STATEMENT OF JAKE ISLEY, OWNER, STEWARDSHIP FARMS,
BLISSFIELD, MI**

Mr. ISLEY. Good morning, Chairwoman Stabenow, Ranking Member Boozman, and thank you for bringing the Committee to Michigan and allowing me to offer this testimony on behalf of the Michi-

gan Soybean Association (MSA) and the soybean growers within the State.

Soybean farmers rely on domestic and global markets as well as a steady supply of production inputs and a predictable regulatory environment for success. When those markets fail or when significant economic disruptions occur we rely on policymakers to ensure that a supportive farm safety net is in place.

Soybeans experienced a significant market challenge during the height of the China trade war in 2018. Unfortunately, the farm safety nets provided through Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) did little to help. In the next farm bill we ask for your help in improving the farm safety net programs for soybean growers and also to developing markets globally. We ask for your continued support for trade programs such as Market Access Program and the Foreign Market Development Program.

Our risk management program on which soybean farmers and our lenders rely heavily is crop insurance. We must continue to have an affordable crop insurance program. With input costs higher in every area of my operation, I cannot afford to have the crop insurance premium subsidy reduced in this next farm bill.

Farmers also rely on credit to plant and produce a crop every year. With land values and input prices on the rise we encourage the Committee to consider raising The Farm Service Agency (FSA) loan limits, which are not in line with the current market.

I am the sixth generation to farm in Lenawee County, Michigan. Conservation-minded farming has allowed me and my family to farm on the same ground for 150 years. It is really in the last 10 to 15 that our family has deliberately worked to incorporate more conservation practices into our operation.

We have found great value in two conservation programs, being CSP and Environmental Quality Improvement Program (EQIP). CSP, or the Conservation Stewardship Program, provided cost-sharing for implementing strip till and subsurface nutrient application on our entire operation. EQIP has enabled us to plant cover crops on what is now our entire operation as well.

As a result of these practices and others we are using less fuel and fewer inputs and have seen increased yields. We have better water filtration and retention because we have improved the structure and soil health of our farm using these programs.

As you develop the next farm bill, we seek your help in providing adequate funding for these programs and other practices and programs; developing climate-smart provisions that focus on total on-farm carbon capture, not just additionality; emphasizing working land programs over retirement programs; and considering incentives that encourage adoption of precision agriculture technologies which have a wide range of benefits.

I do want to take this moment to also thank you, Chairwoman Stabenow, for leading the push to continue to grow the bio-based economy through programs like USDA's BioPreferred program which provides new markets for farm commodities and increases the use of renewable agricultural resources. We need your continued support to ensure growth of both bio-based and bio-fuels, including the energy program of the farm bill.

Thank you again for the opportunity to share testimony on behalf of the farm bill perspectives for Michigan.

[The prepared statement of Mr. Isley can be found on page 62 in the appendix.]

Chairwoman STABENOW. Thank you so much.

Now we have got Mrs. Ashley Kennedy with us.

Ashley, welcome.

**STATEMENT OF ASHLEY KENNEDY, OWNER, SHERIDAN DAIRY,
BAD AXE, MI**

Mrs. KENNEDY. Thank you. Chairwoman Stabenow, Ranking Member Boozman, thank you for the opportunity to testify. I am Ashley Kennedy. My husband, Eric, and I are third-generation farmers. We raise our two daughters, Calli and Adeline, on our farm along with 600 dairy and beef animals. We milk 240 cows with an automated milking system. Our farm has been a member of Michigan Milk Producers Association for 60 years. As a Michigan State University alumnus, I am excited to share my perspective on the campus that has shaped my career.

Chairwoman Stabenow, dairy farmers are grateful for your strong leadership in reforming the dairy safety net in both the Bipartisan Budget Act of 2018 and the 2018 Farm Bill. The Dairy Margin Coverage Program (DMC) is a major improvement over its predecessor, and has been a safety net during hard times. It was essential to our success last year.

There is always room for tweaks, such as the recent production history and feed formula adjustments. We are also pleased that like other producers dairy farmers now have a range of risk management options to meet their custom needs.

Two years ago the COVID-19 pandemic took hold and impacted our entire country. While dairy farmers never stopped producing abundant and nutritious food, we still felt the consequences. The change made to the Class I mover and the government's heavy cheese purchases cost dairy farmers over \$750 million in Class I skim revenue in 2020. Nobody could have anticipated COVID-19, but it highlighted the need to improve the Federal order system.

The dairy industry is working hard to find consensus on a range of improvements to take to the USDA for consideration via a national order hearing. Michigan Milk Producers Association (MMPA) is actively participating in The National Milk Producers Federation's (NMPF) process. We know that to enact better policies we must work together to reach consensus. We look forward to working with this Committee as our efforts advance.

I would like to highlight other areas of great significance to dairy. First, dairy farmers are environmental stewards who have long been champions of sustainability. We commend your efforts to increase funding for conservation programs which help dairy farmers scale up innovative, climate-smart practices.

Second, trade is critical to our success so we support doubling funding for key trade promotion programs.

Third, dairy farmers appreciate the enduring connection between agriculture and nutrition. Continued robust support for programs like the Supplemental Nutrition Assistant Program is vital to feed-

ing families facing difficult circumstances and linking the food we produce to households across the country.

We also strongly support and are proud to have helped inspire the Dairy Donation Program that you authored, Chairwoman Stabenow, to facilitate the donation of dairy products to food-insecure families.

Finally, in recent years farmers have endured one difficult year after another. Stress in rural America needs to be discussed more, because it is a problem we can only solve by working together. I thank you for renewing the Farm and Ranch Stress Assistance Network which connects those in agriculture to stress assistance and support programs. Rural areas are desperately short of mental health resources, as I found out.

Thank you for the opportunity to testify before you. As a farmer who has used USDA beginner farmer loans three times I could not have come back to the family farm if not for the work you two do.

I am happy to answer any questions.

[The prepared statement of Mrs. Kennedy can be found on page 71 in the appendix.]

Chairwoman STABENOW. Wonderful. Thank you very much. Now Mr. Tom Vear, welcome.

**STATEMENT OF TOM VEAR, OWNER AND OPERATOR,
DONCKERS AND THE DELFT BISTRO, MARQUETTE, MI**

Mr. VEAR. Thank you. Chairwoman Stabenow and Ranking Member Boozman, thank you for hearing my testimony today about Northern Initiatives and our business.

My name is Tom Vear. My wife, Jennifer Ray, and I own and operate Donckers and The Delft Bistro in Marquette, Michigan. It is up in the UP up there.

Food and agriculture has been a part of my life for quite some time. I graduated from DePaul University in Greencastle, Indiana, a small, rural farming community, and spent the next 20 years trading corn and soybean futures at the Chicago Board of Trade. Then another 20 years ago, my wife and I changed chapters in our life and moved to Marquette, Michigan, a rural community where we were meant to be.

In 2007, we bought Donckers, a 112-year-old family business, from Fred Donckers, the grandson of the founder. The building, a 1909 historic property in downtown Marquette, caught my eye. My love for historic renovation encouraged us to try our hand at restaurants and chocolate making. In 2015, we also purchased The Delft Theater, built in 1914. We converted the property to a more upscale lunch and dinner restaurant.

Our choice to be in Marquette was influenced by our three children and the desire to be in a small, rural community. All three have worked in our business and graduated from the University of Michigan.

Chairwoman STABENOW. You are a very courageous man.

Mr. VEAR. I have been on the board of Northern Initiatives for 12 years and both strongly believe in and enjoy the mission of this Community Development Financial Institution. NI's loan funding through Rural Development has helped to create many successful businesses as well as job creation, including our two businesses.

Donckers and The Delft Bistro have both borrowed funds from NI to further develop our restaurant and our chocolate making. When we originally purchased Donckers, Fred, the 78-year-old grandson, agreed to stay on and teach us the fudge-making process, which was part of the business 100 years ago. We saw an opportunity in the chocolate business and for the past 12 years have been growing that part.

Just this past week, with the help of a revolving loan from NI, we purchased a \$50,000 candy-coating machine. Last year, we made a half million of our signature salt caramels. This year we anticipate making five to seven times that amount this year. When getting products for our restaurants, we try our best to source locally. We work with local farmers for our eggs, greens, syrup, and meats. We have also been using the expertise of the Michigan State Extension, a resource to help us with our packaging requirements. In addition, we have been working hard on getting our businesses B-Corp certifications.

Being a part of the growth and influence of Northern Initiatives has been a great pleasure. The board and staff members are fully committed to the mission of rural development as well as job creation.

Over the past 10 years, Northern Initiatives has established itself as the Statewide Community Development Financial Institution (CDFI) lender that rural, female, and minority owners seek out for their business development. The organization is headquartered in Marquette with office locations throughout Michigan.

Northern Initiatives provides loans and business services to entrepreneurs and small business owners who create jobs and help their communities thrive. Starting in 1994, as a program of Northern Michigan University's College of Business to help build rural economic resiliency in the face of declining resource extraction, NI serves 83 counties in Michigan and Northern Wisconsin presently.

Since 1994, NI has provided 1,507 loans totaling over \$88 million and helped to create or retain nearly 7,000 jobs. Nearly 85 percent of those loans have been to small businesses in rural Michigan. Of the top 20 counties NI served in 2021, 16 were rural. In 2021, 66 percent of Northern Initiative's loans were to startups, a third were to manufacturing businesses, a third were to women-owned businesses, and 72 percent were to small businesses located in low-income areas.

USDA Funding sources have been instrumental in NI's ability to support small businesses, including those of Jenn and I. As our businesses have grown, we have needed additional capital. When we opened The Delft, Northern Initiatives utilized IRP resources to help us purchase our kitchen equipment. Rural Microentrepreneur Assistance Program (RMAP) funds have been utilized to finance many of our rural neighbors and to provide those businesses with the technical assistance to manage their cash-flow and market their goods and services.

To date, NI has deployed 252 IRP and RMAP loans, totaling \$18,814,845 and creating and retaining 1,283 jobs. The RMAP and IRP included in the farm bill are important sources of job creation

for rural and low-income communities. They support small businesses and help communities thrive.

Thank you again for the opportunity to submit a written statement.

[The prepared statement of Mr. Vear can be found on page 78 in the appendix.]

Chairwoman STABENOW. Thank you very much.
Now we will turn to Dr. Phil Knight. Welcome.

**STATEMENT OF PHIL KNIGHT, Ph.D., EXECUTIVE DIRECTOR,
FOOD BANK COUNCIL OF MICHIGAN, LANSING, MI**

Dr. KNIGHT. Thank you. I come to you today not only representing my role as Executive Director for the Food Bank Council of Michigan but also my own personal experience with food insecurity. Hunger has many faces, and at one time it was my own.

No one aspires to be food insecure but it happens, and through a variety of circumstances. For me it was a life upset. After 28 years of marriage I found myself with full custody of my two teenage boys and during a time of the Great Recession, despite my advanced degrees and years of job experience, I struggled to find a full-time job. At one point I was a cashier at a large retailer and I sucked at it. I worked as a substitute teacher throughout Michigan. Five-year-old PE teacher is quite the challenge. During that time my boys and I rolled quarters and dimes so we could eat.

The counselor at school helped my boys get reduced price lunch and helped me apply for the Supplemental Nutrition Assistance Program (SNAP). The \$97-a-month SNAP allotment was a lifesaver for us. We went straight to the store, where I sucked at the cash register, and spent the money on fresh fruits, vegetables, and meat, something that we could not afford until then. We supplemented our groceries with a nearby pantry that I learned later was supplied by our food banks, and suddenly hunger came off the table with it a lot of toxic stress.

It was simultaneously a horrible time and a joyful time. I was ashamed yet relieved, embarrassed yet appreciative, and my emotions fluctuated between despair and hope. SNAP and the work of the food banks worked together to help take hunger off our table, and the impact of the food cannot be diminished. The power of the food is evidence and it helped stabilize our home through direct economic impact, and it empowered me by giving me hope to find my next success. After some time I found a job that led me to the one that I have now and have held for the last seven and a half years at the Food Bank Council.

At my current work I continue to see the impact of food insecurity, and during the pandemic our food bank across the States increased their distribution by 47 percent to try to help meet the need. With additional investments by Congress, mainly the Federal nutrition programs in response to the pandemic, the food insecurity rates began to decrease. With those investments now ending and current rising costs of essentials like food and fuel impacting households, we are now again seeing the increase in need.

As inflation impacts our residents and agricultural community it is critical that the next farm bill strengthen and invest in these programs. Doing so means investing in people and communities.

I want to thank Senator Stabenow for her leadership in passing the bipartisan 2018 Farm Bill that directed the USDA to re-evaluate the Thrifty Food Plan. This is important because it helps determine the eligibility and the amount of benefits people are eligible for. This helps ensure the adequacy of benefits for the program, something that should be high priority for the next farm bill.

The reality today is high cost of food and transportation means less food available to distribute to communities. Today our food banks are at a five-year low for USDA food. We ask that we could have investment in the Emergency Food Assistance Program along with SNAP. The farm bill is an opportunity to strengthen both these programs and to help us address equitable distribution as well as disparities in race and place.

Let's change the conversation. Let's change it just a bit. The work of SNAP, Federal commodities and the food banks are not handouts or charity. They are investments, investments in people like me and in communities. Thank you.

[The prepared statement of Dr. Knight can be found on page 80 in the appendix.]

Chairwoman STABENOW. Thank you so much, Phil. I really appreciate it.

Ms. Rosie Florian, welcome.

**STATEMENT OF ROSIE FLORIAN, FOOD HUB MANAGER,
VALLEYHUB FOOD HUB, KALAMAZOO VALLEY COMMUNITY
COLLEGE, KALAMAZOO, MI**

Ms. FLORIAN. Chairwoman Stabenow and Ranking Member Boozman, thank you for the opportunity to provide testimony at today's hearing.

I was born and raised in Van Buren County, where grape vineyards, orchards, and vegetable farming painted the landscape, and I have worked in Southwest Michigan in the food systems for over 20 years, in roles including food service, restaurant operations, retail grocery management, farmers market management, and organic vegetable farming. These experiences reinforced my strong connections to Southwest Michigan farms and food producers. They helped me understand their needs and obstacles, accessing markets, meeting food safety requirements, and simply getting all the work done each day before sunset.

I now manage ValleyHUB Food Hub at Kalamazoo Valley Community College, which is an urban farm, food hub, and education center that supports local and regional food producers in Southwest Michigan through direct supply chain coordination and complementary education and training programs.

We work toward the dual community goals of increasing viability for small and mid-sized farms and food producers and improving diets and health outcome in our community by promoting seasonal, local, plant-forward menus in health care, educational, and corporate cafeterias.

The farm bill's Local Food Promotion Program funding has been instrumental in allowing ValleyHUB to support over 32-and-growing regional farmers and value-added product producers and to connect consumers to fresh Michigan-grown produce in settings as

diverse as hospitals, schools, groceries, restaurants, and early childcare facilities.

Our programs build new skills, relationships, and market solutions for settings that have unique food preparation and serving requirements. Local and regional food systems and the locally embedded businesses and organizations that support them are a critical piece of our global food security and an engine of regional economic prosperity. We thank the Agriculture Committee for their continued strong advocacy for permanent Local Agriculture Market Program (LAMP) funding and the opportunity this year how the dollars dedicated to rural economic development have impacted ValleyHUB and our partners.

[The prepared statement of Ms. Florian can be found on page 87 in the appendix.]

Chairwoman STABENOW. Thank you very much.
Steve Ewald, welcome.

**STATEMENT OF STEPHEN EWALD, OWNER AND OPERATOR,
EWALD FARMS, UNIONVILLE, MI**

Mr. EWALD. Good morning, Chairwoman Stabenow and Ranking Member Boozman. Thank you for the opportunity to testify before you today.

As stated, I am Steve Ewald, the owner of Ewald Farms near Unionville in Tuscola County. It takes my wife and my son to make the things go around, the wheels turn there. We operate nearly two, 200 acres and grow a variety of crops—yellow corn, blue corn, winter wheat, soybeans, navy beans, black beans, great northern beans, small red beans, and dark red kidney beans.

Organic farmers, in particular, utilize specialty cover crops to maintain and build soil quality. This is extremely important for organic growers because of the avoidance of synthetic and nutrient fertilizer inputs. We do not have the option of conventional nitrogen fertilizer such as urea or anhydrous ammonia to kickstart our corn and wheat crops. This can sometimes limit yield and/or quality levels of grain. Instead, we utilize manures and composts, which are in short supply.

Thanks to Senator Stabenow's leadership, the 2018 Farm Bill included permanent, mandatory funding for organic research, which could encourage research on organically permitted products that would utilize atmospheric nitrogen.

Crop insurance can also be an important risk management tool for producers, and I encourage the Committee to work to ensure this tool works for organic producers, and I appreciate your effort, Senator Stabenow, to expand this program to more types of production in farm bills of past.

I am also very concerned with imports of fraudulent organic products that do not meet the same high standards as U.S. organic farmers and undercut the domestic organic growers like me. It is critical that USDA quickly implement the 2018 Farm Bill provisions to ensure organic importers have all the tools and enforcement actions necessary to combat organic fraud at ports and in domestic markets.

In my closing, I will plead with the writers of the 2023 Farm Bill to incorporate funding and language that will build a stronger base

for all organic agriculture through better biological product development programs for nutrient availability, increased production of natural fertilizers, and better access to breeding lines for organic seed companies, continued and renewed support for organic research at universities such as MSU. Continued funding for dry bean research in variety, disease resistance and placement of this protein rich food into food programs of our Nation and beyond our borders.

We still struggle with even medium-speed internet access, so the continued push for rural broadband is a must.

We all live in a beautiful but somewhat fragile world and I believe all farmers want to produce the most while doing no harm. It would be wonderful for all to heal our world with some old and some new highly sustainable practices. Let farmers be farmers, we are good at it. It is in our blood. Thank you for your time.

[The prepared statement of Mr. Ewald can be found on page 93 in the appendix.]

Chairwoman STABENOW. Thank you very much. I could not agree more.

Glen Chown, welcome.

STATEMENT OF GLEN CHOWN, EXECUTIVE DIRECTOR, GRAND TRAVERSE REGIONAL LAND CONSERVANCY, TRAVERSE CITY, MI

Mr. CHOWN. Thank you, and good morning, everybody. I would like to begin by thanking Senators Stabenow and Boozman for their leadership, and especially our Senator for championing the historic investments to protect our Great Lakes, address climate change impacts, and support Michigan's economy. There has always been bipartisan support for programs that protect our farms and our coveted freshwater resources, and we are so grateful that this vital bipartisan spirit continues under your leadership.

I would like to share a brief summary of our Regional Conservation Partnership Project, also known as RCPP. In 2015, a unique collaboration of two tribal nations, Federal and State agencies, and nonprofit organizations called the Tribal Stream and Michigan Fruitbelt Collaborative came together to significantly increase the amount of agricultural land under permanent protection and improve water quality in one of the fastest-developing areas in the Great Lakes Basin.

This work underpins two major and interdependent portions of Michigan's economy: agriculture and tourism. This collaboration is an example of what can be done right now to address food security and climate change. Continuing this work and ensuring we retain our agricultural lands and keep our farmers viable hinges on a strong farm bill conservation title.

Programs such as the Agricultural Conservation Easement Program (ACEP) are a win for all Americans, keeping working lands in production now and into the future. That need has always been important, but today the risk of losing our ability to grow food and fiber here at home are even more pressing with the rise of global food security concerns.

The original conservation partnership program provides the "secret sauce" to address these challenges head-on. RCPP enables in-

novative, public-private partnerships to fully utilize and leverage the NRCS programs. Even though ACEP and RCPP are critical tools, the demand for these programs far exceeds the funding.

We are aware of numerous projects in several States that could have conserved more than 130,000 acres of working lands while leveraging at least \$80 million in matching funds. That is just a snapshot of what is at risk without robust funding for these programs.

There are opportunities for the 2023 Farm Bill to improve programs so that they can even be more effective. I outline specific suggestions for improvement in my full written testimony.

Thank you, Senators, for taking the time to hear from Northern Michigan. We are thankful for your commitment to strengthening the 2023 Farm Bill conservation programs that provide benefits to all Americans.

[The prepared statement of Mr. Chown can be found on page 95 in the appendix.]

Chairwoman STABENOW. Thank you very much.

We will now turn to questions. I will begin, and then Senator Boozman, and we will each do two rounds to make sure we have an opportunity to ask each of you a question.

First of all, Ms. King McAvoy, welcome again. In your testimony you talked about the climate change issues that you are experiencing on the farm, and we know that the increased severity of weather really is making your job even harder. Can you elaborate on what you see and how tools like crop insurance can help manage the increased risk, and are there any changes that you would suggest, particularly to specialty crop producers or diversified farmers?

Ms. McAVOY. Thanks, Senator. I already mentioned the volatile spring weather that has resulted in crop loss in the last two years, back-to-back crop loss in tart cherries and sweet cherries. This is the fourth time we have experienced a crop loss in the last 19 years. The frequency of the spring frost is increasing. In addition, we are seeing less frequent but more severe rain events. Those are less nourishing to the plants and trees and causes erosion and flooding. There is increased humidity, which creates more fungus and bacteria problems, and increased pest pressure.

I often describe our situation on my farm as the canary in the mine. We are in the northern cusp of the growing region in Michigan, and because we are tree fruit growers we are that much more vulnerable to climate change. With tree fruit, the lifespan of an orchard is typically 30 to 40 years, so it is very long-term investments and we cannot change and restart each year like many crops can.

The physiological requirement of pollination is also another vulnerability. The process of bloom pollination and the survival to maturity is incredibly fragile and precise, so any disruption to that process, like a frost, it disrupts the process and you lose your crop for the entire year.

Crop insurance absolutely helps us manage this risk, and like mentioned, we have increased frequency of crop loss, and I cannot imagine trying to survive without it. There are not many business models that can withstand the kind of volatility that we are experi-

encing. It is the only way that I am confident enough to continue planting orchards that are long-term investments. We do not know what the climate is going to look like in 30 years, but that is how far out I am planning right now.

I think that we could improve the crop insurance by having provisions that benefit producers that are doing risk management practices, like frost protection and irrigation, but I also think that we could make it easier for very diversified farms like King Orchards, where we have many crops that do not have specific insurance plans.

Chairwoman STABENOW. Thank you very much. That is important for us to look at.

Ms. Florian, your testimony mentions using various grants under the Local Agriculture Market Program to promote local food markets and products. Could you talk a little bit more about how you have used the local food promotion program or Value-Added Producer Grants and what impact do you see in terms of the community, of having access to those tools?

Ms. FLORIAN. Yes. We were able to hire a couple of key positions with those grants from Local Food Promotion Program. Those positions stabilized our work. One prioritizes institutional customer needs, so the food service relationships in cafeterias of all sizes, developing the products they need. Also that funding went to purchase equipment which allowed us to scale to the need of those cafeterias and food service directors' needs.

We built capacity, we scaled our operation, and another position that is new this year also works with the food systems on education. The different partners in the agriculture and farming world, as well as the institutional food service labor force, basically.

Chairwoman STABENOW. Thanks very much.

Mr. Isley, I wanted to talk about bio-based products. As you know, I am a huge supporter of both biofuels and bio-based products that we can do a whole range of manufacturing. I am pleased that we are seeing more E15 in the marketplace, so with the President's decision it is going to help bring down some of the sticker shock that is ongoing now at the pump, but we have a lot more to do.

When we talk about bio-based products as a market for corn and soybean farmers, while creating sustaining and doable consumer products, could you talk a little bit more about why those markets for bio-based products, both biofuels and bio-based chemicals are important to our Michigan farmers, and what value do farm bill programs aimed at bio-based manufacturing really do to help you on the farm?

Mr. ISLEY. Yes. Thank you very much, and I do appreciate, Madam Chairwoman, your support of the biofuel program as well. I think as we think about bio-based products and the opportunity that they have, really within the farm bill, is I am excited that there are a lot of bio-based products today already. You know, there are thousands of products out there, from cleaners and asphalt sealers and things that we are able to use.

I think as we look forward toward continuing to promote bio-based products it really allows us to continue to produce products from things that were produced within our States and within our

country. We are able to do that by being able to replace what would historically be petroleum-based products with renewable-based products that we can get from things like corn and soybeans.

I think as we continue to look toward the future it allows a lot of those products that are produced through biological means or are bio-based, it really makes that overall market more sustainable. Then as a grower it continues to expand the market where our products can be used within those manufacturing processes, and puts those products in the product that is produced, at the end of the day.

Chairwoman STABENOW. Thank you. I have to say, one of the things I find actually fun to talk about with folks is the bio-based products, including automobiles. I mean, every Ford product is made with Lear and it soy-based. It is bio-based foam, so if you get hungry you could eat it. It is sustainable. I mean, there are so many things that are corn-based, bio-based, as well as, I said, the E15 expansion now in biofuels, which is important.

Mrs. Kennedy, I was happy to help improve the Dairy Margin Coverage Program, as you know, as we were leading up to the 2018 Farm Bill and to make sure our dairy farmers also have access to crop insurance, like other farmers. I am glad to year the DMC Program has worked for your operation. How have the expanded crop insurance options really worked for you, and do you see ways we should build on that in the next farm bill?

Mrs. KENNEDY. Thank you for that question. In my experience we started with the MPP program and then it became DMC, and when we looked at it, you know, MPP did not really seem like it would work for us, and so we decided to go other routes. We tried Livestock Gross Margin Program. We tried DRP. I think they are excellent products for different farms. The thing is, all of these programs fit a different purpose too.

DMC is that safety net. It is for true emergencies, margin issues, all different sorts of things like that. It is comparable to ARC and PLC for traditional agricultural products, for corn and soybeans. Whereas the DRP is more like crop insurance. You can truly tailor it to what you need and want as a farm. Livestock Gross Margin is sort of like that too.

I think all of these programs serve a different purpose, you know, depending on your farm size, depending on your philosophy, all of those things. To me they truly do fit for different farmers. DMC works the best for us. We feel like it is the most value for what we need.

Chairwoman STABENOW. Thank you very much. I am going to turn to Senator Boozman for some questions.

Senator BOOZMAN. Thank you, Madam Chair. Mr. Isley, you mentioned participation in the ARC program, Agricultural Risk Coverage and Price Loss Coverage program, PLC. The 2018 Farm Bill allowed producers to make annual elections, 2021 to 2023. What is your decisionmaking in regard to that? You have got decisionmaking tools. What do we need to do to improve that?

Mr. ISLEY. Yes, thank you very much, Senator Boozman, for that question. As we think about making the decision between ARC and the PLC program, that decision is not easy because we are still

speculating on what is going to happen in the future for both of those programs.

I have utilized the tools in the past to be able to help make that decision, and the tools that are available out there help give guidance. Within those you are still speculating. I mean, both of those programs are a safety net. I do not sign up for those programs with hopes of having to use them. I mean, I want that to simply be if something goes wrong then there is something there for me to continue to rely on.

I have used the tools in the past. I have used the spreadsheets put out by FSA or other universities, to be able to say, hey, this is what that decision is, and that has been the biggest driver in understanding what my risk is as a producer and then how can I best cover that risk through either of those programs to make that decision.

Senator BOOZMAN. Very good.

Something that has been really important for all of us throughout the county but plays such a significant role connecting producers and consumers to information is the cooperative extension programs. Whoever would like to jump in, but tell us about your experience working with cooperative extension programs, the land-grant universities, in addition to increased funding, which is always an ask. Tell us how we can improve the program, you know, maybe some areas. These programs have been in place for a long time and done tremendous good throughout the country. Any particular areas that perhaps we might could improve?

Mrs. KENNEDY. This is a wonderful question, so thank you for that. I actually just finished doing my FINAN with one of my local business extension agents. It is her job to take all of our financial information and put it into really easy terms so that we can make business decisions. As a small, beginning farmer we do not have the money to pay an accountant to do something like that, because that is a pretty expensive bill.

Corey Clark, Dr. Corey Clark—she is a doctor now, she just got her doctorate—she is amazing. She is my person that I rely on for financial advice and really getting in the nitty-gritty of our finances on our farm.

I think looking at more of that business end could be really, really valuable as agriculture becomes more diverse, as there are lots and lots of new farmers, you know, urban agriculture, all different kinds of things, bringing in conservation and climate change efforts as a source of income that is probably coming in the future. I think that is going to be a really important end of it.

Senator BOOZMAN. Very good. Anybody else?

Ms. MCAVOY. We work very closely with the MSU Extension. There is a wonderful research station in Northwest Michigan that does excellent work. It is so important right now. The number of issues we are facing seem to be multiplying every year, between new pests, new diseases. All this research takes so much time that they need more resources, not just funding for the researchers themselves but for the plot fees for the infrastructure for the greenhouses. We are constantly looking for better ways to combat these issues, and MSU Extension is our first resource that we go to.

Senator BOOZMAN. Yes.

Dr. KNIGHT. I would say from a Food Bank Council side, during a time of crisis, I guess a friend is described as someone who walks in when the rest of the world walks out, and Michigan State University Extension and the Food Bank of Eastern Michigan during the Flint water crisis worked hand in glove to meet the need there, both in regard to pure water and nutrition that would help with the children who had been exposed to lead.

I just have to say that Kara Ross, the CEO for Food Bank of Eastern Michigan, is here with us today as well, and it was an extraordinary thing to see how they worked together.

Senator BOOZMAN. Very good. Yes, sir.

Mr. CHOWN. Briefly, the average age of a farmer in Michigan is something, I think, in the low 60's.

Senator BOOZMAN. I think that is probably right.

Mr. CHOWN. We are about to see a massive transfer of land, and that is going to have enormous implications. Extension gives farmers resources they can turn to for planting, for technical assistance, and on the other end we are seeing a lot of young farmers who want to farm but there are huge barriers—the financing, of course the technical knowledge, and everything else.

This is a time where we need a strong extension more than ever, and I think hats off to Michigan State University, the first land-grant college in the country. It is a fantastic program. Strengthening it to meet all of these demands, the adaptation to climate change, et cetera, is going to be more relevant than ever.

Senator BOOZMAN. Very good. I am going to yield back to the Chairwoman.

You mentioned broadband earlier, and I think that is good story that we can tell. We have had all of this tragedy as a result of the pandemic, but that has really identified, I think, a great help to rural America, particularly in telemedicine, tele-education, tele-commuting, all of those things. I am very active in that space. The Chairwoman is very active in that space also, in rural broadband.

The good news is we have got a lot of money in the pipeline, and it is going to take a while to build this out. It is a very doable thing and it something I appreciate you all bringing up, to keep our feet to the first.

We have got all these problems going on all over the world and domestically. On the other hand, this is one that we can solve. Much of the technology that we depend on, whether it is climate or just being efficient on the farm, it is dependent on having that ability.

I just want to reassure you that we really are working very, very hard on it, and I think it is going to help us a great deal as we protect rural America going forward in the future.

Chairwoman STABENOW. Well said. I could not agree more, in so many ways.

I am going to turn, Mr. Vear, to you, and that actually reminds me that up in the Upper Peninsula, with Northern Michigan University, one of our early leaders on high-speed internet and broadband access across the UP, I know getting awards way before we were even talking about disconnecting the 15 counties and the schools and the hospitals and so on in the UP. I know how important all of that is.

You mentioned over 1,000 jobs in Northern Michigan, the UP, have been created thanks to the Northern Initiative's partnership with USDA Rural Development. I wonder if you could talk a little bit more about that program and how that has allowed you to hire new employees and expand your businesses?

Mr. VEAR. Thank you, Senator Stabenow. Northern Initiative has been very instrumental in job creation throughout rural communities, especially in the UP. It has been around for 25 years. The programs that they provide are rural development lending, and there is nothing more important than creating jobs, and people who have not had jobs know that particular thing.

One thing Northern Initiatives does very well is lend funds to startup businesses that could not otherwise get funding. They have minority businesses they lend to often. They helped my business itself by lending funds for machines that I actually had hired more employees for. That is part of my chocolate business. They also do a lot of education with their lending. They are very good at educating their customers about financials, about business sense and whatever else they might need.

We have hired quite a few employees. I think through Donckers and Delft we have probably had upwards of 800 employees over the last 15 years. One of them, Marisa, is sitting out right now. She is on the next panel. Job creation is by far the No. 1 thing in rural communities that Northern Initiatives does very, very well.

Chairwoman STABENOW. Yes, I would agree.

Dr. Knight, you talked in your testimony—I appreciate you sharing your own personal experience as well as now your leaderships at the food banks—you talked about the importance of the update that we did on the Thrifty Food Plan evaluation to better reflect current prices and consumer eating habits. I think it had not been updated since the 1960's. It was incredible that we were operating under different costs, different ways of cooking and providing food and access and so on. We finally did a long-overdue update.

What has been the impact, though, of more accurately being able to reflect costs and the ways we operate on foods. What has been the impact for families in Michigan who are receiving food assistance? Then I would also just ask you to speak on, what is the biggest misconception—you spoke a little bit about it, but the biggest misconception about SNAP and other nutrition assistance programs?

Dr. KNIGHT. Great question. I think, though, in regard to the Thrifty Food Plan the impact is that people have more resources when they have more money than they do. This helps take those tradeoffs off the table. For me, when we went through this and SNAP and the food banks came alongside of us, it took the toxic stress of worrying about rent or utilities or whatever else that you did not have enough to pay for. When you improved the Thrifty Food Plan it just gave more resources to reduce people's toxic stress, and I think that is probably the biggest investment improvement that we have seen and experienced.

I would also say that because your staff is so great, that it inspired me to think, well, if we could do this for the Thrifty Food Plan why do we not just take on the Federal poverty measure?

Let's just update that too while we are at it, and that would certainly address a lot of need.

In regard to misconceptions, I think that I would say that there are two. One would be me. I think when we think about SNAP and who is utilizing benefits you do not normally think of a middle-aged, adult, white man. You know, it is not an easy story to tell, for anyone, and I think that every face of hunger is different and it has a different story behind it as to why. It is about people who need help for a little while, and it is about people who need help maybe for a little while longer. I think that says more about us as a country and a culture, how we come alongside of them, than it ever says about them personally.

I think to the other misconception is that SNAP is really an economic force, right alongside The Emergency Food Assistance Program (TEFAP). I mean, for every dollar spent in SNAP it generates \$1.80 in economic activity, and the same can be said about TEFAP investment, you know, for our farmers, and we think that solving food insecurity, and it starts in the field. A strong farm bill means a strong America. I think that these are economic drivers.

I just would end by saying that it is our firm believe, and I think it is yours as well, that hunger is not bigger than we are, it not better than we are, and it is not beyond us to solve. We can do it.

Chairwoman STABENOW. Thank you. Thank you very, very much, and I agree.

Mr. Ewald, you first started out growing conventional crops but made the decision early on to transition to organic. Given the higher input and management costs of growing organically, why did you make the choice to grow organic beans and grain, and what changes—you mentioned some, in the farm bill, but would you want to expand at all on the tools that organic farmers need for us to address?

Mr. EWALD. Well, thank you for the question. I jumped into the transition to organic in 1999, so we have been going for 23 years now, I guess. In 1999, we were working with some different industries and they were having their own problems paying bills, so that meant I was having trouble paying bills. We had to find a way to be more efficient. We are a small farm. I farmed with my father at that time, about 400 to 900 acres from my late teen years through 1999.

You can imagine a small amount of acres, making a very small amount per acre, you have to find a different way if you want to exist, unless you want to go find an off-farm job.

That is what I did. I started looking, and there seemed to be room in the organic corn markets, especially, and some soybean markets. If you look at historic yield or prices in those times, we were taking a lot of healthy peas and corn, and when you start hearing of a \$5 opportunity to sell organic corn it makes you think. Soybeans was the same thing. At that time there was transitional markets, but even in those first three years of transition to organic you could tap into a little bit higher profit.

At the time our chemicals were not working that well anyway. We were already hiring labor to help cleanup fields and dry beans, that kind of thing, so it was sort of a no-brainer. If we were going

to hire them, we might as well try to figure out a way to get more out of them, and that is what the organic market did for me.

Something that is becoming a problem, I think, as more people go organic is you are starting to see the shortfall of litters of poultry manures, manures that are available for widespread use. We have got to haul longer distances. It is more expensive. Like I said, we cannot just put regular nitrogens on. There are companies that make certain types of fertilizers but they are usually out of a plant-based product, and a lot of times they are organic plant-based.

They are expensive to begin with and you cannot afford to use them in the amounts it would take to grow, say, a corn crop. If you needed to put 200 pounds of that on it would probably cost you \$900 an acre, and you just cannot do that that way. We have to look for manures and cover crops that might add nitrogen to the soil.

A couple of things that would make it easier if people were looking to transition today. Remember, from a conventional standpoint you are going from conventional fertilizers and chemical weed control. Now, in year one, in transition, you are going to stop all of that. No more spoon-feeding the crop. You cannot call the neighbor fertilizer dealer and have them put your fertilizer needs on for the year.

One, two, and three years you are probably going to experience somewhat of a yield decline compared to what you would have maybe grown conventionally. We think that changes at about year four, and the biological activity seems to kick in and things start working better, and then you are in pretty good shape at that point.

