

# A New Product for Cane Management: Helps Improve Sugar Yields

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# About Moddus

- Trinexapac-ethyl, the active ingredient in Moddus™, is a foliar absorbed plant growth regulator (PGR)
- Increases sugar yield
- Extends application window prior to harvest
- Reduces lodging of sugarcane crop: improves harvest efficiency
- Potential to increase root growth resulting in better water and nutrient use efficiency
- Registered sugarcane uses:
  - Harvest management to increase sugar yield
  - Shortening of internodes for seed piece production

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# Features and Benefits

- ▲ **Inhibits gibberellic acid (GA), a plant hormone responsible for cell elongation**
  - Shortens internodes to reduce crop height
  - Improves stalk strength resulting in improved standability which mitigates risk from adverse weather
- ▲ **Boosts sugar yield without reducing cane yield**
  - In 86% of trials had an increase of 10+ lb./ton when compared to UTC
- ▲ **Flexible application window: 28 to 60 days prior to harvest**
  - Helps growers manage spray programs (timing, cost efficiency) and provides flexibility under adverse weather conditions
- ▲ **No residual effect on subsequent ratoon crop**
- ▲ **Improves harvest efficiency**
  - Ease of harvest because of improved standability
- ▲ **Excellent crop tolerance when applied under favorable environmental conditions**
- ▲ **Stimulates root growth** (Brazilian observations)
  - Better water and nutrient use efficiency

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# Use Recommendation for Seed Piece Production (internode shortening)

Crop	Use Rate (fl oz/A)	Use Recommendation
Sugarcane	4 - 12	Make a minimum of two split applications of Moddus™. Make first application of 4-12 fl. oz./A when six fully developed full size leaves have appeared. Note the bottom leaf should be feeding internodes above the soil surface. Make second application of 4-12 fl. oz./A when six additional fully developed full-size leaves have appeared.

The total amount applied per acre per crop season should not exceed 19 fl. oz./A.



untreated

Moddus treated

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# Moddus Seedpiece Demo

10 oz of Moddus  
applied on 5/13/13

Picture taken  
6/13/13

Very noticeable  
difference in height  
vs the untreated.

No noticeable  
difference in plant  
color, etc.



# Moddus Seedpiece Demo

10 oz applied  
on 5/13/13

Picture taken  
8/28/13

Very  
noticeable  
difference in  
height vs the  
untreated.

Lodging  
reduced in  
Moddus  
treatment

No noticeable  
difference in  
plant color,  
etc.



# Moddus Seedpiece Demo

10 oz applied  
on 5/13/13

Picture taken  
8/28/13

Very  
noticeable  
difference in  
height vs the  
untreated.

Lodging  
reduced in  
Moddus  
treatment

No noticeable  
difference in  
plant color,  
etc.



Classification: INTERNAL USE ONLY



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# Moddus Seedpiece Demo

10 oz applied  
on 5/13/13

Picture taken  
8/28/13

Very  
noticeable  
difference in  
height vs the  
untreated.

Lodging  
reduced in  
Moddus  
treatments

No noticeable  
difference in  
plant color,  
etc. in any of  
the  
treatments



Classification: INTERNAL USE ONLY



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# L99-226

10 oz  
applied at 6  
true leaves

Picture  
taken  
8/19/13

Significant  
reduction in  
overall plant  
height and  
lodging in  
Moddus  
treated vs.  
untreated.

No  
noticeable  
difference in  
plant color,  
etc.



# L99-226

10 oz  
applied at 6  
true leaves

Picture  
taken  
8/19/13

Significant  
reduction in  
overall plant  
height and  
lodging in  
Moddus  
treated vs.  
untreated.

Internodes  
definitely  
shortened.



Classification: INTERNAL USE ONLY

 **Moddus**<sup>™</sup>

 **syngenta**<sup>®</sup>

# HoCP04-838

10 oz  
applied at  
6 true  
leaves

Picture  
taken  
8/19/13

Moddus  
treated had  
a slightly  
greener  
color.



# HoCP04-838

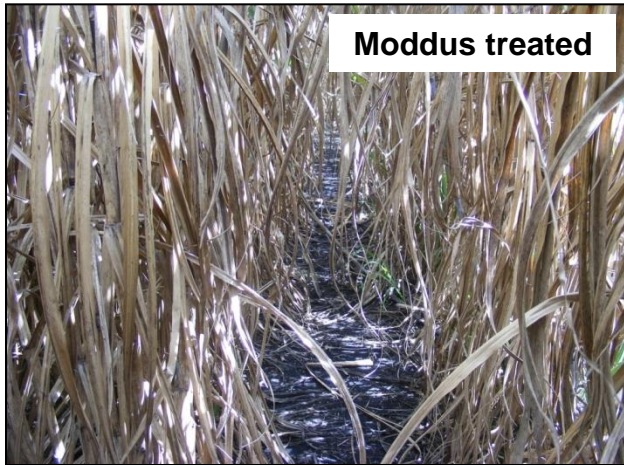
10 oz  
applied at  
6 true  
leaves

Picture  
taken  
8/19/13

Internodes  
shortened  
especially  
in upper  
part of  
stalk.



