



# Insect Pest Update in Row Crops

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Did the cold wintry  
weather kill the  
redbanded stink bugs?



# RBSB lower developmental thresholds and supercooling point

- Redbanded stink bug supercooling point is  $-4^{\circ}\text{F}$
- At  $23^{\circ}\text{F}$ ,  $\text{LT}_{50} = 4 \text{ hr}$  and  $\text{LT}_{90} = 7 \text{ hr}$
- At  $32^{\circ}\text{F}$ , redbanded stink bug had to be exposed for a week to see 95% mortality

Dr. Jeff Davis  
LSU AgCenter Entomologist



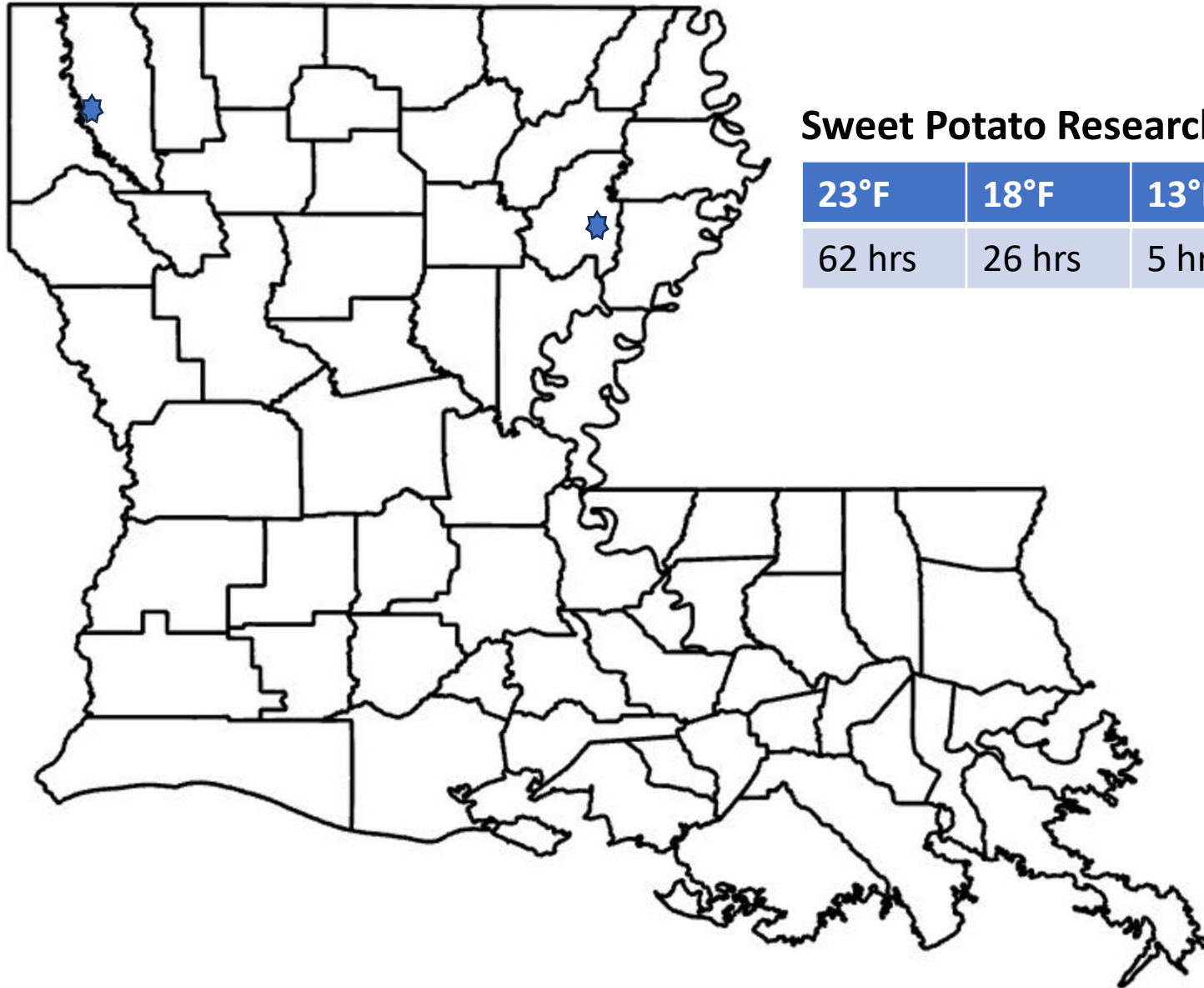
# Recorded Temperatures at Different Research Stations



