

Arthropod Pest Management: What's in the Pipeline for Cotton Producers?

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Discussion Topics

- **Conventional Pesticides**
- **Transgenic Products**
- **Sampling Tools**
- **Application Systems**



Insecticides Will Remain An Essential Component Of Cotton IPM For The Foreseeable Future

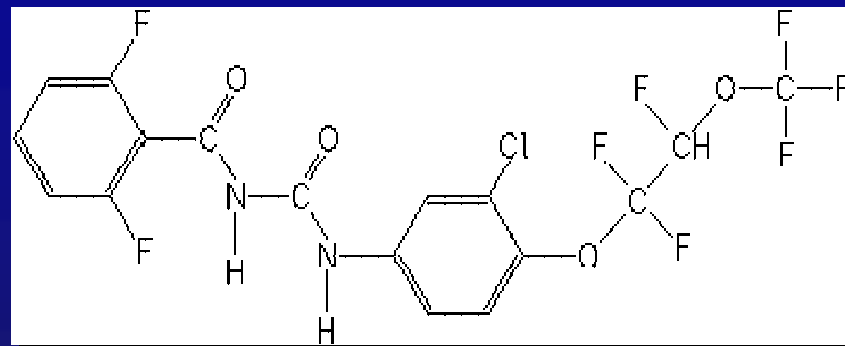
Choosing the Correct Insecticide is Challenging !!!

- **Cost**
 - **Efficacy on Target Pest**
 - **Non-Target Pest Spectrum**
 - **Residual Properties**
 - **Coincidental Impact on Beneficials**
-

Diamond 0.83EC

(Benzolphenyl Urea)

- Novaluron
- Chemtura
- MOA; IGR
- Moderate Rate Range
- Targets; Bugs, **Armyworms**
- Labeled 2004

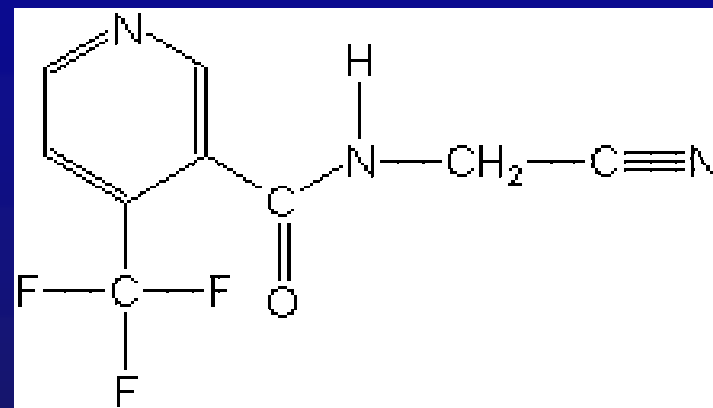


Key Notes: Active on Nymphs
Long residual
Ovicidal

Carbine 50WP

(Pyridine Carboxamide)

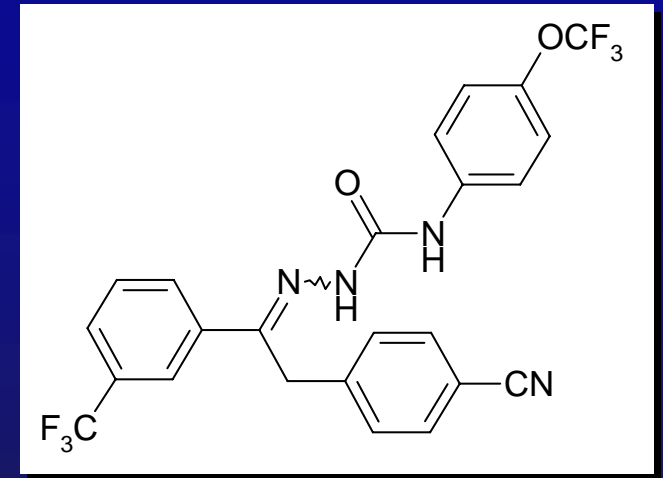
- Flonicamid; F-1785
- FMC; ISK
- MOA; Nervous System (Ca+)
- Low Rate Range
- Targets; Bugs, **Aphids**, Whiteflies
- Labeled 2006



