MICHIGAN SUGAR COMPANY / WINTER 2023 / VOLUME 36 • ISSUE 2

THE NEWSBEET

The War on Weeds

Challenges, Control Strategies, & Future Threats

MICHIGAN SUGAR COMPANY

ALSO IN THIS ISSUE

- *An interview with Michigan Sugar Company Grower-owner Melvin Bischer*
- *Employee Service & Ernest Flegenheimer Awards*
- *Industry Celebrates Inaugural Real Sugar Day*

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THE NEWSBEET
MICHIGAN SUGAR COMPANY • WINTER 2023 • VOLUME 36, ISSUE 2

ON THE COVER

Waterhemp is shown in a Huron County farm field in a photo taken Sept. 22, 2022.

Photo by Ben Tierney

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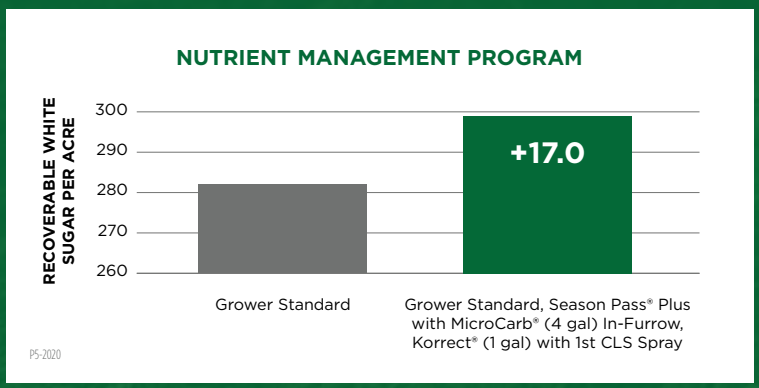

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IT HAS BEEN A SWEET RIDE

By Mark Flegenheimer, President and CEO

After 28 years at Michigan Sugar Company and nearly 40 years working in this great industry, I will be ending my sugar industry career in 2023. As I look back at the last four decades, there are so many highlights and great memories.

In the early 1980s, as a sugar trader in New York City, I traveled and did business around the world. I had business trips to every continent (except Antarctica — not much sugar grown there) and met business-people in the sugar industry from all walks of life and from some very interesting cultures. Visits to places like Guatemala, Australia, Haiti, Argentina, Cote d'Ivoire, and the Philippines gave me a unique perspective into the global sugar trade. During those early years in my career, I developed lifelong friendships with members of the "sugar family." Also, while living in New York I met my wife Anne, which is the best thing that happened to me while I was in the sugar trade.

In 1995, I convinced my pregnant wife (a woman who never lived in a house while growing up in New York City) to move to Saginaw so I could join Michigan Sugar as Vice President of Administration and we settled down and started our family.

Dave Roche was President of Michigan Sugar when I joined the company, and he was a great mentor to me. He showed me the ins and outs of Washington, D.C., taught me the importance of strong union relations, and how to work closely with the growers.

Soon after joining Michigan Sugar, Savannah Foods (owner of Michigan Sugar) was purchased by Imperial Sugar Company. These were some very challenging years, as Imperial was highly leveraged and did not re-invest the needed dollars back into the factories. Bankruptcy soon followed.

Work began immediately on extricating Michigan Sugar from bankruptcy and discussions commenced on turning Michigan Sugar into a grower-owned cooperative. Grower leaders, including Tom Zimmer, Dick Maurer, Jack Tagget, Loren Humm, and Wayne Hecht realized the importance of this opportunity and they charged Dick Leach to quarterback this effort. Working alongside these gentlemen led to some of my most rewarding experiences in this industry. Their consistent faith, trust, and vision is what spurred the growers to buy Michigan Sugar.

The growers hired me to run the cooperative once they acquired the company and we all had much to learn — co-op bylaws, policies, grower agreements, co-op accounting, committees, and so on. Fortunately, for me, my dad lived nearby, and I was able to pepper him with questions and ask for advice, daily. While I technically never "worked" with my father, I had the best, most knowledgeable consultant anyone in the sugarbeet industry could hope to have. Thank you, Dad.

In the early days of being a co-op we knew the factories needed to be updated and repaired after Imperial had neglected them for years. The opportunity to merge Monitor Sugar with Michigan Sugar presented itself shortly after we became a cooperative and with the funding of our bank group, a loan from the State of Michigan, and support of our growers we combined these rival companies while also updating our facilities with new, state-of-the-art equipment.

> *Change is often uncomfortable and change at a rapid pace is even more difficult. I have watched this company and its growers adapt, adjust, and change for many years and I am confident we will continue to be nimble for many years to come.*

During the last 20 years, we have seen incredible growth; sugarbeet yields increased by 50%, annual sugar production doubled to more than 1.3 billion pounds, and energy consumption was decreased by 40%. Michigan Sugar has positioned itself as a leader in the industry while delivering some of the highest payments to our shareholders among sugarbeet co-ops.

We have a great employees and progressive growers at the core of these accomplishments. As the co-op's first President and CEO, I hope I have developed a culture for future success; a culture that appreciates everyone's input, insights, and opinions; a culture that embraces our EPIC+ values: Excellence, Pride, Integrity, Compassion, and Trust.

It has been a "sweet" ride and a wonderful career. Thank you for trusting me to lead Michigan Sugar for the last 25 years. To survive another 100 years, we must be nimble and willing to try new and different things. Change is often uncomfortable and change at a rapid pace is even more difficult. I have watched this company and its growers adapt, adjust, and change for many years and I am confident we will continue to be nimble for many years to come. ■

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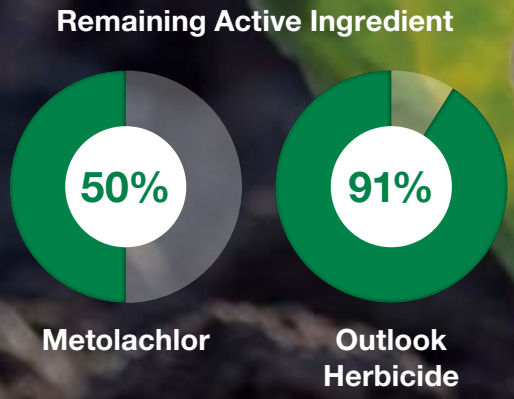

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WHEN IT COMES TO FARMING, YOU MUST HAVE FAITH

By James Ruhlman, Executive Vice President

> ***As we approach another growing season, we ask for wisdom to make good decisions, health to keep us strong in mind and body, and faith to guide us in all we think, say, and do.***

As a kid, I always enjoyed the purity, innocence, and authenticity of being in a farm field.

It is there where you feel solid footing with nature and experience a feeling of wonderment and awe. There is a stillness and a solitude that can be felt just before dusk as the sun settles on the horizon. It is almost eerie when you hear ringing in your ears from the quietness.

Yet, even in the serenity of moments like these, there are great unknowns.

When will the rains come?

How hot will the temperature rise?

What challenges will my crop face this season?

During my time on Earth, I have come to deeply understand a few things about farmers:

- They work with unwavering confidence that comes from experience and expertise that, in some cases, has been passed down by six or seven generations.
- They are eternal optimists, always believing that if they do their part, everything will work out as God has intended.

Some would describe this way of life as "risky."

I prefer to say farming is an occupation of extreme faith.

At Michigan Sugar Company, we are blessed to be able to combine that faith with a variety of skills, tools, and knowledge that provides a bit of insurance against the unknowns.

For example, advances in the sophistication of equipment have resulted in our ability to plant crops more quickly and accurately and harvest them with fewer employees and in a shorter timeframe.

Advancements in seed technology allow for reduced risk as newer varieties can better cope with changing environmental and biological risks. World-class seed variety research and development gives us firm belief that more sugar per ton and per acre can be achieved.

State-of-the-art equipment being installed at our factories, including our new molasses desugarization facility in Bay City, gives us the peace of mind that we will produce more sugar, and significantly increase return to our shareholders, without planting another acre of sugarbeets.

These are some of the tangibles, but equally important is the intangible idea of faith, which I believe to be the backbone of our cooperative model.

We must have faith in each other.

We will see this in action as we become more efficient through harvest groups that can pay huge dividends in the battle against labor shortages and rising equipment costs.

We will see this in action as we speak with a unified voice and work together with lawmakers in Washington, D.C., to craft the next Farm Bill that helps keep our market stable and staves off unfair trade practices.

And we will see it in action as we work together openly and honestly, trusting in each other, to move our business forward in positive ways while combating any future challenge or threat.

As we approach another growing season, we ask for wisdom to make good decisions, health to keep us strong in mind and body, and faith to guide us in all we think, say, and do.

CAPITOL BEET

MID-TERM ELECTIONS BROUGHT A FEW SURPRISES

By John Boothroyd, Manager of Government Relations

Another election has come and gone, and we can once again safely turn on our televisions without seeing a flood of political ads. Overall, the results on Nov. 8 were a surprise to many. The Republican party, which had expected to make significant gains, underperformed. The Democrats successfully defended their Senate seats in Arizona, Nevada, and Georgia while managing to pick up a win in Pennsylvania. This increases the Democratic majority to 51-49.

In the House of Representatives, the Republicans fared better, though far below pre-election predictions of picking up 20-30 seats. Republicans picked up 10 seats to give them a 222-213 majority. This sets up Republican leader Kevin McCarthy (R-CA) to be the next Speaker of the House, should he survive leadership elections.

ABOVE U.S. Rep Dan Kildee, center, with representatives of Michigan Sugar Company, from left: Director of Communications and Community Relations Rob Clark, President and CEO Mark Flegenheimer, Manager of Government Relations John Boothroyd, and Co-op Board Director Dean Haubenstricker. Kildee was re-elected on Nov. 8, 2022, to serve another term in the U.S. House of Representatives. He is one of the biggest supporters of the sugar industry in Congress.

On the Democrat side, House Speaker Nancy Pelosi (D-CA) has announced she is stepping down as leader of her caucus, a post she has held since 2003, including two stints as speaker. Congressman Hakeem Jeffries (D-NY), who is a supporter of the sugar industry, has been chosen to replace her. In Michigan, Congressman Dan Kildee cruised to an easier-than-expected victory over his Republican challenger. We can expect Congressman Kildee to continue to be one of the sugar industry's biggest champions.

While the 2022 election was disappointing for Republicans nationally, it was disastrous in Michigan. Democrats swept all three statewide races and, for the first time in 40 years, took control of the state House and state Senate. Fortunately, Michigan Sugar Company has developed strong relationships on both sides of the aisle, and we will work to maintain those relationships in the new legislature.

BELOW Work wrapped up in late 2022 on a $6 million road reconstruction project on South Euclid Avenue in front of Michigan Sugar Company's Bay City factory. L.A. Construction of Flushing was the general contractor for the project, which included all new infrastructure, curb and gutter, and turn lanes into the factory on a 1-mile stretch of South Euclid between Salzburg and Hotchkiss roads.

SOUTH EUCLID AVENUE PROJECT UPDATE

Numerous construction delays pushed the completion date for the South Euclid Avenue reconstruction project back by nearly two months. However, at long last, the project has been completed.

Michigan Sugar's Agriculture Department deserves a lot of credit for the work it did with the Bay County Road Commission to ensure that sugarbeets could still be delivered throughout the project. We expect the traffic and mud issues that have plagued that stretch of road to be significantly reduced with the instillation of turn lanes and curb and gutter.

Michigan Sugar was able to secure $2.5 million in state funding to help facilitate this project that has been a priority for the company for 15 years. So long as we continue to invest our time, expertise, and resources in protecting and improving the Sugar Program, I am confident that we will continue to find success on the federal level. ▮

***John Boothroyd** is Michigan Sugar Company's Manager of Government Relations. He joined the company in 2018 after working four years for U.S. Rep. John Moolenaar. He and his wife Katherine have two children and live in Midland.*

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Photo by Ben Tierney

The War on Waterhemp

PREVENTION IS THE SOLUTION WHEN MANAGING GLYPHOSATE-RESISTANT WEEDS

By Dennis Bischer, for Michigan Sugar Company

In recent years, glyphosate-resistant waterhemp has become more widespread and during the 2022 sugarbeet growing season, numerous fields throughout Michigan Sugar Company's growing region had high densities of the weed above the crop canopy.

Much like the battle against marestail (see sidebar story, page 13) that began years ago, growers must must now continue and take new measures to control and prevent the spread of waterhemp.

Unlike marestail control, waterhemp control is more difficult. Currently, our most effective strategy for waterhemp control is to prevent emergence. While marestail is easily controlled after emergence, waterhemp needs to be controlled before emergence. Control strategies after waterhemp has emerged are limited to rescue treatments in sugarbeets.

Waterhemp emergence typically does not occur until soil temperatures have warmed to 50 degrees. When planting sugarbeets in late March or early April, a pre-emergence herbicide application is not as important because it is highly likely that post-applications of soil residual herbicides at the two-true leaf stage will occur before waterhemp has emerged.

When planting is delayed until mid-April and into May, pre-emergence herbicide applications become more important. Soils will be warmer, and it is likely that waterhemp will emerge before a post application of a soil residual herbicide can occur.

Season-long waterhemp control requires multiple herbicide applications. Dual Magnum, Outlook, and Warrant all are effective when applied before waterhemp emergence, but only Dual Magnum is recommended and labelled for applications before sugarbeets emerge.

The following strategy is recommended for controlling waterhemp:

- Pre-emergence herbicide applications.
  - o Dual Magnum or Ethofumesate.
- Post layby soil residual herbicide applications.
  - o Dual Magnum, Outlook, or Warrant applied to two-leaf sugarbeets.
  - o Dual Magnum, Outlook, or Warrant. applied two to three weeks after the two-leaf application.
- Post-Rescue Treatments.
  - o Ultra Blazer (pending Section 18).
  - o The Weed Zapper.
  - o Weed Wiper.
- Control and prevention in other crops.

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ABOVE & RIGHT Waterhemp is visible in a Michigan field of sugarbeets. *Photos by Ben Tierney*

ABOVE, PHOTO 1 Reduced stand from Dual Magnum applied at 2 pints per acre pre-emergence.

ABOVE, PHOTO 2 No stand loss from ½ pint of Dual Magnum applied pre-emergence.

PRE-EMERGENCE HERBICIDE APPLICATIONS

There are two herbicides recommended as a pre-emergence application in sugarbeets. They are Dual Magnum and Ethofumesate, commonly known as Nortron.

Dual Magnum should be applied after planting but before weed and sugarbeet emergence at a rate of ½ pint per acre. For crop safety, this is a lower rate of Dual Magnum than what is applied post-emergence in sugarbeets. While full rates of Dual Magnum have resulted in reduced sugarbeet emergence in the past, multiple years of research has demonstrated that the lower rate of ½ pint per acre of Dual Magnum applied pre-emergence is very safe and has not resulted in reduced stand while still providing control of waterhemp (Photos 1 & 2).

Ethofumesate also is effective at preventing waterhemp emergence. Ethofumesate should be applied at 3 pints per acre after planting but before weed and sugarbeet emergence. While Ethofumesate can provide improved weed control over Dual Magnum, it does have an increased risk of crop injury and reduced sugarbeet emergence when compared to Dual Magnum.

