FALL 2007

THE NEWSBEET

MICHIGAN SUGAR COMPANY

root of the BUSINESS

By Mark Flegenheimer, President and CEO

As harvest is about to get underway, we mark an important milestone in history in the sugarbeet industry. This year, 250 acres of Roundup Ready® sugarbeets were grown in Michigan. Early this fall they will be harvested and processed at the Croswell factory during the first few weeks of campaign. This commercial demonstration is paving the way for next year when Roundup Ready beets may be grown on nearly half of our acres. Combating weeds has always been a challenge for our shareholders. Having sugarbeet varieties that can tolerate Roundup is a tool many growers have dreamed about for decades. It is now a reality.

I believe that developing varieties through biotechnology, that will make weed control easier, is only the tip of the iceberg. Creating varieties with this technology will result in sugarbeets with a higher sugar content, better storability and improved resistance to disease.

With high competing crop prices, we, as a co-op, are doing what we can to keep beets an attractive part of your rotation. Roundup Ready sugarbeets are one more tool to make beets easier and more profitable to grow. Maintaining maximum beet acreage and throughput at the factories of your co-op will allow beets to compete with other crops.

This year, the farm bill expires and our representatives in Washington, D.C., are currently working on its replacement. The House of Representatives recently passed their version of a farm bill and the Senate will begin their discussions in early fall. The sugar provision in the House's farm bill is good for our industry. It increases the loan rate for the first time in over 20 years, sets a minimum allotment quantity and institutes a sucrose-to-ethanol program to absorb excess supplies caused by imports. These changes, along with other enhancements (see Ray VanDriessche's Washington article, Page 4) will provide a solid foundation for our industry and our co-op to compete and prosper in this very competitive environment.

The future is now. This issue of *The Newsbeet* covers topics that will affect our industry, our co-op and our shareholders now and for many years to come. I hope the articles in this issue assist you in your production of sugarbeets in the coming years and spark your imagination about the possibilities in the future.

Good luck with your harvest. I hope it is safe and bountiful.

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Cover: A beautiful Frankenmuth area home next to the Cercospora leafspot nursery on Wayne Hecht's farm.

2007 CROP UPDATE

A LOOK BACK AT HARVEST AND OUR STORAGE SEASON

By Paul Pfenninger, Vice President of Agriculture

Our first beets were planted back on Tuesday, March 27. A total of 6,135 acres were planted over the next few days, before rain arrived on March 31. The weather turned cold and wet once April arrived, and no beets were planted between April 1 and April 15. Planting resumed slowly on April 16. A majority of our crop was planted in a seven-day span between April 20 and April 26. Approximately 106,000 acres, or 66 percent of our total acreage, was planted at that time. There were 18 days with measurable rain between the first day of April and the last day of May, so planting of the 2007 crop did have a few challenges.

Once the crop emerged, we had several days where frost was a concern. Nighttime lows caused frost on three different occasions – May 12, May 18, and May 20. Damage from the frost was minimal, but did stress the newly emerged crop.

In the end, the following report was generated:

Acres Contracted	162,717	
Acres Planted	159,995	
Acres Replanted	4,856	(3.0%)
Acres Abandoned	1,032	
Acres for Harvest	158,963	

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In 2006, we harvested 163,929 acres of beets. The number in 2007 is reduced because we purchased 6,121 acres in the buy-back program and the base acreage was reduced accordingly.

Harvest is still scheduled to begin in mid-September, and with an average yield of 21.5 tons per acre, we are still looking at a 160-day campaign. The Early Delivery Premium, which was put into place in 2006, was successful in its inaugural year, and we expect it to work this year as well. Once we start our factories, it is imperative that we maintain a supply of beets, regardless of any outside factors.

What's new in 2007? We are working on a phone-blast system which will notify every grower via a "primary phone number" of any changes in beet delivery schedules. This system will help us communicate with every grower in a more timely fashion during harvest. The phoneblast system will be used for early delivery announcements and any other unexpected changes in delivery during open piling. This system will be especially beneficial should we encounter any shutdowns in delivery due to frost/freeze or warm temperatures.

Crop Year 2007 will also be the first year of our new "Quality Payment Program." Your payment will include the Clear Juice Purity (CJP), along with your sugar content, to calculate a Recoverable White Sugar per Ton (RWST). In the past, we have analyzed your sugar sample for CJP, but payment was based on percent sugar only. Quality is very important to the Cooperative.

In 2007, you will also see many more ventilation tubes in Bay City and Sebewaing and also a few in Caro for the first time. Since our first study in 2005, we will add approximately 220,000 ventilated tons this year at the following sites:

Sebewaing	—-	90,000 tons
Bay City	—-	110,000 tons
Caro	—-	20,000 tons

When added to the tons ventilated previously, we will have 270,000 tons of ventilated sugarbeets, in total, which is about 8 percent of the crop. New technology and the use of computers make ventilation a very beneficial capital expenditure.

On behalf of the entire Ag Staff, we wish you a very safe and successful fall harvest.

HOUSE FARM BILL PASSED BY CONGRESS

By Ray VanDriessche, Director of Community & Government Relations

Despite efforts by Congressmen Ron Kind (Wisconsin) and Jeff Flake (Arizona), who submitted the Kind-Flake Amendment as a means to derail the farm bill proposed by the House Agricultural Committee, Congress voted to approve the bi-partisan farm bill package on Friday, July 27. The passage of the Bill was the result of the willingness by Ag Committee Chairman Collin Peterson of Minnesota to include and allow all members of the Ag Committee, Republican or Democrat, freshman or seasoned legislator, to influence the outcome of the final package. The end result was a package that included compromise by all in an effort to work within budget constraints to reduce payments to the major commodities and at the same time make farm bill funds available to specialty crops for the first time ever. The package also included an increase to the Food and Nutrition Program of $4 billion. The method of funding the $4 billion increase, which was considered a means of closing a loophole that allowed foreign companies to escape paying taxes by one party, was considered to be a tax increase by the other party. This difference in opinion caused a bailout at the last minute by most Republicans who had committed to supporting the farm bill due to budget concerns.

KEY ELEMENTS OF THE SUGAR PROVISION IN THE HOUSE AG COMMITTEE'S 2007 FARM BILL
(Source: American Sugar Alliance)

1. Retain inventory management approach.
   - No payment to producers
   - USDA balances supply and demand to avoid sugar loan forfeitures by:
     a. Controlling domestic sales – (marketing allocations): When U.S. production exceeds USDA estimate of market needs, sugar producers store surplus sugar at their own expense ("blocked stocks").
     b. Controlling imports: Tariff-rate quota on imported sugar
        - Mexican imports under NAFTA as of January 1, 2008, remain unrestricted as of this time.

2. New market balancing mechanism: Limited sucrose to ethanol program
   - To be used only when imports exceed domestic demand
   - Not to be used to clear domestically produced blocked stocks
     - USDA would estimate import-oversupply amount, invite bids from ethanol producers to buy sugar and invite bids from sugar producers to supply sugar.
     - A tool to be used to deal with Mexican import uncertainty — which may not be needed in some years
     - Helps to address U.S. desire to reduce dependence on foreign oil

3. Minimum Overall Allotment Quantity (OAQ)
   - U.S. producers' share of the U.S. market – set at no less than 85% of domestic consumption
     - Allotments no longer trigger off with import surge

4. Import management
   - Restricts initial Tariff Rate Quota (TRQ) announcement in August to trade agreement mandated minimum (WTO + CAFTA)
   - Would mean no TRQ increase, unless there is a crop emergency, until April 1 of the next year.
     - TRQ could then be increased if domestic production, plus initial TRQ, plus Mexican imports are inadequate to meet domestic market demands.

5. Loan rate increase: First since 1985 (inflation since 1985 = 90%)
   - Refined sugar loan rate increased 0.6 cents/pound = 60 cents/cwt increase
   - Raw cane sugar loan rate increase of 0.5 cents/pound

Another amendment that had been put before Congress was the Davis-Kirk Amendment. The amendment, sponsored by Illinois Congressmen Danny Davis and Mark Kirk, both with candy manufacturers in their districts, could have rendered the sugar program a major blow. It would have eliminated the first proposed loan rate increase in 22 years, imposed a forfeiture penalty, effectively reducing the loan rate by six percent, and would have eliminated a much needed market balancing mechanism in response to oversupplies in the U.S. market due to highly subsidized foreign sugar.

The final passage vote in favor of the House Farm Bill was 231-191.

The President has threatened to veto the farm bill saying that the House Bill is too costly and fails to significantly cut subsidies, which is a sticking point in WTO negotiations. A farm bill has never been vetoed by a President. A compromise on the funding problem is expected to be worked out in the Senate conference package, which would avoid a veto by the President.

The American Sugarbeet Growers Association, in conjunction with U.S. Beet Sugar Association, coordinated a week long lobbying effort at Capitol Hill congressional offices just prior to the vote. Four lobbying teams, with team leaders from Michigan Sugar Company, American Crystal Sugar Co., Amalgamated Sugar Co. and Southern Minnesota Sugar Co., along with two union members from beet processing facilities in the Red River Valley, called upon key legislative offices in an effort to educate legislators on the devastating impact the Kind-Flake and Davis-Kirk Amendments would have on the sugar industry. Much of the initial groundwork had been laid by our Washington representatives and their staffs prior to our legislative visits. The visits to the members and their staffers allowed us to identify and educate legislators who had concerns. On our way home, as we heard of the wide margin of votes in favor of the farm bill and against the Kind-Flake and Davis-Kirk Amendments, we had a feeling of "mission accomplished."

The Kind-Flake Amendment would have essentially gutted the farm program as we traditionally have known it, slashing commodity program payments drastically and essentially eliminating the sugar program. Just prior to the vote, the amendment was softened to garner more support, but was overwhelmingly defeated by a bipartisan vote.

WHAT IS THE NEXT STEP IN THE 2007 FARM BILL PROCESS?

Legislators were out on summer recess and resumed session after Labor Day. The September legislative calendar will most likely be taken up by appropriations bills and the Iraq emergency funding debate, which needs to be completed before the beginning of the new fiscal year beginning October 1. It is very likely the farm bill will not be on the floor until October. The Senate Agriculture Committee needs to get a consensus on their version of the farm bill, which has not been an easy task. If time runs out, their options are to pass the House bill or extend the current bill.

The overwhelming defeat of the Kind-Flake and Davis-Kirk Amendments is proof that common sense is still alive and well on Capitol Hill!

The sugar industry is very appreciative of those legislators who voted in favor of the House Farm Bill and those who defeated the Kind-Flake and Davis-Kirk Amendments. A note of appreciation has been sent to all legislators who supported us.