Key Notes: Proposed new MOA
Feeding inhibition > damage reduction

Alverde SC/EC (Vegetables) (Metaflumizone)

- Semicarbazone
- BASF
- MOA; Nervous System (Na⁺)
- Targets; Lepidoptera, “Bugs”, Beetles
- Low Rate Range
- Label in Cotton 2008 (Anticipated)



Novel Lepidopteran Insecticides

Common	Trade	Company
Chlorantraniliprole (Rynaxypyr)	Altacor	DuPont
Flubendiamide	Belt	Bayer CropScience

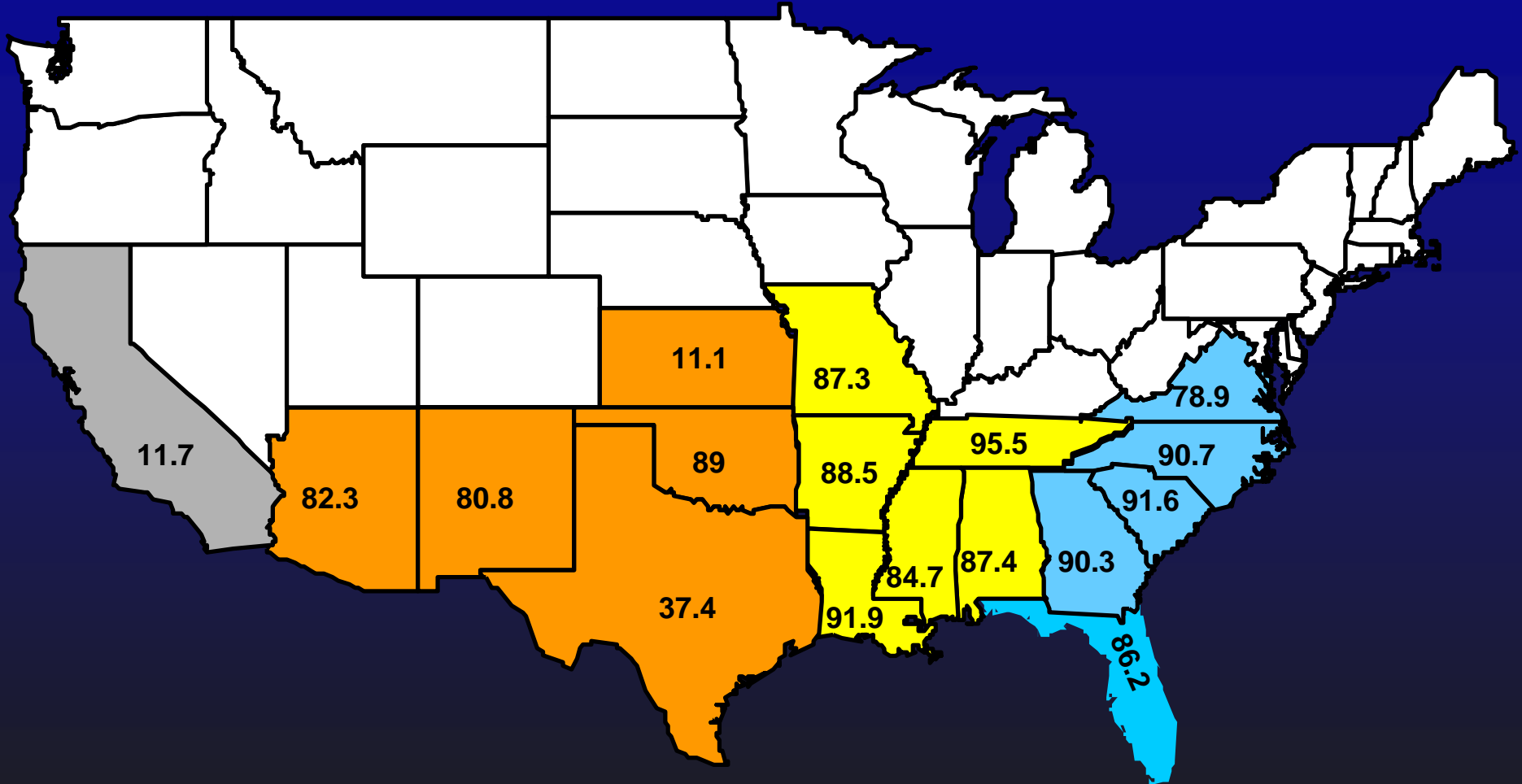
Novel Acaricide/Insecticides

Common	Trade	Company
Abamectin	Abba	Makhteshim Agan
Abamectin	Zephyr	Syngenta
Bifenazate	Acramite	Chemtura
Etoxazole	Zeal	Valent
Fenpyroximate	FujiMite	Nichino America, Inc
Spiromesifen	Oberon	Bayer CropScience

Insecticide Combinations

Name	Compounds	Company
Aeris	Imidacloprid + Thiodicarb	Bayer CropScience
Endigo	Lambda-cyhalothrin + Thiamethoxam	Syngenta