# Use Recommendation to Manage Growth and Sugar Yield



Crop	Use Rate (fl oz/A)	Use Recommendation
Sugarcane	11 - 19	Apply Moddus™ 28-60 days prior to harvest to increase sugar yield and/or extend harvest window.

## Specific Use Restrictions

- 1) When applied as a ripener, Moddus may be applied until 28 days prior to harvest (28-day PHI).
- 2) Do not apply more than 19 fl. oz. Moddus per acre per crop season.
- 3) Do not apply to cane under stress from lack of water, poor fertilization, abnormal temperatures, or disease.
- 4) Results may vary according to the variety.
- 5) Crop tolerance: Moddus has been shown to be safe at the rates, timings, and varieties tested. Some varieties may be more sensitive and exhibit symptoms such as stunting. Under normal agricultural conditions, the affected plant will resume growth.

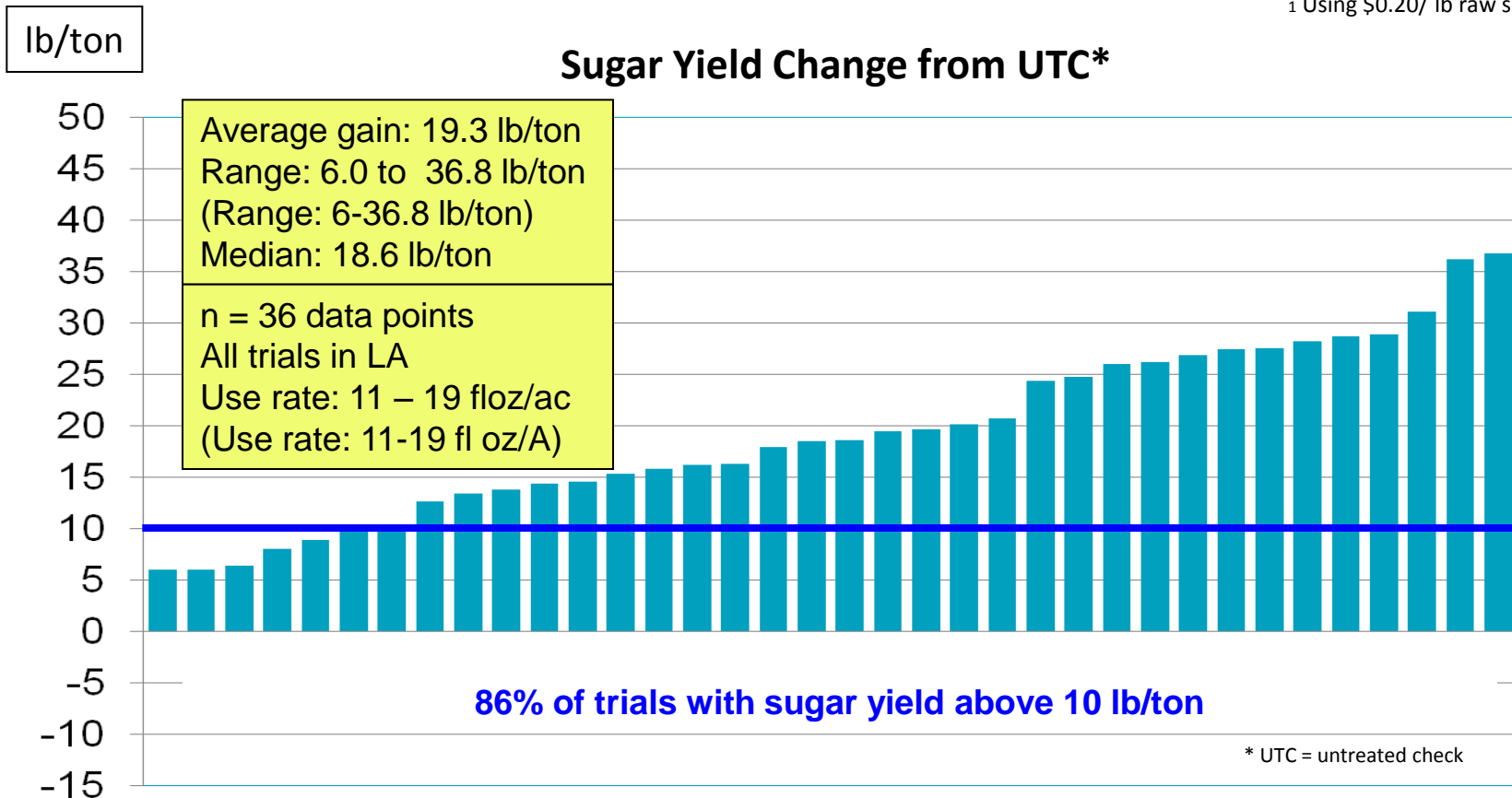
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# Increases Sugar Yield