MEXICO/U.S. SWEETENER NEGOTIATIONS

With January 1, 2008, just around the corner, discussions between the U.S. and Mexican sweetener industries have seen renewed interest in trying to arrive at a negotiated settlement. Talks have taken place over the last three months between the U.S. sugar industry's Mexico Task Force and the Mexican Sugar Chamber (Mexican mill owners). Discussions have been positive and encouraging, seemingly moving in the right direction. If an agreement is reached between the two industries and the legal work has been done, the next major hurdle will be to get the U.S. and Mexican governments to legislate and implement the agreement. If this can all be accomplished, the result would be a balanced North American sweetener market giving much needed stability to the market and instilling confidence in investing in the future of our business.


THE FUTURE
IS N

NOW

FUTURE OF SUGARBEET PRODUCTION — POTENTIAL OF NEW TECHNOLOGY

Thomas K. Schwartz, Executive Vice President Beet Sugar Development Foundation & American Society of Sugar Beet Technologists

As with anything, especially agricultural production systems, the future of sugarbeet production is unknown, and is really only limited by the minds and imaginations of those whose hands in which the future lies. It only takes a look back in history to see that advancements, however slow we thought at the time, actually came quite rapidly. Also, sciences and technologies that were unheard of, or only dreamed about, have now become reality and are rapidly replacing or enhancing our traditional sciences.

Think about this: It was not until after World War II that true mechanization was introduced into the sugarbeet industry. Until that time, most all operations were done by hand labor. In 1949, only half of the sugarbeet crop in the US was harvested by machine; by 1952, it was nearly 100 percent. In fact, that is exactly why the industry created the Beet Sugar Development Foundation, to aide in the development of mechanization of the sugarbeet industry. The first employees of the Beet Sugar Development Foundation were all engineers.

Think about this: It was not until the mid-1950s that we had commercial monogerm sugarbeet seed. This was discovered by V. F. Savitsky in an Oregon seed field, planted to Michigan Hybrid-18. There were only five plants found; only two were true monogerms and only one became extensively used. This means the entire advancement into monogerm cultivation could have been missed had it not been for one scientist and one plant. That is just the agricultural side of our business; the processing side has made similar strides with such things as molasses desugarization and steam drying of pulp.

We have come a long way in the past 60 years. So to predict where we will go in the next 60 is nearly impossible. It certainly will take a crystal ball and then some. In the mid-20th century, agriculture was not even thinking about biotechnology as we know it today. No one could have predicted we would be inserting specific genes into specific plants to accomplish specific functions and initiate specific traits. But here we are on the verge of introducing biotechnology to the sugarbeet industry. Roundup Ready® is just the tip of this iceberg.

So what is the future of sugarbeet production and what are the potential new technologies? I think we must first break this into two avenues of thought. First, what we think of as traditional sugarbeet production and secondly what we might call non-traditional production, or production for something other than sucrose.

When we think of our traditional sugarbeet production, we think of various ways to increase yield, either tons per acre or sucrose content, or reducing our costs of production. Through the efforts of our public sector scientists, those being university and United States Department of Agriculture, Agriculture Research Service, and our private sector scientists, researchers within our sugar companies and our supplier industries, such as seed companies, we find that we continue to make advancements in these areas. However, there are limits to how many tons of sugarbeets can be produced on a given area of land and how high of sucrose content a beet can obtain.

We can and should continue to fine tune such things as seeding rate, fertilizer management, water management (in areas where it is applicable), traditional disease and insect control and traditional weed control to name just a few. However, I do not see where improvements in these areas alone will result in monumental strides in either yield increase or cost savings. However, having said that, when you are working in an industry where the margins are as thin as ours, every little bit is helpful.

Earlier I mentioned that Roundup Ready is just the tip of the iceberg. I truly mean this in several ways. The introduction of Roundup Ready sugarbeet into commercial production will open the door for seed companies and technology companies to develop and advance other traits in sugarbeet through the use of biotechnology. It is certainly no secret that these companies have been working on such traits as disease resistance, insect resistance, nematode resistance, drought stress, increased sucrose content, and probably others. However, until acceptance of sugar produced from a biotech sugarbeet was achieved; substantial investment into these types of activities was not anticipated. Now I think we can look forward to increased activity in this type of research and development. These types of developments could both increase yield and decrease cost in the future. However, as I stated before, there are limits to how much we can increase yield and how much we can decrease costs.

If we are really looking into the future and the potential of using new technologies, I think we need to look outside the "sugar bag." What do I mean by this? We have long thought of ourselves as sugar producers, and only sugar producers. Yes, we also produce pulp, which we sell into the feed market and molasses, which is mostly sold into the feed market, but mainly we produce sucrose. There is nothing wrong with this; there is now and always will be a need and demand for sucrose, and we have become and are getting better each year at being a low cost supplier of this commodity. However, again, there is a limit to the market for sucrose – really the only way to increase this market is to increase consumption, and that we as an industry are actively pursuing. If we are to grow our industry, we need to look beyond sugar or sucrose. There is nothing new and startling about this concept. Many people have been thinking about it for years, and I think we are very near the verge of taking some steps in this direction. Recently, I spoke at a meeting of the World Association of Beet and Cane Growers. I was visiting with Bill Hejl, who was then the President, and is a beet grower from the Red River Valley. I asked Bill about the name of this organization, and why it did not contain the word sugar. Bill's response to me was that just several years ago they removed the word sugar from the name of the organization because they felt it restricted the future direction of the group. Don't get me wrong, I am not advocating removing sugar

FUTURE OF SUGARBEET PRODUCTION — POTENTIAL OF NEW TECHNOLOGY (CONT'D.)

from the name of our industry, because it is the backbone of what we do; however, I hope the future holds other avenues.

Of course, the first avenue to come to mind is biofuels. There has been considerable press in the past few years, and even legislation which may hold promise for agriculture and for an industry such as ours. Let's not limit our thinking to ethanol, although it is currently the most common form of biofuels. There are other forms of biofuels such as methanol, butanol and biodiesel which, are formed through various fermentation processes and cellulosic conversions, are possibilities for the future. Although our current sugarbeets could work for these processes, it might be advantageous to design beets through both traditional breeding and biotechnology for these types of purposes.

Recalling that the sugarbeet plant is a very efficient producer of the carbohydrate, sucrose, it is possible to use the sugarbeet plant to produce something other than sucrose. With new technologies emerging, the possibilities of manipulating the sugarbeet plant to produce specialty chemicals for manufacturing of such things as bioplastics, biopharmaceuticals and other renewable resources are not out of the question.

Some of these things may seem a long way off, and indeed some may never become practical, but remember, it was only about 60 years ago that we were growing multigerm seed and manually doing most of the work.

ROUNDUP READY® EXPERIENCES FROM IDAHO

By Stacey Camp, Manager of Agricultural Services, Amalgamated Sugar Co., LLC

With the need for better weed control and the reduction of production expenses, the Beet Sugar Development Foundation (BSDF), with the cooperation of The Amalgamated Sugar Company LLC, proposed a research project to plant approximately 270 acres (four half pivots) of Roundup Ready® sugarbeets in 2006. An equal number of test acres (the other half of the four pivots) were planted to a conventional variety to establish as true a baseline as is practically possible from a commercial farm scale operation. The Roundup Ready beets have been grown, harvested, stored in potato sheds and processed. The conventional sugarbeets were harvested and hauled to the grower's respective receiving stations for normal storage and processing. The products from both the conventional and Roundup Ready varieties were sold as part of the test with all products from the Roundup Ready beets segregated from conventional products so that the Roundup Ready product did not enter unauthorized markets.

Fields were prepared according to the grower's standard production practices and adjustments were made as needed. The seed size was matched with the planter. Good stand establishment was achieved in all fields. Three of the four fields had stands of approximately 165 beets per 100 feet of row; and the fourth field had a stand of 195 beets per 100 feet of row.

HERBICIDES

Two applications of Roundup® was sufficient to give excellent weed control in the demonstration fields. One of the four fields, with low weed pressure, was treated with one Roundup spray and the weed control was good; however, two sprays could have made for excellent weed control. It is advisable to use at least two Roundup sprays.

Wind will be a concern when applying Roundup. In all fields there were delays in Roundup applications while waiting for minimal wind speed. Although there is a larger window of opportunity to spray Roundup than conventional herbicides, the window is not as wide as one might think. Depending on temperature, the weeds can grow rapidly and put spraying behind schedule.

The conventional side of the fields had weed escapes even though early weed control looked good (see photo on next page). The conventional side of this field was not hand weeded for demonstration purposes.

One field received Outlook® herbicide in a 32-row strip two days after the first Roundup application and to another field we added Outlook herbicide with Roundup at the first application timing in a 32-row strip. This was done to test if one application of Roundup with a lay-by of Outlook would be sufficient for weed control. The results showed good weed control, but the two applications of Roundup showed excellent control. At the end of June, the fields were flown and infrared pictures taken. It was interesting to note that the sugarbeet foliage was slightly stunted (visually and infrared) where Outlook was applied. It was not determined if yield was affected by Outlook.

The project in 2006 did not show dust from the spraying equipment to be an issue. The moisture in the soil profile was good from the moisture received the previous winter and spring. This year, Amalgamated has a similar Roundup Ready project and there have been weed escapes from dust on the weeds from the movement of the tractor and sprayer. It would be beneficial to spray soon after an irrigation or rain to aid in dust control. Another solution would be to offset where the sprayer goes through the field in sequential passes. This works to help control the escapes.

It will be important to broadcast apply Roundup with 10 to 15

ROUNDUP READY® EXPERIENCES FROM IDAHO (CONT'D.)

gallons of water versus banding to avoid getting Roundup resistant weed escapes. Using the fully recommended Roundup rates will also help reduce the risk of resistant weed escapes.

One concern is, weeds may not be controlled beneath the canopy. This year, drop nozzles were tried and were successful if the older leaves were not lying on the ground and making a barrier so Roundup could not contact the weeds.

CULTIVATION

Three of the four growers reduced the number of cultivations from three to one while the fourth field had three cultivations on the Roundup Ready side of the field. The yield was excellent on the Roundup Ready sides of the field with reduced tillage. Growers will be looking at the least amount of tillage as possible to find savings in the future.

NITROGEN

The Roundup Ready beets showed vigorous growth throughout the season where the leaf canopy of the conventional variety was stunted from the conventional sprays. Petiole nitrogen samples were compared throughout the season and the Roundup Ready beets appeared to use the nitrogen earlier since they were not inhibited by conventional sprays.

Roundup® side of the field (on the left) and conventional side (on the right).

CONCLUSION

Since the Roundup Ready and conventional sides of the field are different varieties, we cannot compare the yields. The Roundup Ready Project demonstrated the financial benefits of growing Roundup Ready sugarbeets compared to conventional practices. There are savings in fewer cultivations and hand labor, but there is an added expense for the technology.

