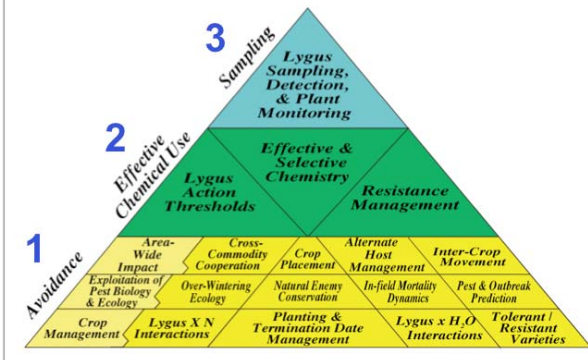


# Lygus IPM...

...depends on 3 basic keys



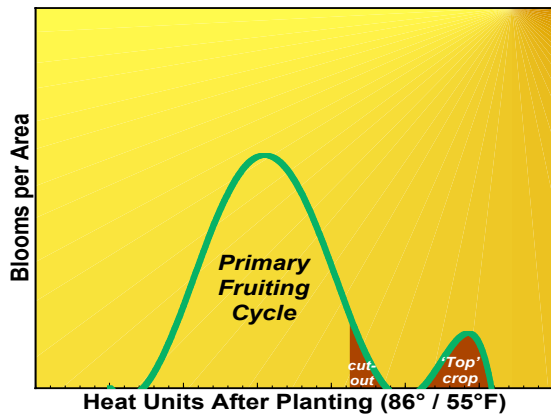
# Plant Dynamics



- Indeterminant growth habit
  - Susceptible plant parts at all times
- Redundancy
  - 50% final fruit retention
- Compensation

Hanan, 1996

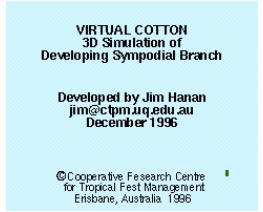
Ellsworth/UA



Ellsworth/UA

# Plant-Pest Dynamics

- Plant provides fruiting structures of varying susceptibility
- Lygus show preferences towards floral and pre-floral structures



