

# Adapting IPM Strategies to the Evolving Needs in Biotech Cotton and Field Corn



**B. R. Leonard**

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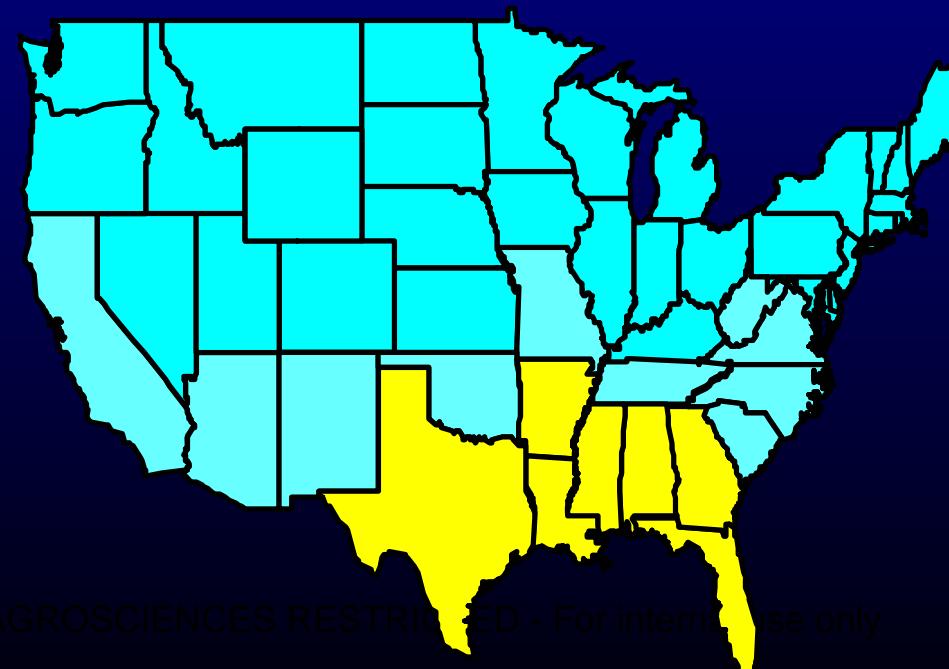


