

UTILIZING VIRUS TO CONTROL WORM PESTS IN SOYBEANS

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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

- Threshold 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



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

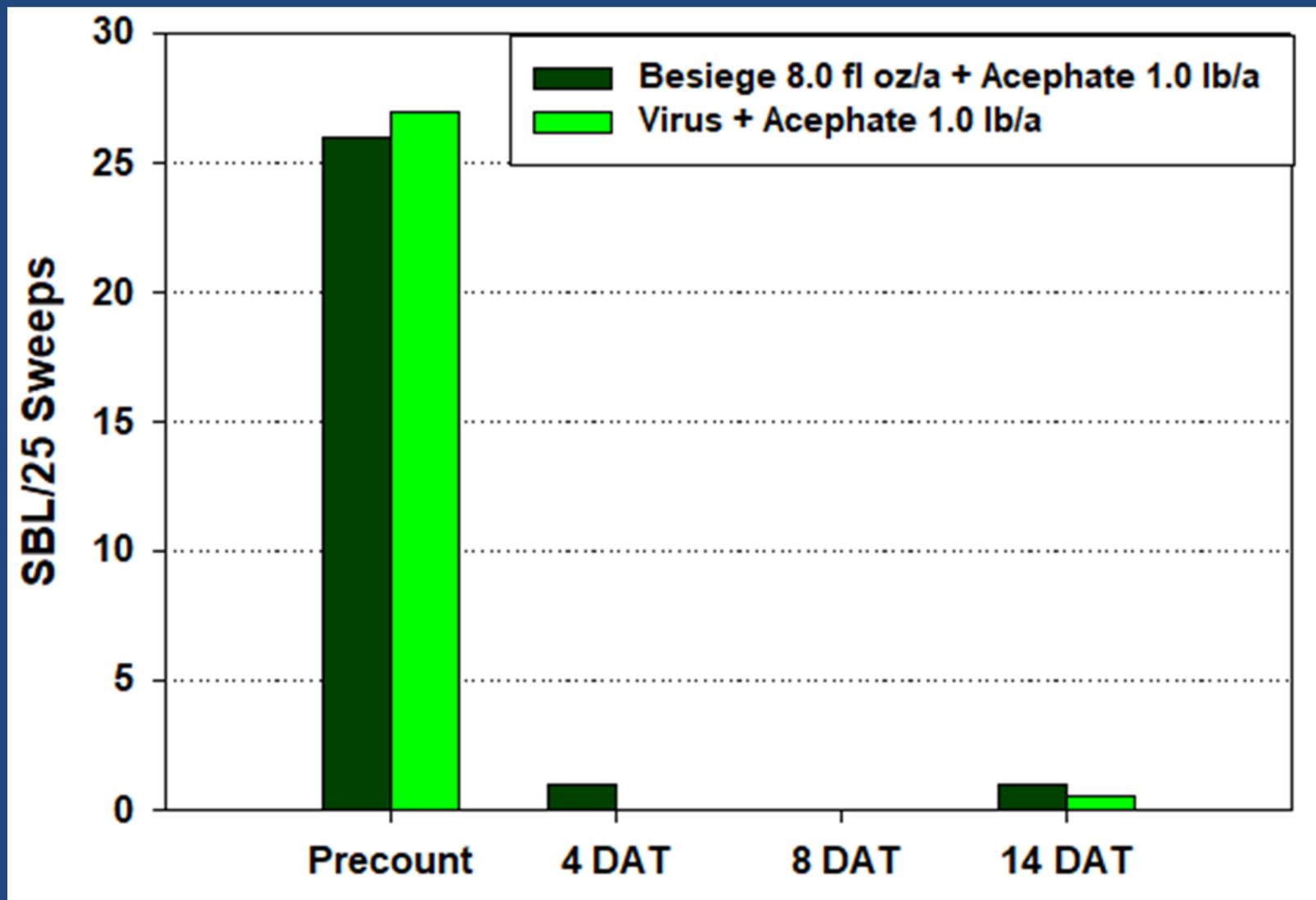


