

# Prepile Premium Program

# Goal of the Program

- To encourage shareholders to deliver a percentage of the crop early, thereby increasing the total annual sugar production and financial return to the shareholders by maximizing campaign length and asset utilization.
- To provide fair compensation for early delivery of sugarbeets by compensating shareholder deliveries for average sugar and tonnage growth.

# Prepile Premium Cautions

- The Prepile Premium Program does not generate additional revenue, it only redistributes revenue between the shareholders.
- The Prepile Premium Percentage calculation is used to determine a daily premium percentage only. The percent premium is developed using a regression of the Recoverable Sugar per Ton from all prepile samples. This calculation method **is not used to calculate premiums on individual fields.**

# Calculating the Percent Premium

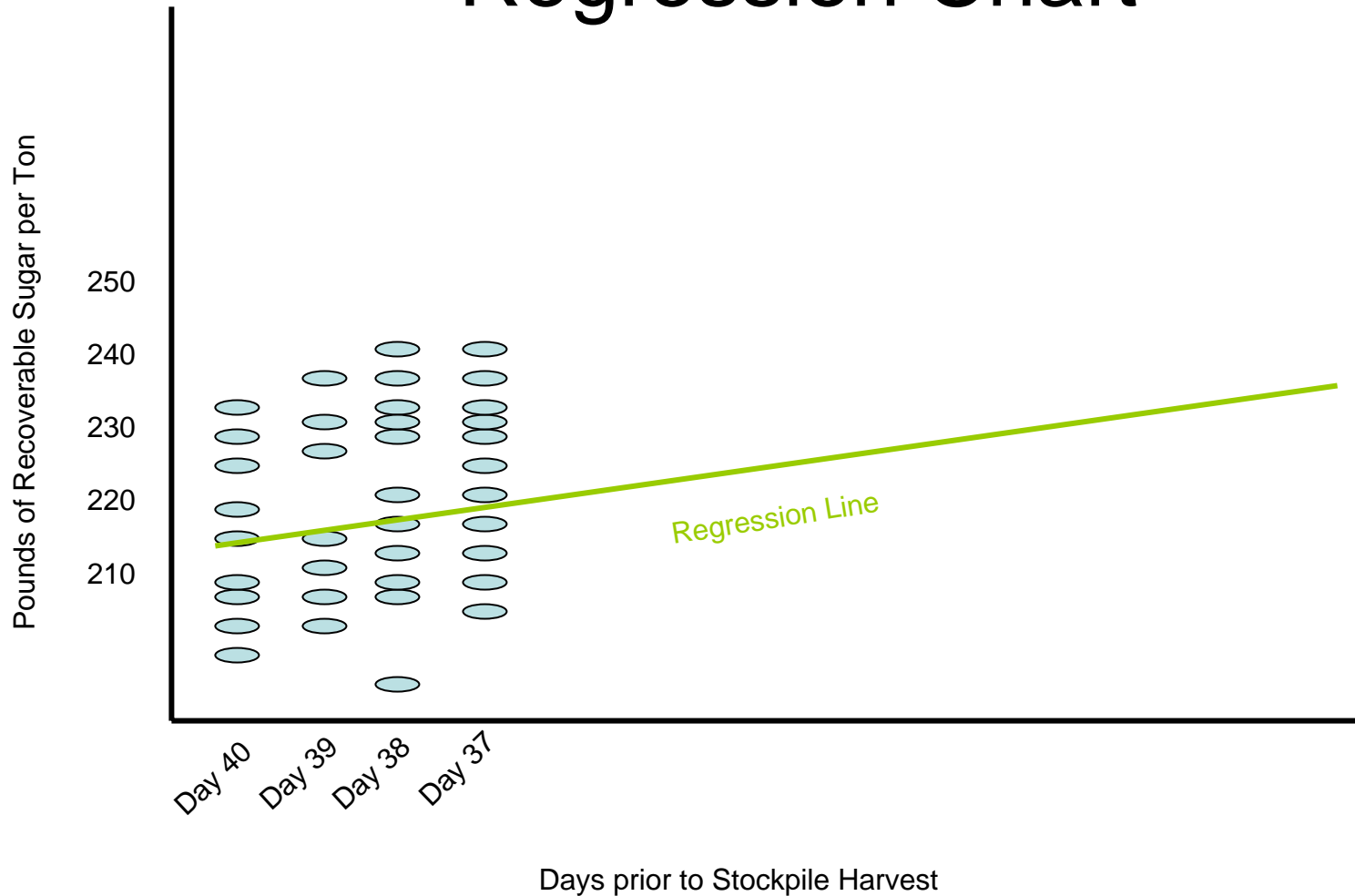
- The prepile premium percentage is calculated for each day of prepile.
- The daily percentages are determined after harvest is complete.
- The calculation of the percentage can be broken down into six steps.