# Technology Enables IPM and Delivers on the Promise



Insecticides: Application Frequency/Total AI

# Technology Enables IPM and Delivers on the Promise



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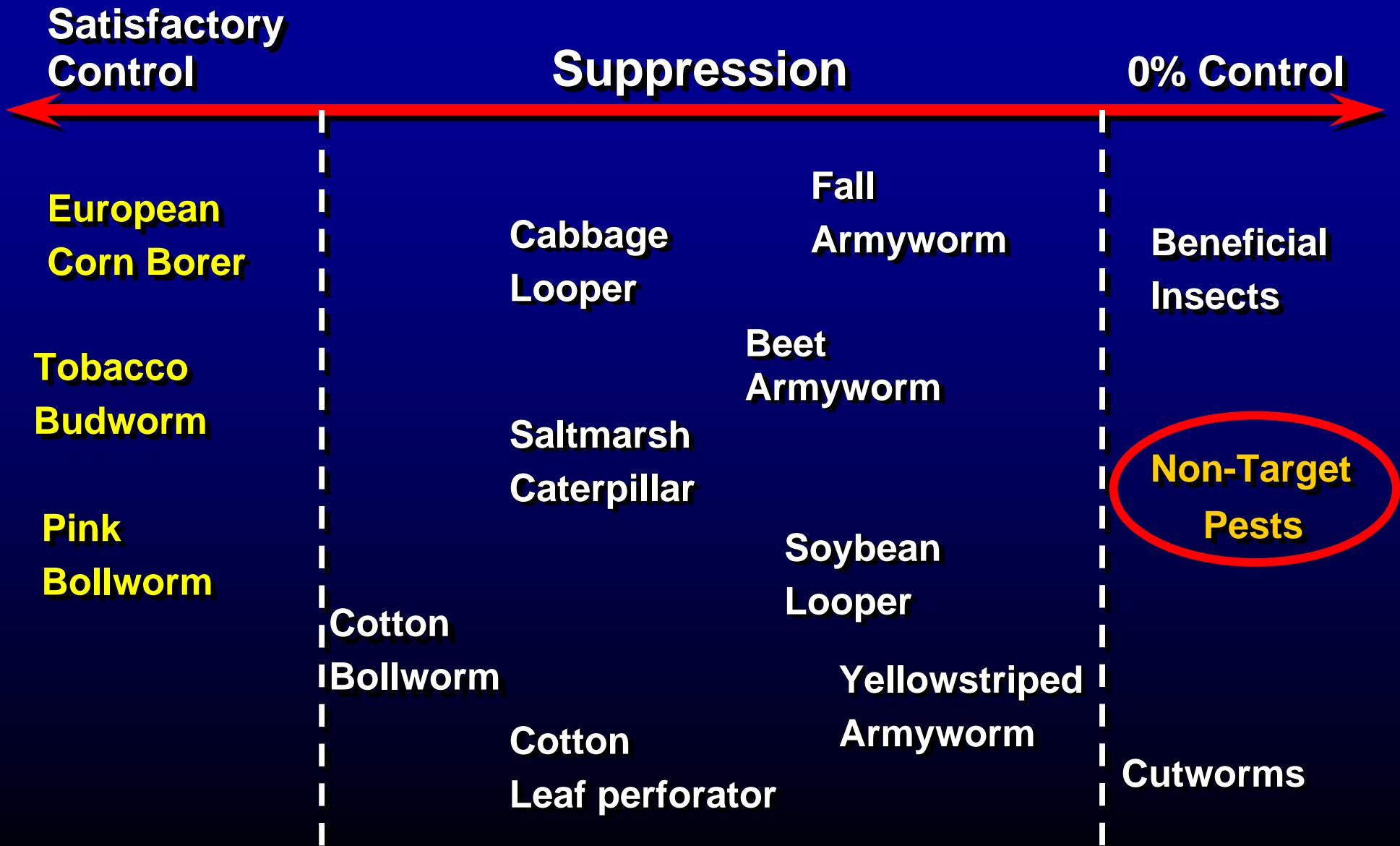
# Technology Enables IPM and Delivers on the Promise



