

# 2022 Row Rice Insect Update

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# Current row rice entomology studies



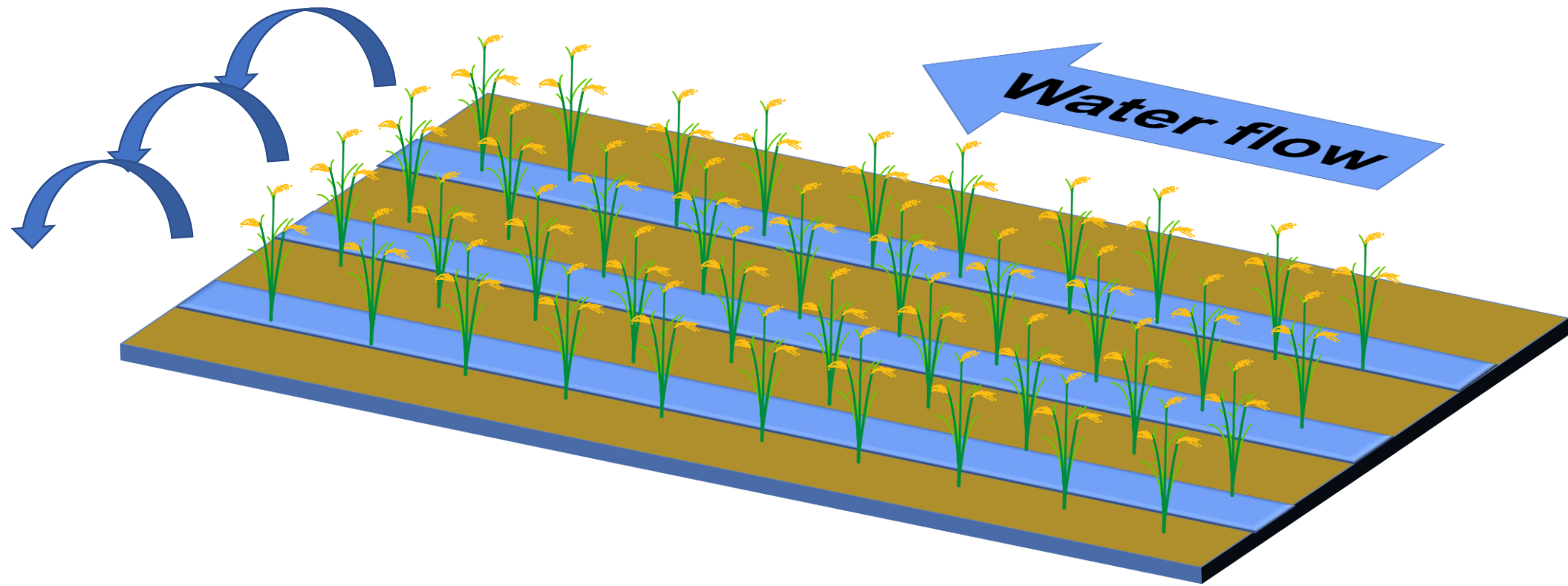
- **Insecticide seed treatment (IST) trial**
- **Varietal resistance to billbug**
- **2022 on-farm field survey**

A wide-angle photograph of a lush green rice field under a blue sky with scattered white clouds. A line of trees is visible in the distance.

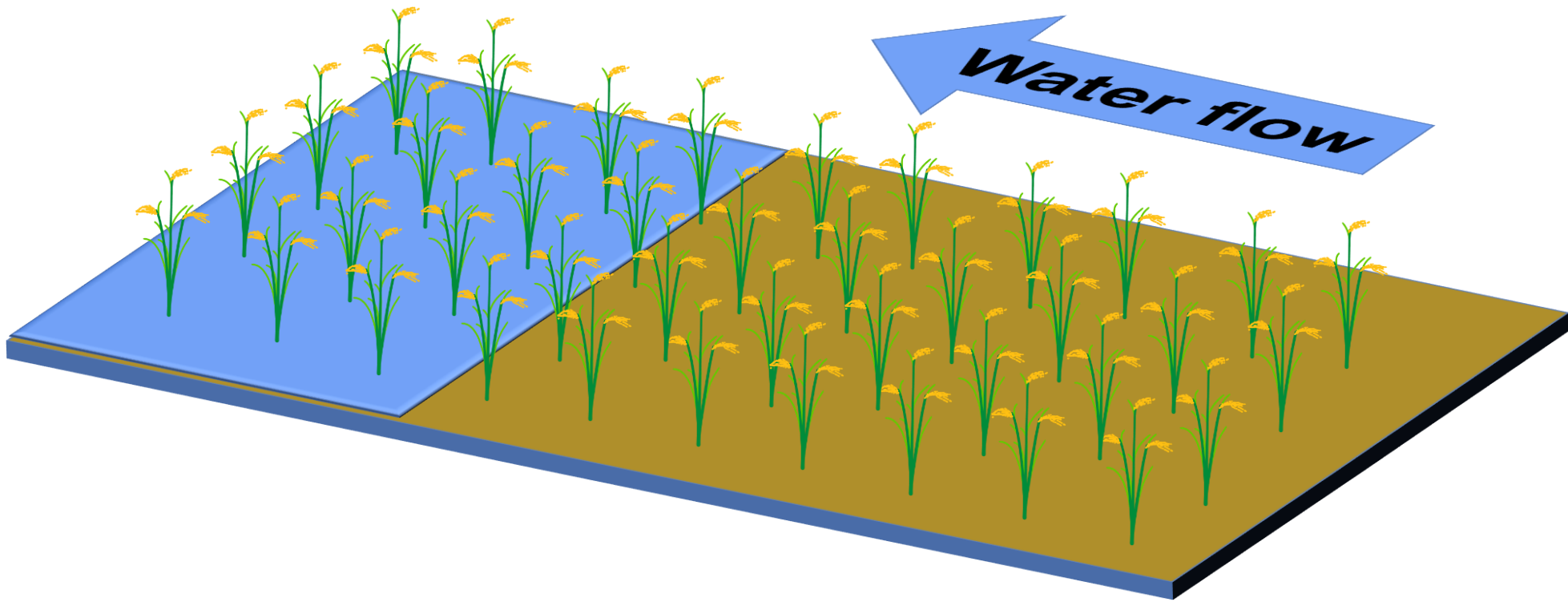
# 2022 Row Rice Irrigation Management and IST Study