U.S. Cotton Belt Bollgard & Bollgard II Planted Acreage (%) - 2006



Data Adapted from Agricultural Marketing Service Cotton Program, USDA-2006

Evolution of Commercialized Bt Cotton

1996
Bollgard
 Single gene
cry1Ac
 (endotoxin)

2003
Bollgard II
 Stacked genes
cry1Ac + cry2Ab
 (endotoxins)

2005
Widestrike
 Stacked genes
cry1Ac + cry1f
 (endotoxins)

2008
VipCot
 Novel Protein
Vip3A + cry1Ac
 (exo/endotoxins)

2009
Bayer BTX
 Stacked
 genes
Cry Proteins

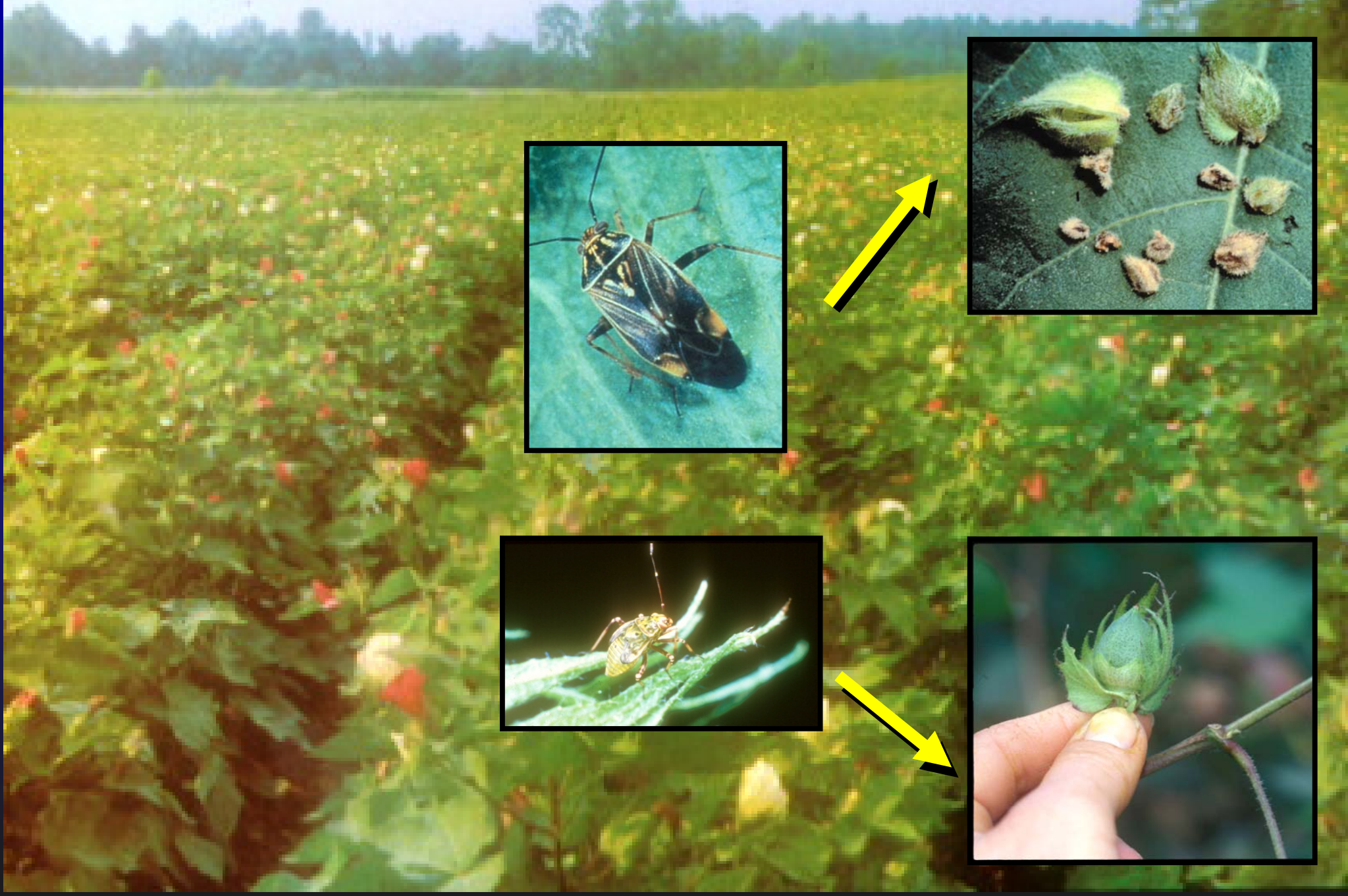


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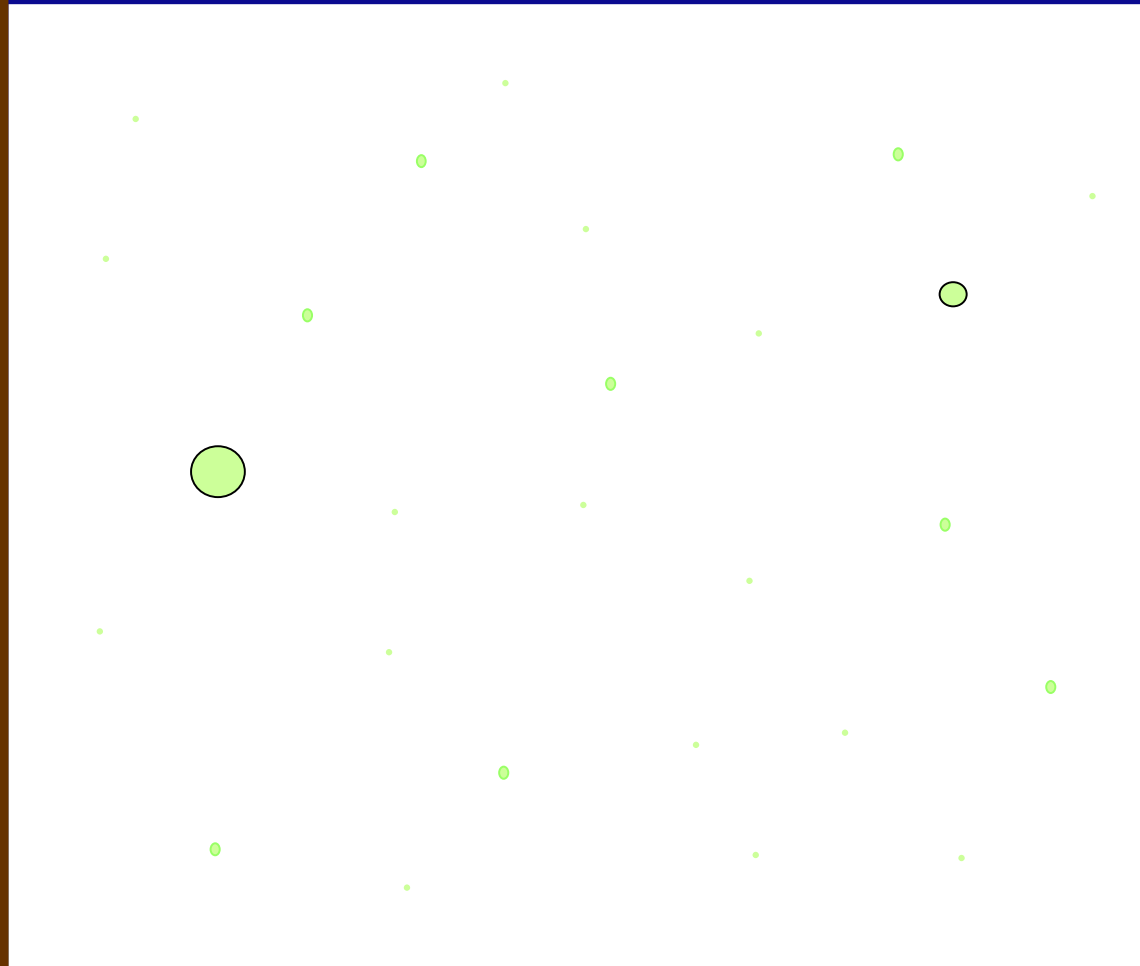
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UF