It is clearly recognized that herbicide resistance, realized through the use of biotechnology for effective weed control in sugarbeets, opens the door to future additional developments in disease and insect resistance, quality improvements, drought tolerance and other benefits. The potential benefits to the sugar industry are significant.

ROUNDUP READY® SUGARBEET COMMERCIAL DEMONSTRATION IN MICHIGAN, 2007

By Corey Guza, Ph.D
Agronomist

Up to 40,000 units, or approximately 80,000 acres, of Roundup Ready sugarbeets may be planted by Michigan Sugar Company growers in 2008. It is important to test Roundup Ready sugarbeets on a large scale to ensure that the technology meets the expectations of the industry. A 500-acre demonstration trial was established in the East District of Michigan Sugar Company, comparing 250 acres of commercially planted varieties to 250 acres of Roundup Ready varieties. The purpose of the Roundup Ready commercial demonstration trial is to evaluate the benefit of Roundup Ready sugarbeets compared to conventional varieties. The test will demonstrate that sugar from Roundup Ready sugarbeets is the same as sugar from conventional varieties. A key component to the demonstration trial is to ensure that Roundup Ready varieties will perform similarly to conventional varieties. This includes disease resistance and yield. Improvements in weed control were also evaluated.

Four fields were established comparing Roundup Ready varieties to conventional varieties. The Shaw Brothers Farms trial is located west of Sandusky and north of M-46 on the southwest corner of Arnold and Richards Roads. The Roundup Ready variety was planted on the east half of the field. The Gentner-Bischer trial is located northeast of Sandusky on Snover Road, 1.5 miles east of Ruth Road. The Roundup Ready varieties were planted on the east half of the field. The Stoutenburg trial is located on the northwest corner of Ruth Road and M-46. The Roundup Ready variety was planted in the north half of the field. The Thom trial is located southeast of Sandusky on Hall Road 1.5 miles west of Brown Road. The Roundup Ready variety was planted on the east half of the field. The Thom trial was the first large scale planting of Roundup Ready sugarbeets in Michigan.

All of the trials were planted in late April. Sugarbeets struggled to emerge due to soil crusting. Timely crust-busting resulted in good emergence and stand

TABLE 1

Timing and type of weed management applied to the Roundup Ready sugarbeet commercial demonstration trial at each location

Allan K. Shaw Inc		D & D Thom Farms		Gentner-Bischer Farms LLC		Stoutenburg Farms	
Roundup Ready	**Conventional**	**Roundup Ready**	**Conventional**	**Roundup Ready**	**Conventional**	**Roundup Ready**	**Conventional**
5/22[a] Roundup[b] WeatherMax 22 oz/A	5/7 Micro-rate[c] Betamix 10 oz/A	5/31 Roundup WeatherMax 22 oz/A	4/23 Roneet 4 pts/A	5/24 Roundup WeatherMax 22 oz/A	5/18 Micro-rate Betamix 10 oz/A	6/1 Roundup OriginalMax 22 oz/A	5/19 Micro-rate Betamix 9.6 oz/A
6/25 Roundup WeatherMax 22 oz/A	5/13 Micro-rate Betamix 10 oz/A	6/20 Roundup WeatherMax 22 oz/A	5/4 Micro-rate Betamix 10 oz/A	6/11 Cultivation	5/24 Micro-rate Betamix 12 oz/A	6/25 Roundup OriginalMax 22 oz/A	5/31 Micro-rate Betamix 13 oz/A
	5/22 Micro-rate Betamix 10 oz/A	7/16 Roundup WeatherMax 22 oz/A	5/18 Micro-rate Betamix 12 oz/A	6/22 Roundup WeatherMax 22 oz/A	6/11 Cultivation	8/3 Roundup OriginalMax 32 oz/A	6/7 Micro-rate Betamix 16 oz/A
	5/30 Cultivation	8/13 Roundup WeatherMax 22 oz/A	5/28 Micro-rate Betamix 12.8 oz/A	7/21 Roundup WeatherMax 22 oz/A	6/12 Split-rate[d] Betamix 3 pt/A		6/15 Micro-rate Betamix 16.7 oz/A
			6/6 Micro-rate Betamix 12.8 oz/A		6/22 Split-rate Betamix 3 pt/A		
			6/22 Micro-rate Betamix 16 oz/A				
			6/27 Cultivation				
			8/2 Cultivation				
			8/10 Hand weeded				

[a]Date weed control treatment was applied.
[b]AMS was added at a rate of 17 lbs per 100 gal of spray solution when using Roundup WeatherMax and OriginalMax.
[c]Micro-rate also included UpBeet 1/8 oz/A, Stinger 1 oz/A, and MSO 1.5% v/v.
[d]Split-rate also included UpBeet 1/5 oz/A and Stinger 2 oz/A.

establishment. Stand counts taken 30 days after planting resulted in over 120 beets per 100 ft of row. Row spacing is 28 inches between rows in each of the trials. Quadris was applied in each of the fields, except for the Thom trial, at the 6 leaf stage. Three to five micro-rate herbicide applications were made on the conventional sugarbeets and two to four glyphosate applications of 22 oz per acre of either

Roundup WeatherMax or Roundup OriginalMax have been made to the Roundup Ready sugarbeets starting at the 2 to 4 leaf stage (Table 1).

Timing of the glyphosate application will be critical. In the Thom trial, the initial Roundup WeatherMax application was made at the 4 to 6 leaf stage of sugarbeets and weed size averaged four inches. Applying glyphosate when weed size averages four inches may be adequate for other crops but, in sugarbeets it is too late. Sugarbeet stunting from weed competition was observed in the trial as well as weed uptake of fertilizer intended for the sugarbeets (see photo). Weed control was generally improved with Roundup Ready sugarbeets. Only the commercial varieties were cultivated for weed control.

The 2007 Roundup Ready sugarbeet commercial demonstration trial has added some excitement to the growing region. Many lessons were learned and new questions need to be answered. Timing of the glyphosate application is critical. Dust on weed leaves and rainfall less than one hour after a glyphosate application will reduce weed control with glyphosate.

Should 100 percent weed control be the new goal of Michigan Sugar Company growers? How does weed population impact glyphosate application timing? Is cultivation no longer necessary?

There have been many visitors to the Roundup Ready sugarbeet demonstration fields, including Monsanto and seed company representatives, students from the beet school that was held in Michigan this summer, along with the USDA, university and sugar company personnel from around the country. All of the visitors were impressed with the trials and are looking forward to the results.

(Top): Four-inch weeds in 4 to 6 leaf stage sugarbeets in the Thom trial.

(Bottom): Left side, conventional weed control with Ronet pre and 2 Micro-rate applications. Right side, Roundup Ready sugarbeets before Roundup WeatherMax was applied in the Thom trial.

THE VALUE OF SUGARBEETS IN A CROP ROTATION

Steven Poindexter, MSU Extension Educator Sugarbeet Advancement

Sugarbeets have been an integral part of Saginaw Valley agriculture for over 100 years. Through most of that period, beets have performed well as a high value cash crop when compared to our more traditional crops of corn and soybeans. As with most high value crops, they require intense management and more input cost, along with an increased labor requirement. Currently, net dollars returned per acre from traditional commodities is very competitive with sugarbeets. This has caused some growers to want to reduce or shift out of producing sugarbeets. Before crop shifts are made, growers should consider what history has to tell us about the value of sugarbeets.

Crop diversity is a key to financial stability. Michigan State University Agriculture Financial Summary Reports indicate that, generally producers who include sugarbeets and dry beans in their crop rotation are more economically stable, have a higher net worth and less debt than traditional farmers. Diverse crop rotations generally offer protection against adverse weather conditions such as excess/lack of moisture, freeze/frost issues and pest issues affecting individual commodities.

Sugarbeets are much more tolerant to extreme weather conditions than many of our other crops. In many areas this year, the corn crop has suffered large yield decreases from missing timely rainfall. Sugarbeets, on the other hand, have the unique ability to slow down or stop growth when moisture is limited, and when moisture returns, they resume growing. We have seen many instances of tonnage increases due to late season rainfall resulting in a respectable beet crop.

Diversity of crop production also offers a hedge against low crop prices. It has been obvious in the last few years that typical corn and soybean prices have not been very high. However, in 2007, traditional commodity prices, including dry beans, were all high. It is one of the few times I can remember in my 27 years of working in agriculture that prices are good for all the Saginaw Valley crops. However, history would indicate high commodity prices do not remain high. If we look into the distant future, by 2013 projections are we will transition to cellulose based ethanol production. How will that affect corn prices? Remember, sugarbeet production and processing has been an integral part of the infrastructure and economics of our communities for years. For every dollar generated, the rollover effect is at least three times in the community.

Growers are always concerned about the future of sugarbeet production in Michigan and the United States. Certainly, as a new cooperative, a significant but manageable amount of debt is being carried. As debt is reduced, options increase for larger grower payments, improvement projects for the factory, along with resiliency in case of adversity. As owners of this cooperative, the business will not just leave the state and go to a third world country as we have seen so many times before. New technologies in genetics have promise to make beet production easier and more profitable. Roundup Ready® beets should improve weed control and reduce the number of trips across the field. This technology may also lead to reduction or elimination of cultivation, increased opportunities for cover crops, and increased opportunities for reduced tillage and no-tillage planting of beets. Newer and better sugarbeet cyst nematode resistant varieties are on the way that will increase profits through improved yield. Other genetics are on the way with improved levels of Rhizomania, Rhizoctonia, and Cercospora leafspot resistance. Each of the new genetics will potentially offer yield enhancements, reduction of pesticide use and increased profitability.

Recently, at the National Association of County Agriculture Agents annual meeting and Professional Improvement Conference held in Michigan, over 1,300 people attended from 50 states. Many of the attendees commented on how fortunate we are to have agricultural diversity in Michigan. Many of my colleagues from other states were envious of the amount of opportunities that our growers have to produce crops other than corn, soybeans, and wheat. WE SHOULD NOT TAKE THAT FOR GRANTED.

OBSERVATIONS FROM AN OUTSIDER

By Dr. H. Christopher Peterson, Nowlin Chair of Consumer-Responsive Agriculture and Professor of Economics, Michigan State University

One year has passed since I accepted the position of the cooperative's first outside director. I have served through one complete cycle in the cooperative's life, even if the cycle was a bit backward—starting with harvest, storage, processing, and then planting. I have enjoyed the year (especially given that it was a good one on so many counts), and I would like to share some perspectives on Michigan Sugar.

