



***AERIS Seed Applied System: A New Seed Treatment Nematicide  
and  
Trilex Advanced Seed Applied System : A New Seed Treatment  
Fungicide for cotton***

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Seed Treatment Specialist  
Bayer Crop Science**



# AERIS™ Seed-Applied System - 2007

**Custom Blend** of imidacloprid + thiodicarb.

## Fungicide Options

- ◆ Base Fungicide Package (Baytan/Thiram/Allegiance)
- ◆ Premium Fungicide Package (TRILEX Advanced)



## Custom Blend

- ◆ Imidacloprid: 0.375 mg ai / seed
  - “Gaucho Grande” component @ 12.8 fl oz/cwt
- ◆ Thiodicarb: 0.375 mg ai / seed
  - “EXP3” component @ 20 fl oz/cwt

EXP 3 Registration approved November 17, 2006

## EXP3 Seed Applied Nematicide/Insecticide

For Use Only in Commercial Seed Treatment Facilities

### ACTIVE INGREDIENT

THIODICARB: Dimethyl N, N' [thio bis [(methyl imino) carbonyloxy]] bis [ethanimidothioate]..... 34% by wt.

### INERT INGREDIENTS

..... 66% by wt.

Contains 3.2 pounds active thiodicarb per U.S. gallon

EPA Reg. No. 264-XXX

EPA Est. No. 264-MO-02

KEEP OUT OF REACH OF CHILDREN

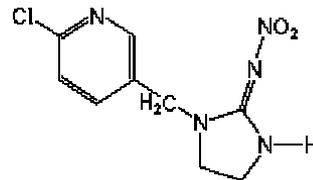
WARNING AVISO



# AERIS™ Seed-Applied System

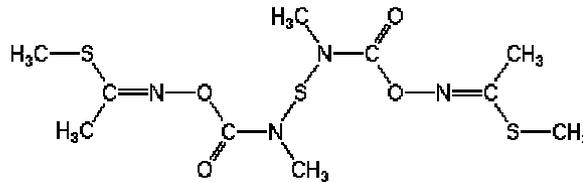
Combines the broad spectrum activity of two products – imidacloprid and thiodicarb in one powerful combination.

✓ Imidacloprid:



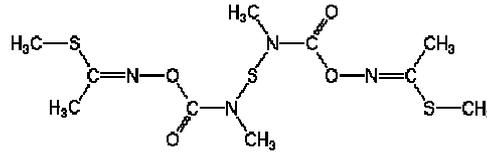
- ◆ **Systemic** neonicotinoid insecticide with excellent activity against thrips and aphids.

✓ Thiodicarb:



- ◆ **Systemic** carbamate pesticide for added protection from thrips, aphids, cutworm and plant protection from early-season root-knot and reniform nematode damage.

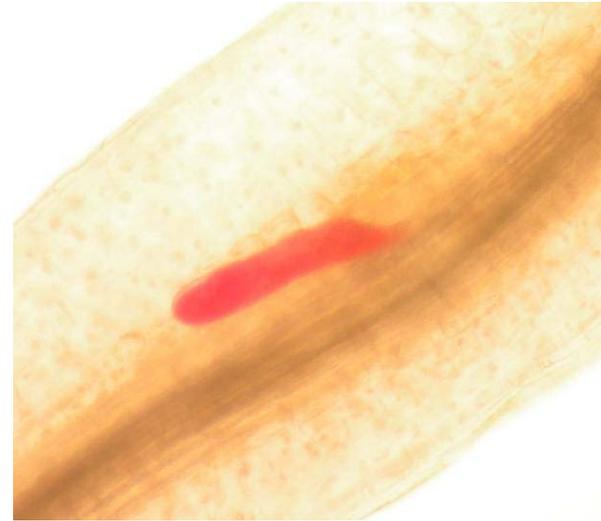
# Why Thiodicarb?



- ◆ Bayer CropScience has investigated the insecticidal and nematocidal efficacy of soil and seed applications of numerous active ingredients including thiodicarb and abamectin.
- ◆ The handling characteristics, physical properties and spectrum of activity of thiodicarb proved to be a much more attractive and promising product as compared to other molecules.
- ◆ Thiodicarb is currently marketed globally as a **seed treatment** for crops such as cotton, corn, rice, soybean and vegetables for the control of aphids, thrips, seed maggots, and specific early season lepidopteran pests.

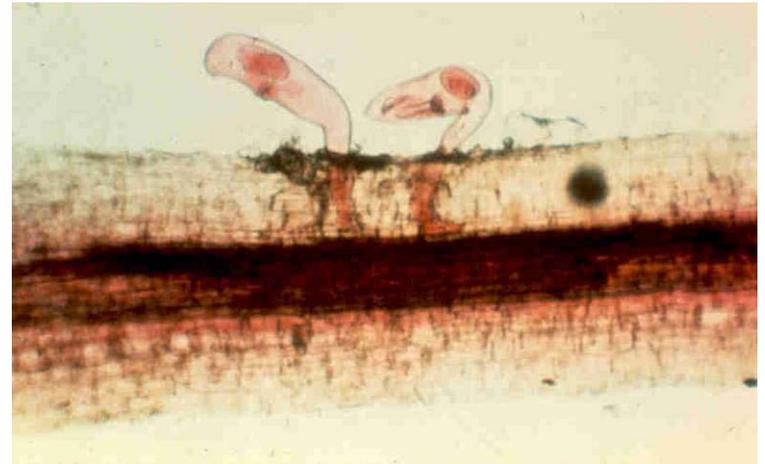
# Target nematodes: *Meloidogyne incognita*

- ◆ **Southern root-knot nematode**
- ◆ **Found in all cotton production areas**
- ◆ **Coarse textured soils**
- ◆ **Up to 50% yield loss**