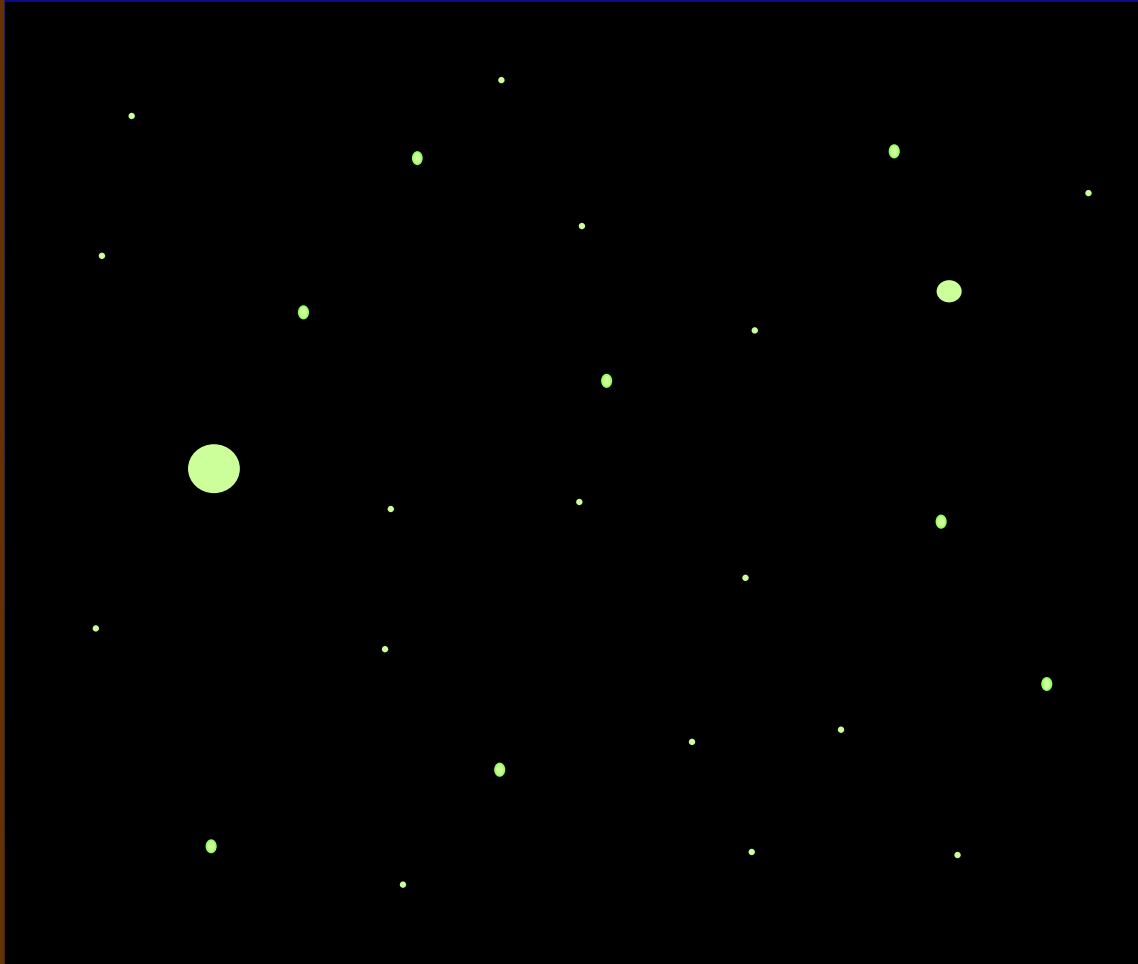




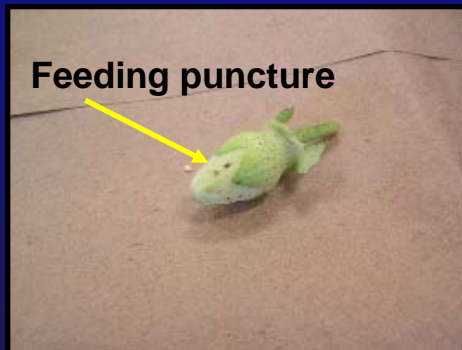
Drop Cloth Samples



Drop Cloth Samples

