

# **The effect of treatment threshold and variety on thrips populations in Florida's southern highbush blueberries**

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# Blueberries in Florida

- Rabbiteye
  - Mainly for U-pick
- Southern Highbush
  - fresh market blueberries
  - 2006 (USDA, 2007)
    - 7 million lbs
    - 2,600 acres
    - Average of \$4.70 per lb



# Flower Thrips

- ~90% of thrips captured in FL blueberries are *Frankliniella bispinosa* (Morgan) (Arevalo, 2006)
- ~1mm in length
- Bristle-like wings and “punch and suck” mouthparts
- Wide host range



# Thrips Injury

- Injure flowers in two ways

- Feeding



- Oviposition



# Thrips Control

- Conventional and Reduced-risk insecticides
  - Malathion<sup>®</sup>
  - SpinTor<sup>®</sup>
- Economic Threshold has not been determined

# Objective

- To examine the effect of treatment threshold and variety on thrips populations in southern highbush blueberries in Florida

# Methods

## ● White sticky traps

- A total of 36 sticky traps per farm were used
- They were changed out weekly



## ● Flower samples

- Five flowers were collected weekly from the plant closest to each sticky trap



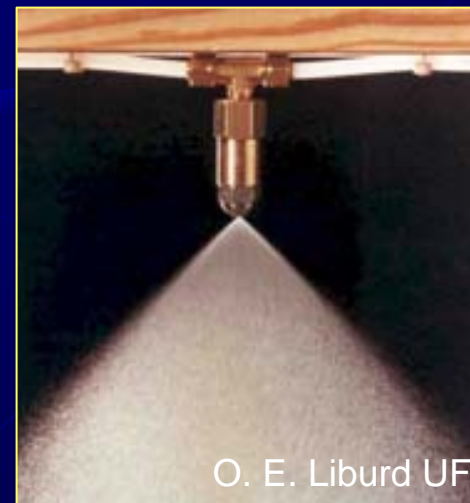
# Methods

- Two farms in Sumter Co., Florida
- 3 treatments: T100, T200, and control
  - T100: When thrips per trap reached 100, SpinTor<sup>®</sup> was applied at the rate of 0.44 L/ha
  - T200: 200 thrips per trap threshold
  - Untreated control
- 4 varieties: Emerald, Jewel, Millennium, Windsor
- Completely randomized design with 3 replicates

