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MICHIGAN WHEAT PROGRAM

ANNUAL REPORT
2017 -2018

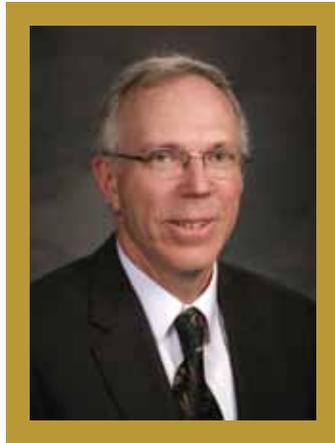
**“Building Wheat Research Infrastructure Today
to Ensure Profitability Tomorrow”**



An aerial view of the 2018 wheat trial in Clinton County.

**A report back to the growers:
The Michigan Wheat Program is expanding wheat research capabilities
and providing results for growers by strengthening its infrastructure base.**

Our 6TH Annual Report highlights the strengthening of the Michigan Wheat Program's research line-up, as well as grower education and consumer outreach activities for the 2017-2018 fiscal year.



Dear Fellow Michigan Wheat Farmer:

In my seventh year as chairman of the Michigan Wheat Program, I'm pleased to share some of our accomplishments over the past year. We've called this 2017-2018 Annual Report **"Building Wheat Research Infrastructure Today to Ensure Profitability Tomorrow"** because it describes the important developments now taking place in our research program. We're keeping up with our current research regimen, and continuing to strengthen and develop the program to benefit our future as wheat growers.

The dictionary says infrastructure is the basic organizational structure and facilities needed to operate an enterprise. The Michigan Wheat Program enterprise has strengthened its research infrastructure by first assembling a team of top-notch scientists, then paying for additional research land, and now updating equipment to achieve additional and more robust results in the field.

With the commitment of resources described in this report, we're getting better and more reliable data. We are also pushing the boundaries of traditional production by ensuring our researchers have access to the same technology as our growers.

We continue to have strong educational programs and outreach to growers, and are involved in some strategic consumer messaging activities. Agricultural markets are improving, but still challenging. I'm confident the Michigan Wheat Program board has streamlined the program's activities, and maintained focus on what really matters to wheat farmers: Research on quality and productivity. We are aggressively pursuing our shared goal of a "viable, thriving and growing Michigan wheat industry."

Thanks for your support!

A handwritten signature in black ink that reads "David J. Milligan".

David J. Milligan
Chairman, Michigan Wheat Program



MICHIGAN WHEAT PROGRAM



On board for the future.



The Michigan Wheat Program board has nine directors. Eight are growers who come from production areas across the state and the ninth member represents the milling industry. In June 2017, Governor Snyder appointed **Marc Hasenick** a wheat grower from Springport to join the wheat check-off board.

Hasenick farms with his father and brother on their a 68 year-old family farm in Springport. His emphasis for precision technology, efficiency, and soil health have resulted in alternative strategies that push the envelope of traditional management for growing wheat, soybeans and corn.

In his community, Hasenick is an active supporter of the Springport FFA and serves on the Springport AgriScience advisory board. He holds a B.S. in crop and soil science from Michigan State University.

Hasenick represents wheat growers in southwest Michigan (District 2).

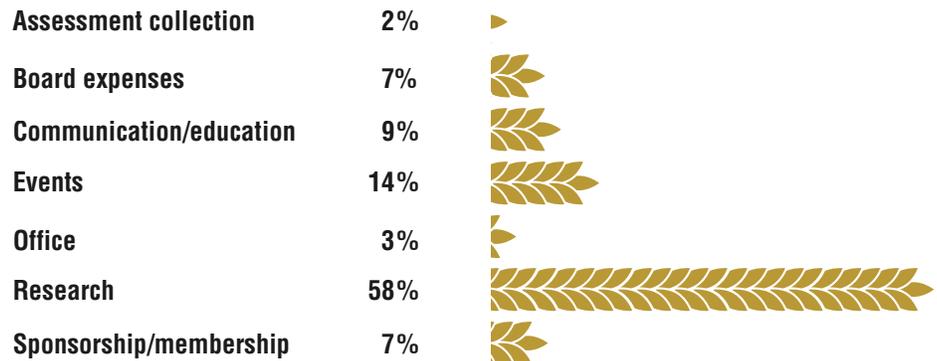
Michigan Wheat Program Board of Directors 2017-2018



Front row: Frank Vyskocil, Dean Kantola, David Milligan, Art Loeffler. Back row: Sally McConnachie, Brent Wagner, Marc Hasenick, Bill Hunt, Jerry Heck, Jody Pollok-Newsom.

