

MICHIGAN SUGAR COMPANY • SUMMER 2012



# THE NEWSBEET

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## Improving Efficiencies: Doing More With Less

One of the pillars of our Co-op's strategic plan, as developed by the board of directors and management team, is "Ag Excellence." This strategic plan encompasses everything from improving sugar-beet yield and quality to receiving and storing the crop as efficiently as possible. In past editions of *The Newsbeet*, we have reviewed some of the programs to improve quality that we called "The Road to 19." We also have discussed our tremendous investment in ventilation equipment, which improves beet storage. This edition of *The Newsbeet* focuses on some of the initiatives around what we term "Improving efficiencies from the field to the flumes."

The dictionary defines efficiency as "the ability to do something well or achieve a desired result without wasted energy or effort" — oftentimes people simply say efficiency is "doing more with less." As we try to improve efficiencies from where the beets are grown and harvested to where they are unloaded, while in storage and until they are deposited into the hopper/flumes, there are many places along that supply chain to improve results. Can we devise a system that would allow our shareholders to harvest their beets in less time, with less equipment, while improving quality?

In the last couple of years, we have purchased two new pilers and enhanced the capacity of some of our other equipment. This year, we are doing a major upgrade in our western growing region with the improvements to our Breckenridge receiving station (see article on Page 20). These types of capital enhancements provide additional unloading and cleaning capacity so truck lines are kept to a minimum while cleaner beets are put into storage.

The introduction and use of field clamps and Maus-loaded beets, a few years ago, also increased efficiencies during harvest. The growers who utilize this equipment need fewer trucks, fewer drivers and never wait to be unloaded. There is no wear and tear on our pile grounds for the tons run through the Maus and the soil remains in the field. These operations also take a great deal of pressure off our pilers and receiving stations, which allows the remainder of the crop to be piled with fewer lines and less wait time. This equipment is widely used in Europe, but has limited acceptance in North America, other than in Michigan. This fall we will have six new Maus operations in addition to the six in place last year (see story on page 16).

Early dig beets are also another area where new and different procedures will allow for dramatic improvements in efficiencies. Scheduled harvests, whether picked up by a Maus or delivered directly to a factory, provide the highest quality beets during a very warm time of year. At the same time, growers participating in a scheduled early dig program are able to harvest full fields in a shorter period of time.

All of these ideas and programs have one thing in common — they are different from how harvest and beet receiving used to be done. Change is never easy; however, the only reason we are rolling out these new concepts is so we can "improve efficiencies from field to flume." If we are able to reduce wait times during harvest, supply the factories with fresher beets and reduce the amount of equipment needed to harvest the crop, we will be able to put more money into our shareholders' beet checks. All of the programs we implement are for one purpose — to "maximize shareholder value."

*Good luck and have a safe harvest this fall.* ■



## THE NEWSBEET

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*It seems like a countless number of times, while driving the countryside in May, you would see a beet field and say "Wow, it's only May and look at that field!"*

## The "Wow!" Crop

The 2012 planting season and crop will be referred to as the "wow" crop. It seems like a countless number of times, while driving the countryside in May, you would see a beet field and say "Wow, it's only May and look at that field!"

"Wow" what a beautiful start to the 2012 season. Our first field was planted March 15 and, before April rolled around, a total of 98,075 acres (60%) were planted. By the middle of April, 95% of our crop was in the ground, off and running. Eventually, 162,867 acres of beets were planted. Growing conditions were favorable and by mid-May — everyone was smiling and the "wow" factor was widespread.

This is in direct contrast to the 2011 crop, which had a very difficult and slow start. Most of the 2011 crop was planted in May, and we still managed to harvest a crop with 24.07 tons per acre.

What does that mean for 2012? — This crop has a lot of potential. Stands are very good and they will need adequate moisture to sustain good growth and maximize their yield and quality.

Our target date to begin harvest was September 1 when our Board made the decision to allow a 98% allocation of acres. We are now talking about an August 15 startup. Can it be done? Only time will tell how this crop progresses and how well the weather cooperates.

When harvest does start, our early delivery harvest will be scheduled and managed. Everyone will have the opportunity to harvest early, if they choose, and beet quality will be kept at a maximum. If we were to start August 15 and enter into long-term storage on or about October 20, we could have over 60 days of scheduled early delivery. This would be our earliest start ever! ■

### First harvest dates dating back to 2005:

Year	First Day of Receiving
2005	September 19
2006	September 14
2007	September 20
2008	September 15
2009	September 15
2010	August 23 – Bay City Only
2011	September 14
2012	August ??

*By mid-April, 95% of our crop was in the ground, off and growing.*





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## Will Farm Bill Flourish Welcome News for

*Capitol Hill has been very active on the agriculture front — with some positive steps forward and a couple back — for the sugar industry.*



*by Ray VanDriessche, Director of Community and Government Relations*

### Farm Bill Update

In late April, the Senate Agriculture Committee passed the 2012 Farm Bill, also known as the "Agriculture Reform, Food and Jobs Act of 2012," with the goal of starting floor debate in early June. Immediately following its passage, Senator Stabenow stated, "As a no cost program, the sugar program is already fiscally responsible and the program will be continued without changes through 2017." The Senate version of the Farm Bill, projected to save \$23 billion dollars, would eliminate "direct payments," but enhance crop insurance programs. The proposed crop insurance program was the key factor for many commodities to be able to accept the elimination of direct payments as agricultural producers need a safety net in the case of catastrophic weather-related losses, such as the one Michigan's fruit industry experienced this past spring. Peanuts and rice producers do not agree that crop insurance will bridge the gap caused by the elimination of "direct payments," since they traditionally do not participate in the crop insurance program. In late June, the full Senate approved the Ag Committee's bill with a few minor amendments. The sugar provisions survived two amendments aimed at dismantling the program.

The House will not move for markup of their version of the Farm Bill until after the Fourth of July recess. Congressman Lucas, Chair of the House Ag Committee, has praised Senator Stabenow for accomplishing what many said could not be done, but feels the Senate version does not go far enough to protect producers against catastrophic weather-related losses. Representative Lucas has stated he plans to include both a "shallow loss" program and a "target price" program in the House bill. He believes the target price program would go a long way to address the concerns of peanuts, rice, and cotton producers and Southern legislators.

The Sugar Coalition for Reform, representing large sugar users, has been very active with almost daily press releases and visits to legislative offices on Capitol Hill asking for reform or elimination of the sugar program, claiming the market has been under-supplied. The sugar industry has easily been able to refute the claims and prove there has not been a shortage and that the current sugar program has been administered by the U.S. Department of Agriculture (USDA) in such a way it provides an adequate supply of sugar while maintaining a balance in the market for consumers, large users, and producers. The tariff rate quota (TRQ) increase in imports of 420,000 metric tons of sugar in April, made by the USDA to keep the market in balance, is proof the current policy is working well and does not need reform.

The American Sugarbeet Growers Association (ASGA) summer meeting, in Washington, D.C., in mid-July, gives your ASGA Board members one more opportunity to visit with legislators on Capitol Hill about the importance of maintaining the current sugar provisions in the 2012 Farm Bill. The visits are critical in key offices where the Coalition for Sugar Reform has made a considerable effort to persuade legislators to change the sugar program.



# on Capitol Hill? Youths on Family Farms

## NAFTA Discussions

Top officials from the Mexican sugar industry, along with U.S. sugar industry representatives, met with U.S. Trade Representatives (USTR), USDA, and key agriculture and trade committee legislators in April to express their support for the U.S. sugar program. They also expressed their concerns about inaccurate data reporting by the USDA of Mexican sugar production and exports to the United States. In the past, inaccurate data has resulted in decisions by the USDA to increase TRQ imports to the U.S. market when the market was already adequately supplied. USDA and USTR officials committed to working more closely with the Mexican sugar industry and the Mexican government on data collection. The discussions also included the reports of large scale smuggling of sugar into Mexico from Guatemala, with estimates as high as 120,000 tons per year crossing the border. The additional sugar in the Mexican market ultimately means more sugar available to be imported into the U.S. market. All parties agreed the smuggling issue hurts both Mexico and the U.S. and needs to be addressed as soon as possible.

## Petition to Rename HFCS to "Corn Sugar" Denied

In a press release by the Sugar Association May 30, 2012, it was announced the Food and Drug Administration (FDA) had denied a Corn Refiners Association (CRA) petition to rename high fructose corn syrup (HFCS) "corn sugar," saying the action would only serve to confuse U.S. consumers and could even pose a health risk to those suffering from fructose intolerance.

According to the FDA letter announcing its denial of the petition, "the use of the term 'sugar' to describe HFCS, a product that is a syrup, would not accurately identify or describe the basic nature of the food or its characterizing properties." Secondly, the FDA stated, "We are not persuaded by the arguments in the petition that consumers do not associate 'corn sugar' with dextrose. The term 'corn sugar' has been used to describe dextrose for over 30 years."

The next step is for the U.S. District Court in Los Angeles to end the CRA's advertising campaign to convince consumers that sugar and "corn sugar" are essentially the same product.