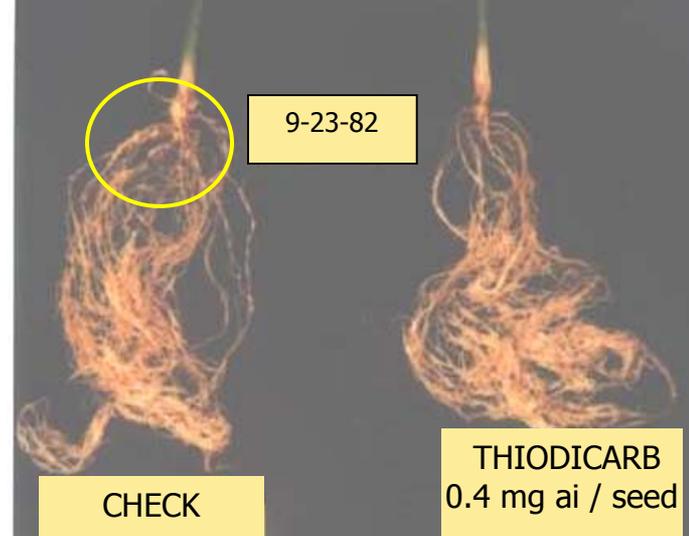


# Target nematodes: *Rotylenchulus reniformis*

- ◆ **Reniform nematode**
- ◆ **Prominent in southeast cotton production area**
- ◆ **Fine textured soils**
- ◆ **Continues to gain recognition as a difficult nematode to control**

