



# Diamond™ 0.83EC Insecticide

## Sugarcane Borer Efficacy in Sugarcane and Registration Update

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## **Product Characteristics**

- **Common name is novaluron**
- **New chemistry – Chitin Inhibitor**
  - **Insect resistance management tool**
- **Residual Control – product not degraded by UV light.**
  - **Product present on cotton and other crops for 14+ days.**
- **Rainfast in a few hours**
- **IPM Friendly – easy on beneficial insects**
- **Low Mammalian toxicity**

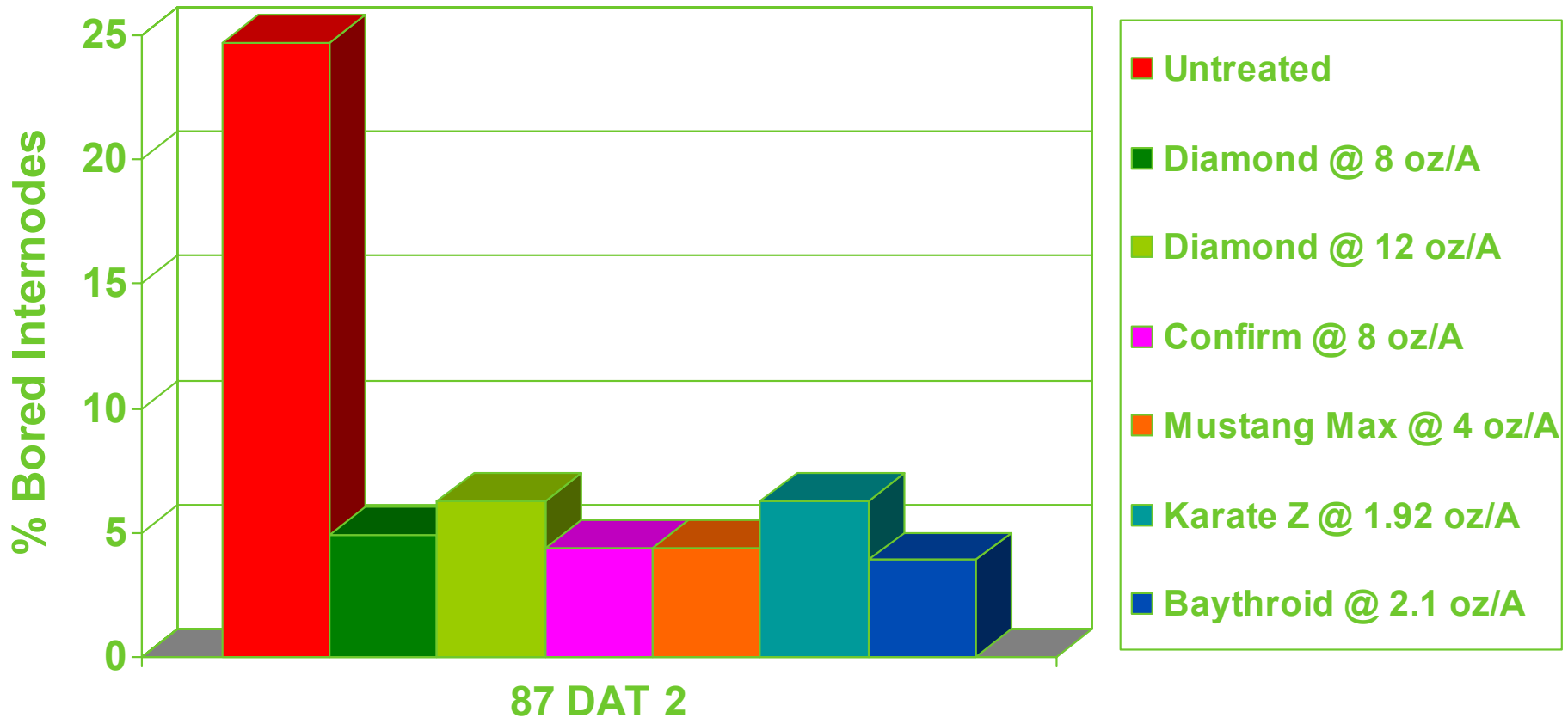


## How Does Diamond Work Against Target Pests?

**Diamond inhibits chitin production resulting in the inability of the target insect to molt successfully to the next growth stage, thus causing death.**

