Summer 2020

Michigan Soybean News ©

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New Processing Plants: Increased Opportunities for Michigan Soybean Farmers

Pages 6-7

Photo credit: Keaton Meeuwsen, ZFS

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Visit the Michigan Soybean Association website at www.misoy.org

See what MSA is doing for its members.

Enlist E3 Soybean: A Unique Platform for Weed Management

Pages 14-15

MI Soybean Growers Join WISHH's Southeast Asia Trade Team

Pages 20-21

2020 Funded Research Projects

Pages 26-28

Comments and suggestions can be submitted to:
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Michigan Soybean Association's Mission Statement
To improve and advocate for the Michigan soybean industry.

From Your MSA President...

How much does a polar bear weigh? Enough to break the ice! I always find humor is a great way to initiate a conversation and introduce yourself. My wife always tells me the polar bear joke is corny, but it always gets a conversation going, even if it starts with a laugh at my expense.

Now that I've broken the ice, I'd like to take this time to introduce myself as your new president of the Michigan Soybean Association. My name is Dan Keenan and I hail from Merrill, MI. My family's 116-year-old farm is located along M-46 in the Northwest corner of Saginaw County. We are a cash crop operation and I farm alongside my family growing soybeans, corn, sugar beets and black beans. I've been married to my wonderful wife Melissa for 12 years and we've been blessed with three troublemakers. Makenzie, Breslyn and Connor remind us daily that karma always wins in regard to how you were with your own parents.

I'd like to take a minute to acknowledge and thank our previous two presidents, Dave Williams and Brian Mackenzie. I had the privilege to serve alongside and learn from both of these great farmer-leaders. They left some big shoes to fill when it comes to representing Michigan's soybean farmers, but I have great confidence we can rise to the occasion, especially given the great board of directors we have to lead this organization.

As I write this article, we are currently dealing with the COVID-19 pandemic. Governor Whitmer announced today the shutdown of the state, with the exception of essential businesses and industries. It comes as no surprise to you all that agriculture is one of the industries deemed essential. Over the past 10 days we have been forced into a situation few are accustomed to or comfortable with. What started as the cancellation of schools and colleges quickly evolved into the cancellation of major sporting events and large social events, and ultimately the closure of businesses. At this time there are more uncertainties than certainties. We have all been taken out of our routines and the sense of normalcy has been disrupted.

I'd like to think of myself as a glass half full kind of guy, so I'm hopeful there will be some positive results that can be found in this time of crisis. I'd like to think the general public will find a greater appreciation for this nation's food system and those who supply it. From input suppliers to farmers and food processors to truck drivers, it is no doubt a team effort to ensure grocery shelves are stocked. I also hope the general public, as well as elected officials realize the importance of the ag sector and the infrastructure it requires to keep this great nation fed and supplied.

Whether it be Pearl Harbor, 9/11, or a pandemic like the coronavirus, this country has a knack for rising to the occasion. We may get a couple black eyes, but we wind up throwing the last punch. I have confidence we will learn and grow from this situation.

Hopefully by the time this reaches your mailbox, the coronavirus will have run its course and America will be on its way to recovery, both personally and economically. But know that however long this pandemic does last, your Michigan Soybean Association will be representing Michigan soybean farmers and the ag industry's best interests. I hope you all have a great planting season. GO GREEN and God Bless the American Farmer!

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Michigan Soybean Association Excited to Assume Michigan Soybean Yield Contest

The Michigan Soybean Yield Contest began in 2006 as a project funded by the Michigan Soybean Promotion Committee (MSPC). In that time, we have seen average yields rise from 65 bushels to 82 bushels per acre. In 2019, there were 89 entries from 23 counties in Michigan, with seven seed companies represented.

Moving forward, the Michigan Soybean Association (MSA), our membership-based organization will be administering the contest. Membership in MSA will be required to enter.

We want to thank the seed companies who have signed on to sponsor our contest. Look for more information in future issues of the *Michigan Soybean News* and on our website, misoy.org.

LG SEEDS

PIONEER

DS DAIRYLAND SEED

ASGROW

Rupp SEE WHAT GOOD YIELDS

Golden Harvest

Dyna-Gro SEED

DF SEEDS

Credenz

Mycogen SEEDS

FULL-CIRCLE RETURN

HERE'S HOW THE SOY CHECKOFF WORKS. The national soy checkoff was created as part of the 1990 Farm Bill. The Act & Order that created the soy checkoff requires that all soybean farmers pay into the soy checkoff at the first point of purchase. These funds are then used for promotion, research and education at both the state and national level.

* Led by 73 volunteer soybean farmers, the United Soybean Board (USB) invests and leverages soy checkoff dollars to MAXIMIZE PROFIT OPPORTUNITIES for all U.S. soybean farmers.

unitedsoybean.org

OUR SOY CHECKOFF™

In-State Processing is a Win for

The Michigan soybean industry has long-awaited an increased processing capacity for soybeans in the state. As the production of soybeans in the state has grown to two million acres, the capacity to process these beans into higher value products has not kept pace. Instead, Michigan farmers have grown high quality soybeans and shipped all but 10 million bushels of them out of the state or country to be processed. Inversely, when Michigan livestock producers need high protein feed ingredients, they buy soybean meal from those processors outside of the state. The addition of two different soybean processing facilities to the state's landscape is a welcome change. "The Michigan Soybean Promotion Committee warmly welcomes ZFS Ithaca and Quality Roasting to the state and pledges to be a partner in their success," shared MSPC President Laurie Isley.

These new processors have both begun operations and are actively crushing soybeans. ZFS Ithaca has finalized construction of a large-scale facility in the center of the state where soybean crushing has commenced. Likewise, Quality Roasting has begun to crush soybeans at their facility near Reese, in the Thumb of Michigan.

ZFS Ithaca

If you head north up U.S. 127 through the middle of Michigan, you won't miss seeing four gleaming steel storage bins and a nine-story metal building lifting steam into the blue sky.

The brand new ZFS Ithaca, LLC soy processing plant, built on 435 acres is a thing of beauty, particularly if you are a Michigan soybean farmer or an end user of one the plants co-products – soybean meal, soybean hulls and soybean oil.

After more than five years of planning and construction, the plant started processing soybeans on February 10, and is slowly ramping up to full production. When running at full capacity, ZFS Ithaca will be able to process more than 40 million bushels of soybeans per year, about four times the amount its affiliate company, Zeeland Farm Services, Inc., crushes annually at its plant in Zeeland.

"The new facility in Ithaca will boost local soybean prices for Michigan farmers, serve as a convenient, reliable source of soybean meal and hulls for livestock producers and allow Michigan's agriculture sector to tap into growing markets at home and abroad for soy products," former Michigan Agri-Business Association President Jim Byrum said, when the plant was announced in 2016.

By the numbers, the outputs of the plant are impressive. The plant can process 125,000 bushels a day and kick out 115 tons of soybean meal each hour of operation. That is almost two billion pounds of meal a year. The flat storage building for meal and other feed ingredients is 124,000 square feet (almost three acres) and has two overhead conveying systems that can distribute up to 40,000 tons of product throughout the building. Additionally, about 60,000 pounds of crude soybean oil can be produced each hour, along with almost 10 tons of soybean hulls. Four storage tanks can hold about two million gallons of soybean oil. The plant can receive 1,200 tons of beans per hour through a pair of receiving pits, which can direct the beans into any of the storage tanks, or into the wet tank for drying. Speaking of drying, ZFS Ithaca can dry 8,500 bushels per hour.

Photo credit: Keaton Meeuwsen, ZFS

ZFS Ithaca

Michigan Soybean Farmers

Quality Roasting

Located in Tuscola County, Quality Roasting began processing soybeans in December 2019. At full capacity, they have the ability to process 2.2 million bushels of soybeans each year. "Quality Roasting is excited to be part of the Michigan community. We appreciate all the support we have received from the state, county and township," said Quality Roasting Director of Business Operations Erin Davis. "We look forward to bringing more value to Michigan soybean producers."

Quality Roasting's mechanical extraction process is called expelling. They use only heat, friction and pressure to remove oil from the soybeans. This differs from a solvent extraction process where a solvent chemical is utilized to remove the oil from the soybean. Their process produces soybean meal that is high in by-pass protein. This by-pass protein is an important ingredient in dairy cow rations for increased milk production. Quality Roasting is proud to offer a high-quality ration option for dairy producers in Michigan.