MARESTAIL: A Weed Control Success Story

RIGHT Marestail is visible in a Michigan field of sugarbeets.

Looking back to the 2017 growing season, glyphosate-resistant marestail was becoming more widespread in the sugarbeet production areas of Michigan. While marestail was still relatively isolated, numerous fields had high densities above the crop canopy at the end of the growing season. If control measures were not put in place there would be serious issues with weed control in sugarbeets.

Fortunately, the herbicide Stinger (clopyralid) provides excellent control of marestail.

Stinger had once been a widely used herbicide in sugarbeets, but since the adoption of Roundup Ready seed, its use had been limited. To control marestail, Stinger would need to be reintroduced into growers' weed-control programs.

Christy Sprague, a Weed Science Extension Specialist and professor in the Department of Plant, Soil, and Microbial Sciences at Michigan State University had been doing research to determine optimum timing and rates of Stinger to effectively control marestail. Using this research, along with field experience, recommendations were developed for control of marestail. The recommendation to apply 2 fluid ounces of Stinger on two-leaf sugarbeets and 4 fluid ounces of Stinger on four-leaf and larger sugarbeets was developed and implemented.

This strategy proved to be very effective. To get widespread adoption though, it took several years of educating growers on the importance of this strategy.

While marestail is now more widespread with increased seed bank densities, there is better control now than we had from 2017 to 2019. This is due to the adoption and implementation of Stinger as a standard practice in growers' weed-control programs.

— Dennis Bischer

POST-SOIL RESIDUAL APPLICATIONS

Dual Magnum, Outlook, and Warrant are effective at controlling waterhemp when applied before weed emergence. These products do not control emerged weeds and must be applied before weed emergence. Dual Magnum, Outlook, and Warrant have their own strengths and weaknesses in that they vary in the overall weed control spectrum, crop safety, and the amount of rain required for activation. In the case of Dual Magnum, Outlook, and Warrant, which herbicide you use is not necessarily as important as making sure that one or more of these herbicides is included in your weed control program.

Applications of Dual Magnum, Outlook, and Warrant should occur as soon as sugarbeets have reached the two-true leaf stage. They also can be applied in a tank-mix with glyphosate and Stinger for broad spectrum weed control. It is common to see some crop injury from herbicide applications and the amount of injury is dependent on weather conditions and other products in the tank. In general, sugarbeets recover from any injury quickly with no loss of yield. It is a good practice to confirm that your tank-mix is safe and compatible before making an application.

Unfortunately, waterhemp continues to emerge for an extended period, thereby making multiple residual herbicide applications necessary for season-long control. At least one more application of Dual Magnum, Outlook, or Warrant will be required for additional weed control two to three weeks after the initial post layby application.

POST-RESCUE TREATMENTS

ULTRA BLAZER – Once waterhemp has emerged it is difficult to control in sugarbeets. A Section 18 label for the application of Ultra Blazer was granted for the 2021 and 2022 growing seasons. Although Ultra Blazer does provide post-emergence control, it should not be part of a planned weed control program and should only be considered a rescue treatment.

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ABOVE, PHOTO 3 Waterhemp control from Ultra Blazer.

ABOVE, PHOTO 4 Ultra Blazer injury symptoms.

Ultra Blazer must be applied to sugarbeets that are six-leaf or larger. Additionally, waterhemp should be targeted when it is less than 4 inches (Photo 3). Applications to small waterhemp are much more effective than larger waterhemp as larger waterhemp often will regrow after the Ultra Blazer application. Field observations of Ultra Blazer applications indicate that 80-90% waterhemp control can be achieved when applied at the correct timing.

Ultra Blazer also causes significant crop injury to sugarbeets (Photo 4). Applications to sugarbeets that are smaller than 6-leaf can result in loss of stand. Also, Ultra Blazer applications can cause significant leaf burn. Sugarbeets larger than six-leaf will outgrow injury symptoms quickly.

THE WEED ZAPPER – The Weed Zapper (see related article on page 18) was used in Michigan during the 2022 growing season. The technology works by using an electrical current to kill plants. This tool was highly effective at controlling waterhemp during the 2022 growing season. Once again, this should be considered a rescue treatment as waterhemp must be above the crop canopy.

WEED WIPER – Weed wipers (see related article on page 16) also control weeds above the crop canopy. Instead of using electrical current like The Weed Zapper, weed wipers use herbicides to control weeds. Weed wipers were widely used for late season weed escapes before the adoption of Roundup Ready sugarbeets and were very effective.

WATERHEMP CONTROL IN OTHER CROPS

To successfully battle waterhemp, the weed needs to be controlled and prevented in all crops.

A comprehensive weed control program for all crops, using multiple modes of action, should be developed for each specific farm. Fortunately, many of the crops grown in Michigan Sugar Company's sugarbeet production area have multiple herbicides to manage waterhemp. Relying on an additional single mode of action to control waterhemp in other crops likely will result in additional herbicide-resistant weeds.

Avoid using the same site of action to control weeds in multiple crops. For example, using dicamba in Xtend or XtendFlex soybeans, then using a dicamba product such as Clarity, DiFlexx, or Status in corn will increase the likelihood of a weed population becoming resistant to dicamba. Site of actions should be rotated within crops and from crop to crop.

THE FUTURE OF WATERHEMP CONTROL

The next herbicide tolerant sugarbeet trait is being developed by KWS and will be marketed as Truvera. This technology will provide herbicide tolerance to glyphosate (Roundup), glufosinate (Liberty), and dicamba. This will provide two additional modes of action for effective control of both waterhemp and marestail.

Herbicide Plan of Attack

Guidelines for herbicide applications to prevent waterhemp emergence before and after the emergence of sugarbeets. Keep in mind that following these guidelines will not provide 100% control.

Pre-sugarbeet Emergence –
Dual Magnum applied at ½ pint per acre or Ethofumesate applied at 3 pints per acre.

Two-leaf Sugarbeets –
Dual Magnum at 1.3 pints per acre, Outlook at 12 to 16 fluid ounces per acre, or Warrant at 3 pints per acre.

Two to Three Weeks Following Two-leaf Application –
Dual Magnum at 1.3 pints per acre, Outlook at 12-16 fluid ounces per acre, or Warrant at 3 pints per acre.

Additional Application –
An additional application of Dual Magnum, Outlook, or Warrant may be necessary depending on weather and growing conditions to provide season-long weed control. Refer to the label to ensure that you do not exceed the maximum season application limits.

The release of Truvera is still several years away. Until launch, the strategy of layered residuals is the most effective approach to the management of waterhemp. Additionally, the herbicide resistance in Truvera is currently used in other crops. It is extremely important to not overly rely on glufosinate or dicamba in other crops to control glyphosate-resistant waterhemp as there is the risk of waterhemp populations becoming resistant to these herbicides, thereby reducing the effectiveness of Truvera in sugarbeet production.

By using effective weed control strategies, we can win the battle against glyphosate-resistant weeds. In the case of waterhemp, specifically, it requires the implementation of an herbicide program that prevents a waterhemp problem from occurring before you have known issues on your farm.

Prevention is the solution. ▮

Dennis Bischer *owns Lincoln Ag, an independent crop consulting company providing GPS soil and nitrate sampling, variable rate seeding, scouting and crop consulting for sugarbeets, corn, wheat, dry beans, soybeans, alfalfa, and other crops.*

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Wiping with paraquat in the battle against

By Nevin Lawrence, Associate Professor & Weed Management Specialist, University of Nebraska-Lincoln

This past summer, I received a phone call from an agronomist who needed help with Palmer amaranth control. It was mid-July, and the Palmer was quickly overtaking the crop. I told him that given the stage of the crop and the height of the Palmer, there really wasn't much to be done to salvage the field, but that I could work with him and the farmer to devise a better strategy for next year.

This sort of phone call was familiar. I have been getting more and more just like it each year. But what stood out to me was the agronomist's response: "I know, I am looking for a cathartic recommendation. It doesn't need to work; it just needs to make the farmer feel better."

Glyphosate-resistant Palmer amaranth is the No. 1 issue for sugarbeet growers in parts of Colorado and Nebraska. Group 15 herbicides — Warrant, Dual Magnum, and Outlook — are the only effective options in sugarbeets, but in our geography, they can only be applied after the two-true leaf growth stage. Depending on the weather conditions, Palmer can emerge as early as mid-April, or as late as mid-June. In sugarbeets, late-emerging Palmer amaranth can be suppressed by the application of repeated and overlapping group 15 herbicides. But when it emerges early, at the same time as the sugarbeets, a single Palmer amaranth plant in one yard of row can lead to 50-90% yield loss (Shultz et al. 2021).

Most growers may be familiar with a weed wiper through use in other crops. Before the advent of Clearfield varieties, wipers commonly were used to control feral rye in wheat. Since the widespread arrival of glyphosate-resistant Palmer across the country, wipers filled with paraquat have been used in peanuts and soybeans but can be adapted to other low-growing crops, such as dry beans and sugarbeets.

Paraquat use in a wiper does come with severe drawbacks compared to the use of glyphosate.

First is safety. All applicators and mixers of paraquat need to complete a paraquat-specific Environmental Protection Agency training program due to the high acute toxicity of paraquat.

PHOTO 1 A Palmer amaranth plant, left, and kochia plant, right, one week after paraquat wiping.

another tool weeds

RESEARCH: IT WON'T SOLVE PALMER AMARANTH PROBLEMS, BUT CAN HELP

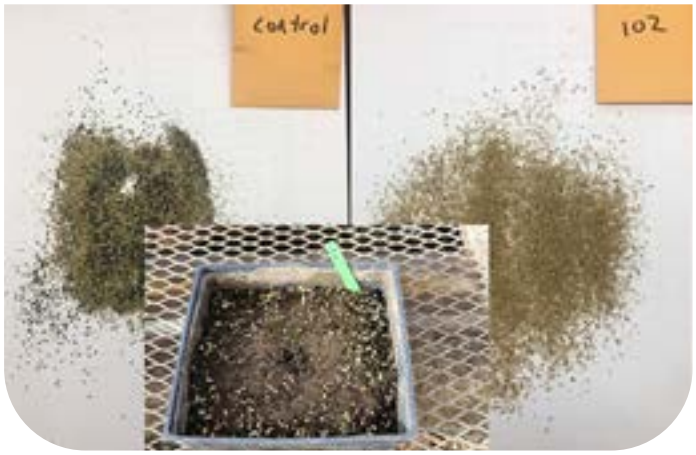

PHOTO 2 LEFT: Seed from a Palmer amaranth plant, not wicked with Paraquat; RIGHT: Seed from a head wicked with paraquat; CENTER: Germination test of seed from the head pictured to the right. Palmer amaranth seed is identified as black in the photo on the left.

Second is performance. Paraquat does not translocate. It will only kill the plant parts with which it comes in contact. The University of Georgia's Pest Management Handbook for peanuts lists up to 85% control as possible with a weed wiper, when 60-70% of the weed surface is wicked. Getting that 60-70% coverage is only possible if there is a large difference in plant height between the crop and weed, and by the time this height difference is reached, yield loss has likely already occurred.

In 2020, I conducted a trial using a rolling carpet-style wiper, manufactured by GrassWorks, with a 50/50 mixture of Gramoxone 2.0 and water. There were three study factors: application timing (late July or first week of August), the addition of crop oil, and one vs. two passes. In 2020, none of the treatments differed significantly. When wiping occurred, complete control of Palmer amaranth, kochia, and common lambsquarters was achieved (Photo 1); along with a complete prevention of seed production (Photo 2); and while crop injury was observed, the beets largely recovered (Photo 3).

In 2021 and 2022 weed control was far worse, and crop injury far higher. I believe the reason for this lack of success is related to weed density at the time of wiping. For moderate infestations the wiping resulted in good coverage with limited off-weed dripping. In 2021 and 2022, weed density in the test plots was so severe that paraquat coverage was poor and increased contact between treated Palmer amaranth and sugarbeets caused crop injury.

This speaks to a bigger issue with researching this topic. A lot of the efficacy of wiping on paraquat is function of experience rather than science. You need to have the right speed, wiper height, and wiper saturation. Wiper saturation is an especially delicate adjustment to make. Control is best if the paraquat is running down the stem of the weed to the base of the plant. But oversaturating the wick leads to dripping and increased crop injury. Finding that right balance takes experience, and with several different manufactures of many different styles of wipers, the equipment setup in a research plot may not carry-over to what a grower may choose to do.

So, is wiping of paraquat a solution to herbicide-resistant weeds in sugarbeets? No, but under the right conditions it can limit seed production, preserve yield, and make harvest easier late in the season when other options fail.

Under less-than-ideal conditions, the best it might offer is cathartic weed control.

PHOTO 3 Sugarbeet injury and weed control one week after paraquat wiping.

SOURCES:
https://extension.uga.edu/content/dam/extension/programs-and-services/integrated-pest-management/documents/handbooks/2022-comm-chapters/Peanut.pdf.

Frasier WR, **Lawrence NC** (2021) Amaranthus Palmeri interference in Sugar Beet. WSWS Annual Meeting, Online.

Nevin Lawrence, Ph.D., *is an associate professor and Extension Weed Specialist in the Department of Agronomy and Horticulture at the University of Nebraska-Lincoln, located in Scottsbluff, Nebraska. Nevin began his current position in 2016. His research and extension efforts focus on the development of weed management programs that leverage crop rotations and other cultural practices to supplement the sometimes-limited weed control options available in Western Nebraska.*

The Weed Zapper Causing a Shockwave in Agriculture

MISSOURI FAMILY MANUFACTURING AN ALTERNATIVE WAY TO CONTROL WEEDS

By Haylee Kroeger, Old School Manufacturing

A Missouri family, with a background in organic farming and running an HVAC and electrical business, is sending shockwaves through the agriculture industry by manufacturing and selling a machine designed to kill weeds using electricity.

Designed and built by Old School Manufacturing LLC in Sedalia, Missouri, The Weed Zapper is a ruggedly built tractor attachment that can kill weeds down to the root using electricity in as little as one pass. It is especially useful with pigweed, amaranth, and giant ragweed.

In 2017, brothers Ben and Mike Kroeger purchased The Weed Zapper technology and prototype from another set of brothers in Illinois, who had set out to tackle both organic weed control and the growing issue of herbicide resistant weeds. The Kroegers immediately set out to make improvements to their new technology. The result is Old School Manufacturing's "Annihilator" and "Terminator" series of Weed Zapper equipment.

HERE'S HOW IT WORKS:

Electric discharge weeding works by forcing an electrical current through a plant's stem. The current boils the water inside the plant's cells, bursting the cell walls. This immediately kills the plant. The less water a plant has, like those of grasses, the longer The Weed Zapper must be touching it for it to be effective (slower speed, extra pass). The Weed Zapper is non-selective in killing plants.

The Weed Zapper is basically a copper bar that has voltage on it. So long as nothing is touching the bar, nothing happens. As soon as a plant touches the bar, current starts flowing down the plant stem. This minimally invasive method of killing weeds is environmentally friendly and requires as little as one pass for minimal soil disturbance. Using electricity to kill weeds allows growers to kill weeds before they go to seed, thus diminishing the seed bank in future years.