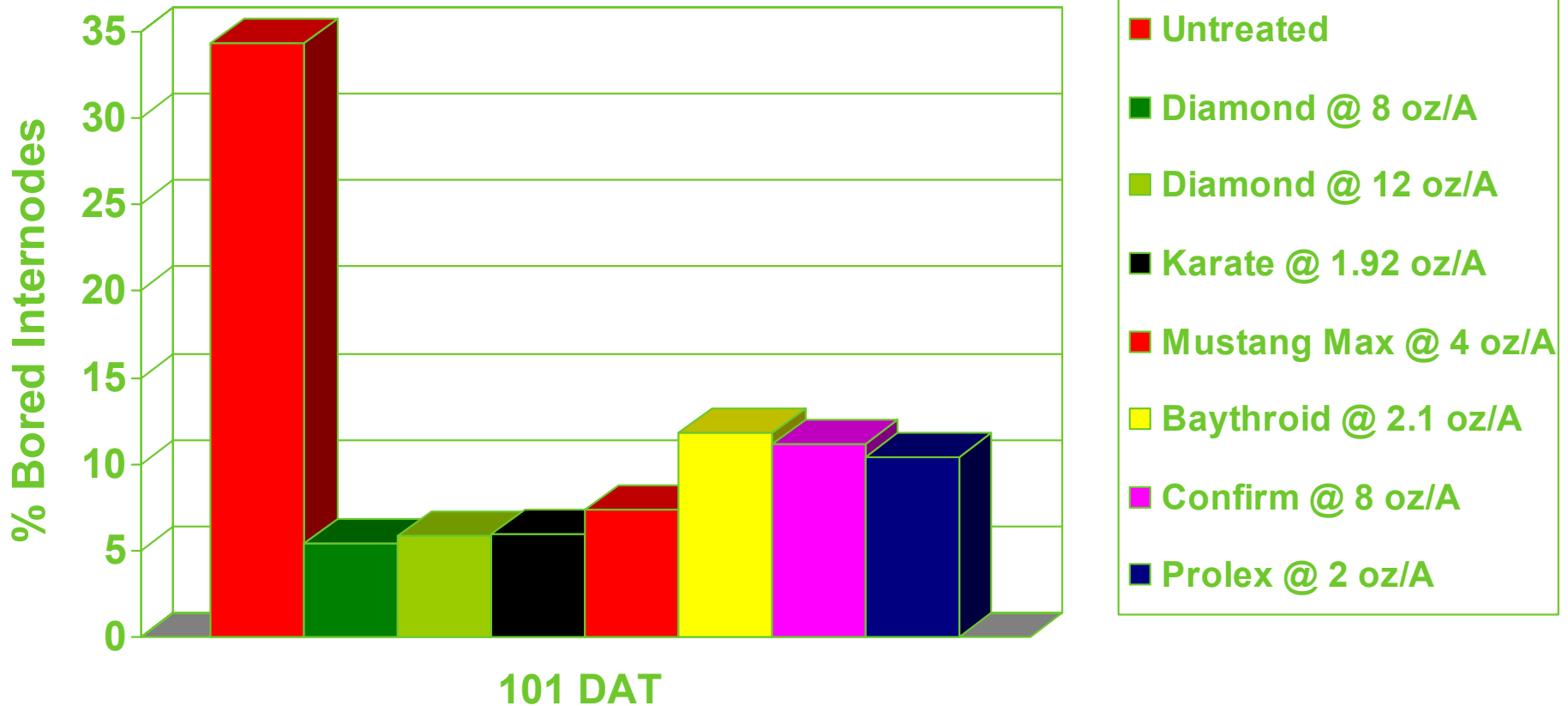


# Sugarcane Borer Control St. Gabriel, LA - 2004



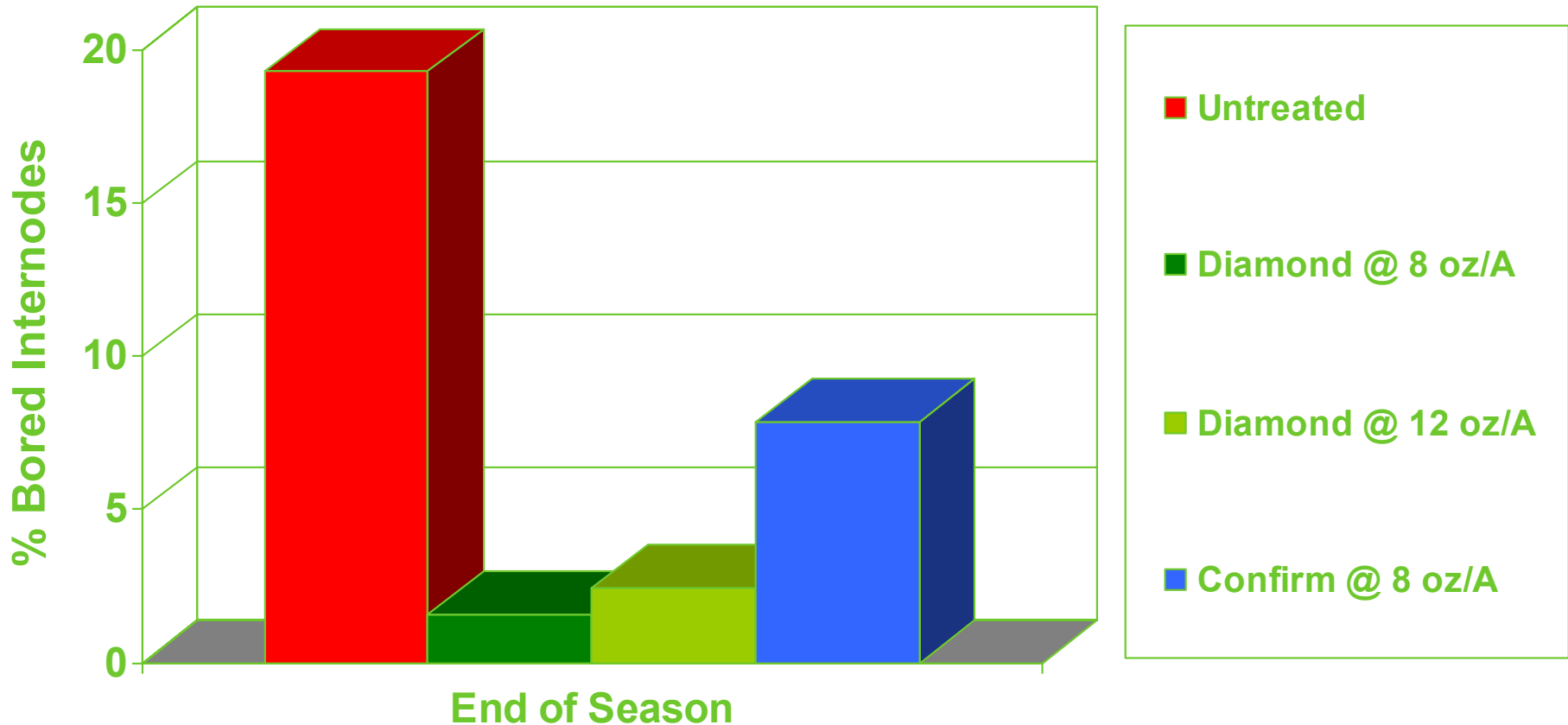
Applications were made on July 10 and August 9. All treatments were applied with Latron CS-7 @ 0.25% v/v.