# Issues to Consider

- Efficacy and Target Pest Spectrum

# Effects of Bollgard on Cotton Pests



# WideStrike Performance



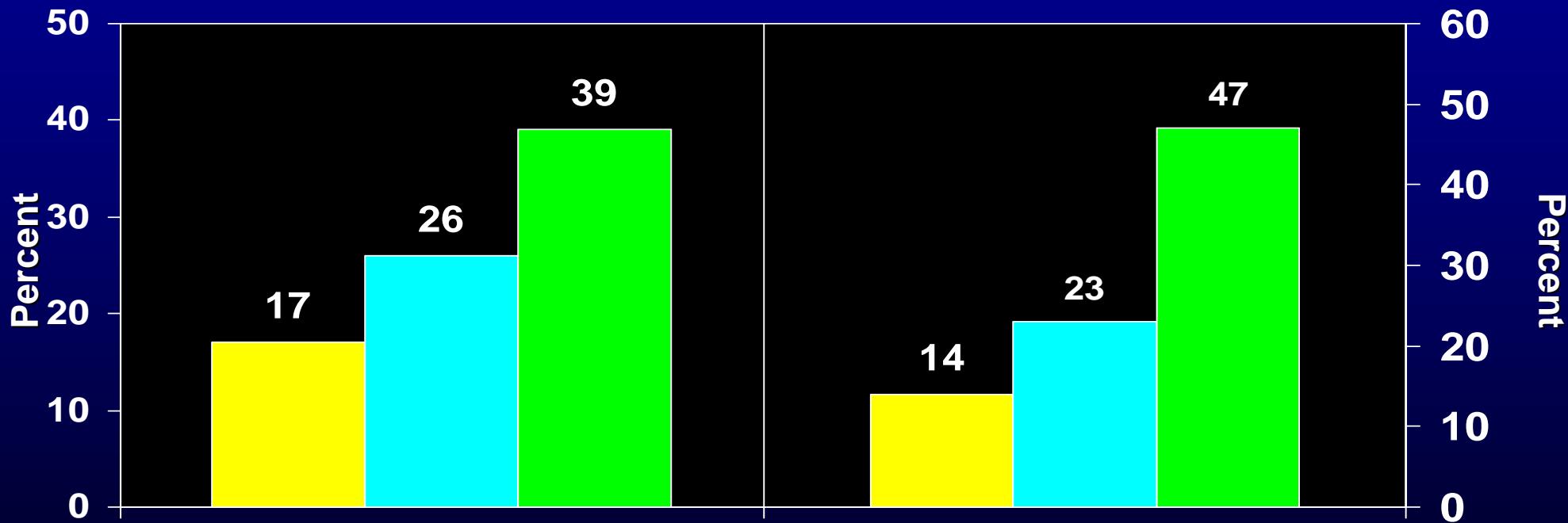
# Corn Borer Pests in LA



# Bt vs Conventional Planting Dates, 2004



■ 10-Mar ■ 25-Mar ■ 15-Apr



