



Michigan Crop Improvement Association
 PO Box 21008
 Lansing, MI 48909

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quality. The standards for seed corn quality are set very high and the higher starch content in corn is more vulnerable to frost injury. Germination and vigor can be reduced. The geographical location near Lake Michigan is buffered from first killing frosts in the fall.

Michigan has been important in seed corn from 1887 when W.J. Beal made the first cross-fertilize corn for the purpose of increasing yields through hybrid vigor. Today much has changed with advanced technology and traits contributing to the gains in yields achieved. Who would ever think that one could harvest 476.9 bushels of corn per acre in Michigan as Don Stall topped the National Corn Growers Association yield contest this year?

Contact Us

Phone: **(517) 332-3546**
 Email: info@michcrop.com
 Website: www.michcrop.com

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Michigan Crop Improvement Association

Calendar of Events

May 31 Memorial Day	<i>MCIA Office Closed</i>
June 1 Small Grains Application Due	<i>MCIA Office</i>
June 13-16 AOSCA Annual Meeting	<i>Virtual</i>
June 14-17 AOSA/SCST/ISTA Annual Meeting	<i>Virtual</i>
July 5 Independence Day Holiday	<i>MCIA Office Closed</i>
August 16 Soybean and Dry Bean Applications Due Final Orders for Wheat Seed Stock Due	<i>MCIA Office</i>



Michigan Seed Bulletin

PUBLISHED BY THE MICHIGAN CROP IMPROVEMENT ASSOCIATION
The Official Seed Certifying Agency

SPRING ISSUE | MAY 2021

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Seed Corn in Michigan

BY CHRIS TIEDJE

Michigan is home to the SEED corn capitol of the world – Constantine, Michigan. People often think of Iowa, Illinois, or Indiana when they think of corn because of the vast acres of the crop. However, a good SEED production environment is not always the same as that for crop production. Corn SEED production is all about pollination, when pollen falls from the tassel to the silk to fertilize and produce a kernel. HYBRID seed corn production is all about pollen management, or the right pollen being available at the right time. This can be a challenge when trying to match up two completely different inbreds. It can also be a challenge when physically removing the tassels from thousands of plants per acre (de-tasseling). Much planning and investment is involved in seed corn production and it is important to minimize environmental risk and also maximize plant production.

Southwest Michigan has several advantages which are well suited for seed corn production: irrigation, lighter textured well drained soils, and a tempered buffer from frost by the Great Lakes. Irrigation is important to minimize plant stress if a hot dry spell might come. The corn plant has a way of dealing with stress – retard or delay silk growth. If a drought were to occur during



Picture showing husk removed at silking.

pollination, silking might be delayed changing the predicted timing for when pollen might be available. Southern Michigan and northern Indiana are home to 680 thousand acres of irrigated ground. An opposite weather condition could also occur – excessive rain. Tassels need to be removed from seed corn plants prior to silk emergence regardless of the weather. A large portion of the tassels are removed by equipment with the remaining by physically walking through the field. Light textured, well drained soils are very helpful to ease traffic in fields when rains come. Finally, frost can be a big threat to seed

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The President's Post

BY CHRIS SCHMIDT, MCIA PRESIDENT



A couple of weeks ago Jim and I were talking about the Michigan certified seed industry

in general terms and the MCIA membership more specifically, not all that unusual considering our respective roles within the association. As our conversations often times do,

it wandered back and forth and finally zeroed in on speculating - how did this happen? How did this diverse group of people from all across the state end up as seedsmen and what's the motivation for them to continue?

Jim and I took a bit of a dive into the membership list and came away with a couple of insights: there's a handful of members that have been in the seed business for at least two if not three generations. Their

businesses are well established and provide decades of continuity for the Michigan seed industry. They are mainstays with a proven track record and have a portfolio of loyal clients. Then, interestingly, there's another handful of members that are 1st generation seedsmen and have managed to find their way into the seed business either through intent or just sheer luck. The newer arrivals are just as essential to a thriving seed industry as the old timers as they bring innovation, competition and fresh ideas to the game. So with these two distinct groups identified, what was the motivator, or as an engineer would ask, what was the prime mover that caused them to become seedsmen?