# Tail-water release vs End-blocking



# Tail-water release vs End-blocking



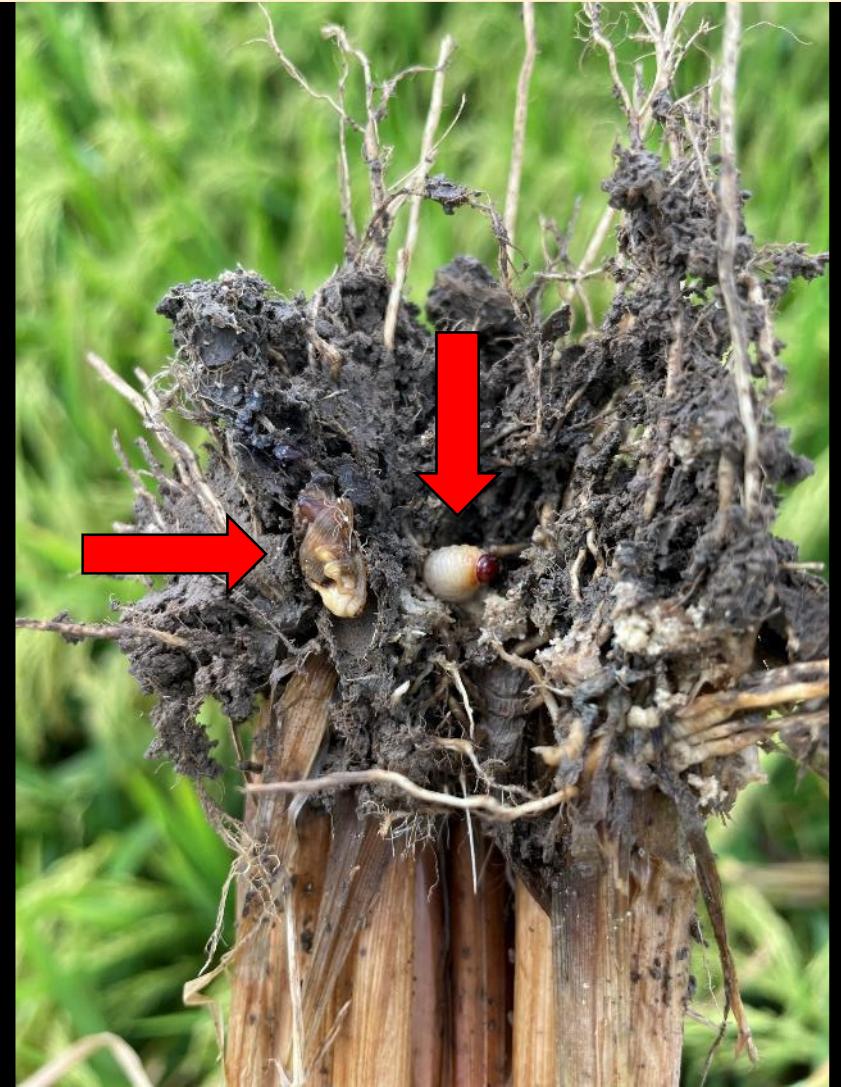
# Insecticide seed treatments

- Target rice water weevil and incidental outbreaks of stem borers
- Change in irrigation management alters pest complex
  - Continuous flood >>> furrow-irrigation
- Is rice water weevil a major threat?
- Will rice billbug become the dominant weevil species?
- Stem borers in row rice?