# Step 1

## Recoverable Sugar per Ton

- Determination of the daily RST is the first step of the percentage calculation.
  - The quality results, of all prepile samples, are charted for each day of prepile.
  - A regression line is established using all of the prepile samples from each day of prepile.
  - The point where the RST regression line intersects the day is the RST used for that day.

# Simplification of a Prepile Sample Regression Chart



○ = prepile quality samples

# Step 2

## Base Payment

- The base payment calculation looks like this...
  - $\text{Base Payment} = (\text{Daily RST} - \text{Other sugar losses}) * \text{Sugar net selling price} + \text{Agri products revenue} - \text{Operating costs}$

Note: Other sugar losses, Sugar net selling price, Agri products, revenue and Operating costs are the same as what is on the payment statement

# Step 3

## Growth Premium

- The growth premium is the third step in the calculation of the daily premium percentage.
- $\text{Growth Premium} = \text{Day} * \text{Growth Percent} * \text{Average Gross Payment}$ 
  - “Day” is equal to the number of days prior to the beginning of stockpile harvest.
  - Growth Percent is based on daily growth curve developed from historical data



# Step 4

## Sugar Premium

- The sugar premium is a little more complicated than the growth premium. This step is designed to compensate for the change in recoverable sugar per ton.
- The sugar premium calculation looks like this...

$$\text{Sugar Premium} = (\text{Day} * \text{Average Sugar Growth per day} + \text{"Give In"}) * \text{Sugar Net Selling Price}$$

Average sugar growth per day is the average daily RST increase, from the regression, beginning the first day of prepile through the end of prepile

"Give In" is the change in RST regression from the last day of prepile to the day that harvest is 50% complete. Calculation for Give-in is subject to change from year to year for the best fit.

# Step 5

## Combined Premium

- The next step is to combine the Growth Premium with the Sugar Premium

Growth Premium + Sugar Premium = Combined Premium

# Step 6

## Daily Prepile Premium Percent

- The last step of the calculation is to determine the Prepile Premium Percentage for the day.
- The percentage is determined by dividing the base payment into the combined premium.

Prepile Premium Percent = Combined Premium / Base Payment

# Prepile Premium Percent Calculation Summary

- RST Regression determination
- $\text{Base Payment} = (\text{RST} - \text{Other sugar losses}) * \text{Sugar net selling price} + \text{Agri products revenue} - \text{Operating Costs}$
- $\text{Growth Premium} = \text{Day} * \text{Growth Percent} * \text{Avg. Gross Payment}$
- $\text{Sugar Premium} = (\text{Day} * \text{Daily Sugar growth} + \text{"Give In"}) * \text{Sugar net selling price}$ 
  - "Give In" is the change in RST regression from the last day of prepile to the day that harvest is 50% complete.
- $\text{Combined Premium} = \text{Sugar Premium} + \text{Growth Premium}$
- $\text{Prepile Premium Percent} = \text{Combined Premium} / \text{Base Payment}$

# How is your premium determined for the beets you deliver?

- A payment for the beets you deliver during prepile is determined each day (daily payment).
- The daily payment is multiplied by the prepile premium percentage for the day of delivery.
- The result is added to the daily payment figure for the total daily prepile premium.

# Prepile Payment Example 1

## Assumptions:

- Prepile Premium Percent for August 24<sup>th</sup> is 94.64%
- Payment Variable:
  - Other Losses: 53.0      Net Selling Price: \$0.22750
  - Agri Products: \$6.10      Operating Cost: \$30.02

- Bob delivers 100 ton of beets on August 24<sup>th</sup> with a sugar content of 15.0% and SLM of 1.4%.

The RST for Bob's deliveries on August 24<sup>th</sup> =  $(0.15 - 0.014) * 2000$   
= 272 pounds.

Gross \$/Ton for the beets delivered on August 24<sup>th</sup>

- = (RST – Other Losses) \* Sugar Net Selling Price + Agri Products  
Revenue – Operating Costs  
=  $(272 - 53.0) * 0.22750 + 6.10 - 30.02$   
= \$25.90

# Prepile Premium Example 1

- Prepile Premium  
= Gross Payment per Ton \* Premium Percent  
= \$25.90 \* 0.9464 = \$24.51
- Total Prepile Payment per Ton for the deliveries made on August 24<sup>th</sup>  
= Gross Payment per Ton + Prepile Premium  
= \$25.90 + \$24.51  
= \$50.41
- As the quality of the beets delivered increases, the gross payment per ton increases, resulting in a larger Prepile Premium, and larger Total Prepile Payment.