## Youth on the Farm

In late April, the announcement by the Department of Labor (DOL) that they were withdrawing a proposed rule that would have severely limited farm youths' ability to work on their own family farms was welcome news to the agriculture industry. Many believed the proposal was not based on reasonable facts or knowledge of the industry. Had the rules stayed in place, many youths who work on farms would not have had the opportunity of the "hands-on" learning experience that has developed into lifelong careers for many in the agriculture industry. The reversal by the DOL was the direct result of a proactive effort by many farm families and farm organizations, here in Michigan and across the nation, through opposition calls and letters to legislators. This action is testimony to the fact that, if the public gets actively involved, your voice can and does make a difference. ■



## Elections 2012: Remember to Vote!

The August primary will narrow the list of candidates for the November elections. Once it is known who will be on the ballot in the general election, it will be critical to take the time to study the candidates' past voting records, and what their views are on issues having a significant impact on our industry.

**Please get out and vote!**



# Looking at the Future GPS and GIS Technology

by Greg Clark, Agronomist

The development and implementation of precision agriculture has been made possible by combining the Global Positioning System (GPS) and Geographic Information System (GIS). These technologies enable the coupling of real-time data collection with accurate position information, leading to the efficient manipulation and analysis of large amounts of geospatial data. GPS-based applications in precision farming are being used for farm planning, field mapping, soil sampling, acre calculations, recordkeeping, tractor guidance, crop scouting, variable rate applications, and yield mapping.

Precision agriculture is now changing the way farmers and agribusinesses view the land from which they procure their profits. Precision agriculture is about collecting timely geospatial information on soil-plant-animal requirements and prescribing and applying site-specific treatments to increase agricultural production and protect the environment. Where farmers may have once treated their fields uniformly, they are now seeing benefits from micromanaging their fields. Precision agriculture is gaining in popularity largely due to the introduction of high technology tools into the agricultural community that are more accurate, cost effective, and user friendly. Many of the new innovations rely on the integration of on-board computers, data collection sensors, and GPS time and positioning reference systems.

### Advantages of GPS and GIS Guidance in Agriculture:

- Reducing overlap and minimizing spraying gaps
- Lowering fertilizer and chemical costs by reducing overlaps
- Minimizing environmental impact
- Verifying complete coverage—at the time of application
- Maintaining reports on all field activity
- Marking areas or points in the field
- Improving acre measurements

Other uses of GPS-based applications include the growing interest in auto steer technologies. This technology helps free up the farmer from turning the steering wheel, and reduces fatigue. Another benefit is GPS does not rely on an operator's eyes; farmers can now work in periods of low visibility. This makes work safer, faster, and more accurate, even when a field is dusty, foggy, or otherwise poorly lit. In turn, more work can be done, which leads to greater economic rewards.

*Below: Wayne Martin, Agriculturist, rides the Quadrunner used in mapping acres, Spring 2012.*





# e with ogies

Michigan Sugar Company is also looking at this technology to help empower growers' ability to view maps and pictures of their fields, along with the ability to enter crop records from an Android-based smartphone or tablet. This technology will help improve acre measurements, especially with all the wind turbines going up, thus eliminating outdated measurements from the FSA offices. Michigan Sugar Company has formed a committee to look at the various possibilities of utilizing Android-based smartphones or tablets for common everyday farm duties.

Michigan Sugar Company has met with Alan Telck (AgTerra, MapItFast), Ian Nichols (Weather Innovations, Inc.), and Mike Houghtaling to see what services they can offer Michigan Sugar Company and its growers by utilizing this fast-growing technology.

For 2012, the committee had decided to do two trial runs for measuring acres; one around the Bay City area and the other in Canada. Over 20,000 acres will be measured with this technology. Both trial runs will use GPS-based software (e.g., FarmWorks and Trimble) and compare those acre measurements with Android-based GPS software (MapItFast, see Figure 1). This will allow the committee to assess the accuracy of the two GPS-based systems compared to the Android-based GPS system.

As we have now seen, the development of GPS and GIS has made agriculture much more productive. It is helping growers to become more efficient with their time as well as saving them from possible hazards and potentially helping them keep timely and accurate crop records for their fields. Putting the Cooperative's best interest in mind is the primary goal for this committee, and more information will be forthcoming on the new changes ahead. ■

Figure 1. Screenshot of MapItFast Android App

**Greg Clark** is an Agronomist at Michigan Sugar Company. He has 13 years of experience in agronomy. Greg joined Michigan Sugar Company in October 2010.



**Christine Dunham**, Director, Information Systems, Michigan Sugar Company, has been with the Company for 10 years. She is responsible for managing computer hardware, their related systems, and data communications.

## Apps and Websites: Developing Software for Mobile Devices

by Christine Dunham, Director, Information Systems, Michigan Sugar Company

If you own a smartphone or iPad, you most likely use apps on a regular basis. Several years ago, apps for devices such as phones were not commonly used, but through rapid advances in data communications and Internet websites, apps have transformed mobile devices into powerful computers.

Many apps rely on an Internet connection to keep the app up to date and functioning properly. For instance, an app which accumulates growing degree days for a particular region would need to periodically receive data from an Internet website to accumulate such information, essentially keeping the app up to date. These updates can be programmed into the app to occur behind the scenes, making it invisible to the user of the app. Many apps do not require an active Internet connection in order to operate the app. So, an app which accumulates growing degree days could still function without an active Internet connection. It could be designed to display the latest data it received from the web the last time an Internet connection was active.

An alternative to an app is a mobile-friendly website. Any Internet website can be developed to look like an app, and websites can detect what Internet browser you are using, determining if it should present the mobile site or the standard site.

One of the responsibilities of the Information Systems Department at Michigan Sugar Company is to develop software for the Company and its shareholders which is cost-effective, while providing value. When we evaluate apps and websites, we must take several factors into consideration before we begin development.

After careful consideration of cost and value, we envision the following functions becoming useful on mobile devices, either as a mobile website, an app, or both.

**Crop Record Entry (in development):** This is currently being developed as a mobile web feature, and we are in the process of testing with a small number of growers to fine tune the system. Once the testing is completed, when you log into the grower website on a mobile device, the system will automatically take you to a mobile version of the grower website where you will be able to maintain crop records as well as run some reports.

**Beet Harvest (still conceptual):** Before a truck departs a MAUSed field, the MAUS operator could scan the truck driver's unique ID card. The MAUS operator would be responsible for entering the grower's field identifying information into the system, along with harvest date. The system would transmit that information to all scalehouses. When the truck arrives at the scalehouse, the truck ID card is scanned, and the system will already know the grower's information for that load. Since the information entered by the MAUS operator must be transmitted immediately to be ready for the truck's arrival at a scalehouse, this would most likely be a mobile website feature.

**Events/Notifications (still conceptual):** This would be an app to make users aware there is a calendar item that pertains to you. For instance, if there is a grower district meeting, the app could let you know of the meeting, rather than requiring you to periodically check the website for updates to the calendar. This could potentially be used for more than meetings, such as crop alerts, with pictures or other attachments.

**GDDs and DSVs (still conceptual):** This would be an app to alert users they should inspect fields for leafspot or needed sprays. This app would take into account each member's field location, the last spray date, and BEETcast data to provide accurate and timely notification to a grower. Much collaboration would need to occur with Weather INnovations and Michigan Sugar Company, because currently MSC does not have access to electronic BEETcast data. The sky is the limit with integration of MSC data and BEETcast data!

**Customer Sugar Orders (still conceptual):** When a customer order is dispatched to be picked up at one of our warehouses, a Carrier Dispatch Sheet is created to document the order content for the trucking company. A Carrier Dispatch Sheet could be created with a QR Code which could be emailed to the appropriate truck driver. Upon arrival at the warehouse, the driver would present the QR Code on his or her phone, it would be scanned directly from the phone into the computer at the warehouse, and the order would be processed. This would eliminate verbal miscommunication of order numbers, thus reducing errors. This would be a mobile website feature.

Before we can begin development of an app, we must survey our growers to determine what types of devices they are using to access our website site. Therefore, sometime in the near future when you log into our website, you may be presented with a survey requesting information about your Internet devices and usage. The survey will help to ensure we develop apps that are both useful and cost effective to our growers. ■

# Early Beet Delivery

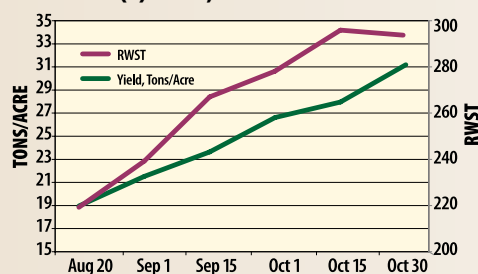
by Jim Stewart, Director of Research

**Table 1. Influence of Early Harvest on Sugarbeet Yield Quality & Grower Payment Six (6) Trials, 2010 & 2011**

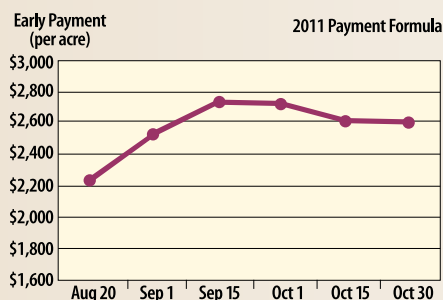
Harvest Date	Tons/Acre	% Sugar	RWST	Factor Increase	Early Delivery Payment*
Mid-August	18.9	15.5	219	88%	\$2,238
Early September	21.4	16.9	240	71%	\$2,529
Mid-September	23.5	18.2	267	52%	\$2,737
Early October	26.6	18.8	276	29%	\$2,729
Mid-October	28.0	19.9	296	10%	\$2,615
Late October	31.1	19.5	292	0%	\$2,609

\*Based on an estimated payment of \$78/ton

**Chart 1. Influence of Early Harvest on Sugarbeet Yield Six (6) Trials, 2010 & 2011**



**Chart 2. Influence of Early Harvest on Grower Payment Six (6) Trials, 2010 & 2011**



This year's crop is off to a fantastic start due to the March planting and timely rains. We are estimating a 29 to 30-ton yield, a little more if weather is good and a little less if we experience a prolonged drought. A yield of 32 to 34 tons is a real possibility for this crop if we receive timely rains throughout the growing season. The question then becomes, how do we process that many beets?