# Recorded Temperature at Different Research Stations

## Red River Research Station

23°F	18°F	13°F
59 hrs	26 hrs	2 hrs



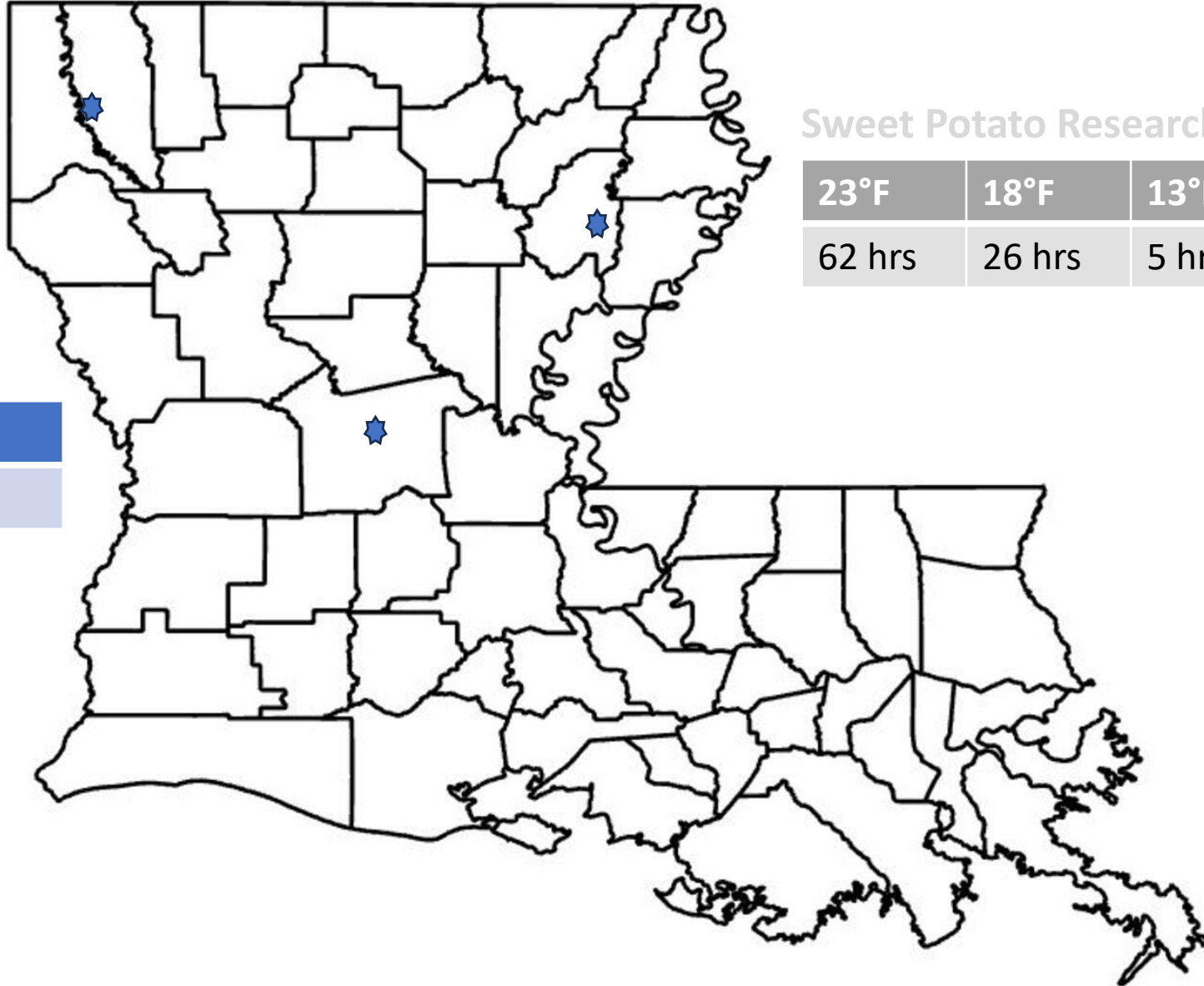
## Sweet Potato Research Station

23°F	18°F	13°F
62 hrs	26 hrs	5 hrs

# Recorded Temperature at Different Research Stations

## Red River Research Station

23°F	18°F	13°F
59 hrs	26 hrs	2 hrs



## Sweet Potato Research Station

23°F	18°F	13°F
62 hrs	26 hrs	5 hrs

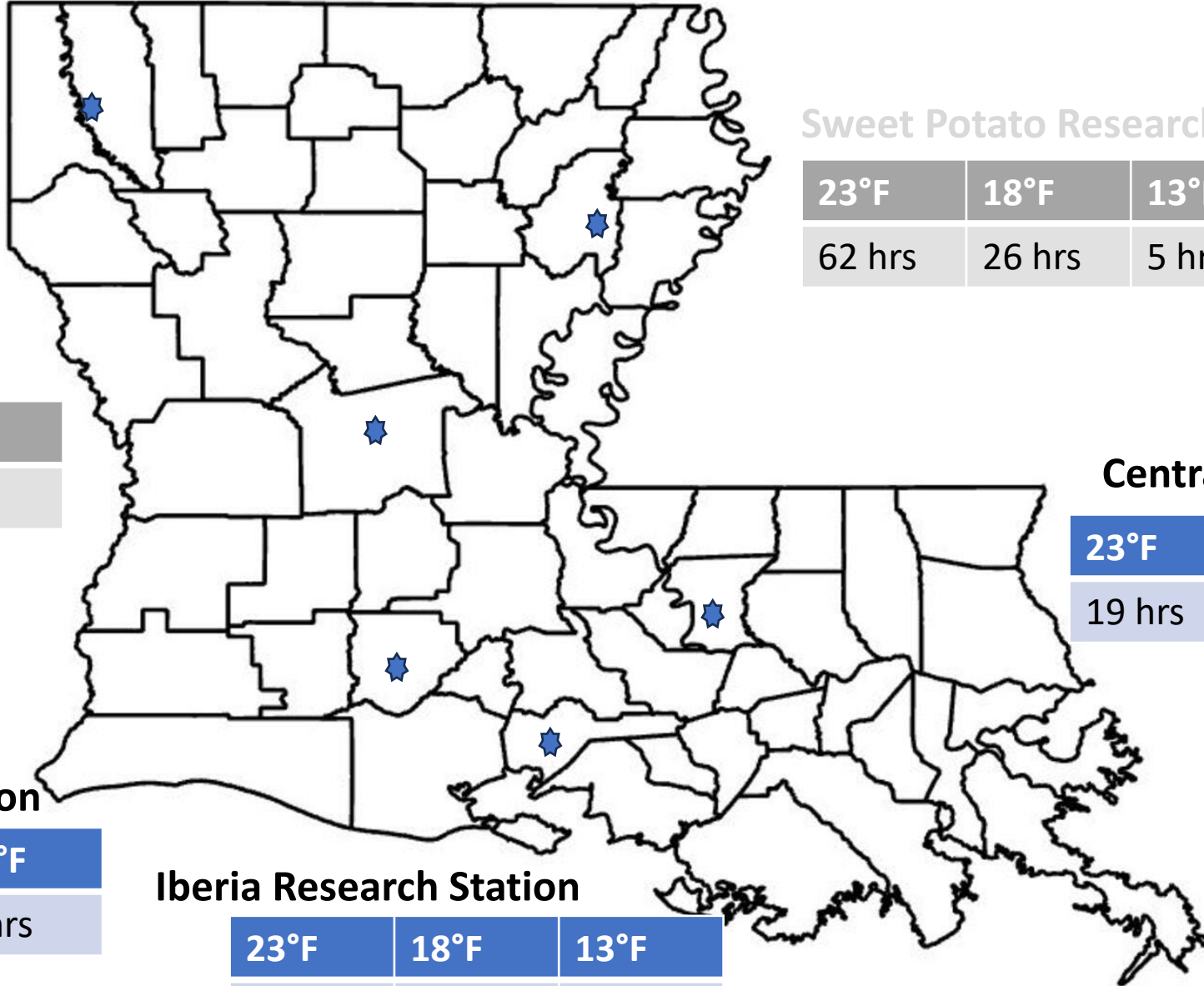
## Dean Lee Research Station

23°F	18°F	13°F
32 hrs	11 hrs	0 hrs

# Recorded Temperature at Different Research Stations

Red River Research Station

23°F	18°F	13°F
59 hrs	26 hrs	2 hrs



Sweet Potato Research Station

23°F	18°F	13°F
62 hrs	26 hrs	5 hrs

Dean Lee Research Station

23°F	18°F	13°F
32 hrs	11 hrs	0 hrs

Central Research Station

23°F	18°F	13°F
19 hrs	3 hrs	0 hrs

Rice Research Research Station

23°F	18°F	13°F
22 hrs	4 hrs	0 hrs

Iberia Research Station

23°F	18°F	13°F
18 hrs	1 hrs	0 hrs

## Recorded Temperature at Different Research Stations

Red Riv

23°F

59 hrs

Dean I

2

3

- Northern parts – early season threat from RBSB is low
- Central and southern parts – will be present but in low numbers compared to relatively warm winter years.

ch Station

13°F

0 hrs

Stay vigilant and continue scouting!