NPV LIMITATIONS

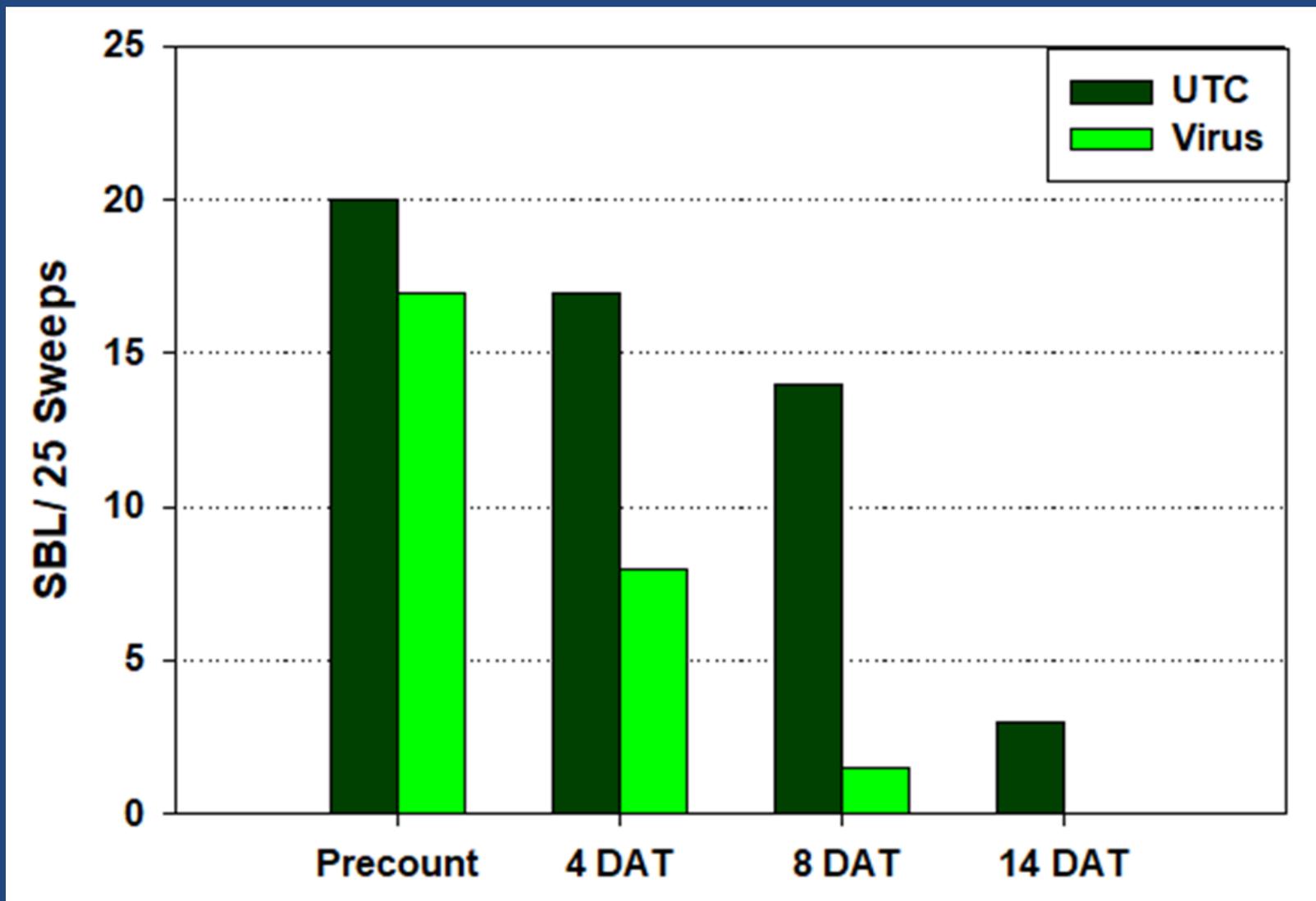
- Temperature
- Limited scope of activity
- Environmental conditions
- May miss large larvae
- Slow speed of kill



SOYBEAN LOOPER VIRUS: RICHLAND PARISH LOUISIANA



SOYBEAN LOOPER VIRUS: FRANKLIN PARISH LOUISIANA





14 DAT

8 DAT

4 DAT

0 DAT

THANK YOU – QUESTIONS?