In that time you have got a lot of costs. If a person is especially young or new to the transition, some banking would help, maybe with some softer terms on repayment in those transition years—no bailouts, no gifts, nothing like that, but maybe a softer repayment schedule, until you are certified organic. It is possible, with the right rotation, to become certified organic in year three if you plan for that. Easier access to bin facility loans, because now all of a sudden you do not just take your corn to the elevator and unload it. You have got to have somewhere at home to store it and dry it, so operating loans, that kind of thing. Better communication, service centers, that type of thing, so people know what is out there and available.

Chairwoman STABENOW. Great. Thank you very much. Finally, Mr. Chown, as you know, Michigan is one of the most agriculturally diverse growing areas in the country. We have been talking about that, and our farmers are critical partners in ensuring our continued productivity.

In your experience working with farmers how do our farm bill conservation programs help them and help the farmers who want to protect their soil and water while becoming more resilient in the face of that kind of change? You talked about that a bit, but could you talk a little bit more about that?

Mr. CHOWN. Sure. That is a great question, Senator. For starters, the most important thing from where I come from in Northwest Michigan, in the fruit belt, which is a globally unique agricultural area but it is also increasingly threatened by development, because

the same lands that are great for growing cherries have the best views of the lake and are under tremendous pressure. We need to make sure that our prime farmland and their valuable soils are protected, permanently.

One of the best ways, obviously, to do that is through the NRCS Conservation Easement Programs, and your leadership in supporting that through the RCPP, through the ALE programs has been instrumental. We know that all farmers care deeply about their land. We have heard passionate testimony today. They want to do what is best. They are the first stewards.

Programs that incentivize the adoption of best practices, such as the Environmental Quality Improvement Program (EQIP), the Conservation Preserve Program (CRP), the Conservation Stewardship Program (CSP), they are all critical, particularly in a rapidly changing world where we have got to adapt quickly.

We know we need to ramp up these programs in the face of climate change. We faced a crisis during the Dust Bowl, as a Nation. Remember that? We responded dramatically. Call me an optimist but I think we can do it again, with the kind of leadership that we have today.

More cost-shared dollars will be crucial, and I commend the NRCS for being a great partner in providing that technical assistance to growers interested in accessing these programs, along with our conservation district and our extension partners.

The good news in our area is that these partnerships that will be necessary to achieve greater resiliency are strong, and we are ready for the challenge. Given the urgency of this issue and the opportunity for agriculture to be a huge part of the solution, in a more resilient future, in a more sustainable future, we are grateful for your leadership for advocating for these in the program.

I want to point out that Growing Climate Solutions bill, passed by 98–2 in the Senate. How about a round of applause? When does that happen?

Chairwoman STABENOW. Well, thank you so much, and we are trying to get it through the House. Senator Boozman was a wonderful partner on that, so we are going to get that done.

Senator Boozman for any questions.

Senator BOOZMAN. Thank you, Madam Chair, and Mrs. Kennedy, I am interested to hear more about how you go about selecting with the dairy margin coverage. There are so many types of coverage to choose from. Do you do that the same every year? How does that work in your particular program?

Mrs. KENNEDY. That is a wonderful question. We look at the futures and see where we think the next year might be. It was much easier before COVID. Now it is a little more challenging and everybody is a little gun-shy about what other pandemic or other wrench might get thrown in there.

You know, we work with our financial people, so Dr. Corey Clark and a few other people. We look at what we think might happen and then we sit down and we say what is the best value for our money, what works the best, what do we think, management-wise, we might do in the next year?

Yes, we are always looking at everything. We are running scenarios and deciding what we think might be the most important

thing to protect against, and then that is our plan for the next year.

Senator BOOZMAN. Very good. This question is for Mr. Isley and Ms. McAvoy. In your written testimony you advocate for raising the FSA farm loan limits. What do you believe would be an appropriate level for both direct and guaranteed farm loan limits? You want to raise them. What exactly do you want to do?

Ms. McAVOY. Well, as my colleague at the end of the table mentioned, I am competing against lots of developers for that lake-view land, so the \$600,000 cap would be exhausted in a very small operation in Northern Michigan. I do not have a specific number in mind, but I could see \$1.5 million being a necessary amount to get started in a fruit-growing region like mine.

Senator BOOZMAN. Okay. Mr. Isley?

Mr. ISLEY. Thank you for the question and I appreciate you bringing it up from the written testimony. One of the things that we face, I am not facing competitors in the marketplace that are looking to buy a view of the lake, but what I am facing is increased pressure from larger organizations or people outside of agriculture that are coming in and they are buying up land as an investment opportunity. I attempted to participate, or I went through the process to participate in a young farmer loan program, and I was looking at parcel that was going to exceed the loan limit, to be able to purchase that land, and I had to go and get financing elsewhere.

I think as far as a term of what would be appropriate for the max amount to be offered should be specific to the ever-changing market in terms of being able to purchase prime real estate. As a beginning farmer, being able to start a land base is definitely something that is needed in a lot of cases.

I think as we look at being able to evaluate what that land is and what that value is, and being able to have some parameters around that, so people just say, "Hey, here is the maximum," we need to be able to look at here is the maximum but here is what we can do from a per-acre standpoint, given what the current market conditions are, would be more a line that could fluctuate up and down as we see ever-increasing pricing from an agricultural needs standpoint.

Senator BOOZMAN. Very good. This is for anybody that wants to jump in, but several of you mentioned in your testimony that you participated in farm bill conservation programs like EQIP. Tell me about your experience, how that was, if was easy to jump in. Then also what do we need to do to change? Is there anything that we need to improve regarding those programs? It does not matter if we are in Arkansas or Michigan, they are very popular, they are undersubscribed. We understand that part of it, but apart from that, are there any other changes that we need to make?

Mrs. KENNEDY. I actually attempted to use EQIP a few years ago and had to pull my application because my project was quite large, looking to build manure storage. The backlog in our area for engineering projects is extremely long, and we knew that we would not be able to get it done in the amount of time that was allotted, which was really unfortunate. We do plan to reapply.

From my perspective, every time we went in to work on this project the engineer that we worked with before was gone. Either

they were promoted or they left. Then every person said, "Well now here are my requirements. I do not need what the other people have. I need this," or "I need that." It was a constant rotation of trying to do that.

Then you finally get plans and it is winter, and so you cannot do it, so then it gets pushed to the next year. A manure pit is an extremely big project, and so you cannot just get the plans in winter and then say, "Hey, when the weather gets nice we are going to rock and roll on this, and we will have it done by June."

From my perspective, adding more employees and working hard to keep the employees that we have is really important, and trying to find a way to find some consistency from level to level through NRC. You know, I know it is challenging. Every project is unique. You are dealing with different type of standards and different watersheds and whatnot, but if there can be ways to put some more consistency together, in my situation that would have been amazing.

Like I said, I still think it is a fantastic program and I plan to use it, but at the time it was tough. I had kids in the middle of trying to do a manure pit, so that was another. I ended up on bedrest for about six weeks before I had babies, so that kind of put a cramp on it too.

Senator BOOZMAN. Very good. Well, yes.

Mr. CHOWN. I just wanted to echo a couple of things. Seed is a problem in all of these programs. There is a lot of bureaucracy. There is a lot of layered decisions and making it redundant. We have got to find ways to streamline these programs where it makes sense, and we are definitely going to be working with Senator Stabenow's talented ag team to be looking at how we can make those improvements in the next farm bill. Seed is one issue.

I think another issue that we do need to recognize, I have always found the NRCS to be some of the most dedicated employees and partners. Garry Lee has got a great team here at Michigan. Thank you, Garry. There are capacity issues, and they can only get to so many farmers and process so many applications. When you have a very bureaucratic, time-intensive process, that just compounds the staff capacity issue.

I think we need to look at both those issues going forward, because we have got to increase the speed. Farmers get frustrated quickly. They need to move. They are making huge decisions about their livelihood. When things are at a snail's pace on the delivery systems that is a real problem. I see a lot of nodding heads in the audience. Let's figure out how to fix those things and streamline the system.

Senator BOOZMAN. Very good. Thank you, Madam Chair.

Chairwoman STABENOW. Well, thank you very much. Glen, I will just add to that. When we originally did the Regional Conservation Partnership Program in 2014, and had the last farm bill hearing, we heard things were not getting done, decisions were not being made fast enough, and so on. It was helpful, with a lot of people in the room we did streamline, and we want to continue to hear about what needs to be done.

All right. Well, thank you so much to all of you. We have another panel, and we will take a short pause to allow our panelists to

come forward. We will take a short break. I just want to say thank you to everybody who came. Thank you so very much.

We will take a short break and then be back.

[Recess.]

Chairwoman STABENOW. We will convene our second panel. Welcome back. We thank so much the first panel that joined us, and now we are very pleased to have some other great Michiganders that are going to talk to us about important parts of our farm bill coalition and what we are doing in Michigan. Thank you so much.

Let me introduce each of our panelists and we will ask them to do five minutes' worth of testimony, and anything else, by the way, in writing that you want to share with us, we want to make sure we have access to that.

First, Brian Bates owns and operates the Bear Creek Organic Farm in Petoskey, Michigan, where he produces USDA-certified organic honey, salad greens, microgreens, tomatoes, garlic, living herbs, and spring transplants. He and his family started farming nine years ago to combat climate change. You are making me hungry as I am reading all of these things here.

Karianne Martus is the manager of the Flint Farmers' Market, where she has served in a variety of capacities for 16 years. The market is located in the heart of downtown Flint and has been a fixture in the Genesee County community since 1905.

Dr. Joe Sullivan is Director of Pullet Operations at Herbruck's Poultry Ranch in Saranac, Michigan. In his position, Dr. Sullivan oversees the testing, health, and vaccination for all Herbruck's chicks, and maintains biosecurity in Herbruck's operation. Joe holds a master's in public health with a focus on infectious disease, and has his doctorate of veterinary medicine.

Alexander Ball owns and operates Old City Acres in Belleville, Michigan, a quarter-acre urban farm that specializes in year-round farming, providing fresh and seasonable vegetables with a flexible community CSA program. Alex has been an active participant in establishing and expanding the Washtenaw County Black farmer's fund.

Allyson Maxwell is the co-owner of Peter Maxwell Farms in Beaverton, Michigan, where she raises sugar beets, corn, soybeans, and wheat. Allyson also helps run the family pumpkin farm that raises pumpkins, ornamental corn, and squash while hosting agritourism events. Allyson is the co-chair of Solutions for the Land, and is a member-owner of the Michigan Sugar Company.

Rachel Lyons is the Tribal Manager for the Bay Mills Indian Community in Brimley, Michigan. In her role, Rachel works on forestry issues and food distribution for the tribe, with a particular focus on Good Neighbor Authority and the Food Distribution Program on Indian reservations.

Marisa Jacobs is the Senior Associate Grower at Square Roots, Inc., in Wyoming, Michigan, an indoor, controlled-environment farm near Grand Rapids that grows leafy greens and lettuces in shipping containers with controlled environment agriculture technology.

Lisa Woodke is Sustainability Director for Star of the West Milling Company in Frankenmuth. Lisa established a partnership between Star of the West and Land O'Lakes to lead sustainability ini-

tatives and also established a partnership with The Nature Conservancy to produce sustainable wheat in the Saginaw Bay area.

Welcome so much to each of you, and we will start with Brian Bates.

STATEMENT OF BRIAN BATES, OWNER, BEAR CREEK ORGANIC FARM, PETOSKEY, MI

Mr. BATES. Thank you very much Chairwoman Stabenow, Ranking Member Boozman, and members of the Senate Agriculture Committee. Thank you for the opportunity to testify today. My wife, Anne, and I are first-generation farmers, organic farmers, and young and beginning farmers, and farmers who would not be here today if not for the farm bill programs that helped us get here.

Like many young farmers, our passion alone was not enough to build our vision. We needed money. With no operational history to lean on, no generational assets to leverage, no bank wanted to touch us. The microloan was a new program in 2013, and expanded in the 2014 Farm Bill. It helped us buy our first greenhouse and first tractor. It also helped us build credit, build equity, and learn to manage debt sustainably.

With annual sales now exceeding \$1 million, it is hard to believe that the Bear Creek of today would not have been possible without the \$35,000 microloan we received in 2013. When we saw the need for expansion five years later we were able to qualify for a much larger FO loan. The experienced counsel of our FSA loan officer helped us manage our risk and optimize our growth potential. We have now graduated from the FSA credit programs and work with Greenstone Farm Credit to support our growing farm.

Beyond farm credit we have benefited from several other farm bill programs. For specialty crop growers, few things can transform the profitability of a small farm better than hoophouse. We have been fortunate to build three hoophouses through the NRCS EQIP program. Based on our experience, we recommend increasing the square foot payments on this program and expanding the maximum size allowed. Material prices have increased dramatically and bigger tunnels are more cost-effective for growers and much better for plants.

In 2015, we were awarded a Sustainable Agriculture Research and Education (SARE) Farmer Rancher Research Grant. Our project focused on overwintering strategies for northern honeybee colonies. Through the research we conducted we were able to make connections with other beekeepers and researchers, test our theories, and we have now managed to achieve 90 to 100 percent winter survival each year since. Our story is not unique. Year after year, SARE grants spur innovation and enhance farm viability across the country.

Another program we value is the Organic Cost Share. This program allows organic growers to commit to certification without bearing the full cost. With the incredible demand in the organic sector, anything to reduce barriers to becoming certified organic is a victory for producers and consumers.

Recent Federal food safety requirements through the Food Safety Modernization Act, or FSMA, are one of the most significant challenges facing specialty crop producers. We are concerned that the

costs associated with compliance could put many small farms out of business. We recommend the creation of a cost-share type program for farms to adopt the necessary practices to comply. Whether these programs would cover infrastructure, water testing, or tools of technology, any investment in food safety would make a difference, as the costs of compliance are disproportionately higher for smaller farms.

Finally, we strongly request that you significantly increase the farm bill investment to beginning farmers and certified organic farmers. Beginning and organic farmers are quite literally the future of United States agriculture, and both parties currently receive a fraction of the investment they need to build the farm future this Nation deserves.

Thank you so much for the chance to share our experience and ideas for the 2023 Farm Bill. We are privileged to be living proof of what is possible when our government invests in us with investment programs that allow farms like ours to startup, grow, and thrive. For that we thank you.

[The prepared statement of Mr. Bates can be found on page 101 in the appendix.]

Chairwoman STABENOW. Thank you so much, Brian, and I forgot a very important thing. I was just told that you and your wife just had a new baby on Saturday.

Mr. BATES. That is true, yes.

Chairwoman STABENOW. A girl or a boy?

Mr. BATES. A girl named Joy.

Chairwoman STABENOW. Oh my goodness. How wonderful. Well, she will carry on the tradition of the farm, and I want to see pictures when we are done.

Mr. BATES. That can be arranged.

Chairwoman STABENOW. Great. All right.

Mrs. Karianne Martus, please proceed.

**STATEMENT OF KARIANNE MARTUS, MANAGER, FLINT
FARMERS' MARKET, FLINT, MI**

Mrs. MARTUS. Thank you. I would like to start with a heartfelt thanks to Senator Stabenow for your ongoing support of the Flint Farmers' Market and to the Flint community as well, and to the entire Agriculture Committee for the opportunity to speak today.

Our community has taken many hits over the years, and the toll on families struggling to survive is not getting any easier. The SNAP/EBT program, which is funded through the farm bill, is a consistent source of opportunity for communities like ours. Making good food affordable and available for families is crucial to try to help people lift themselves out of poverty.

Our market is extremely diverse, both in terms of our vendors and our customer base, and almost all of our eligible vendors accept SNAP/EBT benefits and participate in the Fair Food Network's Double Up Food Bucks Program, which Senator Stabenow helped take nationwide in the farm bill by establishing the Gus Schumacher Nutrition Incentives Program.

Our market's participation in these programs does not only benefit the people of Genesee County but it has kept our farmers in

business during particularly trying times such as COVID, natural disasters, and economic downturns.

Some people may be surprised to learn who is aided by food assistance, although Dr. Knight earlier did a fantastic job of making that very real for all of us. Over the years, EBT has been widely associated with low-income, single-parent households, but that is not necessarily the case today. We see single parents but we also see people with disabilities, parents of children with disabilities, senior citizens, college students, and displaced veterans. There is no once face of EBT. It reflects a broader community of people who are struggling to make ends meet and survive.

It is also a changing population based on circumstances. What I mean to say is that people benefiting from food assistance, by and large, are not looking to become lifetime members of this group. We see so many people at our market who have fallen on hard times for a variety of reasons, most of whom it is a harsh blow to their pride to accept assistance. It becomes for their family not so much a matter of choice but a matter of survival.

I have personally witnessed customers in tears upon understanding that by shopping at our farmers' market with SNAP and Double Up Food Bucks they can double the amount of good food grown by farmers for their families, and it is has been a truly humbling experience for many, including myself.

I have also witnessed the evolution of food education, because of programs like Double Up Food Bucks that support Michigan agriculture. In 2021, there were more than 150 farmers' markets in Michigan, 72,856 transactions occurred at those markets, and accounted for \$1.6 million in SNAP/EBT sales for the State, much of which goes directly to our farmers and producers. It is a happy occasion to pass a customer having a conversation with a farmer or vendor about when Michigan produce is in season so that they can better utilize the funds that they saved on their card.

Part of this food evolution also relies on funds to continue to promote and educate our community that these types of programs are available and how they can best use them to benefit their families. The importance of marketing funds for farms and farmers' markets cannot be understated, nor can the assistance from healthy food financing incentive programs, which have also helped to make it possible for our market to expand.

It is important, too, that we talk about technology and the integral part it plays in the advancement of food assistance. Our market was a pilot over a decade ago for Double Up Food Bucks. Most other farmers' markets were using tokens to accept food assistance funds for EBT and Double Up Food Bucks. Our market, I am very proud to say, has always been a digital shopping experience. Beginning with EBT, no tokens at our farmers' market.

When Double Up Bucks came along we insisted to continue that tradition. This was not only for ease of use and a less burdensome system on farmers and vendors but also for a larger reason. I mentioned earlier the emotional side of using food assistance. Our market developed a reward card system for shoppers to use Double Up Food Bucks.

This decision shaped the face of food assistance at our market. People in our community who were already struggling did now not

have to wait in line longer, hold up transactions for farmers to count tokens, and feel generally uncomfortable using their benefits. Now having an EBT card and getting and using Double Up Food Bucks is a positive experience, and the stigma of the struggle, at least for the time they are at our market, is eased. Technology leveled that playing field. This practice should become reality all over the country for EBT and Double Up Food Bucks recipients with regard to interactions at farmers' markets and with local food producers. Once the Double Up Food Bucks program was created, shoppers realized that they got more bang for their buck.

I will wrap up and just say programs like SNAP/EBT and Double Up Food Bucks being available at farmers' markets, and for farmers more broadly, is a huge part of helping everyone in our society to grow stronger and healthier together.

[The prepared statement of Mrs. Martus can be found on page 108 in the appendix.]

Chairwoman STABENOW. Thank you very much. I know there is so much to say about the positive experiences and benefits of this. Dr. Joe Sullivan, welcome.

STATEMENT OF JOSEPH SULLIVAN, DVM, DIRECTOR OF PULLET OPERATIONS, PRODUCTION, HERBRUCK'S POULTRY RANCH INC., SARANAC, MI

Dr. SULLIVAN. Thank you, Senators, for the opportunity to testify today.

The Herbruck family has been in the egg business for nearly a century, and located in Saranac. Herbruck's offers several specialty eggs, such as cage-free, organic, and free-range. One hundred percent of our conventional corn comes from within the State of Michigan, as well as nearly 90 percent of the organic corn. The egg is part of a sustainable organic cycle that is derived from an animal raised with integrity.

Egg farmers are affected, both directly and indirectly, by the farm bill. I would like to thank this Committee for its past work to address and identify animal diseases, including the National Animal Disease Preparedness and Response Program in the 2018 Farm bill.

I would like to mention a few issues that are important to poultry producers and egg farmers today.

First, highly pathogenic avian influenza. This year's outbreak has already affected over 30 million commercial poultry, and 24 million of those are layers. It is critical for Animal and Plant Health Inspection Service (APHIS) to have access to the CCC funds for indemnities and other costs. In addition, APHIS needs to review its indemnity calculations and make them more transparent.

Additional, low-path AI, or avian influenza, is less severe than high-path. However, it can mutate into a high-path variety. Low-path outbreaks need to be sent out quickly before mutation occurs. In the 2023 Farm Bill, Congress should require the use of CCC funds to indemnify low-path and cover related costs.

We would like to thank you for your work in the previous farm bill and express the importance of the work of the NAHLN labs and biosecurity efforts put in place to help identify and control dis-

eases. Without these measures we could be in a worse situation than we are in this current outbreak.

Second, the Organic Livestock and Poultry Practices rule that is now under review at OMB. We are concerned about this rule because it would ban production that had been accepted by the USDA for decades, in which farmers have invested millions of dollars while greatly reducing the supply of organic eggs and increasing consumer prices.

Finally, agricultural labor. We are having the same problems as many other industries do in attracting and retaining workers. Congress should come together and pass legislation that will ensure access to a reliable farm labor supply, including reforms to the H-2A guest worker program to make it year-round so it works for animal agriculture. I realize that this issue is not directly under this Committee's jurisdiction, but I would like to think it is important for you to know the issues that have direct impacts on our farm.

Again, thank you very much.

[The prepared statement of Dr. Sullivan can be found on page 110 in the appendix.]

Chairwoman STABENOW. Thank you so much.

Alexander Ball, welcome.

**STATEMENT OF ALEXANDER BALL, OWNER, OLD CITY ACRES,
BELLEVILLE, MI**

Mr. BALL. Thank you. Chair Stabenow, Ranking Member Boozman, and members of the Committee, thank you for the opportunity to testify today. I, along with two generations before me, was born and raised in a small factory town on the edge of Detroit. During the height of the housing crisis, I saw my local economy collapse and my friends, family, and neighbors plunged deeper into poverty, causing many local businesses to close, including our local grocery store. At that moment, the weight of the situation fell onto me, and at the age of 18 I knew that I not only needed to grow food for my community but build a more resilient food system on the values of food access, mutual aid, and sustainable community-focused growth.

With no family land or money, the first and largest roadblock that would haunt me over the first half of my farming career was my lack of access to land and capital. Over the next half decade I would move from rented plot to plot, trying to find a stable, safe, and long-term location to try and build my farming business and agricultural future, all the while not being able to invest and build some semblance of a future for myself and my family.

As the years went on, I continued to save whatever scraps of income I could to go toward a piece of land of my own, but every year land prices and inflation continued to grow, slowly pushing me, and many like myself, further away from the possibility of owning land and building long-term, multigenerational wealth.

After five years of farming and saving for a small down payment and finding a small piece of land to build my forever farm, I was ready to take the push and grow my farm into a scaled-up business. I was new to the world of banking, land buying, and government agencies, but I had heard of the Farm Service Agency and knew that they helped farmers.

After weeks of work trying to get an appointment, I was finally all set to meet with my agent. Unfortunately, my agent, whose district represented large urban areas, was not from the community and was inconveniently located two counties away. I drove over an hour to be told that I could not be helped and that I should just turn to the private sector to fund my urban farming project. I was devastated because every other traditional bank I had spoken to was not interested in financially backing a produce farm or getting involved in agricultural endeavors at all.

They did, however, give me information to a local ag lending association, GreenStone Farm Credit Services, in 2017. When I reached out, I was blown away at how quickly they directly understood and supported my business, and I was given, almost immediately, a loan to purchase my first farm property. Over the last five years I have been given subsequent farm loans to help build my business. This direct access to capital has been the deciding factor in the overall possible success of my business. Using these transfer payments directly to our farm.

As a peri-urban farm, I spend a lot of my time on the edge between rural and urban spaces, and one of the biggest hurdles I see is the lack of direct information about State and Federal programs directly aimed toward small and urban growers. When FSA and other government agencies are located so far from urban centers there is no way to prevent disparity in access and use of those programs put in place to prevent that exact issue. Thank you to Senator Stabenow for taking the first steps to address this disparity by creating the Office of Urban Agriculture in the 2018 Farm Bill, to help farmers like myself.

This last year I had the privilege to cooperate with other local growers and institutions to start the Washtenaw County Black Farmer's fund. Our goal was to raise funds from our community and redistribute it back to Black farmers in order to grow their infrastructure and production. Over 2022, we were able to raise \$100,000 and redistribute that to the community, and we are hoping to beat that next year. Through this fund, we were also able to act as an informational hub connecting growers directly to additional funding or technical assistance from local farmers, non-profits, and GreenStone Farm Credit Service.

There is much work to be done at every single level of the food system, and I believe that we are just at the beginning of a new era of local food production and technological interconnectedness that will increase access to food, information, and resources to more folks. Constantly strengthening of the food supply chain is imperative, and we need the continued and expanded roles of FSA, Washtenaw Black Farmer's Fund, Office of Urban Agriculture, and GreenStone Farm Credit Services to continue this great work.

Thank you so much.

[The prepared statement of Mr. Ball can be found on page 113 in the appendix.]

Chairwoman STABENOW. Thank you very much for all of your efforts.

Now Allyson Maxwell. Welcome.

**STATEMENT OF ALLYSON MAXWELL, CO-OWNER, PETER
MAXWELL FARMS, BEAVERTON, MI**

Mrs. MAXWELL. Chairwoman Stabenow, Ranking Member Boozman, thank you for the opportunity to testify today. My name is Allyson Maxwell and I farm with my husband, Peter, in Beaverton, Michigan, while also raising our three very active sons. Peter and I are proud to be a part of a multigenerational, diversified, MAEAP-verified family farm that has the privilege of providing food, fiber, and fuel for our world.

In October, we open Maxwell's Pumpkin Farm alongside our family in order to sell pumpkins, squash, ornamental corn, and other treats to the public, and also to share our life in agriculture with the public and help to educate them about what we do.

It is an honor today to provide input to the Committee on behalf of corn-growers and sugar beet farmers in Michigan. It is a great responsibility to grow safe and sustainable food, to take care of our land, and to provide a good future for our sons, and it certainly is what keeps us motivated every day.

First, as a sugar beet grower, I urge the Committee to support the U.S. sugar policy, which is structured to serve American farmers, consumers, food manufacturers, and taxpayers, and has operated at zero cost to taxpayers 17 of the past 18 years.

While our sugar program has worked, the low rate for refined beet sugar as not kept up with inflation nor the steeply rising cost of production. As such, we would support looking at how the farm safety net could better match actual operating costs for producers.

Sugar is a staple in most kitchens, including mine, and I would also like to note that as a mother of three I am proud of the fact that I out of all the items I have had trouble finding at the grocery stores over the past few years, sugar was not one of them, and I think my sons and my husband were too.

Second, the safety net provided by crop insurance is vital to maintaining the agriculture industry in this country, especially in the face of increasingly unpredictable disasters like drought, flood, and extreme weather. A memory that stuck with me as a child was watching my aunt and uncle in Southeastern Missouri almost lose their farm because they had no insurance. Fortunately they are still farming today and are another example of a great American farm family that also is able to take advantage of having a crop insurance program.

Next with regard to conservation programs, we are fortunate to farm in the backyard of the beautiful Saginaw Bay, which strives us to continually improve our sustainability efforts to protect our land and water. We appreciate Chairwoman Stabenow's strong leadership in that area. It is imperative that we continue to provide the tools and support for farms like ours, to keep the trades and technology that we currently have which allows us to utilize climate-smart best practices as well as adopting new practices and technology.

We also appreciate Chairwoman Stabenow's efforts in order to improve our PLC programs for corn-growers in Michigan and urge the Committee to continue to look for ways to ensure producers have market-based risk management tools.

Trade promotion programs are also critical for the future of our industry. We believe that the Market Access Program with Foreign Market Development funding should be increased as it is critical to the effectiveness of these programs.

I would also like to note that the FSA young and beginning farmer loan was a critical lifeline on our farm, and I would encourage the Committee to continue to support new and beginning farmers.

In addition, much of what we have able to achieve on our farm has been made possible by a reliable source of funding from GreenStone Farm Credit Services, like Alex. The farm credit system's role in rural America is critical, and our local GreenStone branch has truly been a valued partner to us. Most recently they have helped us to weather radical price increases in our crop inputs.

Finally, U.S. farmers have faced unprecedented challenges in recent years. I hope that the previous and current supply chain challenges will galvanize bipartisan support to ensure our farmers have a strong safety net so farms like ours can continue to operate.

As Congress discusses reauthorizing the farm bill I hope that the issues facing farmers today will remain at the forefront. A successful farm bill reauthorization should continue to support new and existing farmers, especially with the economic realities facing farmers today.

I just wanted to thank you, Senator, for all of your hard work on the 2018 Farm Bill and getting that done. Thank you so much.

[The prepared statement of Mrs. Maxwell can be found on page 117 in the appendix.]

Chairwoman STABENOW. Thank you very much and thank you for your testimony.

Rachel Lyons, welcome.

STATEMENT OF RACHEL LYONS, TRIBAL MANAGER, TRIBAL ADMINISTRATION, BAY MILLS INDIAN COMMUNITY, BRIMLEY, MI

Mrs. LYONS. Thank you. Chairwoman Stabenow, Ranking Member Boozman, and invited guests, I am honored to be with you this morning. Aanii Boozhoo. My name is Rachel Lyons and I am an enrolled member of the Bay Mills Indian Community. We are a small, federally recognized Native American tribe located on the shores of Lake Superior in Michigan's Upper Peninsula.

I am appearing before the Committee in my capacity as the tribal manager for my community. In this role I have management responsibilities for various governmental departments, including the Commodities Food Department and Fire Management Department, both of which have been significantly impacted by the USDA's Agricultural Improvement Act. The programs and funding associated with this legislation are an absolute necessity for our communities to not only address concerns related to our natural resources but also in helping to increase food security for our people.

Due to the expanded authorities of the 2018 bill, our tribe has been able to contract with USDA Forest Service under the Good Neighbor Authority. This collaboration has allowed for the ongoing successful stewardship and land management of the Hiawatha National Forest.

Our Commodity Food program has been in operation for decades, with Food Distribution Program on Indian Reservations (FDPIR) being its primary funding source. This program has been a constant for providing necessary nutrition to some of our most vulnerable tribal members.

Our community has seen many successes come from these programs, but we also see many potential opportunities for improving upon the implementation of both the Good Neighbor Agreement and FDPIR. The Good Neighbor Agreement between Bay Mills and the Forest Service has fostered a strong relationship between our two entities. The increase communication, interactions, and support from this program have formed several other progressive agreements for our two entities, including an unprecedented Lighthouse Management Agreement.

Our fire crew has historically been funded by the Bureau of Indian Affairs RTRL program. This administration is strongly promoting coordination amongst agencies and stakeholders. I believe there is great prospect here for the USDA to work alongside the Department of Interior and tribal nations to achieve critical goals for conservation and forestry.

Our Commodities Department has not only been able to provide access to nutrition for our community, but they have also implemented various educational and outreach services for our members. One strong concern pertaining to the FDPIR program has continuously been the income eligibility requirements. The overall standards to access both FDPIR and SNAP truly needs to be reassessed. If the USDA were to increase the income eligibility limits even slightly the agency would be able to serve this often overlooked, working poor class of citizens that are many times faced with food insecurity.

As with many governmental programs, there is room for improvement. Three minutes simply is not enough time for me to convey our full story, but this Committee needs to be aware that there have been many achievements that have come from this legislation. I greatly appreciate this opportunity to present these impacts. Miigwetch, thank you, and I look forward to any questions you may have.

[The prepared statement of Mrs. Lyons can be found on page 123 in the appendix.]

Chairwoman STABENOW. Thank you very much.
Marisa Jacobs.

**STATEMENT OF MARISA JACOBS, SENIOR ASSOCIATE
GROWER, GRAND RAPIDS, SQUARE ROOTS, INC., WYOMING, MI**

Ms. JACOBS. Chairwoman Stabenow, Ranking Member Boozman, and members of the Committee, my name is Marisa Jacobs from Square Roots. Thank you for the opportunity to testify today.

I grew up in Clarkston, Michigan, and studied environmental studies and sustainability at Northern Michigan University. A professor introduced me to the concept of indoor farming, which connected my love for plants and sustainability. This became a career path I began to research and pursue.

After graduation I discovered what Square Roots was doing with Gordon Food Service in Grand Rapids, Michigan. Gordon Food

Service is a 125-year-old food distributor that was looking for innovative ways to meet growing customer needs and growing customer demand for fresh local products.

Square Roots is a tech-enabled leader in Controlled Environment Agriculture (CEA). CEA is a form of hydroponic agriculture where plants grow in an enclosed environment year-round, regardless of the climate. CEA offers many benefits, including bringing fresh food to urban areas, reducing environmental impacts, and creating a reliable, year-round model for farming.

Square Roots' farms utilizes a water-efficient, vertical growing system which requires less space than outdoor farms. A single steel shipping container provides 320 square feet of growing space that can produce hundreds of pounds of non-GMO, pesticide-free produce per week. This climate-controlled environment creates optimal growing conditions for small herbs and vegetables such as cilantro, dill, basil, and microgreens. We can replicate the conditions existing in the best years of certain crops, such as basil from Genoa, Italy in June 1997. I can control the entire container on my phone through the use of software, the Square Roots Farmer Toolbelt.

I started as an apprentice grower to learn the tech and the production and sale of the products that are now offered in 250 retail stores and to Gordon Food Service restaurant customer. I know that the farm bill authorizes programs to support and train beginning farmers, including the Beginning Farmer and Rancher Development Program, which thanks to Senator Stabenow's leadership received permanent mandatory funding in the 2018 Farm Bill. This farm bill program could be used to train future generations of not only indoor growers but also traditional growers.

Because of my time as an apprentice, my skills have developed significantly. After my apprenticeship was complete I took on an associate grower role and then was promoted to a senior associate grower. I am one of 30 employees in the State of Michigan who enable and operate our farm.

In closing, we are grateful to Senator Stabenow's efforts to authorize the Office of Urban Agriculture and Innovative Production at the USDA in the 2018 Farm Bill. We hope to see grants, funding, or other programs available in the reauthorization farm bill to further support CEA and apprentice programs for the next generations of farmers. Thank you.

[The prepared statement of Ms. Jacobs can be found on page 129 in the appendix.]

Chairwoman STABENOW. Thank you so much.
Last but not least, Lisa Woodke.

**STATEMENT OF LISA WOODKE, SUSTAINABILITY DIRECTOR,
STAR OF THE WEST MILLING CO., FRANKENMUTH, MI**

Ms. WOODKE. Thank you. Good morning, Chairwoman Stabenow, Ranking Member Boozman, and members of the Committee. My name is Lisa Woodke, and I am the Sustainability Director at Star of the West Milling Company. We are a flour miller, dry bean processor, and agronomy services provider based in Frankenmuth, Michigan. I appreciate the opportunity to be with you today.

Star of the West was founded in 1870, and brings a unique view to food sustainability and the future of climate-smart foodsheds. Every day we work closely with farmers and food processors helping meet market demands for sustainability. To get this job done we rely on people—our expert agronomists and certified crop advisors, as well as technology. For us, this technology includes Syngenta’s AgriEdge farm management software and Trugerra, the sustainability business at Land O’Lakes. These tools help farmers better target their conservation practices, supporting both economic and environmental sustainability.

Star of the West is working hard to stay ahead of the curve in this area. For example, we helped bring to market the Airly cracker, a new, climate-smart snacking option from Bright Future Foods. It is chocolate-flavored, so I will let you have that.

Chairwoman STABENOW. Do you have two boxes left?

Ms. WOODKE. I will get another.

Chairwoman STABENOW. Okay.

Ms. WOODKE. This cracker is produced using carbon-negative wheat grown on Michigan farms. We have also partnered with Kellogg Company and The Nature Conservancy, and we have gathered insights and data to showcase the benefits of wheat on the farm. We expect this space to continue to evolve quickly.

As you consider the next farm bill, we see two critical needs for this work—people and food. First, let’s talk people. Human capital is critical. We encourage new investment to support social networks for farmers, investment to enhance agronomists’ climate-smart agricultural skills, and investment to engage beginning and smaller-scale farmers.

Second, food production. We see the potential for Michigan to have a climate-smart foodshed providing both food and environmental benefits for our communities. The farm bill can support regional processors and markets and help institutional buyers like schools and hospital access locally grown grains, legumes, and other food items. This will help bolster markets for new and emerging crops and nourish some of our most vulnerable populations.

This farm bill could also provide growers greater flexibility to qualify for cover crop incentives while still producing a food crop. Winter wheat is a perfect example of this for our region. In addition, working lands conservation programs that provide flexibility would benefit both farm stewardship and food production.

Agriculture is advancing every day. Actual horses became horsepower, corn is now a hybrid, and wheat can be a carbon sink. We are at an exciting crossroads where farmers can use incredible technology to deliver quantifiable environmental benefits while nourishing that which we treasure most, our families and communities.

Thank you for the opportunity to present on behalf of Star of the West. I appreciate your leadership, and I would be happy to answer any questions you may have.

[The prepared statement of Ms. Woodke can be found on page 148 in the appendix.]

Chairwoman STABENOW. Wonderful. Thank you so much, to all of you, for your very, very important testimony. Let me start with our new dad, Mr. Bates.