# Billbug and stem borer scouting

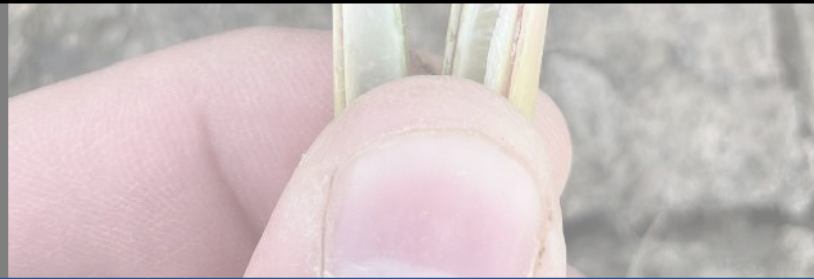


# Billbug and stem borer scouting





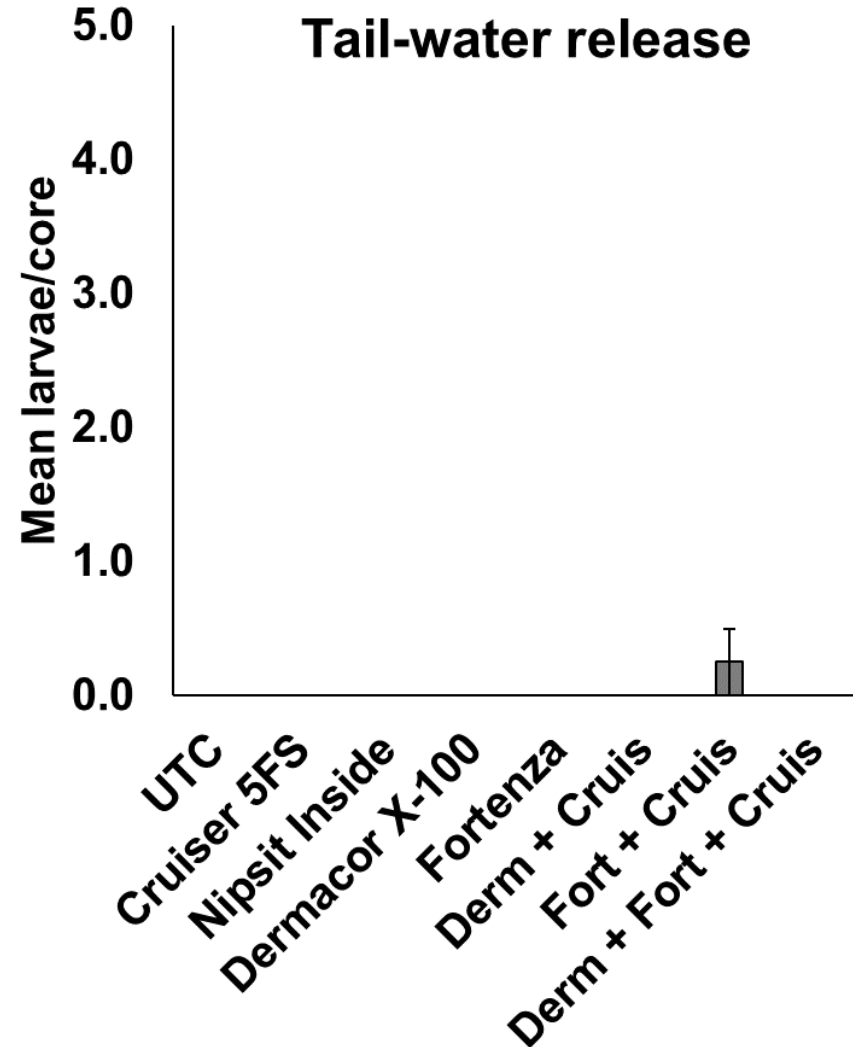