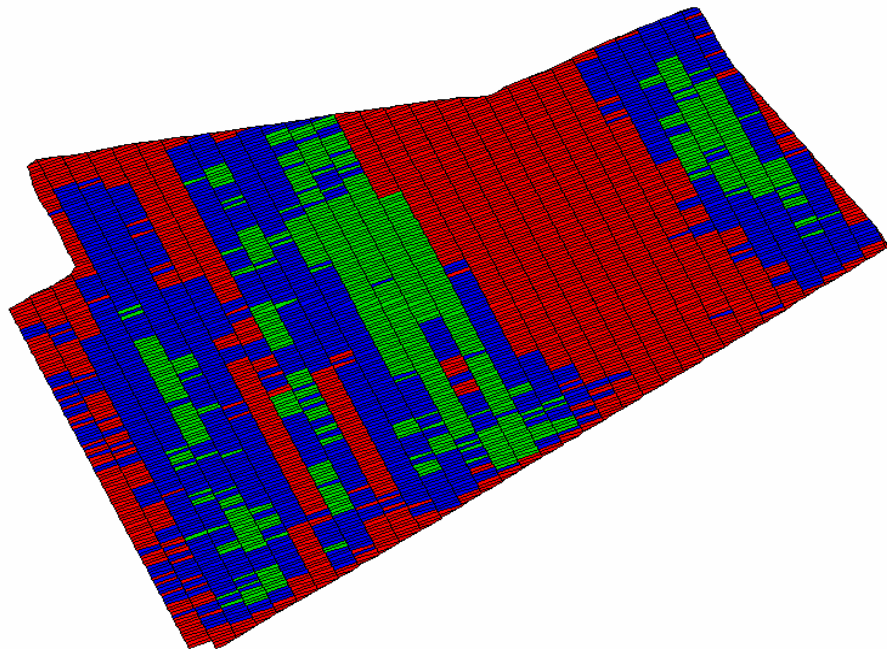


Square and Boll Injury Ratings





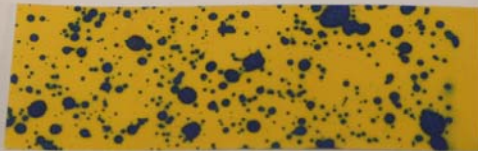
Variable Rate Pesticide/Fertilizer Applications