Michigan Wheat Program Annual Budget

Each spring the board sets the budget for the upcoming year, and may make adjustments later depending upon income. The last couple of years have been challenging, and some programming cuts made, but focus has been maintained in all areas. The funding percentages to showcase the focus of the organization for 2017-2018 are at right:



Highlights from the 2017-2018 research agenda of the Michigan Wheat Program

In fiscal year 2017-2018, the Michigan Wheat Program invested over \$314,000 in 14 research projects. This year for the first time, the check-off board of directors spent two consecutive days reviewing final reports and hearing requests, which have become more complex and numerous.

Several projects now being funded are on-going, advancing the findings from prior years. Projects have already yielded some answers for growers' questions, but more trials are needed to get additional data to make stronger recommendations. The board weighs results achieved as return on investment of grower check-off dollars when making its funding decisions.

Since the program began funding research in 2012, about \$3 million has been invested in nearly 100 research projects to move the wheat industry forward and assist Michigan wheat growers with their two biggest needs: Increasing yield and improving quality.



Dennis Pennington and Dr. Maninder Singh explaining their precision planting project.

Building the infrastructure for

The Michigan Wheat Program board is making steady progress on its goal to make Michigan a world-class powerhouse in wheat research.

Research Staff. When the Michigan Wheat Program was voted into existence, there was very little wheat research going on, except that of MSU Extension's Martin Nagelkirk. Researchers at MSU had their schedules filled by commodities that had funding available for research and Nagelkirk was doing all he could with available funds and hours.

One of the areas the board focused on early, was to meet with researchers and share the board's vision and request research proposals to look at targeted areas. As the program grew, it became apparent that additional help was needed to focus on wheat.

The Michigan Wheat Program partnered with MSU to hire a MSU wheat specialist, Dennis Pennington, to bridge the gap between the University and growers, and to increase the focus and reach of MSU wheat research. Pennington has been vital for growing the research program and increasing collaboration among wheat researchers.

Research Land. Recognizing that land available for wheat research was a "bottleneck" in the important thumb growing region, in 2016 the Michigan Wheat Program pledged \$700,000 by 2021 to support MSU in making a significant land purchase to increase the size and capacity of the Saginaw Valley Research & Extension Center (SVREC) outside of Frankenmuth. The additional land allows researchers to make wheat a standard part of the rotation, which will be key to farmers' wheat production decisions.

State-of-the-art Equipment. If Michigan's wheat research is to push the frontier the Michigan Wheat Program must drive innovation with infrastructure investments. To that end, two pieces of leading-edge equipment were included in the research funding. A new planter was purchased by the program in 2017 and a research combine was updated. Both are being utilized in research work hoping they will bring additional production improvements.

Precision Planter. Have we maximized wheat production in Michigan? While precision planting (singulation or planting one seed at a time) has been part of corn and soybean production for years, the impact has not been studied on wheat.

Building on a dozen precision planting research studies from other crops, Dr. Maninder Singh, MSU assistant professor of cropping systems agronomy, and Dennis Pennington, MSU wheat specialist, proposed to learn whether singulation of wheat seed is mechanically possible and whether it would yield more, higher quality wheat.

The Michigan Wheat Program is funding research to learn whether more precise depth and space between seeds at planting, could make a significant, cost-justified improvement in yield and quality at harvest.

next-generation wheat research

In 2017, the Singh-Pennington team bought and retrofitted the precision planter, designed the research parameters, and prepared to plant four plots at SVREC and the MSU Agronomy Farm in Lansing. The entire project represents a commitment through at least the end of 2019.