One of the greatest concerns in developing this technology revolved around safety. The Weed Zapper Annihilator models can run up to 14,000 volts of electricity, and like any other piece of equipment, can cause harm if misused. Some of the features created to combat this risk include seat sensors, wing sensors, and motion sensors, each of which, if triggered, will cause electrical output to cease.

The Weed Zapper has been fine-tuned for ease of use and service, and is equipped with modern software and hardware, including redesigned, shatter-proof insulators; flexible, field-contouring booms; and up to three times more amperage.

The Weed Zapper comes with front-mounted booms that help minimize operator fatigue and allows the unit to contact weeds that are closer to the crop canopy. The redesigned, custom-made booms feature contouring ability that allows the booms to flex and move with the contours of crop fields.

The Annihilator series can cover up to 20 acres per hour.

LEFT Here is a look at The Weed Zapper, a piece of equipment that uses electricity to kill unwanted weeds in fields. **RIGHT** Waterhemp is shown in a Michigan sugarbeet field following the use of The Weed Zapper.

Other types of weeds these machines kill include Johnson grass, lamb's quarters, black eyed susan, Queen Anne's lace, foxtail, button weed, and thistle. The Weed Zapper also has been proven to help kill cover crops like alfalfa, oats, rye, peas, and clover.

The Kroeger brothers began investigating this type of technology in 2014, when the family's hobby farm was turned into an organic farming operation. Weed control, nearly obsolete after the conveniences of Round-up, became an urgent issue and the duo began to experiment with cultivators and plant-based chemicals, and at one point toyed with the idea of fire. Luckily for the sake of their wives, God had a better plan.

Word was brought to them of an electrical weeder from LASCO, a machine pioneered in the early 1980s, a few years before the "Roundup Revolution" took hold. There were only six of these prototype machines built. The brothers sourced one in Iowa, bringing it home to see how well it worked. The results were shocking, to say the least. But the LASCO, while its kill rate was immediate and effective, was too delicate for the needs of the modern farmer.

The brothers, their heads buzzing with the capabilities of the LASCO, began thinking about building their own zapping machine. That's when God stepped in again and led the Kroegers to the brothers in Illinois who had built the forerunner to today's Weed Zapper machines. After much debate, prayer, and discussion, the family decided to buy the prototype and the rights to the business.

During their first year of sales in 2017, the Kroegers sold 15 units. This past year, they sold more than 100. Today, Old School Manufacturing has partnerships with dealers in eight states — California, Indiana, Michigan, Minnesota, Nebraska, New York, Ohio, and Texas — as well as one in Quebec, Canada. The Michigan dealer is Pondhill Sales and Services in Bancroft.

The Annihilator Series models run for between $69,000 and $88,500.

From its humble beginnings, Old School Manufacturing has grown by leaps and bounds. The company is looking to expand in all directions in the future, from the building of updated facilities, to experimenting with new and improved machinery.

LEARN MORE

For more information on The Weed Zapper, go to *theweedzapper.com* or search "The Weed Zapper" on Facebook, Instagram, or YouTube. For questions regarding the sales and operation of The Weed Zapper, call 660-851-8800.

Haylee Kroeger *is the daughter of Old School Manufacturing CEO Ben Kroeger and his wife Jessika. She works as a teller at The Missouri Bank in Sedalia, Missouri, practicing her hobbies of writing, reading, and horseback riding in her spare time.*

Glyphosate-Resistant Weeds: Current and Future Threats

RESEARCHERS HAVE SEEN SPREAD ACROSS MICHIGAN IN LAST DECADE

By Christy Sprague, Ph.D., Weed Extension Specialist, Michigan State University

One of the greatest advancements in weed control for sugarbeet growers was the commercialization of Roundup Ready sugarbeets. Major benefits of this system included greater flexibility and excellent weed control without crop injury. However, as with any system that appears perfect, at some point Mother Nature catches up and provides challenges. These challenges have revolved around the evolution of glyphosate-resistant weeds and to a greater extent weeds that are resistant to multiple herbicides, including glyphosate.

Five years ago, an article in *The Newsbeet* featured the five different glyphosate-resistant weeds that had been identified in Michigan — horseweed (marestail), common waterhemp, Palmer amaranth, common ragweed, and giant ragweed. The good news is no new glyphosate-resistant weeds have been identified in Michigan since. However, the bad news is we have witnessed the continued expansion of these weed populations across much of the state and into sugarbeet fields.

Currently, of the five glyphosate-resistant weeds, horseweed (marestail) and waterhemp are the two most frequently found problems in sugarbeet fields. In fact, in recent surveys, horseweed and waterhemp were No. 1 and No. 2 for Michigan's top weed challenges. Because of these issues, researchers at Michigan State University have continued to look for new strategies to manage these weeds. Below are the current recommendations.

ABOVE Horseweed is shown in a commercial Michigan sugarbeet field. Early and continued emergence of horseweed seedlings and glyphosate resistance have made horseweed management increasingly difficult in sugarbeets.

HORSEWEED (MARESTAIL)

Early and continued emergence of horseweed seedlings and glyphosate resistance have made horseweed management increasingly difficult in sugarbeets. While there are no perfect options for horseweed control, it is the one glyphosate-resistant weed that is easier to manage in sugarbeets as compared with other crops. From our research, we know we can get good control of horseweed with Stinger (clopyralid). However, control is rate — and horseweed size — dependent.

To effectively manage horseweed, it is important to follow the current recommendations:

- Plant sugarbeets into a horseweed-free seedbed.
  - Examples: tillage, Gramoxone, Liberty, etc.
- Apply Stinger HL 5L tank-mixed with glyphosate in at least two of the glyphosate applications. Good results have been observed with:
  - 1.8 fluid ounces per acre followed by 1.8 fluid ounces per acre of Stinger HL 5L.
  - 1.2 fluid ounces per acre followed by 2.4 fluid ounces per acre of Stinger HL 5L.

While following these recommendations can provide good horseweed control there are some precautions that growers need to follow. It is important to remember Stinger has a 45-day preharvest interval. It also is important to be mindful of crop rotation restrictions. Stinger is dissipated by microbes and the speed of degradation is dependent on rainfall, temperature, and soil organic matter.

All these factors impact which crops can be planted the year following Stinger application. The crop rotation restriction for soybeans and dry beans is 10.5 months for soils with greater than 2% organic matter, and 15 inches of rainfall is needed during the 12 months following application. If soil organic matter is less than 2% and rainfall is less than 15 inches, the rotation restrictions for soybeans and dry beans are lengthened to 18 months. Corn can be planted at any time.

Removing plant residues and deep plowing can help alleviate the chances for Stinger carryover. Remember, if you are concerned about the potential for carryover, a field bioassay can be conducted.

ABOVE Waterhemp is shown in a commercial Michigan sugarbeet field three weeks before harvest. A pigweed species, waterhemp has become one of the most problematic glyphosate-resistant weeds in the Midwest.

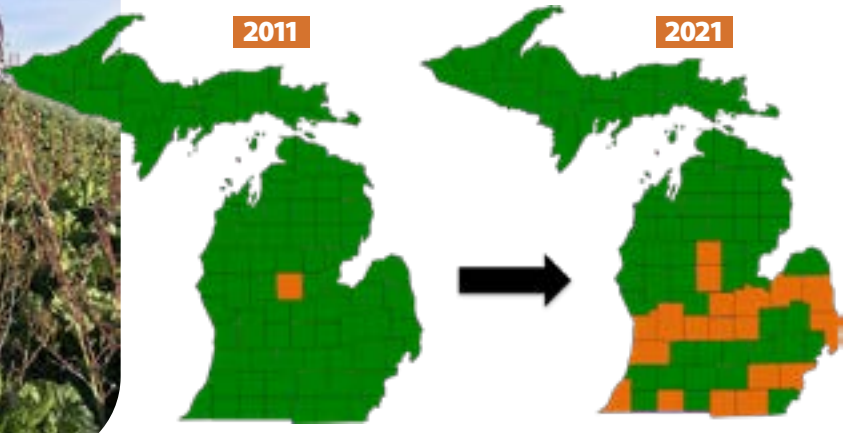

FIGURE 1: Based on data submitted to Michigan State University Plant and Pest Diagnostics, the counties in brown show the spread of glyphosate-resistant waterhemp in Michigan from 2011 to 2021.

WATERHEMP AND PALMER AMARANTH

The pigweed species waterhemp and Palmer amaranth, have been the two most problematic glyphosate-resistant weeds in the Midwest and the Southern United States, respectively.

Until recently, these species were not widespread in Michigan. While the spread of Palmer amaranth has been at a slower pace, we have observed the rapid expansion of waterhemp across the state and into the sugarbeet growing region over the last 11 years (Figure 1).

The majority of waterhemp populations in Michigan are resistant to glyphosate (Group 9) and the ALS-inhibiting (Group 2) herbicides. In addition, some populations have developed resistance to the triazine (Group 5) and PPO-inhibiting (Group 14) herbicides. Resistance issues combined with rapid growth rates, long emergence patterns, and high seed production make waterhemp and Palmer amaranth extremely difficult to control.

Strategies to manage glyphosate and multiple-resistant waterhemp and Palmer amaranth in sugarbeets have been the focus of Michigan State University's research over the past 10 years, with the focus on waterhemp the past six years. To date, the use of overlapping residual herbicides (Dual Magnum, Outlook, or Warrant) has been the most promising (Figure 2). However, the residual herbicides need to be applied before waterhemp and Palmer amaranth emergence and typically these residual layby POST applications should not be made until sugarbeets have at least two fully expanded leaves.

The second residual application should be made when sugarbeets are at the six- to eight-leaf stage. These residual herbicides are generally tank-mixed glyphosate to control all other weeds. Residual herbicides will not control emerged waterhemp or Palmer amaranth. That is where understanding the time of waterhemp and Palmer amaranth emergence in relation to sugarbeet planting is important. Most of Michigan's waterhemp and Palmer amaranth populations start to emerge in mid- to late-May and if sugarbeets are planted in late-April or later, the use of a pre-emergence herbicide will be needed to control waterhemp and Palmer amaranth until the first POST residual layby application.

Currently, the only herbicides that can be applied PRE with waterhemp and Palmer amaranth activity include ethofumesate at 3 pints per acre and Dual Magnum at ½ pint per acre with the 24C Michigan registration. These PRE herbicides will provide initial control until the POST layby applications are made.

COMMON RAGWEED AND GIANT RAGWEED

Common ragweed (2014) and giant ragweed (2016) are the two most recent confirmed glyphosate-resistant weeds in Michigan. Fortunately, due to the biology of the ragweed species, they tend to spread at a much slower rate than other glyphosate-resistant weeds. Additionally, like horseweed, Stinger (clopyralid) has good activity on both ragweed species.

While we have not examined control strategies of glyphosate-resistant common or giant ragweed in sugarbeets, implementing strategies that use multiple applications of Stinger likely will control both common and giant ragweed. However, it will be important to keep an eye on the effectiveness of these applications because in 2017, a common ragweed population was confirmed resistant to clopyralid in Montcalm County. ▮

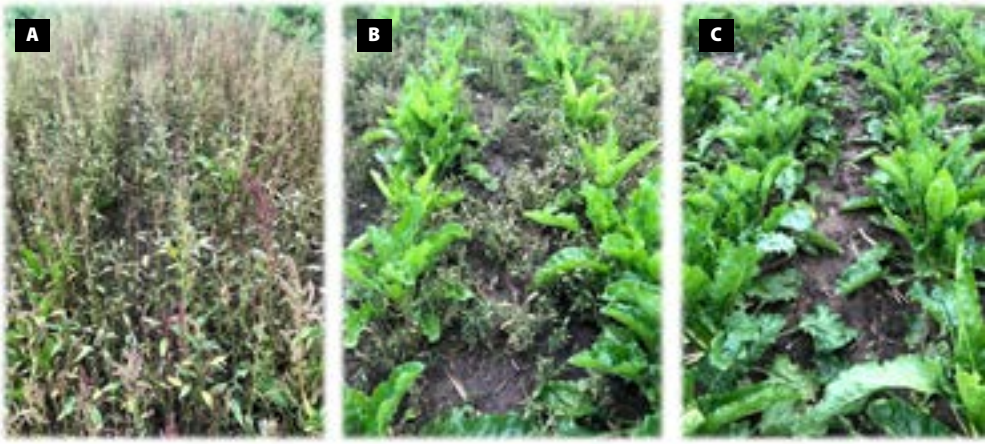

FIGURE 2: Glyphosate-resistant waterhemp control from (A) Roundup PowerMax applied at two- and six- to eight-leaf sugarbeets, (B) Warrant at 3 pints per acre applied with each Roundup application, and (C) Dual Magnum at 0.5 pints per acre applied PRE followed by two applications of Roundup PowerMax + Warrant.

Christy Sprague, Ph.D., *is a Weed Science Extension Specialist and professor in the Department of Plant, Soil, and Microbial Sciences at Michigan State University. She has been employed at MSU since September 2003. She earned her bachelor's degree in crop and soil sciences from MSU, her master's degree in agronomy from the University of Illinois, and her doctorate in weed science from MSU.*

PHOTO 1 A&B: Seedling disease (A) and adult plant root rot (B) caused by Aphanomyces cochlioides. In seedlings, the root becomes thin and blackened. In adults, the root rot is light brown and moist.

PHOTO 2 Cercospora leaf spot-resistant USDA sugarbeet breeding line on the left compared to a Cercospora leaf spot-susceptible variety on the right.

PHOTO 4 A wild sea beet (Beta vulgaris subsp. maritima), bottom, vs. a sugarbeet (Beta vulgaris subsp. vulgaris), top.

CELEBRATING 100 YEARS OF SUGARBEET RESEARCH

PARTNERSHIP BETWEEN USDA AND MSU PLANTED IN 1923

By Linda Hanson, Ph.D., and Rachel Naegele, USDA Agricultural Research Service

Over the years, public sugarbeet breeding programs overseen by the United States Department of Agriculture (USDA) Agricultural Research Service have been an essential contributor to the industry's success, with more than 1,000 releases, including varieties and breeding lines.

Celebrating its 100th anniversary in 2023, the East Lansing unit of the agency is no exception.

In 1923, the USDA Bureau of Plant Industries — now known as the Agricultural Research Service (ARS) — was relocated to East Lansing to facilitate collaborative work with Michigan Agricultural College — now known as Michigan State University. The goal was to develop sugarbeet varieties adapted to Michigan, particularly those with resistance to *Aphanomyces*-induced root rot, both at the seedling (also called black root) and adult stages (Photo 1 A&B), as well as resistance to Cercospora leaf spot (Photo 2).

PHOTO 3 A sugarbeet harvest from 1921, around the time the collaboration between the United States Department of Agriculture and Michigan State University began. *Image from Smiths Farm, Monks House Spalding-South Holland Life Heritage and Crafts, including Chain Bridge Forge*

The USDA has maintained a sugarbeet research presence in East Lansing ever since, even as the industry has grown and changed to hybrid seed and mechanized production practices (Photo 3). More than 80 sugarbeet lines have been released at this location since 1960 by multiple breeders who have built off their predecessors and adapted the program to fit the industry's needs. During that time, Cercospora leaf spot resistance has remained an important aspect of the research project.

Breeding and sugarbeet genetics also have continued to be a major focus with one or more breeders/geneticists at the location since its inception.