# Sugarcane Borer Control St. Gabriel, LA - 2005



Application was made on July 26. All treatments were applied with Latron CS-7 @ 0.25% v/v.

# Sugarcane Borer Control Cheneyville, LA – 2004



Aerial applications (5 gal/A) were made on July 16 and August 13. All treatments were applied with Latron CS-7 @ 0.25% v/v. There were no treatment differences for any beneficial arthropod monitored.

## Louisiana Sec. 18 SLN Label - 2006

- Section 18 Emergency Exemption granted to LA on August 3, 2006 for sugarcane borer control.
- Justification for SLN based on damage to beneficial insect populations from salt water intrusion and concern for potential Confirm resistance in SCB populations from overuse in affected areas.
- Lateness of SLN issuance limited Diamond use in commercial fields.
- Commercial field tests will continue in 2007.
- 2007 Sec. 18 ??

Diamond Insecticide Test: Paul J. Templet & Jeremy Babin; Ag Consultants

Grower: Northside Plt Co.; Clint & Chad Judice; Franklin, LA

Farm Tract: Oaklawn

Plot Size: 5 cuts totaling 70 acres

Variety: HoCP 96-540

SC Borer Infestation on 8/22/06: 11.2%

Five leaf samples consisting of 25 leaves each in five different locations were examined for the presence of live borers.

Insecticides: Diamond @ 9 oz/ac; Confirm @ 6 oz/ac; **No untreated check**

Application Date: 8/22/06; Mid Morning

Application Method: Aerial @ 2 GPA with non-ionic surfactant @ 1 qt/100 gal.

Weather: Partly cloudy; shower 24 hrs later; showers frequent after application

Procedure: SC Borer infestations determined 7 DAT and 28 DAT;

Table 1: % Live SCB Larvae\*

	Rate	DAT	
		7	14
Diamond	9.0 oz	0.0	0.0
Confirm**	6.0 oz	0.0	0.0

\*Five samples of twenty five leaf sheaths and stalks examined for live borers

\*\*One recently killed 2nd instar observed 7 DAT

Table 2: % Bored Internodes\*

	Rate	DAT
		14
Diamond	9.0 oz	0.01
Confirm	6.0 oz	0.00

\* Five samples of 100 joints examined for bored joints

\*\*One recently killed 2nd instar observed

Observations:

Diamond appeared to have a quicker kill than Confirm.

7 DAT: leaf feeding signs were observed but no larvae present.

Rain increased performance of both insecticides.