Going forward, Quality Roasting is looking forward to continuing to increase soybean meal production at their Reese facility. With their current processing line, they plan to add more machines to double their processing capacity.

Michigan Soybean Farmers Benefit

With ZFS Ithaca crushing more than 40 million bushels per year, Zeeland Farm Services processing another 11 million and Quality Roasting, LLC adding two million bushels, the soy processors in Michigan now have the capacity to handle more than 50 percent of the state's annual production. Much of the other Michigan soybean production is close to the southern border, with proximity to out-of-state soybean processing plants. That means the basis should improve on both ends of the line, benefitting both Michigan soybean farmers and the state's producers who use the products coming out the back end of the plants.

Michigan soybean growers proudly welcome these new businesses to our state and look forward to a future of supplying high quality soybeans to be processed into higher value products in order to supply the world with soybean oil and soybean meal. Since the scale of these businesses are so large, the supply chain of Michigan soybeans will take a while to adjust to the new normal. "While any major change in the flow of commodities involves disruptions, the overwhelming effect on Michigan soybean growers and livestock farmers is a positive and welcome change," stated MSPC Research Director Mark Seamon.

Quality Roasting

WE SEE MORE THAN *Bacon and Eggs*, WE SEE OPPORTUNITY.

In Michigan, pigs consume over 116,000 tons of soybean meal annually.

That helps soybean farmers bring home the bacon!

Poultry in Michigan (turkeys, layers and broilers combined) consume over 284,000 tons of soybean meal each year.

We think that's something to cluck about!

WHEN SOYBEAN FARMERS LOOK AT LIVESTOCK, THEY SEE A MAJOR MARKET FOR THEIR PRODUCTS.

97% of U.S. soybean meal is used to feed livestock and poultry. Animal nutritionists value U.S. soybean meal because of its protein, essential amino acids and energy.

Michigan Soybean Promotion Committee
The Soybean Checkoff
michigansoybean.org

MSA NEEDS YOU TODAY!

People making decisions in Lansing and Washington, D.C. are getting further and further away from the farm. In the past, families had someone who was a farmer they could visit, but now generations are far removed and don't have a direct connection. "I've met several legislators that have never set foot on a farm. We as farmers need to be visiting with legislators and representing our land," stated Jay Ferguson, MSA director. "There is a lot of education that needs to occur to our politicians and the public."

Paying the soybean checkoff does not make you a Michigan Soybean Association member. Checkoff dollars cannot be used for lobbying.

Are you receiving the *MSA eNews*?
Email soyinfo@michigansoybean.org to sign up for this informative membership e-newsletter.

Protect your farm and way of life, join the Michigan Soybean Association today!

Some Membership Benefits:

- 5% member discount purchase incentive on all IntelliFarms equipment and free admission to grain school and workshops
- Through Auto-Owners Insurance/Cedar River Insurance Agency, an offer of premium discounts up to 10% on select policies is available
- Scholarship opportunities for your children and grandchildren
- Preferred pricing on the purchase or lease of most new Chrysler, Dodge or Jeep vehicles
- Cabela's gift card purchase discount
- Discounted registration to the Commodity Classic

3-year or Lifetime Memberships:

- $300 Specialty seed with a minimum order of 30 units
- $50 certificate good for LG Seeds Roundup Ready 2 Xtend™ soybean seed **AND** $50 soybean seed certificate good for Renk Seed
- 2-$25 Soy Biodiesel certificates **OR** 2-$25 Soybean Meal Bucks certificates

The MOST IMPORTANT MSA membership benefit: *Having a voice in Lansing and Washington, D.C.!*

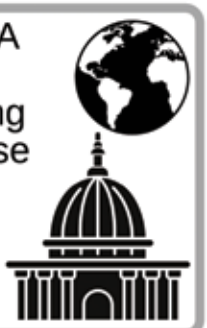
YOUR MEMBERSHIP MATTERS!

These days, it seems like there are a lot of factors working against farmers. Increased regulation, COVID-19's impact on the economy, reduced markets due to trade disputes and other outside influences can make your work as a farmer even more difficult. **Your membership in the Michigan Soybean Association (MSA) can make a difference and help strengthen our voice as we work on behalf of soybean farmers.** MSA works on your behalf on a variety of issues that impact the agriculture industry everyday.

MSA recognizes the **vital role livestock play as the #1 consumer of soybeans**. MSA is committed to defending livestock produers' right to operate without overly burdensome regulations. Recently, MSA provided comments to the MI Department of Environment, Great Lakes & Energy (EGLE) encouraging them to reconsider proposed changes to their CAFO permitting process. If livestock producers can't operate, our major soybean market is challenged. Additionally, nutrient application regulations could potentially be modified and applied to commercial fertilizer applications in the future. The revised permit took many of the agriculture industry's concerns into consideration, but MSA continues to remain engaged to ensure the implementation is reasonable for farmers.

MSA works to increase **demand for Michigan soybeans** domestically and internationally.

MSA is actively engaged with ASA and members of Congress to **promote trade**. We are monitoring implementation of the China Phase 1 Agreement and USMCA and advocating for future funding for market access and foreign market development programs.



MSA continues to advocate for maintenance and **improvements to Michigan's infrastructure**, as well as encouraging the expansion of investments in inland waterways including the St. Lawrence Seaway and the Lower Mississippi River dredging projects.

MSA supports increases in annual RFS volumes for biodiesel and advanced biofuels, supports favorable implementation of the RFS and is working to **grow biodiesel demand** in Michigan.

MSA
MICHIGAN SOYBEAN ASSOCIATION

JOIN TODAY!
SEND IN YOUR MEMBERSHIP APPLICATION, FOUND ON THE BACK OF THIS PAGE!

MICHIGAN SOYBEAN ASSOCIATION

MEMBERSHIP APPLICATION

First Name:_____

Last Name:_____

Address:_____

City/State/Zip:_____

Phone:_____

Cell Phone:_____

Email:_____

☐ **1-yr: $75** ☐ **3-yr*: $190** ☐ **Lifetime*: $750**

Payment Amount & Method:

Check (Payable to MSA) or Credit Card

Credit Card Type:_____ Expiration Date:_____

Credit Card #:_____

Signature:_____

Mail application with payment to:
Michigan Soybean Association
PO Box 287, Frankenmuth, MI 48734

Dues are not tax deductible as a charitable contribution for federal tax purposes, but may be deductible as a business expense. 18% of member dues are allocated to lobbying activities and are not deductible.

*3-year and Lifetime memberships can choose between receiving either (check one):

☐ 2-$25 Soy Biodiesel Bucks certificates or
☐ 2-$25 Soybean Meal Bucks certificates

Date of Birth:_____

Number of Soybean Acres:_____

Total Farm Acres:_____

Occupation (check one):
☐ Farmer ☐ Retired ☐ Other

What issues interest you most?
(Check all that apply)

☐ Biodiesel/Biobased Products
☐ Farm Bill
☐ Transportation Infrastructure
☐ Trade Agreements
☐ Conservation
☐ Consumer Education
☐ Biotechnology
☐ Freedom to Operate
☐ International Marketing
☐ Soy and Nutrition
☐ Other:_____

For a list of all membership benefits, visit www.misoy.org/member-benefits/

A Crisis is a Terrible Opportunity to Waste

At the time of this writing in late March, California has just ordered its 40 million residents to self-quarantine at home, the number of Michigan residents infected with coronavirus is skyrocketing, and Governor Whitmer has ordered all bars and restaurants closed except for carryout. The economy appears to be in free-fall and businesses are hurting.

Despite all this gloom and doom, are there silver linings in these storm clouds?

MSA and MSPC took the opportunity as this crisis was emerging to hand out hand sanitizer – specifically sanitizer made with soy protein – to legislators. We visited Senate legislative offices and took a moment to highlight the versatility of soy-based products with each visit. Unfortunately, state government was shifting their employees to work from home, so we were only able to deliver the hand sanitizer to Senate members. However, when we did connect with legislators and staff, it was well received during these trying times.

At the recent County Road Association conference there was talk of using soy oil-based asphalt. Several county road commissions have tried it as an alternative to traditional petroleum based asphalt. As a county road commissioner myself, I will be advocating for our agency to partner with MSA and MSPC to try it in our county.