Combine-ing New Software and Data Collection Abilities. One thing came to the end of the road in 2018: The useful life of two on-board weighing systems on Almaco combines that were shared and used to harvest wheat and soybean research plots.

In fact, in 2017 wheat harvest experienced several days of delays and lost plot data due to software failures on the combines. Both combines' software was outdated and no longer supported by the manufacturer.

In 2018, the Michigan Wheat Program and the Michigan Soybean Promotion Committee partnered with MSU and each contributed \$10,000 toward the \$50,000 needed to upgrade the combine equipment utilized by the research staff of Dr. Martin Chilvers, Dr. Eric Olson and Pennington.

The research plots were harvested in a timely fashion. And the updated software enabled the collection of test weight for the first time. The updates also enable data compatibility across both combines, which provides higher-quality output, fewer interruptions and is easier to use by the research team.

“Nearly all wheat in Michigan and other Midwestern states is planted with a ‘spill type’ drill with low precision. This operation generally results in a non-uniform seeding depth, which can cause poor germination and crown root development, reduced tillering, increased disease incidence and susceptibility to winter injury... These factors in combination with non-uniform within-row plant spacing and inadequate plant population are key factors that could decrease crop yield... precise placement of seed can lead to improved resource use, efficiency and plant health by equally sharing resources such as water, nutrients and sunlight, and reducing plant-to-plant competition.”

- Problem Statement, Michigan Wheat Program Research Project Proposal from Dennis Pennington and Dr. Maninder Singh

The battle to control Fusarium head scab in wheat.



Dr. Martin Chilvers, MSU associate professor of plant pathology, has a top-notch team looking at the impact of the timing, rate and type of fungicide, as well as wheat variety selection, growth regulators and fertility practices on the management of Fusarium and other foliar diseases. Pictured here are technician John Boyse, and undergraduate Paige Pickett (driving).

The foundation for wheat grower education

Winter and summer meetings continue to draw big crowds

For the 2017-2018 fiscal year, the Michigan Wheat Program held its Winter Grower Meeting in March 2018, and its annual Summer Field Day in June 2018. The two meetings rotate between the Lansing area and the thumb annually.

Highlights of the 2018 Annual Winter Grower Meeting

The 2018 Annual Winter Grower Meeting attracted more than 260 growers to the Eagle Eye Conference Center in Bath Township. Two top-drawer presentations included Canadian high-management wheat specialist Peter Johnson, most recently provincial cereal specialist with the Ontario Ministry of Agriculture Food and Rural Affairs; and a panel of Michigan growers speaking on German wheat production from a trip they had taken to meet with growers and equipment manufacturers.

The Grower Panel on German Wheat Production was led by Michigan wheat farmers Mike Milligan and Jeff Krohn, and Dennis Pennington, talking about what they learned during an agricultural tour of Germany in 2017. Highlights of the presentation include German climate, proper seeding rates, nutrient application practices, tiller management and overall wheat plant health.

Once again the meeting incorporated a tradeshow highlighted by industry support in which growers and agribusiness have the chance to talk about the marketplace and future opportunities. The Annual Winter Grower Meeting keeps growers coming back to hear what's happening in the industry and to get cutting-edge research results.

2018 Summer Field Day Highlights

The Summer Field Day followed its traditional wagon tour format with stops at the field research plot sites at the Saginaw Valley Research Extension Center outside of Frankenmuth.

More than 150 farmers attended the plot tours and learned from nine MSU researchers, dropped off ailing wheat samples for the MSU Plant Diagnostics Center, and listened to presentations on marketing and perspectives from the North American Millers Association.

Upon leaving the event, farmers could visit MSU wheat breeder Dr. Eric Olson and look at his wheat variety plot trials in the area. In addition to the current research program, it is vital to see what is on the horizon and what varieties will be available in the coming years. Note: Videos, handouts and PowerPoint decks from the 2018 Annual Winter Grower Meeting and the 2018 Summer Field Day are posted at www.miwheat.org under the Education and Previous Events tabs.



Great Lakes Crop Summit a Proven Partnership

The Michigan Wheat Program was pleased to partner with the Michigan Soybean Promotion Committee and the Corn Marketing Program of Michigan to bring the 5th Great Lakes Crop Summit (GLCS) to farmers. The event has been a success and continued to grow since its first year.