Herbicide - Insecticide Co-Applications



TeeJet AI11003

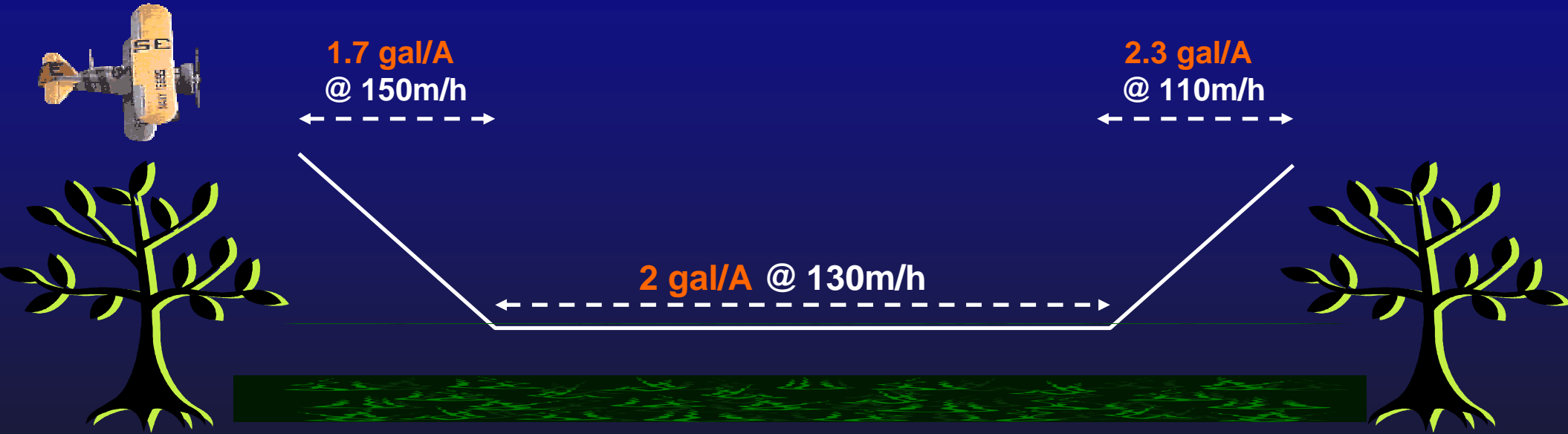


ConeJet TX-12





Air Speed and Actual Applied Rate

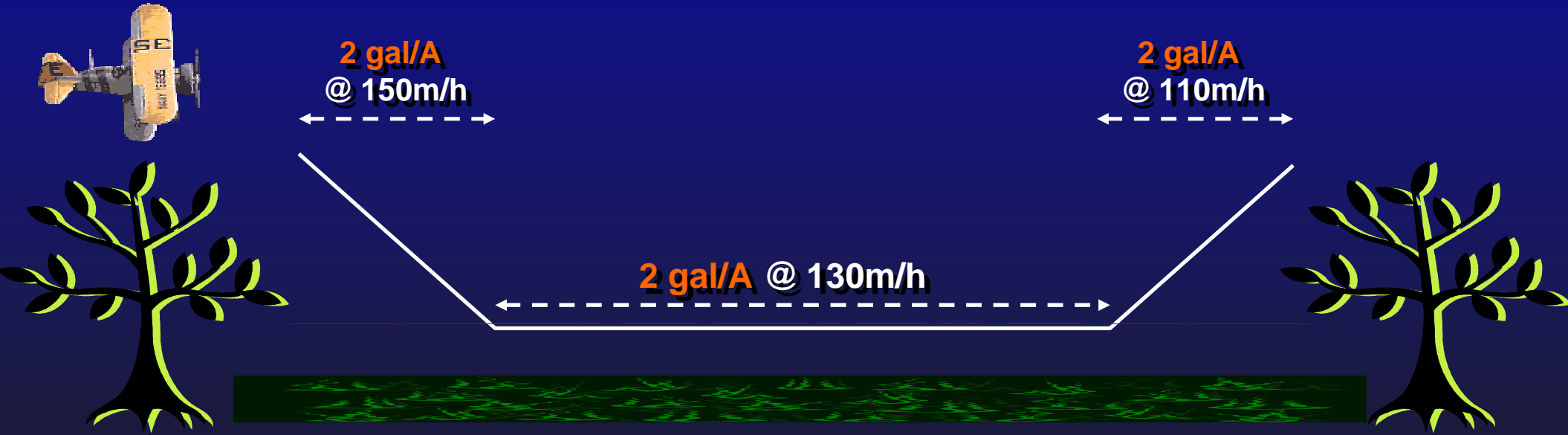


Liquid Flow Controller



**Stabilizes Flow
(GPA) Rate With
Changes in Speed**

Air Speed and Actual Applied Rate



Summary

- **Continued Pesticide Development**
- **More Options for Transgenes**
- **Improved Sampling and Thresholds**
- **Application Methods are Evolving**

Louisiana Cotton Producers Association



COTTON INCORPORATED



**Building Markets For Cotton And
Cotton Products**