All of us here today know how important research is to producers, and I know in your written testimony you discussed the importance of agricultural research, both on the farm as well as off the farm. I wondered if you might talk a little bit more about research programs and how important they are to your operations.

Mr. BATES. Yes, sure. That is a great question. In many ways my start into agriculture involved research. My first job was volunteering on a research project on a farm when I was in college, and then my first paying farm job was working on a research farm while in college. Since then research has sort of been the foundation of our business. We are in a relatively new field. We are certainly new farmers. We have no generational knowledge to draw upon.

I think the thing that we so often miss about research is we tend to just think of it as very static, lab coats in the field, trials, and it is sometimes hard to relate.

I think one thing that we forget about is research comes in many different ways, and it is really, really hard to do good research and run a profitable business simultaneously. We have enjoyed the on-farm research we have done but what we enjoy more is when somebody's full-time job is to do the research and shares with us the results. I think sharing that knowledge has never been easier, but there is so much knowledge that sometimes it is hard to sort through what is legitimate and what is not, and that is where I think the value of farm bill-funded research adds a certain level of legitimacy to the work that is being done.

I also think that we also miss the process of doing research. The process of being a part of it, whether formal or informally a part of it, really builds networks far beyond the projects that we are working on. We felt that first-hand with our on-farm beekeeping research, was yes, we made progress with what we did but the connections we made with other beekeepers, with researchers at MSU, with researchers at Purdue, those networks have provided a lot of additional value for our business ever since then.

Then last I would just say that all research is not crop varieties and yield. I think there is a lot of really good research being done in market growth, business research, how to build a farm business to survive in this economy. As farms like ours look to hold onto staff year-round and want to grow our business in new and different ways, having legitimate market research and business research sometimes provides just as much value as which crop to plant.

Chairwoman STABENOW. Great. Thank you very much. Let me ask this both to Mr. Ball and Ms. Jacobs. Each of you are producing food in non-traditional or urban agriculture areas and you have very different production systems in what you are doing. Each of you are doing really important work in those areas.

Could you describe how the USDA Office of Urban Agriculture and Innovative Programs can further help you as urban farmers?

Mr. BALL. Thank you for that question. Yes, I think the one thing that would be really helpful is that language culture of messaging directed toward these urban growers who really, I have found, just need access to information. It more a misunderstanding or not understanding of the wording of a lot of these programs. I

think that what can be helpful is a need for low-amount loans, especially for these urban growers like myself, who do not need a \$20,000 tractor. They need \$5,000 to build a wash pad to wash vegetables, or they need \$3,000 to rebuild a truck to get to market.

Senators from ag, if you can really work to connect these local growers with these already-existing programs I think that is where the real need is.

Chairwoman STABENOW. Thank you. Ms. Jacobs?

Ms. JACOBS. Yes. On behalf of a controlled indoor environment and a much different growing capability that we have, and it is year-round, something that I would be interested in is—but I know the USDA is already working on, with an indoor grow system—is yield and data standards, because they differentiate incredibly from a traditional farm to an indoor farm.

Then also just the consumer education on these different growing methods, from farm-to-farm. There is different food safety and farmer safety that occurs in the indoor farm compared to a traditional farm. Just having those set standards for these different things and having all those metrics out there for everyone.

Chairwoman STABENOW. Great. Thank you very much.

Mrs. Martus, let me talk about Double Up Bucks for a moment, which we are so proud started in Michigan a number of years ago. We know that it has doubled actually since 2020, and in your testimony you talked about how important it is to educate people about healthy eating habits. It is something we all need to do.

Based on your experience at the Flint Farmers' Market, what would you say is the greatest challenge that SNAP participants face as they try to eat healthy meals, and what are some of the ways that you have helped to address these challenges?

Mrs. MARTUS. Sure. It is no secret that a lot of times locally grown food can cost more to produce than the food that people get at a big box store. Getting people to understand the value when you do not have a lot of choices and it is a necessity is not easy but it is possible, with persistence and a personal experience.

One of the big issues is relationship to where people live. Where can you spend your SNAP/EBT Double Up Food Bucks in a way that you have a nice variety? It is very easy for people to get junk food from a corner store or a gas station. The incentive that Double Up Food Bucks provided, and letting people know that through marketing funds and educational programs with MSU Extension, a huge help in terms of helping us spread that word. People automatically make better choices when they are able to come to a farmers' market and get locally grown food.

We also work with our mass transit authority, MTA. They provide rides to groceries. Sometimes if people cannot get there they can call for a ride. We are also located next to the bus terminal.

The other thing is once you get the food, what do you do with it? If people are just learning to eat better it does not do a lot of good if you just buy the food and then it just sits there. At a farmers' market and at a farm stand, people have an opportunity, if they can take their SNAP and EBT and Double Up Food Bucks there, they can find out, well, what exactly is this vegetable or fruit, and when is it ripe? When should I eat it? What are all the

things I can do with it? Can I save it? Can I can it? All of those types of things. That is a big difference maker.

In our market we have also participated—and a lot of this is through State funding with the WIC, Project FRESH, Senior Project FRESH programs, and with Michigan State Extension programs, through the School of Public Health, which is conveniently located across our parking lot in Flint, we have prescriptions for health, which started out at the Early Children’s Clinic, which was a very big part of the Flint water crisis. It is an opportunity when children go in for well kid or well-baby visits, they walk out with a prescription that looks just like what you would get for medication, except it is for fresh fruits and vegetables at the farmers’ market. That has been a very exciting experience, very fun to walk by and see kids with their prescription, talking to farmers and talking to vendors about what can I get with this today and what can I make with it?

All of those really personal experiences are so important to helping people see that this is a value. You do have a choice, a little bit of at choice at least, to make a better choice for your family.

Chairwoman STABENOW. Great. Thank you so much.

Dr. Sullivan, unfortunately we are facing this second major, highly pathogenic avian influenza outbreak in the last eight years. More than 30 million domestic birds have already been impacted. I know that Michigan’s poultry and egg industry is really on high alert. I know you are. There is a very real threat to producers as well as our economy and consumers who may see higher prices as a result.

Could you explain how Herbruck’s and other egg producers in Michigan benefit—and you talked a little bit about the animal health programs, but could you talk a little bit more about the importance of those programs, and particularly as we are looking at the threats now that we see?

Dr. SULLIVAN. Yes, so since you brought up the previous outbreak we had it is starting to become more narrow since we have seen another outbreak then in years past. The landscape of chickens and poultry production has changed quite a bit, how we raise the birds. We are allowing to be outside as well as having more backyard producers. This is allowing the animals to actually intermingle with the wildlife, which is creating those diseases.

The health programs allow us to educate producers as well as hobbyists on their birds, infectious disease and how it is spread through the wildlife. Labs such as the one here at Michigan State, that we visit quite frequently, allows us to test our flocks frequently and then lets us know when we have issues within the State that we can react quickly.

Avian influenza has a vaccine in other countries. However, we are not allowed to vaccinate the birds due to trade implications. We are kind of stuck to biosecurity, which is essentially the protective measures we do to keep diseases out of our farms and our flocks, so eliminating interactions with other poultry as well as other wildlife.

All of these measures, very important to train the people as well as using the labs in place to help us detect.

Chairwoman STABENOW. Thank you so much. I will turn to Senator Boozman.

Senator BOOZMAN. Thank you, Madam Chair, very much.

Mrs. Maxwell, you mentioned the importance of crop insurance to your operation. Can you please elaborate on the role crop insurance plays in your ability to mitigate risk and what your experience has been with the program?

Mrs. MAXWELL. Yes. Thank you for the question. You know, I did not grow up in agriculture. I married into agriculture. I was lucky. I really had some eye-popping moments when I look at the bills that are paid, the equipment that we have. When I was growing up I did see my aunt and uncle, they almost lost their farm in Southeastern Missouri in the 1980's because crop insurance was not available at the time.

When I married into a farm I thought, wow, this is a really heavy thing. This is something that needs to be managed and it is serious. That is something that Peter and I worked together, with our crop agent, just to assess our risks, make sure that we got a good balance there of what want to pay out of pocket and what we want to be covered for. It is a really, really important risk tool that we have.

I know that is something that we always take advantage of every year, and we are really grateful for it, and the fact that it is protected by our farm bill.

Senator BOOZMAN. Thank you very much.

Dr. Sullivan, I want to follow up on the Chairwoman's question regarding poultry. We are a huge poultry producer in Arkansas, of all types. Do you think we need to be doing anything different or additional to what we are doing regarding trying to address the risks that we have?

Dr. SULLIVAN. There is always room for improving education, especially within the consumers and the increase of backyard flocks. Again, going back to vaccination, we can revisit the trade implications, what is preventing us from using the bird's immune system to protect them from the disease itself, and it has been proven to work.

Going up with biosecurity only is a great preventative measure. However, we may need other pieces in place to help prevent this from the spread, since it is prevalent in so many wild animals.

Senator BOOZMAN. Well, we appreciate that. You are a major in the area so again, we look forward to hearing more about that as we go forward.

Mrs. Lyons, I applaud the great work that the Bay Mills Indian Community is doing under the farm bill's Good Neighbor Authority in partnership with the Forest Service to increase desirable timber, improve forest ecosystems, and enhance wildlife habitats.

I would like to hear your thoughts on what is working well under the Good Neighbor Authority and what is needed, if anything, to help your tribal community and others continue the important work of keeping our forests healthy for generations to come. It is great to be in this building where we see the ability to use different types of timber, and it is just something that we are working hard on in Arkansas with the ability to build entities in that fashion. I think it is a great opportunity for agriculture.

Mrs. LYONS. Absolutely. Thank you for the question, Ranking Member Boozman. Some of the things that I have seen come from the Good Neighbor Agreement that have been beneficial to not only our community, the Forest Service, but our lands in general, has been—I kind of touched on it in my opening statement there—is that relationship that we are building between the two organizations, between the Forest Service and our tribe.

Our fire crew is able to learn different aspects of manned management of forestry from the Forest Service that we typically would not have access to. Furthering our capacity internally with the tribe and allowing them to then take this knowledge and impart it into the other work that they do, typically through the Bureau of Indian Affairs (BIA) Reserved Treaty Rights Lands (RTRL) program. That is where I have really seen a great benefit come from this.

In addition, I mentioned that we have gotten some really progressive agreements together as a team because of this relationship that we have formed. I think that is one of our greatest benefits. Then a great direct benefit outside of that is our forests. They are much more plentiful with the preferred species now. Our teams work to remove unwanted vegetation, invasive species, to help to reduce the fuel, to have fuels reduction, so that there is less likelihood of wildfires.

You know, we live in the rural Upper Peninsula. Our big draw for people to come up there, where we have some of the harshest winters in the Nation even, our big draw is tourism, recreational tourism. That tourism takes place in our forests, in our waterways. This work is really helping to take care of those resources and help support our economy, quite frankly.

It has been an amazing agreement. In regard to what more could we use, I mean, I think any one of us can speak more funding. You know, we need more for our tribal crew to be able to provide these services. There are a lot of unallowable costs with the Good Neighbor Authority that the tribe is having to absorb, and quite frankly we are not a rich tribe. We do not have the resources, and this may be a problem going for the long term. More funding and more flexibility in what is allowable with that funding.

Senator BOOZMAN. Very good. Thank you, Madam Chair.

Chairwoman STABENOW. Thank you very much.

Mrs. Maxwell, I have always said the farm bill is a jobs bill. I think we know it is a jobs bill, and many farm programs, including the sugar program, help support farmers and generate jobs along the supply chain for food manufacturers and users. Could you talk a little bit more about the USDA's sugar program and the economic impact it has in terms of supporting family farms like yours, as well as jobs beyond the farm?

Mrs. MAXWELL. Thank you for the question. I would love to.

Michigan Sugar Company employs regularly about 1,000 full-time employees, 800 of which are union, so that is a great relationship, and for the mid-Michigan community those are really critical jobs. In addition to that there is another what we would hope to have about 1,200 seasonal employees, which I think it is getting harder and harder to find these days, which is a challenge. There are four working factors in different communities, so that is a real-

ly important thing for those communities to maintain and keep those jobs.

In addition to that it all the grower-owners that are involved as well. Sugar really kind of runs deep in the family, in the Maxwell family, and it is something that we are proud to be sugar producers. There is about three to five times the manpower that goes into harvesting a sugar beet crop than a regular commodity, so we need that crop to continue to pay for us, to be able to do that, which is why I think we are kind of asking for a little bit of a look at that number.

You know, in general, the economic impact directly is \$600 million a year, and that stays in our community, which I think is really notable.

Chairwoman STABENOW. Great. Thank you very much.

Mrs. Lyons, I am so glad to have you talking about your partnership with the Forest Service and the Good Neighbor Authority. I am so glad we could get that into the 2014 Farm Bill and then to be able to expand it in 2018. I know that Senator Boozman has asked you about this already but I wonder if you might just expand a bit on how this supports your tribe's environmental management goals.

Mrs. LYONS. I had touched on a bit of this in the previous answer. The educational component, the GNA supports that. It builds our capacity and it takes care of our local forests. Like I said before, we depend upon that area for people to come and want to enjoy and explore those resources. If we have wildfires and if we are not taking care of those areas we are just not going to have that tourism coming into our area. Our economy depends upon that, not just the tribe. You know, our entire regional economy depends on that.

The Good Neighbor Agreement has been very beneficial. Outside of that, you know, it keeps 12 of our crew working into what is typically their layoff season, so that they are able to earn a paycheck and support their families. It is has been an amazing agreement.

Chairwoman STABENOW. Great. Thank you. For my final question, Ms. Woodke, private companies like Star of the West are really in a unique position to connect farmers and create new market opportunities—you have talked about that—that can reward them for adopting conservation practices. Could you talk a little bit more about how private companies like yours can better support farmers who are looking to learn more or adopt climate-smart production and practices?

Ms. WOODKE. Yes. Thank you for the question. Private companies like Star of the West need the ability to hire more people. We need boots on the ground in the form of maybe a climate-smart agronomist, to focus one-on-one with the growers. I mentioned that we have got a wonderful array of tools in Trugerra and AgriEdge, but those tools are not useful without people to input that data, without people to explain that data, without people to work directly, one-on-one with farmers. Sustainability is like a toolbox and there are hundreds of things that a person could do on a farm, and farms are each unique and individual. People to work one-on-one, like we have all talked about here, that personal aspect and the re-

lationship to know those items, to share those items, and then be able to incorporate the people and the technology altogether is ways that private companies can help.

Chairwoman STABENOW. Thank you. I appreciate.

I will turn to Senator Boozman for his questions.

Senator BOOZMAN. Thank you, Madam Chair.

Mrs. Martus, in your experience with the nutrition programs you mentioned the early adoption of EBT for digital transactions at farmers' markets. What recommendations do you have for organizations who may have limited funds or access to reliable connectivity in the adoption of the technology?

Mrs. MARTUS. Well, that is a great question, and I think part of that is for people a lot more technologies. I do not need an agent to figure that out but I think I would say it is really important, you have heard education and technology several times in all the different folks have been talking today. I think technology, in relation to farmers' markets and areas where there is a lot of SNAP redemption and Double Up Food Bucks, we need to continue to keep up.

I think that indicates further funding, and it is both ways. It is to help people have the funds on their cards to be able to use but it is also to help our farmers and our producers to be up to speed, so that it is not cumbersome to make those transactions. I mean, we are coming a long way. There are apps right now that are for Double Up Food Bucks. That is what we use. There are also SNAP/EBT apps that are used in different parts of the country, but it is not across the board.

Right now if you are a farmer at a farmers' market, you have got a couple of people in line, you have got to do an EBT transaction one particular device and then you have to do a Double Up Food Bucks transaction on another device. Then you might have a credit or debit sale, and maybe somebody is paying cash. You are just trying to hurry, and you want to give good customer service.

I think empowering our farmers and our producers through increased funding for technology so that everybody is coming to the table with the same tools I think would be huge, not just for the shoppers but, in particular, for our farmers and our vendors.

Senator BOOZMAN. Very good. Thank you.

Mr. Bates, there is ample conversation in Washington about the National Organic Standards Board and streamlining the regulatory process at the National Organic Program. What is your level of confidence that the National Organic Standards Board adequately represents your interests and humanitarian interests of the industry? Do you have further thoughts about whether current organic standards best represent the industry and consumer expectations and how can we help with that?

Mr. BATES. That is a good and loaded question about organic agriculture. I think everyone in here probably has an opinion. I will say for me it has felt like just in the last couple of terms on the NOSB I have felt like I see more farmers like me on the board. There are also representatives that are representing interests that are completely counter to what I think is the integrity of the organic standards, but at least my voice is also represented. I feel good about that.

I feel like the implementation of becoming certified organic is oftentimes depicted as far more complicated than it is. That is my first-hand experience. We are a multiple-crop farm. By all accounts we should have a very complicated organic application.

My sense is that the challenge with growing organically is actually the growing, not so much the paperwork. I feel like the paperwork is overstated.

Senator BOOZMAN. Where does that come from? Why is that the case?

Mr. BATES. Well—

Senator BOOZMAN. As far as the perception or whatever with the paperwork?

Mr. BATES. I think that there has been a lot of efforts by many different parties in consumer education to try to educate consumers why organic costs more. I think that is so often the front of the conversation. I think unfortunately one of the narratives that has led is that bureaucracy and paperwork is expensive, when I think the main reason organic costs more is the input costs and the labor costs, which is what the gentleman earlier mentioned.

I think that would probably be the No. 1 concern. I do not have a tremendous concern with the paperwork required. Obviously, no one wants to deal with paperwork. We are certified organic. We are B-Corp certified, the first one in the State of Michigan. That was a far more rigorous process to become a certified organic.

We just recently did an add-on organic certification called Real Organic Project Verified. This is a new, third-party certification that is trying to strengthen the integrity that was in the original organic rule. I had hesitancy about doing that because it might dilute the organic seal that we value so much, but the more time has gone on the more I feel like consumers understand that maybe not all organic imports are equal, maybe not all organic products are equal. It felt like a good reason for us to build that trust.

I would be opposed to anything that would give the illusion that becoming certified organic is too easy, too fast. I think it does not need to be expensive, but I do not think we should be focused on lowering the barriers to entry from people playing by the rules. I think everybody should be growing the right way.

Senator BOOZMAN. Very good. I want to thank you, Madam Chair, for holding the hearing here. This was great. We had such a great variety of people represented that did a tremendous job. We got your personal testimony and also your written testimony, which is very, very helpful.

The other thing is I am here, but I think probably even more important is I have got a bunch of staff here. Why don't you all stand up.

Chairwoman STABENOW. Let's have all of our staff stand because they worked as partners on this.

Senator BOOZMAN. I think you know—maybe some of you do not know—these are the people who actually do the work. They have been busy listening and taking notes. It is really hard to delve into great detail, but a lot of things that you all have mentioned really do—some of them just come up over and over again, which is really good, and then others that we have not heard as much about are

just things that—I made a bunch of notes—things that we need to look into.

Thank you all for being here, and again, thank you, Madam Chair, for just a great hearing to get us started.

Chairwoman STABENOW. Well, thank you so much, and thank you for coming to Michigan, coming to East Lansing, Michigan State, and for everybody being here.

I would just say this, that in the midst of still coming out of a pandemic, a war, we are seeing climate crisis, all of it, partisan issues that we hear about all the time, we are deeply committed to working together to solve problems in these unprecedented times, and we will. We will move forward in a bipartisan way to be able to get things done together.

I really love my role as Chairwoman of the Committee. I have been so honored to have the opportunity to do this. I had an opportunity to write two farm bills with my friend and colleague, Senator Pat Roberts, who came to Michigan State as well. He used to call the table in our hearing—we actually sit around a table, traditionally, in the hearing room, and he called it “America’s kitchen table.”

I appreciate Senator Boozman coming to our table today, and all of you coming to the table, and that the Razorback from Arkansas is willing to be an honorary Spartan today. I will say one more time, Go Green.

All right. On that note, the record will remain open for five business days for members to submit additional questions for the record. This hearing is adjourned.

[Whereupon, at 12:58 p.m., the Committee was adjourned.]

A P P E N D I X

APRIL 29, 2022



**Statement of Kelly F. Millenbah, Ph.D., Interim Dean
Michigan State University College of Agriculture and Natural Resources**

Before the

United States Senate Committee on Agriculture, Nutrition and Forestry

April 29th, 2022

Chairwoman Stabenow, Ranking Member Boozman, invited guests and witnesses here with us today, on behalf of Michigan State University (MSU), I wish to thank you for the opportunity to host the first 2023 Farm Bill hearing and to highlight its importance to growing jobs and economic opportunities in food production and food security, as well as addressing solutions to climate change and environmental conservation in Michigan and beyond.

As Interim Dean in the College of Agriculture and Natural Resources, I oversee the college that also includes MSU Extension and AgBioResearch. Between these units, we have a presence of outreach and research in all of Michigan's 83 counties, partner on positions within six colleges at MSU, and are engaged in studies impacting regions worldwide.

Founded in 1855 on the land-grant mission of teaching, outreach, and research, MSU is the first agricultural college of its kind in the nation. It has long served as a prototype for land-grant institutions under the Morrill Act, enacted by President Abraham Lincoln. In 1888, Michigan State University also became one of the first U.S. institutions to create a network of agricultural experiment stations where research trials and field studies are conducted on behalf of farmers. In 1914, Congress passed the Smith-Lever Act, which created the Cooperative Extension System and directed the nation's land-grant universities to oversee the outreach work.

I am honored and pleased to welcome you today to the new Michigan State University STEM Teaching and Learning Facility that combines historical and leading-edge elements in a transformative space for Spartan students and educators. What a fitting place to kick off the Farm Bill hearings. Our new building is the 73-year-old Shaw Lane Power Plant. Although decommissioned in 1975, the power plant has found a fitting new home. The building that once powered the campus is now empowering Spartans to innovate ways to learn and share knowledge about science, technology, engineering and mathematics, or STEM, and that includes the College of Agriculture and Natural Resources.

The STEM Teaching and Learning Facility, much like Michigan State University in general, is more than a place where students attend classes. It's a place where tradition meets innovation and where Spartans

learn they have the prowess to better the world. I assure you that the relevance of teaching, research and outreach has never waned. Despite the pandemic, it has been our charge to continue advancements pertaining to food, health and the environment and we take this charge very seriously.

There is perhaps no greater time to be involved in research pertaining to sustainable and nutritious food production and improving health and nutrition, especially considering weaknesses in the supply chain revealed through the pandemic and recently emerging pressures on the food supply and input prices driven by the ongoing conflict in Ukraine. We need solutions that will keep our food supply healthy, safe, and secure, while protecting our natural resources. Since the need is constant, the food and agricultural industries, especially in Michigan, the U.S.'s most diverse agriculture state with a reliable source of water, provide great opportunities for economic prosperity, growth, and increased employment.

Solutions to crisis issues such as clean water and nutritious food mean not only providing and growing food and efficient use of water resources but understanding human behavior and the challenges people face across the country and worldwide. More than growing more nutritious food and providing clean water, we need to find ways to better distribute and understand the importance of both. We also need to better communicate the economics, so that more people understand the vitality of the food and agriculture industry.

The Michigan State University College of Agriculture and Natural Resources, AgBioResearch and MSU Extension work collaboratively with commodity organizations to address the issues facing growers and producers throughout the state – solutions on everything from disease management to food processing.

Agricultural resilience is at play here and every day.

We've recently created several centers of excellence around food production and natural resources conservation directly tied to addressing many global challenges of the future.

First, the Detroit Partnership for Food, Learning and Innovation (DPFLI).

Founded in 2017, DPFLI is Michigan State University's first urban agriculture center. Housed within MSU Extension, DPFLI is dedicated to research and programming that improves the quality of life for Detroit residents and farmers. The facility also serves as a community space for recreation, respite, and connecting with nature.

The site is just under 3.5 acres on the former grounds of Thomas C. Houghten Elementary School. T.C. Houghten is the grandfather and great grandfather of Michigan State University alumni, and members of his family have made financial contributions and been involved in the site's development. Michigan State University selected the location in partnership with the City of Detroit and community members based on accessibility and presence of urban agriculture in the surrounding area.

Second, the Michigan State University Center for PFAS Research.

Michigan State University's Dr. Cheryl Murphy is leading studies on PFAS contamination that has made headlines around the country and in Michigan, resulting in mounting concerns about the effects these chemicals have on public health. In response, Michigan State University has invested in a new Center for

PFAS Research and has developed several multi-institutional, nationwide partnerships to address the problem.

Researchers are working to quantify the exposure risk to humans and the environment, develop possible remediation strategies, and explore PFAS alternatives for industries that have relied on them. This is particularly relevant considering the increased prevalence and emerging concerns regarding PFAS contamination on agricultural land in Michigan and throughout the country and a lack of viable remediation strategies. For example, Dr. Hui Li, a professor in our Department of Plant, Soil and Microbial Sciences, received a \$750,000 USDA NIFA grant to study uptake of PFAS by agricultural crops, in addition to potential remediation strategies to prevent it.

Additionally, Dr. Murphy recently received a \$1.9 million grant from the Department of Defense's Strategic Environmental Research and Development Program. She leads an effort to develop a testing framework for PFAS toxicity, addressing how animals may be affected by these chemicals in lethal and sublethal ways.

Third the Michigan State University Center for Regenerative Agriculture.

Michigan State University's animal science researcher Dr. Jason Rowntree is directing new studies investigating how future climate and weather variability will challenge the resilience of today's agriculture. Widespread adoption of regenerative agriculture across Michigan's 10 million acres of farmland will help mitigate these mounting challenges while improving soil health and reducing the carbon footprint of agricultural production.

Michigan State University's new Center for Regenerative Agriculture is aimed at improving the health and resilience of our land, plants, and animals. Center priorities include:

- integrating state-of-the-art field and remote sensing technologies to accurately measure ecological functions, including soil carbon sequestration, and
- examining the linkages between agricultural management, human health, and ecosystem functions and barriers to adoption of regenerative practices.

Ongoing research at our centers is critical to meet the future challenges facing agriculture, food, and natural resources. However, like many other research institutions, we are facing mounting challenges to deliver timely and relevant teaching and research due to aging infrastructure.

First our Plant Science Greenhouse Complex.

Producing more food to meet the demands of an increasing worldwide population is no small feat. Much of that begins long before the field. Frequently it starts in greenhouses and growth chambers — the controlled environments where trial and error drives the future of food production by providing vital information on disease and pest control, temperature variability, soil balance and nutritional content among others.

Plant agriculture is essential to the Michigan economy. Field crops have an economic impact of more than \$5.12 billion in Michigan annually, in addition to \$1.2 billion from the nursery and landscape industries. Specialty crops play an important role as well, including the apple industry that ranks third in U.S. production and has an estimated annual economic impact of \$700-900 million.

More than 60 faculty and 400 students use the Michigan State University greenhouse facilities, but two-thirds of the greenhouses were built between 1955 and 1978 and lack modern, energy-efficient design.

To meet the growing needs of our plant agriculture industries, we must modernize and expand the greenhouse facility, including the addition of high containment, temperature-controlled spaces needed for research on plant breeding and emerging pests and pathogens.

Second, our Dairy Research and Teaching Facility.

The dairy industry is a critical component of Michigan's agricultural economy, ranking #1 in farm receipts among the state's agricultural commodities. The industry supports more than 111,000 jobs in Michigan and accounts for nearly 5% of the state's GDP.

While Michigan State University continues to play a pivotal role in training students and conducting research on behalf of the industry, the Dairy Cattle Teaching and Research Center does not meet the growing needs. Our ability to deliver on Michigan State University's teaching, research, and outreach missions to the Michigan dairy industry, ranked 6th in the U.S. with 11.6 billion pounds of milk produced in 2020, is severely hampered by the age of the facilities.

A new facility will help maintain our leadership in dairy science throughout Michigan and beyond by allowing us to:

- identify feasible strategies to promote economic and environmental sustainability,
- ensure the highest level of animal care and production with robust data-driven science,
- enhance much-needed studies on nutrition, genetics, and animal well-being,
- create a pipeline of labor by introducing Michigan State University students to modern, relevant dairy operations, and
- train dairy professionals for the College of Veterinary Medicine curriculum accreditation.

I would also like to highlight some other important work happening at Michigan State University in addition to what has been shared above.

First, advancing pollination and pest control.

Michigan State University entomologist Dr. Rufus Isaacs is leading a multi-state, multi-institutional project that impacts crops from apples to pickling cucumbers. As honeybee populations decline, Dr. Isaacs is looking at alternative pollinators to help maintain the vitality of U.S. crops that are pollinated every spring and valued at more than \$14 billion annually. Major funding comes from the USDA, Michigan State University Project GREEN and industry organizations.

Dr. Isaacs and several colleagues are also addressing ways to control the spotted wing drosophila (SWD), an invasive species that seriously threatens fruit crops such as apples and cherries, with a bio-control agent. Unlike most pests, the SWD mandible is so strong it can burrow its way into unripe fruit, leaving irreparable damage to the fruit and unavoidable economic loss to the grower. The Asian insect is believed to have come to the U.S. via food crates and has become one of our region's greatest fruit production threats.

Second, plant disease continues to be a steadfast priority.

Corn tar spot, a fungal disease exacerbated by humid and wet conditions, had been limited to Central and South America prior to 2015. Since then, however, the pathogen has spread rapidly across the U.S., confirmed in 10 states and Ontario, Canada, with the potential to expand its reach in the coming years.

Michigan State University's Dr. Addie Thompson is studying potential genetic resistance to tar spot, which presents as small, black lesions on upper and lower leaf surfaces that work quickly to degrade plant tissue. According to previous studies, the disease can go from a few specks on one plant to encompassing an entire field in less than three weeks.

Addressing animal disease including those for dairy cows are ever important.

Dr. Angel Abuelo, assistant professor in the Michigan State University College of Veterinary Medicine (CVM), is working to develop diagnostic tools that predict major illnesses during dairy cows' transition from late gestation to early lactation.

Roughly 75% of diseases in adult dairy cows occur in the first month after calving, with two of the most devastating being mastitis, a bacterial infection of the udder, and metritis, a bacterial infection of the uterus. These ailments can cause a deterioration in reproductive performance, lower milk production, lameness and in severe cases result in death. Mastitis alone costs U.S. dairy producers an estimated \$2 billion annually.

Research into precision agriculture remains a focus.

Newly published Michigan State University research shows that incorporating in-season water deficit information into remote sensing-based crop models drastically improves corn yield predictions. This project is led by Dr. Bruno Basso, a Michigan State University Foundation Professor in the departments of Earth and Environmental Sciences, and Plant, Soil and Microbial Sciences, and the Kellogg Biological Station.

Yield predictions are of great importance, from national and international food supply chains to the individual grower. In addition to ensuring food security, highly consequential financial decisions are made based on this information. Growers must decide how much fertilizer and other inputs to apply to their fields, for example, an area in which costs have soared for numerous reasons, including climate change and global conflict.

We must maintain the momentum.

Michigan's food and agriculture industry supports nearly 1 million jobs in the state. Successful partnerships between the federal government, industry, the Michigan Department of Agriculture and Rural Development, and Michigan State University can grow the sector.

We know that to meet the growing needs of Michigan's food and agriculture system, a system with a combined economic impact of more than \$104 billion, we will need to do more.

Working with state government and industry partners we recently created a 2-year food processing, technology, and safety certificate program. A full 47 percent of the agriculture jobs in Michigan involve food processing. Complementary to this effort, and with the support of the Michigan Department of Agriculture and Rural Development, we built a mobile food processing laboratory to be used at several

of our community college partner locations to deliver hands-on learning experience to students throughout the state. This work allows us to prepare students, both on campus and at partner community colleges, for jobs with any of the hundreds of food processors who call Michigan home.

While Michigan's agriculture production has expanded, facilities, workforce development and nimble research dollars have not kept pace. Targeted investments in workforce development, facilities, and research can enhance Michigan's agricultural success and retain talent.

Like other land grant universities, we look forward to continuing to generate and disseminate new knowledge and educate young people to work in the food and agriculture industry. As the world population is expected to reach 9 billion within the next few decades, our work is more important than ever.

I would be remiss if we did not commend Congress for including in the 2018 Farm Bill the Timber Innovation Act, that supports "research and development, education, and technical assistance for the purpose of facilitating the use of innovative wood products in wood building construction," specifically mass timber. Michigan State University, through the College of Agriculture and Natural Resources' MassTimber@MSU program, leverages research, education, outreach, engagement, and policy strategy to advance mass timber construction and manufacturing in Michigan and the surrounding region. An increasing number of Michigan building owners and project teams are looking to mass timber to achieve both sustainability and design objectives; this trend is present in regions across the United States. Those wishing to build with mass timber face two key challenges. First, the cost of mass timber materials is typically higher than other building materials. Second, demand for mass timber materials in North America is quickly outstripping the pace of their manufacture on the continent. The 2023 Farm Bill offers a powerful opportunity to renew the Timber Innovations Act to continue its original purpose and expand the act to address the above-referenced barriers by providing funding to support the establishment of new, domestic mass timber manufacturing and fabrication facilities, and for sunseting incentives to offset materials costs for early adopters of domestically produced mass timber materials in buildings.

While we, at Michigan State University, have been a recognized leader in agriculture and natural resources teaching, research and outreach for many decades, the system faces major challenges. The declining buying power of appropriations makes it difficult to maintain the long-term programs essential to addressing many agricultural and natural resource issues. The cost of research is rising, and funding limitations not only slow progress of scientists in traditional areas of agricultural research, but it also impedes our ability to bring a broader array of scientists to address agricultural problems. The current levels of funding in competitive grants programs have resulted in low funding rates, leaving meritorious projects undone and discouraging young scientists from entering the field. In short, it is creating a system that is not welcoming to the best and brightest young scientists. If this continues, it will erode our ability to respond to the challenge of feeding the world while protecting our environment.

We look forward to continuing our tradition as a strong land-grant university – educating future generations to meet the growing demands and discovering and sharing advancements that will benefit our state, the nation, and the world. Agriculture is America's oldest career, and today it is arguably one of the most complex, technology-driven, knowledge-based industries in the world. We've come a long way, but there continues to be so much more to do.

Thank you for this opportunity and your continued support. A few announcements follow that we are extremely pleased to have been awarded:

NIFA grant announcements (July 2020 to present)

1. New USDA grant supports MSU researcher studying prevention of dairy cow diseases after calving
 - <https://www.canr.msu.edu/news/new-usda-grant-supports-msu-researcher-studying-prevention-of-dairy-cow-diseases-after-calving>
2. MSU researcher receives \$750K grant to examine effects of wildfire burn severity on soil health
 - <https://www.canr.msu.edu/news/msu-receives-750k-grant-to-examine-effects-of-wildfire-burn-severity-on-soil-health>
3. MSU researchers part of team investigating winter stresses of turfgrass in northern climates
 - <https://www.canr.msu.edu/news/msu-researchers-part-of-team-investigating-winter-stresses-of-turfgrass-in-northern-climates>
4. MSU research team receives \$750K USDA grant to explore ways to mitigate crop uptake of PFAS
 - <https://www.canr.msu.edu/news/msu-research-team-receives-750-000-usda-grant-to-explore-ways-to-mitigate-crop-uptake-of-pfas>
5. MSU researcher part of new \$10M project to study, support diverse perennial forage systems across the US
 - <https://www.canr.msu.edu/news/msu-researcher-part-of-new-10m-project-to-study-support-diverse-perennial-forage-systems-across-the-us>
6. MSU-led international research team receives \$1 million grant to build multi-disciplinary precision livestock farming network
 - <https://www.canr.msu.edu/news/msu-led-international-research-team-receives-1-million-grant-to-build-multi-disciplinary-precision-livestock-farming-network>
7. MSU to study precision livestock farming adoption trends in U.S. swine industry
 - <https://www.canr.msu.edu/news/msu-to-study-precision-livestock-farming-adoption-trends-in-u-s-swine-industry>
8. MSU research team receives USDA grant to evaluate effectiveness, cost of new blueberry pest management strategies
 - <https://www.canr.msu.edu/news/msu-research-team-receives-usda-grant-to-evaluate-new-blueberry-pest-management-strategies>
9. MSU receives \$2 million USDA grant to improve blueberry pollination
 - <https://www.canr.msu.edu/news/msu-receives-2-million-usda-grant-to-improve-blueberry-pollination>
10. MSU entomologist leads training for Latino/a farmers, receives new \$600K USDA grant
 - <https://www.canr.msu.edu/news/msu-entomologist-leads-training-for-latino-a-farmers-receives-new-600k-usda-grant>
11. MSU-led national cucurbit project reupped for \$7.1 million
 - <https://www.canr.msu.edu/news/msu-national-cucurbit-project-reupped-for-7-1-million>

Published research funded in part by NIFA (July 2020 to present)

1. New MSU research shows how biofuel crops can help mitigate climate change when grown on land of otherwise little agricultural value
 - <https://www.canr.msu.edu/news/new-msu-research-shows-how-biofuel-crops-can-help-mitigate-climate-change-when-grown-on-land-of-otherwise-little-agricultural-value>
2. New MSU research showcases innovative method to develop more accurate corn yield predictions
 - <https://www.canr.msu.edu/news/new-msu-research-showcases-innovative-method-to-develop-more-accurate-corn-yield-predictions>
3. MSU greenhouses: Infrastructure that leads to innovation
 - <https://www.canr.msu.edu/news/msu-greenhouses-infrastructure-that-leads-to-innovation>
4. South Campus Animal Farms provides facilities to support MSU teaching, research, outreach missions
 - <https://www.canr.msu.edu/news/south-campus-animal-farms-provides-facilities-to-support-msu-teaching-research-outreach-missions>

Senate Ag Committee Farm Bill Testimony

April 29, 2022

My name is Juliette King McAvoy and I am the Vice President of Sales and Marketing for King Orchards, a family owned and operated farm and business in Antrim County, Northwest Michigan. I am on the Michigan Cherry Committee and a Commissioner on the Michigan Commission of Agriculture and Rural Development. Along with my leadership roles within agriculture, I am on the executive board of the Northern Lakes Economic Alliance a regional economic development organization, and Co-Chair of the Great Lakes Business Network, a coalition of midwestern business leaders advocating for environmental protections and the transition to clean energy.