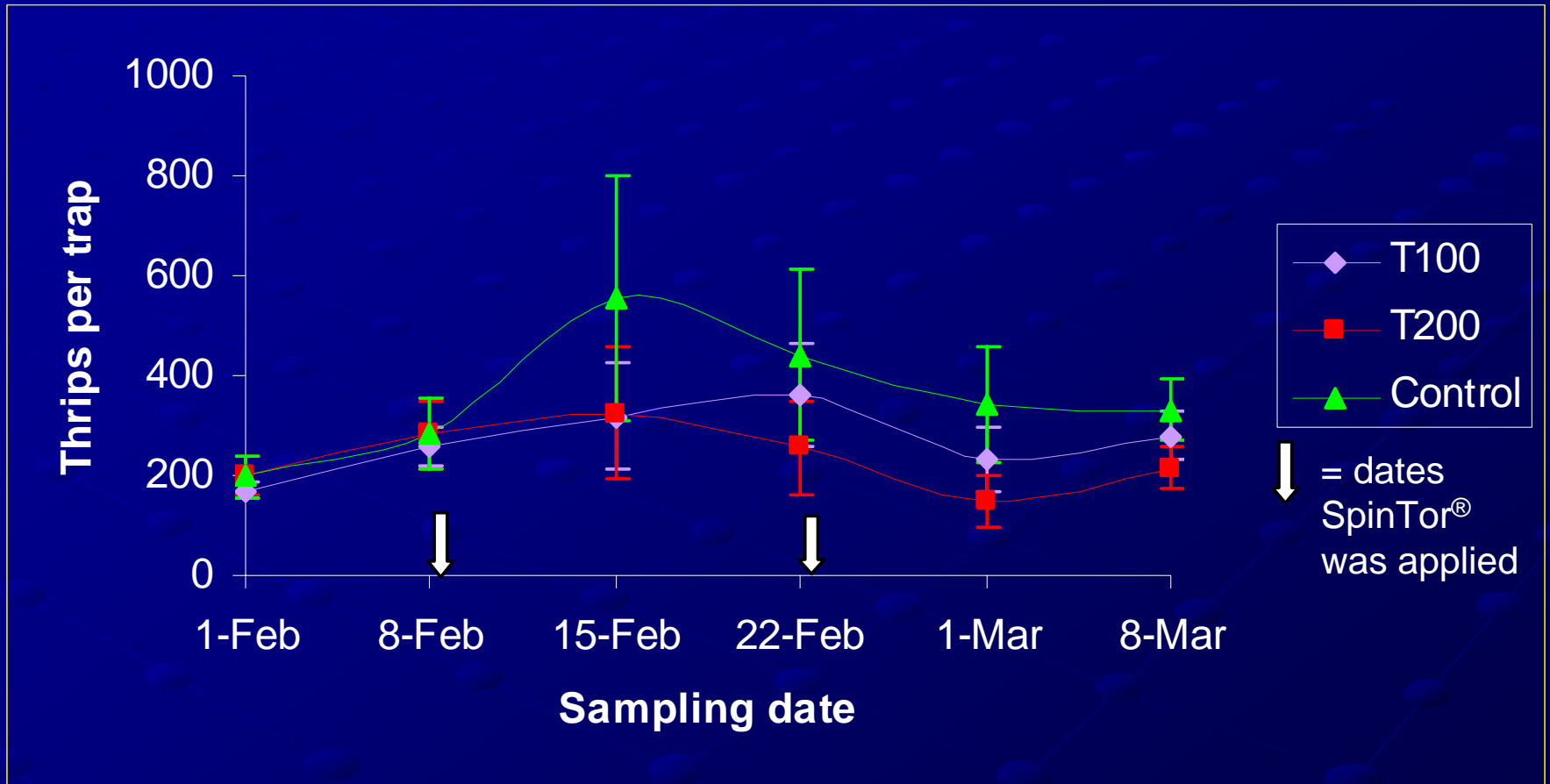


# Farm 1: Treatment Threshold

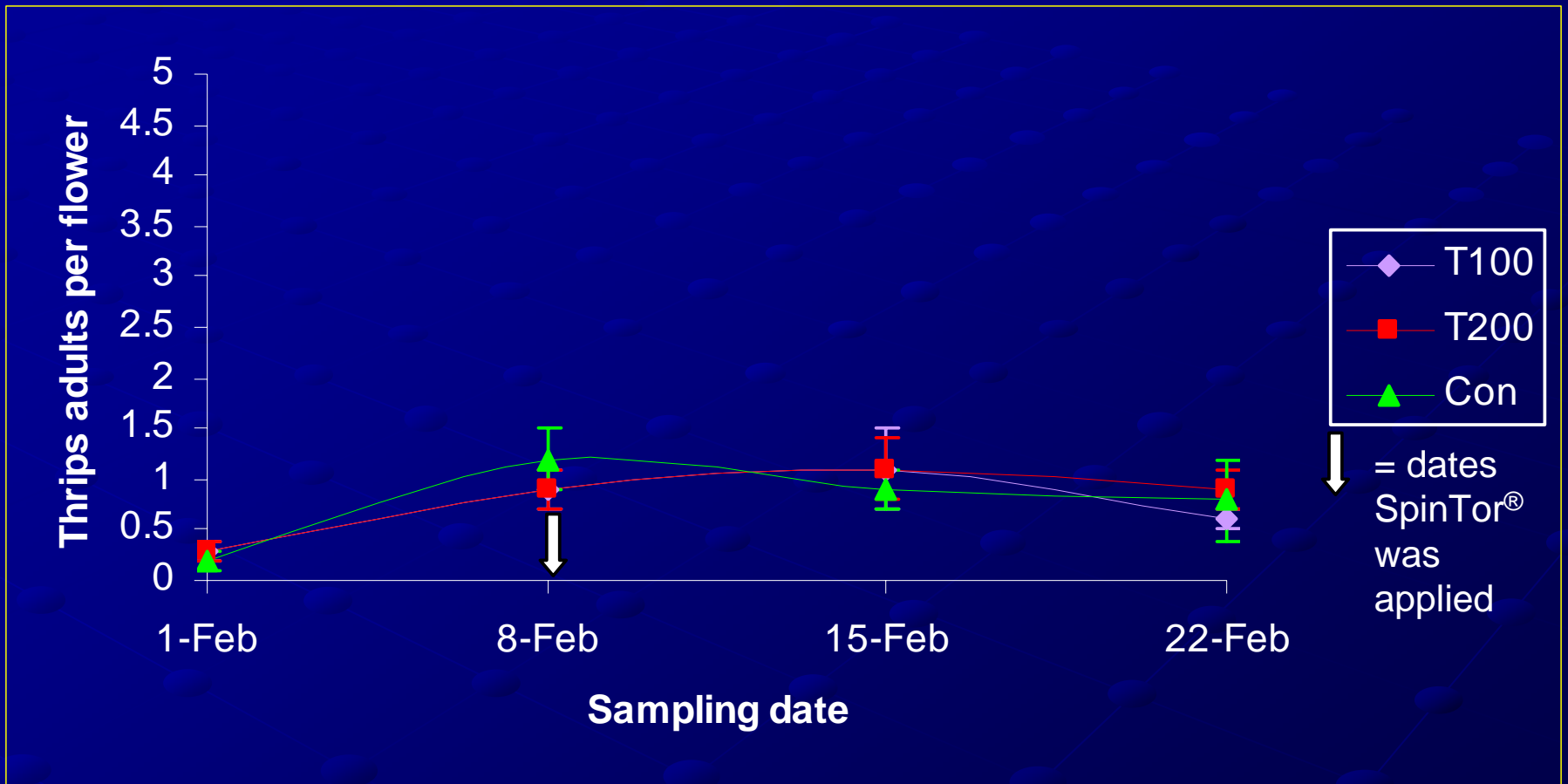
- Both treatments were at threshold on the first day of sampling
- SpinTor<sup>®</sup> was applied on Feb. 9 and Feb. 22