# Billbug and stem borer scouting



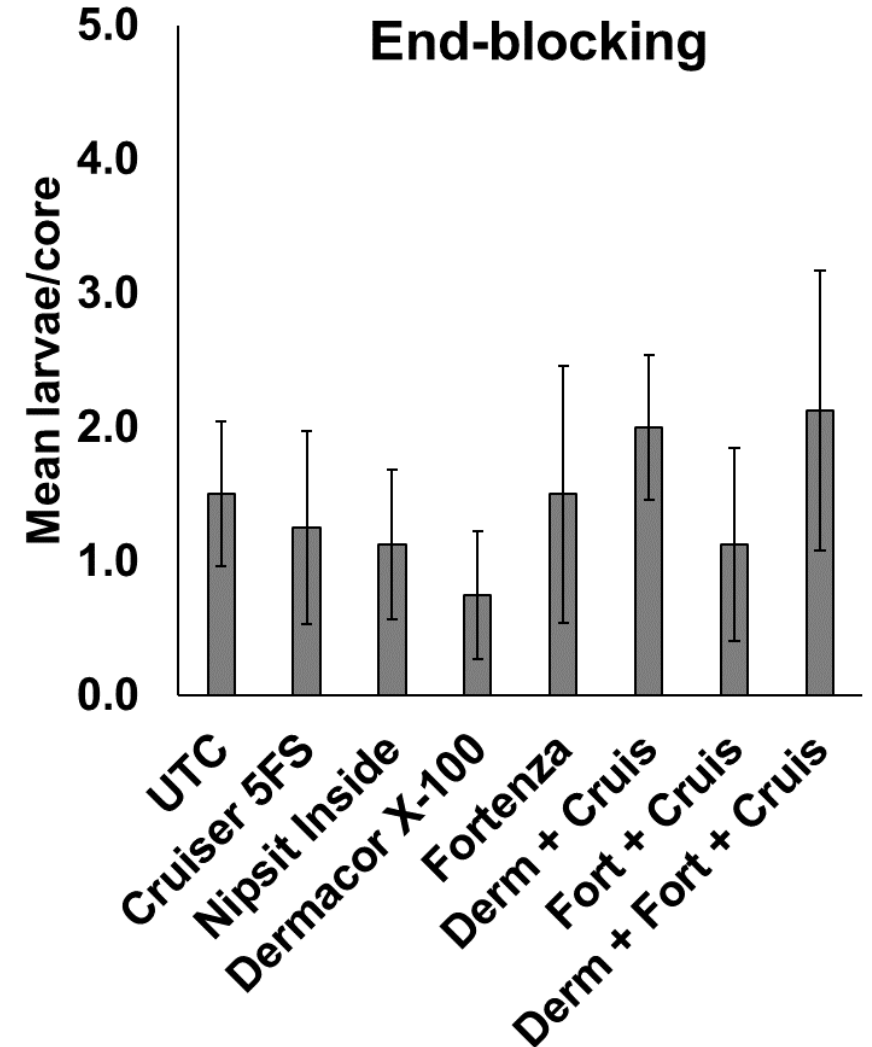
# Billbug and stem borer scouting



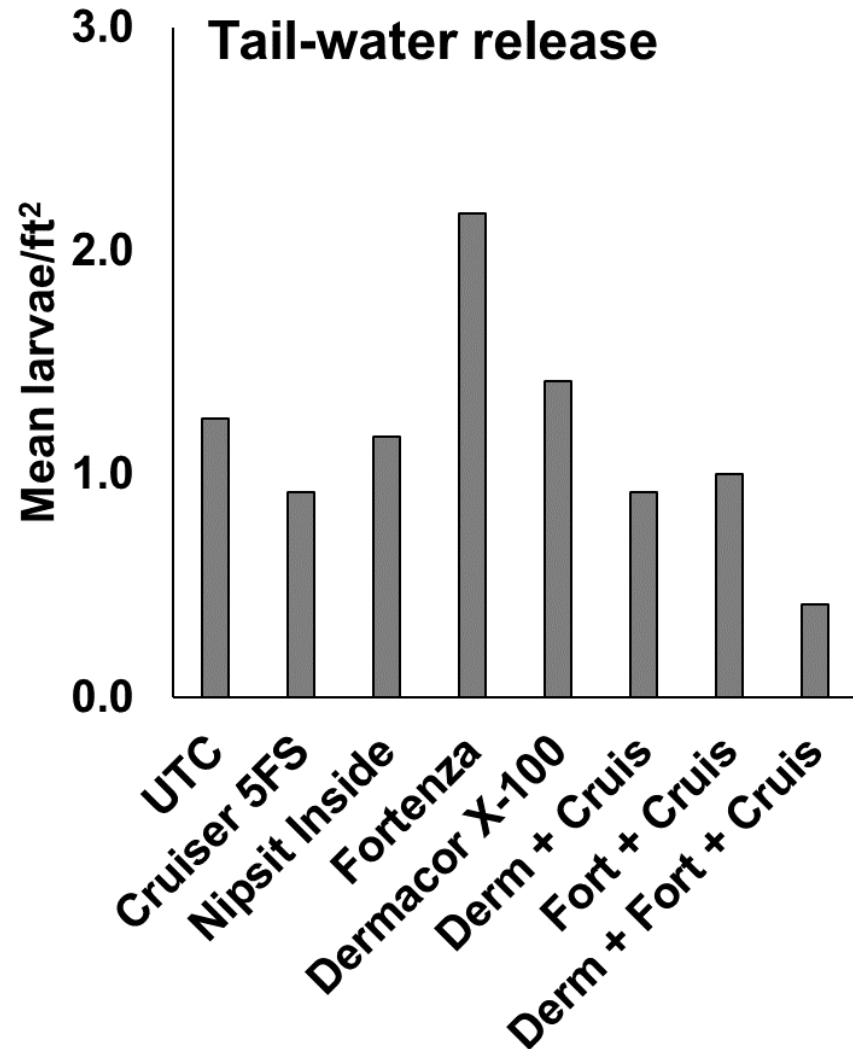
# Is rice water weevil a threat to FIR?