As diversified, specialty crop farmers in a vertically integrated business, we interact with many aspects of the Farm Bill. Thank you to Senator Stabenow for creating the Specialty Crop title in the 2008 Farm Bill and for always being a champion to specialty agriculture. We farm over 250 acres of primarily fruit orchards and have two retail stores where customers drive from all over the Midwest region to pick strawberries, cherries, apricots, peaches, apples and more. King Orchards also sells fruit into wholesale and processing channels, and has a growing value-added business, marketing fruit products to customers and manufacturers around the world. While we feel proud of the work we have done and sweat we have put in, it is hard not to feel discouraged by the many obstacles we face. Rising costs, shrinking margins, volatile markets and a changing climate are making it harder and harder for small businesses and family farms like mine to survive.

Specialty crop insurance has been a safety net that I can't imagine operating without. King Orchards purchases policies for sweet cherries, tart cherries, apples and the new whole farm revenue policy. Eight out of the past 10 years we have had a claim from a loss large enough to warrant a payout. The crop insurance plans do not make us whole (typical plans insure 60% of a crop), but they are so important to ensure that we can keep the orchards maintained and make it to another season. The Whole Farm insurance policy is a newer program that Senator Stabenow helped establish in the 2014 Farm Bill, and King Orchards has purchased only the last three years. This particular policy is beneficial for very diversified operations like King Orchards, where we have many crops that do not have their own insurance policies, like apricots, asparagus, strawberries, etc. I encourage the Committee to consider ways to make this risk management tool easier for diversified operations like ours to use. Our diversification reduces the risk of a truly crippling year, however it is still possible to have failure across the many crops we grow. In 2012, spring frosts damaged virtually all of our tree fruit crops. The specialty crop insurance was not available to us at the time and we only had access to emergency loans at low interest rates. A decade later we have still not recovered from the financial impacts of 2012.

King Orchards has always had a very close relationship with MSU Extension and are so thankful that we have those resources supporting our specialty crop growers in our state. Research for pest management, breeding, and horticultural practices are only going to be more important as we see increasing effects of climate change. The future of specialty fruit crops in our region and beyond depend on our ability to adapt to the changing conditions, whether that is through breeding programs to select cultivars that are more drought, frost, and disease resistant, or with more effective and safe chemistries to combat increased pressure of pests, bacteria and fungus.

While we do pride ourselves as a tourist destination, it is also very important to us that we are a source of fresh, healthy food for our local community. That is why we have been proud to accept EBT payments and participate in the Double Up Food Bucks program. This not only benefits us by bringing new customers to our farms but is a great benefit to the community by increasing access to local, healthy food and exposing more people to agriculture, hopefully increasing their knowledge and appreciation of where their food comes from. The Double Up Food Bucks program is particularly beneficial to small, local producers as it encourages customers to visit farmers markets and purchase unprocessed, fresh foods.

Another very important way to increase access to healthy foods is by getting more US grown fruits and vegetables into US schools and military bases. The Buy American initiative must be an essential part of the program to ensure that our own farmers are benefiting. By stimulating the demand of American grown foods on school menus, it bolsters the entire locally grown and value-added food chain. The USDA Bonus Procurement program has greatly helped specialty crop industries by removing surplus product from the market and putting it on school menus and into the hands of needy families. This has been particularly important for the tart cherry industry as we have faced market imbalances in recent years.

Imported tart cherry products have flooded the market at prices significantly less than our cost of production. The result has been a simultaneous decrease in price and demand of American grown tart cherries. Our collaborative industry marketing efforts have driven strong growth in the use of tart cherries, only to have the increased demand captured by imported product. Imports now represent more than 50% of the tart cherry market in the United States. I believe that consumers want to purchase domestically grown food and support American farmers, but lack of transparency on food labels make it nearly impossible for consumers to make informed decisions at the point of sale. The use of USDA Organic certification is another point of confusion for consumers and a way for imports to capture market share from American farmers. Consumers see the USDA Organic certification and assume that it is grown in the USA. The tart cherry juice market has been critically impacted by this practice because the target consumer market for cherry juice is aligns with the typical organic consumer.

There are some market access programs in the Farm Bill that have greatly helped King Orchards and many specialty crop industries. Namely, the Specialty Crop Block Grant has been an important resource for the Michigan Cherry industry. King Orchards has utilized Food Export Midwest's Branded Program (a USDA Market Access Program) to cultivate a market for our Montmorency Cherry product in Taiwan, Hong Kong and China. Through that program, we have had the ability to create and execute marketing plans to educate consumers about the benefits of tart cherries and our brand and also attend trade shows and buyers missions in target markets. Without the buyers missions organized by Food Export, King Orchards would have never had the experience or knowledge to navigate visiting a foreign market and setting up sales meetings.

King Orchards was also awarded a Value-Added Producer Grant, which is part of the Local Agriculture Market Program administered through the USDA. This 50% matching grant will be used for a comprehensive marketing plan for the Montmorency tart cherry concentrate. The Value-Added Producer Grant is unique because there are not many funding opportunities for working capital. Agriculture is an industry plagued by small margins and variable returns. There are so many benefits to vertically integrating and adding value to what you produce, from job growth in rural areas, innovation,

and retaining earnings on the farm and local community. Funding opportunities like the Value-Added Producer Grant stimulate small businesses and a diversified food system.

I would be remiss if I did not mention that King Orchards interaction and benefit from Farm Bill programs go back to our very origins in 1980. My father, John King, purchased the first 80 acre farm with a 100% loan for beginning farmers through the USDA. As a young bachelor, with no family history in agriculture and no seed money or equity to speak of, this Farm Bill program was the only way that he could realize his dream of being a cherry farmer. In today's world, barriers to entry are larger and risks greater, making USDA loans essential for stimulating new participants into our industry, bringing with them, new ideas and energy. An increase to the cap of USDA farm ownership loans makes sense to keep up with the rapid increase in land and equipment costs. There is a large population of aging farmers that are looking to see their life's work passed on to enthusiastic, hard working, young farmers. But even a small sized specialty crop farm in our area easily outpaces the \$600,000 cap for direct farm ownership. The consequence is that farms are far too often being sold to other large farms, corporations, or developers, driving the trend of consolidation and corporation run agriculture.

My biggest concern for the future of my family's business and specialty crop agriculture is the rapidly changing climate. I have often used the term "canary in the mine" when describing the circumstances on our farm with respect to climate change. Perennial specialty fruit crops are especially vulnerable to the long term effects of climate change because of their physiological characteristics. When we plant an orchard, we plan for the trees to live for 30 or more years in order to get the return on investment. Many varieties will not even produce a single crop for seven years. In order to set a crop of fruit, a fruit bud needs to be pollinated in a very short window and then survive to maturity. That is an inherently fragile and precise process. The increasingly volatile spring weather patterns are making frost damage and crop failures occur at an alarmingly increased frequency. At King Orchards, we had two back to back crop failures in Montmorency Tart Cherries, our largest crop. That is the fourth crop failure in 19 years. There are not many business plans that can support that kind of volatility. The Farm Bill has the opportunity to help mitigate the consequences of the changing climate in several different ways: crop insurance, research, environmental protections and clean energy infrastructure.

We need the Farm Bill to not only protect farm land, but also the surrounding land, water and ecosystems through increased environmental protections and incentivizing carbon sequestration. While the agriculture community has mixed views about this, I believe that voluntary programs are not going far enough to protect our invaluable resources. The agricultural industry is in a unique position of becoming a solution to the problem by implementing and improving carbon sequestration methods and this can be a great opportunity for farmers.

The need for clean energy infrastructure is throughout the entire economy, along with agriculture. King Orchards installed a 52kw solar field in 2016. In it's 6 year, life we have created renewable energy equivalent to nearly 1,000 barrels of oil. We have immediate need and desire for more solar arrays, but are constrained by access to capital. As you surely know, agriculture is a capital intensive endeavor, with most operations carrying major debt loads. At King Orchards, we have had more immediate needs with our capital and have not had the ability to invest in the clean energy infrastructure that we believe in. Without a rapid transition to clean energy, the very existence of specialty crops is in jeopardy.

Thank you for your time and consideration as I've described the many ways that my family farming business interacts with the Farm Bill. The thoughtful deliberation and work that goes into this is very appreciated.



**Testimony of Jacob Isley
On behalf of Michigan Soybean Association**

Before the U.S. Senate Committee on Agriculture, Nutrition, & Forestry

"Growing Jobs and Economic Opportunity: 2023 Farm Bill Perspectives from Michigan"

April 29, 2022

Good morning, Chairwoman Stabenow, Ranking Member Boozman, and distinguished members of the Senate Committee on Agriculture, Nutrition, and Forestry. It is a privilege to join you and offer testimony on farm bill perspectives from Michigan.

I am a soybean farmer from Palmyra, Michigan, and am here today representing the Michigan Soybean Association. The Michigan Soybean Association represents more than 12,000 Michigan soybean growers and is a state affiliate of the American Soybean Association (ASA), which represents soybean farmers in Washington, D.C., on domestic and international policy issues. Farmers produce soybeans in nearly every state represented by members of this committee.

Michigan soybean farmers are among the nation's most productive, having sustainably grown more than 109 million bushels on 2.15 million acres in 2021. This allows Michigan's soybean farmers to help provide countless products needed and enjoyed by consumers, including healthy edible oils and other food ingredients, protein-rich livestock feed, and clean-burning biodiesel, among others. A 2019 study conducted by the United Soybean Board and National Oilseed Processors Association estimated Michigan soybean producers generated nearly \$232 million in wages and nearly \$2.2 billion in revenue for the state.

These benefits would not be possible without the efforts of the United Soybean Board and the Michigan Soybean Committee, the partner organization of the Michigan Soybean Association. These agricultural research and promotion programs, also called "checkoffs," are funded and managed directly by soybean farmers, and the funds raised go toward research, promotion, and education initiatives, all aimed at improving yield, sustainability, and driving demand for U.S. soy products. This brings a return on investment—over \$12 for every farmer dollar invested in the checkoff—to farmers like me, who are then better able to support our families, employees, and rural communities.

Farm Safety Net

Soybean farmers rely on domestic and global markets, as well as a steady supply of production inputs and a predictable regulatory environment, for success. When those markets fail or when significant economic disruptions occur, we rely on policymakers to ensure that a supportive farm safety net is in place.

Soybeans have long been U.S. agriculture's top export crop. Foreign markets were destinations for more than 50% of U.S. soy production in the last marketing year, as is historically consistent in recent years. China is the largest importer of soybeans in the world, so our commercial export relationship with China is critically important. Even with ongoing efforts to diversify and open new markets, almost a third of all soybeans grown in the United States are destined for China under normal trade conditions.

During the height of the China trade war in 2018, U.S. soy stopped flowing to the market during the peak export period that fall. Soybean prices fell by about 20%, but the producers of the crop received no Price Loss Coverage (PLC) payments and little from the Agriculture Risk

Coverage (ARC) program under the Title I safety net. USDA stepped in with ad hoc, temporary support to farmers through the Market Facilitation Program (MFP).

If soybeans, the second-largest crop by area in the U.S., did not receive help through Title I during this critical situation, it is hard to imagine a scenario where the Title I safety net could provide meaningful help with the current reference price.

In addition, there is a significant disparity in soybean planted acres compared to base acres, the historical acreage on which ARC and PLC benefits are provided.

In 2021, soybeans were planted on over 87 million acres in the United States. By comparison, soybean base totals 52.5 million acres. 34.5 million acres of planted soybean acres were not protected by the soybean provisions of ARC and PLC in 2021. While some of these 34.5 million soybean acres may have been corn or wheat base, for example, these other crops may not correlate well with the losses being experienced on the farm. Some beginning farmers have little base on their farms, and greater adoption of no-till conservation practices has enabled farmers to cultivate row crops in new areas that have no base.

Looking ahead to the next farm bill, we respectfully request that the committee consider: 1) increasing the soybean reference price for calculating ARC and PLC, and 2) providing the option to update base acres. It is important to note that a combination of remedies to address these deficiencies is needed. For example, if an option to update base acres is allowed, it may not be exercised if the reference price for soybeans remains where it is currently set.

Crop Insurance

A risk management program on which soybean farmers—and our lenders—rely heavily is crop insurance. We must have an affordable crop insurance program. With input costs higher in every area of my operation, I cannot afford to have the crop insurance premium subsidy reduced in the next farm bill.

In 2021, Michigan soybean farmers paid over \$25 million for crop insurance protection on over 1.6 million acres of soy, according to USDA Risk Management Agency (RMA) data. This program allows farmers to select coverage that meets their needs each year and responds in a timely manner when losses are triggered. The competitive private sector delivery system allows farmers to find the best service providers for our operations.

Crop insurance generally works well for soybeans in Michigan, and one area we hope to enhance is specialty soybeans. RMA has met with us to better understand these challenges, and we hope to work with them and you to improve coverage for producers of specialty types of soybeans.

Credit

Farmers also rely on credit to produce a crop each year. There are a variety of providers, including bankers, Farm Credit, and USDA's Farm Service Agency (FSA), for these critical resources.

With land values on the rise, we encourage the committee to consider raising FSA loan limits, which are not in line with the current market. There are also very practical, common-sense modifications that could make FSA's loan process more user-friendly. These include continuing to partner with local leading organizations where farmers are currently doing business; evaluating options to be approved for a young farmer loan prior to a purchase agreement being signed; and working alongside young farmers to evaluate potential property to be purchased and establishing a maximum amount to be spent when a property goes to auction.

Soybean farmers have also been concerned about FSA's approach to implementing the beginning farmer definition used for credit programs. Due to FSA's information technology system limitations, the definition is viewed as an inflexible 10-year timeframe and does not allow for military service or college years to be excluded from that 10-year timeframe. We have discussed this concern with our contacts at FSA and understand they are looking at options. It is simply unfair to penalize beginning farmers for taking a break to serve their country or improve their education.

Trade

Soybeans are one of Michigan's top agricultural export products. Long-term success abroad would not be possible without the foresight of Congress to create public-private partnership programs at USDA to assist trade associations in promoting our products on a global stage. The Market Access Program (MAP) and the Foreign Market Development (FMD) Program are two programs utilized by soybean growers to promote our products on a global stage. Through our national organizations at ASA and the U.S. Soybean Export Council (USSEC), Michigan soybean growers leverage additional dollars to increase market access, address technical barriers to entry, and create on-the-ground capacity and demand for U.S. soy.

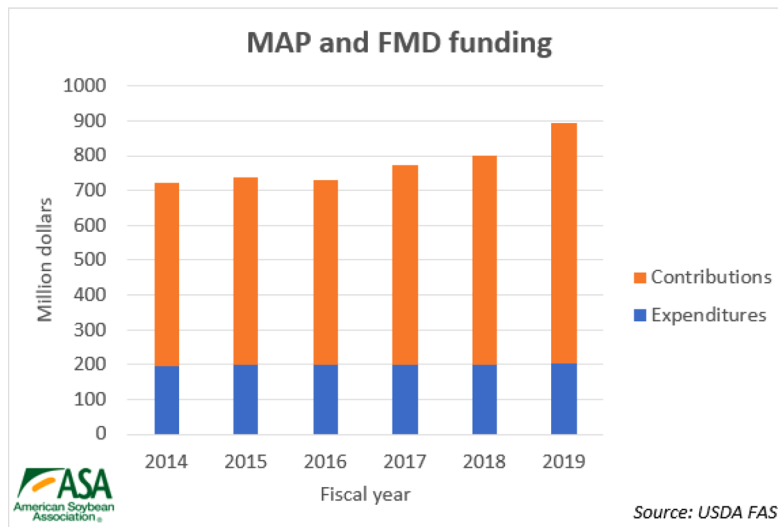
U.S. soy has invested these dollars in a variety of projects across the globe. Recognizing the global demand for sustainably produced and verified soybeans, our industry used MAP funding to create the U.S. Soy Sustainability Assurance Protocol (SSAP). SSAP is a benchmarking system that helps industry customers ensure U.S. soy is produced following a strong set of conservation regulations and best management practices. For Marketing Year (MY) 2021, the U.S. sold 28,432,763 metric tons of SSAP-verified soy. Every year, the number of SSAP-certified shipments to our export markets is only expected to increase. Eighty percent of U.S. soy shipments to the European Union are SSAP certified, and SSAP has recently passed independent benchmarking to confirm compliance with the European Feed Manufacturers' Federation (FEFAC) Soy Sourcing Guidelines 2021.

SSAP was also recognized for meeting the Olympic and Paralympic Games Tokyo 2020 Organizing Committee's sustainable sourcing code for agricultural products, the Global Seafood

Alliance’s Best Aquaculture Practices and the Consumer Goods Forum’s Sustainable Soy Sourcing Guidelines.

Promoting the sustainability story of Michigan-grown soybeans is of high importance to our state, and the Michigan Soybean Committee has invested state dollars to help USSEC support SSAP efforts in the European Union.

We appreciate Chairwoman Stabenow’s leadership in helping to secure permanent, mandatory funding for MAP and FMD in the 2018 Farm Bill. These programs, however, are in desperate need of an increase in funding allocations. The MAP program was officially created in 1996, but authorization can be traced back to 1978, while FMD was created in 1955. Available data about total export market development funding and partner contributions ends in 2019. However, MAP and FMD funding has not changed since fiscal years 2006 and 1997, respectively. Over that same time, partner funding coming from states like Michigan continually grew to be about twice the level of federal dollars.



For FY 2021, 67 organizations received MAP funding and 21 received FMD funding. With the increase in the number of cooperators and adjustments for inflation, a steady budget of \$200 million annually for MAP means the full pool of funding available to cooperators is more akin to \$129 million.

It is critical for the continued success of U.S. agriculture that Congress invest additional resources in trade promotion programs in the 2023 Farm Bill. We respectfully request doubling

the minimum annual mandatory funding for the Market Access Program to \$400 million and the Foreign Market Development Program to \$69 million.

Conservation Programs

My family has been farming the same land near Palmyra for more than 150 years. I am the sixth generation to farm here. Conservation-minded farming has allowed us to farm the same ground for that long, but it is really in the last 10-15 years that our family has deliberately worked to incorporate more conservation into our operation.

Our soil is primarily sandy loam with gravel subsoil, meaning that its capacity to hold water and nutrients is limited, and we have tile drainage in place on all our acreage. When a toxic algal bloom in the Western Lake Erie basin caused a water shutdown in Toledo, Ohio, in 2014, it shined a spotlight on farming practices in the basin and how they might impact water quality. It encouraged my family to look more carefully at practices that might limit runoff and nutrient loss.

At that time, the farm signed up for USDA's Environmental Quality Incentives Program (EQIP), which provided cost-sharing for implementing cover crops. Today, we plant cover crops on most of our acres, primarily an annual ryegrass mix. We also strip-till and no-till 100% of our acres, and we apply nutrients subsurface. We also soil test half our acres every year to ensure we only apply what fertilizer is needed. I am farming differently now, knowing that I can put nutrients right where the crop is going to need them and where they have the smallest chance of getting away.

As a result of these and other practices, we are using less fuel and fewer inputs, and we have seen yield increases. We have better water filtration and retention because we have improved the structure of the soil. I am excited about the synergy of agriculture and conservation. We think it can provide solutions, and I want to help find those solutions.

The farm bill is essential if we want to continue to extend these solutions across American farmland. Title II of the farm bill is the world's largest investment in private lands conservation, and it shows in the history of farmland conservation success stories. But we can do more. Farmer demand for voluntary, incentive-based working lands programs like EQIP and the Conservation Stewardship Program (CSP) always outpaces available funding: between 2010 and 2020, just 31% of farmers who applied to EQIP and 42% of those who applied to CSP were awarded contracts. We need to adequately fund these programs and ensure they are flexible enough to accommodate this country's wide range of crops, soil types, farming practices, and weather systems. When it comes to conservation and agriculture, one size does not fit all.

In addition, early adopters of conservation practices—like my family—are increasingly unable to access these farm bill programs. With limited funding, farmers understand USDA needs to make hard choices, and the Natural Resources Conservation Service's (NRCS) choice to bring new farmers and acres into conservation is a smart one. But this also has the unintended consequence of driving long-term conservationists to give up on some of their practices when

they become unfeasible in an era of tight margins; farms may also see conservation undone when farmers retire or lease terms end. We must find ways to reward early adopters and hold them up as models to new generations, not allow their hard work—and our societal gains in water quality, wildlife habitat, and carbon sequestration—to be undone.

As you develop the next farm bill, we encourage you to consider directing funding to programs and practices that address cropland soil quality and health, water quality and quantity, provide regulatory predictability, and save input costs; to develop climate smart provisions that focus on total on-farm carbon capture, not additionality; to emphasize working lands programs over land retirement programs; and to consider incentives that encourage adoption of precision agriculture technologies, the use of which has a wide range of environmental benefits.

Soybean farmers have many ideas about how to use the farm bill to improve and expand conservation on American farms. We look forward to working with the committee in this important effort.

Biobased Products

In February, Chairwoman Stabenow and Senator Klobuchar sent a letter to USDA Secretary Vilsack asking the administration to take a meaningful step in addressing the climate crisis by increasing federal investments in biobased products. Thank you, Chairwoman Stabenow, for leading the push to continue to grow the biobased economy through programs like USDA's BioPreferred® program.

Celebrating 20 years this spring, the USDA BioPreferred® program was developed to spur growth in the rural bioeconomy, provide new markets for farm commodities, and increase the use of renewable agricultural resources. However, despite the intent of Congress in previous farm bills, the goals of the BioPreferred program are still not being realized. According to the most recent data, the Federal Service and Construction Contractors reported \$76 million in biobased product purchases in fiscal year 2021—truly a drop in the bucket when looking at the \$650 billion in overall federal procurement that fiscal year.

As you may recall, the 2018 Farm Bill directed USDA and U.S. Department of Commerce to develop North American Industry Classification System (NAICS) codes for biobased products and renewable chemicals, but this past December the Office of Management and Budget still declined to do this. While the biobased products sector is rapidly expanding and developing new product innovations, federal procurement has flatlined. The 2018 Farm Bill sought to address that, but it seems more needs to be done.

There are over 1,000 biobased products made with soybeans that can be utilized by federal agencies and private consumers alike, ranging from cleaning supplies to asphalt sealant to running shoes—and all made with ingredients grown right here on Michigan farms. Biobased products made with soy protein and oil are sustainable. Unlike fossil fuel-based feedstocks, soybeans capture carbon dioxide from the atmosphere. They also fix their own nitrogen for

energy, limiting chemical-based fertilizer applications. And, like me, most soybean farmers use conservation tillage, which disturbs less soil, reduces fuel use, and helps sequester carbon on cropland. Consumers continue to increase demand for sustainably produced products, and Michigan's soy growers are ready to help deliver products with environmental benefits including lower greenhouse gas emissions, reduced energy costs, lower volatile organic compounds (VOCs), reduced exposure of workers to toxic chemicals, credits toward LEED certification of some finished products, and reduced processing costs and environmental compliance fees.

One of my favorite examples of the use of soy-based products is thanks to a partnership between Lear Corporation, based in Southfield, Michigan, and Michigan icon Ford Motor Company, which together commercialized soy-foam applications in vehicles. Since 2008, Ford Mustangs, Explorers, Escapes, and other models have rolled off North American production lines with seats, head restraints, and headliners made with Lear SoyFoam™.

Ford Mustangs and many other vehicles can now also roll on soy-based tires made by Goodyear Tire and Rubber Company. Through a partnership with the United Soybean Board, Goodyear has introduced four lines of commercially available Goodyear tires containing soybean oil, and last year the company made a multi-decade commitment to source sustainably produced U.S. soybean oil, phasing out petroleum-derived oils from its products by 2040.

Henry Ford believed that one day his company would "grow a car," and you can see the roots of this innovation and partnership with U.S. soybean farmers at Greenfield Village in Dearborn, Michigan, where Ford's soybean research laboratory still stands today. Ford actively looked for opportunities to combine the fruits of industry and agriculture. With your support in the next farm bill, we can help realize that vision here in Michigan and across the country.

Energy

Created in the 2002 Farm Bill, the Biodiesel Fuel Education Program seeks to stimulate consumption and investment in biodiesel and renewable diesel, which are advanced, low-carbon biofuels derived from a variety of vegetable oils, including soybean oil, animal fats and used cooking oil. Information and outreach activities funded under the Biodiesel Fuel Education Program have raised awareness of the benefits of biodiesel fuel use and complemented incentives Congress provided in 2005 when it enacted the Renewable Fuel Standard and biodiesel tax incentive. For example, from 2014-2018 the biodiesel industry leveraged \$3.6 million dollars from the Biodiesel Fuel Education Program to raise an additional \$17 million non-federal dollars. The industry used the funds to promote biodiesel's sustainability attributes, provide technical assistance to original equipment manufacturers, develop fuel quality assurance programs, and promote biodiesel blending in home heating oil.

Unfortunately, the Biodiesel Fuel Education Program no longer receives mandatory funding; after 2018, it switched to discretionary funding, and Congress has unfortunately appropriated no funding to the program. This program remains a priority for soy growers. There is still much work to be done in terms of market growth—especially as industry continues to seek to play a

large role in greenhouse gas emissions reductions in the aviation, marine, and surface transportation sectors.

Conclusion

Thank you again for this opportunity to share testimony on farm bill perspectives from Michigan. We appreciate your commitment to agriculture and look forward to working with you to craft the next farm bill.

Written Testimony of Ashley Kennedy

U.S. Senate Agriculture Committee Field Hearing on the 2023 Farm Bill - *Growing Jobs and*

Economic Opportunity: 2023 Farm Bill Perspectives from Michigan

STEM Teaching & Learning Facility - Michigan State University, East Lansing, Michigan

On behalf of the

National Milk Producers Federation and Michigan Milk Producers Association

April 29, 2022

Chairwoman Stabenow, Ranking Member Boozman, members of the committee, thank you for the opportunity to testify before you today as the committee reviews current farm policy in advance of the upcoming farm bill.

I am Ashley Kennedy and my husband Eric and I are the third generation to farm our land. Although we are only the third, our history of being American agriculturalists goes back to when my family emigrated from Poland in the early 20th century. We raise our two daughters, Calli (six) and Adeline (three) on our farm along with 600 dairy and beef animals. On the farm we milk 240 cows with an automated milking system and raise all the calves born on the farm as future cows or as steers for beef. We are growing our own specialty beef herd of Wagyu cows and heifers. During the summer season we grow and harvest 120 acres of hay and 120 acres of corn to feed the animals. One of the most exciting parts of our operation is we are developing a direct-to-consumer farm store. We are going to sell our specialty Wagyu freezer beef, heirloom dry edible beans my brother produces and cheese from my milk cooperative plants.

Our farm has been a member of Michigan Milk Producers Association (MMPA) for 60 years. MMPA is a dairy farmer owned cooperative founded in 1916 that serves producers in Michigan,

Indiana, Ohio, and Wisconsin and operates four dairy manufacturing plants in three states. MMPA works hard to serve its members by providing leading on-farm services, training, and member involvement opportunities. MMPA also supports education for the next generation of dairy leaders with scholarships and other programs.

We are proud of the dairy industry in Michigan. At nearly 11 billion pounds, Michigan currently ranks 6th nationally in terms of annual milk production and ranks 1st in production per cow.

I am pleased to be delivering testimony on behalf of myself; my cooperative, Michigan Milk Producers Association, and National Milk Producers Federation. As an alumni of Michigan State University it feels fitting that I am able to share my testimony on the campus that shaped the beginning of my career.

As you prepare to craft the next farm bill, I am happy to share my perspective as a dairy farmer on current priorities. Chairwoman Stabenow, dairy farmers in Michigan and nationwide are grateful for your strong leadership in reforming the dairy safety net in both the Bipartisan Budget Act of 2018 and the 2018 Farm Bill. The Dairy Margin Coverage program is a significant improvement over its predecessor and has been a safety net for dairy farmers during difficult times. DMC worked as intended in 2021, paying out nearly \$55 million to participating Michigan dairy farmers as they continued to weather the challenges of the pandemic. This program was essential to our farm and family's financial success last year. We thank this committee for enacting Supplemental Dairy Margin Coverage payments to compensate producers for incremental production increases since 2014 and account for a nearly decade-old production history formula. We urge that production history adjustments be carried over into the farm bill. We also appreciate USDA's actions to ensure that DMC accurately reflects dairy farmer feed costs by fully incorporating dairy quality alfalfa into the DMC feed formula. Finally, we are pleased that, on par with producers of other commodities, dairy farmers now have access to both a Farm Service Agency-run safety net as well as Risk Management Agency tools such as Dairy Revenue Protection and Livestock Gross Margin-Dairy, which gives farmers the ability to customize their risk management to their needs.

Just over a year after the current farm bill was signed, the COVID-19 pandemic took hold, and, from the start, impacted our entire country in significant ways. While dairy farmers never stopped providing households with an abundant supply of nutritious milk and dairy products, we were not immune to the massive economic consequences of the pandemic. In particular, the combined effects of the change made to the Class I mover in the last farm bill and the government's heavy cheese purchases cost dairy farmers over \$750 million in Class I skim revenue during the last six months of 2020. That includes over \$117 million in the Mideast order which includes Michigan. We know that no one could have anticipated COVID-19 at the time the change was made to the Class I mover, but the events of the last two years have put a spotlight on the need for an overall update to the Federal Milk Marketing Order system. Although the COVID-19 relief packages were essential to keeping our business alive as beginner farmers, I wish I hadn't needed that assistance because the milk pricing system was in a more reliable state.

To recap, prior to the 2018 Farm Bill, the Class I mover was based on the higher of the Class III or Class IV price each month, commonly called the "higher of" formula. To maintain revenue neutrality for farmers while also accommodating price risk needs of processors, a compromise was reached to restructure the mover as the monthly average of the Class III and Class IV prices, with a \$0.74/cwt. adjustment factor added to that average. The historical record from January 2000 through August 2017 indicated that this new mover would be revenue neutral for dairy farmers by maintaining essentially the same Class I skim milk revenue as the old mover.

The new mover took effect in May 2019, but the COVID-19 pandemic dramatically undercut the revenue neutrality that formed its foundation. The Farmers to Families Food Box Program heavily weighted its dairy product purchases toward cheese (Class III). This imbalance caused a wide chasm between the monthly Class III and Class IV prices, making the average of the two significantly lower than the "higher of" the two, even with the \$0.74/cwt. adjustment factor added. As a result, Class I skim milk prices averaged \$3.56/cwt. lower during the second half of 2020 than they would have under the previous mover. This undermined the orderly marketing

of milk and represented a net loss to dairy producers of more than \$750 million during the latter half of 2020.

I am pleased to share that the dairy industry through the National Milk Producers Federation (NMPF) is treating this matter with urgency and is seeking to find consensus on not only the Class I mover, but a range of improvements to the system that we can take to USDA for consideration via a national order hearing. MMPA is a member of NMPF and is actively participating in its process, which involves careful examination of key issues to the dairy sector nationwide. The dairy industry recognizes that to successfully enact policies that are better than those we have in place today, we must work together with the goal of achieving consensus. We look forward to working with the members of this committee as our efforts advance.

I would like to highlight several other areas of great significance to the dairy sector. First, dairy farmers are environmental stewards who tend with great care to our land, water, and other natural resources. We have in fact been working on sustainability long before this work captured the public's attention. As a testament to dairy's endeavors, research shows that producing a gallon of milk in 2017 required 30% less water, 21% less land, had a 19% smaller carbon footprint, and produced 20% less manure than it did in 2007. However, we always believe that more can be done, and, as a result, have set industry-wide goals of becoming greenhouse gas neutral or better, improving water quality, and optimizing water use by 2050. We commend your efforts, Chairwoman Stabenow, to increase funding for farm bill conservation programs. Conservation programs like the Environmental Quality Incentives Program are key as we work to continue our ongoing sustainability efforts. Enhanced funding will help dairy farmers scale up innovative climate smart practices, such as new approaches to both feed and manure management. We also congratulate the members of this committee for getting the Growing Climate Solutions Act through the Senate on a vote of 92-8. This legislation will help facilitate greater farmer participation in environmental markets, and we look forward to its enactment.

I feel compelled to reiterate the importance of agriculture being part of the solution when it comes to carbon markets and the greater discussion about climate change. I passionately feel we cannot hide and think if we don't talk about it, it will go away. I want to be a part of the discussion because agriculture does so many important things already to combat climate change. Agriculture is a carbon sink; we need to make that part of the discussion and continue to find solutions to make ourselves carbon neutral. Farmers have been stewards of the land for generations and it's time we use this to become part of the climate solution.

My belief in environmental and conservation practices started several years ago. In 2016 I was awarded an EQIP grant to help cost share on a new manure pit for our farm along with other conservation practices. The logistics of it were, frankly, a mess. Every step included a new person because the previous engineer had left or been promoted. Each person had different requirements which meant we had to keep bringing out the expensive private engineering firm to take more samples at several thousand dollars a time. When it came time for the end of my contract, we knew we couldn't fulfill all the requirements needed in the time left and pulled my application. It was very disappointing. From my view USDA needs to hire more engineers to get through the massive backlog of projects and needs to find out how to keep the people already there. NRCS could provide a better service to farmers and conservationists if employees, especially good ones, could be kept.

Second, trade is critical to our success as farmers. Today, exports account for 17% of our production and are likely to comprise an even greater share as global dairy demand continues to grow. Trade promotion programs like the Market Access Program and the Foreign Market Development program promote American-made dairy and ag products that compete with heavily subsidized foreign products, returning well over \$20 in export revenue for every one dollar invested in the programs. We support doubling funding for both essential programs to better promote U.S. dairy products worldwide. In addition, we hope to work with this committee to help combat the European Union's efforts to restrict the use of common food

names in markets around the world. These efforts are a trade barrier plain and simple, and they must be stopped. Finally, we hope to increase the role of dairy in food aid and expedite the process of nominating key trade officials.

Third, dairy farmers appreciate the enduring connection between agriculture and nutrition, as enshrined in the very name of this committee. Nutrition programs like the Supplemental Nutrition Assistance Program are vital to feeding families when they face difficult circumstances and are the bedrock of linking the food we produce as farmers to households across the country. Dairy is a nutrition powerhouse, serving as an excellent source of essential nutrients, but continues to be under consumed according to the most recent Dietary Guidelines for Americans. Continued robust support for USDA nutrition programs will help boost consumption of healthy, nutritious dairy products across our population. We also strongly encourage robust support for the Dairy Donation Program that you authored, Chairwoman Stabenow, to facilitate the donation of dairy products to food insecure families. MMPA is proud to have helped inspire this initiative, which began as the Milk Donation Reimbursement Program in the 2018 Farm Bill, based on our partnership with the Kroger Michigan Dairy plant to donate thousands of gallons of milk through the Food Bank Council of Michigan. The Dairy Donation Program is helping to minimize food waste by providing nutritious dairy products to those who need them most while supporting local dairy farmers.

Relating to nutrition as well, while this committee does not oversee the Food and Drug Administration, it is critical that the agency finally enforce dairy standards of identity to combat the proliferation of imitation products attempting to use dairy's positive reputation in the marketplace when these products are not nutritionally equivalent to real dairy.

Fourth, labor is a chronic and challenging issue in agriculture. Likely, it will require creative solutions and mechanizations. Nine years ago, we were struggling to find reliable labor. We made the decision to put in an automated milking system for our cows. The mechanization made it, so we still have dairy cows today. Before robots I couldn't imagine ever having kids and

cows at the same time. I hope the Farm Bill can continue to set up funds for farmers, organizations and the government to find solutions to getting the work done in the fields, barns and greenhouses.

Lastly, in recent years, farmers have endured one difficult year after another. Stress in rural America is not talked about enough, which is unfortunate, because it's a problem we can only solve by working together. I am thankful to this committee for stepping up in the farm bill and reauthorizing the Farm and Ranch Stress Assistance Network, which aims to connect those working in agriculture to stress assistance and support programs. For the last 3 years I have truly struggled with ADHD, anxiety and depression. Dealing with birth trauma, an employee suicide and a cousin dying of an overdose, I went to a dark place. I have been a person who needed the help and I am thankful to have received it. The stories of many others like mine and the work of this committee cannot be replaced in our rural communities. Even with the Farm and Ranch Stress Assistance Network our rural areas are desperately short of mental health resources. Our thanks to members of the Appropriations Committee for following through and providing the needed funding and I hope the efforts can be increased in the future.