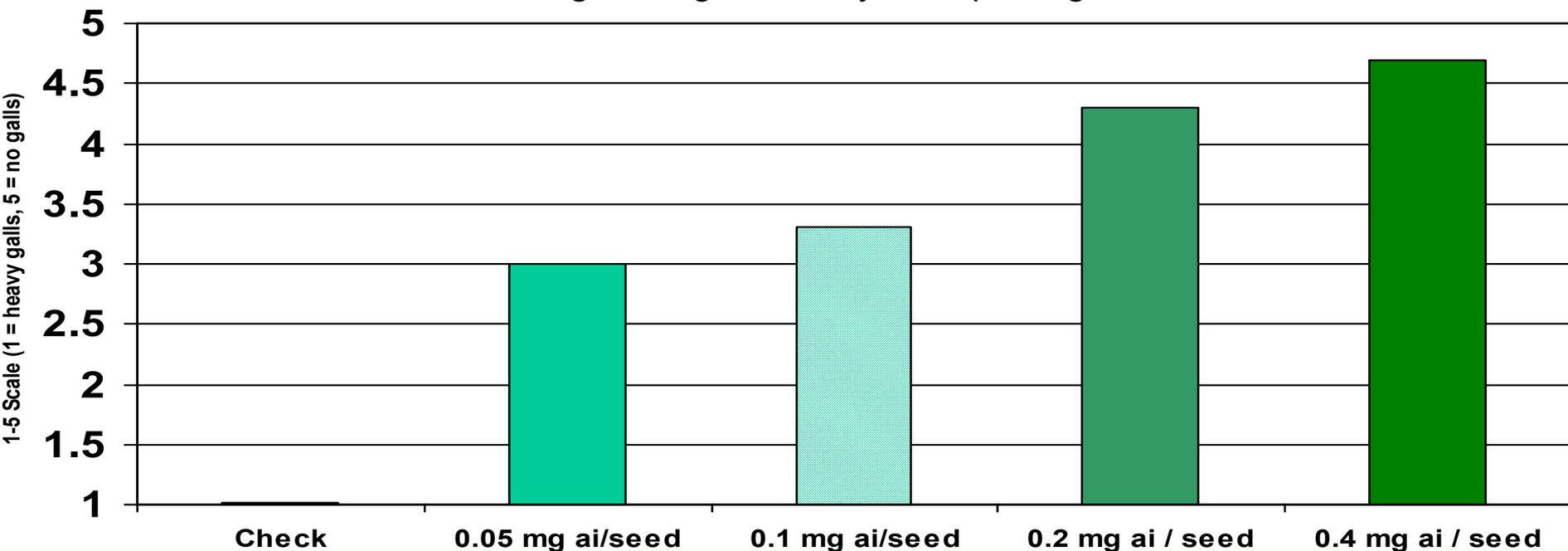


# Nematicidal efficacy of thiodicarb versus Meloidogyne incognita on cotton



Scan of original Polaroid photo

Root knot gall ratings at 30 days after planting. 9-23-82



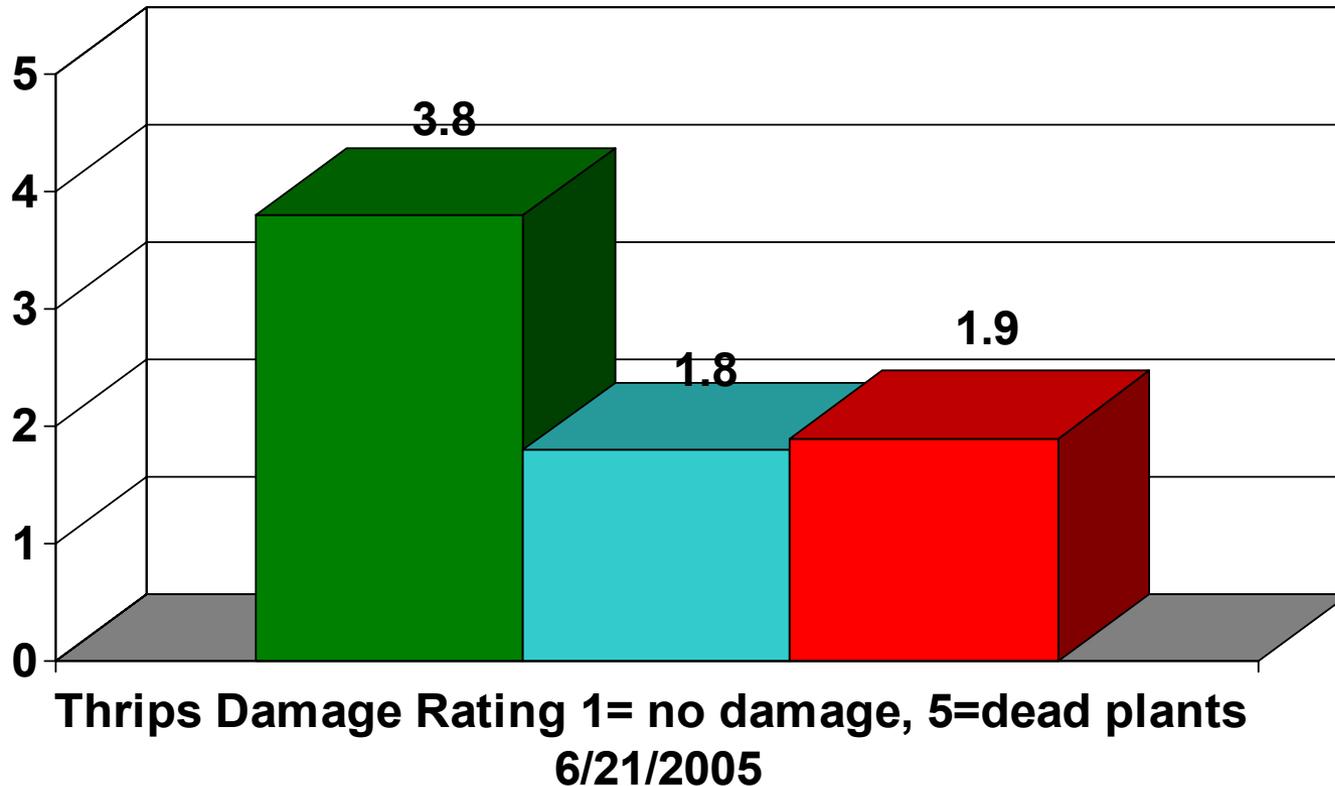


Untreated Control – RKN 6 WAT

Imidacloprid + thiodicarb – RKN 6 WAT



# AERIS Seed-Applied System Trials 2005/06 Summary across 13 locations



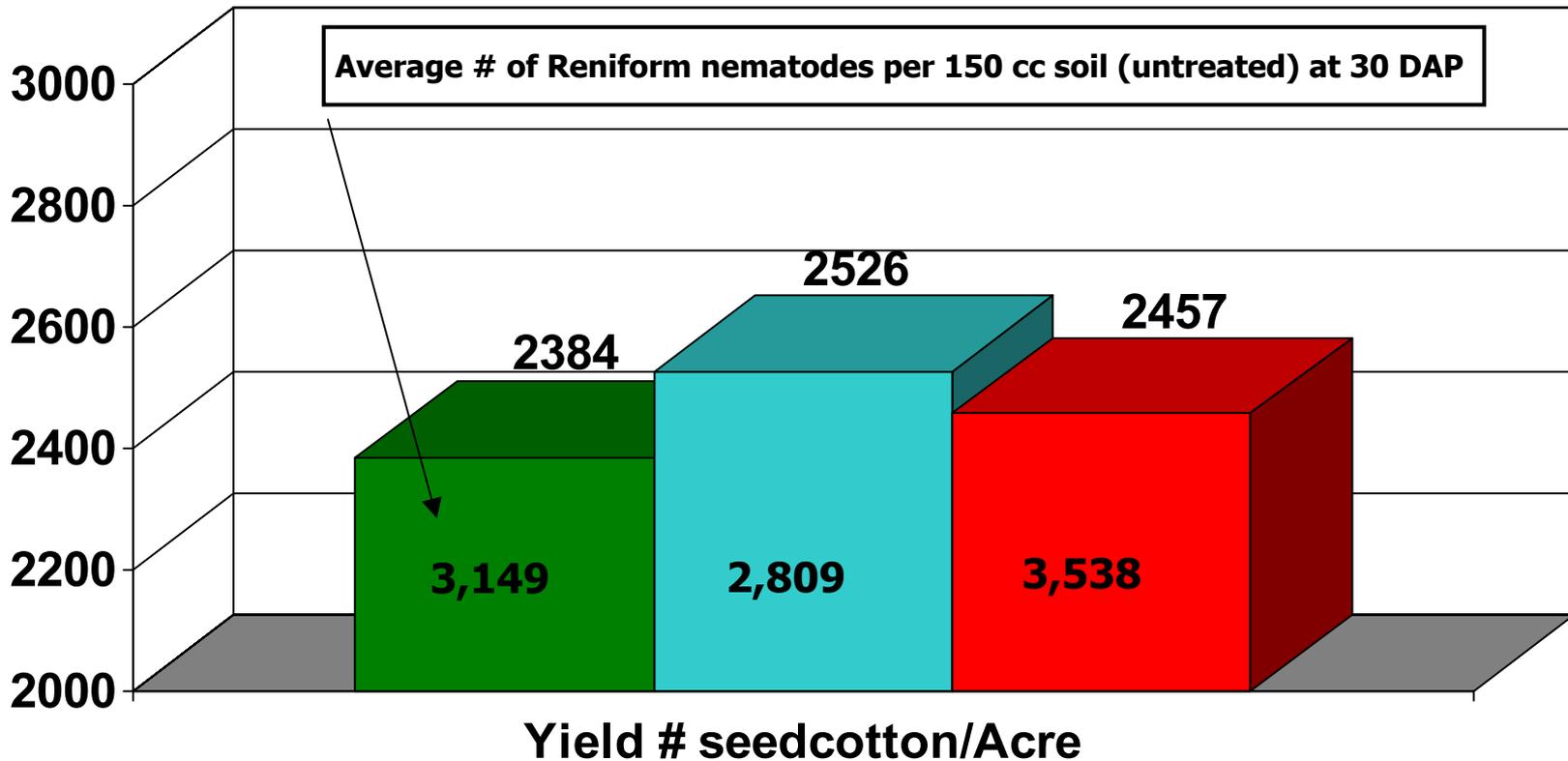
■ Untreated

■ AERIS Seed-Applied System

■ Avicta Complete PAK