# Prepile Premium Example 2

Under same assumption:

- Jim delivered 100 tons of beets on August 24<sup>th</sup> with a sugar content of 16.0% and a SLM of 1.4%
- The RST for Jim's deliveries on August 24<sup>th</sup> =  $(0.16 - 0.014) * 2000$   
= 292 pounds.

Gross \$/Ton for the beets delivered on August 24<sup>th</sup>

= (RST – Other Losses) \* Sugar Net Selling Price + Agri Products

Revenue – Operating Costs

=  $(292 - 53.0) * 0.22750 + 6.10 - 30.02$

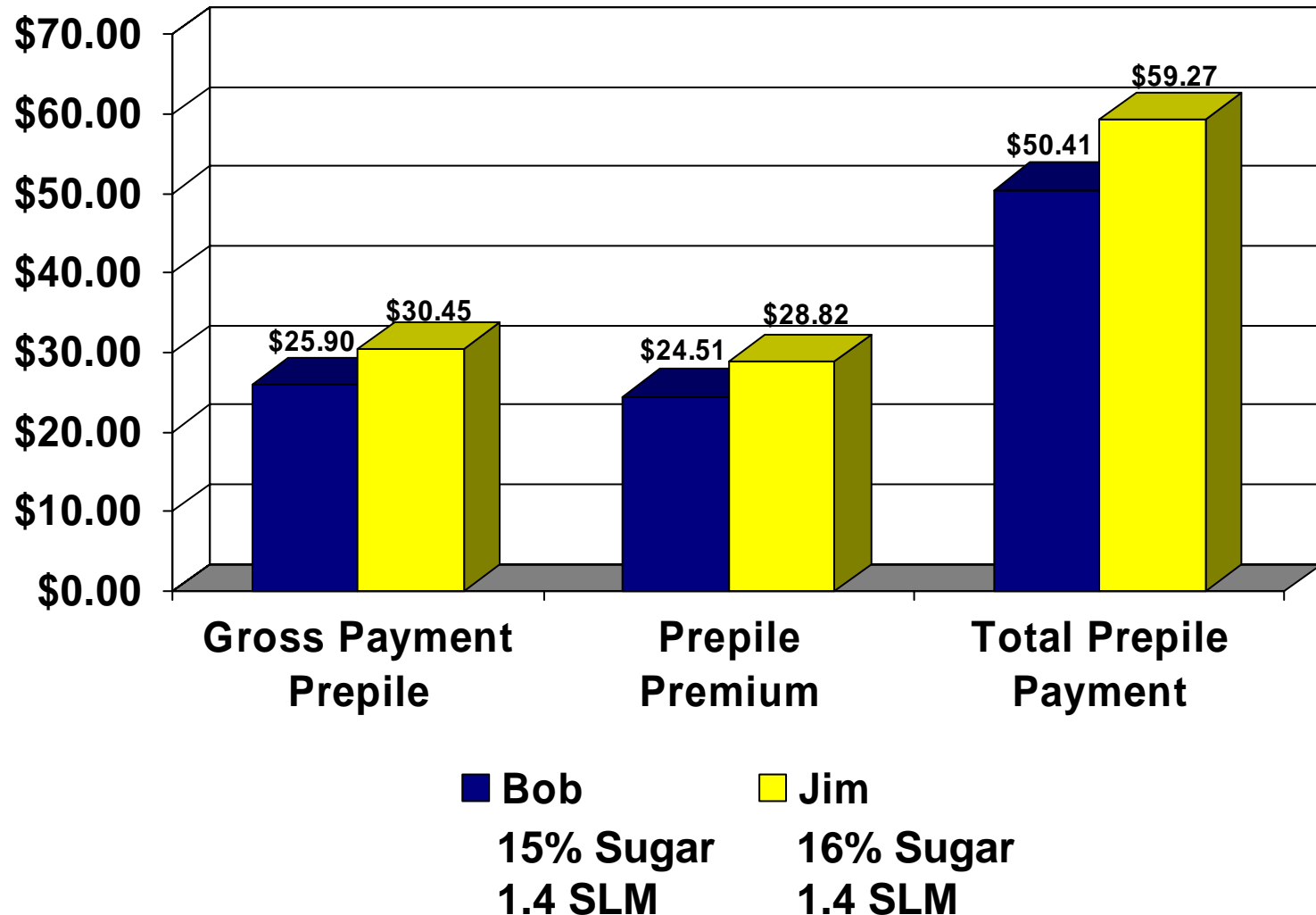
= \$30.45



# Prepile Premium Example 2

- Prepile Premium  
= Gross Payment per Ton \* Premium Percent  
=  $\$30.45 * 0.9464 = \$28.82$
- Total Prepile Payment per Ton for the deliveries made on August 24<sup>th</sup>  
= Gross Payment per Ton + Prepile Premium  
=  $\$30.45 + \$28.82$   
=  $\$59.27$