GLCS is a two-day event held in Mt. Pleasant that has general sessions with nationally- and internationally-known keynote speakers, and special-interest break-out sessions covering everything from farm succession planning to marketing.

The January event has several wheat-specific break-outs, which are well-attended and include MSU researchers and other wheat experts.

Michigan continues its strong presence at the National Association of Wheat Growers (NAWG)

Since joining NAWG in 2013, the Michigan Wheat Program board has committed individuals to serve the wheat industry on the national level.

MWP chairman David Milligan serves as Treasurer of the NAWG Board and will continue his rotation and ultimately serve as NAWG President.

Sally McConnachie served as chair of the NAWG Research Committee.

Dean Kantola served on the Environment & Renewable Resources Committee.

NAWG creates good visibility for the Michigan Wheat Program, and an excellent opportunity to get Michigan issues represented in the national agenda.



Dan Quinn, former graduate student of Dr. Kurt Steinke, speaks to growers on nutrient management in the Frankenmuth wheat research plots, at the 2018 Field Day in Frankenmuth.

Educating legislators and consumers

Ag Day at the Capitol

In an era of term limits and few farmers in the Michigan Legislature, agriculture education is even more important at the State Capitol. The Michigan Wheat Program has been participating in Ag Day at the Capitol to ensure wheat is recognized as an important state crop by those creating statewide farm policy.

Again in March 2018, the Michigan Wheat Program partnered with the Michigan Beef Industry Commission to serve pretzel bun beef sliders to elected officials – while talking to them about important issues to the wheat industry.



Board member Frank Vyskocil offers a brisket slider on a pretzel bun to former Lt. Governor Brian Calley at Ag Day at the Capitol.

New focus to consumer education



You've heard of food trucks ...

The Michigan Wheat Program has contributed funds to the Michigan Farm Bureau Science Trailer that is making a circuit to elementary schools across the state of Michigan. Exhibits and volunteers like Executive Director Jody Pollok-Newsom teach kids in a fun setting why science matters to crops and the food they eat.

The trailer visited 52 schools across Michigan and has educated 16,879 students and 617 educators about the importance of agriculture in the state.

Breakfast on the Farm

The Michigan Wheat Program board members and staff talked to about 5,000 visitors at two Breakfast on the Farm events during the summer of 2017. Events held at J & J Dairy Farm in Marne (Ottawa County) and the De Saegher Dairy in Middleton (Gratiot County) provided a delicious breakfast, then shared craft sheets and information about wheat with kids and parents alike. A highlight of the event is the opportunity for consumers to actually tour the facilities and see firsthand how well the animals are cared for and where food comes from.

Critter Barn

The Critter Barn of Zeeland is the modern agriculture field trip for many elementary- and middle school-aged children in West Michigan.

Its goals include inspiring visitors through interactive learning about agriculture, to provide real hands-on farm experiences, and to inspire youth for a lifelong respect for agriculture. They have been able to secure additional land and are growing and revamping their experience. The Michigan Wheat Program has offered support to the Critter Barn for use to develop wheat educational pieces and a wheat experience for visitors. Plans are still in development for this consumer interactive opportunity.



McDonald's® Kids' Activity Booklet

The Michigan Wheat Program again participated in the McDonald's® activity book promoting Michigan agriculture, which is coordinated by the Michigan Festivals and Events Association. This is a fun way to educate parents and children about the farm-to-fork reality of wheat.

Michigan Ag Council Continues Social Media Push and Consumer Education

The multi-commodity hub known as the Michigan Ag Council, which receives financial support from the Michigan Wheat Program and several other agricultural commodities, is continuing its work to educate consumers about Michigan agriculture.

Michigan Wheat Program
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MARK YOUR CALENDAR!

**Michigan Wheat Program Summer Field Day scheduled
June 12, 2019 at the MSU Pathology Farm, Lansing!**

To remain informed year-around, sign up for the free monthly Wheat Wisdom e-newsletter by visiting www.miwheat.org. Growers are also encouraged to follow the Michigan Wheat Program's Facebook page, which is simply: Michigan Wheat.