Before the crisis began, Ag Day at the Capitol was yet again a success. MSA and MSPC directors and staff participated in basket deliveries to legislative offices and handed out tasty soy-based brownies. They also took the opportunity to educate policymakers on our industry!

Dan Keenan, MSA President and 5th generation farmer, said it best in a recent Facebook video – we will get through these trying times as long as we stick together and do our part. Thanks to everyone for doing their part in providing the food that feeds all of us.

As always, The Frederick Group is here to represent you and advocate for your issues in Lansing. If you have any questions or if we can be of service, feel free to contact the office at 517-853-0413.

MSA President Dan Keenan was introduced from the gallery of the Michigan House of Representatives as part of Ag Day at the Capitol.

Michael Frederick of The Frederick Group.

New and Renewing MSA Members

NEW:
Harold Anderson, Fowlerville
Anthony Bohac, Owosso
Kyle Crumbaugh, St. Louis
Tim Halfman, Carson City
Tom Horetski, Pigeon
Jeremy Jones, Owosso
Ken Merryfield, Sunfield
Larry Palmreuter, Frankenmuth
Bruce Pline, Saint Johns
Joel Ruczynski, Richmond
Dave Squires, Tecumseh
Syngenta, Butler, MO
Robert Tibbits, Richmond
Mike Timmer, Hopkins
Rex Ulrich, Sand Creek
USDA Great Lakes Regional Office, East Lansing
Jed Welder, Greenville
Matthew Wila, Wayland

RENEWING:
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Brian Bellville, Prescott
Jim Bolday, Emmett
John Brendel, North Branch
Citizens Elevator Co. Inc., Vermontville
Francis Deutsch, Dundee
William Dodds, Onsted
Cody Ferry, Otisville
Dennis Gardner, Croswell
Don Girdham, Hillsdale
Larry Gould, Morenci
John Heller, Dexter
Hoffman Ag Service, LTD., Marhsall
Knoerr Farms, Sandusky
Joe Kwiatkowski, Dorr
Larry LaPointe, Temperance
David Little, Cass City
Frank Marcello, Hemlock
David McConnachie, Deckerville
Chris Muto, Columbiaville
Abraham Nemcik, St. Johns
Bruce Noel, Leslie
Rob Richardson, Vicksburg
Larry Robinson, Homer
Frank Rochowiak, Milan
Gordon Rogers, Chatham, ON
Steven Schlagel, Turner
Mark Seamon, Saginaw
Philip Selter, Ypsilanti
Leslie Severance, Decker

RENEWING continued:
Larry Starkey, Fairgrove
Mike Staton, Allegan
John Sulkowski, Goodells
Frank and Lisa Szymanski, Port Austin
Paul Taylor, Ottawa Lake
Troy Vandenbusche, Jasper
Jeff Vogl, Henderson
William White I, Hudson
Michael Wilder, Unionville
Tom Woelmer, Monroe
Pat Zeeb, Bath

See insert for application or visit www.misoy.org.

Your Soybean Checkoff

Enlist E3 Soybean: A Unique Platform for Weed Management

By: Christy Sprague, Professor and Weed Extension Specialist, Michigan State University

The use of the 'Easy' button for weed control in soybean is gone forever. Glyphosate- and multiple herbicide-resistant weeds have increased exponentially over the last 10 years creating many weed control challenges for Michigan soybean farmers. Tillage, the use of soil-applied (PRE) herbicides and planting soybean varieties that allow for the use of herbicides that traditionally would have injured or killed soybean has provided farmers with additional and/or alternative options for weed control. Over the past few years, farmers have planted LibertyLink (glufosinate-resistant), LibertyLink GT27 (glufosinate and glyphosate-resistant) and Roundup Ready 2 Xtend (dicamba and glyphosate-resistant) soybean to be able to apply at least one effective postemergence herbicide to control many of Michigan's glyphosate and multiple-resistant weeds. In addition to these platforms, during the 2020 growing season farmers will have another option with the full commercial launch of Enlist E3 soybean.

The Enlist system in soybean was developed as a tool to help manage herbicide-resistant weeds. This system enables growers to apply registered 2,4-D choline formulations to soybeans designated as Enlist E3. In addition to 2,4-D resistance, these soybeans are also resistant to glufosinate (i.e., Liberty) and glyphosate. This makes Enlist E3 the first soybean technology where three different herbicide active ingredients, which could not previously be used together in soybean, an option for growers. The 2,4-D resistance in Enlist E3 soybean also allows farmers to apply registered 2,4-D choline products in burndown herbicide applications right up to and after planting of Enlist E3 soybean without a plant-back window. The glufosinate resistance in Enlist E3 soybean also provides an additional herbicide site of action that growers can use to manage glyphosate- and multiple-resistant weeds. Farmers also have the option to tank-mix or apply 2,4-D and glufosinate sequentially to control glyphosate-resistant weeds, including horseweed (marestail), Palmer amaranth and waterhemp, providing two effective herbicides for control. However, as with any herbicide system, it is important to keep in mind that every application of either glufosinate or 2,4-D increases the selection for herbicide resistance. If a grower decides to use this technology, it will be important to use an integrated approach to control problematic and resistant weeds. An overreliance on any one of these herbicides will lead to the development of additional herbicide resistances.

It is also important to keep in mind that there are several plant species across the landscape that are susceptible to 2,4-D. Off-target movement of 2,4-D to susceptible plants can be a concern with postemergence 2,4-D use. The recent development of the lower volatility 2,4-D choline formulations, Enlist One and Enlist Duo (2,4-D choline + glyphosate), registered for use in Enlist E3 soybean greatly reduces this risk. However, to help ensure that susceptible species are not damaged by 2,4-D exposure, there are several label guidelines that must be followed if a farmer decides to use the registered 2,4-D choline formulations. Please refer to the labels and the factsheet, "Guidelines and Precautions for 2,4-D Use in Enlist E3 Soybean" on pages 101-102 in the 2020 MSU Weed Control Guide for Field Crops, found here: https://bit.ly/2Jul1jv. Remember, it is the responsibility of the applicator to protect sensitive areas and susceptible crops from 2,4-D injury.

While there are certain precautions and restrictions that need to be followed if Enlist One or Enlist Duo are applied in Enlist E3 soybean, the advantage of this soybean platform is that it provides farmers greater flexibility in their weed control strategies by allowing for multiple approaches that can be used based on their weed control situation. What we do know for sure is that one application of any of the herbicides, Enlist One, Enlist Duo, Liberty (glufosinate) or glyphosate alone will not consistently provide season-long weed control in Enlist E3 soybean. Therefore, it is important to use a systems approach for weed management, regardless of the herbicide-resistant soybean technology. The following is a synopsis of steps that should be followed for weed control in Enlist E3 soybean.

Weed management steps recommended for Enlist E3 soybean:

1. **Consider planting soybean in narrow rows.** Early canopy closure from planting soybean in narrow rows will help improve season-long weed control.
2. **Control emerged weeds prior to planting.** This can be done either with tillage or an effective preplant burndown herbicide program in no-till soybean.
   a. One of the strengths of the Enlist E3 system is that Enlist One (2,4-D choline) at 2 pt/A or Enlist Duo at 4.75 pt/A can be used right up to or after planting Enlist E3 soybean. Additionally, these rates of 2,4-D are twice the use rate of 2,4-D ester that is normally applied seven days prior to planting non-Enlist soybean, which ultimately improves control of harder to control weeds such as marestail.
3. **Use of an effective soil-applied (pre-emergence) herbicide is critical.** Product choices should be based on the weeds that need to be controlled, as well as soil and rotation restrictions. For a complete listing of soybean herbicides with residual weed control, consult Table 2A in the MSU Extension publication E-434 *"Weed Control Guide for Field Crops"*.
4. **Choice of postemergence herbicide should be based on what weeds you are trying to manage.**
   a. If using Liberty (glufosinate) postemergence, apply when weeds are two to three inches tall. We recommend adding ammonium sulfate (AMS) at 8.5 lb/100 gal or the equivalent of a liquid AMS product.
   b. If using glyphosate postemergence, apply when weeds are less than four inches tall. The addition of AMS at 17 lb/100 gal is also recommended. It is also important to consult the glyphosate product label and make sure it can be used in either glyphosate-resistant or glyphosate-tolerant soybean. Remember glyphosate will not control glyphosate (Group 9)-resistant weeds.
   c. Enlist One postemergence can be applied alone (1.5 to 2 pt/A), or tank-mixed with glufosinate or glyphosate formulations. However, tank-mixtures with these and other products, including additives can only be applied after first consulting the EnlistTankmix.com website within seven days before application to make sure tank-mixtures are approved. These applications should also be made when weeds are less than four inches tall.
   d. Enlist Duo postemergence (3.5 to 4.75 pt/A) applications should be made when weeds are less than four inches tall. If tank-mixing other products with Enlist Duo, they need to be on the approved list found on the EnlistTankmix.com website.
   e. Some farmers may choose to use tank-mixtures of Liberty (glufosinate) and glyphosate postemergence. In some cases, these combinations have resulted in slight antagonisms of certain weed species, especially weeds that are harder to control with glufosinate (grasses and perennial weeds). However, in the case of controlling glyphosate-resistant weeds, in particular glyphosate-resistant Palmer amaranth and waterhemp, the addition of glyphosate does not appear to antagonize glufosinate's effectiveness on these species.
5. **Tank-mixtures with postemergence Enlist One, Enlist Duo, Liberty (glufosinate) or glyphosate.** While this is not always needed, several soil-applied residual herbicides (i.e., Dual II Magnum, Warrant, Zidua or Outlook) can be tank-mixed with these products and applied postemergence for extended residual control. Remember, when using Enlist One or Enlist Duo tank-mixture, allowances need to be on the approved EnlistTankmix.com website.
6. **Follow up with an additional application of Enlist One, Enlist Duo, Liberty (glufosinate) or glyphosate if needed.** It is important not to exceed the maximum yearly amounts or maximum application timings for each herbicide.

For more information on weed control in soybean consult the *2020 MSU Weed Control Guide for Field Crops* and visit www.MSUweeds.com. Remember to always read the herbicide label.

MICHIGAN STATE UNIVERSITY

On-farm Trials Improve Management Decisions

By: Mike Staton, MSU Extension Soybean Educator

Soybean producers need to make management decisions that affect their net income, and low commodity prices make these decisions more important than ever. Accurate and reliable information is required to make good decisions and there is no better way to gather this information than to conduct well-designed trials on your farm. Precision farming technologies such as auto-steer, data management programs such as Climate Field View and yield monitors make it easy to conduct on-farm trials without creating delays. You likely have everything needed to set up, conduct and analyze the results from your own trial.

The first step to generating meaningful and reliable results from on-farm trials is to design them properly. Producers often split a field or leave one unsprayed strip in a field to evaluate a new product or practice. These designs don't produce reliable results because external factors that create yield variability such as soil type, drainage, topography or previous management can affect the outcome. To reduce the influence of external factors, I recommend using the randomized complete block experimental design (RCBD). This sounds complicated but the concept and implementation of the RCBD are simple. All the treatments being compared are placed close together within blocks or replications where they are compared under similar conditions. The blocks are repeated or replicated to further reduce the impact of external factors. For trials comparing three or four practices, four replications are sufficient, and the treatments should be placed randomly within each block (Figure 1). Most producers will compare only two treatments - with and without the new input. In this case, the treatments can be alternated but six replications are recommended.

Figure 1. The randomized complete block design used in the 2019 on-farm planting rate trials.

80	100	130	160	100	160	80	130	100	80	160	130	160	100	130	80
Replication 1				Replication 2				Replication 3				Replication 4			

One of the most common external factors that can drastically impact trial results is tile drainage. The best way to prevent subsurface drainage from confounding your results is to plant all trials perpendicular to tile lines. I can't emphasize enough how important this simple concept is, as I've had to discard several on-farm trials after learning that they were planted parallel to the tile lines, which very likely impacted yields more than the treatment being studied.

Consider the width of each strip or treatment when planning a trial. Ideally the strips should be wider than the combine header to ensure that the same area is harvested from each strip. Also, eliminate tire tracks from affecting the results. This is especially important with sprayer tracks as they reduce yields when fields are sprayed after R1. Sprayer tracks should be present in, or absent from, all the harvested strips.

When reviewing yield results, compare yields between adjacent strips. The overall average of each treatment is important but noting how each strip compares to its neighbor is also critical to determine if the yield difference is due to the treatment. Whether or not you choose to work with the Michigan Soybean On-farm Research program, I encourage you to consider conducting one or more on-farm trials in 2020. Please call me at 269-355-3376 if you want to discuss a trial you are considering.

Tips for Successful On-farm Trials:

- **Use 4 – 6 replications**
- **Plant perpendicular to tile lines**
- **Make strips at least as wide as combine header**
- **Each strip should have sprayer tracks or no tracks**
- **Precision technology makes it easier (auto-steer, GPS yield monitor)**

Thin Soybean Stands May Not Require Replanting

By: Mike Staton, MSU Extension Soybean Educator

When poor soybean emergence and thin stands occur, producers are compelled to make timely and informed replant decisions. Accurately assessing your soybean stand and diagnosing the cause of the emergence problems are the first steps in the process. Once the existing stand has been determined, use the information provided in this article to help inform replant decisions.

The average final plant stands and average yields of the lowest and the highest planting rates from 48 planting rate trials conducted in Michigan from 2015 to 2019 are listed in Table 1. There were 10 locations in 2015, 10 sites in 2016, 11 sites in 2017, 8 sites in 2018 and 9 sites in 2019. Detailed information from all the planting rate trials conducted from 2015 to 2019 is available in the 2017, 2018 and 2019 On-farm Research Reports available at www.michigansoybean.org.

The following table clearly shows thin soybean stands can produce surprisingly high yields. However, there were exceptions, as yields from the 80,000 planting rate were reduced by more than four bushels per acre at 12 of the 48 sites (25 percent of the time). Four bushels per acre is the breakeven yield loss for the 80,000 planting rate given current seed and crop prices, making the 80,000 rate less profitable than the 160,000 rate at these sites. At three of these sites, the yield loss in the lowest planting rate was more than seven bushels per acre. None of the varieties in the trials were thin or straight-line plant types.

Table 1. Average final plant stands and yields by year for the lowest and highest planting rates compared in 48 on-farm planting rate trials conducted in Michigan from 2015 to 2019.

	Target planting rates (seeds/ac)			
	80,000		**160,000**	
Year	**Stand (plants/ac)**	**Yield (bu/ac)**	**Stand (plants/ac)**	**Yield (bu/ac)**
2015	70,000	58.4	141,300	60.2
2016	66,800	68.7	131,700	71.4
2017	64,400	51.3	121,300	53.9
2018	61,800	64.0	113,400	65.1
2019	64,300	58.1	120,000	62.0

Soybean agronomists have identified 100,000 plants per acre in narrow rows and 80,000 plants per acre in 28- and 30-inch rows as the minimum plant stands required to produce optimum yields. However, the information presented in Table 1 shows that stands of less than 80,000 plants per acre can produce high yields. I urge producers to consider this when making replant decisions. Also, realize that soybean yields decrease by 0.3 to 0.4 bushel per acre per day when planting after the first week of May. So, replanting 30 days after the original planting date could reduce yield potential by 9 to 12 bushels per acre.

The case for keeping thin stands becomes even stronger for fields having a history of white mold. The lowest planting rate increased soybean yields by 5 bushels per acre and income by $80.00 per acre over the highest planting rate at two sites infested with white mold.

Plant stands from the 80,000 seeds per acre planting rate (left) and the 160,000 seeds per acre planting rate (right) from the 2017 Sanilac 2 planting rate trial.

Weapons to Battle SCN are Increasing

Soybean cyst nematodes (SCN) continue to push back against all of the management tools that have been created to control their impact on soybean yield. Like most crop pests, eradication is not possible, because the goal of most organisms is to survive and reproduce. Because of this, we control what we can up front and deal with the survivors the best we can. The surviving SCN are pretty tough and resilient.