Sugarbeet yields have increased by nearly ten tons per acre in our growing region over the past decade. These gains are due primarily to genetic improvements, including our conversion to Roundup Ready varieties and an aggressive variety approval system, which allows the use of these high yielding varieties. In addition, significant advances in controlling Rhizoctonia and Cercospora

have made it possible to grow high yielding varieties lacking disease tolerance. Other agronomic advances, including higher sugarbeet populations, 2x2 fertilizer applications at planting, and a move to narrow rows have also pushed sugarbeet yields higher.

The result of raising yields from 20 to 30 tons per acre obviously means more profit; however, we also need to be concerned with how many days it takes to process a large crop of sugarbeets. Factory efficiencies and capacities have improved, but not at the same rate of sugarbeet yield increases.

Numerous studies have been conducted throughout the sugarbeet industry to determine the relationship between harvest date and the yield and quality of sugarbeets. Data varies from year to year due to weather conditions; however, on average, most companies have found yield increases from one-half to one ton per week and about one-quarter to one-half point increase in sugar content per week during the early harvest period.

Six early harvest trials were conducted in Michigan during 2010 and 2011 by Michigan Sugar Company and Sugarbeet Advancement (Table 1). We began harvest in mid-August and finished in early November.

## 2010 and 2011 Trial Harvest Dates

1. Mid to late August
2. Early September
3. Mid-September
4. Early October
5. Mid-October
6. Late October - Early November

Weather conditions were favorable for sugarbeet growth during the harvest period during both years. Around two inches of rain fell in September and two in October 2010, and temperatures remained warm through October. Rain was even more plentiful in 2011 with approximately 7-8 inches spread throughout the harvest period. Temperatures in 2011 were warm until late October.

The average sugarbeet yield on August 20 was 18.9 tons per acre compared to 31.1 tons per acre on October 30 (Chart 1); a difference of 12.2 tons which equals an average gain of 1.2 tons per week during the early harvest period. Sugar levels improved from 15.5% to 19.5% during the same early harvest period, for an average gain of 0.4 points of sugar per week. Sugar levels dipped at the end of October due to heavy rainfall after the mid-October harvest dates.

The early harvest payment schedule provided a relatively even payment over the early harvest period. The highest payments were harvested at the mid-September and early October harvest dates, while the early September and mid-October harvest dates paid only slightly less (Chart 2). We also evaluated a mid-August date, even though growers did not harvest at that time. The mid-August harvest date paid quite well considering the low yields and sugar levels at that time. The late harvest date (after the early harvest period) paid slightly less than the early harvest dates, probably because the sugar levels were driven down by late October rainfall.

In general, the early payment plan appears to be equitable and will likely encourage growers to participate in early harvest. It is difficult to predict sugarbeet yield and quality trends during the harvest period, because of weather differences each year. Early harvest trials are being conducted this year and more trials will be conducted in the future. When we have five to ten years of early harvest data, we will be able to predict early harvest yields and quality more accurately and adjust payment plans, if needed.

One thing is certain, we should not grow more sugarbeets than we can process. There are several ways to address this issue including planting fewer acres, increasing factory capacity, starting slice earlier or slicing later in the spring. The Cooperative has been increasing efficiency and slicing capacity as we can afford it. We have been pretty lucky (recently) slicing in March but long-term history tells us it is pretty risky. Early harvest seems to be the smartest way to go, i.e., the way we make the most money. We all need to do our part to make sure the early harvest programs work properly. ■



**Jim Stewart**, Director of Research, coordinates the agricultural research activities at Michigan Sugar Company and specializes in weed, disease and pest control, soil fertility, and other sugarbeet production practices. He has been with the company for 13 years.



# Proper Defoliation

## Leave the Tops in the Fields

by Lee Hubbell, Research Agronomist

Quality is the key to good storage conditions and net profit per acre. It all starts with the selection of varieties, the spacing and emergence of beets at planting time and then the defoliation of the beets to remove all tops from the beet prior to harvest. Proper defoliation is critical to pile storage and ultimately to your payment per ton.

We have designed several tests over the last five years to help us understand the importance of proper defoliation. In two studies, we simply selected beets that had been delivered to Bay City which were poorly topped and going into our storage piles (Photo 1). We gathered information prior to removal of tops and then analyzed the same beets after removing all the tops from the selected beets.

In the other studies, beets were harvested and defoliation was purposely created to simulate the range of extremely poor defoliation (Photo 2) to good defoliation. Beets with extremely poor defoliation should never go into long-term storage, but we know it happens from time to time.

The range of defoliation varied from complete defoliation to 25-100% with green tops.

The results of our test indicate that poor defoliation causes a grower to lose an average of 9 pounds of sugar per ton (RWST) with a range in sugar loss from 5.6 pounds–12 pounds (Chart 1). If we base the sugar loss on a \$70/ton payment, the dollar amount loss to poor defoliation would be \$2.40/ton or \$60/acre on a 25 ton per acre crop.

Poor defoliation impacts your individual quality and beet payment and then continues to negatively impact the cooperative. Beets with excessive green will not store as well as properly topped beets. In two

years of studies in pile storage, we found fair defoliation could lose up to 1.0% of its sugar content and 17.4 pounds of RWST when compared to a good defoliated sample. (Chart 3) In extremely poor defoliated samples, the losses climbed to 1.6% of the sugar content and 31.0 pounds of RWST!

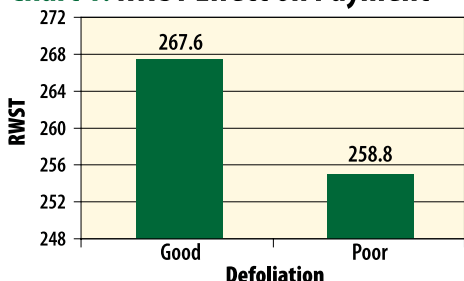
It is impossible to calculate the true cost of poor defoliation, but if assumptions are made, the numbers are staggering. If we assume we have one-half of our crop, or two million tons, in storage for an extended period of time and we assume we lose 10 pounds per ton — that's \$8,000,000 dollars if the sugar value is \$0.40 per pound! Looking at it another way, it reaches \$2.00 per ton pretty quickly.

At harvest, it's easy to make excuses for delivering poorly topped beets — "it's a dead furrow" or "it's on the headland" or "it was around the power poles" — no excuse is reason enough not to change our ways. Weather conditions do influence how beets will defoliate, and adjustments need to be made from time to time in order to do the best job defoliating your beets. Warm beets defoliate differently than cool beets; varieties differ in crown growth; a cool night with frost will definitely change the performance of the defoliator; and speed kills! Defoliator speed and the need to stay ahead of the harvester is probably the number one reason why poorly defoliated beets end up in pile storage. The other critical part to proper defoliation is replacement of worn or broken flails as harvest progresses. The best maintenance and new flails, at the start of harvest, will show wear and tear after some of your acres have been harvested and harvest winds down. Conditions change daily and we need to adjust to the changing crop conditions in order to deliver a beet fit for storage.

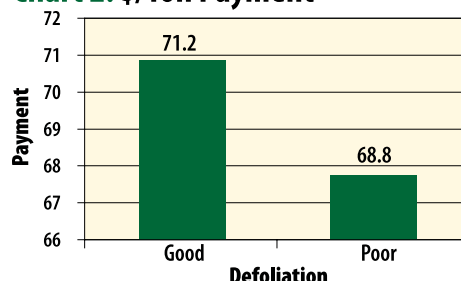
Take the time before harvest, and during harvest, to keep the defoliator in proper operating condition. Good defoliation will return more profit to everyone. It is a critical operation and needs your constant attention. We have a big crop ahead of us and long-term storage will be critical to our success. Let's work together to harvest a beet ready for long-term storage. ■



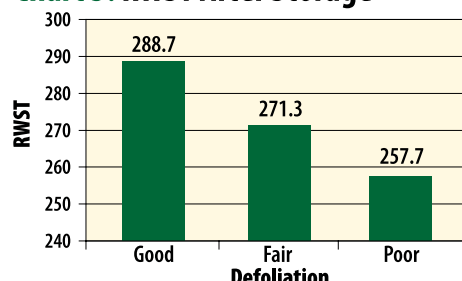
**Chart 1: RWST Effect on Payment**



**Chart 2: \$/Ton Payment**



**Chart 3: RWST After Storage**



**Lee Hubbell**, Research Agronomist, is a specialist in sugarbeet variety and agronomic testing and has been with Michigan Sugar Company for 27 years.