E.E. Down, in 1923, through a cooperative agreement with Michigan Agricultural College, began the process of developing multi-germ varieties suited to Michigan's climate. This was the start of the breeding program and a shift from the previous work of variety evaluations. In 1929, Down was succeeded by H.L. Kohls, who was responsible for the original source of monogermy, one seed per fruit (circa 1950) that is now widely deployed throughout commercial breeding programs.

By the mid-1950s, sugarbeet breeding had shifted from multigerm lines to monogerm hybrids under G. Hogaboam. The most prominent USDA hybrid developed at the time was "US H20," a variety with moderate Cercospora leaf spot and *Aphanomyces* resistance, bolting resistance, and good sugar yield. This was released in 1967.

Breeding hybrid sugarbeet varieties continued until the mid-1980s, when public breeding programs began to release improved breeding lines and hybrid development shifted to commercial companies. In 1985, Hogaboam retired, and J.C. Theurer joined J.W. Saunders in the program. At that time, germplasm enhancement became the focus.

Theurer and Saunders made great strides incorporating the smooth root- and Rhizoctonia-resistance traits into East Lansing germplasm with the low bolting, *Cercospora* and *Aphanomyces* resistance that were typical of the program. This work was later continued and expanded by J.M. McGrath, who brought the industry releases such as "EL51" (*Rhizoctonia* and *Cercospora* resistance) and "SR98" (smooth root with seedling and adult plant *Rhizoctonia* resistance), and "SR102" (smooth root with good storage). Beyond germplasm releases, McGrath also positioned the program to make use of technologies like genomics. Breeding efforts continue with R.P. Naegele.

As the USDA ARS prepares for the next century of sugarbeet breeding, the program will continue to evolve to meet the industry's changing needs. A major factor for breeding efforts is germplasm enhancement and disease resistance, combining useful traits from wild beets (Photo 4) into sugarbeets using modern and traditional tools.

Linda Hanson, Ph.D., *left, is a Research Plant Pathologist with the United States Department of Agriculture's Agricultural Research Service. She has been focusing on sugarbeet diseases for more than 20 years, specializing in diseases caused by fungi. She is a twin.* ***Rachel P. Naegele, PhD.,*** *right, joined the United States Department of Agriculture's Agricultural Research Service in 2021 as a Research Geneticist. She works on breeding improved sugarbeet germplasm.*

The Return of Factory Tours

CHECK OUT OUR WEBSITE, www.michigansugar.com/community/factorytours/ to see available tour dates. If you're interested in a group tour, please contact tours@michigansugar.com to learn more.

By Elizabeth Taylor, Ag Relations & Communications Manager

Public can once again see the sugar-making process at Michigan Sugar's Bay City operation

BELOW An agronomy group from Abraham Baldwin Agricultural College in Tifton, Georgia, visits Michigan Sugar Company's Bay City factory for a tour in October 2019.

LEFT On Oct. 11, 2022, Michigan Sugar Company hosted a factory tour for a group of 80 middle and high school students and educators from 13 school districts in the Great Lakes Bay Region who are part of Saginaw Valley State University's Chief Science Officer program. Here, three students sample some brown sugar during the tour.

Do you know how sugar is made? It might seem like a silly question to most of the readers of this magazine, but really, have you had the chance to see the process of transforming sugarbeets into pure, all-natural, sugar?

After a long pause on our factory tours due to the COVID-19 pandemic, Michigan Sugar Company is excited to get back into the swing of factory tours in Bay City. Since we expanded our tour program in 2017, more than 4,000 people have visited and learned how sugar is extracted and packaged.

We've hosted groups and individuals from all over the world, including a group representing an ag tech college in Georgia, a group of farmers from Argentina, and sugarbeet processors from Ukraine. We've also had visits from many leadership groups, local high schools and colleges, customers, vendors, legislative groups, and even interested community individuals.

The tour starts in our new Welcome and Education Center and takes about an hour to complete. You'll get to see the entire process up close, and even get a sweet treat or two along the way.

As we get ready to resume our tours, we also are pleased to introduce a new tour guide — Lindy Richards, Michigan Sugar's Shareholder Relations Coordinator. Lindy is an excellet addition to the team and gives a quality tour.

Factory tours are a great opportunity to share a little more about what we do here at Michigan Sugar Company.

***Elizabeth Taylor** is Ag Relations & Communications Manager at Michigan Sugar Company. She joined the company in 2016 and works closely with the Agronomy Department to create and share meaningful information with growers.*

MEET MICHIGAN SUGAR FACTORY TOUR GUIDE LINDY RICHARDS

Lindy Richards of Fairgrove, is Michigan Sugar Company's Shareholder Relations Coordinator. In that role, she also is the newest Michigan Sugar Factory Tour Guide.

A native of Reese, Lindy graduated from Reese High School in 2009 and went on to take classes at Delta College. While a senior in high school, Lindy went to work as a co-op student at Frankenmuth Credit Union and then spent the next 12 years with the organization, last working as an asset recovery specialist.

In 2020, she joined the staff at Weiss Equipment in Frankenmuth, working as an office assistant. She joined Michigan Sugar on Nov. 7, 2022.

"I have a passion for the ag industry and sugarbeets are a crop like no other," said Lindy. "We get to go out and deliver that message."

Lindy is the second member of her family to work for Michigan Sugar. Her mother Brenda Neveau worked for many years as a seasonal employee for the company, starting at the scale house at the Blumfield Township piling station and eventually coming to Bay City to drive a lime truck.

Lindy and her husband Luke have a 7-year-old son named Ryker and a German shepherd named Sergeant. In the family's free time, they enjoy spending time in the great outdoors, especially at their property in Newberry in Michigan's Upper Peninsula.

Lindy, who wore the crown of the Munger Potato Festival Queen in 2008, also coaches freshman volleyball at Reese High School and an AAU volleyball team.

— Rob Clark

BELOW Members of the Bay Area Chamber of Commerce Leadership Bay County Class of 2019 see how sugar crystals are formed during a tour of Michigan Sugar Company's Bay City factory in January 2019.

Bay City

BELOW During Michigan Sugar Company's 2022 inter-campaign, a new one-way road for co-product and interplant traffic was installed at the Bay City factory. The $550,000 project included upgrades to traffic safety and process water collection, improving controls for wastewater treatment.

BELOW The 300-horsepower motor on the sugar cooler fan was retrofitted with a variable frequency drive aimed at reducing the amount of power it takes to run the system by more than 30%. The return on investment is expected to be fewer than 1.9 years.

By Nick Klein, Vice President of Operations

Michigan Sugar Company's 2022-2023 Beet Campaign started in late August with all factories hitting their stride in early September.

At the Bay City factory, inter-campaign capital investments focused on safety, infrastructure, and energy savings totaling $1 million.

Construction of a new one-way road for co-product and interplant traffic was the largest project at $550,000. In addition to the one-way traffic safety initiative, this project included upgrades to process water collection, improving controls for wastewater treatment.

Another $100,000 was spent to replace several roof locations that had deteriorated over time and, in some cases, exceeded their life expectancy. The new roofs ensure protection of the infrastructure and assets for many more years.

An additional $25,000 was spent on upgrades to a motor control center with the addition of secondary egress in response to insurance company recommendations and code requirements.

The sugar cooler has a fan that is powered by a 300-horsepower motor that consumes more than 2 million kWh per year. This motor was retrofitted with a variable frequency drive that is providing a more than 30% reduction in power with a return on investment of fewer than 1.9 years.

ABOVE As part of the molasses desugarization project at Michigan Sugar Company's Bay City factory, a voltage regulator upgrade took place to maximize capacity of the factory substation.

***Nick Klein** is Vice President of Operations for Michigan Sugar Company. He is a 2003 graduate of Ferris State University and joined Michigan Sugar Company in 2009. Nick serves on the Board of Directors for the American Society of Sugar Beet Technologists. He and his wife Megan have three children.*

LEFT The cargo ship BBC Song arrives via the Saginaw River in Bay City on Nov. 22, 2022. Built in 2017 and sailing under the flag of Portugal, the ship measures about 475 feet long by 76 feet wide. It traveled from China, through the Panama Canal, St. Lawrence Seaway, Lake Ontario, and Lake Huron, carrying the desugarization separators, evaporators, and pressure vessels that are being installed at Michigan Sugar Company's Bay City Factory as part of its $75+ million molasses desugarization project.

BELOW, TOP Here is a look at Michigan Sugar Company's molasses desugarization facility in Bay City on Dec. 7, 2022. The project is expected to be completed with the new facility coming online in spring 2024. **BELOW, MIDDLE** A crane lifts a section of a tank into place on Dec. 7, 2022, at Michigan Sugar Company's new molasses desugarization facility in Bay City.

ABOVE Work is well underway to construct a new 6-million-gallon extract storage tank at Michigan Sugar Company's Bay City factory. The tank will hold molasses as part of the company's new, $75+ million molasses desugarization facility.

RIGHT As part of its molasses desugarization project, Michigan Sugar Company is constructing a new molasses delivery rail system in Bay City. The system will be fully enclosed and will allow the company to receive 100% of the molasses it produces as a byproduct of sugar production.

MOLASSES DESUGARIZATION PROJECT UPDATE

A new $75+ million molasses desugarization facility has begun rising at Michigan Sugar Company's Bay City factory.

To date, more than 3,000 yards of concrete has been poured for the new building foundation, equipment pads, and ground level surfaces. In addition, nearly 700 tons of steel are being fabricated as the building starts to go vertical. A voltage regulator upgrade to maximize capacity of the substation and installation of a new cooling tower also are complete and construction of a 6-million-gallon extract storage tank and a new molasses delivery rail system also are well underway.

Pumford Construction Inc. is the general contractor for the project.

On Nov. 22, 2022, a cargo ship named the BBC Song arrived in Bay City carrying the desugarization separators, evaporators, and pressure vessels that are being installed at the new molasses desugarization facility. The equip-ment was designed in Germany by ESCON Engineering Services & Consulting GmbH and manufactured in China by Shanghai L&H Steel Equipment Co., Ltd.

Due to supply chain delays, Michigan Sugar Company now expects to have the new molasses desugarization facility up and running in spring 2024. Once operational, Michigan Sugar will have the capacity to process 100% of the molasses produced as a byproduct of the sugar extraction process. "Desugaring" all the molasses will allow Michigan Sugar to produce up to an additional 80 million pounds of pure, all-natural sugar annually without planting another acre of sugarbeets.

Currently, Michigan Sugar Company has the capacity to extract additional sugar from 60% of its molasses. Once completed, Michigan Sugar Company expects to process as much as 650 tons of molasses daily, up from the current amount of 325 tons per day.

Michigan Sugar Company's grower-owners will see added annual revenue of $10 million to $15 million, in perpetuity.

— Rob Clark

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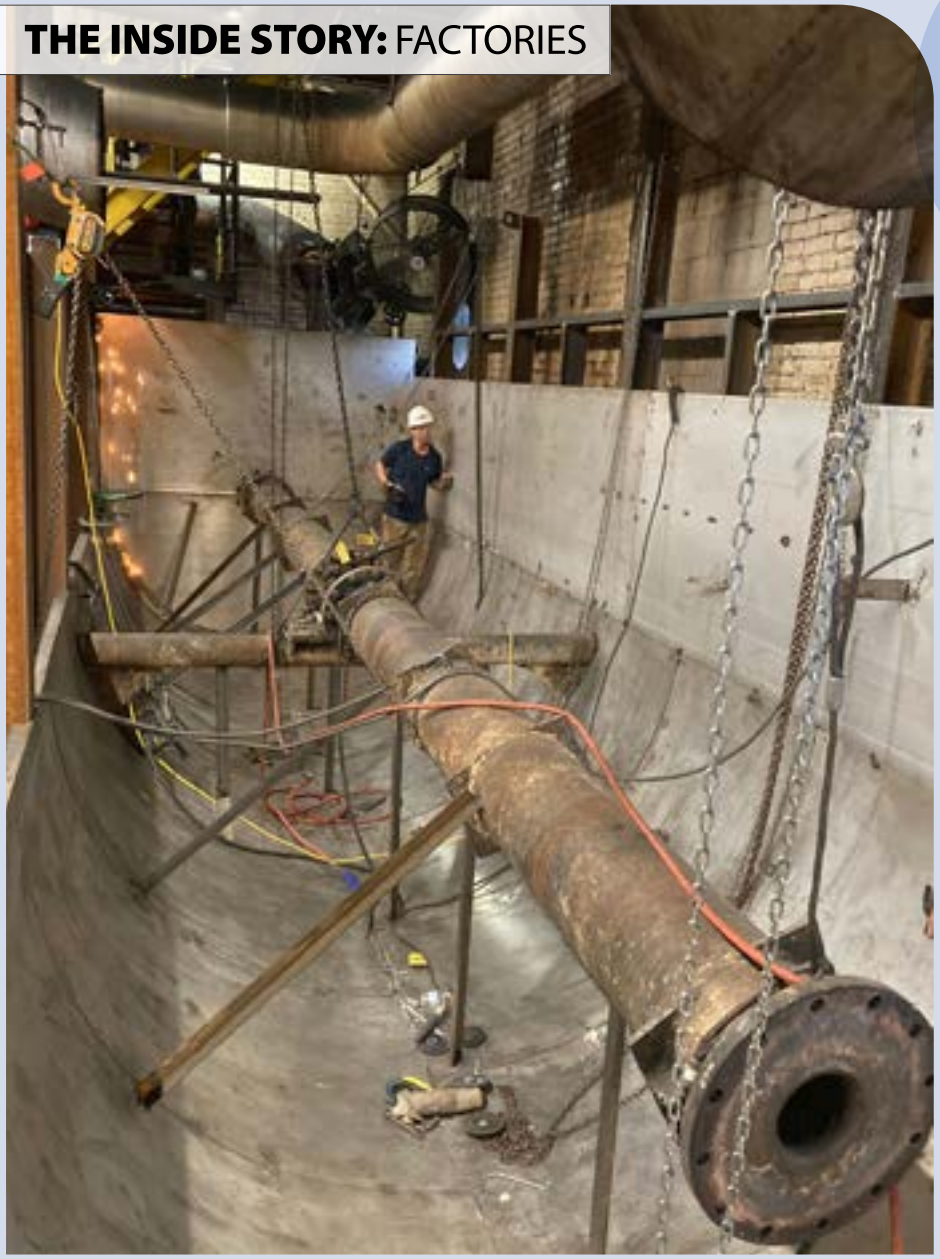


ABOVE A new bulk soda ash silo and distribution system has been installed at Michigan Sugar Company's Caro factory at a cost of $430,000.

ABOVE A $4 million project to install new juice softening equipment at Michigan Sugar's Caro factory is ongoing. Once operational, the system will improve operations, limit evaporator boil-outs, and generate soft molasses for the desugarization expansion in Bay City.

ABOVE LEFT A new white pan massecuite receiver is installed at Michigan Sugar Company's Caro factory as part of a $400,000 project.

Michigan Sugar's Caro factory was one of the first two factories to start slicing in 2022.