There may not be any complete control options available, but the good news is that the "weapons" available for farmers to use against SCN are increasing. The SCN Coalition (www.SCNCoalition.com) has created a chart for soybean growers to use in selecting the best fit for an SCN seed treatment on their farms. Many other resources are also available from the coalition related to SCN management in your fields. You can also contact the Michigan Soybean office if you are interested in printed materials or SCN sample collection bags and instructions.

Drs. Marisol Quintanilla and George Bird, nematologists at Michigan State University, are contributors to the national SCN Coalition effort. Checkoff investments from Michigan soybean growers are used to support their work.

NEMATODE-PROTECTANT SEED TREATMENTS*

** In order of market introduction*

What's your number? Take the test. Beat the pest.

BRAND NAME	CROP(S)	TARGETED NEMATODES	ACTIVE INGREDIENT	MODE OF ACTION	COMPANY
Avicta Complete	Soybean, Cotton, Corn	All plant-parasitic nematodes	Abamectin	Inhibits nematode nerve transmission	syngenta
N-Hibit Seed Treatment	All plants	All plant-parasitic nematodes	Harpin protein	Induced plant defenses	Direct Enterprises
Votivo Seed Treatment	Soybean, Cotton, Corn	All plant-parasitic nematodes	*Bacillus firmus* I-1582 (Clothianidin + *Bacillus firmus* I-1582)	Blocks infection via root colonization and degrades eggs through enzymes	BASF
Clariva pn	Soybean	Soybean cyst nematode (SCN)	*Pasteuria nishizawae*	Nematode parasite	syngenta
ILEVO Seed Treatment	Soybean	SCN, root-knot nematode (RKN), reniform, lesion	Fluopyram	Inhibits cellular respiration in nematodes	BASF
AVEO EZ	Soybean, Corn	SCN, RKN, reniform, lesion, others	*Bacillus amyloliquefaciens* PTA-4838	Colonization and nematode paralysis	VALENT
escalate nemaseq	Soybean, Corn	All plant-parasitic nematodes	Heat-killed *Burkholderia rinojensis* + fermentation media	Enzymes and toxins	BECK'S
BIOST	Soybean, Cotton, Corn	All plant-parasitic nematodes	Heat-killed *Burkholderia rinojensis* + fermentation media	Enzymes and toxins	Albaugh
Trunemco	Soybean, Cotton, Corn	All plant-parasitic nematodes	Cis-jasmone, *Bacillus amyloliquefaciens*	Induced systemic resistance, protective colonization	Nufarm
Saltro	Soybean and Canola	SCN, RKN, reniform, lesion, lance	Pydiflumetofen	Succinate dehydrogenase inhibitor	syngenta

MSPC Director Positions Available

Every year certain district seats on the seven-member Michigan Soybean Promotion Committee (MSPC) board are open for appointment or reappointment by the Governor. Two of these positions will be filled this summer. Each district up for appointment must submit two names for consideration. The districts seeking applicants in 2020 include District 1 – Berrien, Branch, Cass, Kalamazoo, St. Joseph, and Van Buren Counties and District 3 – Lenawee, Livingston, Monroe, Wayne and Washtenaw Counties.

Interested soybean farmers residing in these districts should contact Executive Director Janna Fritz at 877.769.6424 or email jfritz@michigansoybean.org. Those interested in applying will be provided with a link to apply online. All applications need to be completed by July 31, 2020. The term starts at the end of September with the first meeting being held in December. We also encourage interested applicants to attend a regular MSPC board meeting to learn more about the organization and position requirements. MSPC's next board meeting will be held June 23. Call to RSVP if you are interested in attending or learning more.

Michigan Soybean Promotion Committee
The Soybean Checkoff
michigansoybean.org

Michigan Soybean Promotion Committee Board of Directors

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The mission of the Michigan Soybean Promotion Committee is to manage checkoff resources to increase return on investment for Michigan soybean farmers while enhancing sustainable soybean production.

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World Initiative for Soy in Human Health

Jim Wilson
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Michigan Soybean Growers Join WISHH's Southeast Asia Trade Team

Michigan soybean growers Jim Wilson and David Williams shared the benefits of Michigan soy with current and prospective customers in January as members of the American Soybean Association's World Initiative for Soy in Human Health (WISHH) Program's trade team to Cambodia and Myanmar.

They delivered four key soy protein messages to current and prospective customers in both Southeast Asian countries where protein demand is rapidly growing for aquaculture and livestock feeds as well as human foods. Both farmers emphasized the trip's importance to reach the rapidly growing young populations that are on the fast-track to add more protein to their diets. By 2030, 65 percent of the world's middle class will live in Asia.

"The most important part of the trip was to show potential buyers and users of soybeans that we would like to be their supplier, and we have a product to meet their specifications," said Wilson.

"It is vital that we talk to our customers," said Williams, who serves as the United Soybean Board ex-officio member on the WISHH Program Committee. "Our customers want to know what we are doing on our farms. They are very impressed that we would go over to meet them and show how interested we are in having them as a customer," said Williams, who made presentations on food grade soybean production practices that he has used at his Elsie, Michigan farm.

Wilson, who serves as WISHH treasurer, was pleased that WISHH recruited seven companies that export U.S. soy or equipment to join the trade team. "The exporters have to work hard to cultivate these customers, so their presence was key."

WISHH continues to collaborate with U.S. soy exporters as well as the current and prospective customers in Myanmar and Cambodia that met the exporters and U.S. soybean growers. A follow up survey shows six of seven U.S. exporters on the WISHH trade team report the trip yielded new sales leads.

Jim Wilson thanks the owner of Rathada Hatchery in Cambodia for her strategic partnership with U.S. soybean growers which will also educate Cambodian fish farmers about improved feeding practices.

Michigan soybean grower and WISHH treasurer Jim Wilson speaks with the U.S. Ambassador to Cambodia W. Patrick Murphy after Murphy's remarks as the keynote speaker at WISHH's 2020 U.S.-Cambodia Soy Trading Conference on January 17 in Phnom Penh.

U.S. Department of Agriculture (USDA) funds supported the January 12-20 travel for the soybean leaders to have face-to-face discussions with WISHH's many contacts in the human food and livestock feed industries.

Wilson also noted the trade team's importance benefited from the U.S. Ambassador to Cambodia W. Patrick Murphy's remarks as the keynote speaker at WISHH's 2020 U.S.-Cambodia Soy Trading Conference on January 17 in Phnom Penh. "His presence represents the importance of the partnership with USDA as WISHH leverages our soybean checkoff investments," said Wilson.

The U.S. Soy Conferences in Myanmar and Cambodia were both filled to capacity, reaching approximately 125 food or feed sector representatives with education about the benefits of U.S. soy protein.

In Cambodia, WISHH implements both U.S. soy food and feed strategies, including a U.S. Department of Agriculture-funded Commercialization of Aquaculture for Sustainable Trade (CAST) Cambodia project. Williams and Wilson joined in the celebration of a milestone with WISHH and CAST strategic partners with a ribbon cutting ceremony for Cambodia's first in-pond raceway aquaculture system, an important innovation for the sustainable increase of fish production in the region.

In Myanmar, WISHH is growing demand for U.S. soy in the human food market while the U.S. Soybean Export Council (USSEC) is leading the animal feed and aquaculture sector work.

"The fact that WISHH and USSEC are teaming up together is fantastic," said Williams. "WISHH develops these emerging markets and promotes the interest of U.S. soy. When the market is ready, USSEC is able to take over and build on the foundation that WISHH has established."

"Since we have such a good product with a high amino acid profile, it makes an excellent source of protein for whatever these countries are doing," Williams adds. "We need to keep our eyes open and look to the horizon for these opportunities. WISHH works with our beginning customers and identifies areas where we fit in, and they concentrate on them to increase the use of U.S. soy."

Kansas Soybean Commission Chairman Bob Haselwood (left) and Jim Wilson (middle) examine the production of tofu at the Star Tofu Manufacturing company.

David Williams, who serves as the United Soybean Board ex-officio member on the WISHH Program Committee, discusses food grade soybeans with a tofu manufacturer that WISHH works with in Myanmar.

Michigan Soybean Promotion Committee Board of Directors
Left to right: Mike Sahr, Laurie Isley, Mark Senk, Steve Koeman, Pete Crawford, Dennis Gardner and Sarah Peterson

Michigan Soybean Association Board of Directors
Left to right: Nick Stone, Matt Stutzman, Heather Feuerstein, Scott Wilson, Samantha Krhovsky, Gary Parr, Dan Keenan and Larry Phelps.
Kyle Crumbaugh not pictured.