# 2006 AERIS Seed-Applied System Trials Summary across 5 University Trials



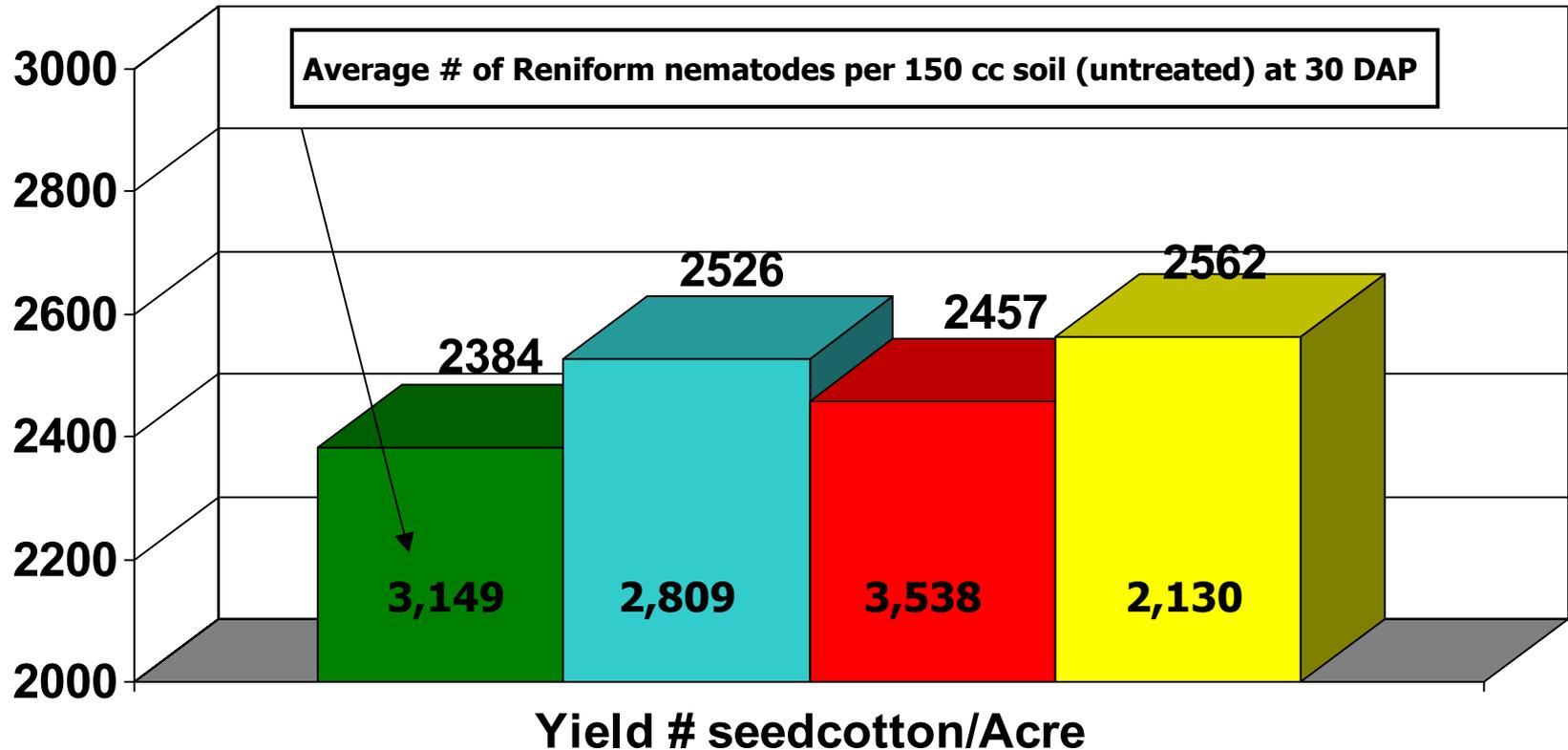
■ Untreated

■ AERIS Seed-Applied System

■ Avicta Complete PAK



# 2006 AERIS Seed-Applied System Trials Summary across 5 University Trials



■ Untreated

■ AERIS Seed-Applied System

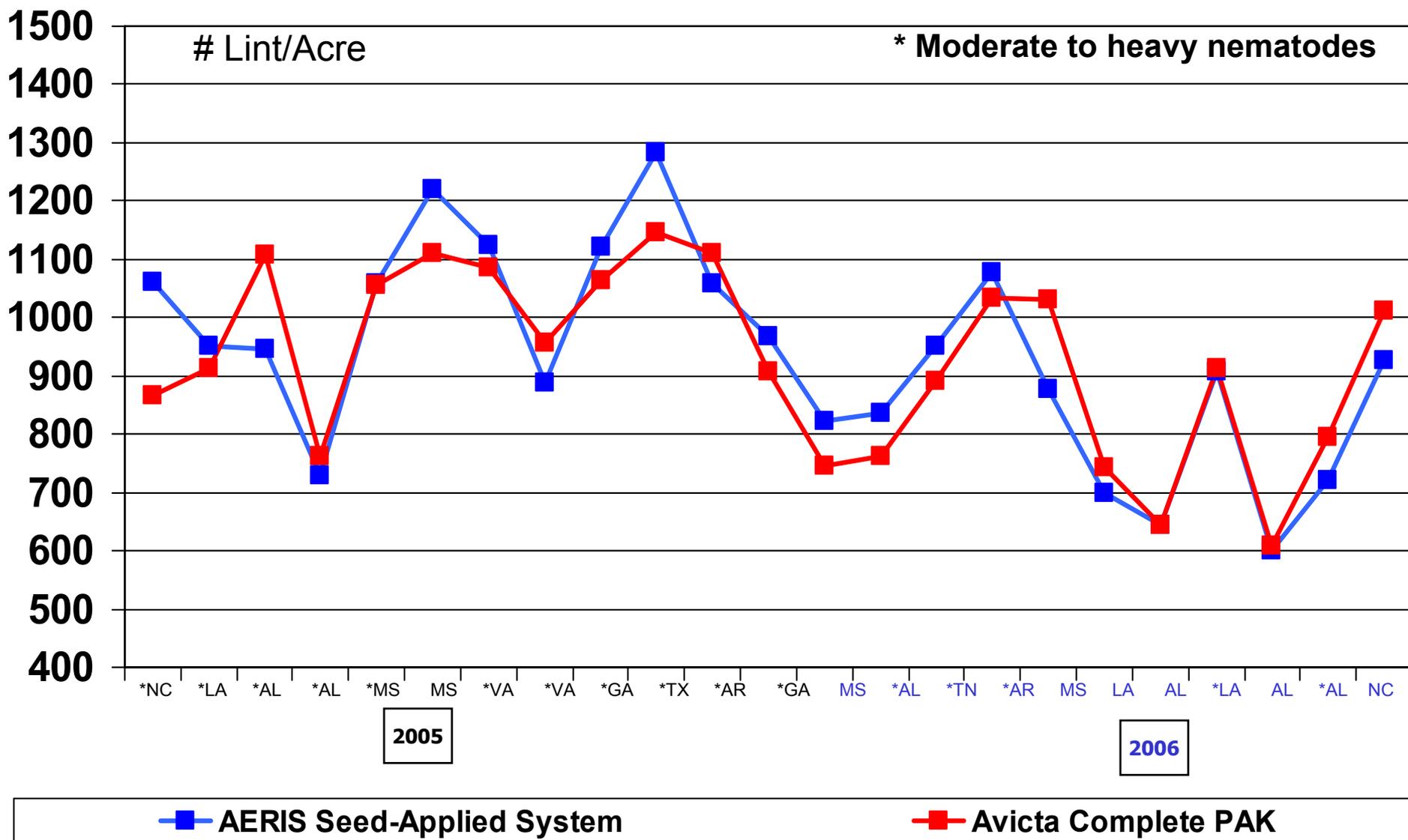
■ Avicta Complete PAK

■ Temik

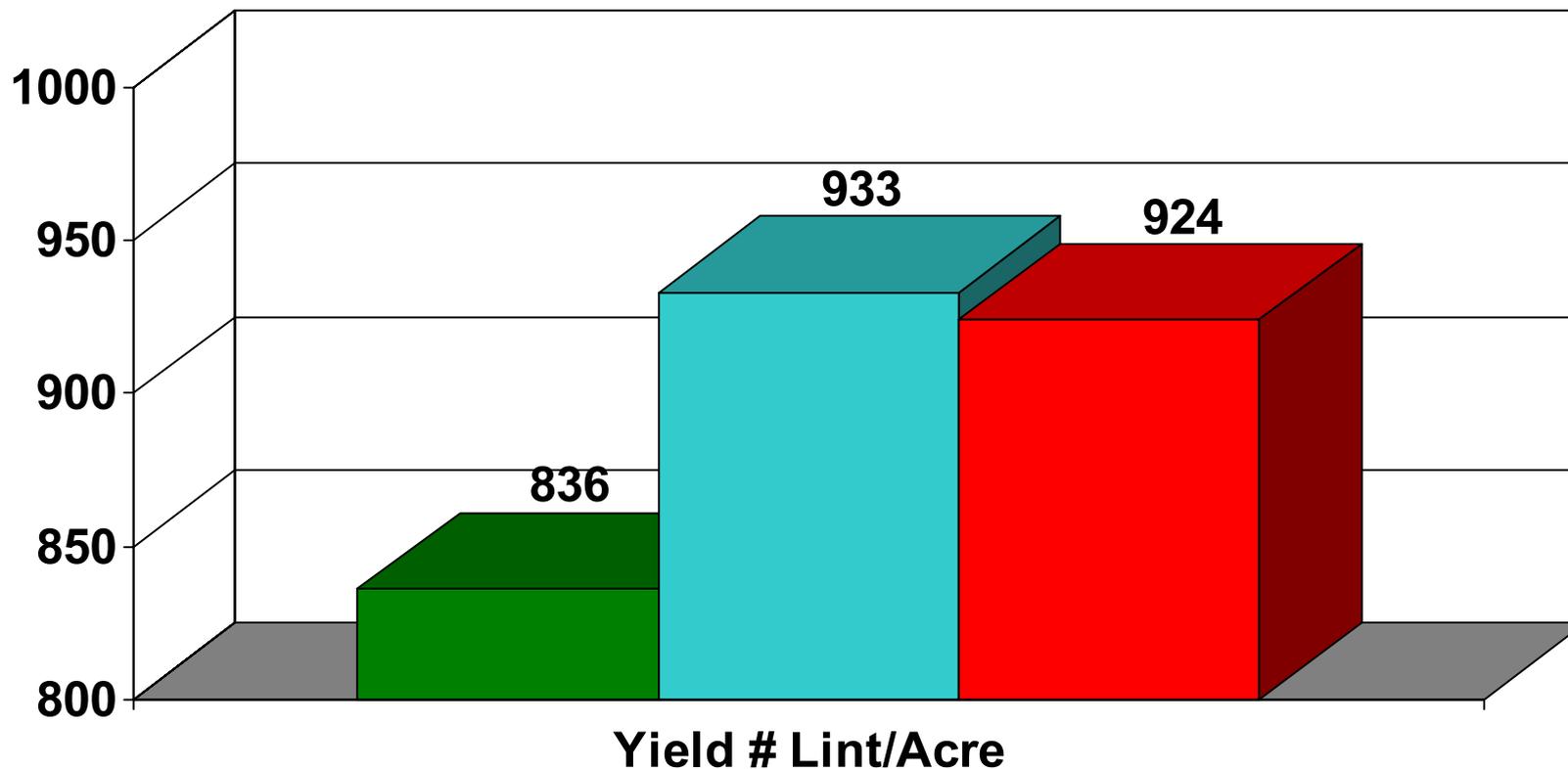


# AERIS Seed-Applied System Trials

## 2005/06 Summary across 23 University Trials



# 2005/06 AERIS Seed-Applied System Trials Summary across 23 University Trials



■ Untreated