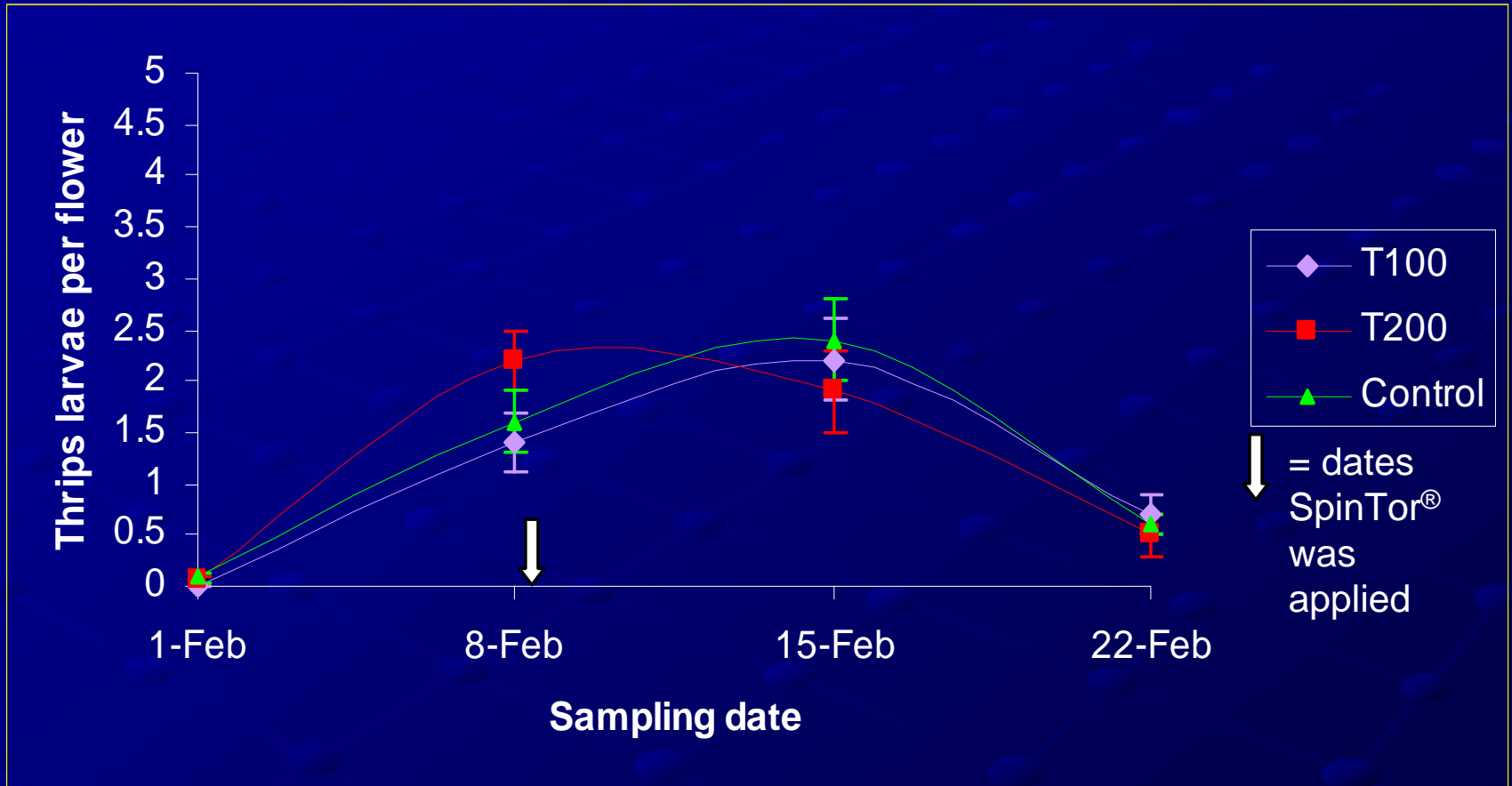
# Sticky Traps



# Adults per Flower

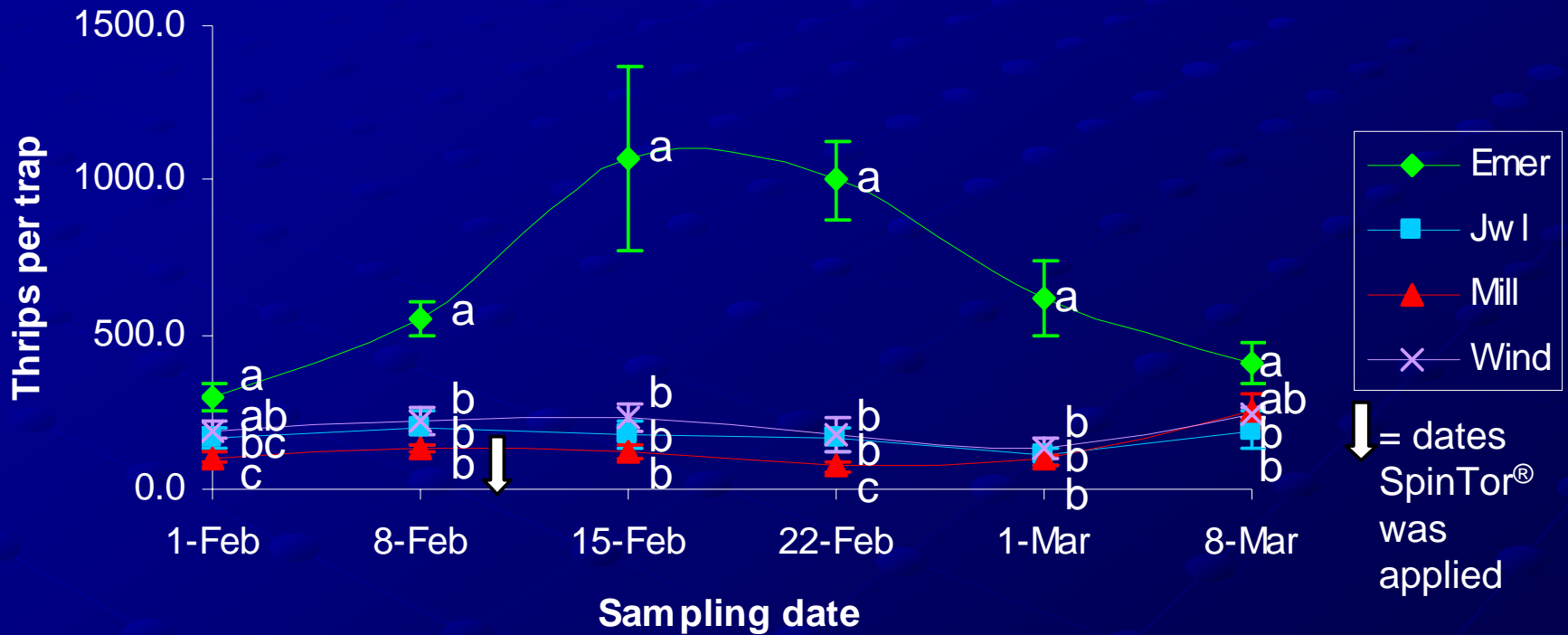