# Beet the Heat When Topping

*by Steve Poindexter, Senior Sugarbeet Educator  
Sugarbeet Advancement, MSU Extension*

It has long been known heat is the enemy when it comes to harvesting and storing sugarbeets. Piled under warm conditions, length of storability is greatly reduced due to increased respiration, microbial activity and regrowth. These factors combined will reduce beet quality and factory efficiency. Under warm conditions, sugarbeet respiration will increase and burn up sugar stored in the root. For every 15 degree increase in beet temperature, respiration will double. Keeping the sugarbeet canopy intact until just prior to lifting goes a long way in beating the heat to keep the roots cool.

A 2011 study was conducted by Sugarbeet Advancement at the Saginaw Valley Research and Extension Farm. The trial was conducted to compare how fast the temperature increases in beets that have a canopy compared to those defoliated. This trial was conducted during early season delivery on October 4, 2011. The day was bright and sunny. Sugarbeets were defoliated at 10:45 a.m., with a recorded air temperature of 57 degrees, and at 1:30 p.m., with a recorded air temperature of 72 degrees. Defoliated beets were compared to sugarbeets that had full canopies in the adjacent rows. Digital thermometers were inserted two inches into the beet crowns and the temperature was recorded every 15 minutes.

Sugarbeets not defoliated gained temperature slower than those without a canopy. Defoliated beets actually increased temperature more quickly than air temperature (see Chart 1 on Page 13). This indicates the radiant energy (sun) was also warming the crown. By mid to late afternoon, sugarbeet crowns were actually warmer than the ambient air temperature for both defoliation timings. By mid-afternoon, the 10:45 a.m. defoliated beets were 13.5 degrees warmer than the non-defoliated beets. Defoliated beets gained about five degrees per hour. The rate of warming of non-defoliated beets was 2.4 degrees per hour, or half that of defoliated beets.

In order to beat the heat, growers are encouraged to not get too far ahead of the harvester. This is particularly critical during long-term pile building, when the temperature for piling is marginal and the sun is brightly shining. Sugarbeets should not be defoliated more than 30 minutes ahead of harvest. Often, those topping beets will need to stop and wait for the harvester to catch up. Another strategy is to slow down your topper to better match harvester progress. The benefit of this approach would be improved quality of beets harvested by better defoliation. This could easily pay good dividends to cover the wage of the topper operator and improve beet storability and profitability for the shareholders. ■





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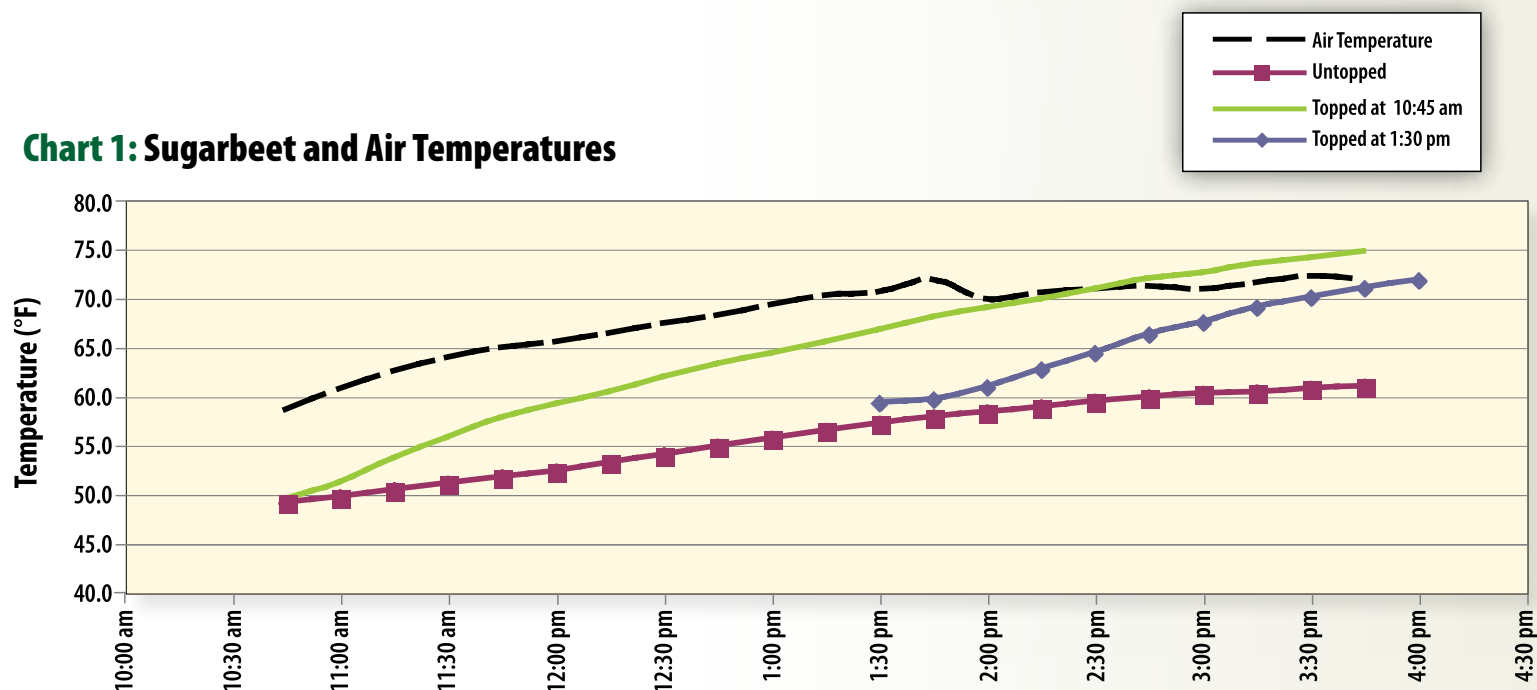
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ACH V1 6/12

**Chart 1: Sugarbeet and Air Temperatures**



**Steve Poindexter**, is the Senior Sugarbeet Educator with Sugarbeet Advancement, MSU Extension (Saginaw County). Steve has been the Director of Sugarbeet Advancement for 13 years.

# Harvest Efficiencies



Keeping your topping equipment in tip-top condition is key to a good sugarbeet harvest. Mike Richmond (left) and Roger Elston, agriculturist at Michigan Sugar Company.

## Don't Forget the Topper!

by Guest Writer, Michael Richmond,  
Richmond Brothers Farms

A number of grower-operators get so wrapped up in the importance of taking care of their beet harvester they forget about the topper. When, actually, the topper is just as important, or can be more important than the harvester, especially if the goal is beet quality and long-term storage. In this case, the topper is the key component.

Keeping a close eye on your topper's performance is crucial, even though time is at a premium at harvest time, we all need to take the time to properly set up the topper.

Flail quality is the first item of importance to look at. When trying to determine if your flails are in need of replacement, you should look at the quality of the cutting edge. Like a knife, you need a good, sharp edge to shear the leaf stem off quickly, whereas a dull flail will tear or shred instead.

Next, inspect the steel component of your flail cluster. Start with checking to see if the rod is worn where it goes through the half moon plate or if the plate holes are egg-shaped. Either issue allows the rod to float or move within the half-moon plate causing the rod to inadvertently break or fall out.

The other area of concern for rod wear is the area of the rod that the flails rotate on or the flails' surface area. If the flail's center hole and the rod are not a tight fit, it allows the flail to angle side to side opposite of its least resistance. This results in the flail moving around the crown of the beet producing a poorly topped beet. One of the biggest mistakes

made is when a new flail is placed on a worn out rod which will egg shape the new flail in a matter of a few acres. You may have a sharp flail, but the flail can move from side to side around the crown of a beet.

One of the most frequently asked questions when it comes to toppers is "Which drum in the topper is the most important to keep in top shape?" The answer is somewhat debatable; however, I feel the back drum is third in order of importance.

Once you have the flails and the flail components in excellent shape, the next thing is to adjust your topper to keep the wear to a minimum. For example, if a topper is adjusted too high, you get a poorly topped beet. If you adjust too low, or as some people call it "plowing with your topper," not only do you get poorly topped beets, but you also get excessive flail wear. It is very important that a flail stays straight when in motion. If it bends back, you lose your sharp cutting edge.

So don't forget about the topper when it comes to off-season maintenance. Take time to adjust in the field, keeping the topper ground speed down, and the result will be well-topped beets, ready to go into long-term storage in excellent condition—not to mention your sugar content will increase as well. ■



**Michael Richmond** is a co-owner of Richmond Brother Farms, located in Michigan Sugar Company's Central District. He is also a partner in Richmond Brothers Fabrication and Richmond Brothers Spray Company, both located in Bay Port, Michigan.



# Lime for Agriculture Use



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- No detrimental effects on rotational crops
- Increase yields of sugarbeet crops with severe *Aphanomyces*
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- Balances acidic results of N fertilizer use
- Offset surface acid zones in low-till farming
- Increases microbial activity
- Better soil structure (air and water flow) and residue decomposition

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### MEMBERS

Members will be charged \$2.20 per ton to help defer lime preparation and loading expense. One lime coupon will be required for each load of lime shipped. Members may obtain coupons in the agricultural office at any factory location. Members may also print coupons from the secure area of the Michigan Sugar Company website ([michigansugar.com](http://michigansugar.com)).

Members with a current Planting Agreement in place will have the cost of lime shipped deducted from future sugarbeet payments. If there is no current Planting Agreement, Michigan Sugar Company will invoice for lime shipped.