Rice Res

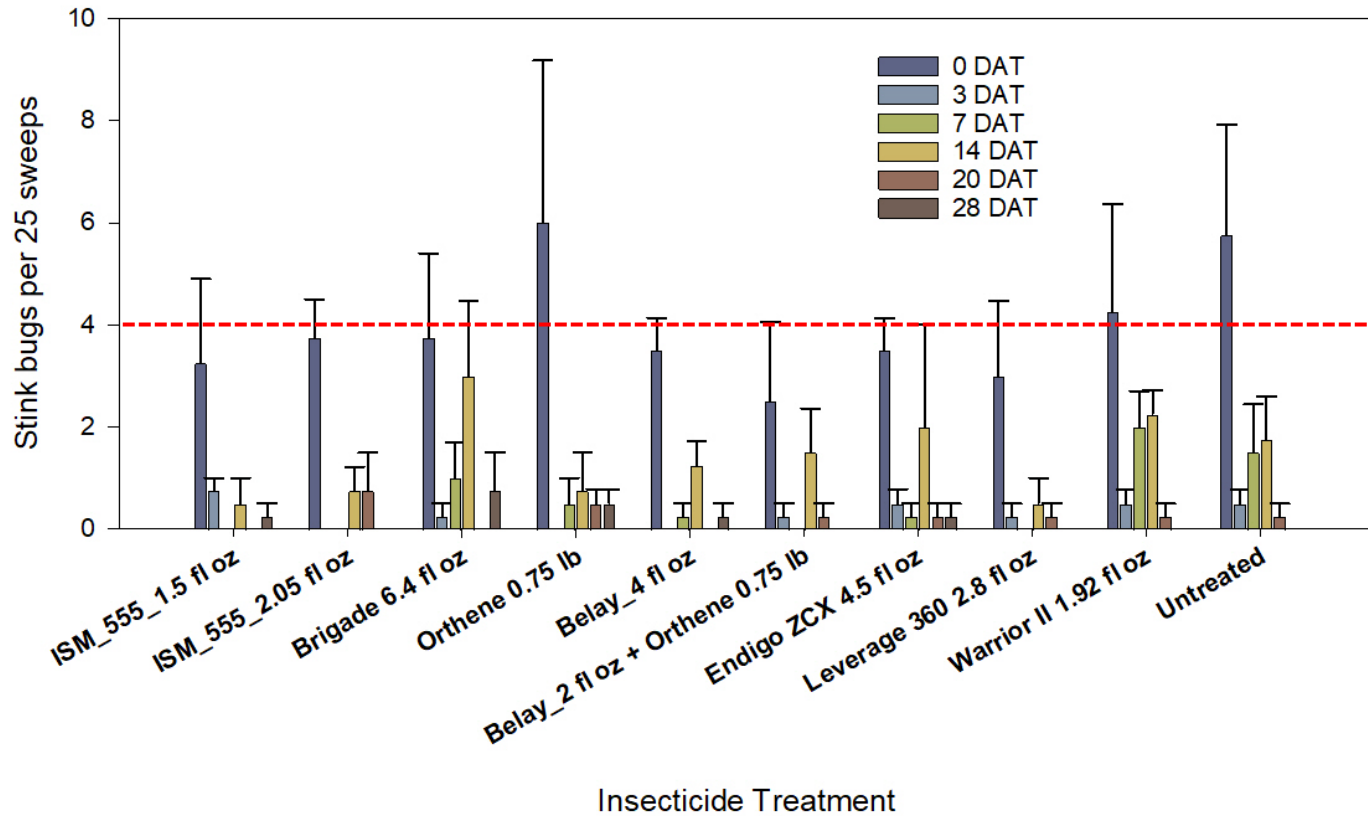
10 hrs

1 hrs

0 hrs

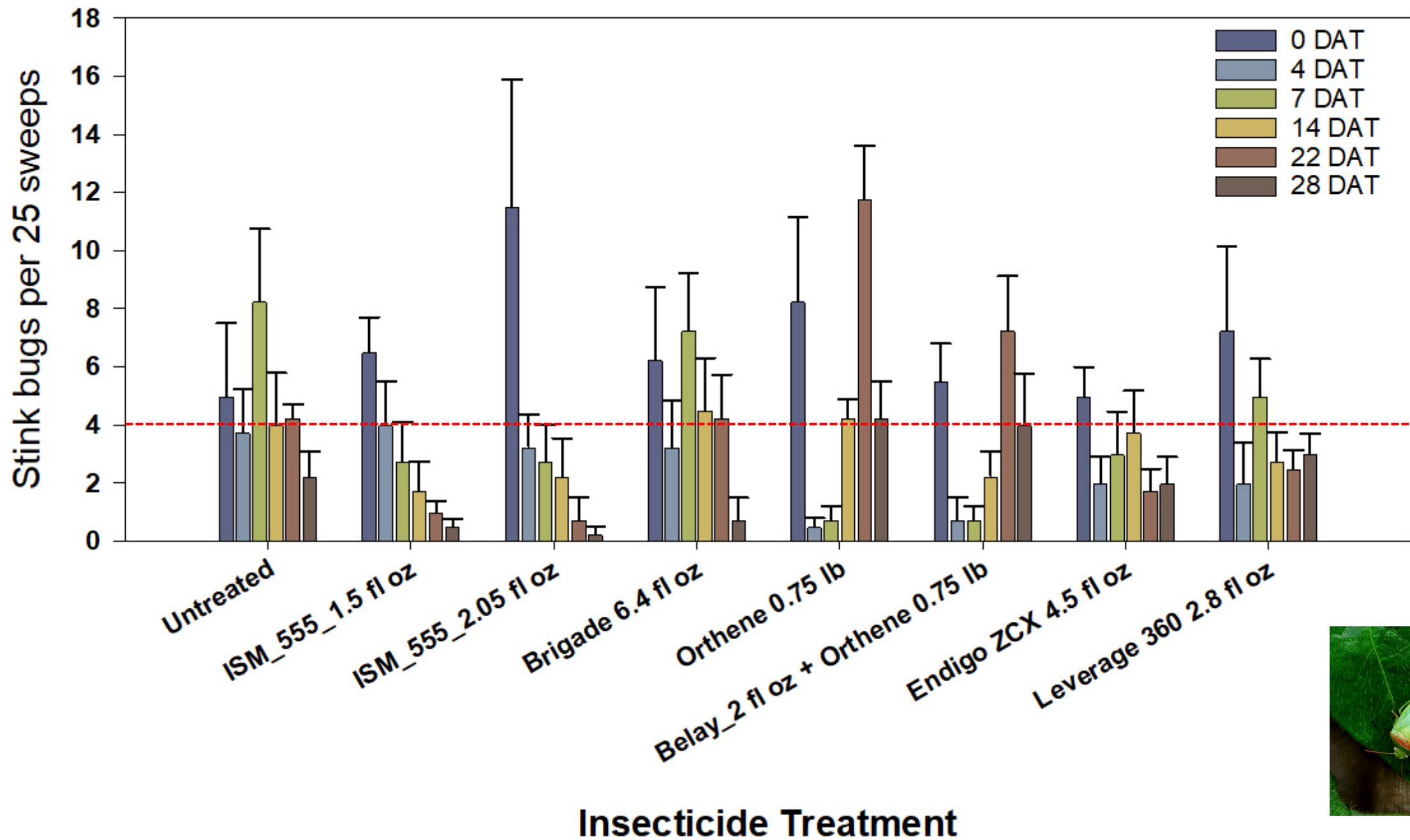


# Low Stinkbug Population in 2023



-stink bug population was low for the duration of the trials (5 out of 6 trials)  
-population crash after insecticide application







**FIFRA 24(c) SLN**  
 For distribution and use only within the state of  
 Louisiana

# 24(c) Special Local Need Renewal for 2 lb ai/acre Use Limit of Acephate in Soybeans

**FIFRA 24(c) Special Local Need Label (SLN)**  
 For use on Soybeans

## Orthene 97

Soluble Insecticide

EPA REG. NO. 5481-8978

EPA SLN NO. LA13-0007

**CAUTION**

Harmful if swallowed