Shortly into campaign, a first carbonation carbon dioxide gas distribution pipe was found to have corroded inside the vessel short-circuiting gas and ultimately reducing throughput. The factory team worked quickly to shut down and replace the bad section of pipe. This team happened to include Maintenance Crew Leader Jim Kurish who had installed the original pipe 50 years prior.

During inter-campaign, more than $5.4 million was invested in new capital installations at Caro, including $400,000 to expand the white pan massecuite receiver, a bottleneck for pan boiling and centrifugal performance in the sugar end operations.

Another $430,000 was spent on the installation of a bulk soda ash silo and distribution system. This was a prerequisite for the $4 million juice softening system that is nearly complete. Combined, these systems are designed to reduce evaporator boil-out requirements during campaign and provide softened molasses for the molasses desugarization expansion at the Bay City factory.

Croswell

ABOVE Packaging and Warehouse employees at Croswell celebrated two new records set during this year's campaign — daily sugar production of 1,810,800 pounds set on Oct. 18, and weekly average sugar production of 1,618,200 pounds, set on Oct. 20.

NEW RECORDS AT CROSWELL FACTORY

During this year's sugarbeet slicing campaign, Michigan Sugar Company's team in Croswell has been rewriting the record books, establishing several new production records.

On Oct. 11, 2022, the factory sliced a record 5,839 tons of sugarbeets, besting the factory's record throughput of 5,646 tons set two days prior. That broke the previous record of 5,604 tons set in October 2019.

The factory also has broken the record for daily sugar production four times during this year's campaign with the current record of 1,810,800 pounds having been set on Oct. 18. 2022. Before this campaign, the previous record was 1,482,100 pounds set in 2019.

Also in October, the factory set another new mark — this one for Weekly Average Sugar Production. From Friday, Oct. 14, through Thursday, Oct. 20, 2022, the factory averaged 1,618,200 pounds of sugar produced per day, smashing the previous record set in November 2010 of 1,390,400.

Now, employees have their eye set on another record — that for Weekly Average Slice. The current record of 5,329 tons per day over a seven-day period was set in October 2019.

"We are looking to reset every record this campaign, but it's really about setting a new standard for slicing and sugar production in Croswell," said Croswell Factory Manager Randy Lesniak. "The vibe in the factory has been crazy this campaign for these record-breakers."

Lesniak said setting new records and new standards is all about teamwork.

"It starts with the growers delivering quality beets with high sugar content," he said. "It continues through our ag employees who bring the beets in, the factory workers who slice the beets and produce the sugar, and our packaging and warehouse employees who get the sugar in the bags and get it out to our customers." ▮

— Rob Clark

ABOVE Agriculture Department employees at Michigan Sugar Company's Croswell factory celebrate a new record for tons of beets sliced on a single day. The record of 5,839 tons was set on Oct. 11, 2022.

BELOW Croswell factory celebrate a slew of new production records set during this year's campaign including daily tons of sugarbeets sliced, daily sugar produced, and average sugar production in a week.

The Croswell factory was first in line ready to slice in 2022. Capital investments during inter-campaign totaled more than $1.5 million with a primary focus on wastewater treatment and controls infrastructure.

Assets, including a high-volume diffuser air system for pond aeration, sand filters for water filtration, and a network of pond piping was installed at an investment of about $1 million. Collectively, these are designed to improve control and treatment of the wastewater treatment system.

Another $400,000 was spent upgrading boiler No. 3's combustion controls to a more efficient electronic control system. The boiler consumes about 120,000 MMBtu per year in natural gas and had an efficiency of about 70%. With new state-of-the-art controls, the efficiency is expected to exceed 80% and provide an annual savings of more than 14,000 MMBtu.

Following catastrophic failure of the molasses storage tank, a new 2-million-gallon tank has been installed and is online.

In addition, significant improvements were made to the carbon dioxide blower system. Piping modifications from the kiln to carbonation were made and a closed loop cooling system was implemented, reducing city water usage by nearly 50 million gallons per year.

The new gas-fired lime kiln is now operating to design and the Croswell factory is slicing at intended rates following a multi-year upgrade project. ■

BELOW Following a catastrophic failure of Croswell's molasses storage tank, a new 2-million-gallon tank has been installed and is online.

Sebewaing

BELOW A $4 million project to install new juice softening equipment at Michigan Sugar's Sebewaing factory is ongoing. Once operational, the system will improve operations, limit evaporator boil-outs, and generate soft molasses for the desugarization expansion in Bay City.

ABOVE At a cost of $300,000, new Detroit stoker coal feeders were retrofitted onto this coal boiler at Michigan Sugar Company's Sebewaing factory, in conjunction with a new over fire air system. The system is designed to provide a more clean and efficient burn of coal.

Michigan Sugar's Sebewaing factory was approved for $6.8 million in capital investment this past year. Like the Caro factory, juice softening equipment is being installed at a cost of $4 million. This will provide an immediate improvement to operations, limiting evaporator boil-outs and generating soft molasses for the desugarization expansion at the Bay City factory.

Two RS68 pulp presses were retired, and a Stord 980 pulp press was revived and installed at a cost of $2 million. This project required extensive steel and conveyor work in the factory, delaying startup by a few days. The project provides increased pulp pressing capacity for the factory and is projected to result in energy savings of more than 40,000 MCF.

Another $300,000 was spent on a press water infection control system designed to combat microbial infections in press water, limiting the spread of infection into the diffusion tower.

New Detroit stoker coal feeders were retrofitted onto one of the coal boilers in conjunction with a new over fire air system at a cost of $300,000. The boiler started up at the beginning of campaign and tuning is underway to provide a more clean and efficient burn of coal. ■

To Our Employees: Thank You!

MICHIGAN SUGAR COMPANY CELEBRATES MILESTONE WORK ANNIVERSARIES

By Rob Clark, Director of Communications and Community Relations

After two years on the road, Michigan Sugar Company's annual Employee Service Awards returned to Saginaw Valley State University for a sweet celebration on Tuesday, Aug. 9, 2022, that drew hundreds of workers from across the cooperative's footprint.

The Employee Service Awards provide an opportunity to thank all employees and honor those celebrating milestone work anniversaries. In 2020 and 2021, due to the COVID-19 pandemic, the ceremonies were held outdoors in each of Michigan Sugar's factory towns — Bay City, Caro, Croswell, and Sebewaing.

This year, the company honored 94 employees celebrating five, 10, 15, 20, 25, 30, 40 and — for the first time ever — 50 years of service. That honor went to Jim Kurish, Shift Maintenance Crew Leader at Michigan Sugar's Caro factory, who planted his career with the company on Sept. 28, 1970, at the age of 18. After working one campaign as a seasonal employee, he was brought on full time in 1971.

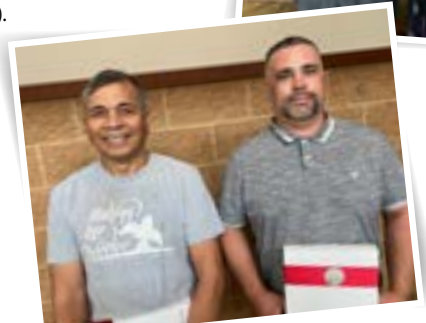
This year's ceremony, held in the Malcolm Field Performing Arts Theatre at SVSU, also featured remarks from Michigan Sugar Chief Operating Officer Jim Ruhlman, Co-op Board Chairman Jim Roggenbuck, President and CEO Mark Flegenheimer, and Keynote Speaker Beau Payne, who gave an inspirational address about his life and times.

Kurish was recognized a second time during the event, as the recipient of the 2022 Ernest Flegenheimer Award (see related story on page 34).

Here is a look at the employees recognized during the event. To them, and to all our employees, thank you for your service. ▮

ABOVE Honored for their years of service to Michigan Sugar Company are, from left, Jordan Garcia (5 years), Clinton Southwell (5 years), and Dale Urmos (10 years).

BELOW Honored for their years of service to Michigan Sugar Company on Tuesday, Aug. 9, 2022, are, from left, Christopher Terrill (5 years), Kenneth Walz (5), Andrianna Payk (5), Robert Eschenbacher (10), Glenn Martus (10), and Kevin McKee (5).



LEFT Honored for five years of service to Michigan Sugar Company on Tuesday, Aug. 9, 2022, are, from left, Jaime Aton and Gary Keith.

5 YEARS		
Kenneth Walz	Agriculture	Bay City
Andrianna Payk	Agriculture	Research
Kevin McKee	Agriculture	Caro
Christopher Terrill	Agriculture	Croswell
Jeffrey Adams	Agriculture	Sebewaing
Mark Binder	Agriculture	Sebewaing
Darrin Hartman	Agriculture	Sebewaing
Craig Krauss	Agriculture	Sebewaing
Justin Ondrajka	Agriculture	Sebewaing
Jaime Aton	Operations	Bay City
Jared Bender	Operations	Bay City
Gary Keith	Operations	Bay City
Terry Reinhardt	Operations	Bay City
James Trimble	Operations	Bay City
Jacob Coutcher	Operations	Caro
Russell Coutcher	Operations	Caro
Eric Epley	Operations	Caro
Kevin Merchant	Operations	Caro
Adam Sprague	Operations	Caro
Aaron Swayne	Operations	Caro
Matthew Bales	Operations	Croswell
Jeffery Duffy	Operations	Croswell
Scott Finkbeiner	Operations	Sebewaing
Nicholas McCreedy	Operations	Sebewaing
Jeremy Meyer	Operations	Sebewaing
William Rabun	Operations	Sebewaing
Jason Kain	P&W	Bay City
Chris Anderson	P&W	Bay City
James Cousins	P&W	Bay City
Paul Mulders	P&W	Bay City
Rachel Schatzer	P&W	Bay City
Wayne Schultz	P&W	Bay City
Shannon Watson	P&W	Bay City
Chante Welch	P&W	Bay City

LEFT Honored for five years of service to Michigan Sugar Compan, are, from left, Rachel Schatzer, Chris Anderson, James Cousins, and Chante Welch.

LEFT Joining us in celebrating their years of service are, from left, Jeffrey Beltowski (5 years), Debra Sy (5 years), Joseph Schweitzer (5 years), Andrew Botello (5 years), and William Lyman (15 years).

Jordan Garcia	P&W	Carrollton
Clinton Southwell	P&W	Carrollton
Jeffrey Beltowski	P&W	Croswell
John Hunter	P&W	Croswell
Andrew Botello	P&W	Sebewaing
Loraine Jimenez Garcia	P&W	Sebewaing
Joseph Schweitzer	P&W	Sebewaing
Debra Sy	P&W	Sebewaing
Dennis Bischer	Ag. Admin.	Corporate

10 YEARS

Glenn Martus	Agriculture	Croswell
Robert Eschenbacher	Agriculture	Caro
Jared Grim	Operations	Bay City
Donald Morgan	Operations	Bay City
Aubrey Pruitt	Operations	Bay City
Matthew Urban	Operations	Bay City
Daniel Vansumeren	Operations	Bay City
Josh Taylor	Operations	Caro
Marvin Milliken	Operations	Caro
Jason Zeleznock	Operations	Caro
Michael Bales	Operations	Croswell
Vincent Christopher	Operations	Croswell
Jeremy Fick	Operations	Croswell
Troy Adams	Operations	Sebewaing
Mitchell Keyes	Operations	Sebewaing
Thomas Osuna	P&W	Bay City
Zacharie Raymo	P&W	Bay City
Jason Hemerline	P&W	Bay City
Jordan Amthor	P&W	Bay City
Nathan Arnold	P&W	Bay City
Roger Eremia	P&W	Bay City
Dale Urmos	P&W	Bay City
Jay Hoffman	P&W	Croswell
Benny Howard	P&W	Sebewaing
Tim Furton	Sales & Mktg	Corporate

15 YEARS

Mike Alderson	Agriculture	Caro
Gary Laleman	Operations	Bay City
Francisco Xavier	Operations	Bay City
Merl Gage	Operations	Caro
Domingo Castillo	Operations	Croswell
William Deeg	Operations	Sebewaing
Trevor Gross	Operations	Sebewaing
Bryce Osterbeck	Operations	Sebewaing
Rolando Pena	P&W	Bay City
Mark Wilinski	P&W	Bay City
Steven Radeback	P&W	Bay City
William Lyman	P&W	Sebewaing

20 YEARS

Keith Rang	Operations	Bay City
Ralph Fisher	Operations	Caro
Jody Morrell	P&W	Bay City
George Painter	IT	Corporate
Don Haynes	IT	Corporate
Lee Ringel	IT	Corporate

25 YEARS

John Matthews	Operations	Sebewaing
Christine Dutcher	Accounting	Sebewaing
Julie Perry	Executive	Corporate
Cheryl Ridenour	Safety	Corporate

30 YEARS

Randy Joles	Operations	Caro

40 YEARS

Calvin Ostrander	Operations	Caro
Sherrie Towns	Purchasing	Corporate

50 YEARS

Jim Kurish	Operations	Caro

ABOVE Michigan Sugar Company President and CEO Mark Flegenheimer honors Julie Perry, Executive Assistant to the President and CEO, for her 25 years of service to the company on Tuesday, Aug. 9, 2022, during the company's annual Employee Service Awards ceremony held at Saginaw Valley State University. Perry retired from the company at the end of September and Flegenheimer plans to retire sometime in 2023.

Jim Kurish Honored with 2022 Ernest Flegenheimer

By Rob Clark, Director of Communications and Community Relations

"Extended family."

That's what Jim Kurish calls his co-workers at Michigan Sugar Company's sugarbeet processing factory in Caro. And as he celebrated his 50th year of employment with the company this past year, that family is one of the things that continues to drive him forward.

"Sometimes I feel more at home here than I do at home," said Kurish, who came to work at the Caro factory on Sept. 28, 1970, at the age of 18. "I love the people here. A lot of characters. Where else could I go for this type of entertainment and get paid for it?"

On Aug. 9, 2022, during Michigan Sugar Company's annual Employee Service Awards Ceremony, held at Saginaw Valley State University, Kurish, who now works as the Shift Maintenance Crew Leader in Caro, became the first employee in the history of the company to be honored for 50 years of service. He also was honored with the company's Ernest Flegenheimer Award, given each year to an employee for their outstanding wisdom, integrity, and character — the same qualities that Ernest Flegenheimer brought to the company as President and CEO from 1963 to 1993.

In announcing the award, Jim Ruhlman, Michigan Sugar's Chief Operating Officer called Kurish a humble, genuine man who is valued and respected.

"He's all about doing the right things in the right manner for the good of our employees and the future of our company. He never wavers from his core values, and he won't compromise his integrity for something he doesn't believe in," Ruhlman said, noting that over the years, Kurish has taken many fellow employees under his wing and passed on his knowledge.

"He loves what he does, and it shows through his commitment and service to Michigan Sugar Company and his fellow union brothers and sisters."

'I STARTED AS A CRANE HELPER'

The son of Ruth and Henry Kurish, Jim Kurish grew up on an 80-acre cash crop farm in Caro, where his family grew navy beans and wheat, as well as a little corn and hay. He was the second oldest of four children — two boys and two girls.

Jim Kurish graduated from Caro High School in 1970, put in an application at Michigan Sugar Company, and went to work in the construction industry. It wasn't long, however, until Michigan Sugar came calling.