Hanan, 1996

Ellsworth/UA

# Pest-Pesticide Dynamics



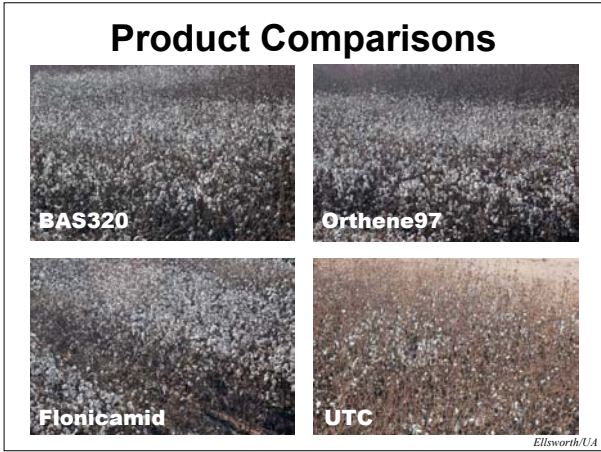
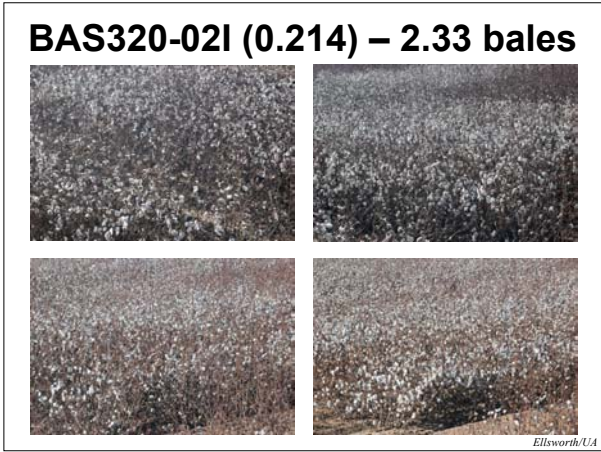
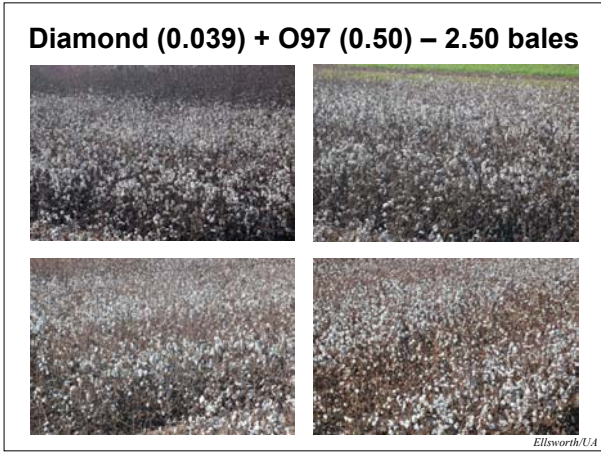
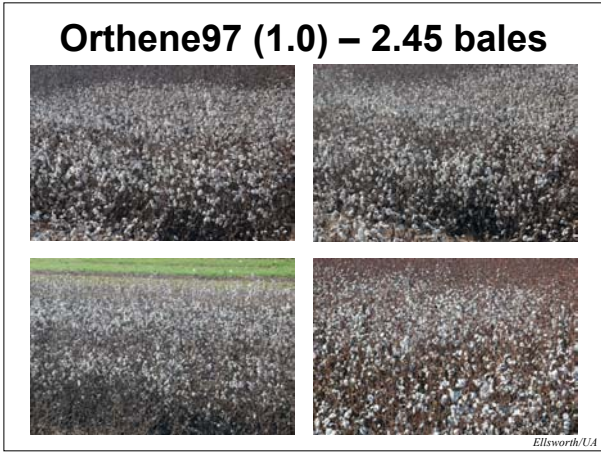
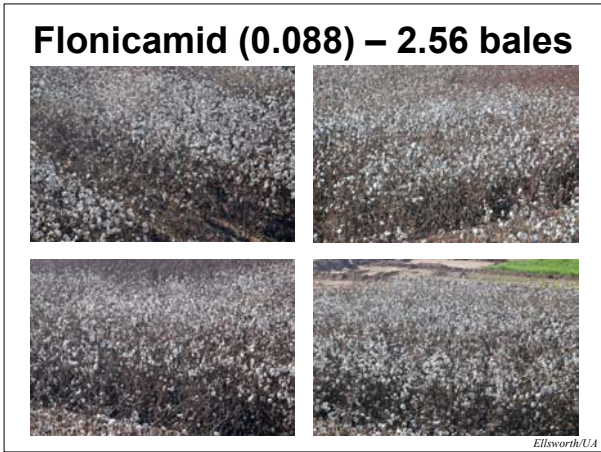
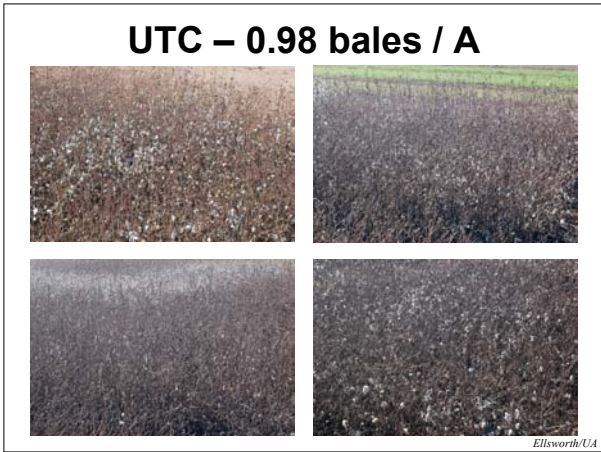
# Plant-Pesticide Dynamics

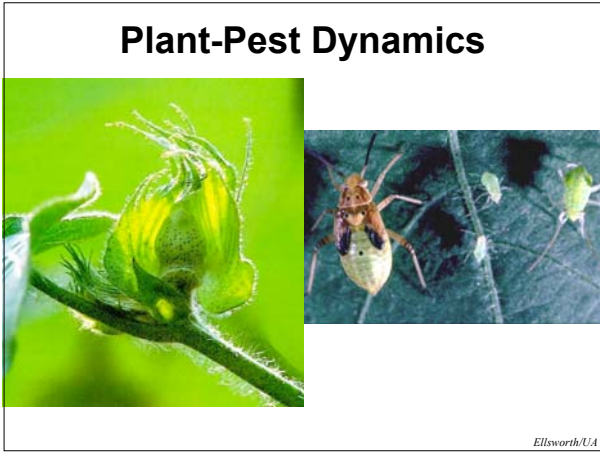
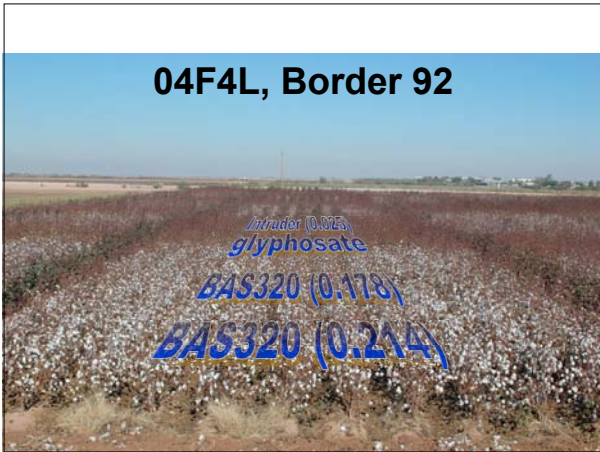