### NON-MEMBERS

Pre-purchase lime coupons in the agricultural office at any factory location:

- |                         |                         |
|-------------------------|-------------------------|
| \$90 for up to 20 tons  | \$135 for up to 30 tons |
| \$180 for up to 40 tons | \$245 for over 40 tons  |

Pre-paid lime coupons not used in 2011 will be valid in 2012.

*\*Prices shown are in effect as of April 1, 2012.*

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- Carrollton • 989-686-1549 – Press 7, for more information press 2.
- Caro • 989-673-2223 – Press 2, press 7, for more information press 1.
- Croswell • 810-679-2241 – Press 6, for more information press 1.
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# Harvest Efficiencies



## 2012 Maus Operations

**Richard List, Agricultural Operations Manager**

The Fall of 2012 will have another major expansion in the number of Maus operations to clean and load sugarbeets. The board of directors has given permission for six new operations, which takes the total to 12 operations for all of Michigan Sugar Company.

Depending on their location, each Maus operation will deliver from 1,500 to 3,000 acres during long-term storage. This is on top of all the beets that are loaded during early delivery.

New operations for long-term storage were added to three regions. Sebewaing will now have a second Maus in operation. Tim and Phil Leipprandt will use their Maus to clean and load their beets. In the Sandusky area, Clint Stoutenburg will be loading and delivering his beets to a stacker at the Sandusky piling ground. There will be four new operations in the Ruth, Verona, and Deckerville areas. These new operations will be run by Alan Bischer, Duane and Richard Maurer, Jacob Maurer, and a group of growers headed by Ryan Roggenbuck.

The majority of their beets will be cleaned, loaded and delivered to Caro and Bay City. This will help reduce truck lines and total volume into the Ruth and Verona piling grounds which, in turn, will allow for adequate room to store all the beets at a reasonable height. Approximately 100,000 tons of these beets will be piled by a new stacker in Bay City and possibly more beets will be sent to a modified piler in Blumfield. The balance will be brought to the slab in Bay City and the stationary piling area in Caro.

Jacob Maurer will be using a new machine manufactured by the Holmer Company in Germany. Instead of being called a Maus, it will be called Terra Felis, translated "earth cat." This machine will do the same job as the Maus.

As of this writing, some major changes could be implemented by the Fall of 2012 for early delivery. In most areas, delivery will stay the same as last year, but Bay City, Sebewaing, and Caro could see something new.

In Bay City and Caro, we are looking at setting up a scheduled early delivery similar to the programs at Croswell and Albee, using a lottery system to allow a small number of growers to harvest each day. This ensures shorter lines and more efficiency for growers while giving the factory fresher beets for slice. At Sebewaing, we are looking at two options. One is the scheduled delivery, similar to Bay City and Caro. The other option would be to place a Maus operation in the Sebewaing area and conduct a program like we have in the Ruth, Verona, Meade, Ontario, and Breckenridge areas.

It is always a challenge to change how we have done things in the past; however, the majority of growers are happy with the results everywhere we have tried the Maus or scheduled delivery.

Michigan Sugar Company is trying to implement changes that will increase efficiencies from field to flume. Change can be difficult, but hopefully these changes will help our growers and factories with the "bottom line." ■



**Richard List**, Ag Operations Manager for Michigan Sugar Company, has been with the company for 14 years.



# Tare Room Addition

*Richard List, Agricultural Operations Manager*



Since the merger of Michigan Sugar Company and Monitor Sugar Company, tare samples have been cleaned and dirt removed in two different ways. Some samples were brushed to remove dirt and others were washed and dried. In 2011, the decision was made to handle the tare samples the same. Due to the volume of tare samples, Michigan Sugar needed to expand its tare room facilities in Bay City.

Construction began this spring to increase the storage area for tare samples. As of the Fall of 2012, Bay City will analyze all Michigan Sugar Company tare samples at the central tare facility.

The capital project for the tare room expansion included doubling the number of bays, where tare samples are stored until processed, from three to six. We also will be adding three new conveyors in the new addition to help move tare samples to our washer/dryer system.

Last year, a new type of vinyl tare bag was tested for the first time and worked quite well. This fall, we will have 9,000 bags and, hopefully, this will be a sufficient number. Our busiest delivery days will determine if more bags are needed.

The tare room building project should be complete by midsummer.

We have also started to upgrade the electronics for our washer/dryer system to match the components in our Bay City factory. This system, more than ten years old, has numerous electronic parts that are out of date. The total replacement process will take two years to complete and, when finished, our electrical engineers will be working with an up-to-date system, similar to those in our Bay City factory.

With these additions, our tare room should be able to handle all of our tare samples and process/analyze all samples the same for all growers.

Construction began Spring 2012 on the larger tare room facilities in Bay City and will be completed mid-Summer 2012.

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## Harvest Efficiencies

# Improving the Efficiency of Early Delivery

by Paul Pfenninger, Vice President of Agriculture

We have potentially a very large crop to harvest in 2012. If we start in mid-August with harvest, we could be facing over 60 days of early delivery. If we slice approximately 22,000 tons per day during this period of time, we will harvest close to 1,400,000 tons (29% of anticipated total) before we open for long-term storage conditions.

How can we be efficient with this lengthy period of time and still supply our factories with good, high quality beets? We are rolling out a planned program called "Scheduled Early Delivery" which we believe will make your farm operation more efficient.

A series of meetings were held in early June to help explain how this program will work. We believe we can eliminate most long lines, improve turnaround times and allow you to harvest more acres in a shorter period of time with a scheduled early delivery program. The Cooperative also wins with better efficiencies of piler crews and a better quality beet. This is truly a win-win situation for everyone who participates.

The revised early delivery payment program, which was implemented in 2011, is really the key to our delivery of beets early in the harvest season. The program has not changed from last year and we expect early delivery participation to increase this year since the program worked so well with Crop Year 2011. How does the scheduled early delivery program work? It starts with each grower submitting a request to harvest acres during early delivery in increments of 10 acres, from a minimum of 10 acres to a maximum of 50 acres. A lottery is then held to determine the rotation of acres among all growers who have submitted a request to harvest early. Once the drawing is complete, the list will be posted to the grower website for all to see. If your request (chip) is drawn early, you will be asked to harvest your allocation of acres, early in the harvest schedule. It will generally mean five to six growers will be harvesting daily to supplement the Maus operations in Meade, Verona, Ruth, and Breckenridge.

This type of scheduled early delivery has been used in Dover, Canada, for many years. It was implemented in Croswell Proper in 2010 and was rolled out in Albee last year. The same types of meetings were held to inform the growers in the past and the same concerns were expressed by the growers involved. In all cases, once the program had a year of experience, the growers were very happy with the way beets were delivered and the efficiencies of a scheduled early delivery harvest.

Everyone needs to keep an open mind and stay positive as the new programs are rolled out in Bay City, Caro, and Sebawaing. As a grower harvesting beets during early delivery, you should get more acres harvested in a shorter

**Improved efficiencies from field to flume is one of the goals of our Cooperative. How do we improve the efficiencies of harvest? Let's start with early delivery.**

period of time without the frustrations of long lines and the unknowns of when piling will occur from week to week. As a cooperative, we should have better quality beets with less sugar loss in storage piles and a better extraction of sugar. It truly is a win-win situation for everyone. We are anxious to get started and roll out our new program at the factory locations. We are strong believers this program will be successful and eventually scheduled delivery may be expanded to all areas of harvest.

*Have a safe and successful harvest season. ■*



**Paul Pfenninger, Vice President of Agriculture,**  
has been with Michigan Sugar Company for 30 years.



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### CAPITAL IMPROVEMENTS IN BRECKENRIDGE:

# Piling Ground An Upgrade

*One of the pilers that was moved from Gratiot being reassembled at Breckenridge.*



Capital improvements to the Breckenridge piling grounds are proceeding well at the time of this writing. The construction of the two new piling grounds is well on its way. All the drainage has been completed. The topsoil is being removed and replaced with fill sand and crushed stone. Once the construction of the new piling grounds has been completed, the new electrical system will be installed to power the additional pilers that will be at this site. The two additional pilers will require additional electrical power. An entirely new electrical service will be installed at the site by Consumers Energy. This will ensure we have the power we need to operate all six pilers. The new service will also allow us to upgrade the electrical feeds to the existing piling grounds. Two of the pilers that were at the Gratiot County piling ground have been disassembled, moved and reassembled at Breckenridge. The dirt belt frames and dirt hoppers have been removed from both of these pilers and they are ready to have the new dirt dump hoppers installed. Bids are being obtained for two new scales and a new scale building. The new scales will be located in the east end of the Ransom Road entrance. They will have 80' long decks and have a capacity of 200,000 pounds. All phases of this project will improve delivery conditions at the Breckenridge site and improve the overall efficiencies of beet delivery by closing the Gratiot piling ground and consolidating the beet receiving equipment at one site.

The third and last piler that was at Gratiot has been disassembled and transported to Bay City. Work is well on its way to convert this



1.



2.

1. Drainage tile and catch basins for the new Breckenridge piling grounds. 2. Digging the drainage sediment basin for the two new piling grounds in Breckenridge. 3. Bay City Piler #11 being lengthened and modified for the new dirt dump hoppers.