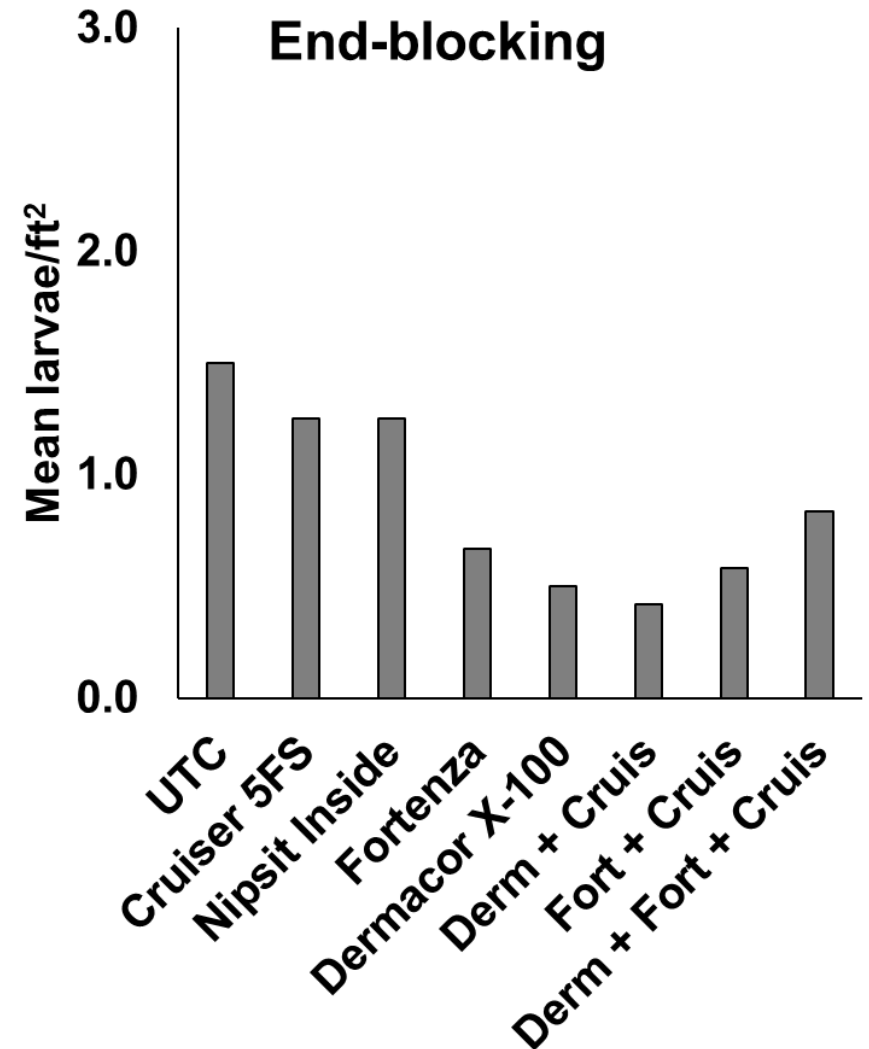
**NO**



# Did ISTs control billbug larvae?

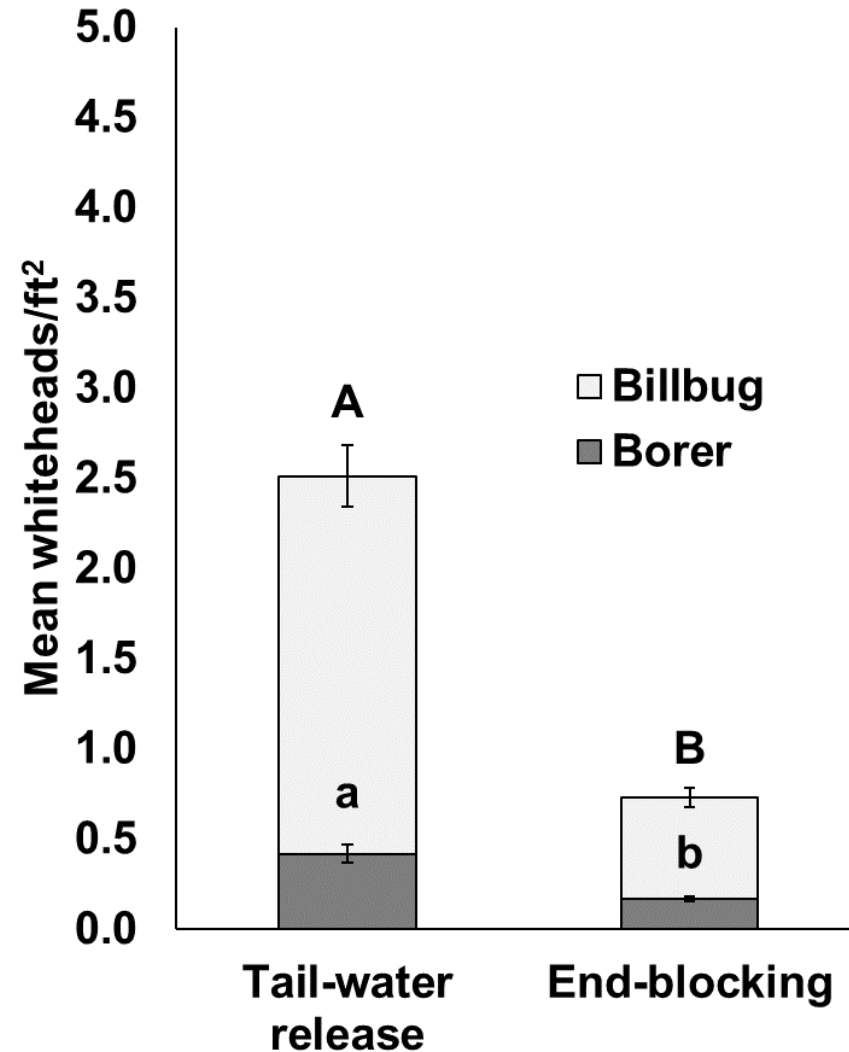


**NO**



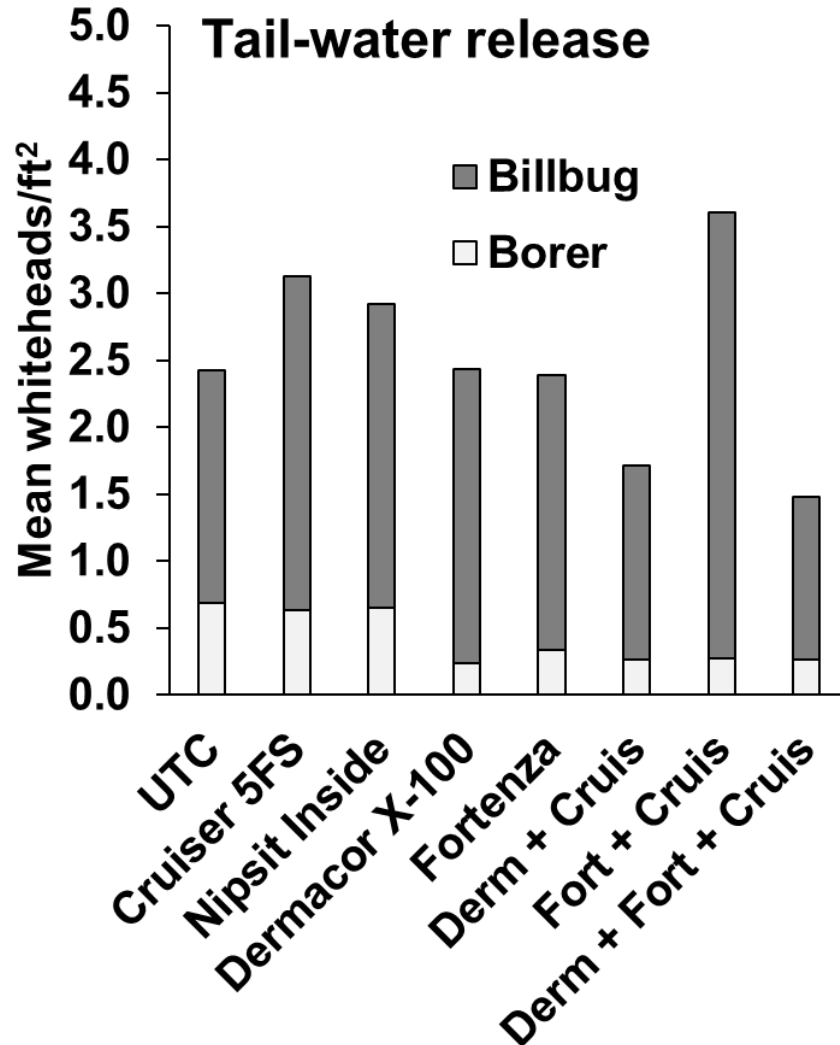
# Does FIR irrigation type impact whiteheads?