Let me begin with a few facts from my background that give me some legitimate right to comment on the cooperative's performance. This is the third outside director position I have held—the first two being in the Farm Credit System (the St. Paul Bank for Cooperatives and then CoBank). In addition, I've been doing strategic planning, financial analysis, and related consulting work with cooperative managements and boards since 1974. I have been involved with cooperatives in good times and bad times, helping some out of trouble and assisting others to move from good to superior performance.

My positive impressions of Michigan Sugar began with the interview process by which I was selected. I was one of three candidates for the position, and one of two to interview. The interview process was imposing. You walked into the board room with the entire board and top management staff ready to grill you on your qualifications and motivations to serve on the board. The various board members did not hold back in asking me tough questions about what I would bring to the board, my qualifications, and my limitations. They expressed appropriate concern about my ability to regularly attend, my willingness to challenge management and my fellow board members, and my goals to serve. I obviously passed the grilling—they did elect me. Their care, concern, and challenging approach to the selection process let me know they were serious about my service. Without a question, if that care, concern, and challenging attitude had not been present, I would not have chosen to serve. The members of this cooperative need to know the board and management take their jobs seriously and exhibit a commitment that is appropriately strong and impressive.

A good cooperative board and management need to be effective across a number of factors. Four such factors really stand out in my mind—the presence of an effective business strategy, commitment to financial strength for the cooperative, the ability to contest tough issues in the board room, and an unfailing concern for the members' interests. The board and management of Michigan Sugar exhibit all four characteristics. Let me comment on each one in turn.

Effective business strategy in a basic commodity business like sugar begins with a focus on cost and efficiency. Critical costs (energy, labor, transportation, etc.) are tracked appropriately and actions to lessen those costs are pursued. Process and storage improvements that drive out cost or reduce waste are also continuously on everyone's mind and in their actions. Likewise, maximizing sugar quality and yield spreads the costs over the optimal volume of output. Beyond this sound basic attention to a low cost strategy, Michigan Sugar takes an extra and highly valuable step to focus on improving the top line—optimizing the mix of higher value products for retail sale. Commodity sales at commodity prices are fine, but a real profit boost comes to Michigan Sugar from retail packaged goods and catering to a customer base that will pay top dollar for quality and service.

A financially weak cooperative cannot effectively serve its members

in the long run. Weak cooperatives cannot afford investments in cost improvements and in revenue enhancing product development. The Achilles heel for many cooperatives has been a member base that gives too little equity and thus loads the co-op with too much debt. As a newly formed cooperative, Michigan Sugar had to assume too much debt or it wouldn't have gotten the assets needed to run the business. That's the bad news; the good news is that the board and management have laid out a plan to reduce debt with time and with as little impact on members as possible. The other good news is that the cooperative is otherwise financially strong.

The board room needs to be a place for reasoned and vigorous debate. If decisions are proposed by management and uncontested by the board, the cooperative will not be strong and will not make good decisions in the long-run. Without question, I can give evidence to the fact that decisions and tough issues are contested in the Michigan Sugar board room. I have been especially impressed with the care given to debate. I remember one especially long board meeting that was adjourned to a second day rather than rush a critical decision about the cooperative's future. Committee meetings are likewise full of challenging questions and discussions. Let me also share that too much debate or an unwillingness for board members to come together after debate can be weaknesses and not strengths. Again, I think that the interchange among board members and with management walks the proper line between amount of debate and the needed coming together after a decision is made.

Perhaps I should have started with this fourth factor rather than end with it. It is after all the most important—the members' interests must be paramount in the work of board and management. At Michigan Sugar, it is. I have yet to see a decision debated without numerous references to the members' best interests. Even the financial reports are tailored to focus everyone's attention on the members' beet payment and the drivers that will make that payment go higher or lower. I need to also commend management on this point. The management did not grow up in a cooperative business environment, yet they have embraced cooperative principles with amazing speed and commitment.

I have enjoyed the experience of being on your board. I've re-upped for a full term with the other board members' approval. Is everything perfect at Michigan Sugar? Is every process optimized and every decision "right"? No organization is perfect. There are always improvements to be made. I am confident that the board and management are committed to every improvement and to the members. When we all pull together, the future will be bright for the cooperative and its members.

RESEARCH UPDATE

By Jim Stewart, Director of Research, and Lee Hubbell, Research Agronomist

VARIETY IMPROVEMENT

Over the past ten years, sugarbeet yield has increased at a rate of about one percent per year due to Michigan Sugar Company's variety improvement program. Along with improvements to yield and quality, sugarbeet tolerance to disease such as Rhizoctonia, Rhizomania, Cercospora leafspot and Aphanomyces, and pests like Root Aphid have also improved significantly. Beginning in Spring 2008, we are on track to introduce Roundup Ready® sugarbeets. None of these advances would have been possible without the Official Variety Trial program.

The main purpose of these "Official Variety Trials" is to identify and introduce higher yielding, higher quality, and more disease-tolerant sugarbeet varieties for the Michigan Sugar Company growers. We are evaluating 39 varieties in the Official Variety Trials this year at eight locations. All of the varieties are tested for Cercospora leafspot, Root Aphid, Aphanomyces and

FIGURE 1

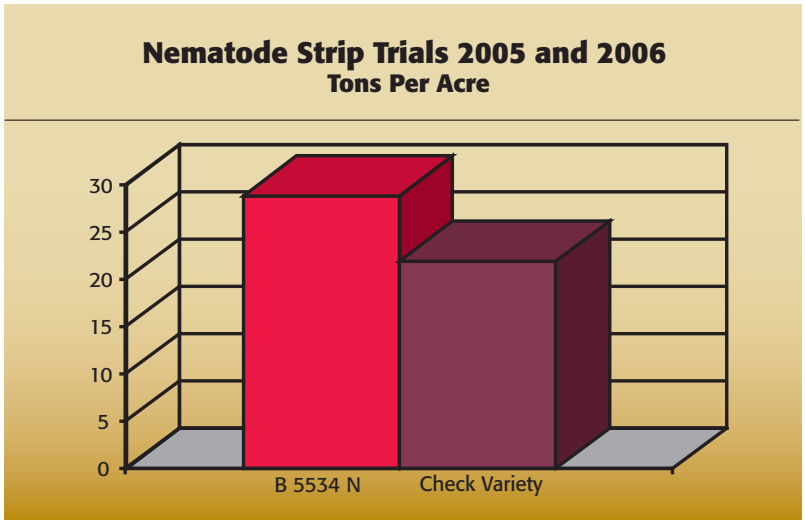


TABLE 1

Sugarbeet yields and quality with nematode varieties (in absence of nematodes) 2006.

Variety	Tons/ Acre	% Suc	% CJP	% Emerg	CLS Rate*
C 963	29.9	18.3	94.1	60.1	3.2
B 5534N	32.5	17.3	93.4	57.0	5.4
B 1643N	33.6	18.4	94.7	67.4	5.3

*A Cercospora rating of over 4 is very poor

Figure 1. Comparison of sugarbeet yield with the nematode resistant variety (B5534N) to a check variety.

Table 1. Yield data comparing 963 to two nematode resistant varieties.

Rhizoctonia resistance. Almost all of the new entries are tolerant to Rhizomania and 19 are Roundup Ready varieties.

We have been evaluating a nematode-resistant variety from BetaSeed since 2005. In strip trials, this variety (Beta 5534N) increased sugarbeet yield by approximately 25 percent. (Figure 1). We are presently working with an improved nematode variety (Beta 1643N) which is higher yielding and has a higher sugar content than the earlier nematode variety (Table 1). The downside of these nematode varieties is poor Cercospora leafspot tolerance.

Of the eight Official Variety Trials, two of the trials look very good, three look fair to good, and three probably will not be good enough to provide reliable data. We have also planted four Cercospora leafspot nurseries. All of the locations look very good; however, the disease moved quite slow this year due to the dry weather. All of the varieties planted by Michigan Sugar Company growers are evaluated in these trials. They are inoculated using diseased leaves kept from previous years. Visual ratings are made by at least three people and ratings will be made from three to five times by each person at each location. There are 234 individual plots at each location. This process ensures our growers have a level of resistance in the varieties that makes Cercospora leafspot more manageable.

TABLE 2

Varieties sold in 2007 or approved for 2008

Level of Rhizoctonia Resistance

Excellent	Good	Fair
HM 9027RR	HM 2779Rz	SX Prompt
HM 9028RR	Beta 5736	Crystal 355
	HM 7172Rz	Crystal 963
	Crystal R509	Beta 5833R
		HM 9029RR
		Beta 5451

NEW PRODUCTS FOR MANAGING CERCOSPORA LEAFSPOT

In addition to Cercospora variety work, we are also conducting seven different fungicide trials for leafspot control in 2007. This work will focus on new products from Bayer CropScience, Syngenta and Sipcam Agro, and new application techniques and timings. Michigan Sugar has taken the lead in developing recommendations for the new group of fungicides in sugarbeets, which we are now using (Headline, Gem, Quadris, Eminent and Enable). We have conducted over 30 research trials in recent years to determine how to best utilize these products.

RESEARCH UPDATE (CONT'D.)

TABLE 3

Comparison of selected approved varieties to three Roundup Ready varieties approved for planting in 2008 (2007 data)

Variety	RWSA	RWST	%Suc	%CJP	Tons/ Acre	% Emerg[1]	CLS Rate[2]	Rhizoc[3]	Aph[4]
HM 9028RR[5]	8281	251	17.1	94.6	32.8	68	3.7	67	99
C 271	8139	259	17.7	94.5	31.1	66	3.3	104	81
HM 9029RR	8128	248	17.0	94.4	32.4	63	3.8	-	136
C 963	8093	258	17.6	94.7	31.0	63	3.2	84	85
HM 9027RR	8023	248	17.3	94.3	32.2	68	3.6	56	131
B 5833R	8020	252	17.1	95.1	31.7	68	3.9	85	-
C R442	7900	257	17.7	94.1	30.6	66	2.9	-	84
HM 79RZ	7872	248	17.1	94.2	31.6	63	3.5	72	90
C 355	7758	253	17.3	94.5	30.4	64	1.9	84	86
HM 2771RZ	7437	257	17.5	94.9	28.6	60	3.2	117	89
HM 7172RZ	7343	246	17.1	93.8	29.8	63	3.3	76	118

[1]Emergence data from 2007
[2]CLS Rate: 0-9 Scale with 0 = no disease and 9 = complete infection, over 3.6 = poor
[3]Rhizoc: % of E17, higher number = less resistance to Rhizoctonia, over 90 = poor
[4]Aph: % of E17, higher number = less resistance to Aphanomyces, over 130 = poor
[5]RR: Roundup Ready

RHIZOCTONIA RESISTANCE NURSERIES

Rhizoctonia Crown Rot is a problem in parts of the Michigan growing area and can cause significant yield loss. In previous years, varieties have been tested for resistance in Fort Collins, Colorado, in a trial conducted by the USDA. In 2006, we started conducting this nursery here in Michigan to help ensure reliable results. We also produced our own inoculum. The trial was a success. We planted two locations of this nursery in 2007. Sugarbeet growth has been good. On July 24, our two nurseries were inoculated. We collected resistance data from both locations late in August. Dead beets will be counted and all roots will be dug and evaluated for disease at harvest.