# Larvae per Flower

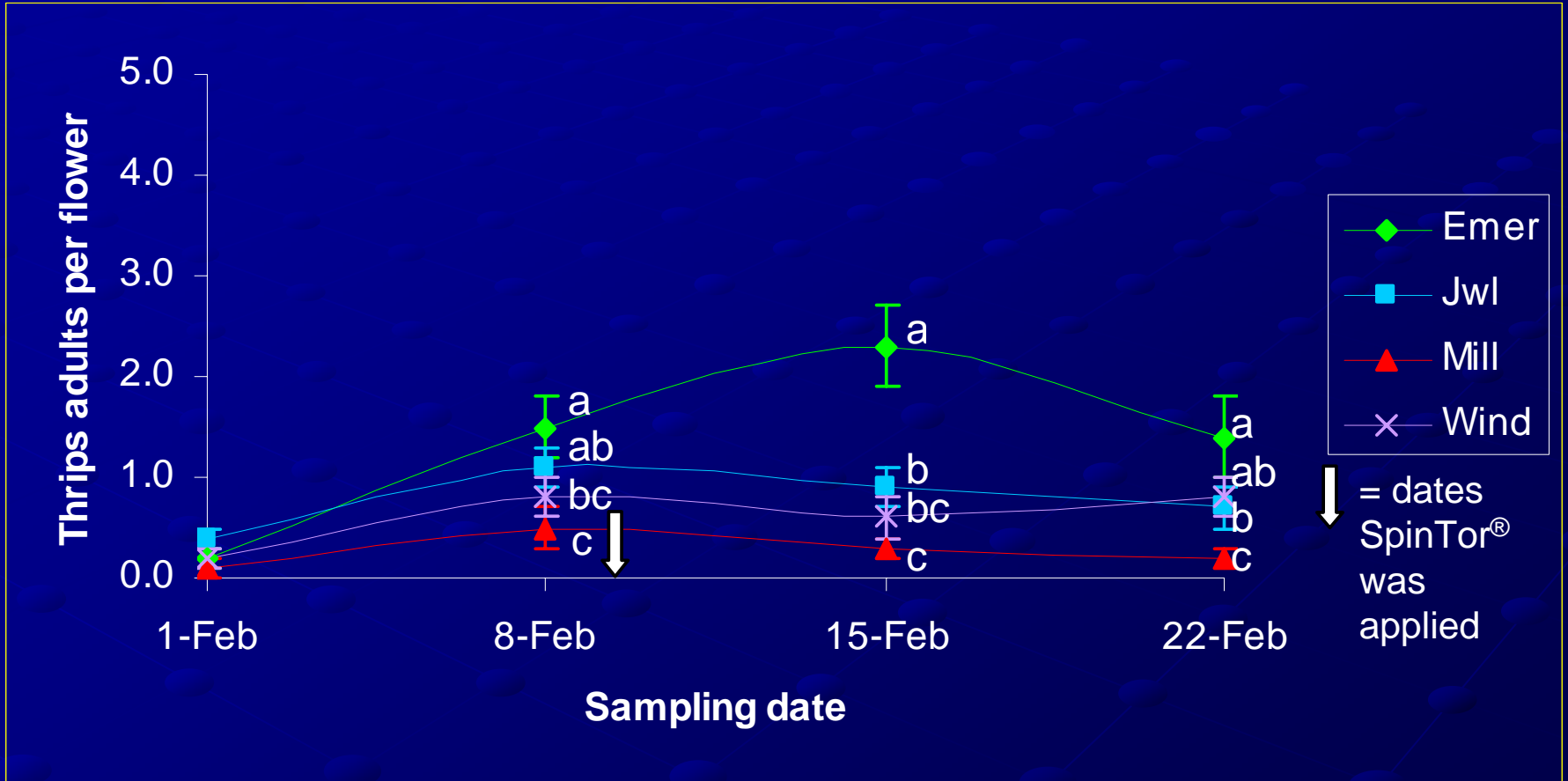


# Farm 1: Variety

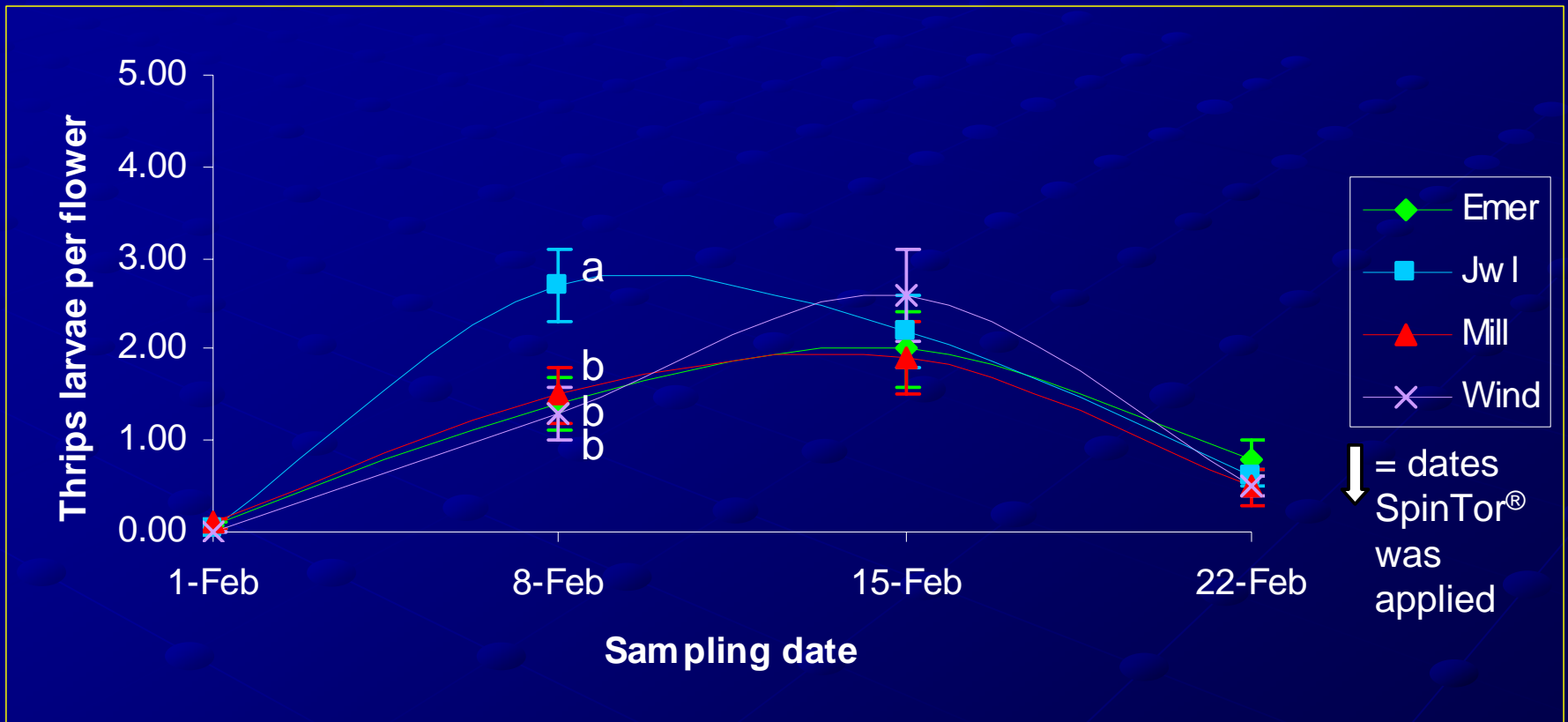