"I started as a crane helper, switching rail cars, unloading coal to power the factory, and keeping the coal hopper filled," said Kurish. "Some of my dad's friends and some of the kids I went to high school with worked here. It was close to home, the pay was good, and it was still a seven-day workweek at the time. So, it was a pretty good job for a kid."

Kurish jumped right in and quickly caught the attention of his supervisors.

"It was a campaign job, but the bosses told me, 'Be sure you put an inter-campaign application in.' I did, and I was hired," Kurish said. "I never thought it would turn into a career, but after that first campaign, it all fell into place."

'STEADY AS CAN BE'

Kurish said after being hired full-time, his first job was working as a "sugar dumper."

"We took 100-pound bags of sugar, ripped them open, and dumped them to make liquid sugar," he said. Built in 1899, Michigan Sugar Company's Caro factory is not only one of the oldest in the world, but it also is the company's only sugarbeet processing facility where liquid sugar is made.

Over the years, Kurish would take on several other jobs at the factory, including Loader Operator and Welder. He has been in his current position for 25 years.

"He's steady as can be," said Kevin Romzek, Michigan Sugar's Factory Manager in Sebewaing who worked alongside Kurish in Caro for many years. "He's one of those guys who just understands what needs to be done. He fixes stuff that is broken, and you never knew it was broken or that he fixed it.

"He'll say, 'Ya, that pump was broken so I fixed it,'" added Romzek. "Whatever he does, you know it will be done well."

BELOW Jim Kurish is the Shift Maintenance Crew Leader at Michigan Sugar's Caro factory. He came to work at Michigan Sugar as a campaign employee in 1970 and later was hired as a full-time employee.

RIGHT Jim Kurish uses a grinder while performing a job at Michigan Sugar Company's factory in Caro.

Caro Shift Maintenance Crew Leader also recognized for 50 years of service to Michigan Sugar Company

Award

ABOVE Jim Kurish, left, is honored by Mark Flegenheimer, Michigan Sugar Company President and CEO, for 50 years of service during the company's annual Employee Service Awards ceremony held Tuesday, Aug. 9, 2022, at Saginaw Valley State University. It was the first time in the company's history an employee was honored for five decades of service.

ABOVE The hands of Jim Kurish, Shift Maintenance Crew Leader at Michigan Sugar's Caro factory.

'JUST ASK JIM'

Kurish also is known as the factory historian. If you need to know when something happened or when a piece of equipment was installed or fixed, there is a common answer given by Kurish's co-workers: "Just ask Jim."

And over five decades, Kurish has seen plenty of changes at the Caro factory, big and small. You might be surprised by his answer when asked about the biggest change he has seen.

"The lighting," he says matter-of-factly. "It seems like a simple thing, but this place used to be pretty dim. The lighting inside has made a huge difference."

Of course, there also have been major factory upgrades, including the construction of the vertical silo, conversion of the coal-powered boiler to clean burning natural gas, and installation of the new No. 1 pulp press, which Kurish remembers fondly.

"I was part of Pat Wilson's crew," said Kurish. "We knocked out concrete floors and put in new structural steel. That was a good project."

'TOO MUCH FUN'

As he celebrated 50 years of service to Michigan Sugar this past year, there was one question on everyone's mind: when are you going to retire, Jim?

"I have no plans to retire," he said. "Sometimes I think maybe it's time to push the pin, but I don't have a whole lot else going on. Actually, it's kind of scary thinking about retiring. It would certainly be a change."

Kurish does have two adult sons — Chris, a graduate of Saginaw Valley State University who now lives in Livonia and works as a Michigan State Police trooper, and Nick, also an SVSU grad who now lives in Clio and works as a corrections officer.

He also has a few hobbies, including a small collection of vintage tractors and bulldozers he likes to work on.

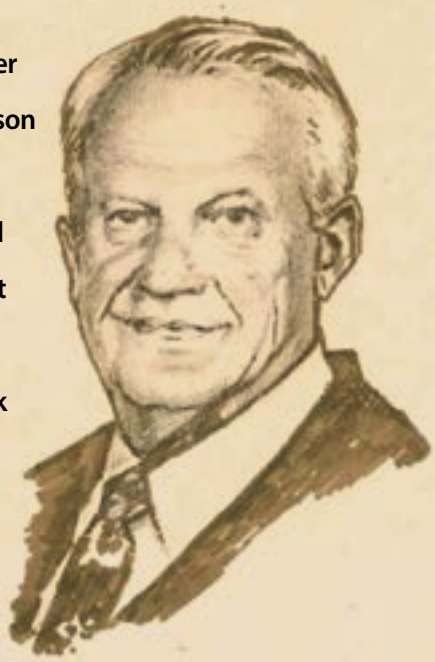
"Really, I just like to work and be at home," he said before pausing for a moment in the shop where he works inside the Caro factory.

"I just like coming to work," he reiterated. "You know, it doesn't feel like 50 years because I've been having too much fun."

Ernest Flegenheimer Award Winners 2006-2022

The following employees have received the prestigious Ernest Flegenheimer Award in recognition of their wisdom, integrity, and character while serving Michigan Sugar Company:

2006 – John Wyett
2007 – Jim Martin
2008 – Chris Dunham
2009 – Robert Arnold
2010 – Keith Kalso
2011 – Carol Kunitzer
2012 – Julie Perry
2013 – Eugene Stewart
2014 – Rick List
2015 – George Painter
2016 – Gerald Sorenson
2017 – Ann Kovacs
2018 – Tanya Richard
2019 – Tricia DeGroat
2020 – Pat Terrill
2021 – Kevin Romzek
2022 – Jim Kurish



VOICES FROM THE PAST

By Rob Clark, Director of Communications and Community Relations

Names of former Michigan Sugar employees etched in the bricks of oldest sugarbeet processing factory in the U.S.

It is widely known that Michigan Sugar Company's factory in Caro is the oldest sugarbeet processing facility in the United States and among the oldest in the world. Built in 1899 by the Peninsular Sugar Refining Co., the factory also is the only sugarbeet processing site in Michigan Sugar's lineup that produces liquid sugar.

But there's something else special about this place.

In the pulp drying and pressing area of the factory, formerly used to house a pellet mill, the walls are alive with the names of past employees.

You see, there once was a tradition at the factory for employees to etch their names into the bricks, along with the year of the sugarbeet slicing campaign in which they were working. Time, and in some cases paint, have taken their toll on the names, many of which are difficult to decipher. But in some cases, the names and dates are well preserved.

It is certainly interesting, especially if you love history, to stand in this room and check out the wall. After a while, you feel like you're on a bit of a scavenger hunt, looking for the oldest dates possible and trying to make out the names. You begin to feel like these voices from the past are talking to you.

As you search and investigate, you can't help but wonder what life was like in 1925 when Clifford Tallman carved his name into a brick; or in 1938 when Harold DeSmyter marked his time at Michigan Sugar; or in 1945 when Walter Galbenski inscribed his name.

Who were these people?

Where were they from?

What was their story?

In the case of one brick, we were lucky enough to learn one of these stories and its connection to the present.

It's a brick with the name Floyd Taylor that dates to 1911-1912. Floyd Taylor was the great-grandfather of current Caro Factory Manager Josh Taylor and among the first in the family to work for Michigan Sugar.

Floyd Taylor

Josh said he believes his great-grandfather worked at the Caro factory as a teenager, maybe age 16 or 17 years old, and and later worked at Michigan Sugar's former factory in Carrollton. Floyd Taylor was from the Juniata Township/ Caro area and married a woman named Mildred. He died in 1921 at the age of 27.

"It's crazy those names are carved into the factory wall, some of them well over 100 years ago, and most people that I show or tell don't even know they are there," said Josh Taylor. "I worked here for more than two years before I was aware of their existence, then I was extremely shocked to see 'Floyd Taylor' carved into the blocks."

Josh Taylor's other great-grandfather, Fred Kothe, also worked for Michigan Sugar, as a Machinist in Sebewaing. Josh's father Rob Taylor is a Machinist in Bay City, and his brother Luke Taylor is a Welder in Sebewaing. Additionally, Josh's wife Elizabeth Taylor is the Ag Relations and Communications Manager, his nephew Gavin Taylor is the White Centrifugal Operator in Sebewaing, and his brother-in-law Kyle Mowry is the West District Ag Operations Supervisor.

"Seeing those bricks and the names of my great-grandfather and all the others makes me think of the extreme hardships they would have endured at that time, hardships we take for granted due to modern technologies," said Josh Taylor. "I have a feeling of pride and sentiment; pride in the fact that after more than 120 years of operation, the same factory where my great-grandfather worked is still operational and providing opportunities in and around our community; sentiment in that I hope my son or daughter will want to work for Michigan Sugar Company, a company that has given me and many others in my family an opportunity to provide for our families and grow within the company."

ABOVE It once was a tradition for employees at Michigan Sugar Company's Caro factory to etch their names, along with the year of the sugarbeet slicing campaign in which they were working, into the bricks that made up the factory walls. Many of these bricks are well preserved in the pulp drying and pressing area of the factory, formerly used to house a pellet mill.

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One of a Kind

By Rob Clark, Director of Communications and Community Relations

At 87 years old, Melvin Bischer has pretty much retired from running the farm he started in 1959 and managed alongside his wife of 62 years Janet.

Although he's no longer harvesting crops, spreading manure, or driving beet truck, he does keep tabs on the operation now being run by the second and third generations of his family. If you hop in a pick-up with him, he'll happily show you the farm's impressive livestock operation, located on Purdy Road in Ruth, and around the countryside of Huron and Sanilac counties where the family grows sugarbeets, corn, wheat, and black beans.

Along the way, he'll tell you, candidly, what he thinks about things while sprinkling in a healthy mixture of humor and humility. Ask him what he loves about farming, and he'll point to Janet and say, "I like the nice chick that's here." Ask him about baseball and he'll tell you about his favorite Tigers player of all time — Mark "The Bird" Fidrych — and how he used to take his hand and fluff the mound down while pitching.

"He was different," Bischer says, implying that what made The Bird unique is what made him great.

Bischer doesn't have a lot to say about the past: he has no idea when the pictures of him that hang in the basement of the farm office were taken or why someone would want a photo of the Outstanding Young Farmer award he received in 1970 from the Harbor Beach Jaycees. He is, however, very interested in the present and the future.

"Stop here," he says while driving past a field of sugarbeets being harvested by his crew. "I'm trying to learn something." Then, he watches, quietly, while a manure spreader he converted into a beet cart unloads sugarbeets on the side of the field. "Have you ever seen anything like that?" he asks before answering his own question: "You've never seen anything like that."

Sure, age and recent bout with vertigo have slowed him down, but Bischer remains fiercely independent.

"Don't touch me," he utters time and time again when offered a hand getting out of a vehicle, descending stairs, or walking through a field of sugarbeets. "If I fall, just let me fall."

After a while, you realize that Melvin Bischer is one of a kind. He's friendly, but not an open book. He's opinionated, but not a know-it-all. He has clearly worked hard to build a legacy and pass down his treasures, but he remains steadfastly humble.

Ask him what he hopes the future holds for his farm and his answer is short and sweet.

"That it's still here," he says.

Here are a few other tidbits from an afternoon spent at Bischer Farms.

A Q&A WITH MICHIGAN SUGAR COMPANY GROWER-OWNER MELVIN BISCHER

Michigan Sugar Company (MSC): Tell us about your upbringing.

Melvin: *My dad was Art, and my mom was Mildred. I was the oldest of 12 kids. I had six sisters and five brothers.*

MSC: Where were you born and where did you go to school?

Melvin: *I was born in Harbor Beach. I went to a one-room schoolhouse just up the road in Ruth and I graduated in 1953 from St. Peter and Paul Catholic School.*

MSC: You're wearing a U.S. Army cap. Did you serve?

Melvin: *Yes. I served in the Army from 1955 to 1956. If I'd have gone in a little earlier, I would have been considered a Korean War veteran, but I was in during a couple of the very peaceful years.*

MSC: Where did you do basic training, and did you ever get shipped overseas?

Melvin: *Basic training was at Fort Knox. I was in the same barracks when I went out as when I went in. They moved me around the base a little bit. I was also at Camp Perry in Ohio for national rifle matches for about two months. That was just a few miles from Cedar Point, which was nothing like it is today. My overseas duty was the Ohio River. I didn't go anyplace.*

Janet: *He had tough duty … beautiful horses and fast women.*

Melvin: *Most of that is just her imagination.*

Janet: *That's what you told me.*

MSC: When did you and Janet get married?

Melvin: *Nov. 19, 1960, at 10 a.m. in Harbor Beach at Our Lady of Lake Huron Church. I think I married up more than she did, but we get along pretty good.*

MSC: What do you and Janet like to do for fun these days?

Melvin: *Do you know how to play cribbage? We like to play cribbage. On a typical day, we play six games.*

MSC: Who's better at cribbage?

Melvin: *Well, I think I am, and she thinks she is.*

MSC: Has your livestock operation always been part of the farm?

Melvin: *As soon as we came home from our honeymoon, we started into* cattle, *and we've been there ever since.*

MSC: Where did you honeymoon?

Melvin: *Quebec, Canada.*

MSC: What took your there?

Melvin: *We'd never been there.*

MSC: What was the first piece of farm equipment you purchased?

Melvin: *Probably a manure spreader.*

MSC: When did you start growing sugarbeets?

Melvin: *Probably three years after we got married — 1963.*

MSC: How did you get into growing sugarbeets?

Melvin: *Chet Leppek and Harold Schott came by and says that you got some really good land here and blah blah blah … you should be growing some sugarbeets. So, we grew 40 acres the first year and our neighbors all said we had way too many for the first time, first year. I don't know if we proved them wrong or not.*

ABOVE Melvin Bischer holds up a sugarbeet in this undated photo. Asked the secret to growing quality sugarbeets, Bischer says, "Good soils, manure, and early planting and late harvest."

ABOVE TOP Melvin and Janet Bischer hold hands while checking out a sugarbeet field at their farm near Ruth on Nov. 14, 2022. Melvin and Janet have been married 62 years. **ABOVE BOTTOM** Melvin and Janet Bischer hold a sugarbeet at Bischer Farms in this undated photo. Bischer Farms was established in 1959, Aside from raising cattle, the Bischers grow sugarbeets, corn, wheat, and black beans.

ABOVE Michigan Sugar Company grower-owner Melvin Bischer holds up a sugarbeet in a field near Ruth, Michigan, on Nov. 14, 2022. Bischer said he started growing sugarbeets in 1963.

MSC: What is the recipe for growing quality sugarbeets?

Melvin: *Good soils, manure, and early planting and late harvest.*

MSC: Do you still get involved in harvest?

Melvin: *I'd just get run over out there. This is the first time in 60 years I haven't driven beet truck.*

MSC: What do you love most about the harvest time of year?

Melvin: *It's busy. As my daughter Pauline says, "It's just absolutely amazing how it all falls together."*

MSC: You mention a daughter, tell us about the family you and Janet raised.

Melvin: *We have two daughters — Pauline Geiger and Nancy Macchiarella. Pauline lives in Ruth with her husband Brad. They both work on the farm. They have four children — Nicole Slepica, Jaclyn Cook, Stephanie Kozfkay, and Grant Geiger. Stephanie is also running the farm and Grant is a student at Michigan State University who helps run the farm. Nancy is an OBGYN in New York.*

MSC: Do you have any grandchildren?