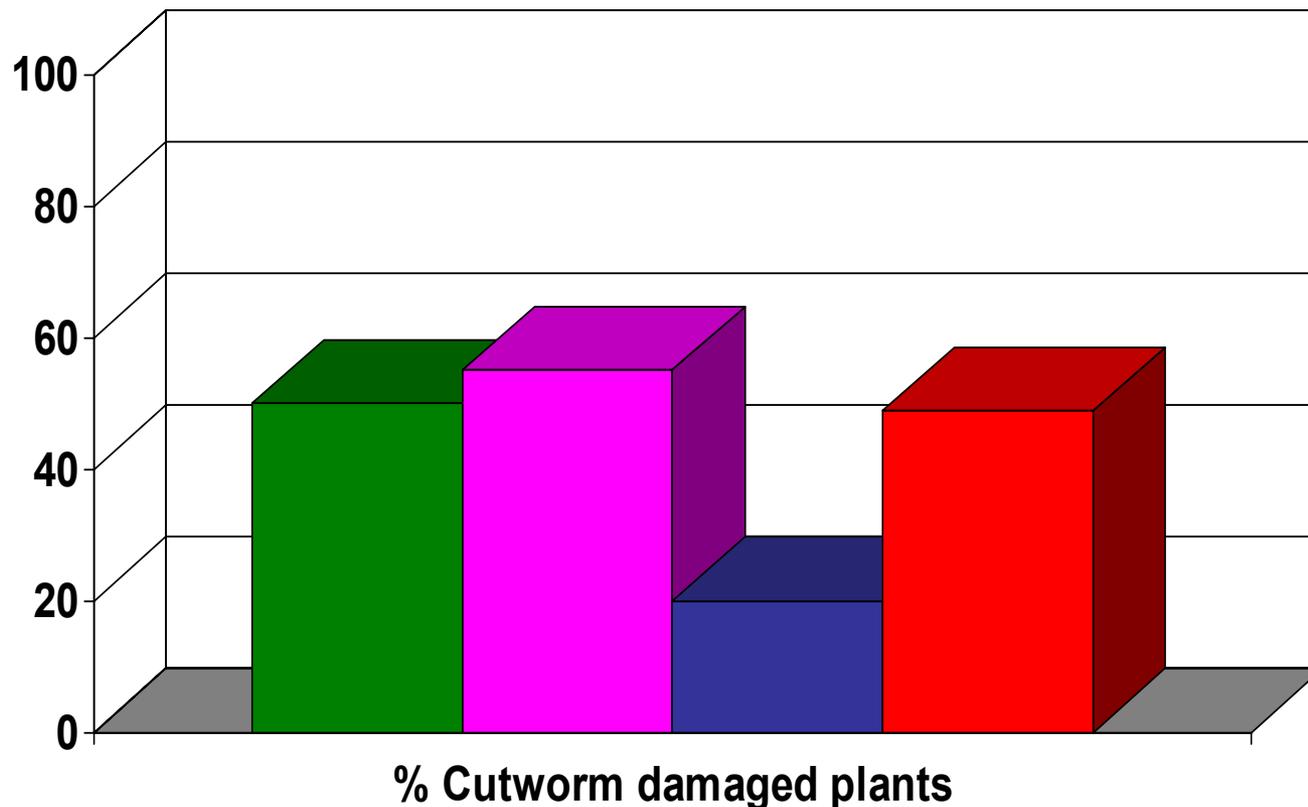
■ AERIS Seed-Applied System

■ Avicta Complete PAK



# 2006 AERIS Seed-Applied System Trial

Jennifer Riggs Bayer STC Raleigh, NC



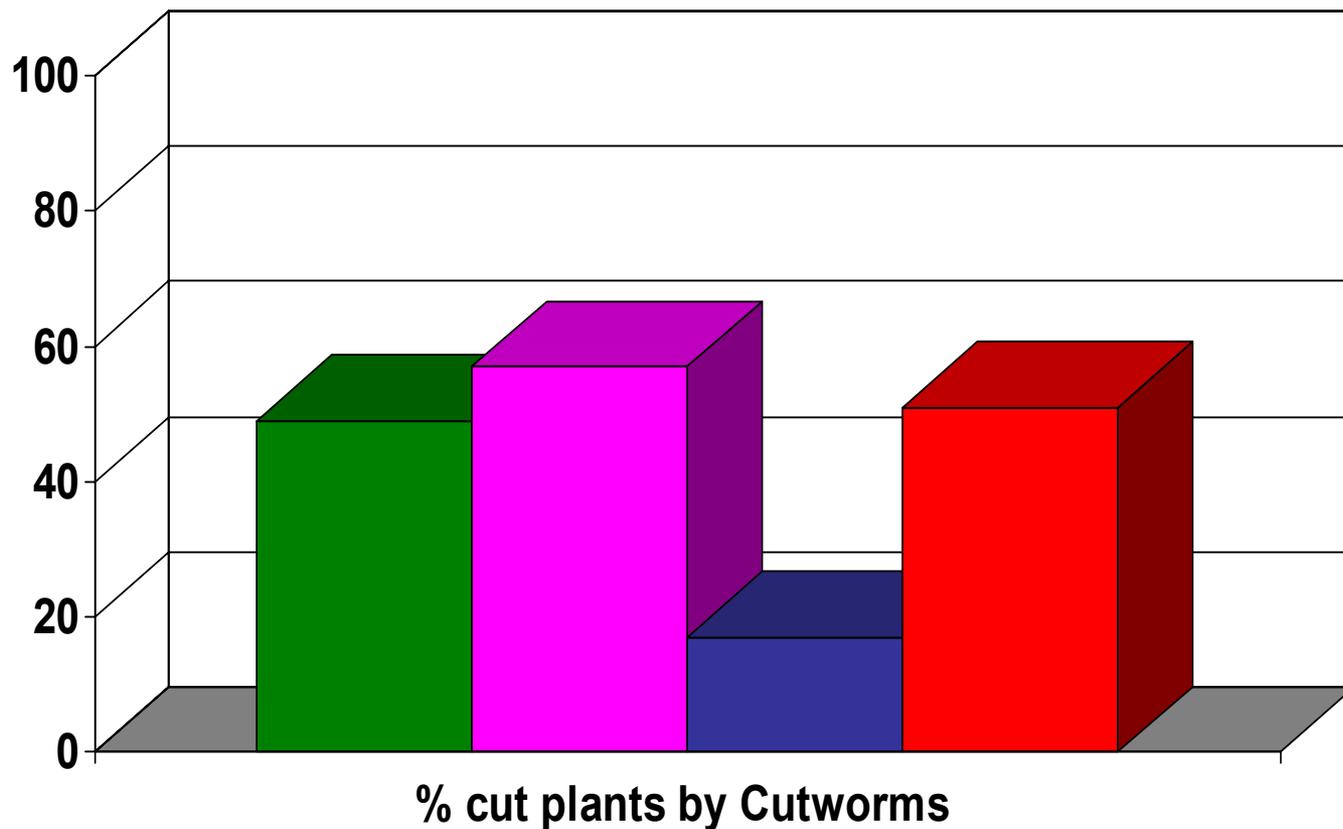
4<sup>th</sup> instar

■ UTC    ■ Gaucho Grande    ■ AERIS Seed-Applied System    ■ Avicta Complete Pak



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4<sup>th</sup> instar

■ UTC    ■ Gaucho Grande    ■ AERIS Seed-Applied System    ■ Avicta Complete Pak