# Gets

by Gary Sauer, Agricultural Maintenance Manager

piler to a stacker. The mainframe and boom of the machine will be lengthened to better accommodate the longer double-bottom trucks that will be delivering Maus beets to Bay City this fall. A new longer, and lower, incline frame will also be installed to improve beet flow and reduce beet damage while increasing the volume of beets that will be put through the stacker. There will be approximately 100,000 tons of beets put in stacker piles in Bay City this fall.

In addition to the two pilers in Breckenridge that will be receiving dirt dump hoppers this summer, there are two other pilers that will also be receiving dirt dump hoppers. There will be a total of four dirt dump hoppers added to pilers this year. Piler #11 in Bay City is having extensive upgrades made to it and part of this project was to remove the conventional dirt belt and replace it with dump hoppers. Piler #4 in Croswell will also be receiving dirt dump hoppers. All four pilers have had the dirt belt frames and dirt hoppers removed and are ready to have the new dirt dump hoppers installed in them. The dump hoppers will increase the capacities of these pilers by allowing the beets to flow continuously through the pilers without having to leave breaks between grower's loads.

While there is still a lot of work to do, all the capital improvements will be completed for this fall's harvest. Maintenance is also proceeding well on the rest of the receiving equipment. The piling grounds, pilers, scales, tare room, and ventilation equipment will be ready to receive the crop when harvest begins. ■



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**Gary Sauer**, Agricultural Maintenance Manager at Michigan Sugar Company. Gary is responsible for working with the agricultural managers on maintenance issues and capital improvements. Gary has 38 years' experience working with beet receiving equipment.

# Sugarbeet Cyst Nematode Sampling Program

by Greg Clark, Agronomist



**Figure 1:** Soil sample taken for sugarbeet cyst nematode.



**Figure 2:** Sugarbeet Cyst Nematode eggs and juveniles.

The sugarbeet cyst nematode (*Heterodera schachtii*) was first discovered on sugarbeets in Michigan in 1948 near Bay City; however, it is believed that the sugarbeet cyst nematode has been in Michigan as early as 1942.

One sure sign a field is infested with the sugarbeet cyst nematode is the presence of swollen immature females of this nematode attached to the surface of the roots. These are first seen about four to six weeks after planting. Roots must be carefully dug with a trowel or shovel and handled gently to prevent jarring loose the white or cream females. The presence of this nematode can also be detected by extracting cysts from the soil (**Figure 1**) and identifying them under a microscope.

Eggs (400-500) (**Figure 2**) of the sugarbeet cyst nematode, enclosed in protective brown cysts, survive up to seven to eight years, in soil, in the absence of host plants. These leathery, lemon-shaped cysts are approximately 1/40 inches in length. Roots of host plants release chemicals that cause larvae to hatch from eggs, leave the cysts, and move to roots. This wormlike stage enters roots, becomes swollen while developing inside roots, and finally breaks through the surface. When first evident on the root surface, the females are white in color. Later, while still attached to roots, they become dirty white in appearance and eventually turn brown. When roots die, mature brown cysts fall loose into the soil.

To help growers identify if they have sugarbeet cyst nematode in their fields, Michigan Sugar Company will be offering a screening program at no cost. To take advantage of this program, growers essentially need to drop off sample(s) to Michigan Sugar Company agricultural offices (in Sebawaing, Caro, Croswell, or Bay City).

The best time to take samples for sugarbeet cyst nematode would be during the season when the sugarbeets are actively growing and when cysts are the most prevalent (July through August). Sampling taken during this time would provide better field diagnosis of cyst species, thus not receiving a lot of false positives when samples are taken in the fall prior to spring sugarbeet planting. Michigan Sugar Company will not accept samples after August 27, 2012.

The complete protocol for taking cyst samples can be found at <http://www.michigansugar.com> under the heading Agriculture >> REACh/Research >> Agronomy >> Sugarbeet Cyst Nematode Sampling Protocol.

Michigan State University Diagnostic Center will be handling the analysis for both cyst nematode species (Sugarbeet Cyst Nematode and Soybean Cyst Nematode). It will take about two weeks to get the results back from the Michigan State University Diagnostic Center. This analysis will help growers determine what actions should be taken to properly manage cysts if they are present in grower's fields. ■



*To take advantage of this program, growers must drop off soil sample(s) to a Michigan Sugar Company agricultural office no later than August 27, 2012. The complete protocol for taking samples can be found at [www.michigansugar.com](http://www.michigansugar.com)*



**Greg Clark** is an Agronomist at Michigan Sugar Company. He has 13 years of experience in agronomy. Greg joined Michigan Sugar Company in October 2010.





# Young Farmer Program Will Plant Seeds for the Future

by Kelsey Prohaska, Student, Saginaw Valley State University

Looking around the State of Michigan and even experiencing it myself, it is sad to see more and more high schools cutting back on student activities. What is even sadder is the first programs being cut are the agriculture programs. As an FFA participant from 7th grade until graduation, and in 4-H even longer, it hits home. According to a study done by National Public Radio (NPR), the average age of the American farmer is 57. Unfortunately, there has also been a 20% drop in farmers under 25. America needs young farmers! With all the reductions in youth programs, how will our nation's children stay interested in agriculture? America will always need farmers. People need to eat! Fortunately, organizations from all across the nation are creating young farmer programs. For years, Michigan Sugar Company has had an active youth sugarbeet program for school-aged children. This year, we have about 150 youngsters in the program. In 2013, Michigan Sugar Company will launch a new Young Farmers Program for growers ages 18 to 35, which will introduce them to all aspects and activities of the Co-op as well as develop future leaders.

Michigan Sugar will host the first annual Michigan Sugar Company Young Farmer seminar in the Summer of 2013. Young farmers will learn about agronomics, operations, finance, marketing, and other activities in their cooperative, as well as leadership opportunities in our industry.

As part of this new program, the company will annually recognize an exceptional young farmer with its Outstanding Young Farmer Award. The recipient will be chosen based on their success in the agricultural field and their leadership in the community. The winner will receive an all-expense paid trip to the American Sugarbeet Growers Association Annual Meeting.

Look for more details about this new program in future editions of *The Newsbeet* and on our Michigan Sugar Company website. ■



**Kelsey Prohaska**, Michigan Sugar Queen during 2011, is from Standish and a graduate of Standish-Sterling Central High School. She currently is a student at Saginaw Valley State University, majoring in Agriculture Business.

Jamie Roggenbuck



Nathan Krohn



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# Grower In the News

## Discover a Slice of History: **Bischer Farms** in Ruth, Michigan



**Above:** Melvin Bischer, granddaughter, Jaclyn Geiger, and Janet Bischer, in front of Melvin's antique manure spreader (1945) and John Deere tractor (1944).



**Above:** Bischer Ready Mix, Bad Axe, Michigan

After driving through miles and miles of Ruth, Michigan's beautiful farmland, you will find this hub of activity called Bischer Farms. The sugar-beet side of this farm began 47 years ago, with 37 acres and borrowed equipment for planting and harvesting. Bischer Farms' yield in those days was around 14.75 tons per acre; today's estimated yield is 29.2. They grow roughly 3,000 acres of sugarbeets, with the balance of the farmland in corn, wheat, and edible beans.

In his crop rotation, Melvin feels it is important to plant a wheat cover crop after the sugarbeets are harvested. The cover crop helps the soil recover from the harvested beet crop, resulting in an improved crop the following year. He harvests his beets with two 22-year-old Red River sidewheel machines that are "worth about \$200 a ton" (scrap value). He jokingly states if he "ever has a good year," he is going to buy new machines.

You would be hard pressed to find someone in the agricultural community who has not heard of Melvin and Janet Bischer of Bischer Farms of Ruth, Michigan. Melvin prides himself on staying up on current activities within the farming community and Michigan Sugar Company. His energy level is truly admirable with his cellphone that never stops ringing and his creative mind that is always onto

the next opportunity. Janet is the matriarch of the family, calmly and quietly running things from the office, along with the help of other family members.

Bischer Farms was established in 1959 with 80 acres of land. Melvin and Janet also own Bischer Ready Mix (established in 1992), a trucking/hauling business, Bischer Tiling, and a 14,000-head Holstein cattle business that was started by Melvin and Janet purchasing one or two calves per week. Melvin repeatedly stressed the success of his business, and any business, is all about people — getting the

right people and partnering with a lender who understands agriculture, like Greenstone-FCS.

Melvin married his wife, Janet, 51 years ago. They jest that when they each left home, Janet was given five dollars and Melvin was given four dollars; therefore, Janet is the majority shareholder in this relationship. Melvin served in the U.S. Army and Janet was an LPN when he met her. Today, they have two daughters, Dr. Nancy Krohn and Pauline Geiger (married to Brad), and seven grandchildren, who are all Melvin's "favorites." ■







*Above: Brent Maust and his brother Cliff have been using a zone till method that they refer to as "strip tilling."*

## Exploring Technology & Techniques: Bay Horizon Farm in Bay Port, Michigan

Over six years ago, Brent Maust was brainstorming a farming method that would reduce tillage on his farm. Along with his brother, Cliff, who has a separate farming operation, they came up with a plan to zone till that they refer to as "strip tilling." Brent prepares his ground in the fall. He utilizes a sub-soiler to till the ground with coulters used to ridge and then rolling baskets to level. Fertilizer hoppers were mounted on the unit at 30-inch row spacing. These hoppers are filled with wheat seed and the wheat is planted in an 8-10 band so approximately one-third of the area is in cover crop, and one-half bushel is planted per acre.