**Lodging**

**Yield > DK 697**

# Issues to Consider

- **Efficacy and Target Pest Spectrum**
- **Perception.**

# IPM Emphasis on Transgenic Bt Crops

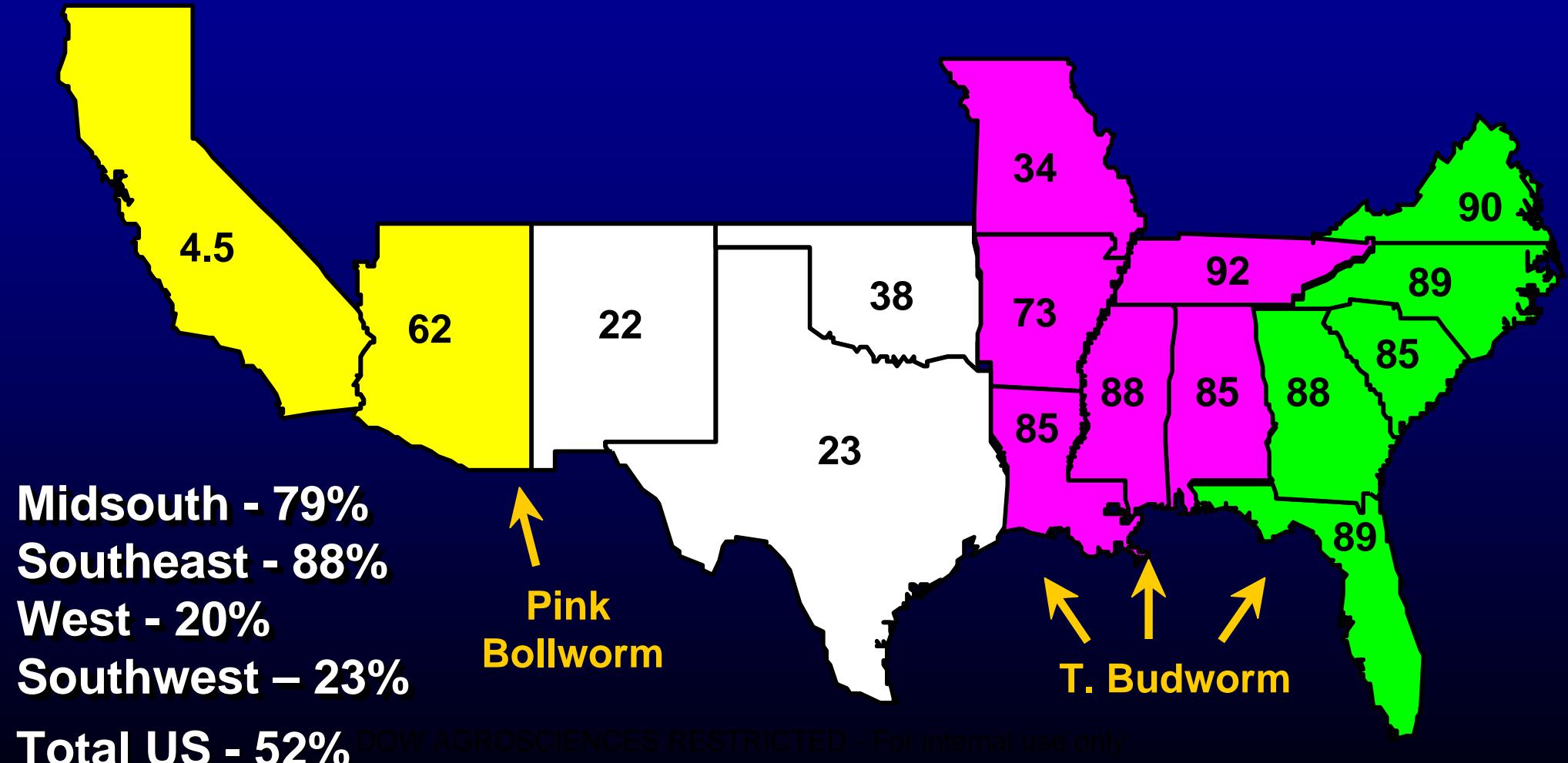
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- Lepidopteran Pressure
- Cost of Control
- Probability of Failures
- Risk Management