This label expires and must not be distributed or used in accordance with this SLN registration after September 21<sup>st</sup> 2028.

**DIRECTIONS FOR USE**

- It is a violation of federal law to use this product in a manner inconsistent with its labeling.
- This state-specific Section 24(c) labeling must be in the possession of the user at the time of application.
- Follow all applicable directions, restrictions, Worker Protection Standard requirements, and precautions on the EPA registered label for EPA Reg. No. 5481-8978

**SOYBEANS**

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS	DAYS TO HARVEST
<b>FOLIAR</b> <b>By Air:</b> 5 to 10 gals./A of spray  <b>By Ground:</b> 10 to 50 gals./A of spray	Grasshopper Thrips	0.25 to 0.5 lb.	Repeat treatment as necessary within use restrictions to maintain control, but do not exceed a maximum of 2 lbs./A (2 lbs. ai/A) per season.	14
	Potato Leafhopper Stink Bugs	0.5 to 1 lb.		
	Armyworms (except Beet) Bean Leaf Beetle Cabbage Looper Green Cloverworm Mexican Bean Beetle Soybean Aphid Threecornered Alfalfa Hopper Velvetbean Caterpillar	0.75 to 1 lb.		

# Corn Earworm

- Feed on fruiting structures
- 3 worms per row foot or 38 in 100 sweeps after bloom
- Some CEW populations are highly resistant to pyrethroids
- Vantacor, Besiege, Intrepid Edge, Elevest, and acephate + pyrethroid
- Biologicals – NPV (Heligen and Harken)