The last three years, he has planted with GPS and planting is now much easier and more precise than the three years prior without GPS. The GPS helps manage the planter, zones, and harvesting by planting consistent rows for better yields. In the spring, the 12-row planter is the only piece of

equipment that goes to the field, and Brent sees an ease of management with this practice. Five important components are utilized on Brent's planter and they are the following:

1. Coulter depth band
2. Trash wipers
3. Single disc Martin fertilizer opener
4. No till coulter
5. Regular planter with airbags adjusting the down pressure

He uses liquid fertilizer 2X2 in the row and side-dresses nitrogen at a later date. He utilizes the wheat for wind protection and kills it when he thinks the wheat is growing too tall and can potentially reduce his tonnage. This practice improves the soil structure. Every year, he plants his crop 15 inches over (offset) from the year before. After his corn crop, he leaves the stalks in the row while planting this year's crop. He believes he is not depleting his organic matter by continuously working his ground every year and not displacing or eroding his soil from wind nor water.

Brent and his wife, Emily, have two children; Emma, a sophomore at Lakers, and Aaron, an eighth grader. Brent farms 1,800 acres under Bay Horizon Farm and grows sugarbeets, corn, soybeans, and alfalfa. They live and farm outside of Bay Port and enjoy working together on the family farm. ■



*Brent Maust of Bay Horizon.*



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# Service Awards 2012

# EXTRAORDINARY! People... Actions... Results

by James Ruhlman, Vice President, Administration

There are many times when we go through our daily routines and fail to recognize those around us. We can easily fall into a trap of focusing on our next piece of machinery or how to take advantage of the latest technology. As we get older, time seems to go faster and all too often we forget to pause and recognize those who have paid the price for the greater cause. We forget those who have served in the military, those who have made an influence in our life, and those who stand beside us every day in our jobs as we strive to make our company better today than it was yesterday.

Every year, we take one day out of our busy schedules to officially and formally recognize those employees at Michigan Sugar Company who have reached milestones for years of service. We all gather at Saginaw Valley State University in the theater and celebrate. This year, 600 employees attended. It is a time to give thanks, pay tributes, and recognize our accomplishments. Over 70 people were recognized for years of service!

When we participate in this event, as a united company it grounds us when we look around and recognize the talents, the diversity, and the colorful individual personalities that make up our culture here. It takes so many of us at so many different locations, acting in unison to produce sugar from "seed to shelf."

This year's banquet offered segments of reflection as we honored those founding board members of the Co-op as we celebrate this, our tenth anniversary. As employees, we will never forget the trials and tribulations that our grower-owners went through as they risked their financial well-being by investing in our co-op. We are all in a better place because of your faith, your hard work, and your devotion to our great industry.

When we became a cooperative in 2002, I told our CEO, Mark Flegenheimer, that we might not be the biggest, but we can be the best. With ten years under our belt now, I think, collectively, we are among the very best sugar companies in the US. When you look at our "field to flume" advancements, our investments in steam dryers and other energy reduction projects, our commitment to value-added packaging, our healthy balance sheet, our rich tradition, and the strong foundation that we have with our employees, I don't think we need to feel second-class to anyone. We make sugar and we do it extremely well! As the oldest sugar company in the nation, we have proven we can weather the storms, overcome catastrophes, and rise to the top.

As we celebrate our tenth anniversary, it is the perfect time to reflect on what we have and where we came from. For many of us, thoughts of people come to mind during reflection. We think of the people who helped us through a hardship. We think of people who fought battles and won wars. We think of the pat on the back or the words of encouragement from a superior. We think of people who stood tall and remained strong. We think of the man with the will to win, or the woman with the brilliant idea. It is interesting when you look back, you don't often recall equipment or technology. Instead you remember the simple acts of humanity that someone shared to make you better. Every year, we officially reflect on the human element of Michigan Sugar Company and every year it becomes so very obvious what makes us so great! ■

## 2012 Employee Service Award Recipients

5 Years	Position	Department	Location
Alex Demeter III	Lead Mechanic	Operations	Bay City
Christopher Neumeyer	Dock Operator	P&W	Bay City
Rolando Pena	Dock Operator	P&W	Bay City
Candy Wineman	Dock Operator	P&W	Bay City
Joseph Thibo	Dock Operator	P&W	Bay City
Robb Schaffer	Dock Operator	P&W	Bay City
Shawn Davis	General Sugar Packer	P&W	Bay City
Fred Broom Jr.	General Sugar Packer	P&W	Bay City
Jose Salinas	General Sugar Packer	P&W	Bay City
Mark Wilinski	Maintenance Tech.	P&W	Bay City
David Hill	Silo Attendant	P&W	Bay City
Michael Cardinal	Specialty Operator	P&W	Bay City
Steven Radeback	Specialty Operator	P&W	Bay City
Shannon Watson	Team Leader	P&W	Bay City
Christopher Rohlf	Elec./Instr. Apprentice	Operations	Caro
Brian Enos	Sugar Boiler	Operations	Caro
David Noble	Vice President	Operations	Corporate Office
Wanita Junga	Office Manager	Accounting	Croswell
Daniel Swoffer	Safety Specialist	Operations	Croswell
Tony St. Clair	Warehouse Utility	Operations	Findlay
Matthew Booms	Agriculturist	Agriculture	Sebewaing
Neil Nuncio	Elec./Instr. Apprentice	Operations	Sebewaing
Michael Alderson	Elec./Int. Journeyman Tech.	Operations	Sebewaing
Keith Stock	Cleaner	P&W	Sebewaing
William Lyman	Dock Fork Truck Operator	P&W	Sebewaing
Terry Miller	General Packaging	P&W	Sebewaing
Edna Heidt	General Packaging	P&W	Sebewaing
Angela Lyman	General Packaging	P&W	Sebewaing
Raymond Grider	General Packaging	P&W	Sebewaing
David Fuerst	Specialties	P&W	Sebewaing
Chad Gaeth	Specialties	P&W	Sebewaing
William Shenk	Warehouse Mechanic	P&W	Sebewaing
10 Years	Position	Department	Location
George Raymaker	Welder - Certified	Operations	Bay City
Justin Savino	Welder - Certified	Operations	Bay City
Homer Fredericks	General Sugar Packer	P&W	Bay City
Dennis Butzin	Specialty Operator	P&W	Bay City
Jody Morrell	Specialty Operator	P&W	Bay City
Ralph Fisher	Drier Leader	Operations	Caro
Jeffrey Adamo	Director Human Resources	HR	Corporate Office
Lee Ringel	Applications Manager	IS	Corporate Office
Donald Haynes	Programmer/Analyst	IS	Corporate Office
George Painter III	Systems Administrator	IS	Corporate Office
Chris Dunham	Director of IS	IS	Corporate Office



10 Years	Position	Department	Location
Kevin Gordon	House Leader	Operations	Croswell
Robert Fuller	Welder	Operations	Croswell
Robert Grugel	Elec./Instr. Apprentice	Operations	Croswell
Roger Sorg	Warehouse Utility	Operations	Fremont
Laurie Harder	Boiler House Operator	Operations	Sebewaing
15 Years	Position	Department	Location
Patti Bierlein	Office Manager	Accounting	Bay City
Craig Cadieux	Asst. Master Mechanic	Operations	Bay City
Dwight Weiss	Drier Foreman	Operations	Bay City
Fred Reinke	Maintenance Assistant	P&W	Bay City
Michael Winchell	Specialty Operator	P&W	Bay City
Julie Perry	Executive Assistant	Administration	Corporate Office
Cheryl Ridenour	Safety Specialist	Safety	Corporate Office
Dennis Nickel	Janitor	Operations	Croswell
Wayne Martin	Agriculturist	Agriculture	Dover Center
Christine Dutcher	Office Manager	Accounting	Sebewaing
Darren Fritz	Welder	Operations	Sebewaing
Kirk Hilliker	Welder	Operations	Sebewaing
20 Years	Position	Department	Location
Randy Joles	House Leader	Operations	Caro
Harold Lowe	Laboratory Leader	Operations	Caro
Randy Damm	Storekeeper	Operations	Caro
Lyn Vancamp	Boiler House Operator	Operations	Croswell
Thomas Alexander	Sugar Warehouse Utility	P&W	Croswell
Fidel Mendoza	Warehouse Leader	P&W	Croswell
Warren Donahue	Control Room Operator	Operations	Sebewaing
Robert Sherman	Elec./Instr. Journeyman Tech.	Operations	Sebewaing
Danna Radabaugh	General Pack Room Leader	P&W	Sebewaing
25 Years	Position	Department	Location
Aaron Lutz	Asst. Master Mechanic	Agriculture	Bay City
David Neumann	Shift Maintenance & Crew Leader	Operations	Caro
James Stephens	Asst. Warehouse Leader	P&W	Caro
Michael Murschel	Grower Accounting Supervisor	Accounting	Corporate Office
Kenneth Rolf	Senior Accounting Manager	Accounting	Corporate Office
Timothy Frostick	Maintenance Manager	Operations	Croswell
Michael Golenberke	Shift Maintenance & Crew Leader	Operations	Croswell
Dennis Monte	Agricultural Manager	Agriculture	Sebewaing
Larry Orndorff	Factory Superintendent	Operations	Sebewaing
Hortencia Flores	General Packaging	P&W	Sebewaing
30 Years	Position	Department	Location
Floyd Torzynski	Welder	Agriculture	Bay City
Michael P. Gies	Boiler House Foreman	Operations	Bay City
Calvin Ostrander	Sugar Boiler	Operations	Caro
William Gough	Factory Manager	Operations	Caro
Sherrie Geitman	Director of Purchasing	Purchasing	Corporate Office
Jeffery Stone	Asst. Storekeeper	Operations	Croswell
35 Years	Position	Department	Location
Kent Graf	Agricultural Manager	Agriculture	Caro
Thomas Kade	General Maintenance	Operations	Carrollton
40 Years	Position	Department	Location
Thomas Schlatter	Agriculturist	Agriculture	Bay City
James Keidel	General Foreman	Operations	Bay City
James Kurish	Shift Maint. & Crew Leader	Operations	Caro
Ronald Markey	Senior Buyer	Purchasing	Corporate Office

**James Ruhlman**, Vice President of Administration, is responsible for Packaging & Warehousing Operations, in addition to overseeing the Safety, Human Resources and IS Departments, and has been with Michigan Sugar Company for 29 years.