The *Michigan Soybean News* is published quarterly by the Michigan Soybean Association. The goal of the *Michigan Soybean News* is to provide the most innovative and up-to-date soybean information to Michigan soybean farmers to help them improve their management and profitability opportunities. To place an ad or provide an article idea, email soyinfo@michigansoybean.org.

ASK AN AGRONOMIST

STEVEN GOWER

DEKALB® ASGROW® BRAND TECHNICAL AGRONOMIST

Dimondale, Michigan

Seeds and agronomy. They're the one-two punch for improving performance in any field. That's why farmers in the western half of Michigan rely on DEKALB® Asgrow® technical agronomist Steven Gower for management advice. He's been working in the region for 11 years and is a great source for local knowledge. Here he addresses some of this year's pressing management questions.

WHAT ARE THE BASICS FOR ACHIEVING HIGH SOYBEAN YIELDS?

For too many of us in Michigan, soybean planting is what we do when all of the corn is in the ground. But more and more farmers are changing that. When soybeans are actively and intensively managed, much like corn, consistently higher yields can be achieved.

The most successful soybean producers in the state pay close attention to product selection, planting date, seed placement and precision, seed treatment, fertility, herbicide practice and in-season crop protection products.

MAKE A SIMPLE PLAN

Begin by selecting soybean products that fit your farm and your fields. Good emergence and standability, a strong phytophthora root rot package, and good tolerance to white mold and sudden death syndrome are all key for Michigan growers.

Plant as early as possible. Early planting is one of the easiest and most economical ways of achieving high soybean yields. Soybeans that are planted in late April to early May can be 5 to 10 bushels/acre better than soybeans planted in late May into June.

Many growers choose Asgrow brand soybeans because they are stacked with important agronomic and defensive characteristics, protected by Acceleron® Seed Applied Solutions and guaranteed with a 100% replant policy in Michigan.

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CONNECT

The AgroExpo is designed to bring together growers with the vision and motivation to improve their operation; companies with new methods, advancements and technologies; commodity groups with the latest in news and marketing, and others with their eye on the future of agriculture.

DISCOVER

With a focus on providing practical, usable information, the AgroExpo aims to change the way you think about your farm. In-field demonstrations, educational programs and presentations to ensure you take home new ideas and plans for growth.

INNOVATE

From tillage to crop protection, silage management to irrigation data management to nutrient applications – the AgroExpo will give you the opportunity to see the leading-edge technology, research and science that can be utilized on your operation today.

Visit the Michigan Soybean Promotion Committee at booth P318

theagroexpo.com

2020 Funded Research Projects

The MSPC board of directors has approved 17 competitive research projects for 2020. This program provides funding to experts who are skilled at conducting meaningful research in Michigan soybean production. Although reduced somewhat from previous years, the 17 projects total about $505,000 in funding. Funding decisions follow a strategic plan to allocate funds to the most critical needs of Michigan soybean growers.

Many projects build upon previous funding and contribute to multi-year projects while some are single year projects. Funded projects are based on four key research categories, each representing specific areas of soybean production and profitability. All research projects fall within at least one of the following categories:

- Resource Limitations: factors that impact attaining maximum genetic potential
- Plant Health: issues that compromise and detract from plant health
- Genetics: inherent genetic potential of soybean plants
- External Factors: factors that impact soybean profitability, external to plant production

Research projects are intended to work across focus areas and develop integrated solutions to production issues. Research projects addressing these priorities receive preference, though proposals for research projects addressing issues outside of these priorities are also considered.

The following are the 2020 funded projects, divided into seven categories (weed control, disease control, soybean breeding, agronomic management, nutrient management, soybean cyst nematode, miscellaneous):

WEED CONTROL

Weed control in non-GMO soybean

Researcher: Dr. Christy Sprague, Michigan State University (MSU)
Investment: $8,150
Description: Evaluate the effectiveness and economics of commercially available non-GMO herbicide programs in conventional and no-till soybeans.

Innovative strategies to manage glyphosate-resistant horseweed (marestail) in soybean

Researcher: Dr. Christy Sprague, MSU
Investment: $26,000
Description: Determine the effect of cover crop termination timing and narrow row widths with and without post herbicides on marestail control.

Strategies to manage waterhemp using new soybean technologies

Researcher: Dr. Christy Sprague, MSU
Investment: $26,825
Description: Evaluate herbicide effectiveness including genetic traits of LibertyLink GT27, Enlist E3, Xtendimax, XtendFlex and LibertyLink on herbicide resistant waterhemp.

SOYBEAN RESEARCH & INFORMATION NETWORK

For information and resources on past and present checkoff-supported research projects conducted by states, organizations or regional partnerships visit https://soybeanresearchinfo.com/.

DISEASE CONTROL

Improving white mold management: epidemiology, fungicide timing and plant resistance

Researcher: Dr. Martin Chilvers, MSU
Investment: $20,000
Description: This project includes basic research in understanding the spore release and plant infection timing to help choose optimum chemical control timing. Fungicide comparison will also be included. Collaboration with soybean breeders in developing lines with white mold resistance will be the third part of this project.

Soybean SDS and SCN management: detection, fungicides and resistance

Researcher: Dr. Martin Chilvers, MSU
Investment: $40,000
Description: Seed treatments will be evaluated for their control of SDS and its symptoms. SDS species assays will also be included to help understand the genetic diversity of this disease across Michigan. Genetic resistance to SDS will evaluated in many soybean lines in development.

Determination of phytophthora sojae populations and assessment of management strategies

Researcher: Dr. Martin Chilvers, MSU
Investment: $25,000
Description: Phytophthora continues to threaten plant health in Michigan. The diversity of this pathogen and the genetic resistance offer complexities that require more understanding. This project will help to update recommendations for Michigan growers to protect yield potential.

A systems approach to managing ILevo soybean seed treatment and foliar fungicide

Researcher: B & M Crop Consulting, Inc.
investment: $11,900
Description: ILeVO seed treatment has shown the protection of yield in previous trials, possibly influenced by a stay green effect. Soybean yield and economics will be compared between ILeVO seed treatment and a foliar fungicide.

SOYBEAN BREEDING

Soybean breeding and genetic improvements for Michigan environments

Researcher: Dr. Dechun Wang, MSU
Investment: $105,000
Description: The MSU soybean breeding program will continue to develop varieties with high yield and resistance to critical disease and insect pests. Specialty lines will also be developed with high protein, large and small seed size and high-value oil traits. Industry input will be used to provide future direction of market demand.

Enhance research in soybean field evaluations in Michigan

Researcher: Dr. Dechun Wang, MSU
Investment: $51,313
Description: The management of the multiple locations of the Michigan Soybean Performance Trials and the MSU soybean breeding field operations require the support of two research technicians. This project helps to fund a portion of one the technicians.

NUTRIENT MANAGEMENT

Enhancing nutrient uptake in soybean production systems - Year Two

Researcher: Dr. Kurt Steinke, MSU
Investment: $43,000
Description: Nutrient uptake can be affected by soil moisture availability and a possible interaction with seeding rates. Mirror trials will be conducted in irrigated and dryland soybeans to evaluate the effect of moisture availability and grain yield. Multiple fertilizer products and application methods (soil applied, foliar applied, liquid, granular, broadcast, in-row, Y-drop, etc.) will be used on multiple seeding rates to determine differences in nutrient response and grain yield.

Evaluating sulfur products and timing in soybeans by management zones

Researcher: B & M Crop Consulting, Inc.
Investment: $21,000
Description: Sulfur content in soil and in the atmosphere are both decreasing over time. This project will evaluate soybean response to three sources of sulfur (dry ammonium sulfate, dry Kmag, liquid ammonium thiosulfate) across management zones. Both plant tissue analysis and yields will be compared to measure effectiveness of sulfur fertilizers and see if the response is affected by management zones.

AGRONOMIC MANAGEMENT

Agronomic management strategies to improve yield and profitability in Michigan soybean production

Researcher: Dr. Maninderpal Singh, MSU
Investment: $52,000
Description: Many practices and products have claimed to increase soybean yields while grower and research experience may not be consistently supportive. Several management factors will be evaluated including optimal planting timing and maturity selection, rhizobium and Azospirillum inoculation, foliar nutrient use and response to Sulfur fertilizer applications.