Melvin: *7 grandchildren.*

MSC: How about great-grandchildren?

Melvin: *Spike and Ace!*

Janet: *Jack and Henry.*

MSC: What would you tell your grandson, Grant, about what it takes to run a successful farm?

Melvin: *Spend more time on the farm and less time with the girlfriend. You'd have to see her to understand why it might not happen.*

MSC: What do you see for the future of the Michigan Sugar cooperative?

Melvin: *I think we'll see fewer growers. I think we have a few too many acres at 160,000 where we're at. I think they need to get that down to 130,000. I think you'll see sugarbeets yielding better and there will be fewer grower-owners.*

MSC: What is the secret to a long, happy life?

Melvin: *I don't know. I was born in 1935 and I lived through the second world war. I drive a car that was made by the Japanese, and it bugs me a little bit, but I really like the Subaru.* ■

Rob Clark *is Director of Communications and Community Relations for Michigan Sugar Company. He is a 1995 graduate of Knox College and worked for 22 years as a journalist before joining Michigan Sugar Company in 2018. He and his wife Claire have four sons and live in Bay City.*

MAKE IT REIGN *To learn more about the Michigan Sugar Queen Scholarship Program and to apply, go to www.michigansugar.com. Once there, click on the "Community" tab and then the "Sugar Queen" tab.*

Brianna Kubik of Reese Crowned 2022 Michigan Sugar Queen

BROOKE PAGEL OF BIRCH RUN, ADRIANA IVEZAJ OF MACOMB CROWNED QUEEN'S COURT ATTENDANTS

By Rob Clark, Director of Communications and Community Relations

Brianna Kubik of Reese was crowned the 2022 Michigan Sugar Queen during a ceremony held Friday, June 17, at Sebewaing Village Park during the village's annual Michigan Sugar Festival.

Kubik, 20, is a graduate of Akron-Fairgrove High School and attends Delta College where she is enrolled in the dental hygiene program with hopes of one day working in that profession. She is the daughter of Fred and Amanda Kubik.

"Once again, Michigan Sugar Company is fortunate to have found a young woman who we know will be an excellent representative and ambassador for our company," said Rob Clark, Director of Communications and Community Relations for Michigan Sugar. "Her knowledge of our company and agriculture in general, along with the quality of her character, shined through during the selection process. We are looking forward to a great year with Brianna as the Michigan Sugar Queen."

Also crowned during the June 17 ceremony were two Queen's Court Attendants — Brooke Pagel of Birch Run and Adriana Ivezaj of Macomb. They, too, are serving as ambassadors for Michigan Sugar Company for the next year.

Pagel, 19, is a graduate of Birch Run High School and attends Delta College where she is studying psychology. She is the daughter of Larry and Tracy Pagel.

Ivezaj, 20, is a graduate of Henry Ford II High School and attends Oakland University where she is studying communications. She is the daughter of Marko and Maria Ivezaj.

The new Queen and Court Attendants jumped right into their year of service appearing Saturday, June 18, in the Michigan Sugar Festival Grand Parade in Sebewaing. They were joined by members of the 2021 Michigan Sugar Queen's Court – Queen Ally Kemp of Unionville and Attendants Kenna Karst of Frankenmuth and Raven Wieland of Pinconning.

Following the parade, the newly crowned Michigan Sugar Queen and Attendants were in Village Park greeting festival goers, passing out 2-pound bags of Pioneer Sugar, posing for photos, and helping members of our Co-op Board and Central District Board serve up cotton candy.

So far during their reign, the trio also has represented the company at the annual Mackinac Island Fudge Festival, Pirates & Princesses Night at Dow Diamond during a Great Lakes Loons Game, Montrose Blueberry Festival, Cheeseburger in Caseville Parade of Tropical Fools, Michigan Bean Festival in Fairgrove, Munger Potato Festival, and Tuscola County Pumpkin Festival in Caro, among other events.

"Being crowned Michigan Sugar Queen is truly an honor," said Kubik, who also served as the 2021 Munger Potato Festival Queen. "I am so excited to not only represent Michigan Sugar Company but be able to be a part of this amazing experience.

"I am looking forward to spreading information to different people around Michigan about the cooperative, why it is such a great company, and how it is grower-owned."

This year, Michigan Sugar Company received 10 applications through its Michigan Sugar Queen Scholarship Program.

"As always, the competition to earn a spot on our Queen's Court was tough," said Clark, who oversees the Michigan Sugar Queen Scholarship Program. "Brianna, Brooke, and Adriana have represented us well and our grower-owners and employees should be very proud of their efforts. I am looking forward to the rest of our year together as we continue to travel the state to tell our story."

Through the Michigan Sugar Queen Scholarship Program, a Queen and two Attendants are chosen to serve for one year as ambassadors for Michigan Sugar Company. Their duties include public appearances, community service projects, interaction with lawmakers and agriculture leaders, and helping to represent Michigan Sugar Company throughout the state.

After completing the requirements of the program, the Queen receives a $2,000 scholarship and each attendant a $1,000 scholarship to be used to help pay for college.

LEFT Michigan Sugar Queen Brianna Kubik, center, and Queen's Court Attendants Adriana Ivezaj, left, and Brooke Pagel, are pictured on the carousel shortly after being crowned during a ceremony held Friday, June 17, 2022, at the annual Michigan Sugar Festival in Sebewaing.

Did You Know?

Bertha Binder, pictured at right, was selected as the very first Michigan Sugar Queen from six candidates who attended the 1933 Tuscola County Fair in Caro. She was the daughter of Mr. and Mrs. Frank Binder of Sebewaing. Frank was a boiler tender at Michigan Sugar Company's Sebewaing factory for many years, according to an article published in 2003 in the "Sebewaing 150" history book. Bertha appeared in a parade that year riding on a float inside a giant sugarbeet. Her crown was tall and hat-like and included a giant "S" on the front, presumably standing for "Sugar." The local history books don't speak of another Michigan Sugar Queen being crowned until 1965 when Mary Ann Hornbacher of Sebewaing became the first modern-day Sugar Queen. Here is a look back at all the young ladies who have represented Michigan Sugar Company throughout the years as the Michigan Sugar Queen:

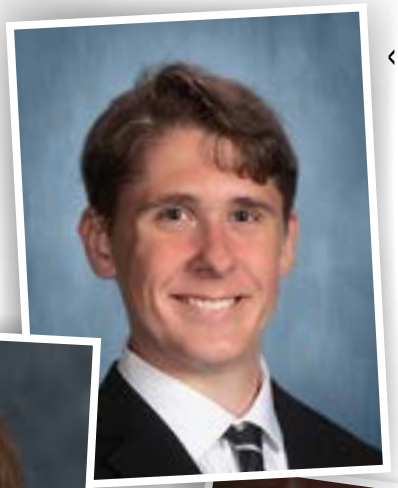
1965 – Mary Ann Hornbacher, Sebewaing
1966 – Judy Dressler, Sebewaing
1967 – Connie Kundinger, Sebewaing
1968 – Becky Good, Gagetown
1969 – Karen Krauss, Sebewaing
1970 – Karen Gremel, Sebewaing
1971 – Renee Roller, Unionville
1972 – Laura Shelter, Pigeon
1973 – Debbie Richmond, Pigeon
1974 – Janet Gettel, Sebewaing
1975 – Connie Tamblyn, Elkton
1976 – Kathy Gremel, Sebewaing
1977 – Sharon Rase, Essexville
1978 – Betsy Heinman, Sebewaing
1979 – Wanda Rase, Sebewaing
1980 – Lori Rase, Sebewaing
1981 – Deadra Lynn Ballard, Fairgrove
1982 – Jill Leipprandt, Pigeon
1983 – Deann Balash, Bay City
1984 – Debbie Smith, Caro
1985 – Bernadette Voelker, Owendale
1986 – Angela Heckroth, Unionville
1987 – Barb Merchant, Cass City
1988 – Shelly Sieman, Harbor Beach
1989 – Kelly Williams, Sebewaing
1990 – Amy Horst, Sebewaing
1991 – Vickie Holland, Unionville
1992 – Kristy Adam, Unknown
1993 – Janna Kundinger, Sebewaing
1994 – Nicole Longhini, Chesaning
1995 – Rhonda Garza, Sebewaing
1996 – Leslie Siefka, St. Louis
1997 – Sarah Zagata, Sebewaing
1998 – Julie Tolles, Pinconning
1999 – Angela Roestel, Pigeon
2000 – Kerri Dyhse, Harbor Beach
2001 – Amanda Trischler, Unionville
2002 – Jelanie Schnettler, Munger
2003 – Jackie Puvalowski, Ruth
2004 – Brittney Maurer, Harbor Beach
2005 – Stephanie Gremel, Bay Port
2006 – Erica Hoffman, Lennon
2007 – Samantha Bishop, Kenockee
2008 – Rebecca Doerr, Cass City
2009 – Elizabeth Krhvosky, Corunna
2010 – Dana Davidson, Fairgrove
2011 – Kelsey Prohaska, Standish
2012 – Taylor Janicek, Corunna
2013 – Victoria Hudgins, Lapeer
2014 – Isabella Krolikowski, Midland
2015 – Riley Smith, St. Louis
2016 – McKenzie Reinhardt, Sebewaing
2017 – Kayla Ratajczak, Munger
2018 – Paige Lupcke, Saginaw
2019 – Channon Turrell, Imlay City
2020 – Shaelynn Lavrack, Montrose
2021 – Ally Kemp, Unionville
2022 – Brianna Kubik, Reese

LEARN MORE *You can learn more about all of Michigan Sugar Company's scholarships online at www.michigansugar.com/community/scholarships/*

Students Awarded Annual Scholarships

ALBERT FLEGENHEIMER MEMORIAL SCHOLARSHIP & CENTRAL DISTRICT SCHOLARSHIP

Alexander Smith of Bay Port is the recipient of the 2022 Albert Flegenheimer Memorial Scholarship. He also is the recipient of the Central District Scholarship. Alexander graduated from Laker High School in 2022 and is pursuing a degree in crop and soil sciences at Michigan State University. After graduation, he plans to return to his family's farm with hopes of incorporating more environmentally sustainable, yet still profitable, practices and technologies to the operation. Alexander is the son of Jeffrey and Sandi Smith.



‹ Alexander Smith

NEXT GENERATION SCHOLARSHIP

Olivia Volmering of Harbor Beach is the recipient of the 2022 Next Generation Scholarship. Olivia graduated from Harbor Beach High School in 2022 and is pursuing a degree in occupational therapy at Saginaw Valley State University. She hopes to one day work for a local school district helping students with cognitive, physical, and developmental disabilities. Olivia is the daughter of Doug and Sarah Volmering.

Olivia Volmering ›

Amalia Towns ›

MICHIGAN SUGAR EMPLOYEE SCHOLARSHIP

Amalia Towns of Saginaw Township is the recipient of the 2022 Michigan Sugar Company Employee Scholarship administered through the Saginaw Community Foundation. She is the daughter of Marvin Towns and Karen Towns and the stepdaughter of Michigan Sugar Company employee Sherrie Towns. Amalia graduated from Nouvel Catholic Central High School in Saginaw Township in 2020 and is pursuing a degree in welding engineering and technology at Ferris State University. She hopes to one day apply her knowledge in her chosen field working for a company that will continue to challenge her.

Mason Weburg ›

LOREN HUMM MEMORIAL SUGAR BEET GROWER'S SCHOLARSHIP

Mason Weburg of Breckenridge is the recipient of the 2022 Loren Humm Memorial Sugar Beet Grower's Scholarship, administered through the Gratiot County Community Foundation. He is a 2022 graduate of Ithaca Junior/Senior High School and is pursuing a degree in agricultural technologies at Delta College with plans to complete his degree at Michigan State University. After graduation, he hopes to return to his family's farm. Mason is the son of James and Alisha Weburg.

RIGHT In July, about 60 Michigan Sugar Company Youth Sugarbeet Project participants gathered for Field Day at the Saginaw Valley Research and Extension Center in Frankenmuth to learn about sugarbeets, ATV safety, and Michigan agriculture. During the event, participants also were able to interact with industry professionals to gain valuable test taking and interviewing skills. *Photo by Rick Moreau | Moreau Visuals*

Youth Sugarbeet Project Records Another Successful Year

NEARLY 60 STUDENTS TOOK PART IN PROGRAM THAT INCLUDED TRIP TO TIGERS GAME, FIELD DAY, AND AWARDS BANQUET

By Jessica Carter, Caro Office Manager

Nearly 60 students from Michigan Sugar Company's three growing districts enrolled in the 2022 Youth Sugarbeet Project. Of that total, 86% of the participants had been in the program for at least one year while the other 14% were new. The program is designed for students in third grade through high school.

The year was highlighted by several fun and educational activities.

On June 15, the group boarded busses in Bay City, Blumfield Township, Sebewaing, and Sandusky and headed to Comerica Park to watch a Detroit Tigers game. A traditional ballpark meal of hot dogs and hamburgers was served on the Vizzy Deck before the game started and at first pitch the group was in their seats. Everyone enjoyed the day, despite the temperature spiking at more than 100 degrees.

In early July, participants gathered at the Saginaw Valley Research and Extension Center in Frankenmuth for Field Day, an annual event during which students visit educational stations and take a sugarbeet field tour in the morning and complete testing and interviews with Michigan Sugar ag staff in the afternoon. This year's event featured five education stations:

- "Nutrient Mobility" led by Michigan Sugar Company Director of Research and Agronomy Corey Guza.
- "Sugarbeet Disease" led by Linda Hanson, Ph.D., a Research Plant Pathologist for the United States Department of Agriculture and Adjunct Professor at Michigan State University.
- "ATV Safety" led by Michigan Department of Natural Resources Conservation Officer Adam Beuthin.
- "Kids in the Kitchen" led by Michigan Sugar Company Ag Relations and Communications Manager Elizabeth Taylor.
- "Michigan Agriculture Overview" led by Michael Ceja, Michigan Ag Council Ambassador.

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ABOVE Michigan Sugar Company Field Consultant Kevin Messing digs up some sugarbeets during the 2022 Field Day event for Youth Sugarbeet Project participants to examine and taste. Each summer, dozens of students get to take a tractor ride to a field to get hands-on experience with sugarbeets. *Photo by Rick Moreau | Moreau Visuals*

Following Field Day, participants were required to submit an age-appropriate report and a "Participant's Project" focused on one of four options:

1. Grow your own sugarbeets and document what you learn.
2. Complete a scavenger hunt aimed at educating participants about the cooperative.
3. Enter sugarbeets in your local county fair.
4. Design and enter a poster about Michigan Sugar Company in your local county fair.

Based on participation, test result, interviews, and project outcome, students were scored and competed by grade level for the Premier Award, the program's highest honor, and the High Honors Award, given to the top 20% in each grade and district. Winners were announced at the annual Youth Sugarbeet Project Awards Banquet held Aug. 25 at the Brentwood Restaurant in Caro. During the event, Michigan Sugar Company Chief Operating Officer Jim Ruhlman spoke to the kids about staying true to themselves as they looked to start a new school year. A pizza dinner was served and gifts of hammocks and water bottles with the Michigan Sugar Company logo were given to all participants. After awards were handed out, all those in attendance were invited to bowl.