As a farmer who has used USDA Beginner Farmer loans three times to start growing our influence on the farm, I appreciate everything this committee does. I couldn't have come back to the family farm if it were not for many of these programs. Being a part of the conversation is essential to see a future that reflects opportunity and success.

Thank you again for the opportunity to testify before you. I am happy to answer any questions you may have.

Statement for the Record

On U.S. Senate Agriculture Committee Field Hearing “2023 Farm Bill - Growing Jobs and Economic Opportunity: 2023 Farm Bill Perspectives from Michigan”

Chairwoman Stabenow and Ranking Member Boozman:

Thank you for hearing my testimony today about Northern Initiatives and our business.

My name is Tom Vear. My wife, Jennifer Ray, and I own and operate Donckers and the Delft Bistro in Marquette Michigan, Da UP.

Food and Agriculture have been part of my life for quite some time. I graduated from DePauw University in Greencastle Indiana, a small rural farming community, and spent the next twenty years trading corn and soybean futures at the Chicago Board of Trade. Then, another twenty years ago, my wife and I changed chapters in our life and moved to rural Marquette with our three young children, where we were meant to be.

In 2007, we bought Donckers, a 112 year old family business from Fred Donckers, the grandson of the founder. The building, a 1909 historic property in downtown Marquette, caught my eye. My love for historic renovation encouraged us (with Jen kicking and screaming) to try our hand at restaurants and chocolate making. In 2015, we also purchased the Delft Theater, built in 1914. We converted the property to a more upscale lunch and dinner restaurant, with a movie concept.

Our choice to be in Marquette was influenced by our 3 children and the desire to be in a small, rural community. All three have worked in our business and graduated from the University of Michigan.

I have been on the board of Northern Initiatives for 12 years and both strongly believe in and enjoy the mission of this CDFI (Community Development Financial Institution). NI's loan funding, through Rural Development has helped to create many successful businesses as well as job creation, including our two businesses.

Donckers and The Delft Bistro have both borrowed funds from NI to further develop our restaurant and our chocolate making. When we originally purchased Donckers, Fred, the 78 year old grandson, agreed to stay on and teach us the fudge making process, which was part of the business 100 years ago. We saw an opportunity in the chocolate business and for the past twelve years have been growing that part. Just this past week, with the help of a revolving loan from NI, we purchased a fifty thousand dollar candy coating machine. Last year, we made a half million of our Signature hand dipped sea salt caramels. Sample enclosed! We anticipate five to seven times that amount this year.

When getting products for our restaurants, we try our best to source locally. We work with local farmers for our eggs, greens, syrup, meats, and coffee. We have also been using the expertise

of the Michigan State Extension, a resource to help us with our packaging requirements. In addition, we have been working hard on getting our businesses B-Corp certification.

Being a part of the growth and influence of Northern Initiatives has been a great pleasure. The board and staff members are fully committed to the mission of rural development as well as job creation.

Over the past ten years, NI has established itself as the state wide CDFI lender that rural and women and minority owners seek out for their business development. The organization is headquartered in Marquette with office locations throughout Michigan. Northern Initiatives provides loans and business services to entrepreneurs and small business owners who create jobs and help their communities thrive. Starting in 1994, as a program of Northern Michigan University's College of Business to help build rural economic resiliency in the face of declining resource extraction in Michigan's Upper Peninsula, today, NI serves 83 counties in Michigan and Northern Wisconsin.

Since 1994, NI has provided 1,507 loans totaling over \$88 million and helped to create or retain nearly 7,000 jobs. Nearly 85% (approximately \$67M) of these loans have been to small businesses in rural Michigan. Of the top 20 counties NI served in 2021, 16 were rural. In 2021, 66% of NI's loans were to startups, a third were to manufacturing businesses, a third were to women-owned businesses, and 72% were to small businesses located in low-income areas.

USDA Funding sources have been instrumental in NI's ability to support small businesses - including those Jenn and I own. As our businesses have grown, we've needed additional capital. When we opened The Delft, Northern Initiatives utilized IRP resources to help us purchase our kitchen equipment. RMAP funds have been utilized to finance many of our rural neighbors and to provide those businesses the technical assistance to manage their cash flow and market their goods and services.

To date, NI has deployed 252 IRP and RMAP loans, totaling \$18,814,845 and creating and retaining 1,283 jobs.

The RMAP and IRP included in the Farm Bill are important sources of job creation for rural and low income communities. They support small businesses and help communities thrive.

Thank you again for the opportunity to submit a statement for the record.

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**TESTIMONY BEFORE THE UNITED STATES SENATE COMMITTEE
ON AGRICULTURE, NUTRITION, AND FORESTRY**

***Growing Jobs and Economic Opportunity:
2023 Farm Bill Perspectives from Michigan***

Dr. Phil Knight

Executive Director

Food Bank Council of Michigan

April 29th, 2022

STEM Teaching and Learning Facility

Michigan State University

East Lansing, Michigan

Introduction

Thank you Chairwoman Stabenow and Ranking Member Boozman for the opportunity to speak today. Senator Boozman, welcome to the great state of Michigan. Welcome home, Senator Stabenow. I start my testimony with a word of appreciation for our hometown Senator. A thank you to you personally Senator Stabenow for how you have chosen to invest the one handful of life you have been given, to stand in the gap for those who struggle a bit more with things most of us take for granted. Thank you for investing yourself in things that are bigger than we are and will last longer than any of us.

I am Dr. Phil Knight, the executive director of the Food Bank Council of Michigan (FBCM). I have the honor to represent the 7 Feeding America food banks here in Michigan who collectively serve all 83 Michigan counties through a network of almost 3000 community partners. I hold a doctorate in religious science and philosophy, a master's in professional counseling and I am a licensed professional counselor (LPC) here in MI. I come to you today not only representing my role at the Food Bank Council of Michigan, but also to share thoughts on how my own personal experience with food insecurity has impacted me and the work I do currently with FBCM. Hunger has many faces – at one time it was my own – and food insecurity is not limited to one singular story or experience.

No one aspires to be food insecure. It is not a hope, a dream, or a pursuit. But it happens in and through a variety of circumstances. Hunger does not care about your zip code or your level of education. It was Booker T. Washington who said, “Success is to be measured not so much by the position that one has reached in life as by the obstacles which he has overcome.”

For me it was a life upset after 28 years of marriage. One where I found myself with full custody of 2 sons who were entering high school. During the time of the great recession, despite my advanced degrees and years of job experience, I could not find any job except for being a substitute teacher, which I did – you’ve never had a challenge until you’ve substituted as a PE teacher for 5-year-olds. I was also a cashier at a large retail outlet, and I was terrible at it. I was so bad they made me be the greeter at the door. We laugh but, at that time in my life my boys and I rolled quarters and dimes so we could eat.

Despite our financial challenges, it did not cross my mind that there may be options for assistance until my boys’ school counselor informed me that she thought they would qualify for free or reduced price school meals. That also led to a SNAP application with a Michigan Department of Health and Human Services (MDHHS) case worker who treated me very well. The \$97 a month SNAP allotment was a life saver for us. We went straight to the retail store where I sucked as a cashier and used the

money to buy meat and fruits and vegetables, providing the protein and fresh produce we had not been able to purchase prior. We also received food from a nearby pantry that I learned later was supplied by our food banks and suddenly hunger came off the table for us and with it a lot of stress.

It was simultaneously a horrible time and joyful time. I was ashamed yet relieved, embarrassed yet appreciative, and my emotions fluctuated between despair and hope. SNAP and the work of the food banks helped take hunger off my table. The impact of the food cannot be minimized.

When hunger came off the table it also took some of the 'tradeoffs' away as well. I still had more month than money, but I didn't have to worry as much about rent, utilities or whether my boys could have the opportunity to play soccer or football. The power of the food is evidenced because it helped stabilize our home through direct economic impact, it empowered me by giving me hope, my mind was free from toxic stress of being food insecure and I could work on finding my next success. We didn't suffer as much nutritionally because the food we bought with SNAP and received from the food bank network was fresh and nutritious.

Senators, the investments that you, as the US government, and the charitable food network made in me inspired me. I often state the commodity we share most often is hope, it just looks like food. After some time, I found a job that led me to the one I have now at the FBCM, where I have served as the Executive Director for 7.5 years.

SNAP and the work of the food bank network are often referred to as 'charity', but they aren't, they are investments in the health and well-being of people. The work we do together to create and 'right size' the safety net is not just about expense, it is about how do we best invest in resources to create opportunities for people and our communities to thrive. Your investment in me helped me find my next success.

Food Insecurity in Michigan and the COVID-19 Response:

During the COVID-19 pandemic, FBCM's members ramped up their warehouse capacity, food sourcing, and direct-to-client distribution capabilities, all in order to serve more people in need than ever before in food banking history. At the height of the COVID-19 pandemic, food distributed by the Michigan food bank network across the state increased by 47%. Our network's existing statewide infrastructure combined with our supply chain and food safety expertise, experience responding to

crisis, and relationships with the farming and food industries uniquely positioned the Michigan food bank network to respond to the unprecedented increase in need related to the COVID-19 pandemic.

In 2019, approximately 1.3 million Michiganders faced food insecurity, over 305,000 of which were children, with a food insecurity rate of 13.6% in Michigan¹. While finalized statistics for 2020 are yet to be reported, estimates show that food insecurity increased to approximately 19.1% or 1.9 million people in Michigan, including 552,000 children². In 2021, we began to see some stabilization in food insecurity rates, approaching pre-pandemic levels, as a result of additional investments made in food assistance and other resources in response to the pandemic, such as the SNAP Emergency Allotments, Pandemic EBT, the Child Tax Credit, and the additional USDA food purchases provided to emergency food providers, such as food banks. With many of the COVID-related investments having ended and the current economic challenges such as inflation impacting households, we are now seeing an increase in need each month once again. Throughout it all, food banks have remained a constant and consistent resource for many individuals and households experiencing food insecurity throughout the pandemic.

In addition to sharing a bit of my own personal story, I am also here to speak to you more broadly on the importance of the federal nutrition programs within the Farm Bill, in particular the Supplemental Nutrition Assistance Program (SNAP) and The Emergency Food Assistance Program (TEFAP). Before and during the pandemic, federal nutrition programs have played a critical role in curbing the rates of food insecurity. Federal nutrition programs are the essential foundation for families and individuals with limited resources to get the nutritious foods needed when they fall on hard times and it is critical that the Farm Bill strengthen and continue to invest in these programs.

Strengthen Federal Nutrition Programs: The Supplemental Nutrition Assistance Program (SNAP)

I want to first applaud and thank Senator Stabenow for her leadership in passing the bipartisan 2018 Farm Bill that directed USDA to reevaluate the Thrifty Food Plan (TFP), which is used to set SNAP benefit levels, to better reflect the modern cost of a healthy diet by 2022 and every five years thereafter. This modernization helps ensure that people will have a better chance of getting the nutrition they need to

¹ Gundersen, C., M. Strayer, A. Dewey, M. Hake, & E. Engelhard. *Map the Meal Gap 2021: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the United States in 2019*. Feeding America, 2021.

² Gundersen, C., M. Hake, A. Dewey, E. Engelhard (2020). *The Impact of the Coronavirus on Food Insecurity in 2020, Update October 2020 [Data file and FAQ]*.

thrive. The cost of the Thrifty Food Plan is supposed to represent the amount of money needed to purchase a nutritious diet assuming people take significant steps to stretch their food dollars. Prior to the recent update, the TFP had been adjusted only for inflation since the 1970s, resulting in SNAP benefits levels that often fell short of households' needs. The recent scientific, data-driven approach to updating the TFP resulted in providing more adequate benefits amounts, meaning that households that struggle with food insecurity now have more purchasing power to put nutritious food on the table.

SNAP benefits have been crucial in mitigating food hardship and stimulating economic activity during the pandemic and will continue to be a critical resource for families and individuals as increased prices for food and fuel continue to put much pressure on households. The Food Bank Council of Michigan operates a statewide food assistance helpline in which we assist Michigan residents with applying for SNAP benefits and connecting to local food resources through our network. We hear on a daily basis from the individuals we serve the impact that SNAP benefits have on their household. Like the Van Buren County resident that shared that when her husband's salary was reduced during the pandemic, the additional food assistance benefits helped her family greatly to be able to keep groceries in their home and eliminated some of the stress that would have been associated with the loss of income. SNAP benefits are such a critical resource to provide some stability for so many households in Michigan experiencing food insecurity.

SNAP also relieves pressure on overwhelmed food banks and food pantries across the country that could not meet the need for food assistance on their own if SNAP benefits or eligibility were reduced. Feeding America food banks in Michigan and nationwide see firsthand the impact that access to SNAP and more adequate benefits amounts have on the households and the communities we serve. When individuals and families are unable to stretch their SNAP benefits or do not qualify for SNAP benefits to meet their household's needs, they turn to our food bank network to help fill the gap. Improving food security for millions of Americans requires modern federal nutrition programs that reflect the realities of the needs of families and individuals today. More adequate SNAP benefits can help reduce food insecurity and child poverty, and those improvements can have long-term impacts, such as supporting economic mobility and reducing health care costs.

Strengthen Federal Nutrition Programs: The Emergency Food Assistance Program (TEFAP)

The Emergency Food Assistance Program, or TEFAP, is a means-tested federal program that provides nutritious food commodities to individuals and families with low-income facing food insecurity. TEFAP food commodities are an essential resource for food banks. Our Michigan food banks exemplify an optimum model of a public-private partnership, combining TEFAP with private donations and Michigan grown and produced food purchased through our Michigan Agricultural Surplus System (MASS) to maximize TEFAP resources far beyond the budgeted amount for the program. TEFAP not only supports food banks and the people we serve, but also has a strong impact on the farm economy as well. TEFAP bonus commodity purchases also provide support for agricultural markets when market support is needed and provides food banks with access to additional healthy food to distribute to communities and individuals in need.

As the need for food resources and supports increased during the pandemic, so have food prices and supply chain issues. The impact of inflation and supply chain issues are not only affecting the individuals and communities that the food banks serve, but also the food banks themselves. Food banks' current funds for food purchasing are not going nearly as far as they have in years past due to high costs of food and transportation, and this means less food available to distribute to communities and households in need. TEFAP commodities accounted for approximately 30-40 percent of the food moving through Feeding America food banks in fiscal year 2020-21. Today, our food banks are at pre-Trade Mitigation numbers for TEFAP, with our network being at a 5 year low for USDA food overall. Our food banks are in need of desperate need of protein right now, as well as dairy.

As the demand for food remains high at food banks across the country, a reliable and continuous stream of TEFAP is necessary to ensure a steady emergency food supply. Additional mandatory funding for TEFAP food in recognition of the sustained high need for food assistance at food banks in Michigan and nationwide is needed. We also see the Farm Bill as an opportunity to further strengthen TEFAP and other USDA commodity food programs such as the Commodity Supplemental Food Program (CSFP) through the development of standards around food safety and demonstrated infrastructure needed to distribute food both safely and efficiently, and opportunities for those unable to meet those standards on their own to work directly with partners such as food banks that can help local organizations provide their communities with fresh, healthy foods. You have partners like Feeding America, FBCM or Feeding Arkansas who are trusted partners to distribute the food across America and our states in the safest, most effective manner possible.

Conclusion

Solving hunger starts in the field and that's why the Farm Bill is so important. It is an honor and pleasure to come together with you all today in the great state of Michigan, the second most agriculturally diverse state in the nation, to discuss the most critical piece of food and farming legislation. We are in this work of creating food security together. There is a push and pull to policy decisions. We all want to shorten the lines at food banks and help people achieve self-sufficiency. The Farm Bill helps accomplish this objective by impacting families, but it also impacts organizations like our food banks. It is greatly important to Michiganders that Congress drafts a unified Farm Bill that supports our agricultural communities and the nutritional needs of all our state's residents. I am encouraged today by the belief in the two of you to work together to invest in the American people, in us and in the core belief that hunger isn't bigger than we are, better than we are and it isn't beyond us to solve.

Senate Agriculture Committee Field Hearing***Growing Jobs and Economic Opportunity: Perspectives on the 2023 Farm Bill from Michigan***

East Lansing, Michigan

April 29, 2022

Testimony of Rosie Florian

Food Hub Manager

ValleyHUB at Kalamazoo Valley Community College

Chairwoman Stabenow and Ranking Member Boozman, thank you for the opportunity to provide testimony at today's hearing.

I was born and raised in Van Buren County, where grape vineyards, orchards, and vegetable farming painted the landscape. During my childhood, it was food cooperatives, farmers markets, and agriculture businesses that impressed into me the importance -and almost celebrity status- of the farmers in the region. As a teen, I didn't see a direct career path into the type of work that I now call a career, so I dove into every angle of the food system that I could. My background includes twenty years of a diverse range of job perspectives including food service and restaurant operations, retail grocery management, farmer's market management, and organic vegetable farming.

As a Produce Manager in a small cooperative grocery store, I developed a thriving and dynamic local produce purchasing program. Our customers were essential in creating that demand and I faced the challenge head on to increase the visibility of local farms while interpreting the impacts and importance of purchasing local to our customers. In response to customers demanding more transparency about the source of their food, I started a small farmers market alongside the grocery store that featured growers and producers within 100 miles of Kalamazoo. The 100-Mile Market supported the then-new cottage food industry, and a myriad of new food businesses in the region. The market accepted SNAP benefits and was one of the first sites for Double Up Food Bucks outside of Southeast Michigan. Later, I spent 3 seasons as the marketing manager for a third-generation organic vegetable farm in Ceresco, Michigan. I worked in the field, packing house and ran market stands at several weekly Michigan farmers markets.

These experiences reinforced my strong connections to Southwest Michigan (SWMI) farms and shaped my ability to serve the unique needs of small to medium SWMI farms and food producers, stewarding by offering support and resources. In 2018, I joined ValleyHUB as the Marketing & Outreach Coordinator, a job opportunity created by Local Food Promotion Program (LFPP) funding awarded to Kalamazoo Valley Community College (KVCC). I then became ValleyHUB Food Hub Manager in 2020. I'm also trained as an internal auditor for the USDA Michigan GroupGAP Network, an organization that provides farmers with the tools they need to ensure the safety of Michigan Farm products.

About ValleyHUB

ValleyHUB at Kalamazoo Valley Community College is an urban farm, food hub, and education center that supports local and regional food producers in Southwest Michigan through direct supply chain support and complementary education and training programs. We work toward the dual community goals of increasing financial viability for small and mid-size farms and food producers, and improving diets and health outcomes in our community by promoting seasonal, local, plant-forward menus in healthcare, educational, and corporate cafeterias. Our social enterprise operations align with an existing

degree program in Culinary Arts and a planned program in Sustainable Horticulture, and a broad portfolio of open enrollment, skills-based and general interest community classes.

ValleyHUB is part of a community of practice that supports local and regional food systems. We work to develop the unique assets in Southwest Michigan, to support the viability of small and mid-size farms that sell into local/regional supply chains. In 2018 and again in 2021, we received grant awards through the LFPP that have provided critical resources for our growth. LFPP, as a subset of the Local Agriculture Market Program (LAMP), exists because small and mid-size farms face barriers to getting their products into local and regional supply chains.

While LFPP has funded many innovative efforts in recent years, the trends in agriculture are still dismal:

Farm non-viability: Across the state of MI, the average farm had just under \$30,000 in net profit in 2012, and over half of farms reported net losses¹.

Farm closure: In Southwest Michigan, between 2012 and 2017, 2% of farmland and 12% of farms were lost. This is the same rate of loss as between 2007 and 2012.

Product mix favoring national/global supply chains: Despite our unique environment well suited for tree fruits, berries and tender vegetables, the top crops in the region are corn and soy, together accounting for \$448 million – over one-third of SW Mich. region's total \$1.27 billion in total agricultural sales in 2012. Specialty crops including vegetables, fruit, and nuts – more likely to end up in local/regional supply chains – account for less than 12% of our region's sales.

Supply Chain businesses struggle at the local-regional scale: When ValleyHUB opened, we filled a gap in connecting local and regional food producers with their customers – because it is not the norm for food hubs to be profitable as independent businesses. The Wallace Center's 2017 Food Hub Benchmarking Report found that 36% of hubs are heavily reliant on grant dollars, and only 67% of food hubs are breaking even or better². (ValleyHUB is sustainable because grant funding fuels our growth, and our overhead and management expenses are supported as part of Kalamazoo Valley's general fund, because of their use in educational programs.)

These trends are seen across the country, and they are not new; they persist despite decades of investment in local and regional food systems work. In Michigan, my team at ValleyHUB and I are part of a vibrant network of practitioners that has been addressing these challenges collectively, supported by national funding streams and communities of practice. I'd like to tell the story I've watched unfold here. It shows the impacts of our work, and remaining gaps, in the Southwest Michigan food system – specifically around helping farmers shift from direct markets into retail and institutional food service markets. We are, of course, building on work going back decades, but for the purposes of this testimony, I will start in the late 2000s, when the 2010 Michigan Good Food Charter set a goal for 20% local procurement in institutional meals³ in order to support local growers.

Promoting farm-to-institution supply chains.

Responding to the difficulties that farmers have with vagaries of consumer behavior, farm-to-institution supply chains were envisioned as a lever to shift the market and open up opportunities for local and regional farms. Programs like the Cultivate Michigan project sought to address some

initial barriers: information, recipes, branding, and assistance with procuring product through supportive broad-line distributors. Key institution partners – most often hospitals with self-operated food service departments – set new norms by declaring local purchasing targets, and the Michigan Farm to Institution Network (MFIN) emerged to share best practices. This work created increased awareness and intention around local purchasing, but we discovered additional barriers that needed to be addressed.

Supporting food hubs.

Soon, it became apparent that a major barrier was the ability to aggregate sufficient product to meet the demand of large food service customers like hospitals. In response, food hubs began to scale up as aggregators and distributors of product. (ValleyHUB enters the story here, launching based on the findings of a supply-and-demand analysis that identified a need for fresh-cut processing and distribution of local produce to institutional customers in SW Mich.⁴) The Michigan Food Hub Network formed to facilitate sharing of best practices, as well as practical collaboration to meet the needs of local and regional food producers across the state. Because of this work, a robust network of food hubs, including ValleyHUB in SW Mich., emerged, ready to scale to meet demand.

Financial support for local purchasing incentives.

Through all these efforts, school food purchasing, a huge market opportunity for local producers, remained largely unchanged due to the higher cost of local/regional/seasonal products. For K-12 schools in ValleyHUB’s service area, this has been the primary barrier to local sourcing. The 10 Cents a Meal program grew to fill in budget gaps, allowing schools (and now Early Childhood Ed sites) to devote a larger chunk of their purchasing to local farms via matching grants. MFIN, Michigan Department of Education, and Groundwork Center for Resilient Communities lead the 10 Cents a Meal grant program, now funded through State budget allocation. 10 Cents grants have increased schools’ purchase of local foods, but this has exposed gaps in skills and capacity within school food service departments.

Creating skills-based culinary training for institutional food service providers (IFSPs). While the financial lever of a 10 Cents grant has huge potential to shift purchasing, partners are also recognizing the need for additional support to schools who want to take advantage of this funding. A relationship with a food hub that can help manage procurement is a strong indicator of a district’s success, but it is not a silver bullet.

ValleyHUB’s first (2018) LFPP-funded project focused on the work of a Food Hub Outreach and Marketing Coordinator, which was my role when I joined the ValleyHUB team. The goal was to work closely with institution food service directors to identify needs for “easy swap” fresh-cut ingredient options, and then work with the Food Hub Manager and Operations Coordinator to develop those products. This basic approach has worked well with several customers, and our catalog now includes over 30 fresh-cut products available seasonally, fresh, and/or frozen. But we soon saw other needs, especially in schools that need processed items that come individually packaged for snack or cafeteria use, as well as products that can quickly pivot from use in a cafeteria to distribution in a food box in case of long-term school closure. For example, Kalamazoo Public Schools was beginning to purchase ValleyHUB processed products for salad bars and sampling stations using its 10 Cents a Meal grant funds in 2019, but during school closures pivoted to purchasing 2-lb frozen local vegetable packs from a higher-volume supplier. We are also learning that distribution logistics and fresh cut products are not universally needed

by IFSPs. Some school districts, for example, would find it easier to have a direct purchasing relationship with local growers and pay their own staff in-house to chop fresh fruits and vegetables, but still need help with identifying growers, ensuring safe growing practices at the farm level, and/or training staff on efficient processing tools and skills. Statewide, MFIN finds that IFSP managers cite lack of fresh food handling skills on the part of their staff as a major reason to not build up a local food purchasing program; or, even more simply, a lack of appropriate equipment⁵. The COVID-19 school closures in the 2020-21 school year exposed how truly capacity-strapped school food service managers are: schools that had been making progress toward local/regional purchasing pulled back entirely from any new initiatives as soon as uncertainty took hold, leaving potential local/regional farm suppliers without a key market outlet.

Based on this experience, MFIN and partners at Michigan State University (MSU) Extension and Michigan Department of Education (MDE) are now working to address these skills barriers, through a Specialty Crop Block Grant that will support training for 10 Cents school district food service staff. Now, with support from a 2021 LFPP grant, ValleyHUB is working to amplify the impact of this work in our service area by directly pairing this training with procurement and farm food safety assurance support. Our newest colleague, Crystal Van Pelt, is our Food Systems Educator, working to identify and fill these training gaps.

Facilitating education and certification networks for On-Farm Food Safety.

Meanwhile, on-farm food safety initiatives, including Michigan GroupGAP Network and the Michigan On-farm Food Safety Readiness Review program, rolled out to support small and mid-size farmers achieving certifications needed to sell to large customers. MFIN also began engaging in work to educate IFSPs about the various food safety certification frameworks. MSU Extension educators working with MFIN found in a 2020 survey that farmers are frustrated and confused by being asked for different certifications (e.g. USDA GAP or Primus) by different customers, or even by the same customers year by year. ValleyHUB partner farmers are required to have a written farm food safety plan and allow us to visit their operation. We have encouraged them (and had funding, through our 2018 LFPP award) to gain USDA GAP certification through the Michigan GroupGAP Network, but we, and our supplier partners, respond to what their end customers demand. We only had three of our partner farms complete their USDA GAP certification, and only then because major customers have required them to comply. Our partners still need active help navigating and using the many resources available.

To move this farm food safety work forward, we are working with our supplier partners to identify their food safety goals, based on their customers' demands. Meanwhile, our program partners at Michigan Food and Farming Systems are working with farms and farmers, focusing on socially disadvantaged farmers such as current/former migrant farm workers, to improve on-farm food safety, and also to access training opportunities and find new markets – like ValleyHUB. Working together and with the Michigan Produce Safety Working Group, we can help growers individually, according to their needs.

MFIN also found in a 2020 survey of IFSPs that the food safety assurance requirements vary widely (54% require certification; 33% don't; the rest aren't sure). Often the decision about whether to require farm food safety certifications and what to require is being made by risk managers (38%) or food service directors (24%) who are not familiar with the range of food safety assurance programs⁶. By now in Michigan, there are many resources available; but we still find that our partners need help navigating them.

Scale-appropriate food “hubbing”.

Scaling from direct-to-consumer sales into institutional markets is a big leap, and may not even be the right long term goal for some farms. A food hub like ValleyHUB can help growers access retail and restaurant markets, either as a stepping stone or a destination. This work exists well alongside efforts to facilitate sales to institutions, because all growers can benefit from on-farm food safety support. And a thriving retail/restaurant customer base is a beneficial balance for the viability of ValleyHUB and its continued ability to serve all of our partners.

Other initiatives in the ecosystem offer complementary supports. Food businesses in general (not just farms) need business support. The Center for Regional Food Systems at MSU is coordinating a USDA-funded Regional Food System Partnership project in SWMI. that aims to provide business and financial support to small businesses in the food system, particularly those owned by people of color. We plan to provide space for the local Navigator’s programming and mutually refer potential participants. As much as institutional food service providers need skills-based training for their staff, workers need pathways to see food service as a viable career. Corporation for a Skilled Workforce, partnering with MSU, is working under a USDA AFRI Education and Workforce Program grant to address training barriers in the local/regional food system, statewide. Locally, ValleyHUB is also partnering with two workforce training partners to develop a career pathway for IFSP workers who can themselves become change agents pushing for ongoing local/regional sourcing on healthy, scratch-cooked menus in institutions’ cafeterias.

Small and mid-size local and regional food producers need support accessing institutional and retail markets and instating scale-appropriate food safety practices. Institutional food service providers need training for staff in order to become a steady market for local and regional farms and producers. Michigan’s food system networks have developed programs and training materials to fill many of these gaps, but finding and navigating these resources takes more time than these busy partners have. ValleyHUB is a food hub that is running smoothly to link local producers with compatible customers; we are also in a position to link them with the training resources they need so we can all scale up together. Support from USDA LAMP grants has provided critical resources so that we can support growers in our region, and amplify our impact by training workers and leaders in the institutional food service arena with skills that they can use to further grow demand for local food.

Moving beyond one-size-fits-all.

After six years of planning and practice, we know our partners need different kinds of support: from simple logistics, to custom processed products, to tailored trainings. From our position within Kalamazoo Valley Community College, ValleyHUB can uniquely help them thrive. **With LAMP support paired with local investment, we are building out the responsive, demand-driven portfolio of tools, services, and programs that grow demand for locally and regionally produced food products through institutional and retail markets.** This is what we plan to do over the next three years:

We will continue to run a social enterprise food hub: connect small and mid-size local/regional food producers with scale-appropriate customers, host a web-based ordering platform, and actively aggregate/distribute products. For some partners, these logistical services are the only service needed; for others, they are the base of a strong relationship, opening doors for us to provide further support. We will continue to support farms achieving food safety milestones, and broaden our focus to highlight a spectrum of scale-appropriate food safety options. We will still offer help with USDA GAP certification through the Michigan Group GAP Network, and also

develop and offer a portfolio of training options: individual consulting with farm owners, group training for farm staff, and open workshops. We will use resources and curricula developed by program partners when possible, and publish ValleyHUB's Standard Operating Procedures and other documents as a tool for other practitioners.

We will develop a Food Safety Assurance Program for our hub, modeled after the New Mexico Grown approved supplier program⁷, which can serve as a pilot for other hubs or a Michigan-wide effort.

We will increase demand for local and regional purchasing by IFSPs through training that builds staff capacity for handling fresh, local and regional foods in their own kitchens – whether they procure product through ValleyHUB or directly from local farms. If needed, grant funds will also support their purchase of small food processing equipment to address their particular barriers. ValleyHUB will continue to produce the fresh-cut and/or frozen local produce items they demand and develop new products as needed. We will also continue to match smaller growers with right-size retail customers, building a pathway for sustainable growth for smaller growers.

Local and regional food systems, and the locally embedded businesses and organizations that support them, are a critical piece of our global food security, and need to be supported as such. The funding Kalamazoo Valley Community College has received through the LFPP grant is instrumental in allowing ValleyHUB to work towards our full potential. We currently support over 32 regional farmers and value added product producers, connecting consumers to fresh Michigan grown produce in settings as diverse as hospitals, schools, groceries, restaurants, and early child care facilities. Not only is ValleyHUB growing, but we are acting as an engine of regional economic prosperity for rural families in Southwest Michigan. Our programs build new skills, relationships, and market solutions for settings that have unique food preparation and serving requirements.

We thank Senator Stabenow for her leadership and strong advocacy for permanent LAMP funding in the 2018 Farm Bill. I appreciate the opportunity to share how the dollars dedicated to rural economic development have impacted ValleyHUB and our partners in Southwest Michigan.

¹ USDA-NASS. 2017 Census of Agriculture.

² Colasanti, K., Hardy, J., Farbman, J., Pirog, R., Fisk, J., & Hamm, M.W. (2018). Findings of the 2017 National Food Hub Survey. East Lansing, MI: Michigan State University Center for Regional Food Systems & The Wallace Center at Winrock International. Retrieved from foodsystms.msu.edu/2017foodhubsurvey

³ Colasanti, K., Cantrell, P., Cocciarelli, S., Collier, A., Edison, T., Doss, J., George, V., Hamm, M., Lewis, R., Matts, C., McClendon, B., Rabaut, C., Schmidt, S., Satchell, I., Scott, A., Smalley, S. (2010). Michigan Good Food Charter. East Lansing, MI: C.S. Mott Group for Sustainable Food Systems at Michigan State University, Food Bank Council of Michigan, Michigan Food Policy Council. Available from: www.michiganfood.org.

⁴ New Growth Associates. Farm to Institution: A supply & demand planning process. 2016. Available from: <http://newgrowthassociates.com/portfolioASupplyAndDemandPlanningProcess.html>

⁵ Mariel Borgman, MSU Extension, personal communication 23 May 2021.

⁶ Results of National Institutional Buyers and On-Farm Food Safety Survey. Presented to MFIN, 25 May 2021.

Rachel Chadderdon Bair, Director for Sustainable Food Systems at Kalamazoo Valley Community College, contributed to the writing of this testimony.

Testimony of Steve Ewald**Before the Senate Committee on Agriculture, Nutrition, and Forestry****“Growing Jobs and Economic Opportunity: 2023 Farm Bill Perspectives from Michigan”**

Good morning Chairwoman Stabenow and Ranking Member Boozman. Thank you for the opportunity and invitation to testify before you today.

My name is Stephen Ewald, I am the owner and operator of Ewald Farms, near the Village of Unionville in Tuscola County. There, along with my wife Dana and my son Luke, we operate a certified organic cash crop farm comprising of nearly 2200 acres. We grow a variety of crops including yellow and blue corn, winter wheat, soybeans, navy beans, black beans, great northern beans, small red beans and dark red kidney beans. We strive to be diversified and nimble in crop choice as to satisfy customer demand while maintaining an important crop rotation that allows the use of various cover crops to help protect and build our delicate soil. I have been a farmer most of my life with memories of working with my mother and father at a very young age. In 1999, faced with the challenges of working off the farm, and trying to make enough money farming to be considered legitimate, I decided to move toward organic production. Although it was not an easy journey, it worked out well and in the 23 years since, I have not looked back. I also had the help of a fine small, rural bank that made it possible to bridge the gap between conventional and organic production.

I currently serve as Vice Chair of the Michigan Bean Commission and Chairman of the Production Research Advisory Board. I also serve on the Michigan Farm Produce Insurance Authority Board representing dry bean growers. I also currently serve as chairman of the Board of the Organic Farmers of Michigan, which is a group of more than 70 certified organic farmers in mid-Michigan formed to help them market some of the best quality food grade soybeans, edible beans, and grains produced in the U.S.

I believe that agriculture has a place for all types of farmers. Food security through environmentally responsible, domestic production and distribution in my opinion should be viewed as the number one priority in America. No one should have to worry about the basic necessity of life, Food. The American farmer is up to the task. We do however, need consistent access to affordable financing opportunities as well as efficient, affordable means of insuring our crops and property. The 2023 Farm Bill can and should include incentives for sound environmental practices that can be implemented by most growers. I myself have utilized the CREP program, cover crop seed reimbursement, ARC/PLC and the crop insurance subsidy, and the organic certification subsidy.

Organic farmers in particular, utilize specialty cover crops to help maintain and build soil quality. This is extremely important for organic growers because of the avoidance of synthetic nutrient fertilizer inputs. We do not have the option of conventional nitrogen fertilizer such as urea or anhydrous ammonia to kick start our corn and wheat crops. This can sometimes limit yield and or quality levels of grain. Instead, we utilize manures and composts, which are in short supply as well. Thanks to Senator Stabenow's leadership, the 2018 Farm Bill included permanent, mandatory funding for organic research, which could encourage research on organically permitted products that would utilize atmospheric nitrogen. The 2023 Farm Bill could also encourage research on organically permitted insecticides and fungicides to help the producer cope with the influx of climate related disease and insect pressure. The 2023 Farm Bill could certainly contain support for the breeding of natural cross seed varieties that may better compete with the newest seed technologies built in a gene lab. Crop insurance can also be an important risk management tool for producers, but I encourage the Committee to work to ensure this tool works for organic producers and I appreciate your efforts, Senator Stabenow, to expand this program to more types of production in past Farm Bills. I am very concerned with imports of fraudulent organic products that do not meet the same high standards as U.S. organic farmers and undercut domestic organic growers like me. It is critical that USDA quickly implement the 2018 Farm Bill provisions to ensure organic importers have all the tools and enforcement actions necessary to combat organic fraud at ports and in domestic markets.

In my closing, I will plead with the writers of the 2023 Farm Bill, to incorporate funding and language, that will build a stronger base for all organic agriculture through better biological product development programs for nutrient availability, increased production of natural fertilizers, better access to breeding lines for organic seed companies, continued and renewed support for organic research at universities such as MSU. Continued funding for dry bean research in variety, disease resistance and placement of this protein rich food in food programs of our nation and beyond our borders. We still struggle with even medium speed internet access, so the continued push for rural broadband is a must. We all live in a beautiful but somewhat fragile world and I believe all farmers want to produce the most while doing no harm. It would be wonderful for all to heal our world with some old and some new highly sustainable practices. Let farmers be farmers, we are good at it, it's in our blood. Help us where you can, thank you for time.

Senate Testimony

Thank you for the opportunity to speak. My name is Glen Chown and I am the Executive Director of the Grand Traverse Regional Land Conservancy, a regional land trust based in Traverse City, Michigan. Traverse City is called the Cherry Capital of the World because it is one of the most globally unique and agriculturally diverse growing areas of the country and grows a monumental quantity of sweet and tart cherries.