2020 Michigan State University Extension on-farm research, education and communication projects

Researcher: Mike Staton, MSU Extension
Investment: $20,000
Description: The collaboration of ten MSU Extension educators and staff will conduct practical on-farm research and demonstrations including a harvest equipment field day, early maturing soybean variety comparison, northern Michigan variety performance trials, cover crop termination method evaluation, SCN resistance comparisons and ammonium sulfate fertilizer use.

Center for Excellence

Researcher: Lindsay Garrison, Lenawee Conservation District
Investment: $15,000
Description: The continued coordination of on-farm research and demonstrations of critical conservation practices such as tillage types and nutrient management. Additional efforts will be placed on nutrient loss reduction tools such as saturated buffers and controlled drainage structures. Educational events and printed materials will be developed to share the results of this work.

Soybean ultra-early planting date evaluation

Researcher: B & M Crop Consulting, Inc.
Investment: $10,000
Description: Soybean growers and industry professionals have reported increased yields from very early planting dates. This project will compare planting dates and quantify crop response in emergence timing, stand establishment, node, pod and seed counts and yield.

SOYBEAN CYST NEMATODE

Management of Soybean Cyst Nematode through rotation of soybean cyst nematode resistant varieties and other management practices

Researcher: Dr. Marisol Quintanilla Tornel, MSU
Investment: $10,000
Description: Genetic resistance has protected millions of bushels of yield potential, but the effectiveness of the most common resistance source is failing. Other sources of resistance exist and show promise to protect yield and reduce SCN population increases but have limitations and require careful management. Strategies of rotating resistance sources will be further evaluated at a multi-year research site with a goal of establishing a grower recommendation.

Management of Soybean Cyst Nematode through the use of composts and manure alongside soybean cyst nematode resistant varieties

Researcher: Dr. Marisol Quintanilla Tornel, MSU
Investment: $20,000
Description: Initial research results indicate some soil amendments such as manure and compost have an impact on SCN eggs. The combination of genetic SCN resistance and soil amendments will be evaluated to determine their effectiveness and financial viability. Further, multiple manure sources will be compared to determine if species of manure source is a factor in its effect on SCN populations.

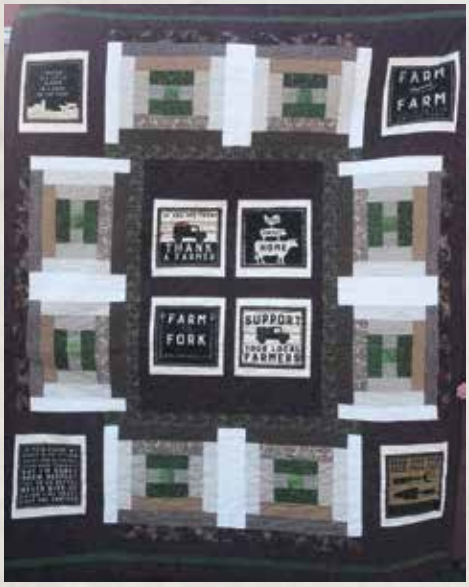
SOYBEAN EXTRA

Congratulations to Sunrise Farms

MSPC President Laurie Isley and her husband Jim of Sunrise Farms in Palmyra were recently named the Lenawee Conservation District's 2019 Conservationist of the Year! "Humbled and honored to be recognized for our work in conservation," stated Laurie. "We are all called to be good stewards of the land and resources God has provided to us."

MSA Quilt Winner

The Michigan Soybean Association entered new members who joined in the month of January in a drawing to win a quilt made by Jean Fritz of Bad Axe. Congratulations to Brent Schmucker of Hillsdale County for winning the quilt and thank you to all our new members.



Michigan Soybeans on YouTube

Did you know MSPC has a YouTube channel? Our channel includes a variety of videos including timely production videos that aim to help you address things you might be seeing on your farm. We also have field check videos that include updates throughout the growing season. Find our channel on YouTube by searching Michigan Soybean and consider subscribing to stay up to date on our newest releases!

Ag Day at the Capitol

The Michigan Soybean Association (MSA) had a great day at Ag Day at the Capitol on March 11th handing out baskets of Michigan ag products to legislators and promoting soybeans. MSA President Dan Keenan was also introduced from the gallery of the Michigan House of Representatives as part of the event.

Soybeans at Science Teacher Conference

Michigan Soybean Promotion Committee (MSPC) attended the 2020 Michigan Science Teachers Association Conference in Lansing in March. Attendees learned that "Soybeans Go to School" kits were available to teach 3rd through 5th graders the many uses of soybeans. Teachers that stopped by the MSPC booth walked away with bags of soybeans and chapsticks made from soy oil.

Aquaculture–The World's Fastest Growing Food Industry

Soy Aquaculture Alliance

Aquaculture is continuing to grow globally as populations increase and economies strengthen. Around the world, many cultures include fish in their diets with each meal of the day. In some cultures, it's just as common as bacon for breakfast.

This is good news for the soybean industry. Our oceans are being overfished, which leads to a shortage of fish meal, which is used in the rations of farm-raised fish. A sustainable, complete plant protein substitute for fish meal is soybean meal.

Education has been key to growing the aquaculture industry both domestically and internationally. The Michigan Soybean Promotion Committee, in partnership with the Soy Aquaculture Alliance (SAA), U.S. Soybean Export Council (USSEC) and World Initiative for Soy in Human Health (WISHH) have been working to educate aquaculture producers on the value of U.S. soybean meal.

SAA oversees domestic aquaculture research and monitors barriers in the U.S. industry.

USSEC works in developing and mature markets to introduce the In-Pond Raceway System (IPRS) to existing aquaculture industries. It has been a game changer and an economic boost to the industry.

WISHH works in new markets around the world. They are currently working in Cambodia and the Republic of Niger to introduce them to aquaculture and the IPRS system.

From 2001-2017 aquaculture has increased by 146 percent in volume and 366 percent in value ($249,579,151) according to the Fisheries and Aquaculture Information and Statistics Branch (as of March 25, 2020).

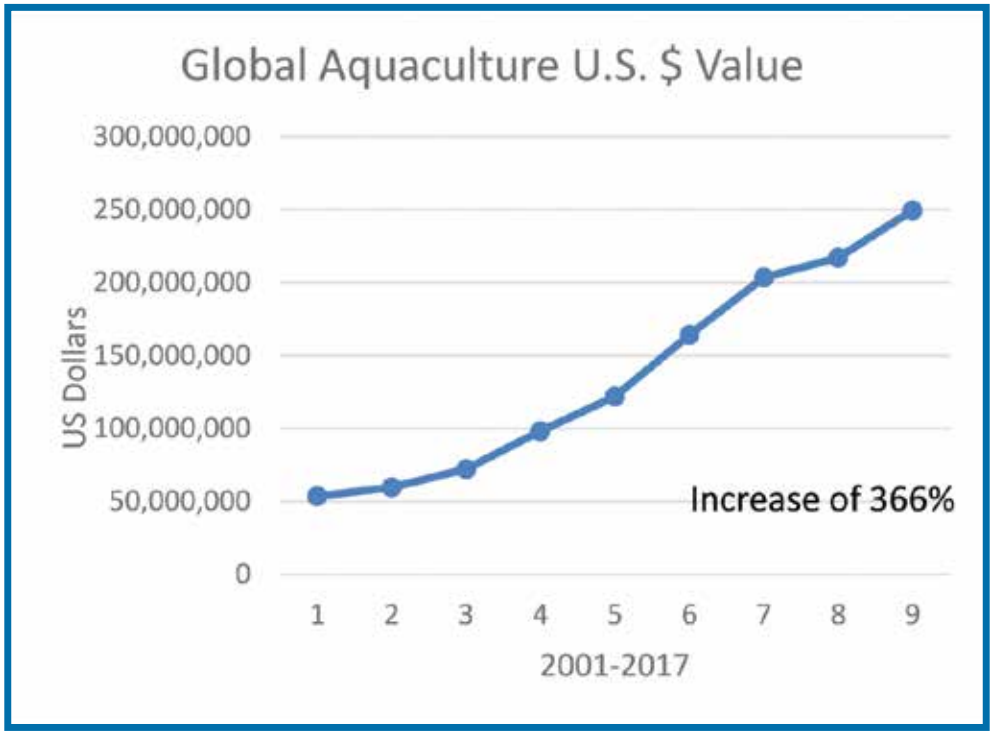
The recent report "Global Aquaculture Market 2020-2024" published by Infiniti Research Limited suggests the aquaculture industry is expected to grow to $48.88 billion U.S. dollars. There is a lot of opportunity for soybean farmers to provide a balanced plant protein meal with important amino acids.