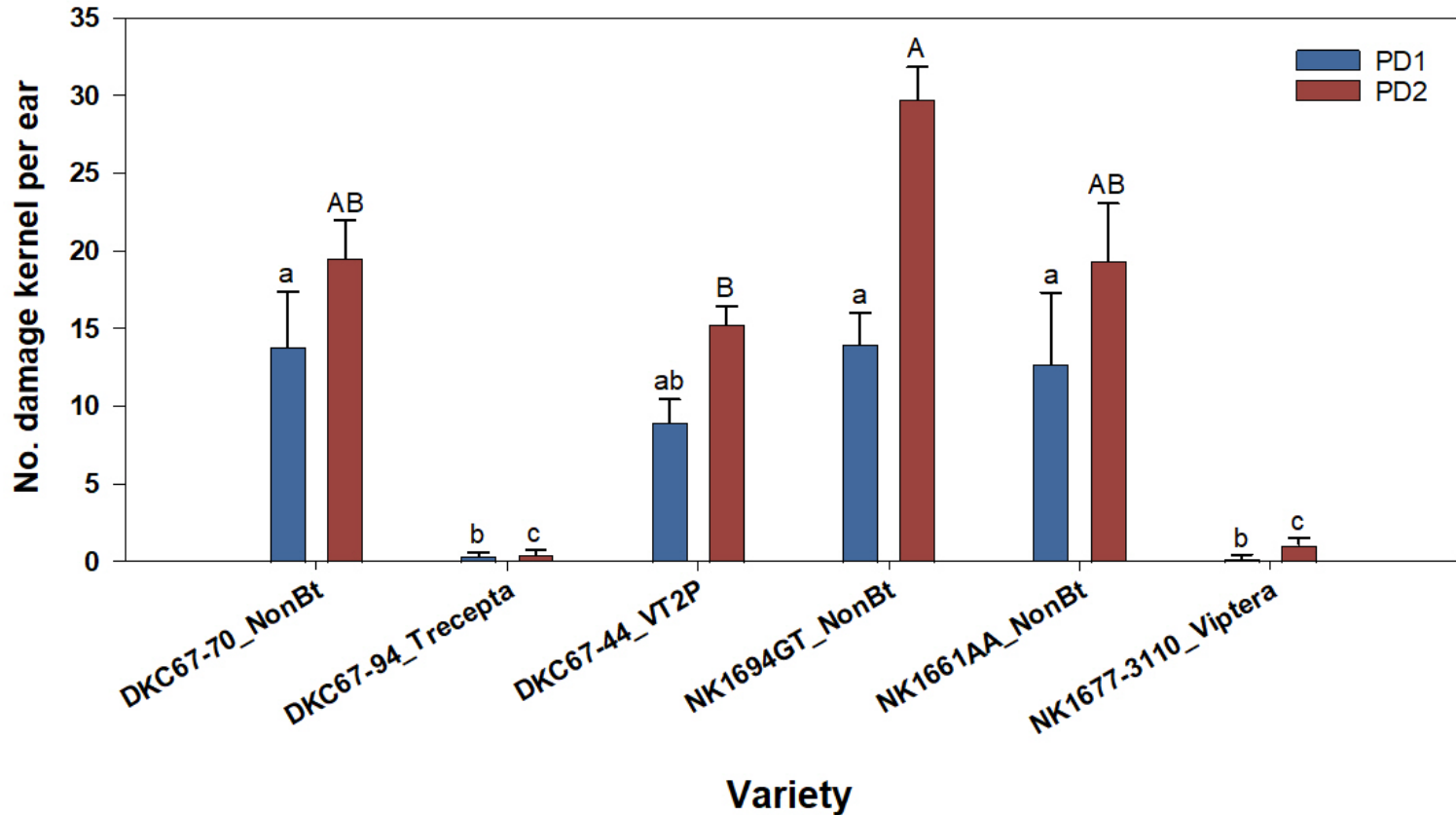
C

- Fee
- 3 w  
sw
- Sor  
res
- Var  
Ele  
pyr

Is there a need to re-examine thresholds?



# Bt Resistance in Corn Earworm



- Sentinel plots in Macon Ridge and Dean Lee
- Collaboration with Dr. Huang (LSU) and Dr. Kern (Texas A&M) for bioassays

**Table 5. LC<sub>50</sub> and 95% confidence limits (CL) based on larval mortality of *Helicoverpa zea* to Vip3Aa39 protein in the Midsouth, n=19**