- Sprays reach only a portion of a closed canopy
- Current materials have residuals of 10-14 days
- Plant increases in size by 2 - 2.5 nodes per week

Hanan, 1996

Ellsworth/UA





## Lygus Termination Studies

- Obj: Identify best timing (of 4 tested) for discontinuing Lygus chemical controls
- Compare 12 different production scenarios (3 x 2 x 2)
  - Variety (S, M, L)
  - Planting (Opt., Late)
  - Irrigation termination (Opt., Late)

VIRTUAL COTTON  
Schematic and Realistic

Developed by Jim Hanan  
jim@ctpm.uq.edu.au  
December 1996

©Cooperative Research Centre for  
Tropical Pest Management  
Brisbane, Australia 1996

Hanan, 1996

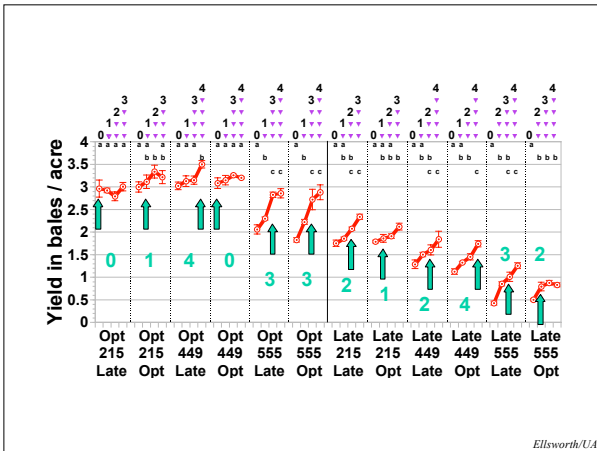
Ellsworth/UA

## 2003 Experiment

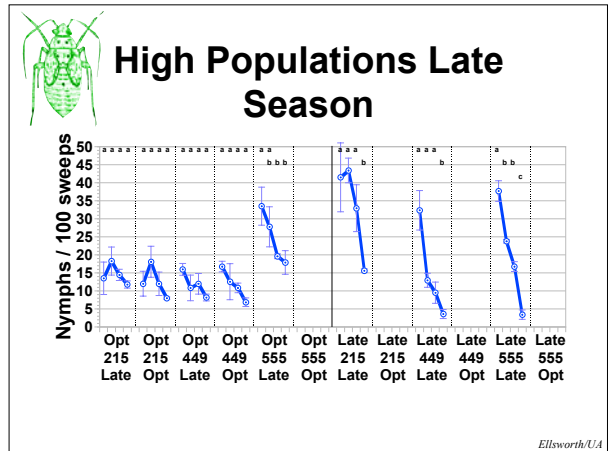
- Two planting dates: April 30 & May 28
- Three varieties: SG215BR, DP449BR, DP555BR
- Two irrigation termination timings: Aug. & Sept.
- Four Lygus chemical control terminations

High heat stress & fruit shed July-August  
Extremely productive “fall”, long, open and dry

Ellsworth/UA

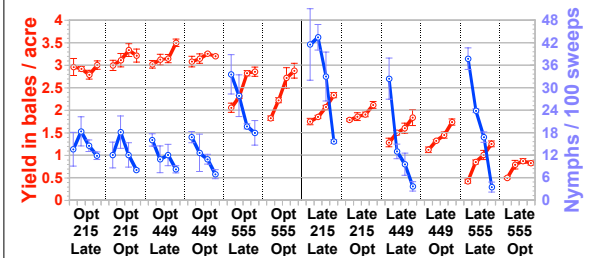


Ellsworth/UA



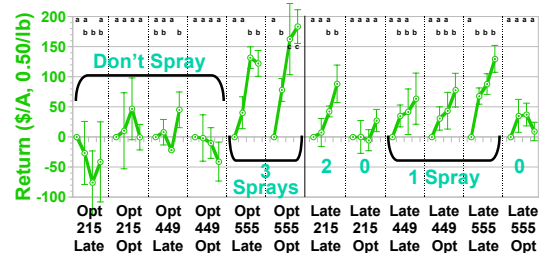
Ellsworth/UA

## Yield : Nymphs Relationship



Ellsworth/UA

## 50¢ Cotton Returns



Ellsworth/UA