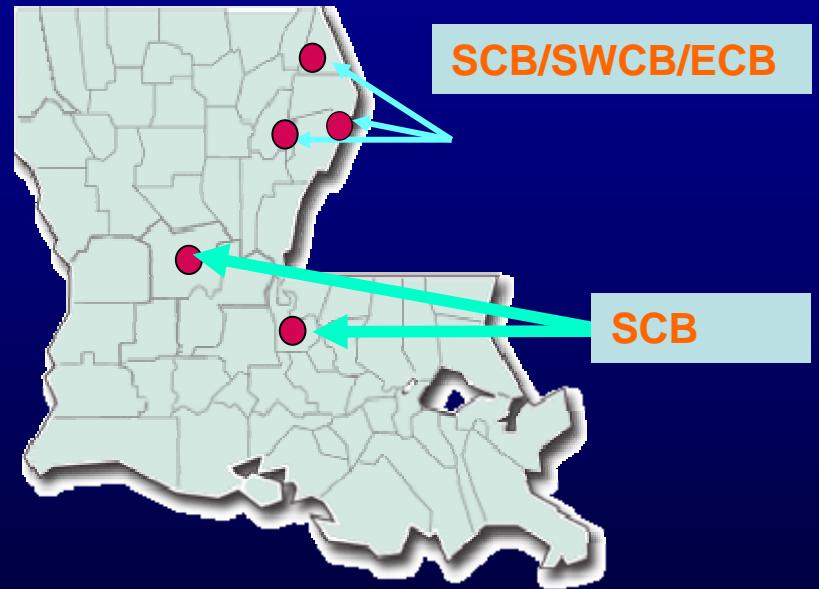


# Cotton Production Regions

## % Bt Cotton - 2005



# Bt Corn Planted Acreage



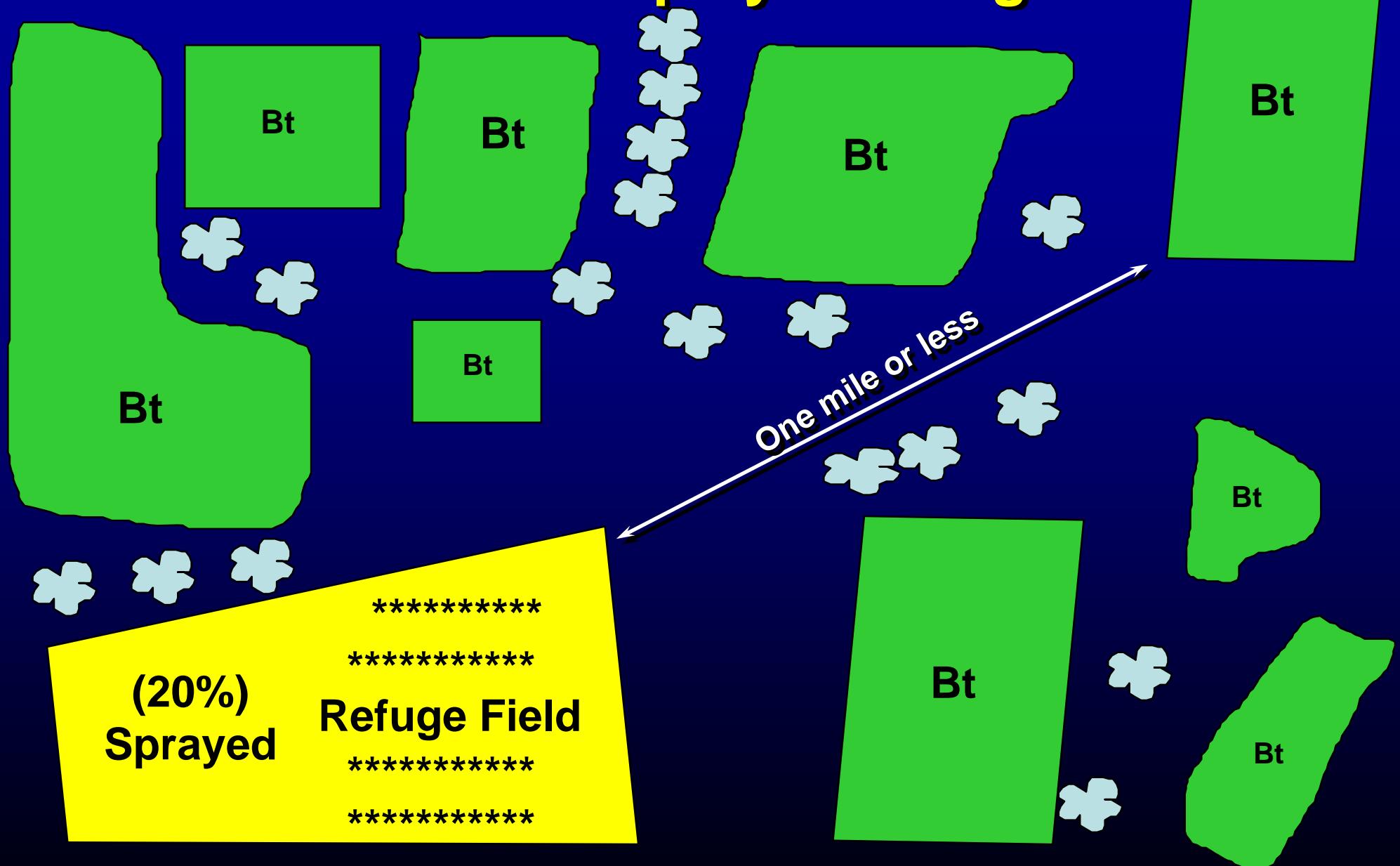


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# Issues to Consider

- Efficacy and Target Pest Spectrum
- Perception.
- IRM.

# 80%:20% Sprayed Refuge



# Issues to Consider

- Efficacy and Target Pest Spectrum
- Perception.
- IRM.
- Non-Target Problems.