Irrigation type significantly impacts both billbug and borer whiteheads  
( $P < 0.05$ )

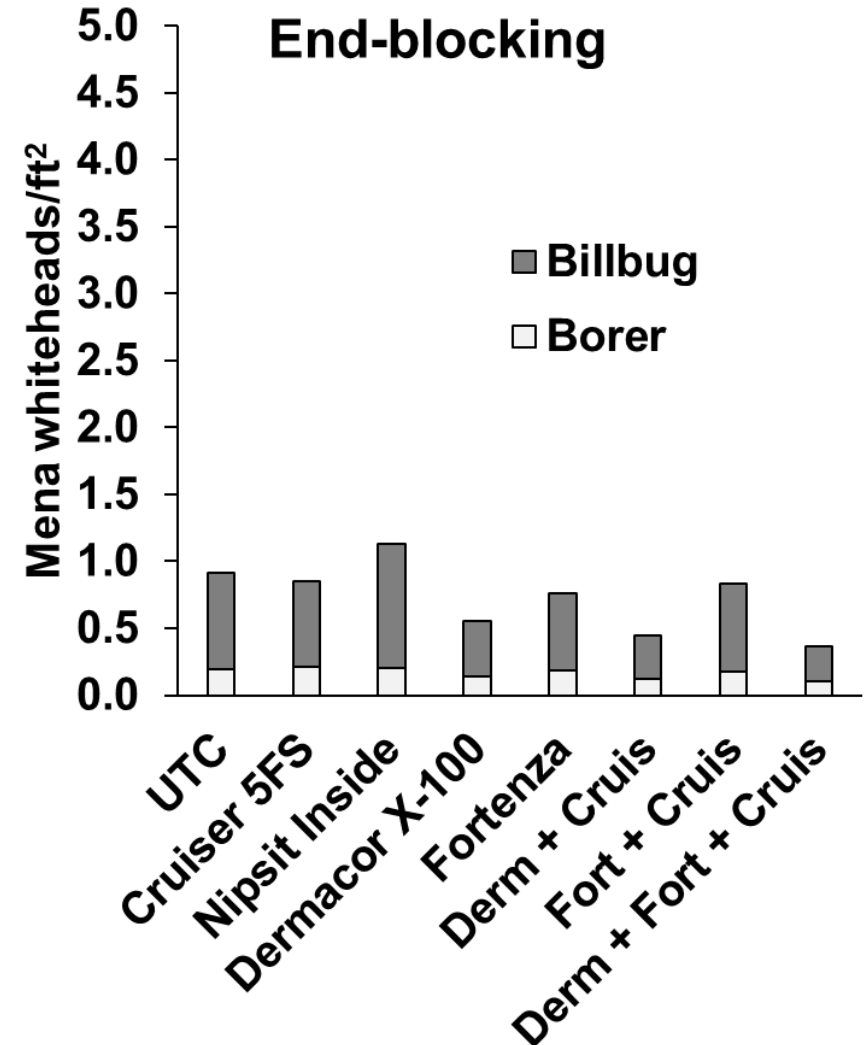




# Does ISTs impact whiteheads?



**NO**



# How do ISTs and irrigation type impact yield?

- **ISTs did not improve yield compared to UTC**

Effect of ISTs and irrigation on Lsmean kg of seed/ha (± 218)		
Seed treatment	Tail-water release	End-blocking
UTC	5955 de	7884 ab
Cruiser 5FS	5741 de	7366 bc
Nipsit Inside	5797 e	7336 bc
Dermacor	5754 de	8379 a
Fortenza	5189 e	7724 ab
Derm + Cruis	6454 cd	8529 a
Fort + Cruis	5280 e	7908 ab
Derm + Fort + Cruis	6441 cd	8487 a

Means followed by the same letter are not significantly different  
( $P \leq 0.05$ , Tukey HSD).



# How do ISTs and irrigation type impact yield?

- ISTs did not improve yield compared to UTC
- Cruiser and Nipsit alone did not improve yield
  - Combination is better than alone