Youth Sugarbeet Project officials thanked all the parents and participants who volunteered their time to help coordinate events, as well as the 2022 sponsors ACH Seeds, Betaseed, Hilleshög, and Seedex. To learn more about the Youth Sugarbeet Project or to register for next year's program by May 1, go to www.michigansugar.com and click on the "Community" tab followed by the "Youth Sugarbeet Project" tab.

RIGHT A few lucky Youth Sugarbeet Project participants got up close and personal with one of the Detroit Tigers players during the annual field trip to Comerica Park.

ABOVE Michigan Sugar Company's Youth Sugarbeet Project Premier and High Honors award winners are, from left, Back Row: Eli Maurer, Audra Maurer, Grant Guza, Abi Guza, John Guza, and Rose Spero. Front Row: Bethany Bignall, Kinsley Lupcke, Ivy Winslow, and Henry Haag. *Photo by Rick Moreau | Moreau Visuals*

RIGHT Michigan Sugar Company Youth Sugarbeet Project participants attended the annual Awards Banquet at the Brentwood Restaurant in Caro. After dinner and the awards ceremony, the participants got to enjoy a few games of bowling. *Photo by Rick Moreau | Moreau Visuals*









Michigan Sugar Company's Youth Sugarbeet Project Premier and High Honors award winners are **ABOVE, LEFT COLUMN, TOP TO BOTTOM** Anna Wendland, Caroline Hudeck, Daniel Hudeck, Emma Guza; **RIGHT COLUMN, TOP TO BOTTOM** Kinzlee Karst, Kurtis Wendland, Liam Maurer, Nash Lupcke, Nathan Hecht and Eva Hecht

Jessica Carter *is the Caro Office Manager for Michigan Sugar Company. She earned her bachelor's degree from Lake Superior State University in Sault Ste. Marie and joined the company in 2019. She lives in Munger with her husband and son.*

A Q&A with Kinzlee Karst

Kinzlee Karst is a prime example of a Youth Sugarbeet Project participant who started with the program at a young age and has continued as a high school student.

The daughter of Jeff and Sheri Karst, Kinzlee is a junior at Frankenmuth High School where she is taking both AP and dual enrollment classes. She grew up on her family farm in Frankenmuth with two siblings and two dogs. Her family grows sugarbeets, soybeans, wheat, and corn. In her free time, she enjoys playing and coaching soccer.

Here is what Kinzlee had to say about her time in the Youth Sugarbeet Project:

Q: How many years have you been in Youth Sugarbeet Project?

A: I've been in the program since I was 9 years old, so about eight years.

Q: What is your favorite memory from the program?

A: When my friends and I made apple nachos during Field Day and the photographer convinced us to include pickles in our concoction.

Q: What is the most important piece of information you've learned from the program?

A: Safety precautions when operating machinery.

Q: What has been your favorite Youth Sugarbeet Project Field Trip?

A: Cedar Point because I got to spend quality time with my dad.

Q: Why should someone get involved in the Youth Sugarbeet Project?

A: Because you learn about the different occupations in the sugar industry that could be useful later in life.

Q: What are you most looking forward to during next year's program?

A: Seeing what delicious treat we will make in the Kids in the Kitchen session during Field Day.

— Jessica Carter

Inaugural Sugar Day

ABOVE Michigan Sugar Company employees, from left, Mackenzie Annear, Madeline Hardy, Karyn Niemi, and Tricia DeGroat take a National Real Sugar Day selfie on Oct. 14, 2022, at Michigan Sugar's Corporate Headquarters in Bay City.

LEFT Michigan Sugar Company employees, from left, Chris Dutcher, Cassie Sneller, Jeff Elston, Ron Bentley, and Joe Garcia take a National Real Sugar Day selfie on Oct. 14, 2022, at Michigan Sugar's Sebewaing factory.

National Real a Sweet Success

MICHIGAN SUGAR CELEBRATED OCT. 14 WITH A SUGAR DONATION, BAKING COMPETITION, AND PLENTY OF OTHER ACTIVITIES

By Rob Clark, Director of Communications and Community Relations

On Oct. 14, 2022, the U.S. sugar industry joined forces to celebrate the first-ever National Real Sugar Day.

The idea behind the day was sparked by Rob Clark, Director of Communications and Community Relations at Michigan Sugar Company, during a meeting of The Sugar Association's Communications Committee. The Sugar Association, founded in 1943, is the scientific voice of the U.S. sugar industry. Its members include nearly 142,000 growers, processors, and refiners of sugarbeet and sugar cane plants.

The Sugar Association applied to establish the day through the well-known National Day Calendar and the application was among a handful to be approved in 2022. Approval sets Oct. 14 each year as National Real Sugar Day.

"As the gold standard for sweetness, real sugar has helped us celebrate life's sweet memories generation after generation. We felt it was time we celebrate sugar and its story — of the plants, the people, the process and, of course, the product," said Courtney Gaine, President and CEO of The Sugar Association. "Real sugar has always been a favorite ingredient, but it is so much more than that. Real sugar, which comes from sugarbeets and sugar cane plants, provides many functions beyond sweetness. We hope National Real Sugar Day spotlights real sugar's natural origins and brings greater awareness to the many roles sugar plays in the food supply."

In the lead up to the inaugural celebration, officials from sugar companies across the country worked with team members from The Sugar Association to plan a handful of activities aimed not only at promoting the use of real sugar but educating the public about where sugar comes from and how it gets to their kitchen tables.

A highlight of the day was a series of 10 live broadcasts on The Sugar Association's Facebook page that took viewers into the farm fields of sugarbeet and sugar cane growers from coast to coast. Michigan Sugar Company's live interview took place at Maple Grove Acres in Ruth, a farm owned and operated by Jake and Nichole Maurer. Clark interviewed Jake Maurer as Maurer harvested a field of sugarbeets in Sanilac County.

ABOVE Linda Schmidt of Kawkawlin pours a cup of white granulated Pioneer Sugar into a saucepan while preparing her "My Husband's Favorite German Chocolate Cake" during the National Real Sugar Day Sweet Treats Bake-off held Oct. 14, 2022, at The Maytag Store in Saginaw. Schmidt was one of eight local, amateur bakers to participate in the contest, hosted by Michigan Sugar Company, WSGW, and The Maytag Store.

The Sugar Association also coordinated a photo baking contest on Instagram that drew more than 1,000 entries; distributed a variety of SWAG — T-shirts, sweatshirts, oven mitts, aprons, hats, etc. — to companies; created "selfie stations" that made their way to many sugar factories across the country; and created a Spotify playlist to celebrate the sweetest songs ever written. You can find the playlist at https://spoti.fi/3DloCYF.

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ABOVE Lisa Helmreich of Freeland, with her 'Ol Fashion Caramel Apple Nut Pie, won first place at the National Real Sugar Day Sweet Treats Bake-off.

ABOVE Caressa Trice of Saginaw, with her Decadent Red Velvet Cheesecake, took second place at the National Real Sugar Day Sweet Treats Bake-off.

ABOVE Joan Gerhardt of Saginaw, with her Chocolate Pecan Pie with Kahlua, finished in third place at the National Real Sugar Day Sweet Treats Bake-off.

ABOVE Hidden Harvest Recipient Agency & Warehouse Coordinator Curt Hecht unloads a pallet of sugar on Oct. 13, 2022, at the organization's headquarters in Saginaw. The sugar was donated by Michigan Sugar Company and transported to Hidden Harvest by Countryside Transportation Service as part of Michigan Sugar's National Real Sugar Day festivities. The donation was made the day before the inaugural celebration on Oct. 14.

Individual companies also conducted their own activities as part of National Real Sugar Day.

In collaboration with WSGW and The Maytag Store, Michigan Sugar Company hosted a Sweet Treats Bake-off on Oct. 14 with eight local, amateur bakers squaring off for bragging rights and a few prizes. The recipes were required to include some type of Pioneer Sugar. The contest took place at The Maytag Store in Saginaw with Michigan Sugar Company grower-owner Lisa Helmreich, of Freeland, taking home first place, and a $150 Meijer gift card, for her Ol' Fashion Caramel Apple Nut Pie.

Caressa Trice of Saginaw finished second with her Decadent Red Velvet Cheesecake and Joan Gerhardt of Saginaw took third with her Chocolate Pecan Pie with Kahlua. Other participants were Pamela Hornbacher-Retzler of Caro, Cheryl Williams of Bay City, Linda Schmidt of Kawkawlin, Shelli Nellett of Bay City, and Danielle Wolfe of Ithaca.

Michigan Sugar Company also donated more than 36,000 pounds of white granulated sugar to Hidden Harvest, a food rescue and redistribution agency serving the Great Lakes Bay Region. The company partnered with its friends at Countryside Transportation Service in Sebewaing to have the sugar delivered the morning of Oct. 13. That sugar was quickly redirected to local food pantries, homeless shelters, and soup kitchens.

"Member companies utilized a variety of tactics to promote the day, both internally and externally," said Gaine, who noted the public was encouraged to join the fun by sharing their own posts using #realsugar throughout the day. "Online conversations reached more than 1 million people with more than 1,400 posts and nearly 36,500 likes and comments across all social channels."

MAKING LIFE SWEETER...ONE COTTON CANDY CONE AT A TIME

By Rob Clark, Director of Communications and Community Relations

Each summer, one of the highlights of the annual Michigan Sugar Festival in Sebewaing is the post-parade gathering on Saturday at Village Park. There, you'll always find a dedicated team of representatives from Michigan Sugar Company spinning and handing out cotton candy. For many years, directors from Michigan Sugar's Co-op and Central District boards have run the cotton candy machines during the afternoon event.

As fast as they can mix the sugar and flossine and then spin the cotton candy onto cones, festival goers young and old are waiting in line for this sweet treat. By the end of the event, they have passed out hundreds of cotton candy cones and put smiles on countless faces.

What you might not know is the Michigan Sugar Festival is just one of the many events each year where cotton candy is served thanks to Michigan Sugar Company.

For many years, Michigan Sugar has owned two cotton candy machines that it gives out to civic, school, and church groups for use at those organizations' events. The machines are housed at and maintained by Michigan Sugar's awesome partners at Hayes Specialties in Saginaw. In the past five years, the machines have been used more than 100 times, including about 25 times this year.

Here's how it works:

If an organization is interested in using one of the machines, they reach out to Michigan Sugar Director of Communications and Community Relations Rob Clark at rob.clark@michigansugar.com. If a machine is available on the requested date, Rob takes care of reserving it at Hayes Specialties and sends information to the customer on how to pick up the machine.

ABOVE Michigan Sugar Company Central District Board Secretary CJ Bednarski spins cotton candy during the 2022 Michigan Sugar Festival in Sebewaing.

Customers generally pick up the machine the day before their event and return it the following day, or on Monday if they are using the machine anytime during the weekend. Along with the machine, customers receive a 10-pound bag of Pioneer Sugar, flossine, mixing bowl, and 200 cotton candy cones — everything they'll need for a successful event.

And here's the sweetest part of the deal: Michigan Sugar provides all of this for free.

The feedback we receive is consistent.

"The cotton candy was a big hit," wrote the organizers of the National Night Out/Touch-A-Truck event put on this past August by the Columbia Township Library and ACW-Unionville Fire Department.

"The 'Mermaid Fluff' was a hit for sure," read a note from Bay County Library System officials who hosted a Mermaid Party in July.

Other groups that have used the machine this year include the Rotary Club of Ubly, Reese Public Schools, Dow Bay Area Family Y, The Arc of Midland, and Girl Scouts Heart of Michigan.

"The cotton candy machines are very popular, especially when the event is focused on children," said Clark. "Our partners at Hayes Specialties make it very easy for us to use these cotton candy machines to fulfill our purpose of *Making Life Sweeter*. We know that when a group uses one of these machines at their event, we are *Making Life Sweeter* literally and figuratively."

ABOVE Michigan Sugar Company Central District Board Vice President Mike Richmond hands a cotton candy cone to a festival goer at the 2022 Michigan Sugar Festival in Sebewaing.

Clark said groups hoping to secure use of one of the machines should reach out well in advance.

"We almost always can make it work, even when two groups have events on the same day," he said. "But, especially in summer and fall, our machines are very popular, so be sure to reach out at least one month before your event so we can reserve a machine for you."

A RECIPE FOR SWEETNESS ...FROM OUR FARMS TO YOUR TABLE

MICHIGAN SUGAR COMPANY'S ANNUAL CALENDAR FEATURES SWEET TREATS FROM OUR GROWERS

By Rob Clark, Director of Communications and Community Relations

Each year, Michigan Sugar Company produces a 14-month calendar to send to its customers as a way of saying thank-you and to promote the cooperative and its Pioneer Sugar brand. The idea is for the calendar to be not only helpful, but for it also to tell a story.

This year's calendar theme is "A Recipe for Sweetness ... From Our Farms to Your Table."

Each month of the calendar features a photograph of a sweet treat submitted by one of our grower-owners, along with a QR code that, when scanned, takes you to the recipe for that treat at pioneersugar.com.

Most of the recipes are for what you would classify as a dessert, but there are a few exceptions — like the Fun in the Sun drink submitted by Amanda Kohl of Kohl Farms in Gagetown, the Cowboy Beans submitted by Julie Leen of Leen Farms in Carsonville, and the Lavender Sugar Scrub submitted by Lisa Helmreich of Helmreich Farms in Freeland.

Assembled in one place, the assortment of delicious recipes is impressive and provides wonderful examples of how to use Michigan Sugar's white granulated, brown, and powdered sugars.

Producing the calendar is only possible with help from our sweet partners. Karen Gerhardt of Sister Studio once again designed this year's tri-fold calendar, Rick Moreau of Moreau Visuals took the photos, and QRP of Midland completed another high-quality printing and binding job.

And, because this year's calendar features our grower-owners, we mailed copies to all of them so they can be proudly displayed in their homes, shops, or offices.

A full list of participants and their recipes can be seen in the photo below. ▮

Scan this code to see all the recipes online @ pioneersugar.com.

1. *Toni Wilson, Raz-Pizazze Pepper Jam — Wyndsor, Toni, Bristol*
2. *Stacey Roggenbuck, PB & J Cups*
3. *Teresa Crook & Eric Frahm, Grandma Cusick's Shortcake — Teresa, Marilyn (Cusick) Frahm, Eric*
4. *Mandy Kohl, Fun in the Sun beverage*
5. *Sally Zimmer, Chocolate Chip Cookies*
6. *Nichole Maurer, Mississippi Mud Cake — Eli, Nichole, Audra, Liam*
7. *Ida Wadsworth, Blueberry Buckle Coffee Cake*
8. *Amanda Kernstock, Apple Cider Cake Roll*
9. *Julie Leen, Cowboy Beans*
10. *Jan Hecht, Incredibly Moist and Easy Carrot Cake*
11. *Nancy Smith, Cinnamon Rolls*
12. *Cynthia Hrabal, Gingerbread for Houses & Royal Icing*
13. *Lisa Helmreich, Lavender Sugar Scrub*
14. *Linda Gerstenberger, Puff Pastry Wonderland Tree — Kendell, Linda, Maddie, and Avery*

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WINTER 2023

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