If Rhizoctonia is a problem on your farm consider planting a variety with Rhizoctonia resistance (Table 2). There are also Roundup Ready varieties being tested for the first time in 2007 that contain some resistance to Rhizoctonia (Table 3).

ROUNDUP READY® VARIETIES

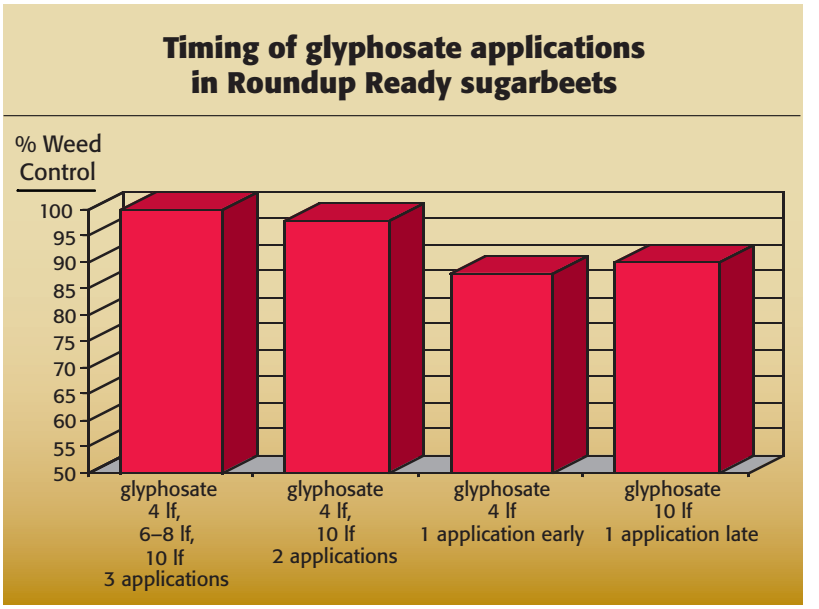
Three Roundup Ready varieties have been granted special approval for planting in 2008. These varieties, HM 9027RR, HM 9028RR, and HM 9029RR, did not make full approval, but came close. Compared to our approved varieties, these specially approved varieties have a very high yield but are relatively

low in sugar and are borderline for Cercospora tolerance. They generally emerge well and two of the three varieties have good Rhizoctonia tolerance. Preliminary results indicate that two of these varieties do not have good tolerance to Aphanomyces (Table 3).

ROUNDUP READY® WEED CONTROL RESEARCH

In addition to the variety improvement work with Roundup Ready varieties, Michigan Sugar Company is also conducting research trials to determine how to best use glyphosate (Roundup WeatherMax) for weed control in sugarbeets. Small plot replicated and large plot demonstration trials are underway to answer questions such as the number of applications needed, application timings and the safety of tank mix partners with glyphosate. Preliminary data suggests that at least two, and possibly three, applications of glyphosate will be required to obtain adequate weed control. In Michigan Sugar Company trials, a single application, either early or late, has not provided season long control. When applied early, late germinating weeds have infested the crop. Late applications (8 to 10 leaf stage) have only controlled about 90 percent of the weeds and sugarbeets have been stunted from early season weed competition (Figure 2).

FIGURE 2



It appears that Roundup WeatherMax can be tank mixed with most common fungicides and herbicides such as fungicides for Cercospora leafspot control and Dual Magnum or Outlook. None of the leafspot fungicides caused any injury when tank mixed with Roundup WeatherMax. Minor injury occurred when Dual Magnum or Outlook was applied with Roundup WeatherMax to sugarbeets with four true-leaves or less. Quadris caused minor injury when applied with Roundup WeatherMax at the two to four leaf stage of sugarbeets. However, tank mixing glyphosate for weed control and Quadris for Rhizoctonia control may be cost prohibitive because Quadris is typically applied in a band and it is advisable to spray glyphosate broadcast.

BEETCAST

The BeetCast predictive model was developed by Dr. Ron Pitblado, Plant Pathologist, while at the University of Guelph in Ontario, Canada. The system includes over 50 weather stations throughout our growing region which measure air temperature, soil temperature, rainfall and leaf wetness. To help manage Cercospora leafspot, the system uses leaf wetness and

RESEARCH UPDATE (CONT'D.)

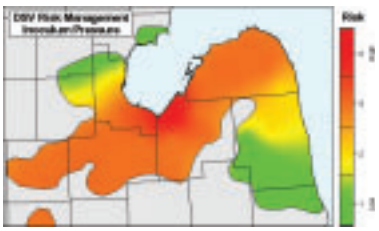


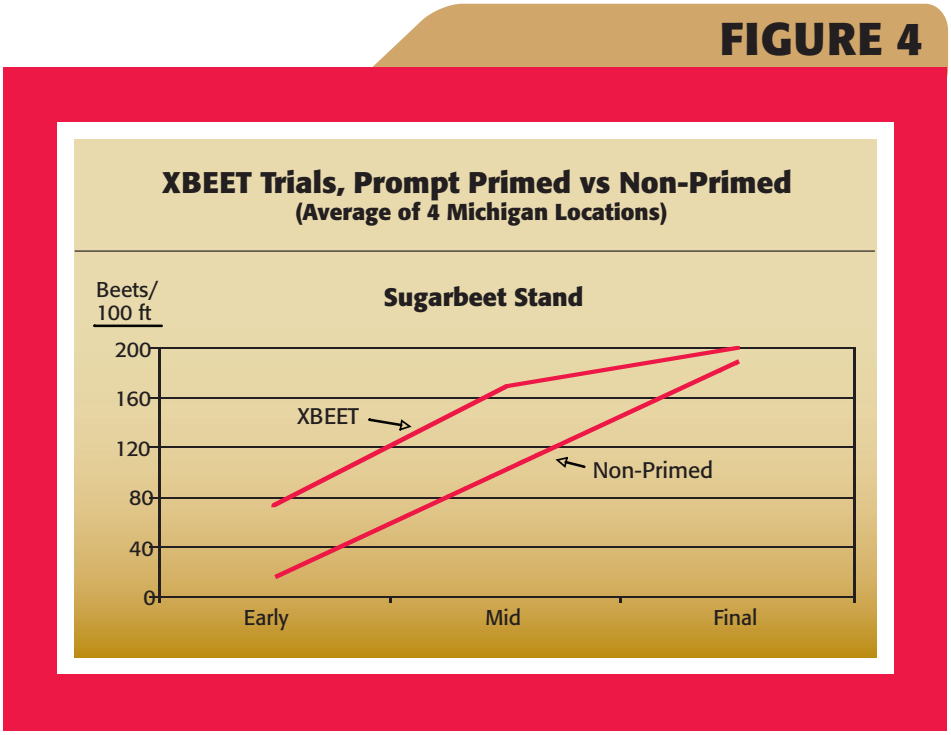
Figure 3. Cercospora risk management map.

temperature to predict when to apply fungicides. The combination of leaf wetness and temperature is recorded daily as a DSV, or disease severity value. Growers can log onto the Beetcast website (www.michiganbeets.com) to follow the DSV progression in their area.

Beginning in 2002, Michigan Sugar Company began research on the BeetCast system. A two-year study was conducted near Akron, MI, proving that applying fungicides every 55 DSVs works well in that area. In recent years, BeetCast research has been concentrated in other areas of the growing region. Results from those trials have been used to create risk management zones (Figure 3). Additional information can be found on the BeetCast website.

To utilize BeetCast, growers need to follow the DSVs and couple that with their zone on the risk management map. The red and orange zones will benefit from following a 55 DSV program. For farms in the yellow zones, applying fungicides at 70 DSV intervals or less will be most economical. In the green zones, growers should wait for the first sign of disease or 80 DSVs, whichever comes first.

FIGURE 4



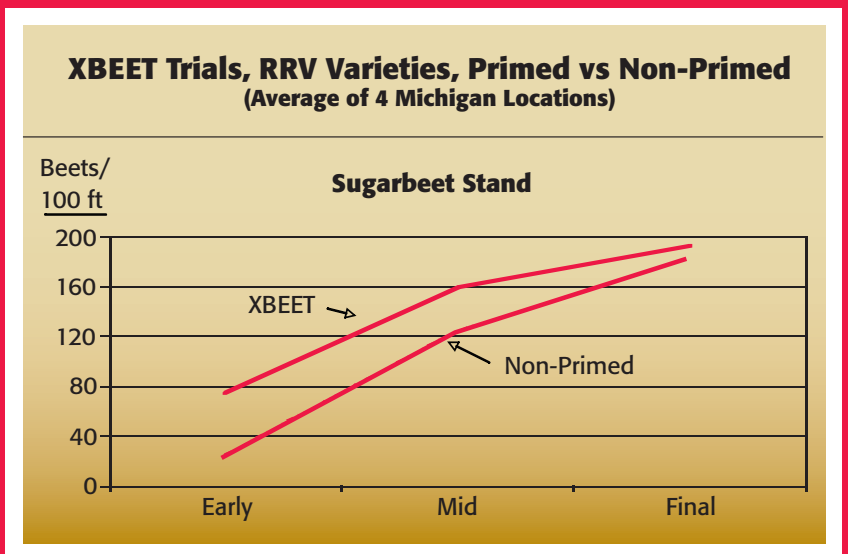
PRIMING TRIALS

Sugarbeet priming started in Michigan using PAT. There was an advantage in speed of emergence and the improvement was greater in cold conditions. Michigan Sugar Company and Sugarbeet Advancement, conducted many trials proving that PAT treated seed was beneficial to growers. All seed is now primed using different processes. The seed companies now do most of the priming. GTG, the company that developed PAT, has been claiming they have an improved priming called XBEET. Trials conducted using XBEET have only been compared to priming also done by GTG. There appears to be an advantage using XBEET in these trials. There have not been any trials comparing the priming processes used by different companies. Trials comparing the processes used by different companies may never happen. There are challenges in using the same variety with each of the primary processes and the results from seed primed in small sample quantities may be different than the same variety processed in large commercial quantities.

We are conducting trials in 2007 comparing XBEET priming to non-primed seed of the same variety. The trials contain SX Prompt and

four varieties sold in the Red River Valley, processed in commercial quantities. As expected, the XBEET primed seed emerges significantly quicker but has a smaller advantage in final stand compared to non-primed seed. (Figures 4 and 5). Research conducted by Michigan Sugar and Sugarbeet Advancement in 2006 showed similar results. Trials conducted by the University of Minnesota over the past three years also indicate that XBEET gives a significant advantage over PAT and unprimed seed.