To begin, I would like to thank Senator Stabenow for her leadership and vision in championing historic investments to protect our Great Lakes and address climate change impacts while also preserving important habitat and supporting outdoor recreation, our way of life, and our economy. The list of the senator's accomplishments in conservation and agriculture is long, with each playing a critical role in protecting our land and water resources.

I'd also like to thank Senator Boozman for being here today to learn how Farm Bill programs support Michigan agriculture. Senator Boozman has always been a champion of conservation in Arkansas and I look forward to working with you to continue to prioritize critical wetland habitat and the restoration of migratory bird and other wildlife ecosystems.

There has always been bipartisan support for programs that protect our farms, our ranchlands, our outstanding growers, and our coveted freshwater resources, and we are pleased that this vital bipartisan spirit continues under your leadership. With you two leading the way on the *Growing Climate Solutions Act*, it passed out of the Senate on a sweeping 92-8 vote. On behalf of the land trust community nationwide, please know how much we appreciate your leadership and appreciate your bipartisan approach as we tackle the important global food security issues that are at the top of all of our minds.

To underscore the importance of strengthening conservation programs in the upcoming 2023 Farm Bill, I want to share a brief summary of our Regional Conservation Partnership Project. This would not have been possible without Senator Stabenow's leadership and Congress' significant investments in the Farm Bill Conservation Title.

In 2015, a unique collaboration of two tribal nations, federal and state agencies, and nonprofit organizations called the Tribal Stream and Michigan Fruitbelt Collaborative came together to accomplish the following:

- Improve water quality in northwest lower Michigan's portion of the Great Lakes Basin
- Recover degraded wildlife habitat
- Improve fish stocks and reconnect aquatic habitats
- Enhance tribal subsistence fishing
- Permanently protect productive family farms, including wetlands and inland streams
- Ensure future agricultural productivity, viability, and ecosystem health.

Together, these partners have and continue to increase to 26% the total amount of working agricultural land under permanent conservation easement in one of the fastest developing areas in the Great Lakes basin. These permanent protections on family farms are accomplished through voluntary agreements and, unlike past agricultural programs, are designed to permanently buffer critical streams, wetlands, and surface waters.

This additional land protection and stream restoration work will help protect a major portion of the network of globally rare cold and cool water, groundwater input, and sandy substrate habitats connected by large forested corridors that deliver the highest quality water inputs and comprise the backbone of resiliency for the Great Lakes.

Protection of water quality and re-connection of aquatic habitat in this region is vital as these natural resources underpin two major and interdependent portions of Michigan's economy – agriculture and tourism.

Our region clearly has the potential to be an example of what can be done, right now, to address food security and climate change, and the federal government can be assured that there is a network of organizations in place to make it happen. We have the necessary elements to make it work: prime agricultural lands; enthusiastic skilled farmers; a direct sales and distribution network; training and mentoring programs for new and beginning farmers; and local farmers willing to serve as test sites and mentors. For all of this to successfully come together, we must have federal program and financial support.

Our region has much in place, but continuing this work and ensuring we retain our agricultural lands and keep our farmers and ranchers viable hinges on a strong Farm Bill conservation title.

Programs such as the Agricultural Conservation Easement Program provide the resources for land trusts such as ours to work with willing landowners to put conservation easements on their properties. This is a win for all Americans — it helps keep working lands in production for now and forever into the future. That need has been important for decades, with conversion of farmland and other working lands taking place at an alarming rate. Today, the risks of losing our ability to grow food and fiber here at home are even more evident as food security issues appear around the globe in response to the war in Ukraine. We must do everything we can to ensure that farmers and ranchers have the tools and resources they need to keep these lands in production and to be able to earn a living.

In addition, the corresponding Regional Conservation Partnership Program provides the “secret sauce” to address these challenges head on. RCPP enables innovative public-private partnerships to utilize the NRCS programs, including

easement programs, to conserve working lands, address water quality, and other important natural resources issues on farms.

I have underscored the importance of specific programs that conserve our farms and ranches which are under continued threat of conversion to other uses. These easement programs work hand in hand with the suite of conservation programs in the Farm Bill that are critical to addressing the variety of resource concerns and farmer needs on the ground. These include the Environmental Quality Incentive Program, Conservation Reserve Program, and Conservation Stewardship Program. Together, these programs meet farmers at their current level of ability and interest and help them achieve their conservation goals. They are critical to a resilient future.

Meanwhile, I should point out that even though ACEP and RCPP are critical tools, the demand for these programs far exceeds the funding. Congress should authorize additional funds so that farmer demand can be met. The Land Trust Alliance is collecting data to determine how many farms and ranches are at risk due to inadequate ACEP funding last year. To date, we are aware of at least 34 qualified projects in Texas, Arizona, Virginia, Pennsylvania, and other states that would have conserved more than 131,000 working acres of farm, grasslands, and ranches. In addition, these dollars would have leveraged at least \$80 million in matching funds. This snapshot presented today does not represent the whole picture, but it does give a sense of what's at risk for our country without robust funding for these important programs.

Senator Stabenow, I applaud you for recognizing the need for increased funding for farm bill conservation programs. The \$28 billion in new funding for the farm bill conservation title as part of the reconciliation package shows your strong commitment to ensuring a viable agricultural community here in Michigan and across our country. Let's work together to get that bill passed and get these dollars flowing to our local communities and farmers.

In addition, there are opportunities for the 2023 Farm Bill to improve easement programs so that they can be even more effective. While great strides were made to streamline ACEP in the 2018 Farm Bill, the implementation has not been entirely smooth and we have suggestions for improvement in this upcoming bill.

First, we would like to work with you to clarify that certified entities can draft their own deed terms, eliminate the ALE plan requirement that served as an impediment to conserving farms and ranches, and allow land donation and expenses to satisfy the match requirement.

The ability to recognize exceptional land trusts as certified entities was established in the 2008 Farm Bill. With this provision, Congress intended to streamline implementation of the ACEP program. To date, only seven entities have been certified. We recommend clarifying the certification application and enrollment process and expanding it so that certified entities are recognized across all NRCS easement programs, including RCPP. Trusted partners can leverage limited NRCS resources and make federal dollars stretch farther, ensuring programmatic dollars are allocated to strong projects on the ground.

Second, even with an increased utilization of partnerships, the NRCS continues to be understaffed. It's important for Congress to provide the funding needed to build staff capacity to deliver results. The land trust community is working with the agency to identify ways to eliminate and streamline approval processes. For example, upon implementation of the 2018 Farm Bill, the final ACEP rule added hurdles and undermined congressional intent by doing things such as making a cash match a national ranking criteria for ACEP or making ALE plans a state ranking criteria. These arbitrary requirements only increase the difficulty for the agency and partners to deploy federal resources to local projects.

Third, we recommend a new easement program for forested lands that is separate from ACEP and does not compete with ACEP for funding. We further recommend

enhancement of the Healthy Forest Reserve Program by creating a stand-alone Forest Conservation Easement Program that ensures private forestland remains intact and in production, allowing them to continue providing numerous benefits to rural and urban communities.

Finally, it goes without saying that it is critical to ensure that all landowners have access to farm bill conservation programs by reducing barriers to historically underserved landowners.

Thank you, Senators, for taking the time to hear from northern Michigan as you draft the 2023 Farm Bill. We are profoundly grateful for your leadership, your vision, and your commitment to strengthening the Farm Bill conservation programs that provide so many benefits to all Americans across this great country from sea to shining sea.

**Senate Agriculture Committee
Field Hearing**

*Growing Jobs and Economic Opportunity:
2023 Farm Bill Perspectives from Michigan*

East Lansing, Michigan
April 29, 2022

Testimony of:

Brian Bates
Bear Creek Organic Farm

Bear Creek

o r g a n i c f a r m

PETOSKEY, MICHIGAN

Chairwoman Stabenow, Ranking Member Boozman, and members of the Senate Agriculture Committee, thank you for the opportunity to testify at today's 2023 Farm Bill hearing.

My name is Brian Bates and together with my wife Anne, we own and operate Bear Creek Organic Farm in Petoskey, Michigan. We are first generation farmers. Organic farmers. Young and beginning farmers. And farmers who would not be here today, if not for the Farm Bill programs that helped us get here.

Bear Creek Organic Farm is a USDA certified organic vegetable farm and greenhouse operation. We specialize in salad greens, tomatoes, garlic, and herbs. And each spring, we grow more than one hundred thousand organic transplants for our community.

Together with our hardworking staff, our supportive community, and a steadfast commitment to growth, our farm business journey has been noteworthy not just in crops produced, but how we grow, sell, and staff our farm.

Almost 90% of our farm's products are sold within 12 miles of our farm. Five years ago, less than 10% of our sales came from on-farm. Now, 75% of our business takes place on our farm, while the other 25% supplies local and regional grocery stores. Focusing on season extension, we now have 10 greenhouses and hoopouses that cover 1 full acre. And most importantly, we have built a great team. As we enter our 9th season, we are proud to employ 7 full-time, year-round positions along with 10 seasonal positions. Our first business plan stated that we could never afford to hire employees. Now we are job creators in our community. Jobs that average double the minimum wage and jobs for which we have never had to advertise to fulfill.

With sales projected to top \$1 million this year, no one is more surprised about our journey these last 9 years than we are. We bought a blank piece of unmanaged pasture with nothing on it. The previous farmer assured us that we would hardly be able to make anything grow in this sandy valley. And with every skeptical old-timer that stopped by, we grew more determined to prove them wrong.

We became our community's first USDA Certified Organic farm in 2013. In 2020, we became the first B Corp Certified farm in the state of Michigan. In 2021, we became our region's first Real Organic Project Certified farm. And in 2022, we were named a Michigan 50 Companies to Watch.

We're proud of what our farm business has become. But to sum it all up and leave it at that ignores the hardship and toil that has gotten us here.

Our Farm Credit Journey

Like many would-be young farmers, our passion alone for getting into farming was not enough to build our vision. We needed money. And lots of it. And while many folks advised us against taking on agricultural debt, we understood that borrowing money was our only path forward.

When the USDA launched their FSA Microloan program, we knew that was our ticket. We had no operational history to lean on. No generational assets to leverage. And no bank wanted to touch us. The prospect of borrowing \$35,000 seemed like just the injection of capital our young business needed.

So you can imagine our disappointment when we were denied our first FSA Microloan. I can remember exactly where I was when we got that call. And with no other obvious options, we waited for the next fiscal cycle to re-apply.

This time, we were guided through the process with an FSA Loan Manager who understood specialty crops. Who understood the growth in the organic sector. And who had witnessed the growth of organic, local, specialty crop agriculture in our northwest corner of Michigan. Simply put, the same agency that dashed our hopes a few months prior, became an advisor and a steward.

As they watched our farm grow, our local FSA office shared new opportunities we were eligible for. When we approached them with a big idea, they helped us find the right fit for our business. And when other growers needed help, we knew where to send them.

Borrowing and farming have a complicated history in this country. But for our farm journey, the Bear Creek of 2022 would not be possible without the farm credit services of the Farm Service Agency in 2013. When we saw the need for expansion five years later, we were able to qualify for a \$400,000 Farm Ownership loan through FSA.

Again, the guiding hand of our loan officer helped us manage our risk and optimize our growth potential. It was then that he introduced us to Greenstone Farm Credit Services for a line of credit. That line of credit and introduction changed so much for our farm.

Of course, we were aware of Greenstone before. We actually approached them before we went to the FSA. But when we first contacted Greenstone, we did not qualify for any of their loans. They sent us to FSA. As we later learned, the FSA lending process plays an important role in filtering through first-time borrowers like us, and allowing more experienced operators to use more traditional farm credit.

Being sent to Greenstone from the FSA a mere five years after Greenstone sent us to FSA was a rewarding moment for us. And our risk profile was significantly different by then. Our relationship with Greenstone has matured dramatically over the last few years. As our farm

has continued to grow, Greenstone has grown with us. Really, you could say that our farm has been able to continue growing because Greenstone has helped us get there.

We've now graduated from the FSA loan programs and deal exclusively with Greenstone. And while this is certainly testament of the benefits of member owned farm credit cooperatives, this is also an FSA microloan success story. The Microloan was a new and innovative Farm Bill program in the 2014 Farm Bill. It helped us buy our first greenhouse and tractor. But it also helped us build credit. Build equity. Learn to manage debt sustainably. And most importantly, it gave us a fighting chance in the incredibly capital intensive business of agriculture.

Beneficial Farm Bill Programs and Provisions

Beyond farm credit, we have benefited from several other Farm Bill programs and provisions. We have built two hoopouses through the NRCS EQIP program. While this program's funding has been dramatically outpaced by the cost of materials (even before the current inflationary pressure), it is arguably the most popular NRCS program amongst growers like us. Few things can transform the productivity and profitability of a small market farm faster and more efficiently than a hoopouse or greenhouse.

We would strongly encourage the USDA to consider expanding the per square foot payments on this program and increasing the maximum size allowed. Bigger tunnels are more cost effective for growers and better for plants. Increasing the payment factor will help this program remain as valuable for future growers as it has been for previous participants

In 2015, we applied for and were awarded a USDA-Sustainable Agriculture Research and Education (SARE) Farmer Rancher Research Grant. Our research project ran for two years and involved researching alternative overwintering strategies for honeybee colonies in northern climates to reduce winter losses. After starting our local beekeeping club a few years prior, we learned and experienced what too many beekeepers up north go through - significant winter colony losses. Unlike the more infamous Colony Collapse Disorder (CCD), we hoped that winter losses could be managed with some different techniques.

After suffering several winters of significant losses, through the research we conducted, we were able to make connections with other beekeepers and MSU researchers, test our theories, and we managed to have 90-100% winter survival for four straight years after we published our findings. And our fellow beekeepers benefitted too! We became a northern host site for MSU-led beekeeper trainings in the apiary and have significantly contributed to the overwintering successes of our regional beekeepers. All of this was possible because of a small investment in our research grant through the SARE Program. We strongly encourage continued and increased funding of the entire suite of SARE suite research grant projects.

The USDA-SARE program has been an essential resource to myself and countless beginning farmers. The first farm I volunteered on was while I was in college at Penn State University. It

was a non-University farm, but it was in the midst of its own USDA-SARE funded Farmer Rancher grant project involving on-farm composting of municipal leaf collection. My next farm experience was working at the Penn State Research Farm working on an organic cover crop research project. Also with SARE funding. The most valuable podcast in our business startup years was a farmer business podcast that had received SARE funding. And we've benefitted from and provided support to, numerous SARE research projects over the last decade. Few dollars are better spent than those on USDA-SARE projects led by and for farmers and researchers who are literally in the fields where the knowledge is needed.

Another program we value each season is the Organic Cost Share. A refreshingly straightforward program (by USDA standards), the Cost Share allows organic producers to commit to the full certification without bearing the full cost burden. Some have questioned the merit of this small cost share, but in our experience, it is the smaller and beginning growers that benefit the most.

It has also been our experience that costs associated with organic certification often keep some growers in the pseudo-organic realm. This is undesirable. Non-certified farms proclaiming organic practices tend to confuse consumers, blur the lines of transparency, and erode the trust in truly USDA Organic production. Anything we can do to reduce barriers to farms becoming officially USDA Certified Organic is a victory for consumer trust and organic agriculture.

Opportunities for Future Investment

From our perspective, there are a handful of challenges and opportunities for beginning growers, along with local and organic growers.

Even though we benefitted tremendously from the FSA credit services, it was incredibly tedious and felt more complicated than necessary. Any efforts to ease the paperwork burden (as was done with the microloan), reduce the barriers to entry, and provide more favorable early payment opportunities would benefit future borrowers.

Recent federal food safety requirements have easily been the most significant shift in small farm operations. The Food Safety Modernization Act (FSMA) has a lot of good in its framework. But the costs associated with compliance could put many farms out of business. This is not hyperbole. Even for a relatively young business like ours, with a strong growth trajectory, the costs of compliance are incredibly significant.

We would strongly encourage a cost-share type program for farms to adopt the necessary practices to comply with FSMA. Whether these programs could cover necessary infrastructure improvements, reimbursement for water testing, or tools and technology to improve traceability and training, any investment would make a difference. Whether intentional or not, it feels like many provisions of the FSMA were designed to filter small producers out of the

marketplace. The cost of basic compliance is disproportionately higher on a per dollar of production basis for smaller operations by volume.

Lastly, and perhaps most importantly, we have benefitted from two Michigan-born programs that we think merit nationwide implementation. These two programs are 10 Cents a Meal and Hoophouses for Health. The best part about these programs, and why they are so fitting for the US Farm Bill, is because both programs simultaneously and independently benefit local agricultural producers and food insecure consumers.

10 Cents a Meal

While we encourage you to reach out directly to the Groundwork Center for Resilient Communities regarding the specifics of 10 Cents a Meal, we can summarize it briefly. It provides economic benefits, access to local food, and marketing and education.

10 Cents A Meal For Michigan's Kids & Farms has provided business to farms that range in size from a 20-acre farm targeting local markets to a nearly 2,000-acre farm that has the capacity to supply the largest of our state's school districts, such as Detroit Public Schools. Schools typically have only about \$1 to \$1.20 a meal to spend on food, and of that, about 30 cents is for fruits and vegetables. So a matching 10 cents, food service directors say, help them serve more fresh produce instead of canned. And schools that were awarded the 10 Cents grants had a wide variety of plans to educate students and promote local foods in connection with food service efforts.

Hoophouses for Health

While we encourage you to reach out directly to the Michigan Farmers Market Association regarding the specifics of Hoophouses for Health, we can summarize it briefly. Hoophouses for Health was a program designed to increase access to Good Food for vulnerable families while at the same time expanding the Good Food infrastructure and season extension capacity of Michigan farmers.

From 2011-2018, the program distributed \$833,995 to 66 farmers to purchase, construct, and grow in over 221,452 square feet of hoophouse production space. Participating families used Hoophouses for Health vouchers and market cards to purchase \$240,210 of produce at participating farmers markets. Participating farmers also provided 41,613 lbs of fresh, Michigan-grown produce to eligible schools and/or early care and education programs through 2018. Hoophouses for Health provided participating farmers with funding to build a new hoophouse. Farmers "repaid" their five-year, zero-interest "loan" by accepting Hoophouses for Health Market Cards from participating families at farmers markets or by providing free produce to qualifying schools or early childhood programs.

Whether or not the funding was limited to hoopouses or school districts with qualifying free and reduced lunch, the premise of taking a single grant dollar and spending it twice (once with producers, and again with consumers) is a powerfully elegant and multiplicative approach to injecting limited grant funds into high impact community investments.

The Benefits of Farm-Specific and Organic Programs

For specialty crop producers and diversified market farms, we find programs such as these to be especially beneficial. It is difficult to fit many specialty crop farms into predefined categories. This limits our ability to take advantage of many of the Farm Bill's most well-funded programs. It is our belief that more programs focused on farm operations as a whole, rather than singular crop enterprises or commodity programs, would be a significant improvement for the 2023 Farm Bill and beyond.

Farmers and ranchers know what their businesses need to succeed. And so often, we are left searching through programs that don't quite fit. As I've already stated, our farm has benefited significantly from traditional and alternative loans and grants. We think the potential of alternative loan repayment options presents an untapped opportunity that would benefit growers, consumers, and taxpayers alike.

Finally, we kindly and strongly request that you consider significantly increasing the Farm Bill investment into Certified Organic agriculture in the United States. Organic food sales are the fastest growing sector in the US, and they receive a fraction of the investment they deserve. It is incredible what the organic food producers and processors have achieved in the last few decades with minimal Farm Bill investment.

Similarly, we are very concerned about the quantity of imports required to meet domestic demand for organic foods. Domestic organic consumption far outpaces organic production and we believe that with targeted investment, the 2023 Farm Bill could significantly increase domestic organic production to help meet demand. In a changing geopolitical landscape and a changing climate, few investments seem more worthy than focusing on improving domestic production to meet domestic demand.

Thank you so much for the opportunity to share our experience, testimony, and ideas for the 2023 Farm Bill. We are privileged to be living proof of what is possible when our own government invests in programs that allow us to startup, grow, and thrive. And for that, we thank you.

Thank you for your time,
Brian Bates

I would like to start with a heartfelt thanks to Senator Stabenow for her ongoing support of the Flint Farmers' Market and to the entire Agricultural Committee for the opportunity to speak today. Our market is located in the heart of downtown Flint and has been a fixture in the Genesee County community since 1905. We serve over half a million customers a year and have about 75 vendors, 45 of whom are year-round. The market provides work opportunities for nearly 300 individuals from our area annually. We have been designated as one of the top Public Spaces in America and have consistently appeared in top 10 public markets in the US!

Many people are surprised to learn of the accomplishments Senator Stabenow mentioned because we are located in Flint. Our community has taken many hits over the years and the toll on families struggling to survive is not getting any easier. The SNAP/EBT program, which is funded through the farm bill, is a consistent source of opportunity for communities like ours. Making good food affordable and available for families is crucial to try to help people lift themselves out of poverty. Our market is extremely diverse both in terms of our vendors and our customer base. Almost all our eligible vendors accept EBT/SNAP benefits and participate in the Fair Food Network's Double Up Food Bucks Program which Senator Stabenow helped take nationwide in the Farm Bill by establishing the Gus Schumacher Nutrition Incentives Program. Our market's participation in these programs has not only benefited the people of Genesee County, but it has kept our farmers in business during particularly trying times such as covid, natural disasters and economic downturns.

Some people may be surprised to learn what kinds of people are aided by food assistance. Over the years, EBT has been widely associated with low-income single parent households, but that is not necessarily the case in 2022. We do see single parents, but we also see people with disabilities, parents of children with disabilities, senior citizens, college students and displaced veterans. There is no one face of EBT – it reflects a broader community of people who are struggling to make ends meet and survive. It is also a changing population based on circumstance – what I mean to say is that people benefitting from food assistance by in large are not looking to be lifetime members of this group. We see so many people at our market who have fallen on hard times for a variety of reasons, most of whom it is visibly a harsh blow to their pride to accept assistance. But it becomes for their family, not a matter of choice but a matter of survival. I have personally witnessed customers in tears upon understanding that by shopping at our market with SNAP and Double Up Bucks they can double the amount of good food (grown by farmers) for their families. It has been a humbling experience for many.

I have also witnessed the evolution of food education because of programs like Double Up Bucks that support Michigan agriculture. In 2021 there were more than 150 farmers' markets in Michigan, 72,856 transactions occurred at those markets and accounted for \$1.6 million in SNAP/EBT sales for the state much of which goes directly to our farmers and producers. It is a happy occasion to pass a customer having a conversation with a farmer or vendor about when Michigan produce is in season so that they can utilize the funds they have saved on their card. Part of this food evolution relies on the funds to continue to promote and educate our community that these types of programs are available and how they can best use them to benefit their families. The importance of marketing funds for farms and markets cannot be understated nor can assistance from healthy food financing incentive programs which helped make it possible for our market to expand.

It is also important that we talk about technology and the integral part it plays in the advancement of food assistance. Our market was a pilot over a decade ago for the Double Up Bucks program. Most other farmers markets TODAY are still using tokens to accept food assistance funds from customers. Our market, I am very proud to say, has always been a digital shopping experience beginning with EBT. No tokens here! When Double Up Bucks came along, we insisted on continuing that

tradition and partnered with a creative local technology company (Epic Technology, Eric and Paul Knific) that created a digital option for us. This was not only for the ease of use and less burdensome system on farmers and vendors but for a larger reason.

I mentioned earlier the emotional side of using food assistance – our market developed a reward card system for shoppers to utilize Double Up Bucks. This decision shaped the face of food assistance for at our market. People in our community who were already struggling did not have to wait in line longer, hold up transactions for farmers to count tokens and feel uncomfortable using their benefits. Now having an EBT card and getting and using a Double Up Bucks card is a positive experience and the stigma of their struggle, at least for the time they are in our market, is eased. Technology leveled the playing field. This practice should become a reality all over the country for EBT recipients with regard to interactions at farmers markets and with local food producers. Once the Double Up Bucks program was created and shoppers realized that shopping at farmers markets gives them more bang for their buck our farmers and vendors saw a huge increase in sales. Consistently each year, the Double Up Bucks Program pays out \$110,000 to our farmers and produce sellers at our market alone on top of the SNAP/EBT, credit and cash sales. It is a win-win-win; people are comfortable coming in and learning about the food that is being grown, using their benefits to purchase it for their families, thereby increasing our farmers' stream of income.

Programs like SNAP/EBT and Double Up Bucks being available at farmers markets and for farmers more broadly is a huge part of HELPING EVERYONE in our to society grow stronger and HEALTHIER TOGETHER.

Karianne Martus
Flint Farmers' Market

**Testimony of
Joe Sullivan, DVM, MPH
Director of Pullet Operations
Herbruck's Poultry Ranch, Inc.
Before the
Senate Committee on Agriculture, Nutrition and Forestry
"Growing Jobs and Economic Opportunity: 2023 Farm Bill Perspectives
from Michigan"**

April 29, 2022

Chairwoman Stabenow, Ranking Member Boozman and distinguished members of the Committee:
Thank you for the opportunity to testify today. My name is Joe Sullivan. I am a veterinarian working for Herbruck's Poultry Ranch, Inc., a multi-generational family-owned farm with headquarters in Saranac.

The Herbruck family has been in the egg business for nearly a century. The fourth generation of the family is now learning the ropes and preparing to lead the farm in the future. Herbruck's is an operation that was established in 1958 and has grown to be the largest cage free egg producer in Michigan and the largest Organic producer in the USA. Herbrucks offers several specialty eggs such as Cage Free, Non-GMO, Organic, and Free Range. Herbruck's proudly embraces the complete organic cycle, from the eggs produced, to feed for the birds, and the fertilizer produced that is used to start the cycle over. All of this is done while keeping a strong emphasis and commitment to animal health, welfare, and food safety. Herbrucks has maintained the drive to "serve the bird," and in doing so there are several key components that contribute to make this effective. A key component to caring for the birds and providing a good egg is the feed. Aside from the 1,700 acres that Herbruck's farms, we are a large buyer of corn from our local community. 100% of our conventional and Non-GMO corn comes from within the state of Michigan, as well as nearly 90% of the organic corn. Herbruck's strives to prevent waste and utilizes all aspects of the farm, we offer multiple forms of organic fertilizer. As the birds go through the process to create the fertilizer, it is dried and removed on belts to improve air quality and animal health. All forms of fertilizer are dried within the chicken house and helps to minimize odor and pests making it a better environment for both bird and human. Herbruck's Poultry Ranch offers much more than a nutritious safe egg. The egg is part of a sustainable organic cycle that is derived from an animal raised with integrity, while being fed quality feed that was raised with the fertilizer created from the birds.

Nationwide, the U.S. egg industry accounts for 119,080 jobs and over \$6.6 billion in wages to families throughout the country, with a total economic impact of \$34.7 billion. Like all farmers, we are directly and indirectly affected by farm bills and the programs they enact. We appreciate the Committee's leadership in preparing for the 2023 farm bill through this and subsequent hearings.

We also appreciate the committee's past work. In a moment, I will discuss highly pathogenic avian influenza. The only reason farmers are able to be indemnified for this devastating disease is the past work of this Committee and your colleagues in the House of Representatives to enact and amend the

Animal Health Protection Act. In a similar way, the Agriculture Committee provided invaluable help to animal agriculture in the 2018 farm bill through the National Animal Disease Preparedness and Response Program. Thank you all for your leadership in support of the barnyard.

I would like to mention a few issues that are important to egg farmers. Some of these issues can be directly addressed in the farm bill. Others probably cannot be, but Senators could still help our industry through advocacy with the executive branch or your colleagues on other committees.

- **Highly Pathogenic Avian Influenza:** U.S. poultry farms are currently dealing with an outbreak of highly pathogenic avian influenza (HPAI) that has already affected some 24 million layers. We commend the Animal and Plant Health Inspection Service (APHIS) for its prompt response to this crisis. It is critical for APHIS to have access to Commodity Credit Corporation (CCC) funds without restriction, in order to pay indemnities and related costs. In this regard, Senators could help us by urging the Office of Management and Budget to promptly meet any APHIS requests for CCC funds. In addition, APHIS needs to review its indemnity calculations and make them more transparent. Currently, indemnity formulas do not adequately cover all production types, such as organic production.
- **Low-Pathogenic Avian Influenza:** Although HPAI is the immediate concern, our industry also undergoes periodic outbreaks of low-pathogenic avian influenza (LPAI). These diseases are less severe than HPAI, but LPAI viruses have the potential to mutate quickly into highly-pathogenic varieties, and have done so. LPAI outbreaks need to be stamped out quickly before mutation occurs. LPAI control is critical. In the 2023 farm bill, Congress should require the use of CCC funds to indemnify LPAI and cover related costs.
- In addition to HPAI, we are continuing to see emerging infectious diseases, like infectious coryza and egg drop syndrome virus, in areas that have not had these diseases before. We have new challenges to our flocks as the landscape of how we raise our birds changes. We need to ensure funding to our National Animal Health Laboratory Network (NAHLN) that provides crucial resources to prepare and prevent a crisis and brings together the federal government, states, industry, and universities to:
 - Provide rapid detection and response capabilities
 - Develop mitigation and stamp-out technologies including vaccines
 - Identify and support critical research needs
- **Organic Livestock and Poultry Practices Rule:** We are concerned about a proposed rule, now under review at the Office of Management and Budget, that may be issued soon. In 2017, the Organic Livestock and Poultry Practices (OLPP) was rescinded, which freed farmers to use the space they had to raise broilers, layers and turkeys.

This should NOT become a rule. Farmers have invested millions of dollars into legacy systems, which have in the past been explicitly allowed by the National Organic Program. Introducing a

new and restrictive regulation will cause further market disruption, and increase the costs to raise Certified Organic eggs, chicken and turkey.

Furthermore, the OLPP regulation falls contrary to current safety protocols and best practices for poultry in our current HPAI environment. The 2017 regulation, which set welfare standards for organic livestock, states that “enclosed porches do not satisfy the organic agriculture requirement to provide daily outdoor access for livestock.” The safest way to protect poultry from HPAI is to keep them indoors. Forcing birds outside will increase the potential spread of HPAI and result in flock depopulation.

If our goal is to increase consumer adoption of Organic proteins, it needs to be the policy of this committee and the USDA to reduce the regulatory environment, so that costs can be reduced, not increased. Simply put, American families cannot withstand the price hike or the market disruption that this rule will incur.

- **Truthful Labeling:** This issue is not primarily under the jurisdiction of this committee, but it is important to us and to others in animal agriculture. We increasingly see plant-based imitation eggs and egg products using the word “egg” in their product names and on-pack statements, in ways that may confuse consumers and make them think the imitation products are nutritionally equivalent – which they often are not. Congress should instruct the Food and Drug Administration to enforce its own regulations against plant-based egg imitation products, many of which are currently misbranded under the Federal Food, Drug and Cosmetics Act.
- **Agricultural Labor:** We have the same problems many other industries do in attracting and retaining workers. The problem is not only in production but in ancillary areas like trucking. Congress should finally come together and pass legislation that will ensure access to a reliable farm labor supply, including reforms to the H-2A guest worker program to make it year-round so it works for animal agriculture. We fully realize the challenges Congress faces in this contentious area, but as employers, we are challenged too – labor is in short supply, supply chains are still distorted by pandemic effects, and we need our elected leaders to cooperate in finding real solutions that work for farms, businesses and workers alike.

Again, thank you for the invitation to testify today. I will be happy to respond to any questions you may have.

Hello,

Chairman Stabenow, Ranking Member Boozman, and Members of the Committee, thank you for the opportunity to testify at today's hearing.

My name is Alexander Ball, and I am proud to say that I am a South East Michigan farmer. I, along with two generations before me, were born and raised in a small factory town on the edge of Metro Detroit called Romulus. During the height of the housing crisis, I saw my local economy collapse and my friends, family, and neighbors plunged deeper into poverty and causing many local businesses to close, including our local grocery store. At that moment, the weight of the situation fell onto me, and at the age of 18, I knew that I wanted to grow food for my community and build a more resilient food system on the values of food access, mutual aid, and sustainable community focused growth.

That year I dedicated my life to growing food, and started my Peri-Urban farm Old City Acres. With no family land or money, the first (and largest) roadblock that would haunt me over the first half of my farming career was my lack of access to land and capital. Over the next half decade I would move from rented plot to plot trying to find a stable, safe, and long term location to try and build my farm business and agricultural future. All the while not being able to invest and build some resemblance of a future for myself and my family. As the years went on, I continued to save whatever scraps of income I could to go towards a piece of land of my own, but every year land prices and inflation continued to grow, slowly pushing me and many like me further away from the possibility of land ownership and building long term multi generational equity. After five years of saving for a small down-payment and finding a small piece of land to build my forever farm, I was ready to take the big push and grow my farm into a scaled up business. I was new to the world of banking, land buying, and government agencies but I had heard of the Farm Service Agency (FSA), and knew that they helped farmers.

After weeks of work trying to get an appointment, I was finally all set to meet with my FSA agent. Unfortunately, my agent (who's district represented large urban areas) was not from the community and was inconveniently located almost two counties over. I drove over an hour to be told that I couldn't be helped and that I should just turn to the private sector to fund my farming project. I was devastated because every other traditional bank I had spoken to was not interested in financially backing a produce farm or getting involved in agricultural endeavors at all. The FSA was my last shot, and I was devastated. They did however give me the information to a local Ag lending association "GreenStone Farm Credit Services" in 2017.

When I reached out to the folks at GreenStone with my business plan, tax information, and vision for my farm, I was blown away at how quickly they directly understood and supported my business with a loan to purchase my farm property and subsequent loans to improve and build my business. This direct access to capital has been the deciding factor in the overall possible success of my business. Over the last five years of owning my small 2 acres of land, I have invested over \$100,000 in infrastructure and land improvements, and all of that was on the back of affordable and accessible farm credit solutions. Our farm specializes in the year round productions of vegetables for direct to consumer sales through our community focused buying club. Utilizing unheated greenhouses, storage crops, and other season extension techniques we are able to produce local vegetables 12 months out of the year for a diverse range of consumers throughout Washtenaw and Wayne County. In 2021 we partnered with the Michigan Department of Health and Human Services and joined their Fresh Food Connections program. Through this partnership we are actively accepting EBT for our CSA (community supported agriculture) programs and connecting with local institutions to direct local folks using these transfer payments directly to our farm.

My farmland is situated in the heart of Sumpter Township on the very edge of Wayne County. At the turn of the century, many folks moving North to work in the auto industry settled here and farmed these wet soils, and I'm proud to continue that tradition along with many other folks in my community. As an area with a large portion of black landowners and farmers (compared to most rural spaces), I am thankful for the opportunity to be close to my family and feed those around me.

Since purchasing my land in 2018, I have unfortunately seen the effects of urban sprawl and land prices escalating in my local community especially by the covid 19 pandemic. I see development and single occupancy homes on 100 acre lots continue to inflate the cost of usable farm land at an alarming rate and I don't see a stop in sight. As land prices, inputs, and labor continue to increase so do those barriers into farming and building long term generational wealth.

As a peri-urban farm, I spend a lot of my time on the edge between rural and urban spaces, and one of the biggest hurdles I see is the lack of direct information about state and federal programs directly aimed towards small and urban growers. When FSA and other government agencies are located so far from urban centers there is no way to prevent disparity in access and use of those programs put in place to prevent that exact issue. Thank you to Senator Stabenow, for taking the first steps to address this disparity by creating the Office of Urban Agriculture in the 2018 Farm Bill, to help farmers like me have better access to USDA programs.

This last year I had the privilege to cooperate with other local growers and institutions to start the Washtenaw County Black Farmer's fund. Our goal was to raise funds from our community and redistribute it back to black farmers in order to grow their infrastructure and production through direct interest free grants. We were able to raise and redistribute \$100,000 in 2022, and

hope to be able to beat that next year. Through this fund, we were also able to act as an informational hub connecting growers directly to additional funding or technical assistance from local farmers, non profits, and GreenStone FCS.

There is so much work to be done at every single level of the food system, and I believe that we are just at the beginning of a new era of local food production and technological interconnectedness that will increase access to food, information, and resources to more folks. The strengthening of the food supply chain is important, and we need the continued and expanded roles of Farm Service Agency, Washtenaw Black Farmer's Fund, Office of Urban Agriculture, and GreenStone Farm Credit Services. Thank you so much for your time.

-Alexander Ball



Testimony of Allyson Maxwell – April 29, 2022

Chairwoman Stabenow, Ranking Member Boozman. Thank you for this opportunity and thank you for making the time to travel to Michigan to hear directly from farmers. My name is Allyson Maxwell. I farm along with my husband, Peter, in Beaverton, MI. We raise sugar beets, corn, soybeans and wheat. We also operate Maxwell's Pumpkin Farm in the fall alongside our family where we sell pumpkins, squash and ornamental corn directly to the public. Peter and I are proud to be a part of a multi-generational, diversified, environmentally-verified family farm that has the privilege of providing food, fiber and fuel for our world.