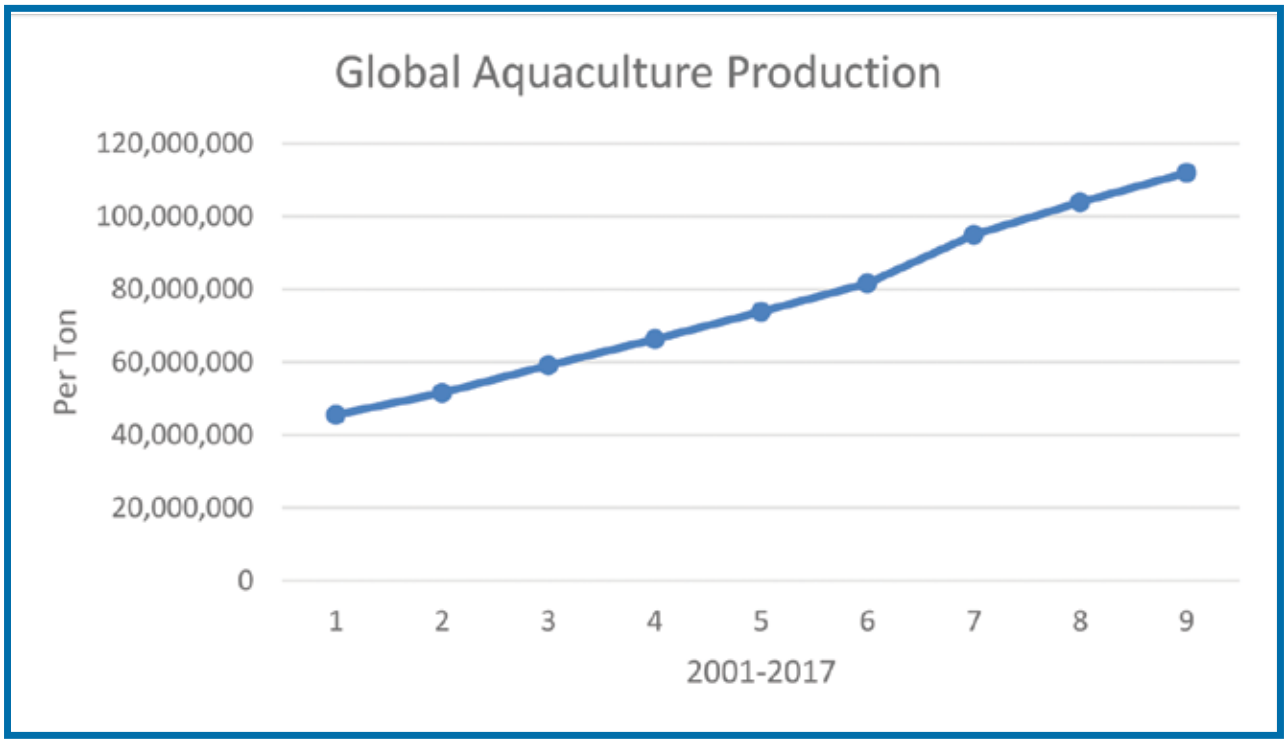
Outside investors are now looking to grow the aquaculture industry as it has proven its sustainability and growth potential.

The Nature Conservation Foundation is also supportive of the aquaculture industry as it takes pressure off the wild caught fish industry and will allow our oceans and lakes a chance to recover from overfishing while still supplying an important and affordable protein source.

Aquaculture is poised to meet the needs of our global population growth. Soybean farmers can play a key role by providing sustainable, complete nutritional soybean meal for this essential food supply industry.

In Pond Raceway Systems have been a game changer for the industry. Auburn University School of Fisheries, Aquaculture and Aquatic Sciences in Georgia first developed this technology. It allows for healthier fish, segregation by size and species, multiple harvests coexisting in the same pond, reduction of water waste, and increased harvest efficiency. Feed enters on one end of the raceway and excess feed and fish waste is collected at the other end, keeping the water clean. The waste is then dried and used for fertilizer.





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Michigan Soybean Attends 2020 Commodity Classic

The 2020 Commodity Classic wrapped up on the first day of March in San Antonio, TX. As one of the premier agriculture events in the country, Commodity Classic is created by farmers for farmers. This year over 4,600 farmers registered for the event. The event is presented annually by the American Soybean Association (ASA), National Corn Growers Association, National Association of Wheat Growers, National Sorghum Producers and the Association of Equipment Manufacturers.

This large event allows the entire soybean industry to collaborate in one location each year. Soybean partners including ASA, the United Soybean Board (USB), United States Soybean Export Council (USSEC), Soy Transportation Coalition (STC) and the North Central Soybean Research Program (NCSRP) all offered meetings and educational sessions at Commodity Classic.

"Commodity Classic is always a great opportunity to network with my fellow farmers from across the country," said Michigan Soybean Association (MSA) Treasurer Heather Feuerstein.

This event was a monumental anniversary celebration as ASA celebrated 100 years as an organization.

"Attending Commodity Classic is a great opportunity to interact with other soybean producers, see new products and processes and celebrate successes. This year marked the 100th year of ASA, which added to the excitement. It was an opportunity to remember the many accomplishments of this organization and to recommit to supporting it in the future," said Laurie Isley, Michigan Soybean Promotion Committee (MSPC) president.

Participants who attended the USSEC board meeting received updates on new international soy markets including promising opportunities in sub-Sahara Africa and other global regions. Challenges in the soybean industry regarding trade with China including the Phase-One agreements were covered, as well as the next steps of the USMCA legislation, which adds stability to trade with our closest soybean customers.

The STC meeting provided information on new products made from soybeans which can help to refurbish, repair and replace asphalt or concrete roads. These products made from soybean oil look very promising and are currently being incorporated by other states. Additionally, funding to dredge the Mississippi River has been approved, which will allow

larger vessels to move soybeans more efficiently.

"Both USSEC and STC work diligently on our behalf. STC focuses on maintaining our transportation infrastructure, and USSEC continues to build and maintain markets for our soybeans around the world. I always leave these meetings knowing that our checkoff dollars are being put to good use," shared Isley.

Another key aspect for ASA during Commodity Classic is the development of national policy, which ASA's Washington, D.C. staff will use in their advocacy work over the next year. MSA is allowed three delegates, who actively participate in the policy development process. MSA's delegates this year were Heather Feuerstein, Scott Wilson and Ed Cagney. Throughout regional caucus meetings, policy sub-committees and then a general session, MSA leaders discussed topics including farm support payments, crop protection, agricultural research and trade policy.

"As a first-time participant in the ASA resolutions process, I came away with a great deal of admiration for the hard work and time our ASA representatives put into shaping the policies that are important to soybean farmers. The opportunity to see firsthand how the policies are drafted and the thoughts behind them was very educational. It further cemented the value of our membership when it comes to making our voice heard on a national level," said Wilson.

"Being a delegate for MSA and helping to set our national policy is always the highlight of Commodity Classic for me. We have some great minds dedicated to the soybean industry and just getting a chance to work with them makes me very proud," remarked Feuerstein of the policy development experience.

In addition to policy and educational opportunities, Commodity Classic offers hands-on looks at the latest technology, equipment and advancements on the trade show floor.

"The huge trade show provides plenty of opportunities to see the newest products and visit with knowledgeable vendors about options for your farm. Meeting farmers from across the U.S. is another positive experience, and a reminder that we all have much in common regardless of where we farm," said Isley.

By the conclusion of the week, all the participating farmer volunteers and staff came away with great experiences and new ideas for future use on Michigan soybean farms. Happy 100th Anniversary to ASA!

MSA Delegates: Heather Feuerstein, Scott Wilson and Ed Cagney