# Premium Seed Applied Fungicide System for Cotton

making a stand against seedling diseases



## SYSTEM BENEFITS:

- Excellent seed safety
- Compatible with seed applied insecticides such as Gaucho Grande and AERIS
- Healthier root systems
- Increased stands
- Excellent protection against soil borne disease

	<i>Pythium sp.</i>	<i>Rhizoctonia solani</i>	<i>Theilaviopsis basicola</i>	<i>Fusarium sp.</i>
Base Fungicide	Good	Good	Fair	Good
TRILEX Advanced	Excellent	Excellent	Good	Excellent
Dynasty CST	Excellent	Excellent	Fair	Good

## • Excellent protection against seed borne diseases:

- *Fusarium*
- *Penicillium*
- *Aspergillus*
- *Rhizopus*



## • Flexibility

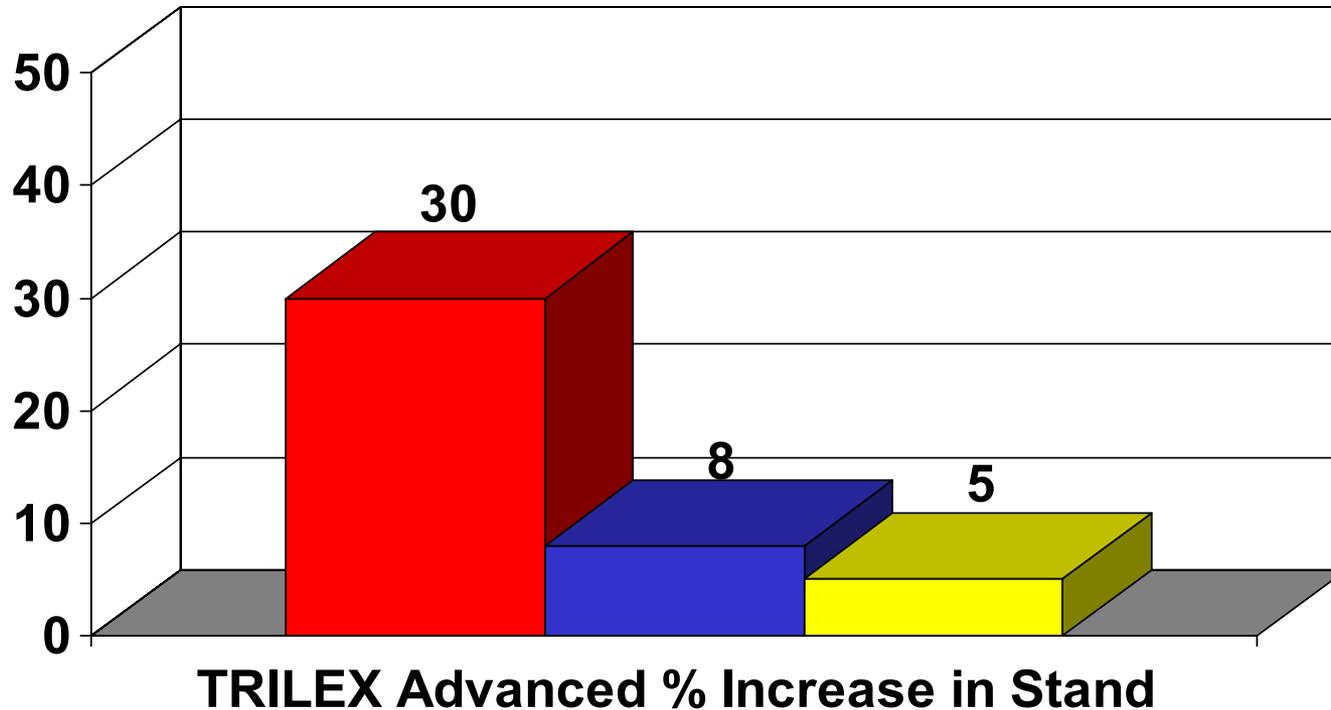
- TRILEX Advanced is the recommended premium cotton fungicide system by Bayer CropScience. Sold as a packaged component system which can be applied by seed companies, distributors or dealers.
- Neutral color – applicators may add the colorant of their choice.
- KODIAK® biological fungicide can also be co-applied with TRILEX Advanced system providing an additional mode of action in the battle against seedling diseases.



