

NEW FROM MANA!



INSECTICIDE

MAKES SENSE.

Diamond[®]

0.83EC INSECTICIDE



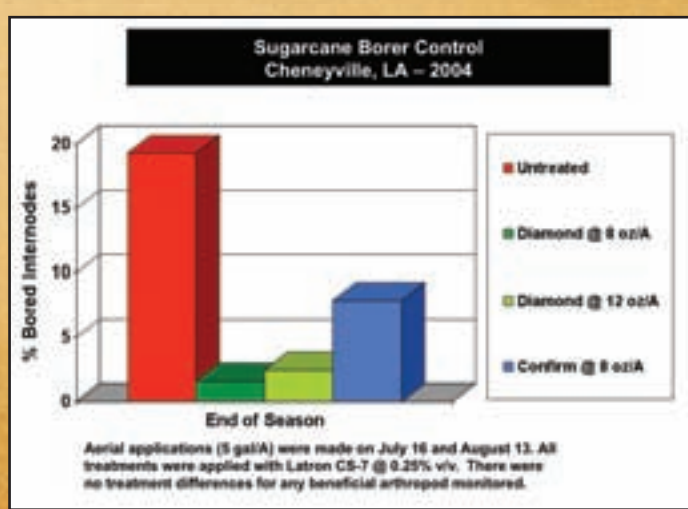
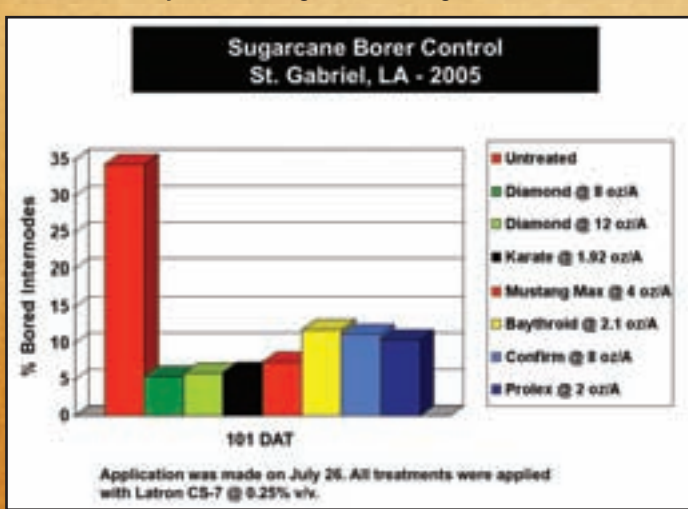
NEW CHEMISTRY FOR SUGARCANE BORER

A number of insecticide classes - including organochlorines, organophosphates and carbamates - have been used over the years for sugarcane borer control. However, each class has been abandoned for one reason or another - effects on non-target arthropods, fish kills or insecticide resistance. The pyrethroid insecticides were introduced for sugarcane borer control in the 1980s and have been widely used until recent years. Pyrethroid insecticides are generally harsh on beneficials and their use tended to lead to enhanced secondary pest problems in sugarcane. However, more importantly, the sugarcane borer has shown strong potential to develop pyrethroid resistance due to widespread use.

INSECTICIDES LABELED FOR SUGARCANE BORER CONTROL				
Product	Chemical Class	lbai/A	Rate/A (oz)	PHI
Asana XL	Pyrethroid	0.033 - 0.05	5.5 - 9.8	21 days
Baythroid	Pyrethroid	0.033	2.1	15 days
Confirm 2F	Diacylhydrazine (IGR)	0.09 - 0.12	6.0 - 8.0	14 days
Diamond 0.83EC	Benzoylurea (IGR)	0.052 - 0.078	8.0 - 12.0	14 days
Karate	Pyrethroid	0.033	2	21 days
Mustang Max	Pyrethroid	0.01875 - 0.025	3.0 - 4.0	21 days
Proaxis	Pyrethroid	0.0125 - 0.02	3.2 - 5.12	21 days
Prolex	Pyrethroid	0.0125 - 0.02	1.28 - 2.05	21 days

An Insect Growth Regulator (IGR) Insecticide - Confirm[®] - was introduced for sugarcane borer control in 1999. Since then Confirm has become the most widely used sugarcane borer insecticide with ~70% of the foliar applications. Confirm contains tebufenozide a biorational insecticide that causes cessation of feeding and premature lethal molt of insect larvae. Due to heavy reliance on Confirm, decreased susceptibility to tebufenozide has been detected in several sugarcane borer populations in Louisiana. With continued reliance on this single class of insecticide chemistry, history is destined to repeat itself with resistance to the diacylhydrazine class of insecticides.

A new IGR Insecticide for sugarcane borer is available for 2009. It is Diamond[®] 0.83EC which contains Novaluron. Novaluron - a benzoylurea - is a different type IGR than Confirm in that it is a chitin synthesis inhibitor which causes abnormal endocuticular deposition and abortive molting of insect larvae. Research by university entomologists and private researchers has shown that Diamond is very effective against the sugarcane borer.



DIAMOND[®] DESTROYS BORERS BEFORE THEY CAN DAMAGE SUGARCANE YIELDS.

DIAMOND 0.83EC USE VALUE AND CONTROL PERFORMANCE POINTS:

- **Diamond 0.83EC contains the active ingredient novaluron and is a chitin inhibitor**

- a) Insects controlled in Sugarcane are Mexican Rice Borer (*Eoreuma loftini*) and Sugarcane Borer (*Diatrea saccharalis*)
- b) Use rates are 9-12oz for Sugarcane Borer and 12oz for Mexican Rice Borer
- c) Diamond 0.83EC inhibits chitin production resulting in the inability of the target insect to molt successfully to the next growth stage, thus causing death
- d) larvae may be present for extended period of time, but feeding is decreased and affected larvae cannot bore internodes
- e) excellent resistance management tool due to alternative mode of action

- **IPM Friendly**

- a) Does not kill adult insects
- b) May temporally affect some predatory insects by decreasing immature populations
- c) Does not kill foraging fire ants and has minimal affect on developing brood in mound

- **Good residual control**

- a) Product not degraded by UV light.
- b) Product present on crops for 14+ days.
- c) Rainfast in a few hours

- **Application Timing**

- a) Check fields at weekly intervals from mid-June through September 15
- b) Apply insecticides only after joints have begun and when economically injurious borer infestations exist, and that 5% stalks infested with live larvae are in leaf sheaths.
- c) NO APPLICATION SHOULD BE MADE DURING RAIN

- **Application Methods**

- a) 2 – 5 gallons per acre by air. Higher spray volumes should be used when sugarcane canopy is thick or when infestations are heavy
- b) Minimum of 10 gallons per acre by ground
- c) Use a non-ionic surfactant to maximize coverage and distribution of spray mixture
- d) Observe buffer language set forth on Section 3 label

QUALITY PRODUCTS. COMPETITIVE PRICES.



MANA

Crop Protection

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Asana XL of E.I. du Pont de Nemours and Company, Baythroid of Bayer CropScience, Confirm 2F of, Prolex of Dow AgroSciences
Karate of Syngenta Group Company, Mustang Max of FMC Corporation, Proaxis of Pytech Chemicals
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