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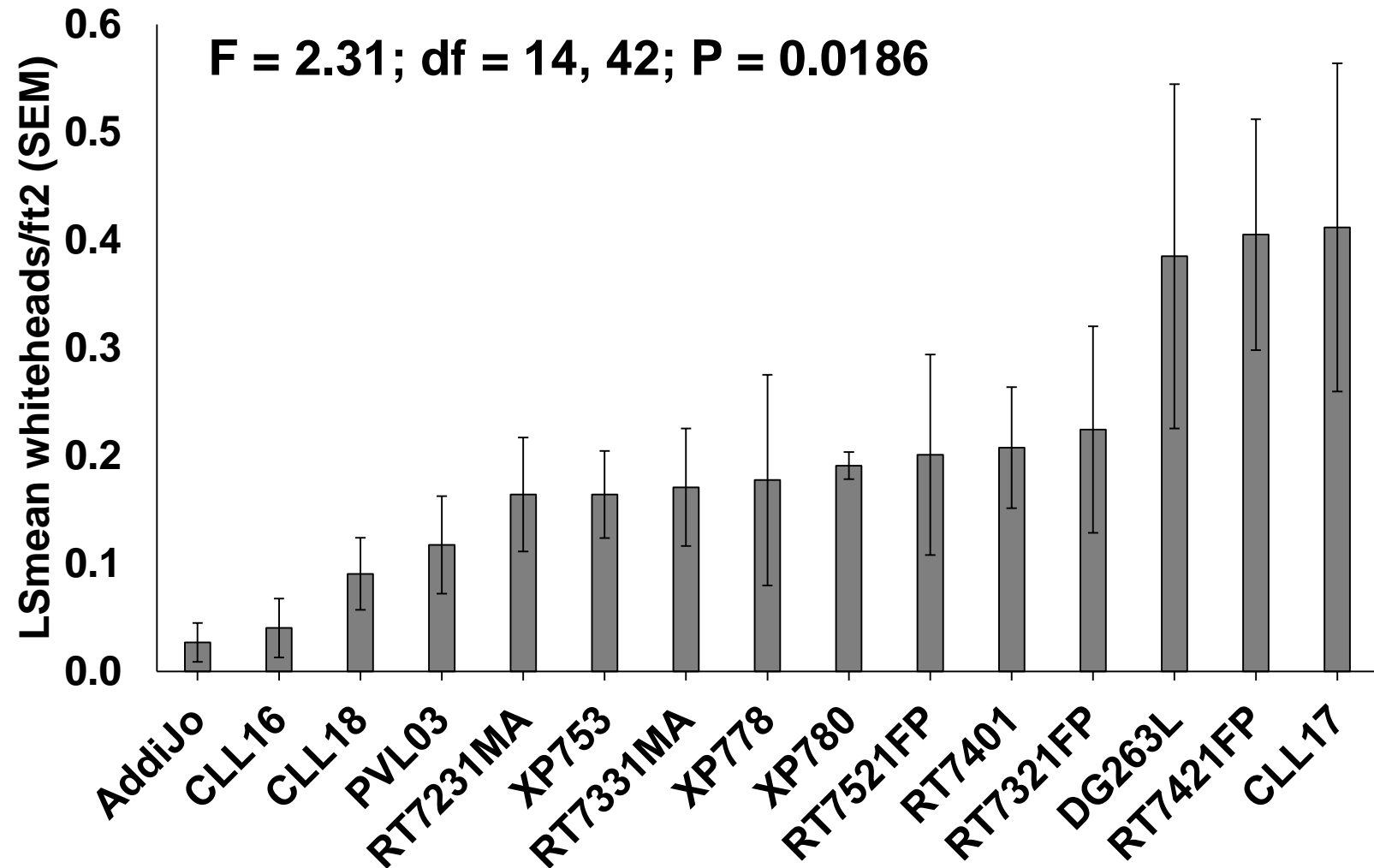
- ISTs did not improve yield compared to UTC
- Cruiser and Nipsit alone did not improve yield
  - Combination is better than alone
- End-blocking improved yield compared to tail-water release

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# 2022 Row Rice Variety Resistance Prelim

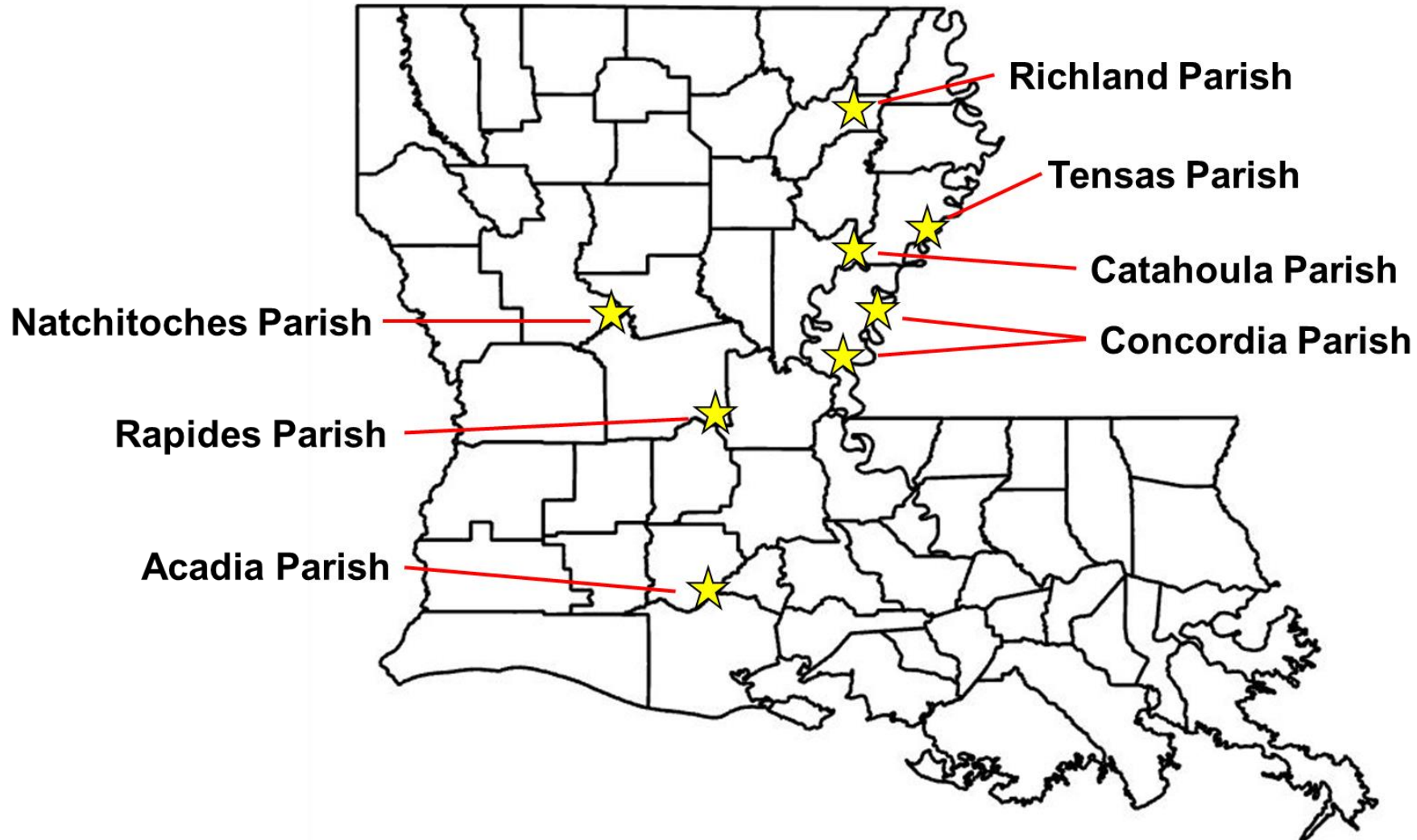
- Northeast Station in St. Joseph
- Resistance/tolerance mechanisms totally unknown
- Continue study for 1-2 more years