- Moddus increases sugar yield per ton without reducing cane yield per acre
- 10 lb/ton generates approximately \$72.00<sup>1</sup> per acre increase in potential gross returns

<sup>1</sup> Using \$0.20/ lb raw sugar

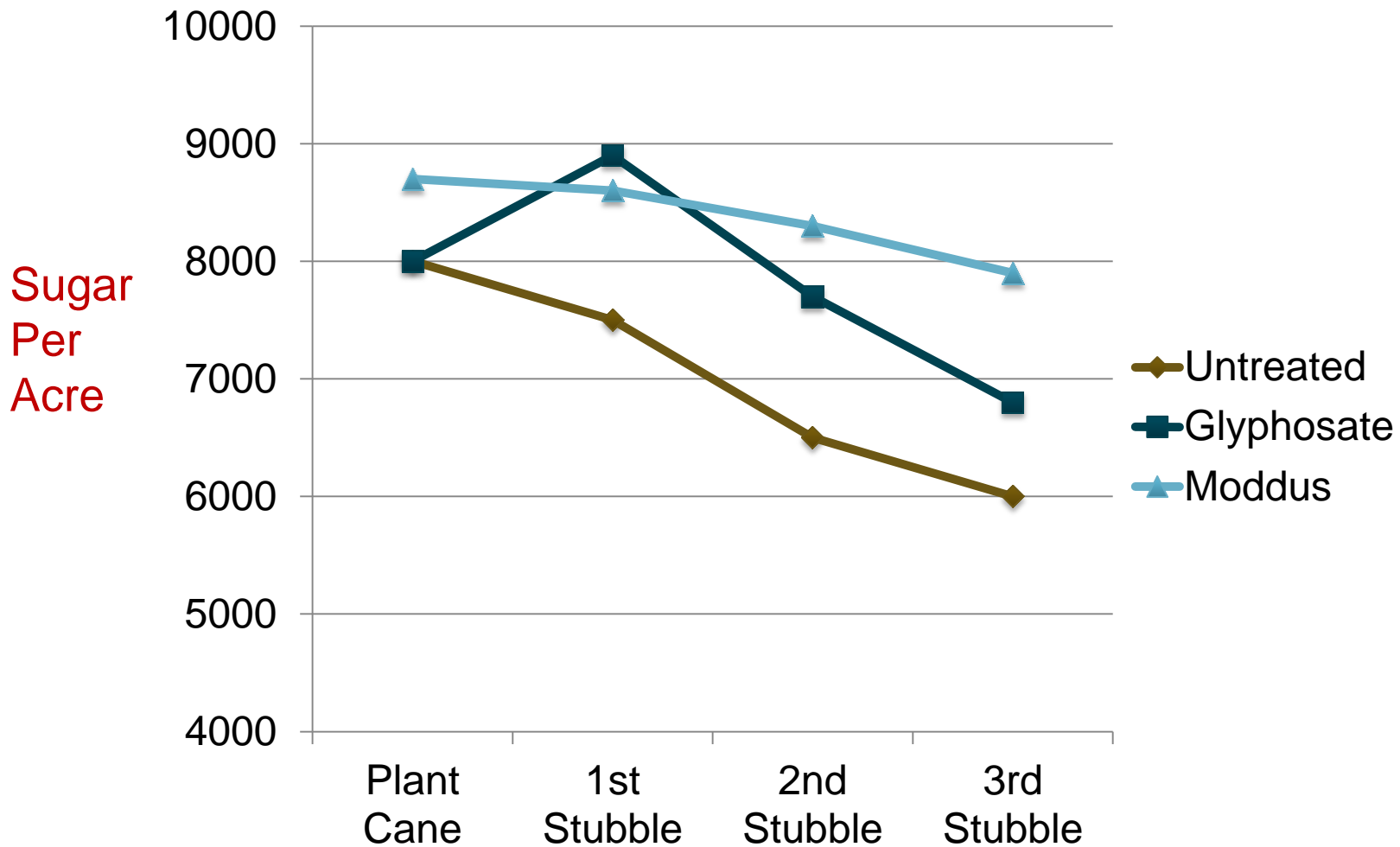


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# Theoretical Yield During Crop Cycle





## DIRECTIONS FOR USE

Crop	Target Diseases	Use Rate fl. oz. product/A (lb. a.i./A)	Remarks
Sugarcane	Brown Rust ( <i>Puccinia melanocephala</i> ) Orange Rust ( <i>Puccinia kuehnii</i> )	16 - 22	Begin applications prior to rust development and continue throughout the season every 14-28 days following resistance management guidelines. Scout fields and begin applications at the earliest sign of rust. Applications may be made by ground, air or chemigation.

### Specific Use Restrictions:

- Do not apply more than 88 fl. oz./A/season of Quilt Xcel.
- Do not apply within 30 days of harvest (30-day PHI).
- Do not apply more than 0.80 lb. a.i. of azoxystrobin-containing products per season.