FIGURE 5



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For more information, CALL your nearest Michigan Sugar Company processing facility during business hours.* Monday–Friday, 7:30 a.m. to 3:00 p.m.

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This offer is available from your friends at Michigan Sugar Company, producers of Pioneer and Big Chief Sugar. Locally grown. Locally owned.

* Truckers/users of lime must comply with DEQ/MI Department of Agriculture regulations. A brief outline of the applicable regulations are as follows:

- Truckers: the same regulations for hauling quarry lime apply. You may need to take steps to prevent blowing of dust from the truck.
- Users: the nutrient loading should be accounted for in your fertilizing program. The sugarbeet lime contains: Nitrogen 5.5 pounds per ton, Phosphorus 1.0 pound per ton, Potassium 0.36 pounds per ton, Calcium 570 pounds per ton (80% as $CaCO_3$ or limestone, Organic content 8%, Moisture content 10%–15%, and Micro nutrients typical background levels

Application should be conducted to not impact any water. A more detailed discussion can be found in the Generally Accepted Agricultural and Management Practices for Nutrient Utilization as approved by the Michigan Commission of Agriculture at the following internet address: http://www.michigan.gov/mda/0,1607,7-125-1567_1599_1605-70361-,00.html

PRESSED BEET PULP 2007

Our pressed pulp program gives you two options for purchase; either pick up at any of our four factory locations or have pulp delivered to your farm. There are also several discount or rebate options to help you reduce your feed costs. Pressed pulp is made to order, with a guaranteed moisture level that will not exceed 75%.

Pressed pulp can be fed fresh or ensiled in a bunker or Ag-Bag. Properly ensiled pulp contains more than 20% dry substance, is light gray in color and maintains its texture well.

Sugarbeet pulp has been recognized as a valuable livestock feed. It has high energy value, is a good source of protein and contains minerals essential for animal health. Pressed pulp is highly digestible and can reduce digestive disturbances. It is a key ingredient in livestock rations, especially for dairy and beef cattle.

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Contact us at 989-686-1549, ext. 243 or ext. 253. Orders for specific tonnage must be placed two days prior to delivery to ensure availability.

Loading is normally scheduled during daylight hours during the processing season (late September to mid-February). Specific loading hours for each factory can be determined when orders are placed.

Payments will be due 15 days following an invoice. All trucks are weighed at the factory to determine quantities sold.

Guaranteed Analysis (Wet Basis)

Crude Protein	Minimum	1.33%
Crude Fat	Minimum	0.04%
Crude Fiber	Maximum	3.83%
Moisture	Maximum	75.00%
N-Free Extract	Minimum	8.67%
Ash		1.50%

Composed of sugarbeet residue after extraction of sucrose.

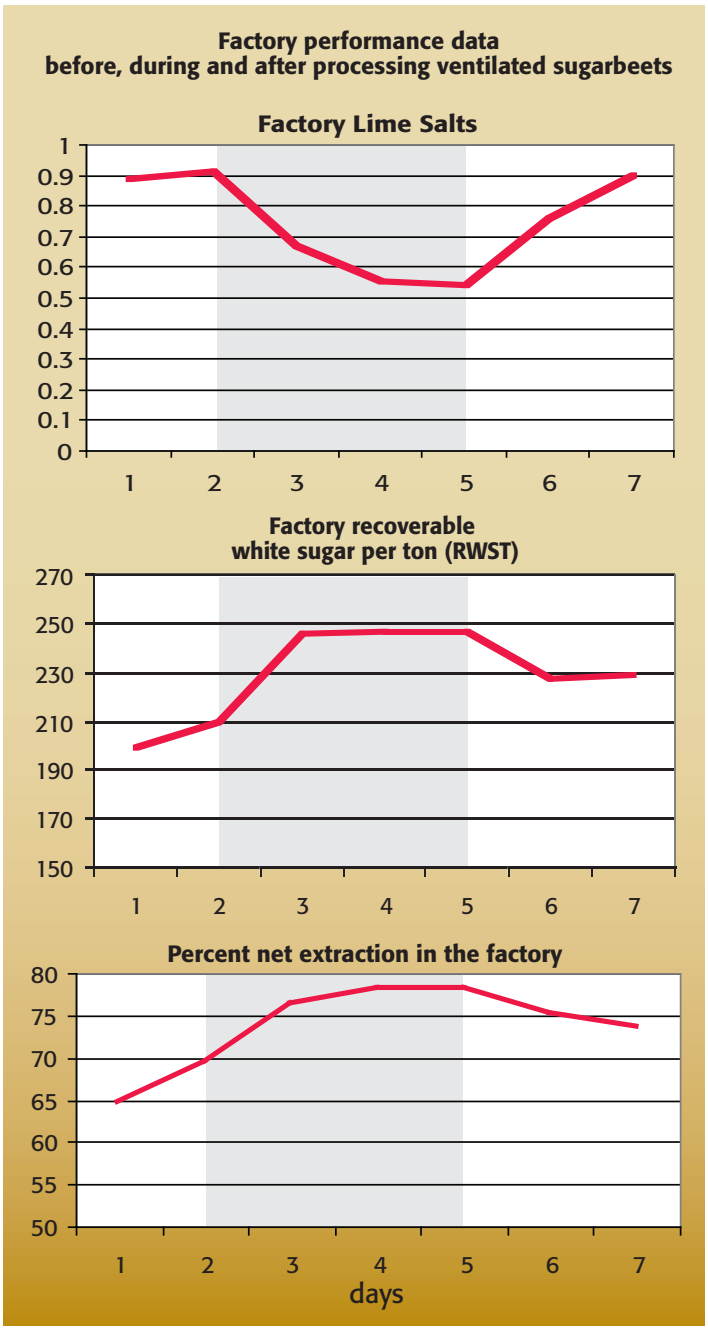
VENTILATION EXPANSION 2007–2008

By Corey Guza, Ph.D
Agronomist

Sugarbeet storage is an important part of improving the profitability of Michigan Sugar Company. Sugarbeet pile ventilation is an effective way to reduce the risk of storage loss, particularly as campaign length is increased. As part of the requirement for receiving $250,000 from the State of Michigan from the Julian-Stills grant, Michigan Sugar Company has been conducting research to determine the value of sugarbeet pile ventilation in Michigan. Due to the positive results from the research, a decision was made to expand the ventilation project to have available 21 slice-days of ventilated sugarbeets on hand at each factory location.

Michigan Sugar Company has been testing pile ventilation for two years, the 2005–2006 campaign and the 2006–2007 campaign at both the Bay City and Sebewaing locations. The first year of testing proved that ventilating piles was a success, resulting in an average of 18 lbs of sugar per ton (RWST) increase in the ventilated piles vs. the non-ventilated check (*Newsbeet,* Spring 2007). In the same study conducted in 2006–2007, the results were even better.

FIGURE 1



Shaded area: ventilated sugarbeets

VENTILATION EXPANSION 2007–2008 (CONT'D.)

Sugarbeets generally stored well in 2006–2007 as indicated by the ability to process sugarbeets well into March without needing to dispose of any. Cold weather in January and February, along with good pile management, were critical factors in the successful campaign. In 2005–2006, the non-ventilated check beets were processed a month earlier than the ventilated beets due to poor storage conditions. In 2006–2007, the non-ventilated beets were processed at the same time as the ventilated beets. At the end of the 2006–2007 campaign, beet quality deteriorated rapidly as air temperatures increased. Despite the challenging weather conditions, the ventilated sugarbeets continued to process well as indicated by the drop in lime salts and improvement in extraction and recoverable white sugar per ton (RWST) (Figure1). Cossette samples taken before, during and after the ventilated beets were processed indicated that ventilation improved RWST. This was due to the higher sugar content and clear juice purity in the ventilated beets compared to the non-ventilated beets (Table 1). The results from the captive samples in which the variety Beta 5451 was used, indicated an improvement in RWST with ventilation, particularly at the Bay City location (Table 2). On average, ventilation improved sugar recovery by 39 lbs per ton for the 2006–2007 campaign.

Due to the impressive results, the ventilation project will be expanded for the 2007–2008 campaign. A total of 270,000 tons of sugarbeets will be ventilated between three locations; Bay City,

TABLE 1

Ventilation Study Results
Factory cossettes

Bay City	RWST	%CJP	%Sugar	#
7AM 3/6 – 5PM 3/6	207	90.79	15.56	11
7AM 3/7 – 11AM 3/9*	251	92.97	17.77	25
2PM 3/9 – 1PM 3/10	220	90.69	16.56	11
Sebewaing				
7AM 3/5 – 3PM 3/7	255	92.94	18.06	30
3PM 3/7 – 4PM 3/8	244	91.93	17.70	10
6PM 3/8 – 4AM 3/9	266	93.88	18.38	15
7AM 3/9 – 8PM 3/10	214	89.79	16.47	10

TABLE 2

Ventilation Study Results
Captive samples

Bay City	RWST	%CJP	%Sugar	Date Removed
Non-ventilated	127	78.11	15.32	3/6/07
Ventilated*	235	89.88	17.89	
Sebewaing				
Non-ventilated	249	92.07	17.97	3/6/07
Ventilated	252	89.98	19.11	

**Red font indicates ventilated sugarbeets.*

Sebewaing and Caro. At Bay City, 20,000 tons of sugarbeets have been ventilated in pile number 10 and an additional 30,000 tons of sugarbeets will be ventilated in that pile for a total of 50,000 tons. There will be 80,000 tons ventilated in piles 6 and 7 for a total of 130,000 tons of ventilated sugarbeets at the Bay City location. At Sebewaing, 30,000 tons of beets have been ventilated. In 2007–2008, 120,000 tons will be ventilated with 40,000 tons each in piles 10, 14 and 15. Caro will have enough equipment installed in the pile near the fairgrounds to ventilate 20,000 tons of beets.

The expansion of the ventilation project this year is a positive step to reaching the goal of having 21 slice-days of ventilated beets on hand each year. With increasing amounts of ventilated beets, more options are available for managing sugarbeet storage and improving sugar recovery. Risk of large storage losses that have occurred in the past will be reduced and the concern of reduced beet quality with long campaigns will diminish. Sugarbeet ventilation will have a long-term positive impact on the productivity and profitability of Michigan Sugar Company.

Projected Return

Average increase in sugar recovery from ventilation vs. no ventilation

2005–2006: 18 lbs/ton
2006–2007: 39 lbs/ton

BEET RECEIVING IMPROVEMENTS, 2007

By Keith Kalso, Agricultural Manager, East District

Michigan Sugar Company continues to "move forward" and improve the receiving equipment with not only routine repair and maintenance but, with new and innovative equipment modifications. This beet harvest, two major improvement jobs have taken place to make harvest more efficient and economical.