# Per Ton Payment Differences Due to Improved Quality of Prepile Deliveries



# Example 1 & 2 Differences

- Total difference for adding 1% sugar  
= \$59.27 - \$50.41  
= \$8.86 per ton delivered
- Jim's total return is \$886 more than Bob's for just 100 tons of delivery! It makes sense to deliver the higher quality beets!!
- But, this is only half the story!!!!

# Prepile Premium Example 3

- Let's assume that Bob had another field that had the same prepile quality as Jim's, we'll call this Bob's Field 2. This field had good growth potential on quality
- Let's also assume that the field that Bob delivered his prepile beets from, say Bob's Field1, had serious disease problem and little change to increase in quality

# Prepile Premium Example 3

- Here are the quality for two fields
- Field 1
  - Prepile: Sugar: 15.0% SLM: 1.4%
  - Stockpile: Sugar: 15.0% SLM: 1.4%
- Field 2
  - Prepile: Sugar: 16.0% SLM: 1.4%
  - Stockpile: Sugar: 18.0% SLM: 1.12%

# Prepile Premium Example 3

- Field 1

- Value of prepile beets with premium = \$50.41
- Value of stockpile beets = \$25.90

- Field 2

- Value of prepile beets with premium = \$59.27
- Value of stockpile beets  
$$= ((0.1804 - 0.0112) * 2000 - 53.0) * 0.2275 + 6.10 - 30.02$$
$$= \$41.01$$

# Prepile Premium Example 3

- Okay, one more assumption...
  - We already said that prepile deliveries were 100 tons.
  - Let's assume the total stockpile tons are 1,900 for both fields.

# Prepile Premium Example 3

- Total payment for field 1
  - Prepile – 100 tons \* \$50.41 = \$5,041.00
  - Stockpile – 1900 tons \* \$25.90 = \$49,210.00
  - Total prepile + stockpile = \$54,251.00
- Total Payment Field 2
  - Prepile – 100 tons \* 59.27 = \$5,927.00
  - Stockpile – 1,900 tons \* 41.01 = \$77,919.00
  - Total prepile + stockpile = \$83,846.00



# Prepile Premium Example 3

- Had no prepile deliveries been made on Field 1 and the total tons harvested are 2,000, then...
  - Total payment for field 1  
= 2,000 tons \* \$25.90 per ton  
= \$51,800.00
- Had no prepile deliveries been made on Field 2 and the total tons harvested are 2,000, then...
  - Total payment for field 2  
= 2,000 tons \* \$41.01 per ton  
= \$82,020.00

# Prepile Premium Example 3

- If Bob only prepiled Field 1
  - Value of beets from field 1 = \$54,251.00 (slide 24)
  - Value of beets from field 2 = \$82,020.00 (slide 25)
  - Total value of beets for Bob = \$136,271.00
- If Bob only prepiled Field 2
  - Value of beets from field 1 = \$51,800.00 (slide 25)
  - Value of beets from field 2 = \$83,846.00 (slide 24)
  - Total value of beets delivered = \$135,646.00

# Moral of the story

- The prepile compensation system rewards high quality vs. low quality beets delivered during prepile.
- If there is little chance for additional sugar accumulation in a field, shareholders may be better off harvesting from those fields during prepile

# So, how do you maximize the quality of your prepile beets?

- Before you plant the field, determine the most likely areas for your prepile deliveries.
- Find out the anticipated prepile schedule from your agriculturist, keep in mind that he/she can provide you with the anticipated order, not the dates.
- Also keep in mind that the schedule can change due to many factors.

# Maximizing Prepile Quality

- Fertilize headlands, strike outs or entire fields to achieve the greatest returns on the anticipated delivery areas. These areas will generally require less nitrogen.
- Plant high sugar type varieties in areas anticipated for prepile deliveries.
- Plant crops other than sugarbeets on headlands or don't plant headlands at all.
- Plan fungicide applications around anticipated schedule to save additional \$\$\$.

# Transferring Prepile Quota

To maintain efficient factory operations throughout prepile, it is vital that the prepile quotas are met.

Remember to **contact your agriculturist if you can't fill your prepile quota** so arrangements can be made with another shareholder.

Do you have any questions?