Our farm operation is typical for our part of the state but unique compared to crop rotations in other parts of the country. In recent years, our rotation of crops has helped to manage our risk and make our operation more resilient to sharp turns in the markets. For example, when there has been a downturn in corn or wheat prices, our sugar beet production has served as the anchor. With corn and wheat prices where they are today, it is very likely that they will serve as our anchor this growing season. As the Committee begins to evaluate policies for the next Farm Bill, I appreciate being able to share some of my own experiences as a board member for Michigan Corn Growers Association and as member-owner of the Michigan Sugar Company.

To begin, I would like to provide a bit of background information on the two commodity organizations that I am representing today.

Michigan Corn Growers Association

The Michigan Corn Growers Association is the only organization that solely focuses on the interests of Michigan corn farmers. It has nearly 1,400 members and represents the interests of roughly 14,000 farmers in the state.

Corn farmers are proud of the work they do to provide food, fuel and fiber to the world. Corn is Michigan's largest row crop by production, and we produce an average of 335 million bushels each year. Most of Michigan's corn production goes either into ethanol fuel or livestock feed, which creates economic ripple effects that further benefit our state's economy.

Environmental sustainability and stewardship continue to be important to corn farmers as well. Between 1980 and 2015, U.S. corn farmers have made significant advances including: decreasing the amount of land required to grow one bushel of corn by 41%; reducing soil loss

per acre by 58%; and reduced greenhouse gas emissions by 31%. Corn farmers have shown that they are at the forefront of sustainability, and we stand ready to continue to lead in this area.

Michigan Sugar Company

The sugar beet industry in Michigan dates to the late 1800s and all four of our factories – located in Bay City, Caro, Croswell, and Sebawaing – were built between 1899 and 1902. By the 1950s, the sugar beet industry in Michigan had coalesced around two main companies, Monitor Sugar Company and Michigan Sugar Company. These companies were privately owned and contracted each year with growers throughout the state. In 2002, Michigan Sugar Company was facing financial difficulties and was purchased by its growers, becoming a cooperative. In 2004, Monitor Sugar Company faced similar challenges and its growers, in collaboration with the Michigan Sugar Growers, purchased the company and merged them together. The story of Michigan Sugar Company is a true success story of grit and ingenuity of Michigan Farmers. An entire industry which serves as an economic lifeblood in 20 Michigan counties could have left the state entirely, however, the farmers banded together and leveraged the cooperative model to keep a critical industry in the state. This is a story that has repeated itself in other sectors in Michigan and is an incredible testament to the cooperative model and farmers in this state.

Today, Michigan Sugar Company has nearly 900 grower-owners, and is the third largest beet sugar company in the country. Every owner is obligated to grow one acre of sugar beets for every share of the company they own. Each year our owners harvest around 4.7 million tons of sugar beets on 160,000 acres in the thumb and central Michigan. These beets are turned into 1.3 billion pounds of beet sugar.

Michigan Sugar Company has 1000 year-round and 1,100 seasonal employees. Nearly 200 of the year-round employees are corporate and the rest are manufacturing, union represented positions. Michigan Sugar annually pays wages of more than \$65 million. Our total direct economic impact to the state is \$600 million and our indirect economic impact is \$1.8 billion.

As an industry, we take our commitment to our communities, the environment, and our workforce very seriously. Every year our company donates tens of thousands of dollars to local nonprofits and community organizations. We also annually donate over 100,000 pounds of sugar for everything from community bake sales to food banks. Our factories are located predominately in rural areas where we are often one of the only companies with the ability to offer significant support to important these organizations. As a result, we are not only a key part of the economy in our growing region, but also, of the social safety net.

As a grower-owner, we are quick to adopt new technologies and practices to help water and soil quality and limit our carbon footprint. Our factories have a similar story. Since 2004, we have reduced our energy usage by nearly 40%. Finally, Michigan Sugar invests heavily in our workforce. Not only does Michigan Sugar Company offer high paying jobs with good benefits, but we have tuition reimbursement and apprenticeship programs to ensure that no job within our company is out of reach for any employee regardless of their current role.

Policy Issues

The Farm Bill contains a number of programs that are important to my family and our farm for both our sugar and corn production. As you consider reauthorizing the Farm Bill, I would like to call your attention to some of the key issues that affect us as farmers here in Michigan.

US Sugar Program

U.S. sugar policy is structured to serve American farmers, consumers, food manufacturers, and taxpayers as it comes at no cost to the U.S. Treasury. U.S. sugar policy has operated at zero cost to taxpayers 17 of the past 18 years and is expected to do so again this year. USDA projects zero cost over the next 10 years, as well.

The success of this program has been highlighted by the COVID-19 pandemic. As a mother of three, I found shopping for groceries during the spring of 2020 was incredibly challenging. Shortages of everything from flour to toilet paper were rampant. As a grower owner of Michigan Sugar Company, I was proud of the fact that, of all the items I had trouble finding, sugar was not one of them. By ensuring domestic production the sugar program provides a resilient supply-chain for this important commodity. A commodity which is not just a staple in many kitchens, but also an important ingredient in everything from baked good to cosmetics and vaccines.

While our sugar program has worked, the loan rate for raw cane sugar and refined beet sugar has not kept up with inflation nor the rising costs of production. It no longer provides a realistic safety net for our producers. Since the early 1980's as a sugar industry we have closed 68 processing facilities and most outside investors have exited the remainder of the industry due to the high risk and low returns. It was our family farmers who stepped up to rescue the industry from further closures of their factories, mills, or refineries. Now many of those are struggling. Operating margins are being squeezed each year, due to rising labor, fuel, seed, fertilizer, equipment and interest rate costs that hit our producers in the field and at the factories they own.

Having a loan rate that is closer to actual costs of production would provide a more effective safety net to our producers. As such, we would support examining how the farm safety net could be updated in the next Farm Bill for Michigan producers to better match actual operating costs for producers.

Input Costs

Rising input costs are a major concern for all farmers. Specifically, fertilizer prices have soared to record levels, and several companies have unfortunately made a bad situation worse for growers by applying for tariffs to be applied to imports of phosphate and nitrogen fertilizers, respectively. The Michigan Corn Growers Association continues to focus on addressing high input costs, including direct requests that the companies voluntarily withdraw their tariff petitions.

On our farm, we've seen significant increases in input costs since last year. Nitrogen prices are 2-3 times higher, glyphosate is 3-4 times higher, potash is 3 times higher, and fall phosphorus and potassium prices are 2 times higher. The farm credit system has been an incredibly important tool in dealing with these radical price increases. As Congress looks to help farmers handle input costs, I hope that they recognize the important lifeline that the farm credit system offers farmers to cope with higher than anticipated costs.

I appreciate that Farm Bills are often crafted to reflect various commodity price dynamics at the time that they are written, and I know many of the other panelists here today will provide the same perspective -- while we are seeing higher prices in many commodities, it does not translate to higher profits because we are paying so much more for our input costs.

Farm Credit System

Much of what we have been able to achieve on our farm has been made possible by a reliable source of funding from GreenStone Farm Credit Services. The Farm Credit System's role in rural America is critical, and our local GreenStone branch has truly been a valued partner to us. Having a farmer-owned credit cooperative is extremely important, especially in these volatile times. GreenStone understands what we need as farmers and can help us to be successful in our operations; something that a non-specialized lender can't provide.

The Farm Credit System is also limited by regulation that prevents them from lending to non-farmers. Expanded eligibility in this area would be beneficial so that non-farmers wanting to partner with farming operations could be eligible.

ARC/PLC

We appreciate Chairwoman Stabenow's efforts to improve the ARC/PLC programs for corn growers in Michigan and urge the Committee to continue to look for ways to ensure producers have market-based risk management tools. These programs provide vital economic safety nets for family farmers in Michigan.

Crop Insurance

I learned from a young age the importance of crop insurance. In the 1980s, I saw my aunt and uncle almost lose their farm because they had no insurance. The safety net provided by crop insurance is vital to maintaining the agriculture industry in this country especially in the face of increasingly unpredictable disasters like droughts, floods and other extreme weather.

We strongly urge Congress to protect crop insurance provisions as they write the next Farm Bill. Crop insurance is one of the most vital safety nets for farmers and serves as a key lifeline especially for younger producers. We have experienced both drought and excessive rain events on our farm, having a solid risk management tool to manage our losses is the only way we can continue to operate.

Conservation and Sustainability

We are committed to sustainability on our farm and ensuring that we are protecting the land and water. We are fortunate to live and farm in the backyard of the beautiful Saginaw Bay. Farming in the Saginaw Bay watershed where our families and communities enjoy being able to fish and swim also drives the imperative to continually improve our environmental footprint. We are constantly adopting new technology on our farm that can further improve soil health and water quality. We are proud participate in the Michigan Agriculture Environmental Assurance Program or MAEAP which provides assurance for our operation that we are following federal standards.

We utilize cover cropping on our operation (radishes and clover) to maximize our soil health, limit our carbon footprint, and reduce runoff and erosion. We also utilize technology that analyzes the soil health of every part of our fields so that we know the exact mixture of nutrients that we need to return to the soil.

It is imperative that we continue to provide not only the tools to farms like ours to provide both incentives and regulatory assurances to adopt new practices and technology but also the on the ground support to ensure that these dollars can be effectively deployed on the ground.

We appreciate Senator Stabenow's ongoing support of conservation programs in the Farm Bill. She has championed historic investments in farmer-led conservation to protect our Great Lakes and waters and understands that American agriculture is part of the solution in addressing climate change. One example is the Regional Conservation Partnership Program (RCPP). Senator Stabenow created this program in the 2014 Farm Bill and pushed to triple mandatory funding in the 2018 Farm Bill to expand conservation partnerships. These partnerships will leverage nearly \$3 billion in new private sector dollars over the next decade and both the Michigan Sugar Company and Michigan Corn Growers Association have participated in RCPP programs.

We understand and support sound science in agriculture, including as it relates to Climate Smart Agriculture. It is imperative that US EPA decisions concerning the registration and reregistration of pesticides be based on the best available science and informed by experts from their own Scientific Advisory Panel reviews. The loss of tools using poor quality studies and questionable science will put our ability to implement Climate Smart Ag practices at risk and could severely undermine the sustainability of the Climate Smart agenda. One example is access to atrazine for use in corn production in Michigan, which allows farmers to grow corn more efficiently and sustainably. Growers need the support of congress and the administration to ensure that the best available science is utilized for all important decision concerning these critically important production tools.

International Market Development

We appreciate the Committee providing permanent, mandatory funding for the Farm Bill trade title programs in the 2018 Farm Bill. However, to bolster U.S. international market development efforts, further boost U.S. agricultural exports, and help U.S. agriculture and related businesses in rural America prosper, we believe that Market Access Program (MAP)

funding should be increased to \$400 million annually; and Foreign Market Development (FMD) program funding to \$69 million annually. MAP and FMD are entering a third decade without increase. Adjusted for inflation and for sequestration, the real dollar value of each program continues to diminish. Fully one-third of MAP funding has been lost to sequestration, inflation, and program administration. FMD hasn't had a raise in 19 years. MAP has been at the same funding level since 2006.

Michigan corn growers have put these funds to good use through our work with the U.S. Grains Council and we've had many successes in growing international markets for our corn, ethanol and DDGS.

The return on federal investment in these programs is significant and undisputed. Between 1977-2019 these programs resulted in \$24.50 return for every dollar invested.

New/Beginning Farmers

According to the Michigan Farm Bureau, the average age of a farmer in Michigan is 56 years old which is only slightly below the national average of 57.5 years old. That's a troubling statistic when you consider agriculture's contribution to the state's economy [is \\$101.2 Billion annually](#).

I hope the Committee considers maintaining and strengthening programs to ensure we have a pipeline of new farmers to replace older farmers as they age out. For our operation, the FSA young and beginning farmer loan was a critical lifeline and I would encourage the Committee to continue to look at ways to strengthen the safety net for young and beginning farmers. Agriculture is an increasingly capital-intensive industry – equipment alone for planting and harvesting can quickly add up to over a half a million dollars. It's nearly impossible for new entrants to enter farming if they do not have additional resources.

Closing

I appreciate the Chair and Ranking Member's time and the opportunity to provide testimony on the impact of the Farm Bill for Michigan's corn and sugar beet farmers. For my family, and many family farmers in our state, the Farm Bill provides key programs that enable us to run successful businesses that provide food, fuel and fiber to the world.

As Congress discusses reauthorizing the Farm Bill, I hope that the issues facing farmers today will remain top of mind. A successful Farm Bill reauthorization should continue critical loan programs for new and existing farmers, while bringing them in line with the economic realities facing farmers today. In addition, finding ways to strengthen and finetune the farm safety net, including crop insurance, will be of the utmost importance as we face new weather challenges. We should also continue to explore new opportunities for international market development to ensure that U.S. agriculture remains competitive in the global marketplace.

Thank you again for the opportunity to provide testimony, and please do not hesitate to reach out if I can provide any additional information.

The Honorable Debbie Stabenow
Chairwoman
Senate Judiciary Committee
Dirksen Senate Office Building
Washington, D.C. 20510

The Honorable John Boozman
Ranking Member
Senate Judiciary Committee
Dirksen Senate Office Building
Washington, D.C. 20510

United States Senate Committee on Agriculture, Nutrition, & Forestry

Rachel Lyons
Bay Mills Indian Community
12140 W. Lakeshore Drive
Brimley, Michigan 49715

April 29, 2022

Written Testimony pertaining to the Agriculture Improvement Act of 2018 (commonly referred to as the "Farm Bill").

Introduction

Aanii (Hello). My name is Rachel Lyons and I am an enrolled member of the Bay Mills Indian Community. The Bay Mills Indian Community (BMIC), Gnoozhekaaning, Place of the Pike, is a federally recognized Native American Tribe that is located on the shores of Lake Superior in Michigan's Upper Peninsula. The people of our Tribe are Ojibwa and we have resided in this area since time immemorial. BMIC is one of the four original reservations established in Michigan. We are one of the smaller recognized tribes in the United States, with just over 2,300 enrolled members.

I am appearing before the Committee in my capacity as the Tribal Manager for Bay Mills Indian Community. In this role, I have management responsibilities for many different governmental departments. Two of these departments, the Commodities Food Department and Fire Management Department, in particular, have been greatly impacted by the provisions outlined in the Farm Bill of 2018.

Purpose

I appreciate the opportunity to present this written testimony to the Committee regarding the importance of the federal funding and programs that have been made available to our Tribal Nation due to the enactment of the Agriculture Improvement Act of 2018.

Bay Mills Indian Community is an under-served Native American community with a strong history of high unemployment and low per capita income in relation to state and national averages. Although the location of our primary Reservation can be seen as an obstacle when it comes to economic development due to being situated in a very rural area and having some of the harshest winters in the Nation, there are many benefits associated with this location. A vast majority of our primary Reservation is positioned along beautiful and pristine stretches of the Great Lakes waterways. Natural assets of the Eastern Upper Peninsula are among Bay Mills Indian Community's greatest resources and must be leveraged to attract tourism and recreation to the region.

Numerous components of the current Farm Bill have had a positive impact upon not only our Tribal community but also the surrounding region. I strongly urge your continued support of this vital piece of legislation. The programs and funding associated with this legislation are absolutely necessary for our communities to not only address concerns related to our natural resources but also in helping to increase food security for our people.

Background

Good Neighbor

As this Committee is aware, under the 2018 Farm Bill, Congress expanded authorities for forest management projects related to the Good Neighbor Authority. This expansion has allowed our Tribal Nation to contract with the USDA Forest Service (hereinafter referred to as the "Forest Service") to complete various projects within the Hiawatha National Forest that have advanced forestland restoration efforts. Our Fire Management Department has been very successful in its effort to assist in the stewardship and land management of these impacted areas. This effort involves working to increase the presence of various, preferred species of timber within our forests, improve the forest's ecosystems, and allow for overall better wildlife habitats throughout the areas addressed with this collaboration.

Based on the Forest Services' applicable forest plans and completed environmental assessments, BMIC's Fire Management has been contracted to achieve various goals of the area. The crew will work at numerous units within the national forest to remove species of trees that compete with the unit's preferred species. Some of the timber that our crew has helped to propagate have been White/Red Pine, Maple, Red Oak, Aspen, Cedar, and Yellow Birch. Along with this work

of supporting specific timber species, our crew has worked diligently to remove and reduce the overgrowth of vegetation to advance fuels reduction in our forested areas. Climate change has increased the prevalence of wildfires and this work has helped to curtail this.

FDPIR

The Bay Mills Indian Community has implemented a Commodity Food program for its citizens for decades. During this time, the funding sources and names of the programming have changed, however, one thing has remained consistent: the availability of nutritious foods for our most vulnerable population of tribal members provided by the Food Distribution Program on Indian Reservations (FDPIR).

The advancements of this program even just in my lifetime have been amazing. When I was a child, like many other families in our community, we strongly relied upon “commods” to get us through hard times. Ask most any Native American throughout the country that grew up on a Reservation, and you will hear many similar descriptions of this program. Much of the food provided was canned, including all meat products and produce. Eggs came in the form of powder in a package and cheese came in a large block (it must be said that commod cheese is referred to as liquid gold in many tribal communities due to its delicious taste and versatility for cooking). Now, several decades later, one would not believe this is the same program. Current food products that are provided under FDPIR now include actual frozen meats, fresh, uncanned produce, and real eggs! Thankfully, the cheese has not changed too much.

Successes and Opportunities

Our community has seen many successes come from programming funded by the Farm Bill, but we also see many great opportunities for improving upon the implementation of both the Good Neighbor Agreement and FDPIR.

Good Neighbor

The Good Neighbor Agreement between BMIC and the Forest Service has fostered a strong relationship between our two entities. Throughout this project, BMIC team members have greatly benefitted from the knowledge and expertise Forest Service personnel possess; there have been numerous opportunities for our team to receive training and education that they otherwise would not have been able to obtain. The increased communication, interactions, and support from this program have formed several other progressive agreements for us, including an unprecedented Lighthouse Management Agreement that will not only help to improve the programming and services provided by the Forest Service at the Point Iroquois Lighthouse but will also help to impart the history and traditions of BMIC to the various visitors to this historic site. We truly have evolved into good neighbors for each other.

The Good Neighbor Agreement has not only helped to achieve various conservation and forestry goals but has also brought about indirect economical advances. The work in this agreement has been successful in achieving fuel reductions within our forested areas here in the Upper Peninsula, helping to decrease the likelihood of wildfires. As stated previously, this area strongly relies upon tourists coming to our region to enjoy the vast amount of recreation here.

Our waterways and forests are the basis of this recreation; without them, tourism would be non-existent in the region. Additionally, this work has kept nearly a dozen of our employees working longer into the seasons allowing them to bring in a steady paycheck and provide for their families.

There have been some obstacles to overcome with the agreement with the Forest Service. Funding for this program does not cover all expenses associated with the use of our personnel. Outside of wages and fringe, as any administrator knows, there are various expenses required to keep a department operational. Two specific costs that are needed for this department include costs for the facility in which they are housed (lease costs, utilities, maintenance and repair, insurance, etc.) and the cost of equipment that is necessary to complete various projects. In the current agreement, these costs have had to be absorbed by the Fire Management Department, something that their budgets simply cannot sustain for the long term.

Our Fire Management Department has historically been funded by the Bureau of Indian Affairs, Reserved Treaty Rights Lands (RTRL) program. This work has always been seasonal, primarily due to the requirements of the funding, but also because the funding allocated is not enough to provide full benefits for permanent full-time employees. Bringing in the Good Neighbor Agreement initially seemed like a great idea to keep our crew working further into the months that they would typically be laid off. However, this work coupled with their duties with the RTRL work has had them working throughout the majority of the last year. As much as we want to provide full benefits for these hardworking members of our team, the funding available for their programs just cannot cover the high costs of benefits. Contrary to popular beliefs, most Tribes are not rich by any stretch of the imagination. BMIC is one of those Tribes; we cannot afford to supplement this program. We are being faced with the real possibility of having to lay this crew off during what is typically their busy season.

I know that there is a real opportunity for improving this initiative by implementing collaboration between the Department of Interior and the USDA – the two agencies that fund various forest management programs. The Biden Administration is strongly promoting coordination amongst agencies and stakeholders. I can speak firsthand on the benefits of removing the silos in an organization and working collaboratively to achieve success. Our Tribe was crippled by compartmentalization of departments for decades, with our leadership only recently working to address this. It has been amazing to see the work that has been achieved with our departments actively working together and combining resources, resulting in the provision of better programs and services for our people. There is a great prospect here for the USDA to work alongside the Department of Interior and Tribal Nations to achieve critical goals for conservation and forestry in our area while helping to positively impact the economy in the region.

FDPIR

The FDPIR program has continuously worked on providing the best services that it can for people across the nation. One new initiative that is being explored, in particular, holds great promise for further development by allowing for locally sourced produce and meats, including fish, to be purchased for distribution to the families that utilize this program. Although this is

only in the testing phase, there is hope for future implementation in our region. This program will bolster the availability of fresh, nutritious foods to our community members that typically would not have access to this type of nourishment. Furthermore, a positive indirect impact will come from the procurement of these goods locally. Our local farmers and fisherman will see an economic boost due to the demand and purchase of their goods.

Our Commodities Food Department has evolved from only providing nourishment to our community, to now providing ongoing education for individuals and families. Tribal members can learn more about pursuing healthy eating and cooking habits, receive one-on-one direction to learn various recipes that only utilize commodity food supplies, food preparation education, in addition to being provided cookbooks and recipes to grow their culinary skills.

Something unexpected that resulted from the Commodities Food program is the positive impact that our elders in the community have experienced. The FDPIR program allows for food delivery to our homebound members, many of which are elders. This ongoing interaction has been a great blessing for this most important group of members of our community. This service affords ongoing interactions with elders, increasing the amount of socialization they are able to participate in. Additionally, program staff can act as another outreach source to assure our elders are in good health and do not need any other services. If additional services are needed, the FDPIR staff are well-versed in the various programs available in our area and can make the necessary connections to support our elders. The delivery service allows our staff to check in on our people and assure they are remaining healthy.

The staff that administers the Commodities/FDPIR program for BMIC has continuously voiced several major concerns about the program. For an individual or family to utilize this service, they must meet income eligibility requirements, similar to most assistance programs available from various other agencies. These requirements are based upon the annual FDPIR Monthly Income Standards. The overall standards to access both FDPIR and SNAP truly need to be reassessed. For example, a single mother of one child has a current net monthly income limit of \$1,629 to access this critical resource. The program allows for a standard deduction of \$450/monthly to account for shelter and utility costs. Even individuals that receive subsidized housing see a much larger cost than \$450/month in Michigan for rent and utilities. Heating costs in our area can easily average \$150-200/ month. Add in the cost of rent, electricity, and water (just the absolute basics that are needed for a family), and you have easily doubled the actual cost of this standard deduction. A monthly income of \$1,629 is quickly depleted with the costs of rent, utilities, gasoline, car and mandatory insurance payments (an amenity that is a necessity in our rural location that is lacking various options for public transportation), health insurance costs (an unallowed deduction), in addition to the everyday costs that are common with having children. If the USDA were to increase the income eligibility limits even slightly, the agency would be able to serve this often overlooked, working poor class of citizens that are many times faced with food insecurity.

In the past, all elders that were considered disabled by Social Security were eligible to receive FDPIR; there was no review of income. Out of the blue, this changed. There was no warning, just new guidelines implemented. Sweeping changes like this have a drastic impact on

individuals that have always depended on receiving monthly assistance for food. Ideally, this program would remain open to our disabled senior citizens, but changes like this must be made incrementally so that individuals and families can better prepare for the decrease in resources. The same type of sweeping change impacted foster children that are placed in care. The children were eligible for this program, then out of nowhere, guidelines shifted to require an income review. For foster children to qualify for FDPIR, all funding associated with the child must be assessed, with no allowability for deductions (as if a child does not have any expenses associated with them.) Many foster families were no longer able to access this resource for children that were placed in their care.

An inequality that had become very obvious to our departmental staff came with COVID-19. During that time, SNAP benefits were significantly increased. While FDPIR has similar guidelines as the SNAP program, our tribal member participants did not and still have not seen any increase in the amount of food they can receive. Our families are currently allocated three types of meat per person for a month of sustenance; a family of four must survive on only twelve meat options for 30 days. If our tribal program is to be held to the same guidelines and standards as the SNAP program, they should also see a similar benefit.

And, finally, regarding the SNAP program, tribal nations typically are not granted the ability to administer this type of food assistance programming. Tribal members many times do not have the means to travel to the nearest Health and Human Services department, the agency to apply for SNAP benefits in our area. Because of this, they are not given a choice as to receive SNAP or FDPIR. While BMIC, and many other Tribal Nations, have administered grants and contracts for decades, many of which are the sole source for providing programs and services, we are not given the ability to administer the SNAP program on our Reservations. This co-management of SNAP in our area could help to increase our Commodities Food Department's capacity while helping to ease the administrative burden that is placed on local State agencies.

Conclusion

There is no doubt that the Farm Bill is a necessity for our Tribal Nation, and likely most tribes across the country. The funding and programs associated with this Act have helped to ensure we can continue to provide greatly needed services to our tribal members and surrounding community.

As with many governmental programs, there is room for improvement. The changes proposed in this testimony can help agencies to provide more effective and efficient services, ease the burdens placed on any one agency, look to collaborate with others, and foster more positive economic impacts in our various regions. I greatly appreciate the opportunity to present the numerous successes my community has participated in because of the Farm Bill and the various opportunities that our teams have identified over the years. Miigwetch (thank you).

TESTIMONY OF MARISA JACOBS
Sr. Associate Grower - Square Roots, Inc.
Senate Agriculture Committee - Michigan Field Hearing
STEM Teaching and Learning Facility, Michigan State University, East Lansing, MI
Friday, April 29, 2022 | 10:00 am EST

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Chairman Stabenow, Ranking Member Boozman and members of the committee, my name is Marisa Jacobs. I am a Senior Associate Grower with Square Roots. Thank you for the opportunity to testify today.

MY JOURNEY INTO FARMING WITH SQUARE ROOTS

Originally from Clarkston, Michigan, I obtained a Bachelor's of Science in Environmental Studies and Sustainability from Northern Michigan University. During that time I took botany courses and was introduced to an indoor agriculture program starting up at my university. Connecting my love for plants and sustainability, indoor farming revealed itself to be a possible career path for me.

Over time, I became interested in food systems and the challenges created by food deserts. I had the opportunity to do an internship at a nonprofit educational farm in the Upper Peninsula in an area that would be classified as a food desert. This nonprofit put gardens on abandoned plots of land to bring food to the community. It was also a farm-to-school program to get kids connected to nourishing food.

In evaluating different job opportunities in Michigan after graduation, I came across what Square Roots was doing with Gordon Food Service in Grand Rapids, Michigan. Square Roots seemed to combine technology, botany, and a focus on solving the issues I had become passionate about. This is why I ultimately chose to apply to become an apprentice grower for Square Roots.

When I started as an apprentice grower, I began to learn the systems that make the farm run. I learned about the tech, systems and plants themselves, and production, harvesting, washing/packing and ultimately the sales side of the products. Being an apprentice is really learning from scratch. I know that The Farm Bill authorizes programs to support and train beginning farmers, including the Beginning Farmer and Rancher Development Program, which thanks to Senator Stabenow's leadership, received permanent mandatory funding in the 2018 Farm Bill. This Farm Bill program could be used to train future generations of indoor growers.

After several months in the program, I took on an associate grower position. I assisted the senior growers with training new apprentices and then taking on some responsibilities of my own. These included following my newly learned training, processes/procedures, care of plants, and proper documentation. Later, having more in-depth knowledge of the work and connection with other farmers I was promoted to a senior associate grower. This leadership opportunity allows me to train the next generation of farmers behind me which will also allow us to scale our operation to match Gordon Food Service's footprint. I am learning how to give feedback, engage, and motivate my team as well as further refining my craft. Right now I am managing the basil packing process, assuring the appropriate quality and quantity to sell. I am also working on improving the microgreens zone, including creating new labels for our systems and improving our yield.

At Square Roots, we use our technology to look at all environmental conditions and indoor elements of the farm to make sure plants are healthy. I can do this all from my iPhone, using the

Square Roots Farmer Toolbelt app, whether I am at the farm in Grand Rapids, Michigan or in Brooklyn, New York. This allows us to be more efficient and correct issues in real-time.

I am so grateful for the opportunities provided by Square Roots to evolve and grow. I would now like to provide background on Square Roots for the benefit of the Committee.

SQUARE ROOTS STARTED WITH AN IDEA

Square Roots was founded by Kimbal Musk and Tobias Peggs, brought together by a shared desire to try to strengthen communities through local food systems.

Tobias Peggs, a tech entrepreneur, previously worked for Walmart managing mobile e-commerce for international markets. In this role, Peggs built mobile applications allowing over 300,000,000 customers to do their weekly grocery shopping. This piqued his curiosity about global food sourcing in different climates, and how innovation might allow food traditionally purchased through global supply chains to be grown locally, year-round. He approached Musk, who asked whether this idea could be good for people and the planet, as well as profits. This led Peggs and Musk to create Square Roots - using technology to bring locally grown food to people in urban areas, while empowering a new generation of young people to become farmers and future leaders in the agriculture industry. This type of agriculture is a high tech form of "Controlled Environment Agriculture".

WHAT IS CONTROLLED ENVIRONMENT AGRICULTURE?

Controlled Environment Agriculture ("CEA") is an advanced form of hydroponically-based agriculture where plants grow within a controlled environment to optimize the quality, safety and yield. CEA creates an enclosed environment where plants can be grown locally, organically, without the need for pesticides, year round, regardless of the climate or availability of nutrient rich farm soil.

Typical features of a CEA environment involve use of limited or recycled water, automatic air temperature and humidity control, solar panel lighting and heating, and tunable 24-hour illumination. The LED equipment can be controlled throughout a growing session to emit a programmed spectrum of light that optimizes photosynthesis for different types of plants. In many cases, soil is not required but plants are "planted" in a natural material and bathed or misted with a high-nutrient liquid. This reduces the need for fertilizers, herbicides, and pesticides.

The earliest example of CEA was the invention of a greenhouse, the origin of which dates back to 1597. In America, greenhouses were present near the time of the American Revolution - George Washington himself built a conservatory at Mount Vernon in 1780. The early greenhouse lacked the technology that the modern CEA environment relies upon today. Further, while early greenhouses and conservatories were considered a luxury, decreasing availability of agricultural land, climate change, reduction in water supply, and population growth make modern CEA solutions a necessity.

THE TECHNOLOGY WE USE

Central to our ability to move fast and meet demand is our modular, indoor, farm-tech platform. Capital-efficient and pre-fabricated inside upcycled shipping containers, ready-to-go indoor climate controlled farms can be shipped and deployed just-in-time to any site in the world, immediately creating the perfect conditions for growing the highest quality food, regardless of local climate conditions or time of year. The overall growing capacity of any Square Roots farm can seamlessly scale up or down depending on demand in the local market.

Square Roots farms utilize a water-efficient growing system and vertical growing towers which require significantly less water and space than outdoor farms. A single 40-foot steel shipping container provides 320 square feet of growing space, but can produce hundreds of pounds of fresh produce, every week, 52 weeks a year. Each container is retrofitted with long, narrow towers studded with crops that are hung on tracks from the ceiling in rows. Plants get their water and nutrients from irrigation pipes running along the tops of the towers and their energy not from the sun but from narrow strips of LED lights. This contained and climate-controlled environment allows for the optimum harvest of fresh and flavorful herbs and vegetables that are non-GMO, pesticide-free and meet our high standards for quality and safety all year round.

Our technology stack surrounds our farmers with data, tools, and insights to help them make smart decisions in real-time, so they can grow as much food as possible using the fewest resources possible. At the simplest level, there's an app which helps the farmers manage their day-to-day tasks. The farms are cloud-connected, and integrated with the farm plan. The farm essentially "knows" that it's a certain crop, what day of the growing cycle that crop is on, and what specific care the plants need.

But that's just the surface. We're tracking millions of data points a day on climate, nutrients and everything else that will ultimately impact quality, yield and taste. As the system is constantly learning how to grow better food, we're able to push those insights to the farmers as they go about their day. We control every aspect inside the farm, including light, water, temperature, humidity, etc. with the idea to replicate the most favorable growing conditions of all time, from climates all over the world at different points in history.

THE PRODUCTS WE GROW

We've designed our farms to provide responsibly-grown food in areas close to the end consumer. Our hydroponic system uses 95% less water than conventional agriculture, our farms require zero pesticides, and the location of our facilities cuts down dramatically on food miles and food waste by enabling delivery of fresh produce within 24 hours of harvest, all year round.

Meanwhile, our latest farm design is easily configured for both vertical and horizontal-stacked growing formats—a new and unique capability that means we can grow a wide range of crops to meet a variety of local market needs. To date, we've grown over 200 different varieties of herbs, microgreens, leafy greens, fruits, and even root vegetables—and we're just getting started!

However, not all products we could grow are in demand or are efficient for our operation. As a plant or vegetable grows and creates biomass, it requires more energy. And in an effort to utilize very little energy, contain costs and get products to market sooner, we focus on leafy greens or herbs with less biomass. For many herbs, seed to harvest takes 28 days.

For all intents and purposes, we're growing the same food as the outdoor farmer. We think about genetics, inputs, and care for the plants in the same way. We source our seeds such that they are non-GMO, the same as an organic farmer. It's the same food - just grown in the city or in an industrial area, and grown all year round.

THE SAFETY AND TRACEABILITY OF OUR PRODUCTS

Square Roots' *Farmer-First* technology platform surrounds its farmers with data, insights, and tools so they can grow high-quality food year-round, using the fewest resources possible. The end-to-end technology platform enables farmers to track every aspect of the business—who did what, and when, alongside environmental parameters. The data is used to track and optimize the business, but it also helps with food safety. The technology enables every plant to be tracked from seed to shelf.

Square Roots' *Transparency Timeline* uses a QR code on every package to enable customers to trace how their food was grown and who grew it—fostering deeper connections between customers and their local farmer. This allows the consumer to trace back the exact farm, tower, zone, and farmer who harvested the product. The QR code also shows a timeline of the growing period - from seed to harvest to transportation and delivery - the full lifecycle of the product. In the event of a quality issue or recall scenario, the code also allows us to trace forward, to notify those who received the product so they can be contacted. This is very unique to Square Roots, and allows us to narrowly isolate issues and provide the recipient appropriate instruction. This targeted approach alleviates undue stress for consumers, food waste from disposing perfectly safe products, and replacement costs sometimes arising from, for example, broad CDC consumer advisories in the case of the Romaine Lettuce listeria outbreak (see Appendix 1).

Our farms include all the necessary infrastructure to run a state-of-the-art, food-safe and people-safe commercial operation. This includes cold storage, biosecurity, climate-controlled packaging space, distributor loading docks, and more. Meanwhile, our farms are Harmonized Good Agricultural Practices ("GAP") certified, in line with the USDA's standards, and operate to strict COVID-19 safety protocols to keep farmers and the local community safe.

As a CEA farming company Square Roots continuously looks to cultivate trust with our buyers and consumers. Each Square Roots farm is accredited with a Global Food Safety Initiative ("GFSI") equivalent standard, under the USDA. We look to participate with an additional voluntary CEA aligned standard in the near future.

Food Safety in indoor container farming is different from outdoor farming for many reasons. Our farms do not use soil, or have risk of contaminants by animals, wind or water runoff. We have

the ability to create a specific growing environment that is monitored 24/7. Our internal monitoring program includes, amongst other things, pathogen testing.

In addition to traditional food safety practices, we also apply safe food handling practices, including cleaning and sanitation. The cadence in which we do this is critical. We are constantly assessing the practices themselves, and what the data is telling us to determine if we need to make process, hardware, or environmental improvements. From all of this, we need to maintain good record keeping. The records, together with the data we are constantly collecting in our software, track data over long periods of time. This allows us to analyze trends, perform root cause analysis, then issue corrective action or improvements.

THE BENEFITS WE CREATE

1. **Improving Access to Fresh Food.** As urban populations explode to a projected 6.8 billion people by 2050, vertical farming enables us to grow delicious, safe food close to the people who need it.
2. **Reducing Energy Consumption in Farming.** Controlled Environment Agriculture and our proprietary processes and technology allow us to produce products with limited water consumption, without harmful pesticides and reduced likelihood of contaminants.
3. **Reducing Environmental Impact.** Growing crops local to where they are ultimately consumed reduces carbon emissions from traditional farming equipment and transportation of the crops to urban areas.
4. **Reduce Food Waste.** With precision growing, there is no need to overplant to hedge against nature. We are able to grow on-demand to meet customer needs. Because of the proximity to the end consumer, and extended shelf life, there is limited spoilage in the supply chain.
5. **Sustainability of Farming Industry.** America's farmers are critical to our economy and food system. However, many family farms do not have succession plans for aging farmers. While CEA is not a complete solution, it can help fill the gaps as the average age of a Square Roots farmer is 25, decades younger than the [average age](#) of nearly 58 for all U.S. farm producers.

Kimbal Musk, our Cofounder and Executive Chairman, says: "COVID-19 exposed major weaknesses in the industrial food supply chain, and accelerated the already fast-growing local farming movement. Square Roots can now deploy commercial-scale, controlled-climate farms, fast, in locations across America to meet demand for local food, all year round. My wider mission is to bring responsibly-grown, local food to everyone in America. With Square Roots, we're going to do it fast."