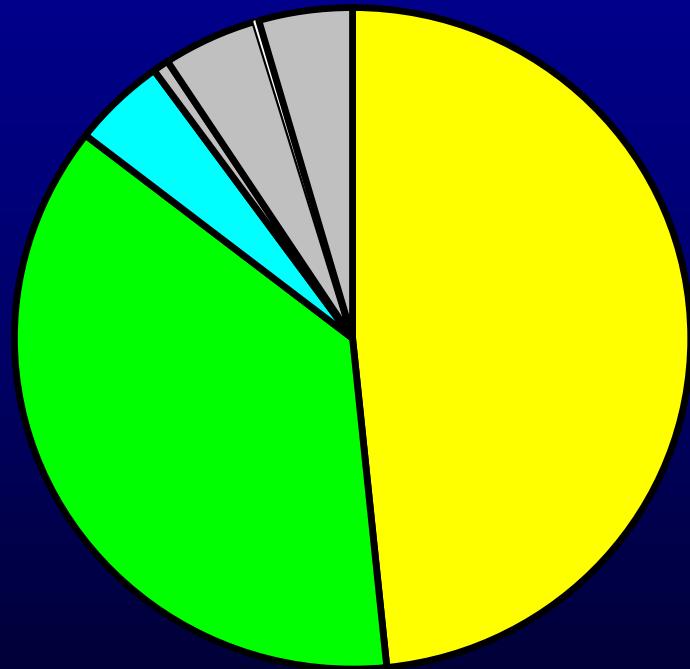
# Cotton Yield Losses - LA Insect Pests

■ Boll Weevil

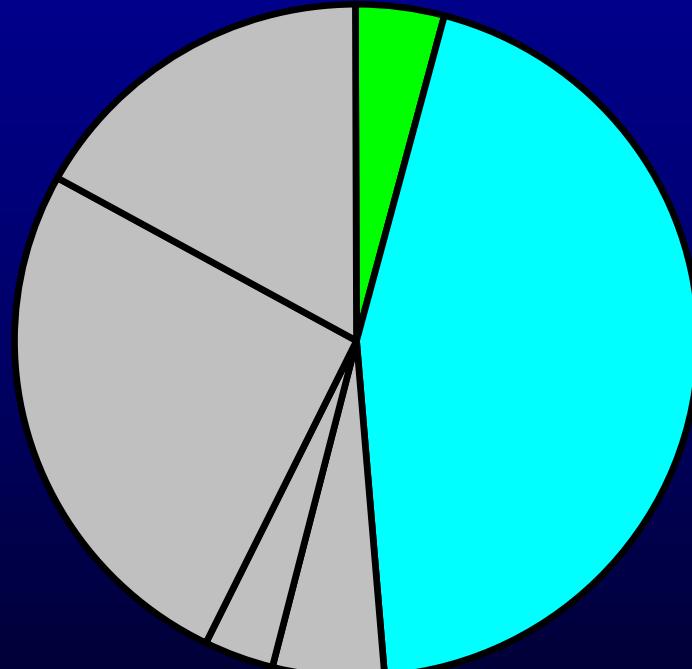
■ Heliothines

■ "Bug" Pests

■ Other Pests



1995

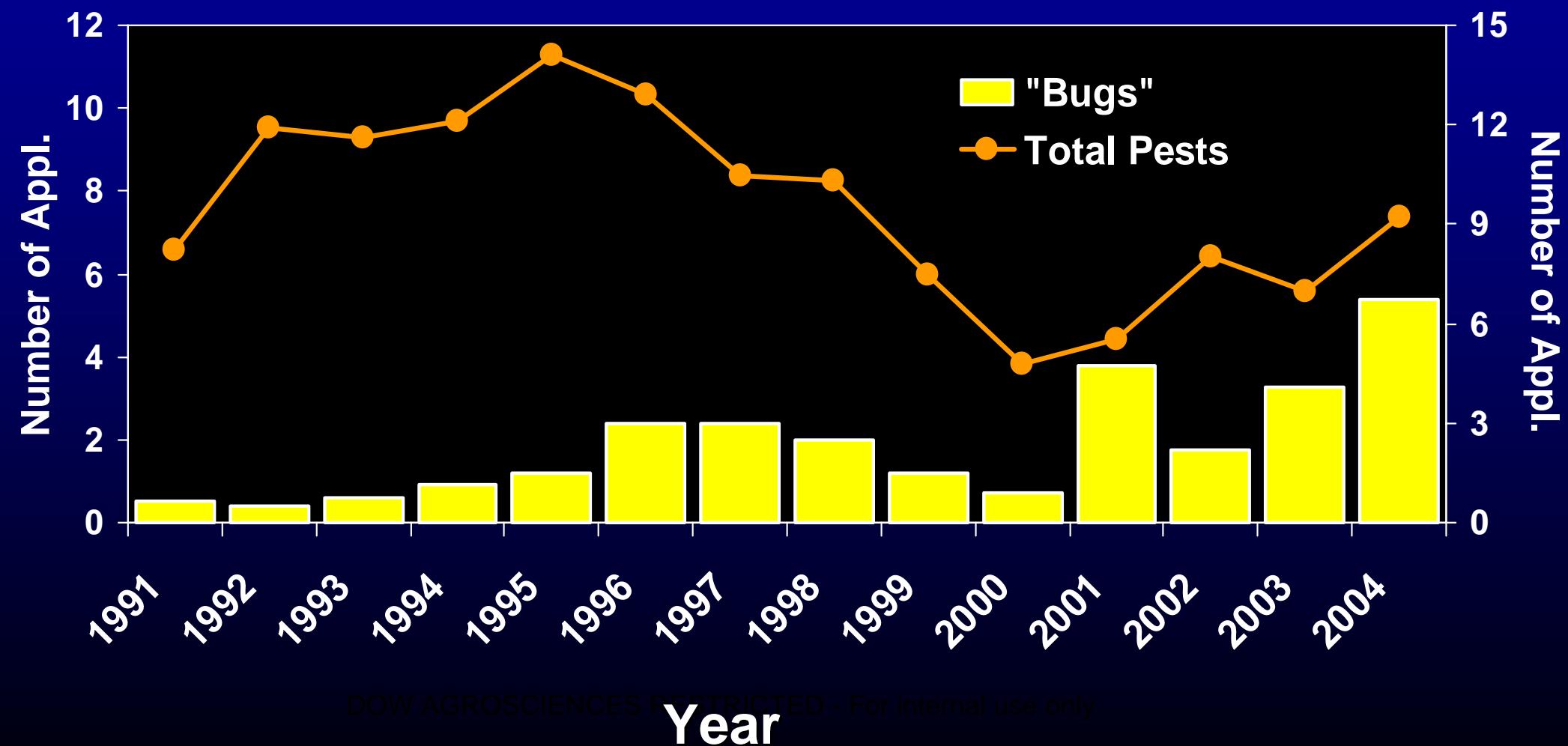


2005

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Adapted from Williams et al. Insect Losses Reports, BWCC

# Insecticide Application Frequency - LA



# Pest Status of Tarnished Plant Bug

- Altern. Hosts as Refuges (C-Till, WRP, CRP)
- Transgenic Bt Cotton
- Boll Weevil Eradication
- Selective Insecticides
- Insecticide Application Efficiency
- Insecticide Resistance

# *Moodna bisinuella* Hampson

## A New LA Pest



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# Issues to Consider

- Efficacy and Target Pest Spectrum
- Perception.
- IRM.
- Non-Target Problems.
- Prospects for the Future.

## Future (3-5 Years)

- Novel Products / Delivery
  - Target Specific.
  - IPM Compatible.
  - Accepted by Industry and Public.
- Challenge: Maintain Performance Through the Logical Use of These Products in an IPM System.