Boredom, vision, curiosity and certainly diversification are all possible motivations. If anyone suffered from boredom and got into the seed business their boredom was surely short lived and cured permanently. But, if we focus on vision, curiosity, and diversification then we have a pretty good handle on the membership we have today. Those qualities are essential for

long term survival.

Vision, curiosity, and diversification also define MCIA - from its inception in 1927 until present day. Take a closer look at any of the three departments of the association and it's clear that the founders provided the wisdom to create an organization where all three branches benefit from and nurture each other. When one division is at their annual lull the others are taking up the slack and providing the momentum that propels the association forward year after year.

The membership would not be here today without the association and the flip side is also true. More importantly, none of this would be possible without the continued efforts and resources Michigan State University brings to the ag community. Vision, curiosity, and diversification apply to all three and without each of these there would be no "seed."

Latest Updates Taking Place at MCIA

BY LEE SILER

Michigan Crop Improvement Association strives to continue to provide excellent grain processing to producers with technology and equipment updates. MCIA's most recent updates impact several aspects of our processing capabilities.

MCIA recently purchased several additional metal grain storage

containers. These containers are used to store seed/grain delivered to MCIA. The containers are also utilized to transfer grain from one operation to another, to minimize contamination, and to maintain a clean and safe work environment.

MCIA is in the processes of replacing the Crippen Fanning mill with a new air screen cleaner manufactured by Q-Sage. This precision air screen cleaner will deliver quality grain processing and will increase seed cleaning capacity by 20% - 25%. We expect

this to be installed and functional sometime in June before wheat harvest rush begins.

A new Toyota forklift from Hull Lift Truck Inc. will soon be added to our fleet. The 5000 Lb. forklift will improve toting and packaging efficiency of products in the warehouse.

MCIA remains committed to improving daily operations through applying the latest technology, equipment, and procedures to deliver premier grain processing to our producers.

Manager's Minute

BY C. JAMES PALMER, MCIA MANAGER



As I took a drive at lunch time today I saw the bustling activity of farmers

beginning to work the land in preparation of planting this year's crop. It always amazes me to see how quickly the American farmer can plant the crop. It has been said, with perfect weather conditions, the American farmer can plant 90 million acres of corn in five days. Normally, we don't get perfect weather, so the average planting time is somewhere between 10 and 14 days in the field, still amazingly quick. Large equipment, new technology and long hours all contribute to the rapid pace farmers are able to plant. The long hours and hard work farmers put in

during the spring are recognized by many in society and are a badge of honor for those who produce food for this country. We cannot forget however, the importance of safety during this hectic time.

On a typical year there are 60,000 farm accidents and usually about 800 deaths of farmers and ranchers due to accidents. Accident rates are especially high in younger ag-workers and many of these accidents are preventable. Tractor roll-overs, farm/auto collisions and falling objects are some of the top causes of accidents and death. Carelessness and fatigue are the most common factors which result in on-farm accidents. It is important to recognize the hazards involved in the production agriculture business and educate your younger family and newest workers as to the safety risks involved in your operation.

The old saying goes "an ounce of prevention is worth a pound of cure". At MCIA we not only stress safety to our work force, but we have a

"safety nugget" presentation at each staff meeting. On a rotating basis each team member presents a brief presentation on a pertinent safety topic. This not only re-enforces the importance of safety, but it forces our team to truly think about how safety plays an important role in not only work, but everyday life. If our safety nuggets prevent even one injury or accident, the time spent discussing safety will be worth every minute times 10!

As you prepare to start work each week, consider taking a few minutes to think about the hazards of your daily tasks. Prepare your team for the dangers and risks involved in their work. Most importantly don't take dangerous shortcuts to save a few minutes especially when you are tired. Spending a few minutes ahead of time getting prepared for dangerous pitfalls will pay off handsomely when split second decisions need to be made. Have a great planting season and be safe out there!

MCIA Directors and Officers Elected

Announced at the Virtual Annual Meeting in March were the results of the Board of Directors election. Toby Brown was re-elected to his second term representing the South West region and Carl Wagner III was

elected to replace the seat held by Larry Metz who was term limited. A special thanks to Larry Metz for his guidance and dedicated service to MCIA for the past nine years as a member of the Board of Directors. We look forward to working with Toby and Carl in the coming years!

