# Sugarcane

# LACA 2024

# Boundary®

S-metolachlor and Metribuzin (Dual Magnum® and Sencor®/Tricor®)

Two modes of action: Glyphosate, ALS, DNA and PPO resistant weeds

Activity: Long residual, broad spectrum foundation for grasses and broadleaves

# **Rate Conversions** (not shown on the actual label)

| Boundary Rate | Dual MAGNUM Rate S-metolachlor | Sencor 75DF Rate Metribuzin |
|---|---|---|
| 1.5 pt/A | ~ 1 pt/A (0.98 lbs a.i.) | 5 oz/A (0.23 lbs a.i.) |
| 2.0 pt/A | ~ 1.38 pt/A (1.31 lbs a.i.) | 6.67 oz/A (0.31 lbs a.i.) |
| 2.4 pt/A | ~ 1.65 pt/A (1.58 lbs a.i.) | 8 oz/A (0.375 lbs a.i.) |
| 2.75 pt/A | ~ 1.9 pt/A (1.80 lbs a.i.) | 9.2 oz/A (0.43 lbs a.i.) |

# What is it?

- Boundary® herbicide controls a variety of weeds, including:
  - Annual broadleaves
  - Grasses
  - Sedges
- Other benefits:
  - Convenient to handle EC formulation (emulsifiable concentrate)
  - Contains two active ingredients:
    - S-metolachlor (5.25 lb a.i./gal)
    - Metribuzin  (1.25 lb a.i./gal)
  - Provides two different modes of action:
    - Group 15 (Chloroacetamides – shoot inhibitor)
    - Group 5 (Triazines – photosynthesis inhibitors)

# Gramoxone 2 SL @ 1 quart + Boundary @ 1.5 pints

1-5-21 Day of App

1-12-21 1 Week after App

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# Callisto Xtra® in Sugarcane

Callisto® Xtra
GROUP 5 27 HERBICIDE

- Atrazine (the active ingredient in **Aatrex®**)

- Mesotrione (the active ingredient in **Callisto®**)
  - Unprecedented broadleaf weed control

- Patented synergistic herbicidal combination of mesotrione and atrazine.
  - The control received from the combination of products is better than expected based on each product used alone (1 + 1 = 3).

Callisto Xtra should be applied at 20-**24** fl oz/A

| Callisto® Xtra | Callisto® | AAtrex® 4L |
|---|---|---|
| 20 fl oz/A | 2.5 fl oz/A | 0.5 qt/A |
| **24 fl oz/A** | **3.0 fl oz/A** | **0.6 qt/A** |





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# Labelled Crops: Field Corn, Seed Corn, Sweet Corn, Yellow Popcorn, Grain Sorghum and Sugarcane

# Calibra™ Single Product Component Rates

| Calibra™ Rate | Callisto® Rate | Dual II Magnum® Rate |
|---|---|---|
| 1.4 qt/A | 3.1 fl oz/A | 1 pt/A |
| 1.9 qt/A | 4.3 fl oz/A | 1.4 pt/A |
| 2.4 qt/A | 5.4 fl oz/A | 1.8 pt/A |
| 2.8 qt/A | 6.3 fl oz/A | 2.1 pt/A |

Classification: Public - Not for Distribution

# Lumax EZ Components

| Lumax EZ (qt/A) | AAtrex 4L (qt/A) | Callisto (fl oz/A) | Dual II Magnum (pt/A) |
|---|---|---|---|
| 3.0 Early Post | 0.7 | 6.0 | 2.0 |
| 3.75 Pre | 0.9 | 7.5 | 2.4 |


Lumax EZ is a Restricted Use Pesticide. Lumax EZ may not be registered for sale or use in all states. Please check with your state or local extension service before buying or using these products.

# Lumax EZ Preemegence Application

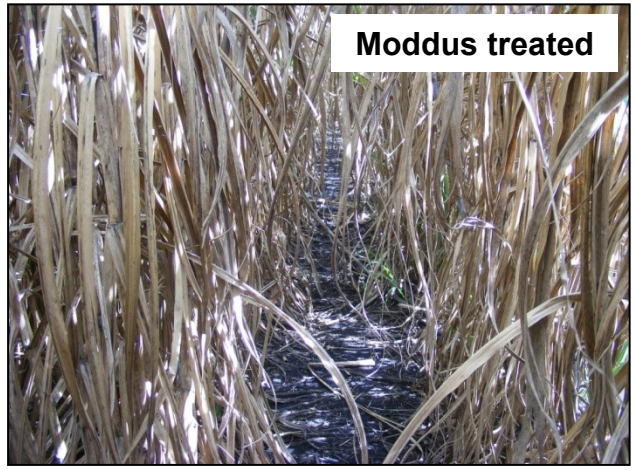
- Application
  - Pre applications best suited for mineral soils
  - Broadcast PRE prior to sugarcane emergence
  - Apply in 10 - 30 gallons per acre (GPA) of clean water as a carrier
- Timing
  - Apply after planting of plant-cane or after harvest of ratoon-cane
- Adjuvants
  - If weeds have not emerged at the time of application, no adjuvant is needed
  - For control of emerged weeds present at application, add a COC or NIS and spray-grade AMS
  - If weeds have emerged but not the sugarcane, an MSO may be used instead of COC
  - If weeds have emerged a tank-mix partner may be required for maximum post control
- Tank Mixture
  - Tank mix partners not typically needed for PRE weed control

| | | | | | |
|---|---|---|---|---|---|
| **Moddus™**<br><br>Applied prior to harvest, Moddus® plant growth regulator helps increase sugar content and/or extend harvest window. It also improves seed piece production in sugarcane. | 12 hours | 28 days | 11–19 fl oz/A (for ripening sugarcane)<br><br>4–12 fl oz/A (for internode shortening for seed piece production in sugarcane) | 19 fl oz/A/season | Apply 28–60 days prior to harvest to increase sugar content and/or extend harvest window (for ripening sugarcane)<br><br>Make a minimum of two split applications.<br><br>First Application: 4–12 fl oz/A when 6 fully developed leaves appear (Leaf bottom should be feeding internodes above the soil surface)<br><br>Second Application: 4–12 fl oz/A when 6 additional fully-developed leaves appear |

# Moddus Overview

- Active ingredient – Trinexepac-ethyl
- PGR that temporarily reduces the level of active gibberellins
- Used to shorten internodes in grasses grown for seed & cereals which reduces lodging
- In sugarcane used to shorten internodes, reduce lodging, increase or maintain sucrose levels, & enhance ratoon vigor

# 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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# 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™.<br>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.<br>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

# Review of Features & Benefits

- **Inhibits gibberellic acid (GA), a plant hormone responsible for cell elongation**
  - Shortens internodes – facilitate billet planting
  - Reduces lodging – improves harvest and planting efficiencies
- **Boosts sugar yield**
  - In 86% of trials had an increase of 10+ lb./ton when compared to UTC
- **No adverse affect on subsequent ratoon crop**
  - Safe to apply to ratoon crops
  - Can enhance ratoon vigor
  - Can enhance ratoon quality
- **Improves harvest efficiency**
  - Ease of harvest because of improved standability
- **Stimulates root growth** (Brazilian observations)
  - Better water and nutrient use efficiency
  - Enhanced ratoon vigor
  - Less susceptibility to lodging & harvest damage



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# Thanks!

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