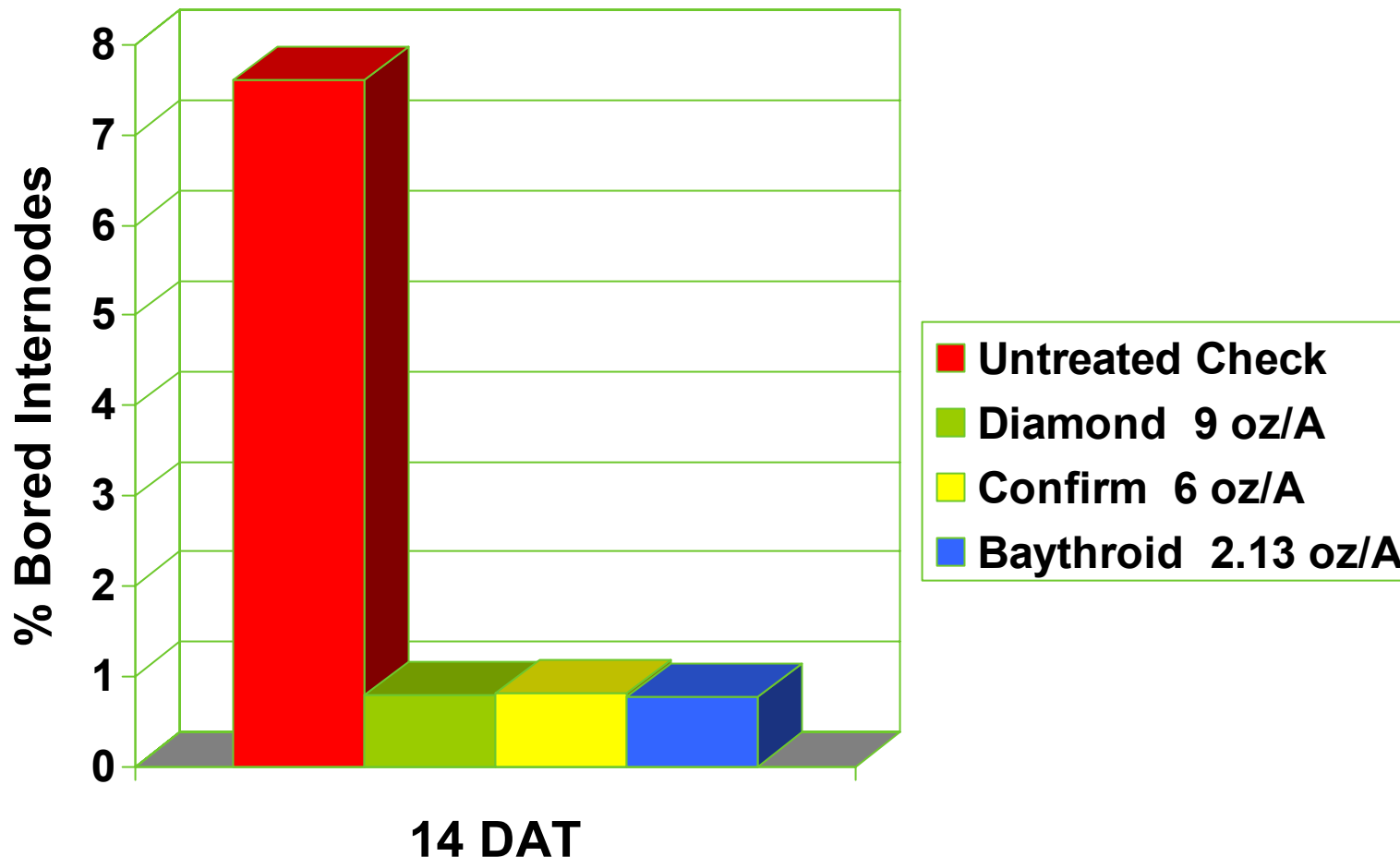
Predators were observed following Diamond treatment both on 7 & 14 DAT: ants; spiders, and an earwig.

Numerous red imported fireant mounds were observed on the edge of rows and headlands for both treatments.



# Sugarcane Borer Control - 2006

## Sotile Farms - St. James Parish, LA



Treated 8-31-06 by air. Spray Volume = 2 GPA. NIS added @ 0.25% v/v.  
10% live SCB larvae behind leaf sheaths @ time of application.  
<1% live SCB larvae @ 7 DAT.

## Diamond 0.83EC Label and Use Pattern - Sugarcane

- **Use Rates: 9-12 fl oz/A**
- **Application Volume: Air – 2 to 10 gal/A**  
**Ground – 10 gal/A minimum**
- **Timing: At SCB / MRB economic thresholds determined by local authorities, e.g. 3-5% larval infestations.**
- **Do not apply more than 5 applications per season**
- **Do not apply more than 60 ounces per acre per season**
- **‘Warning’ signal word - potential temporary eye injury**
- **PHI and REI to be set by EPA. Sec. 18 label PHI was 14 days and REI of 12 hours.**



## Diamond™ 0.83EC for Sugarcane

### Registration Status

- All required residue and environmental fate studies are under review at EPA.
- Federal Sec. 3 registration anticipated in 1<sup>st</sup> Quarter of 2008.