The most innovative modification for Harvest 2007 will be used at the Verona receiving station. A dump box dirt handling system has been installed on piler #4 to replace the old and damaged dirt belt and frame. This system was developed and proved at the Dover receiving station.

The dump box system utilizes two dump boxes (much like pull-type dump carts) to hold and separate the tare soil on a piler. Each box will hold six to seven tons of tare soil and serve as a superior replacement for the conventional dirt belt/hopper systems (most of which are too heavy, expensive, have high maintenance and are a continuous target for careless truck drivers). The dump boxes are out of harm's way from any truck interference, making it very easy to isolate each truck's tare and virtually eliminating the chances of grower's tare being mixed. The dirt system allows for continual beet piling, since waiting for truck boxes to slowly settle will not cause the piling process to be delayed. The dump box dirt handling system in Verona will be the third such system in place at Michigan Sugar Company. The two systems at the Dover Receiving Station have been under two pilers that have piled approximately 160,000 tons of sugarbeets since their existence. The proven system is the way of the future; it represents a new direction on how tare soil is handled while improving productivity.

(Top): Building the new scale in Croswell.
(Bottom): The new dump box in Verona and Dover.

A major improvement to the Croswell Factory scale complex is the new 80-foot-long truck scale installation. This new scale is installed in the same location as the previous "pit" scale. The end walls were extended 10 feet on each end to expand from 60 to 80 feet. The scale being replaced had an old lever-style weigh bridge that was badly deteriorated. The new scale incorporates dependable digital technology and a long life span. This longer scale will be able to weigh longer farm, transfer, and sugar trucks. Less traffic congestion will be welcomed from this dependable piece of equipment.

CAPITAL PROJECTS, 2007

by William Gough, Manager, Caro Factory

Everyone likes clean air, right? Michigan Sugar Co. has invested millions of dollars to meet new air emission standards. All of our available capital this repair season has gone toward two projects; one at Caro and one at Croswell. Our coal fired boilers, at Sebewaing, Croswell and Caro, must comply with new air emission standards effective in the Fall of 2007. **Maximum Achievable Control Technology (MACT)** is the name given to recent federal rules and regulations developed to help us do a better job of controlling and reducing air emissions. Coal is currently the most cost-effective energy source we can use for our energy intensive process. As long as the price of coal remains favorable, we will continue maintaining these boilers and operating in a manner that complies with regulations. Coal will remain our most utilized energy source as long as these conditions exist.

Compliance with the new MACT standards began last year with the installation of a flue gas scrubber system at the Sebewaing factory, designed and installed by ESI Inc. of Tennessee. By installing one last year, we were able to reduce our emissions and evaluate the technology and equipment before committing resources and capital for similar installations at Croswell and Caro. Results at Sebewaing were favorable and the "green light" was given for work to proceed on the final two installations this year.

Actual construction activities were preceded by engineering design, soil borings to determine footing requirements for the heavy equipment, site visits to determine and confirm the equipment sizing, physical layout around existing structures, ductwork, piping, etc. Everything had to fit in the space available and perform as designed, right from the very first day of campaign.

The following describes some of the construction activity for Caro. Keep in mind that this work and activity was also conducted at Sebewaing and Croswell.

As last season's campaign concluded, demolition of the existing boiler ductwork, induced draft fan, steam lines and concrete floors began. A hole was cut in the wall to allow demolition equipment access and to remove obsolete parts and debris. Small excavators were driven inside the factory to break the concrete into pieces and load out the debris. A portion of the roof was removed so large pieces could be extracted and new parts inserted by mobile cranes.

The chimney stack was in need of some repair and was ultimately shortened by several feet, which removed a structurally unsafe portion. Old peeling paint had to be removed, new lightning rods were attached, a fresh coat of protective paint applied and concrete poured inside to form a level base to set the fiberglass stack liner.

Mobile crane and workers positioning the main separator body for insertion through the Caro factory roof and onto the newly formed concrete base inside.

Contractors then rebuilt the concrete floor, poured footings for equipment and connected floor drains. Metal fabricators installed structural steel to mount the scrubber and associated equipment. Nearly all of the equipment and structural steel was lowered

CAPITAL PROJECTS, 2007 (CONT'D.)

into place with mobile cranes.

At Caro, an additional 13,200 volt primary electrical supply had to be routed to a new set of transformers to supply the 1,250 horsepower, 4,160 volt, 3 phase motor that drives the new induced draft fan. At Croswell, additional 8,320 volt primary power was routed to the factory and then similarly reduced for that fan motor. This fan is required to keep the flue gasses moving from boilers through the scrubber to the atmosphere. Additional transformers were installed to make the reduction to the usual 480 volt, 3 phase for pump motors and drives, along with 120 volt for control and monitoring systems.

At Caro, a water line was added and connected to the village water system to assure an ample supply of emergency cooling water. The municipal water supply had been tight under normal operating conditions in the past and an ample emergency supply is required. If something happens to the circulating water and the flue gas temperature is not reduced before going into the chimney stack, the fiberglass liner could be damaged. That would not be a good situation.

When you look at the coal fired boiler stacks this coming campaign, you will see a plume of water vapor (similar to the drier stacks) with far fewer particulates exhausted into our air. Now, we can all breathe a little cleaner air.

JOHN SCHLUCKEBIER

By David Ganton, Agriculturist, West District

John Schluckebier has had the same address for the entire 77 years of his life. Just because he has been on the same farm since 1930 doesn't mean things haven't changed.

John credits his success to a few different things; first, a good teacher, his father Arthur; second, good soil; and third, a good partner in his nephew, John Krick. Without any of those three, John's farming operation would not be what it is today.

Attending Frankenmuth Schools until eighth grade, John was immediately submersed into the farm that his grandfather and father had established. The only time he deviated from his farming tasks was to serve his country in the military.

Today, the cows are gone and the barn is used for the storage of equipment and not the housing of animals. John Schluckebier and John Krick farm about 1,200 acres with a diverse rotation that includes dry beans, corn, soybeans, wheat with clover, and, of course, over 300 acres of sugarbeets. John can't remember not growing sugarbeets on the farm and his earliest recollection is a 20-acre contract with delivery to Carrollton. "We sure have come a long way", says John. "I remember getting our first one-row McCormick, and thinking we had it made. Now, the operation digs with a six-row Art's-Way and delivers five miles up the road to the Blumfield receiving station. One of many things I have learned is the future will surprise us."

John Schluckebier

Hard work, good weather and attention to detail make the Schluckebier operation a success. One of John's few regrets is that he didn't graduate from high school. He has made it a practice to keep a detailed record of the events and growing practices on their farm. In his words "it gives me something to review and learn from, good and bad, and with a smile he says, "At 77, I still forget. Years go by too fast and crops rotate quickly. So to look back and see how a certain variety performed on a certain soil type is a real value to me. Record keeping is a must. In addition to the valued knowledge of my nephew, I realize that I am never too old to learn. I gather information from those around me whether it is from my neighbors, my agriculturist or my agricultural products dealer and try to make the best decision possible."

On the subject of being a good neighbor, ask anyone and they will say John fits the definition to a "T". Always friendly and willing to help, he is very much a part of the community. Even though he is a busy man, he is never too busy to take time to chat and be interested in what's going on in your life and that is what a good neighbor is all about.

John has two daughters, Sherri and Lisa, who remind him of his deceased wife, Betty. They were happily married for 41 years. As a member of St. Michael's church and past elder, John lives a well-rounded and Godly life. John has been (and wishes he still could be) an avid snowmobiler, but age has caught up with him. He now spends his free time playing cards, staying active in the local conservation clubs and serving as an elected official of the Saginaw County FSA committee.

On a personal note, the job of an agriculturist is diversified and we wear many hats, but the one I cherish most is the personal relationships we develop. After spending time with John Schluckebier, it has truly been my pleasure to know him and to call him my friend.

grower IN THE NEWS

THE PAWLOWSKI FAMILY

By Matthew Booms, Agriculturist, Central District

The Pawlowski Family: Sheridan, Tricia, Kendall and Brian.

The rural area surrounding the small town of Filion, Michigan, is the place where Brian Pawlowski and his wife, Tricia, chose to raise a family. They have two children; Sheridan (10), and Kendall (8). Tricia is the Technology Director for nearby Deckerville Schools, while Brian currently farms approximately 950 acres of land with a large variety of crops consisting of dry beans, wheat, soybeans, corn, alfalfa and sugarbeets.

After graduating from high school, Brian began farming on a part-time basis. He also worked at a local machine shop for seven years before deciding to take up farming full time. In 1991, he raised sugarbeets for the first time, planting only 18 acres. The following year, he nearly doubled his sugarbeet acreage and since then has steadily increased his acres grown until he reached his current contract of 150 acres.

Brian has a deep rooted philosophy on farming, as his grandfather farmed and his father farmed in addition to working at the local soil conservation office. Although his grandfather and father are deceased, Brian credits his father as being his biggest influence when it comes to being a good steward of the land he farms. Brian chuckles quietly as he repeats his father's words, "Take care of the ground and it will take care of you." Brian takes heed of his father's advice and currently rents out 45 acres of his farm to a neighboring farmer for growing alfalfa. He doesn't do this because it is profitable, but because he believes his soil will reap the great benefits of having alfalfa in the rotation.

As of this year, Brian has completed a total switchover of planting in 22-inch rows. He cites his desire to clip dry beans directly into the combine as his main reason for changing the row spacing; although he knows his beets will reap the benefits of early canopy closure and its closely associated weed control. A possible yield increase would simply help the bottom line.

Two-thirds of Brian's beets are planted following Roundup Ready® corn. This helps to prevent any herbicide carryover. He also is a firm believer in conventional moldboard plowing of the corn stalks. His farm is closely surrounded by the cool waters of Lake Huron and he feels plowing helps to warm the soil in the spring.

Brian uses 100% GPS soil sampling on his sugarbeet acres and applies fertilizer based on its recommendations. The Michigan Sugar Company website has also proven to be a very useful tool to Brian, as he closely watches the DSV map and uses it to decide when to apply fungicide for Cercospora leafspot. He plants with a White 6100 planter equipped with a double frame to accommodate twelve 22-inch rows and harvests with a six-row Art's-Way 690 model. The tractor that he plants with may be slightly smaller than average; but he believes he creates less soil compaction with it. He also feels that early planting of sugarbeets is important, but that it should not be done before the ground is ready. In the future, Brian would like to plant more of his sugarbeets into a fall-prepared stale seedbed.