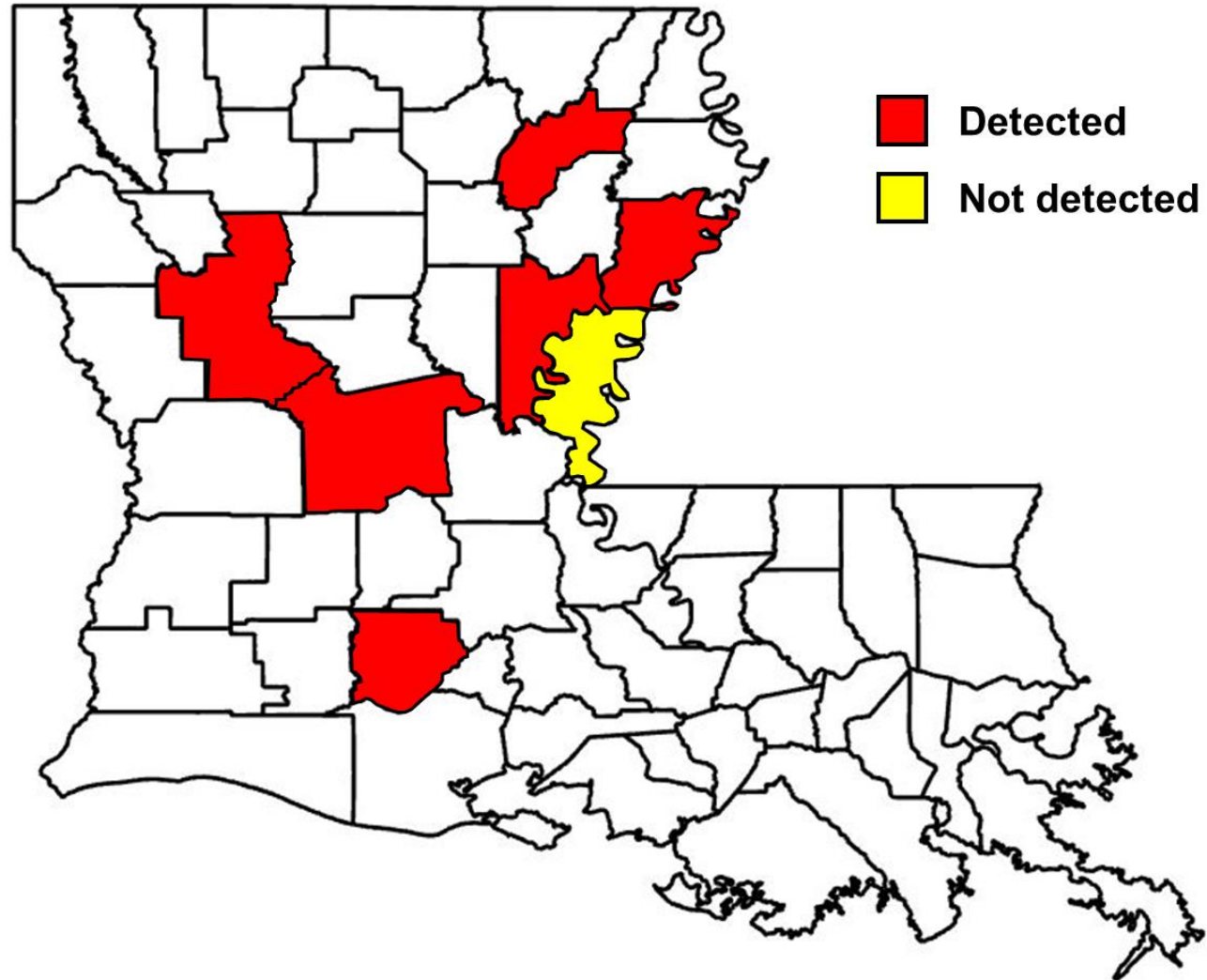
# 2022 Row Rice Field Surveys



# 2022 field surveys



# Billbug captures



# On-Farm Sentinel Plots 2023

- Skip no longer than width of planter
- Hand-planted with untreated seed
- Sampled every 2 wks
- Record pests and natural enemies



# On-Farm Sentinel Plots 2023



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