## GET READY TO TAKE THE FIELD FOR THE Michigan Sugar Company 10th Anniversary!

Hit a home run! Join us at the Great Lakes Loons Stadium for our celebration on August 27, 2012!

**GATES OPEN** at 4:30 pm for Michigan Sugar Company shareholders and employees and their guests. Before the game starts, you can watch batting practice, get autographs from players/coaches, take a stadium tour, get pictures with Lou E. Loon, enjoy music from a live band — and top off the evening with a fireworks show! There will also be a bountiful buffet and unlimited soda for all attendees along with chances to win posters, t-shirts and other great items!

Don't get left on the bench!

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# Scholarship Spotlight

## 2012 Scholarship Recipients Announced

### Guy Beals Scholarship

This year's recipient of the Guy Beals Memorial Scholarship is Shaun Roggenbuck, son of Doug and Debbie Roggenbuck of Harbor Beach. Shaun has been involved in the Youth Sugarbeet Program for the last ten years. He has an older sister in college and a younger sister still in school at Harbor Beach.

Shaun received the Youth Program's Premier Grower Award in 2009 and 2010. He earned top honors in 2011 by receiving the Prestige Award.

Shaun graduated from Harbor Beach High School in June 2012. While in school, he participated in the sport of hockey, was a member of the National Honor Society, and attended the Huron County Technical Center where he learned the "construction trades."

Working on the farm is Shaun's real passion. The family farm, Helena Valley Farms, is owned and operated by Shaun's grandfather, Mike, his father, Doug, and uncle, Jim. The farm encompasses 5,500 acres of tillable land; 1,500 acres of which are sugarbeets. Shaun can operate any machine on the farm, including the sugarbeet planter and the Ropa Tiger self-propelled beet harvester. He also operates one of the combines and tractors wherever needed. Helena Valley Farms feeds over 1,200 head of beef cattle, annually, which Shaun helps to feed and keep healthy.

Shaun plans to stay on the farm and continue to develop his operating and farming skills. When not working, he enjoys riding ATVs and snowmobiling in the winter. ■



Shaun Roggenbuck is the recipient of the 2012 Guy Beals Scholarship.

### Albert Flegenheimer Memorial Scholarship

Alyssa Brown of St. Louis, Michigan, is this year's recipient of the Albert Flegenheimer Memorial Scholarship. She is the daughter of proud parents, Matt and Nanette Brown. This year, we had some excellent candidates and this made the selection that much more difficult.

Alyssa is a very outstanding student and individual, both with her educational accomplishments and her social activities. Alyssa has participated in the Sugarbeet Project for nine years and earned the Premier award in 2004, 2005, 2006, 2007, and 2010. Alyssa graduated from Breckenridge High School with a 4.0 GPA. While in high school, she was involved in many activities. She participated in the Beebe Beef 4-H Club where she served as president for two years. She was also in FFA and was the junior vice president. Alyssa has held the office of class president for two years, was on the student council, and in the National Honor Society. She has traveled to Marion County, Texas, and Shawnee County, Kansas, with the 4-H Exchange Club.

Alyssa is very involved in activities in the community and was involved in Food for America Day, Bullying Hurts, Habitat for Humanity ReStore, Food with Friends, Golden Grocery Bag Food Drive, and many more. Alyssa also competed in volleyball and softball in high school where she had All State Academic, team captain, and All TVC West Honorable Mention. Alyssa also attended classes to become a certified nursing assistant (CNA) and will be starting nursing school next year as one of only a few who were accepted as a freshman into the program. Alyssa will be attending Saginaw Valley State University and plans to become an RN and work in oncology. She states that her parents told her "As long as you do your best, we will be happy," and this stuck with her through her four years of high school. Alyssa is a very dedicated and committed student, and it is evident she will have a bright future! ■



Alyssa Brown, 2012 Albert Flegenheimer Memorial Scholarship recipient.



# 2012 MICHIGAN SUGAR QUEEN

by Barb Wallace, Queen Coordinator

**And the Sweetest Girl in Michigan is ...** Taylor Janicek of Corunna. Also crowned were Stefanie Denstedt, of Lupton, as first runner-up, and Ashli Maser, of Au Gres, as second runner-up, at the 48th Annual Michigan Sugar Festival in Sebewaing on June 15.

Taylor is the daughter of Gregg and Kellie Janicek of Corunna. Taylor is a 2011 graduate from Corunna High School and is currently attending Michigan State University majoring in agri-business management with a minor in agronomy.

First runner-up, Stefanie, is the daughter of Larry and Diane Denstedt of Lupton. Stefanie graduated from Ogemaw Heights High School in 2010 and attends Kirtland Community College where she is majoring in nursing.

Ashli Maser, second runner-up, is the daughter of Rodney and Jennifer Maser of Au Gres. Ashli, recently graduated from AuGres-Sims High School. Ashli will be attending Saginaw Valley State University pursuing a degree in biochemistry with the intent to become a dentist specializing in orthodontics.

The Royal Court will be touring the state on the Pioneer Sugar float while making appearances in many local parades. Beginning with the Michigan Sugar Festival Grand Parade on June 16, 2012, they will also appear in

two national parades; the National Cherry Festival Parade and the National Baby Food Festival Parade in July; as well as the popular Blueberry Festival in Montrose and the Fudge Festival on Mackinac Island in August.

The Queen and Court may be coming to your hometown soon so be sure to check the calendar of events under the community tab on our website ([www.michigansugar.com](http://www.michigansugar.com)) for the upcoming parades and appearances for the 2012 Michigan Sugar Queen and Court.

Michigan Sugar Company solely sponsors the Michigan Sugar Queen competition. As the sponsor, the Company and grower-owners provide the queen with a \$2,000 scholarship for use at the university of her choice. The first and second runners-up will each be awarded a \$1,000 scholarship. ■

Michigan Sugar Queen Taylor Janicek, center, is flanked by her court members, Stefanie Denstedt, left, first runner-up and Ashli Maser, right, second runner-up, just after the annual crowning ceremony on June 15 in Sebewaing.



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## Sprinkling a Little Sweetness Around Mid-Michigan...

Michigan Sugar Company is pleased to participate in and support so many regional events and activities. Here are just a few highlights...

- 1 2011 Sugar Distribution:** Free sugar is given annually to qualifying local organizations.
- 2 Annual Summer Trip:** Allows young people to explore the history of Michigan agriculture, such as visiting Henry Ford Museum.
- 3 Taste of Home, Grand Rapids:** A celebration of food and cooking.
- 4 Miss Michigan 2008 & Zehnders:** Promoted "Select Michigan" products (blueberries and Pioneer® Sugar) at a Kroger store in Detroit.
- 5 Sugar Queen & Parades:** The Sugar Queen and Court participate in many festivals and parades!
- 6 Habitat for Humanity:** Michigan Sugar Company contributes employees' time as well as funds toward the cost of lunches for workers.





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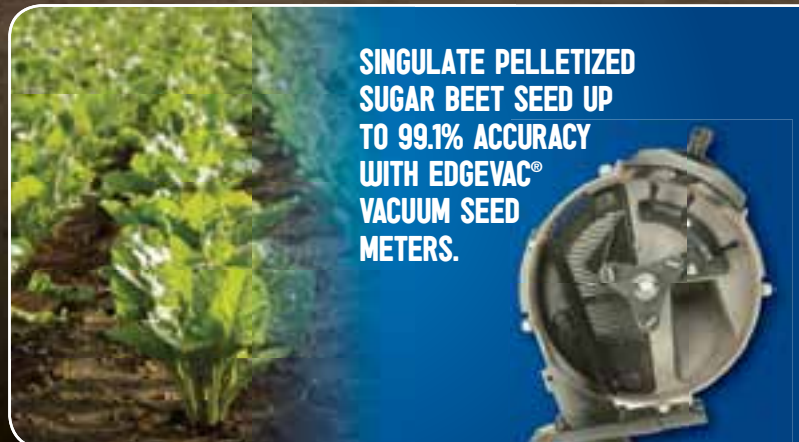
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