At the conclusion of the meeting officers were

elected for 2021. Chris Schmidt will remain President, while Mark Vollmer was elected Vice President and Toby Brown elected to the Secretary/Treasurer position. We appreciate the willingness of these and the other Board Members who generously give of their time to help support MCIA.

Coho- A new Light Red Kidney (LRK) Bean

MCIA has entered into an agreement with MSU Technologies to license the newly released Coho LRK originated from the MSU dry bean breeding program. Coho is a result of a 2012 cross between Red Cedar (DRK) and the numbered line K11916 (WK). Coho is an upright



determinate bush with good lodging resistance, uniform dry down and excellent yield potential with high pod placement. Coho has the I-Gene resistance to

BCMV and shows moderate levels of resistance to common bacterial blight as well as bacterial brown spot. Coho matures in an average of 100 days which is one to two days later than common LRK varieties such as Clouseau and Big Red. Coho has excellent dry seed color and retains a desirable pink rosy color in storage unlike other varieties which turn brown due to after darkening. Coho Foundation Seed is available for 2021 planting. A royalty will be assessed on Foundation Seed purchased or Certified Seed Sold. Please inquire about Foundation Seed availability if interested!



MCIA is looking to fill the position of Seed Processor I in the Foundation Seed Division. Suitable applicants will need to have a background in agriculture, ability to work in a fast paced environment and the desire to learn the principles of seed cleaning. This is a full time position with health, dental and vision as well as paid holidays, paid vacation and a 403B retirement plan. If you are detail oriented with a positive attitude please contact MCIA at www.michcrop.com/ **contact for further details on how to apply.**



Carry over bean seed lot with poor germination due to dead seed

Analysis of Carryover Seed

BY CHRIS TIEDJE

What does a Germination test tell you? More than you think. There is a forensic science used in the evaluation of a seed lot when considering the results of a germination test. Sometimes

the non-viable seed provides evaluators clues as to what is causing poor results in a particular seed lot. Possible culprits of poor germination could be mechanical damage, seed treatment toxicity, old dead seed, or storage mold due to higher seed moisture contents or humid storage conditions. Have questions on your results? Ask us!

Tetrazolium Test Using Triphenyl Chloride

BY LAUREN MEZO

The TZ test is a quick, mostly 24-hour test used to estimate germination and seed lot vigor. Farmers will request this TZ test in conjunction with a germination test, theoretically both ending test results should be similar.

First the seeds are imbibed with water, then soaked in a solution of tetrazolium chloride. As the seeds start to respire, the tetrazolium chloride reacts, changing from a clear to red color. Depending on the type of crop, seeds are then cut and evaluated. Based on the staining patterns, seeds can be evaluated into vigor categories of high, medium, low, or dead seed.

The TZ test has proven very beneficial in determining mechanical damage in soybeans and sprouting in small grains. However, this test is available for all field crops.

The two pictures shown are from a recent TZ Test completed in the same soybean lot. The seeds on the



Broken radicles on soybean seeds, and frost damage shown in white on soybean seed.

top shows multiple places where the radicles are broken. Damage to the radicle will reduce or eliminate the potential for the seedling to produce a normal root/plant. Broken radicles are more common when seed is harvested and/or handled with lower seed moistures (10% or lower). Improper harvest equipment settings (too much thrashing) can damage the seed. The Tetrazolium is also good at showing where frost injury occurs (shown below on right). Frost damage

is out of our control. We cannot predict Mother Nature, sometimes she has a mind of her own.

If you were to do a germination test on this seed lot, you wouldn't know the reasoning or backstory as to why that lot has such a lower germination percentage. The TZ test is very useful in identifying these causes. This sample had a TZ result of 87% with a high number of broken radicles and a germination of 86%.

Fun Fact



Michigan has more than 150 waterfalls and all but one of them are located in Michigan's Upper Peninsula.

Ocqueoc Falls located in Presque Isle County is the only recognized falls in the Lower Peninsula.

Ocqueoc Falls, courtesy photo