BIOPESTICIDES: NPV

- NPV virus that only kills host while replicating more virus
- Cost
  - $3-6/acre (Heligen)
  - ?? (Surtivo Soy)
- Must be stored at or below 77°F out of sunlight
- Only kills target insect
  - Heligen (Bollworm/Budworm)
  - Surtivo Soy (Bollworm/Budworm+Loopers)
IDENTIFICATION IS CRUCIAL
BOLLWORM SCOUTING & THRESHOLDS

- Reproductive Thresholds for Bollworms
  - 9 per 25 sweeps
- NPV threshold
  - 3 to 5 small larvae per 25 sweeps
- 4 to 6 days post application
  - Reduced damage and feeding
  - Larval migration to tops of canopy
  - Decreased defense response
  - Liquefied larvae
  - “Sweating larvae”
LOOPER SCOUTING & THRESHOLDS

• Thresold for Soybean Loopers
  – 37 worms 0.5 inch or longer in 25 sweeps
• NPV threshold
  – 10 loopers per 25 sweeps
• 4 to 6 days post application
  – Reduced larval damage/feeding
  – Migration to canopy top
  – Larvae on ground
  – Liquefied larvae
  – Sluggish behavior
KEYS TO NPV SUCCESS

• NPV is a live virus, not a traditional insecticide

• Keep it cool

• NPV only kills target insects (Heliothine, Loopers)

• Target small larvae

• NPV takes 4-6 days to kill host larvae

• Other insects spread virus
Mitchel Field
3 Days After Application

36.7 larvae/25 sweeps
- Virus Present

https://casifarm.files.wordpress.com/2015/06/g0010240.jpg
Mitchel Field
7 Days After Application

24.3 larvae/25 sweeps

Virus Present
Mitchel Field
14 Days After Application

2.3 larva/25 sweeps

Virus Present
Mitchel Field
21 Days After Application

2.3 larva/25 sweeps
Virus Present

https://castens.files.wordpress.com/2015/06/mitchel20.jpg
NPV LIMITATIONS

• Temperature
• Limited scope of activity
• Environmental conditions
• May miss large larvae
• Slow speed of kill
SOYBEAN LOOPER VIRUS: RICHLAND PARISH LOUISIANA
SOYBEAN LOOPER VIRUS: FRANKLIN PARISH LOUISIANA
THANK YOU – QUESTIONS?

Louisiana Soybean & Grain Promotion Board

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