Insect strain	N	LC <sub>50</sub> (95% CL) (µg/cm <sup>2</sup> )	Slope ± SE	X <sup>2</sup>	df	Resistance ratio
<b>CBW-BZ-SS</b>	<b>512</b>	<b>0.109 (0.087, 0.136)</b>	<b>1.90 ± 0.16</b>	<b>20.3</b>	<b>26</b>	<b>1.0</b>
CBW-Alexandria LA-NBT	448	0.033 (0.028, 0.039)	4.54 ± 0.85	11.6	22	0.3
CBW-Alexandria LA-VT2P	448	0.037 (0.028, 0.046)	2.61 ± 0.40	8.6	22	0.3
CBW-Epps LA-Crimson Clover	448	0.208 (0.167, 0.258)	2.02 ± 0.18	25.1	22	1.9
CBW-Jackson TN-NBT	448	0.022 (0.012, 0.029)	2.83 ± 0.65	4.8	22	0.2
CBW-Jackson TN-VT2P	448	0.021 (0.011, 0.030)	2.13 ± 0.42	14.8	22	0.2
CBW-Leland MS-NBT	448	0.040 (0.032, 0.054)	2.85 ± 0.41	14.9	22	0.4
CBW-Leland MS-VT2P	448	0.033 (0.022, 0.042)	2.22 ± 0.33	16.7	22	0.3
CBW-Marianna AR-NBT	448	0.030 (0.021, 0.038)	2.65 ± 0.45	10.9	22	0.3
CBW-Pine Bluff AR-NBT	448	0.032 (0.023, 0.041)	2.43 ± 0.39	14.5	22	0.3
CBW-Winnsboro LA-NBT	448	0.043 (0.028, 0.058)	1.60 ± 0.21	16.8	22	0.4
CBW-Winnsboro LA-VT2P	448	0.107 (0.086, 0.133)	2.09 ± 0.21	10.7	22	1.0
<b>CBW-BZ-SS</b>	<b>512</b>	<b>3.12 (2.42, 4.14)</b>	<b>1.68 ± 0.15</b>	<b>119.74</b>	<b>26</b>	<b>1.0</b>
CBW-CA-MS-CC	512	0.24 (0.20, 0.30)	2.11 ± 0.18	136.77	26	0.08
CBW-CT-MS-NBt corn	512	0.12 (0.10, 0.15)	2.32 ± 0.21	125.76	26	0.04
CBW-HB-LA-CC	512	0.33 (0.27, 0.40)	2.36 ± 0.21	121.92	26	0.11
CBW-LY-MS-CC	512	0.22 (0.17, 0.27)	1.71 ± 0.14	149.17	26	0.07
CBW-PK-AR-Bt corn	512	0.33 (0.27, 0.41)	2.17 ± 0.18	139.63	26	0.11
CBW-PK-AR-NBt corn	512	0.43 (0.36, 0.53)	2.40 ± 0.22	123.39	26	0.14
CBW-YC-MS-CC	512	0.32 (0.26, 0.39)	2.30 ± 0.20	126.22	26	0.1

Resistance ratio = LC50 of a field population / LC50 of the susceptible strain.

≥ 10 = resistant  
0:19

Table 5. LC<sub>50</sub> and 95% confidence limits (CL) based on larval mortality of *Helicoverpa zea* to Vip3Aa39 protein in the Midwest

- No resistance or UXI by stalk borers or fall armyworm
- Field resistance of CEW to Cry1A/Cry2A was common
- Vip3A is still very effective, no resistance or UXI observed for CEW



# Wireworm Damage in Corn



Wireworms have long life cycle – 3 to 5 years as larvae



Wil  
cyc

In 2023, cold spell after corn was planted slowed the growth and emergence.



**Hessian Fly Damage**



**Hessian Fly in Wheat**

- Insecticidal Seed Treatment trial at Dean Lee
- Varietal resistance screening (Dr. Harrison and Dr. DeWitt)



# Field Crops Insect Scout Schools

- Winnsboro and Alexandria
- Dates: End of May and Early June



# LSU AgCenter Extension IPM Advisory Committee

- Consultants, producers, extension agents, research and extension faculty
- 3-year term; annual meeting
- Discuss evolving needs of the state's agricultural industry
- Guide the direction of future IPM program





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Dean Lee Research and Extension Center

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