While COVID-19 wreaked havoc across the industrial food system, consumers increasingly valued local food, which in turn accelerated the adoption of indoor-grown produce. Consumers, forced to stay at home and cook, were able to experience the consistent peak-season flavor of

our locally-grown greens. Meanwhile, retailers appreciated the reliability, longer shelf life, and complete traceability of all Square Roots' products. As a result, we've seen a big increase in retail demand this year, and our products are now available in more than 250 stores.

In parallel, working hand-in-hand with our strategic partner Gordon Food Service—one of the largest food distributors in North America—we've been supporting and supplying restaurants throughout the pandemic. We're as excited as anyone to see diners begin to venture out once more, and the restaurant industry bounces back.

THE OPPORTUNITY FOR THE NEXT GENERATION OF YOUNG FARMERS

In a 2018 report, the Food Institute at George Washington University estimated that the global hydroponics market will be worth more than \$27 billion by 2020. While CEA has drawn the attention from large institutional investors as well as tech entrepreneurs, traditional farm credit institutions largely ignore this section. Access to capital is reported as the greatest challenge to CEA producers.

Notwithstanding the foregoing, CEA is drawing talent into the farming industry. The 2019 Global CEA Census Report indicated that 60% of CEA founders were under the age of 40 when they started their business. While the average age of traditional farmers in the US was 58 years old, indoor vertical farmers are on average under the age of 30. Research suggests that younger people are moving to cities at a higher rate, are more adept at technology and are more likely to be interested in sustainability. The same report also suggests that indoor vertical farming offers a career path for individuals without a lot of experience, though the individuals must possess or be willing to learn the requisite skills. Very few universities offer courses or programs that help students learn these skills, but two that do are in the State of Michigan - Michigan State University and Northern Michigan University. The USDA estimates that between 2020-2025, employment opportunities in food and agriculture will remain strong for college graduates, creating approximately 59,400 jobs annually, and at least 7,900 of those in food and biomaterials production.

Square Roots has created 30 jobs in the State of Michigan, and will create at least 20 jobs per farm in future farm developments. Square Roots scalable technology platform empowers young farmers to grow delicious real food in urban farms close to the consumers. Imagine every urban consumer now has a direct relationship with their local farmer, who is growing delicious food they can trust.

Known as The Square Roots Farmer Toolbelt, our proprietary operating system (OS) provides day-to-day guidance to farmers while capturing millions of data points throughout growing cycles across our network. This data can then be analyzed to determine how changes in certain environmental parameters impact factors like yield, taste, and texture. Our system learns faster as we deploy more farms and our network gets larger, all while helping farmers determine how to grow more, better tasting food with fewer resources. Training new farmers—and empowering the next generation of leaders in indoor agriculture—has always been core to our mission, and

the Farmer Toolbelt is a key enabler in our ability to offer accessible pathways for young people to enter the high-tech farming industry.

The Square Roots Next Gen Farmer Training Program is a unique program that gives people a foundation to become future leaders in the food industry. The training program creates pathways to learn about not only agricultural science and farm management but also marketing, community outreach, leadership and business.

THE PARTNERSHIP WITH GORDON FOOD SERVICE

Together, Square Roots and Gordon Food Service (“GFS”) have created a partnership with the ambition to build indoor farms adjacent to GFS distribution center locations across the US and Canada. The partnership plans to expand through the Midwest and the Northeast in 2022, where a year-round indoor growing season has obvious advantages in satisfying demand for fresh, local produce.

Gordon Food Service is the first broadline foodservice distributor to place a controlled environment agriculture farm on its premises in order to bring fresh, hyper-local produce to its customers year-round. GFS has a long history of innovation, and the partnership with Square Roots represents a continuing pursuit of innovations that better serve our foodservice customers, and their customers’ customers, by bringing fresh, nutritious and local food to communities while also being good stewards of the environment.

Square Roots products are sold through GFS’ vast distribution and grocery retail network. Specific items may be targeted for specific customers and segments, depending on market demand and opportunity. The items produced today include basil, mint, chives, lettuce and microgreens. The first farm, housed on GFS’ Home Office headquarters in Wyoming, MI was opened in 2019 (see Appendix 2). The second farm expanded the first farm (see Appendix 3). A third farm just opened in Kenosha, WI and a fourth in Springfield, OH (see Appendix 4) later this year.

Together with GFS, Square Roots can scale its operations to drive significant positive change throughout the foodservice industry. Our partnership enables us to participate in and ultimately benefit from the establishment of local urban farmers that grow high-quality, high-value produce and better serve urban markets.

IN CLOSING

I am grateful for the opportunity to testify in front of the Senate Agriculture Committee. We are also grateful for Senator Stabenow’s efforts and foresight to authorize the Office of Urban Agriculture and Innovative Production at the USDA in the 2018 Farm Bill. We hope to see grants, funding or other programs available in the Reauthorized Farm Bill to further support CEA and apprentice programs for the next generation of farmers.

APPENDIX 1 - CNBC ARTICLE NOVEMBER 12, 2019

KIMBAL MUSK'S SQUARE ROOTS IS ON A MISSION TO FEED THE WORLD — AND EVENTUALLY ASTRONAUTS ON MARS

PUBLISHED TUE, NOV 12 2019 8:00 AM EST; UPDATED TUE, NOV 12 2019 7:59 AM EST
 Mary Stevens | CNBC

KEY POINTS

- Elon Musk's brother, Kimbal, is on a mission to feed the world and train the next generation of farmers.
- He co-founded Square Roots with CEO Tobias Peggs to grow non-GMO crops in reclaimed shipping containers, even in urban areas.
- The company is installing its container farms at Gordon Food Service facilities and other grocery stores across the U.S.
- Square Roots made CNBC's 2019 Upstart 100 list, released Tuesday.

One-third of the world's food supply is wasted, according to [research](#) from the UN Food and Agriculture Organization. Now a start-up called [Square Roots](#), co-founded by Kimbal Musk (Elon Musk's brother) and Tobias Peggs, wants to reduce that waste by growing food as close as possible to the point of use.

Based in Brooklyn, New York, [Square Roots](#) has developed and installs "modules" — hydroponic farms in reclaimed shipping containers that can grow certain non-GMO vegetables around the clock and without pesticides. Today they are producing mint, basil, other herbs and leafy greens. The company made CNBC's [2019 Upstart 100](#) list, released Tuesday. The modules, which employ software-controlled LED lighting and irrigation systems, can be set up in the parking lot of a grocery store or even inside a large warehouse or industrial building, enabling a food maker to access fresh ingredients locally for use in their dishes or packaged products.

According to CEO Peggs, raising at least some crops close to where they will be eaten helps reduce the food damage and spoilage that occurs during shipping from a point of harvest to a faraway destination.

Growing food in a tightly controlled microclimate also means those crops can have better flavor and yield than counterparts that are grown in traditional farms, said Peggs, who added that in the great but unpredictable outdoors, everything from changes in soil acidity to humidity can harm crops.

Those who buy Square Roots produce can scan a QR code on the packaging to read a "transparency timeline," with details about their fresh food, like the identity of the farmers who grew it and when it was harvested and delivered to the store.

One day Square Roots aims for its technology to work off-world. Kimbal Musk, who is Square Roots' executive chairman and also holds board seats at SpaceX and [Tesla](#), said: "I'm focused on bringing real food to everyone (on Earth), but the farming technology we are building at Square Roots can and will be used on Mars."

Peggs, who has a Ph.D. in artificial intelligence from Cardiff University, has a history of building businesses with Kimbal Musk. Peggs was the CEO of a social media analytics firm called OneRiot, which Musk co-founded. They sold it to [Walmart](#) in the fall of 2011.

Peggs and other OneRiot employees joined Walmart Labs, and helped the retail giant roll out mobile apps and analytics in international markets. That was when Peggs became intrigued with the potential for software to help feed the world.

Square Roots faces significant competition in what's known as indoor ag or sunless farming, including venture-backed competitors Bowery Farming, Plenty, Freight Farms, Gotham Greens and AeroFarms, among others. Their potential to reduce the environmental footprint of agriculture is yet to be determined.

Modern agriculture accounts for 24% of greenhouse gases and is the No. 1 source of pollution on the planet, according to environmental researcher Paul Hawken, the founder of [Project Drawdown](#), a nonprofit that points to ways global warming can be reversed.

Hawken told CNBC, "Indoor ag may or might not pencil out with respect to sustainability when all the energy and inputs are totaled." That's because indoor farming requires more human-made energy but less transport and distribution energy.

Moreover, crops from indoor farms might not match the nutrition of soil-grown crops, because the medium the plants are grown in is either hydroponic or assembled substrates. Hawken wrote: "What makes plants superfoods and nutritious is stress, not 'perfect' temperature-controlled growing environments. Phytonutrients that are vital to human health do not develop to the same extent indoors. Sun, UV radiation, insects, dryness, competition, wind and wide temperature variations ultimately make plants strong, delicious and nutritious." But it will bring locally grown, organic produce — part of a healthy diet — to markets that may not have much of it otherwise, he said.

Square Roots is aiming to work with partners that use renewable energy as much as possible to power their modular farms, said Peggs. One recent example is Square Roots' partnership with Gordon Food Service in Grand Rapids, Michigan, which runs its business partly on wind power. The company has agreed to roll out Square Roots modular farms across their network of hundreds of retail stores and food production and distribution facilities in the U.S. in coming years.

Rather than a plant factory, where you'd spend tens of millions to build an industrial-scale facility that could take two to three years, we pop up in a new city in a matter of weeks.

Another objective of Square Roots is to inspire more people to become farmers. Wherever it installs its modules, crops are grown and systems are managed by employees who have enrolled in Square Roots' Next-Gen Farmer Training Program. Throughout the year, the trainees get to learn about everything from plant science to computer science from Square Roots, while also earning a salary and health benefits — which aren't always available from similar internships and apprenticeships.

Because Square Roots is supplying fresh-grown herbs to more than 70 stores in New York City, that means a significant number of its next-gen farmers are city dwellers who never expected to be working in agriculture.

Peggs said he's betting on modular farms over other indoor agriculture approaches precisely because of their flexibility. "Rather than a plant factory, where you'd spend tens of millions to build an industrial-scale facility that could take two to three years, we pop up in a new city in a matter of weeks."

APPENDIX 2 - PRESS RELEASE MARCH 6, 2019

**SQUARE ROOTS & GORDON FOOD SERVICE PARTNER TO GROW
LOCAL FOOD IN CITIES ACROSS NORTH AMERICA**

Brooklyn, NEW YORK (March 6, 2019) — Square Roots, the technology leader in urban indoor farming, and Gordon Food Service, one of the country's leading food service providers with distribution operations spanning North America as well as 175 retail locations across the US, have officially joined forces to bring the latest advancements in locally-grown, real food to customers across North America, all year-round. The strategic partnership will ultimately see new campuses of Square Roots' indoor farms built on or near Gordon Food Service distribution centers and retail stores across the continent, enabling year-round growing of premium quality herbs, greens, and more, and made available to Gordon Food Service customers.

This partnership reflects a shared vision and commitment by both organizations to invest in a modern, unique offering to meet growing customer demand for local food across North America. It also signifies the first, significant expansion to new locations for Square Roots and its unparalleled farmer training program, enabled by the company's scalable "farmer first" technology platform. The Square Roots and Gordon Food Service exclusive partnership comes at a time when customer tastes and palates are seeing an increasing demand for fresh, high-quality, local food.

"Customers want an assortment of fresh, locally grown food all year round. We are on a path to do that at scale with Square Roots and are excited to be the first in the industry to offer this unique solution to our customers," said Rich Wolowski, CEO of Gordon Food Service.

Square Roots' mission is to bring local, real food to people in cities by empowering the next generation of leaders in urban agriculture. The company combines a high-tech farming platform with a unique "[Next-Gen Farmer Training Program](#)" to train passionate people to become future leaders in the food industry.

Meanwhile, Square Roots' [Transparency Timeline](#) enables customers to trace exactly how and where their food was grown and who grew it, simply by scanning a QR code on its packaging. Now, having partnered with Gordon Food Service, this unique ability to bring technology-enabled local food will soon become a reality for food-conscious consumers across North America. And the Next-Gen Farmer Training Program will soon open up doors for even more driven young people, arming them with the skills to take part in building a better food system for our future.

Tobias Peggs, co-founder and CEO of Square Roots, continued, "This partnership means we will grow delicious, local, real food at huge scale. We're so happy to be working with a mission-aligned partner in Gordon Food Service - leveraging technology to bring real food to a huge number of people across the country, while delivering real social impact by empowering thousands of young people to become our country's future farmers."

More information about Square Roots can be found on the company's [website](#).

ABOUT SQUARE ROOTS

Square Roots is the technology leader in urban indoor farming. Its scalable “farmer first” technology platform brings fresh, healthy food to urban areas year-round, while simultaneously training future generations of farmers.

Founded in 2016 by serial entrepreneurs, Tobias Peggs and Kimbal Musk, Square Roots has a mission to bring local, real food to people in cities across the world while empowering the next generation of leaders in urban farming.

Central to the Square Roots mission is a “Next-Gen Farmer Training Program”—a year-long program that puts participants at the forefront of the indoor urban farming industry while they are growing food as part of the Square Roots farm team. Using a unique and scalable technology platform, these young farmers are armed with intuitive tools, enabling them to quickly learn how to grow food that is more sustainable, healthy, and profitable. During their year at Square Roots, they’re also educated on plant science, food entrepreneurship frameworks, and engaging local communities—preparing them for successful subsequent leadership roles in urban agriculture.

ABOUT GORDON FOOD SERVICE

Since 1897, we have delivered uncompromising quality and heartfelt service for our customers. We began as a simple butter-and-egg delivery service, and have grown to become the largest family business in the foodservice distribution industry by upholding the same approach for over 120 years—remaining passionately committed to the people we serve. Today we serve foodservice operators in the Midwest, Northeast, Southeast, and Southwest regions of the United States and coast-to-coast in Canada. We also operate more than 175 Gordon Food Service Store® locations in the U.S., which are open to the public and provide restaurant-quality products and friendly, knowledgeable service without a membership fee. By partnering with organizations from across industries—healthcare to education, independent and chain restaurants, and event planners—we help our customers create food experiences that people choose, enjoy and remember. To learn more about Gordon Food Service visit [gfs.com](#)

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APPENDIX 3 - PRESS RELEASE OCTOBER 26, 2021



**Square Roots and Gordon Food Service Celebrate New Michigan Indoor Farm,
Expanding Partnership to Grow More Local Food Across the U.S.**

Co-founded by Kimbal Musk, Square Roots' cloud-connected, climate-controlled, indoor farms are an investment in the future of food systems, putting local, technology-enabled farmers at the center.

Square Roots has more than doubled output for its classic crops like basil since the beginning of the pandemic, while introducing a new range of herbs and salad mixes to meet rising demand for local food.

October 26, 2021 (Wyoming, MI) — Square Roots, the technology leader in indoor farming, and Gordon Food Service, one of the largest food distributors in North America, held a ribbon cutting ceremony to celebrate their new indoor farm opening in Michigan, taking another step to expand a shared vision to build indoor farms together across the continent — enabling local food at a national scale.

“In partnering with Square Roots, we are delivering on our ambitions to make nutritious, local produce available to everyone, throughout the year, regardless of the local climate,” said Rich Wolowski, CEO of Gordon Food Service.

“This new indoor farm in Michigan means we can grow delicious, nutritious food, all year round, in responsible ways,” said Tobias Peggs, Co-Founder and CEO at Square Roots. “Furthermore, we have an ambitious and exciting roadmap to build additional indoor farming facilities across the country with Gordon Food Service, as we work to prove that the future of food can be good for people and the planet, as well as being good business.”

Located at the Gordon Food Service headquarters in Wyoming, Michigan, the new farm was deployed in just 3 months using Square Roots' modular technology platform. Inside the farm, multiple different climates are constantly monitored and controlled by the company's proprietary

software, allowing Square Roots farmers to grow a wide range of crops to meet a variety of local market needs.

Square Roots produce is now available at grocery stores including Gordon Food Service Stores, and through Gordon Food Service customer restaurants, as well as ecommerce platforms across the Great Lakes region. Square Roots is seeking to address a \$35.4 billion total produce category at retail¹.

In addition to its farming operations, Square Roots continues to invest in the Midwest — recently opening a 5,000 square foot manufacturing facility in the region, where it now creates and assembles key components for future farms.

Key stats:

- Square Roots operates two indoor farms in Michigan, with the capacity to produce over 2.4 million packages of herbs and leafy greens annually. Approximately 50,000 plants are grown at any given time in each farm.
- Square Roots grows a wide variety of produce, including premium herbs like basil, dill, parsley, and cilantro; microgreens; and salad mixes made with crisp baby lettuce leaves, mizuna, kale, tatsoi, broccoli, and cabbage.
- Square Roots' commitment to the local community has created over 30 local jobs in the Midwest. The local team includes farm managers, growers, engineers, delivery drivers, technicians, produce packers, and more.
- Square Roots offers extensive ongoing training opportunities for employees, in addition to full benefits, ownership in Square Roots, and accelerated career paths to propel professional advancement.
- Square Roots' sustainable, cloud-connected farms use 95% less water than conventional farming methods and enable precision growing to exactly meet customers needs — practically eliminating food waste on site. Meanwhile, Square Roots products are sold in 100% recycled and 100% recyclable packaging.
- All Square Roots farms are Harmonized Good Agricultural Practices (GAP) certified, in line with the USDA's standards, and operate to strict COVID-19 protocols to keep farmers and the local community safe.

About Square Roots

Square Roots is the technology leader in indoor farming. Its mission is to bring local, fresh, real food to people in cities around the world - setting new standards for transparency and responsibility while empowering a new generation of leaders in agriculture. Founded by serial entrepreneurs, Kimbal Musk and Tobias Peggs, its range of fresh produce is available in more than 200 retail locations around the country including Gordon Food Service Stores, Fresh Thyme Market, D&W Fresh Market, Meijer's market format stores, Whole Foods Market, and Busch's Fresh Food Market. Square Roots' strategic partnership with Gordon Food Service reinforces a larger shared ambition to build commercial scale, climate controlled indoor farms together across the continent - enabling local food at a global scale, year round. For more information, please visit www.squarerootsgrow.com.

About Gordon Food Service

¹ Total Produce in MULO (Latest 52-Week Period Ending 9/5/21)

Since 1897, we have delivered uncompromising quality and heartfelt service for our customers. We began as a simple butter-and-egg delivery service, and have grown to become the largest family business in the foodservice industry by upholding the same approach for over 120 years—remaining passionately committed to the people we serve. Today we serve foodservice operators in the Midwest, Northeast, Southeast, and Southwest regions of the United States and coast-to-coast in Canada. We also operate more than 175 Gordon Food Service Store® locations in the U.S., which are open to the public and provide restaurant-quality products and friendly, knowledgeable service without a membership fee. By partnering with organizations from across industries—healthcare to education, independent and chain restaurants, and event planners—we help our customers create food experiences that people choose, enjoy and remember.

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APPENDIX 4 - PRESS RELEASE APRIL 5, 2022



**Indoor Farming Leader Square Roots Opens New Farm in Springfield, Ohio;
Partnering With Gordon Food Service to Further Expand in the Midwest**

New climate-controlled, cloud-connected facility is the company's fourth farm built in partnership with Gordon Food Service and second farm to open in 2022

First harvests are scheduled for summer 2022, reaching local consumers across Ohio in the Cincinnati, Columbus, and Dayton metropolitan areas

April 5, 2022 (Springfield, Ohio) — Square Roots, the technology leader in indoor farming, and Gordon Food Service, one of the largest food distributors in North America, today announced the opening of a new climate-controlled, indoor farm in Springfield, Ohio.

“Our partnership with Gordon Food Service, combined with our modular, smart-farm platform, means Square Roots is able to rapidly open a number of new farms this year,” said Tobias Peggs, Co-Founder and CEO of Square Roots. “With our new farm in Springfield, we are now making locally-grown food available, all year, to new consumers across Ohio, while also creating exciting jobs in the community.”

“The new farm we’ve announced with Square Roots in Springfield accelerates our shared vision to build more indoor farms together across the continent,” said Rich Wolowski, President and CEO of Gordon Food Service. “Together, we are enabling local food at a global scale, meeting the rising demand for produce that is fresher, responsibly grown, and traceable from seed to shelf.”

Springfield will be home to the fifth Square Roots farm located in North America and is the second new farm Square Roots has announced in 2022, following the recently announced opening in Kenosha, Wisconsin. Square Roots already operates two commercial-scale indoor farms in Michigan, and another facility in Brooklyn, New York.

The new farm in Springfield harnesses Square Roots' smart-farm technology platform and software-controlled hydroponic growing systems to produce more food with fewer resources 365 days a year, regardless of outdoor weather conditions. Square Roots' approach uses 95% less water than conventional field farms and features repurposed urban infrastructure — creating ideal growing climates inside refurbished upcycled shipping containers that are stacked vertically to reduce the company's impact on the land. By deploying a network of local farms in strategically located cities like Springfield, Square Roots also ensures a shorter supply chain and less distance between people and their food, reducing food miles and minimizing food waste.

Square Roots farmers in Springfield will soon be harvesting long-lasting herbs such as basil, cilantro, dill, and parsley, alongside nutritious salad mixes and chef-favorite microgreens. The Springfield farm has the capacity to produce more than 2.4 million packages of herbs and leafy greens annually. All Square Roots produce has at least 14 days of extended shelf life and is completely free of pesticides and GMOs.

Square Roots is recruiting locally in Springfield and the surrounding areas and on April 14, the company will host a virtual job fair to help Ohio-based job seekers looking to learn more about opportunities in the high-tech agriculture industry. Square Roots offers extensive ongoing training opportunities for employees, in addition to full benefits, ownership in Square Roots, and accelerated career paths to propel professional growth.

About Square Roots

Square Roots is the technology leader in indoor farming with a mission to responsibly bring its locally grown food to people in cities around the world, all year round. Square Roots is setting new standards for transparency and responsibility, while training a new generation of leaders in agriculture to create a more sustainable food system. Founded by serial entrepreneurs, Kimbal Musk and Tobias Peggs, its range of fresh produce is available in more than 250 retail locations around the country including Gordon Food Service Stores, Whole Foods Market, SpartanNash corporate stores, Fresh Thyme Market, Meijer's market format stores, Busch's Fresh Food Market, FreshDirect, and Morton Williams. Square Roots' strategic partnership with Gordon Food Service reinforces a larger shared ambition to build commercial-scale, climate-controlled indoor farms together across the continent - enabling local food at a global scale, year round. For more information, please visit www.squarerootsgrow.com.

About Gordon Food Service

For 125 years, Gordon Food Service has delivered uncompromising quality and heartfelt service for our customers. Beginning as a simple butter-and-egg delivery service, we've grown to become the largest family business in the foodservice industry by upholding the same approach since 1897—remaining passionately committed to the people we serve. Today, we serve foodservice operators in the Midwest, Northeast, Southeast, and Southwest regions of the United States and coast-to-coast in Canada. We also operate more than 170 Gordon Food Service Store locations in the U.S. By partnering with organizations from across

industries—healthcare to education, independent and chain restaurants, and event planners—we help our customers create food experiences that people choose, enjoy, and remember.

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Testimony of Lisa Woodke
Sustainability Director, Star of the West Milling Company
Field Hearing of the U.S. Senate Committee on Agriculture, Nutrition and Forestry
April 29, 2022

FINAL

Good morning Chairwoman Stabenow, Ranking Member Boozman, and members of the Committee. My name is Lisa Woodke, and I am the Sustainability Director at Star of the West Milling Company, a flour miller, bean processor and agronomy services provider based in Frankenmuth, Michigan. I appreciate the opportunity to be with you at this important field hearing on the next Farm Bill. I am excited to discuss our efforts at Star of the West as we work in close partnership with growers to advance agricultural stewardship and climate solutions. I look forward to sharing my thoughts on how the next Farm Bill can bolster farmers' good work to deliver environmental solutions here in Michigan, and across America.

Today, I would like to share information about our 152-year-old company and our relationships that span all the way from the grower to global food companies. Second, I would like to provide some examples of stewardship being led by Michigan farmers, with the help of companies like ours and the assistance of innovative new technologies. Third, I hope to share some of what we have learned as we work with growers on carbon sequestration, climate solutions and environmental protection. I hope this will provide you with useful information as you craft our next Farm Bill.

Star of the West and Our Visibility Spanning the Food Value Chain

I joined Star of the West three years ago, but have spent my entire career in different segments of the agriculture industry. I grew up on a family dairy farm in Port Hope, Michigan, near the tip of the Thumb along the shores of Lake Huron. Post college at Michigan State University I joined the team at H.E.B. Grocery in San Antonio, Texas, where I learned about the food side of agriculture. After Texas, I moved back to Michigan and worked in crop protection and seed sales prior to joining Star of the West. One thing that has stood out for me during my time at Star of the West is the opportunity to be a part of so many pieces of the food puzzle. Our company brings a unique perspective to the food system, with visibility at all points on the value chain.

We were founded as a flour miller, a tradition we continue today by producing high-quality flour, cereal wheat, and food grade wheat flakes for some of the world's largest food producers. Over the years our operations have expanded to include the handling and processing of a wide range of Michigan-grown products – from dry beans and oats, to edible soybeans and beyond – and we also provide agronomy and farm supply services for customers across mid-Michigan, the Thumb and Saginaw Valley.

I love to share the story of how we work with growers to support them every step of the way: From planting to harvest, to delivery and processing – ultimately milling the wheat they produce into ingredients for some of the tasty treats we all know and love. From crackers that look like fish, to ice cream cones, to cream-based soups in a can, it's amazing the number of things that our flour goes into. Flour is as important today as it was when we were founded more than 150 years ago. As a company uniquely situated to sell inputs to the farmer, buy the grain from those same growers, mill or process grains and beans, then sell those food ingredients to consumer-packaged goods companies, Star of the West has been privy to many of the opportunities and challenges within the entire value chain.

Working Together to Advance Sustainability

Throughout our history as a company, we have worked together with Michigan farmers to stay on the cutting edge of production practices. This includes a long-standing commitment to sustainability, and I would like to give you a few examples of our journey. I share these examples because I believe it is important to showcase the cutting-edge innovation of Michigan's, and America's, farmers.

Star has been thinking about sustainability for a long time. In fact, going back in time to the *July – August 1996* industry publication entitled *Dealer Progress For Fertilizer/Ag Chemical Retailers*, Star of the West was highlighted as a Regional Winner of the 1996 "Environmental Respect Awards." Our current CEO, Jim Howe, was then the Plant Food Division Manager and recognized how our early adoption of GPS helped drive both production success and environmental benefits. In that magazine published more than 25 years ago, Jim spoke about soil sampling and field mapping, and how "we are looking at the next step in technology – variable application rates for fertilizer and pesticides." Only applying what the soil or crop needs, in the space that it needs it, instead of applying a blanket rate across a whole field was an emerging concept in 1996. But as we know, the GPS soil sampling and grid sampling of today have become a hallmark of modern farming.

Technology has continued to drive sustainable production. Fast forward to today, our Plant Food Division is managed by Keith Martus, and we strive to find tools to help set our growers and ourselves up for success. One such tool we have implemented to help our Certified Crop Advisors and on-staff agronomists deliver top-notch recommendations that include both return on investment and environmental benefits is the Truterra system, the sustainability business at Land O'Lakes. With data provided by the grower and then input by the retailer, Truterra generates customized stewardship and profitability insights for each and every field, including establishing a stewardship score.

This technology gives farmers a deep understanding of the performance of their fields by giving them soil health indicators such as wind and water erosion rates, soil carbon and quality trends, and estimates of net greenhouse gas emissions. We are then able to work with farmers to determine stewardship practices that could maximize their return on investment while protecting natural resources. Just like Jim Howe and his team pioneered the use of GPS and precision agriculture in the 1990s, today we are proud to use advanced technology that offers a field-by-field analysis and balances profitability and sustainability. The acres in production can be more profitable overall, while less productive areas can be used more beneficially for native plant species and other environmental stewardship practices.

In addition, we are using Syngenta's AgriEdge program and farm management software to track farm production data, giving both growers and end-users greater visibility into a product's footprint. Our growers have been both open and patient while working with food company requests, and AgriEdge has played an important role in supporting that work. For example, we have used AgriEdge to track soft white winter wheat for the past six years for a key food customer. The ability to track every single pass of a tractor, application and rate, fertilizer used, and other key data has provided value for the food company and helped our growers to be well-positioned at a time when new carbon programs and many private-sector sustainability requirements mandate multiple years of in-field data and analysis. The capacity to house this data in one easily-accessible system, instead of paging through notebooks or finding paper records from every machine that went across the field has saved time in the long run – and will continue to do so.

In-field technology and the ability to track multiple years of data has also sparked innovative new ways to translate our work to the store shelf. We were proud to help launch Airly, a new cracker from Bright Future Foods. Airly crackers are the first of what we hope becomes a much larger sector of climate smart snacks. Star of the West was able to work with several growers in the Thumb and Saginaw Bay area to obtain soft winter wheat, and just as importantly, the records associated with that wheat, including total farm information along with field specific data over the last five years. For the Airly wheat, technology in the form of Comet Farms and other life cycle assessments were used, along with many hours of data input. The result was wheat with a carbon negative score, which means the wheat sequestered more carbon than it took to produce it. Michigan wheat helped create this climate smart cracker!

We also partner with Kellogg Company and The Nature Conservancy on programs regarding wheat, improving sustainability metrics, and the data needed to accomplish these goals. The hours of data input needed cannot happen easily without two additional elements. First, high speed broadband in all geographies is essential, and I'd to thank Senator Stabenow for her work to secure funding in this area. Second, the interaction between the grower, the retailer and the data system is critical. Data often needs to be entered in different ways or onto other platforms to produce various scores. Technology cannot adapt for colloquial terms, abbreviated names, farmer terms, and other items. Thus, shaping, or editing of the data by a person who understands agriculture, like a CCA, is one of the most underrated – and essential – components of sustainability today.

It is also important to note that technology alone will not solve the challenges that our agricultural system faces today. As I mentioned above, human capital is critical to the future of agriculture. Human capital spans the breadth of the industry, from Certified Crop Advisers, to farmers, to rural communities and those working alongside and supporting the farming communities. We are proud to have deep, long-lasting relationships with growers and buyers across the Thumb and the lower mitten, but we cannot possibly provide the needed interaction to each and every grower across the state. Investing in social networks for farmers in Michigan – and other agricultural regions of the country – is key to a successful Farm Bill, especially as we look to recruit the next generation of farmers and agribusiness professionals. These networks would cover a variety of needs, including peer-to-peer knowledge exchange, rural development, overall wellbeing, and mental health awareness.

Building on Past Farm Bills

Growers across the region have had strong support from past Farm Bills to implement conservation practices on their land. Thanks to bipartisan support for a strong Conservation Title of the Farm Bill – and thanks to your leadership, Senator Stabenow and Senator Boozman – growers have had a partner in the federal government as they look to advance innovative practices.

For example, in the Saginaw Bay region that Star of the West calls home, a successful Regional Conservation Partnership Program made possible by the 2014 Farm Bill has resulted in bringing together farmers, local agribusinesses, food companies and non-profit partners such as The Nature Conservancy to help advance stewardship across the watershed.

The 2018 Farm Bill took new steps to open the door for innovative, out of the box practices to be funded by NRCS, a trend I encourage the Committee to continue. It streamlined opportunities for external entities to become Technical Service Providers and help farmers work together with NRCS, something we hope to see USDA advance. It also delivered new opportunities to use cover crops via the Federal Crop Insurance Program, among other changes to support soil health and carbon sequestration.

For many years, the Farm Bill has invested in programs to provide wildlife and recreational habitat on conserved or retired farmland. Today's technology equips us to have a much clearer view, more so than ever before, of the return on investment, production value and stewardship benefits of specific practices on specific farmland. I urge the Committee to use this Farm Bill as an opportunity to focus on working lands conservation programs, such as the Conservation Stewardship Program and Environmental Quality Incentives Program, that allow practices to be targeted and achieve the best value for farmers, and taxpayers.

Overall, the past two Farm Bills have prioritized innovation, new thinking and public-private partnership to support conservation. I urge you to consider how we can continue to grow these new partnerships, while breaking down barriers for growers to participate in USDA programs.

Also imperative to the next Farm Bill is support of both food grade crops and regional food systems. At Star, we have been involved in the food chain since 1870, and we clearly see the potential for Michigan to have a climate smart, sustainable foodshed. The pandemic showed us vulnerabilities in our food system, and we know Michigan can do better. While Star's focus is on grains, dry edible beans and food grade soybeans, we know that our colleagues in vegetable, fruit, dairy, beef and other food commodities have much to offer to the Michigan foodshed, as well. A resilient agricultural system across the U.S. would be well-served by local and regional producers and processors providing their neighbors and neighboring communities with food. This could include support for more regional food processors and markets, creative ways to help institutional buyers access locally grown grains and legumes, as well as other food items. Imagine the resiliency and vibrancy of a foodshed that supplies locally grown, sustainable, nutrient-dense food to some of our most vulnerable populations: hospitals, prisons, schools and inner-city areas like Detroit and Flint. Star of the West knows this can be achieved and we are excited to see how the next Farm Bill can help us nourish our families, communities, and states through a climate smart foodshed.

There is no doubt in my mind that consumer-driven demand for environmental sustainability and progress in the fight against climate change will keep this issue front-and-center for agriculture. I am proud that our company and our grower-customers are helping to make progress in this area. New technology and innovation have helped growers continue to enhance their generations-long commitment to the health of their soil, which in turn helps our environment, and we are excited about what the coming years will hold. We must always remember though, to consider farmers' *economic success* as well as the health of the soil and water as crucial for climate smart food systems. The economics of a farm business must work to support sustainable practices and environmental solutions. When looking at economics, one specific item near and dear to us at Star of the West is understanding the benefit of winter wheat, as it provides both winter cover on the land and food. Wheat's value of feeding the world, while also acting as an important input in a sustainable crop rotation should be recognized, and farmers should not have to choose between harvesting their crop for food or collecting a cover crop payment. In instances like this, we continue to see how economic sustainability and environmental stewardship could work together on the farm – and could even result in new markets and production opportunities for our farmers.

Barriers

It's easy to provide a list of climate smart practices for growers to implement, and simply recommend that they go ahead and do so at their earliest convenience, or tomorrow, whichever comes first. But, as was stated by Dwight D. Eisenhower, "Farming looks mighty easy when your plow is a pencil and you're

a thousand miles from the corn field.” Actual farming isn’t easy, and when looking to incorporate new stewardship practices, practices that may or may not be traditional or accepted by NRCS, the process is further complicated. Farmers need support, in various forms, to be able to provide climate smart food or feed.

This support can include social networks for growers to reach out to and ask questions ranging from how and when to plant a new cover crop and termination of that cover to how to market their products so they can sell food items including oats, beans, or carbon negative wheat to a local restaurant or grocery store.

Capital, both up front and operating, is also important to continue farming in today’s unpredictable market conditions. A modern farm business is complex and involves a range of equipment, technology and tools – all designed to work together to deliver a successful growing season. Changing one of these systems can require changes or updates to other parts of the business. In this sense, a farmer is really an “orchestra conductor” who brings together a huge array of technologies to achieve success. Operating capital helps ensure that when they try something new, they are positioned to make relevant updates and improvements across their entire business.

Conclusion

We have learned much in this area, but reserve the right to learn more. Technology on the farm is both ever changing and evolving. While technology creates new work, it also creates new challenges and new decisions. For growers and companies like Star of the West, it’s an exciting time to be in our industry. We know from 150 years of experience that our Michigan growers bring something special to the table. Whether it be the proximity of the Great Lakes, the diversity of Michigan cropping systems, or the longevity of farming families today, Michigan is blessed with farmers that truly care and want to make a difference.

Our farmers are proud of their role in the food system and want to strengthen agriculture – and our environment – for future generations, just as previous generations did for them. They are part of an industry that has always embraced modern technology to enhance production. Actual horses became horsepower, corn is now a hybrid, and wheat can become a carbon sponge. We are at an exciting crossroads where farmers are using technology to deliver quantifiable environmental benefits and strengthening the fabric of rural life as they do so. All while nourishing that which we treasure most: our families and communities.

When defined, sustainability often includes a three-tiered approach of people, planet and profit. The next Farm Bill is also essentially a three-fold bill: a climate bill, an innovation bill and a technology bill. But we should take a page from sustainability’s handbook, and make sure the **people element** is supported when we craft this Farm Bill. We can’t forget the rural communities, the farm families, and the independent spirit of these growers. At its core, the Farm Bill needs to be an investment in people; the social networks and human capital that are imperative to making lasting change. It’s an opportunity to fuel agricultural innovation, enrich rural communities, nourish our population, ensure the tools are available for those who want to try new methods and technologies, and break down barriers of adoption for new and non-traditional production methods. All of these goals can help equip farmers and companies like Star of the West to build and enhance new economic opportunities for generations to come. It is an exciting time to be in agriculture, and the next Farm Bill will be well-timed to serve as a springboard for the continued success – and vibrancy - of our industry.