# 2005-06 Cotton Fungicide Trial Summary

## Stand counts

*Average of 11 University locations across Mid-South*



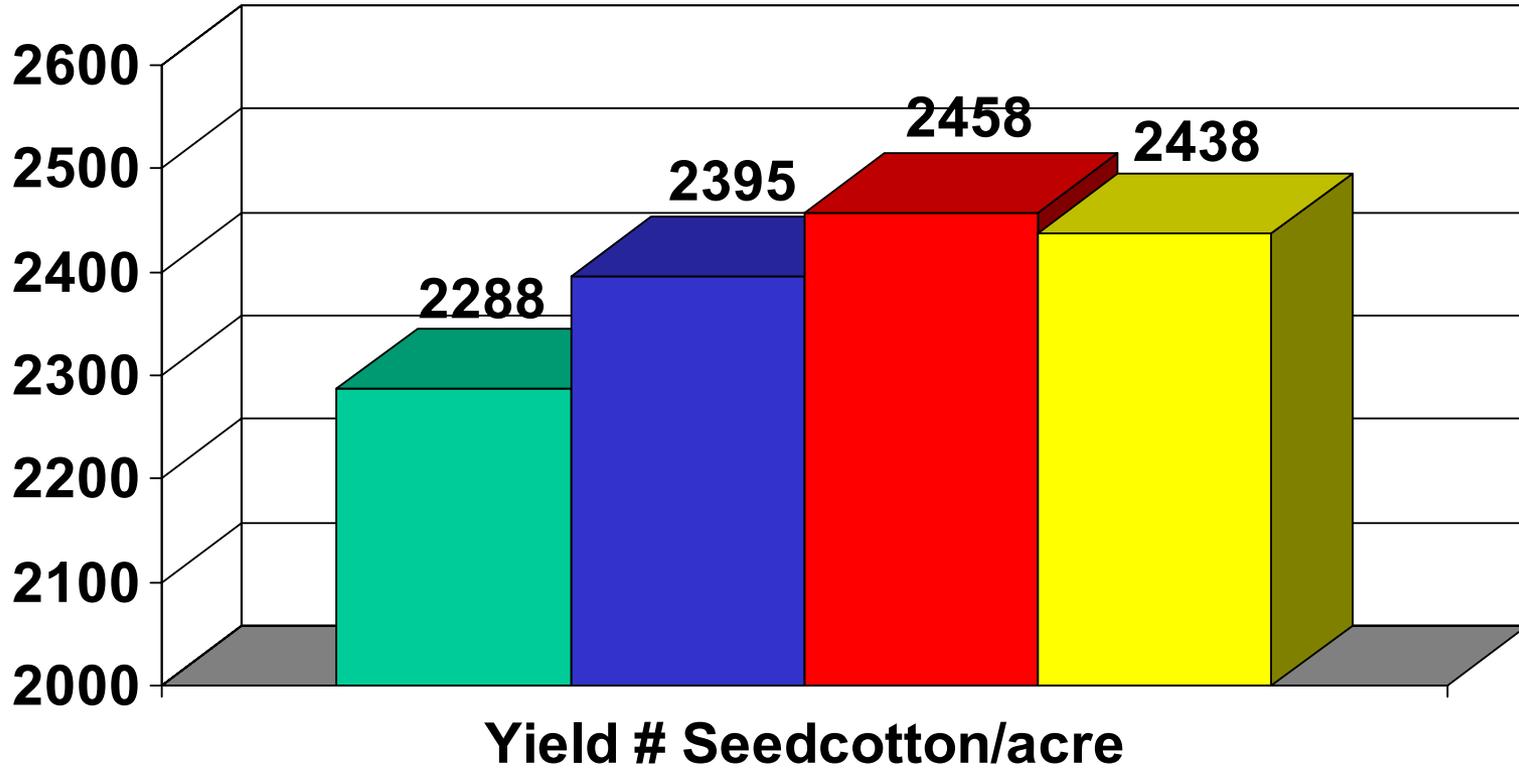
■ base + TRILEX Advanced

■ base (Baytan+Allegiance+Thiram)

■ base + Dynasty CST

# 2005-06 Cotton Fungicide Trial

Average of 8 Mid South and Southeast Trials



■ UTC   ■ base (B+A+T)   ■ base + TRILEX ADVANCED   ■ base + Dynasty CST

# AERIS IS AN ADDITIONAL TOOL FOR COTTON PRODUCERS FROM A COMPANY THAT PROVIDES CONSULTIVE PRODUCT RECOMMENDATIONS TO MEET A GROWER'S NEEDS AND PRODUCTION PRACTICES.

0 days      10 days      20 days      30 days      40 days

**TEMIK**



**TRILEX  
ADVANCED**  
SEED-APPLIED SYSTEM



**AERIS**  
SEED-APPLIED SYSTEM

**TRILEX  
ADVANCED**  
SEED-APPLIED SYSTEM



**GAUCHO  
GRANDE**





Bayer CropScience