Brian's hobbies include camping in his fifth-wheel trailer with his family and deer hunting. He especially remembers the nine point buck that he bagged a couple of years ago. He said it was quite unique because it had a dropped tine. In his spare time, Brian also serves as the Lincoln Township Assessor. Brian and his family attend the Bad Axe Free Methodist Church.

SUMMER 2007 YOUTH PROJECT TRIP

Nearly 250 Youth Project participants were treated to a fantastic trip to Dow Diamond, the new ballpark in Midland. The event was June 29, a beautiful Friday night. Dow Diamond is home to the Great Lakes Loons, an affiliate of the LA Dodgers. The participants were fortunate to see the Loons play the Lansing Lugnuts, a team some of the project participants saw in 2003.

The Sebewaing and Caro area groups were picked up by tour buses, courtesy of the Richmond Bros. They stopped in Sebewaing at the Agriculture Office, the Caro Agriculture Office and at Reese High School for pickup. It was nice to keep the groups together and arrive at the same time. When the participants arrived, Ray VanDriessche and Barb Wallace had everything organized for sign-in and then the group moved to the entrance. From there the participants went to an area of the park that was designated for our group.

The venue for watching the game was superb. The group was able to view the game while eating a nice barbequed meal in the Pavilion. There were choices on whether to sit at tables or on the lawn close to the game action. The park is very open, accessible and great for family or group outings. Some brought lawn chairs and were sitting on the grass. There was a playscape on the southeast corner of the park for the smaller children. It is a very nice place from which to watch a baseball game.

Each youth participant was given a Loons commemorative baseball and several people had opportunities to snatch foul ball hits that came close to our group. The Loons ended up losing the game, but the sugarbeet project participants were all winners!

Top photo: Ray Van Driessche visits with motor coach drivers Mike Richmond and Tim Henderson shortly after arrival at the Loons Baseball Park.

Bottom Photo: Carl Bednarski and his son wait for the gates to open at the Loons Ballpark.

2007 SCHOLARSHIP AWARDS

Michigan Sugar Company awards scholarships to eligible high school senior Youth Project winners each year. These scholarships that Michigan Sugar administers were established to honor the memories of their namesakes after their passing; Albert Flegenheimer (1890–1972), a former Chairman of Michigan Sugar Company; Phil Brimhall (1938–1999), a former agronomist for Michigan Sugar Company; and Guy Beals (1964–2003), a former Michigan Sugar Company sugarbeet grower near Brown City. This past year, we also awarded an additional scholarship sponsored by Bayer CropScience.

The Albert Flegenheimer Scholarship is awarded each year to an outstanding young individual who has shown leadership in academic and extracurricular activities. The recipient must have participated in the 4H/FFA Sugarbeet Project. This year's scholarship has been awarded to Sara Smith of Pigeon. Sara's parents are Scott and Nancy Smith. Sara graduated from Laker High School with a 3.974 grade point average. She will be attending Saginaw Valley State University with a major in mathematics. She plans to go into elementary education and hopes to promote and continue to be very involved in the FFA program.

Sara has been heavily involved in both school activities and community activities all during her school years. She has participated in 4-H for eight years and won outstanding awards for numerous years. Sara is ranked fifth in her graduating class and is local chapter president of the National Honor Society.

Sara Smith

Brittany Armbruster

Rita Gentner

Cody Kurzer

The Phil Brimhall Memorial Scholarship is awarded each year to a deserving young person who has participated in the 4-H/FFA Sugarbeet Project. This year's scholarship has been awarded to Brittany Armbruster of Pigeon. Brittany's parents are David and Debra Armbruster. Brittany graduated from Laker High School with a 3.3 grade point average. She plans to attend Michigan State University to pursue a career in agronomy.

Brittany has been involved in many extra-curricular activities such as Student Council, Band, and has been very involved in FFA. Next year she will be serving as the Region III State Vice President for FFA. She has earned the Premier Award for the Sugarbeet Project five times.

The Guy Beals Memorial Scholarship is awarded each year to the 4-H sugarbeet project participant from the East District who earned the most points in the program. This year's recipient of the Guy Beals Memorial Scholarship was Rita Gentner from Minden City. Allen and Debbie Bischer (and the late Robert Gentner) are the parents of Rita; she is the fourth oldest of eight children. The Bischers' farm land in the Ruth, Minden City, and Deckerville areas.

Rita scored the highest quantity of points in the Youth Advisory Sugarbeet Project in 2006 which earned her this distinctive $500 academic scholarship. She has been involved in the Sugarbeet Project for the past ten years. With her hard work in the Project, she has earned Premier Grower Awards four times, and was the Master of Ceremonies at the 2006 Croswell Sugarbeet Project Awards Banquet.

Rita graduated from Ubly High School in June 2007 with honors and was ranked seventh in her class. Rita was very active throughout her high school years, participating in several sports, the National Honor Society, and Business Professional of America to name a few. She plans to attend Saginaw Valley State University in the Fall of 2007, working toward a degree in Crop and Soil Sciences or landscaping.

The Bayer CropScience Youth Scholarship was awarded to Cody Kurzer. Cody's parents are Raymond and Candra Kurzer. Cody graduated from Unionville-Sebewaing Area High School with a 3.753 grade point average. He plans to attend Michigan State University to pursue a career in agronomy or chemical engineering.

Cody has been involved in many extracurricular activities in his school, church and community. He has been a member of FFA for four years and has participated in the Sugarbeet Project for nine years, winning both Premier and Prestige awards. Cody is a member of the National Honor Society and has been on the High Honor Roll.

Michigan Sugar is proud to honor these very deserving students and wishes them the best in their future endeavors.

Samantha Runyan, Samantha Bishop, and Sara Smith.

THE SWEETEST GIRL IN THE WORLD IS…

… **Samantha Bishop of Avoca.** The 2007 Michigan Sugar Queen was crowned at the 43rd Annual Michigan Sugar Festival on June 22, 2007, at the Sebewaing Village Park.

Samantha will represent the sugarbeet industry as she visits with public officials, food industry leaders and the general public. Her schedule includes many official appearances during the year, mostly riding on the Pioneer Sugar float in over 20 parades throughout Michigan. Sam is the daughter of Edward and Linda Bishop of Avoca. Sam graduated from Yale High School as Valedictorian in 2005 and has been attending St. Clair Community College and will be transferring to Michigan State University in the fall to finish her degree in finance and management.

Lou Tibbits of Bay Shore Camp, emcee for the event, announced the winners of the contest. First runner-up, Samantha Runyan, of Hale, and second runner-up, Sara Smith, of Pigeon, will serve as representatives for the company along with Queen Samantha.

Samantha Runyan is the daughter of Glen and Kam Runyan of Hale. She is a recent graduate from Hale High School and will be attending Central Michigan University where she wishes to pursue a business administration and management degree.

Sara Smith is the daughter of Scott and Nancy Smith of Pigeon. Sara recently graduated from Laker High School and will continue her education at Saginaw Valley State University where she will seek her degree in mathematics and science and begin her path toward becoming a teacher.

Twenty-two young ladies from our growing areas competed for the 2007 Michigan Sugar Queen title. The judging for this event is held two weeks prior at Bay Shore Camp, where the contestants have an opportunity to meet the outgoing queen and court, enjoy a luncheon, and are also introduced to the community leaders and company personnel.

Layher Jewelers of Sebewaing has been a long-time donator of the jeweled crowns presented to the queen and court. Jackie's Country Flowers, also of Sebewaing donates the fresh bouquet of flowers presented to the winners. After John Balk retired from making the traditional "sugar" crown a few years ago, Judy Bollstetter, a former sugar queen, committed to making the "sugar" crown for the queen for the second year in a row.

As the sole sponsor of the Michigan Sugar Queen event, Michigan Sugar Company provides 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. Applications for the 2008 contest will be available in January on our website (www.michigansugar.com).

ray's RAMBLINGS

DOES IT "MELT AWAY" LIKE ICE CREAM?

By Ray VanDriessche, Director of Community & Government Relations

A big ice cream cone on hot day — it doesn't get much better than that! Do I buy a single, double or go all the way and get a triple? Ice cream looks and tastes great and I have a tendency to order a triple scoop and oftentimes it "melts away" before I get a chance to enjoy it all. It is a natural tendency to grab at something that looks appealing and take all we can get without thinking about the long-term effects.

It is easy to get caught up in the same mentality when it comes to making cropping decisions, especially when we see an upswing in the market of a particular commodity. It only makes sense to lock in a good price for our crops and make some minor adjustments in our rotation when the opportunity is knocking on our door; however, making extreme crop rotation swings could have short-term appeal and long-term disadvantages. On our farm, Dad always told my brother and I over the years not to chase after or get in and out of crops based on "roller coaster markets." We have seen neighbors get in and out of certain crops, sell equipment related to one crop, and spend a ton of money on machinery for a different crop, only to have the high market "melt away." Throw in a mix of bad weather conditions like we have experienced this summer and many times, the financial strength of the farming operation has deteriorated to the point where it takes years to recover — and that is if they are lucky enough to survive at all.

Just as weather unpredictability can have a devastating impact on our ability to survive, commodity market price volatility can be just as devastating. The June/July 2007 futures markets are a perfect example. On June 15, corn hit $4.25 a bushel and 25 market-trading days later on July 23, the price had dropped .9875 cents. Soybeans saw a similar trend with a drop of $1.01 in a ten-day period in July. A number of factors are spurring this volatility. One major concern within the biofuels industry is that the infrastructure is not in place to distribute the billions of gallons of ethanol and biodiesel from plants currently producing and those that are projected to be completed within the next year.

With the biofuels industry beginning to mature, we often hear about the legitimate concern for an adequate supply of a "feedstock" to make the venture profitable and reliable. Sugarbeets are the "feedstock" for our Michigan Sugar Company factories and the record tonnages we enjoyed from the 2006 crop allowed our cooperative to maximize factory "throughput" and efficiencies, resulting in a beet payment projected to exceed $40/ton. The weather played a role in reaching the record tonnage of 2006, but the key is "total acres planted." Planting our full acreage allows for the potential of record tonnages each and every year.

The key element to any successful business is decisions based on long-term, predictable streams of income incorporated with minor adjustments when opportunities arise. Past history has shown that sugarbeets have been the foundation upon which many of us have built our farming operation. Sugarbeets have been "the mortgage payer" for many farming operations. This proven track record is the reason lending institutions have been known to base the size of operating loans on how many acres of sugarbeets were projected to be in a grower's rotation. With market price increases for other commodities such as corn, soybeans and wheat, the temptation is there to think "short term" and forget that sugarbeets are the crop that makes the cash flow for most farms in the area, year in and year out. It is tempting to "order that extra scoop of ice cream" or plant an extra 40 acres of corn; however, if we do that, our investment in the Co-op may "melt away" before we can enjoy it.

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