# Sticky Traps



# Adults per Flower



# Larvae per Flower





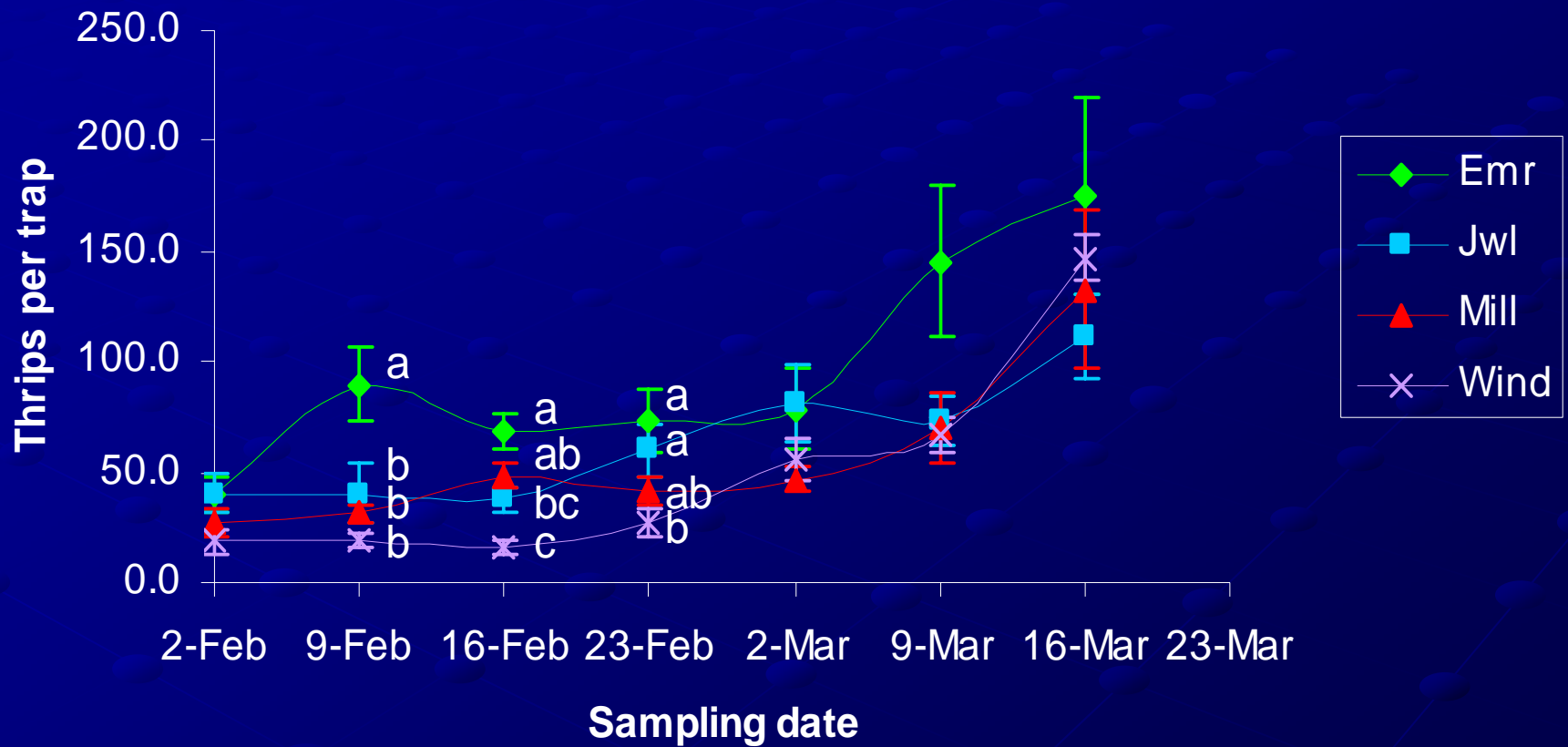
# Farm 2: Threshold

- Neither of the treatments reached threshold so SpinTor<sup>®</sup> was not applied

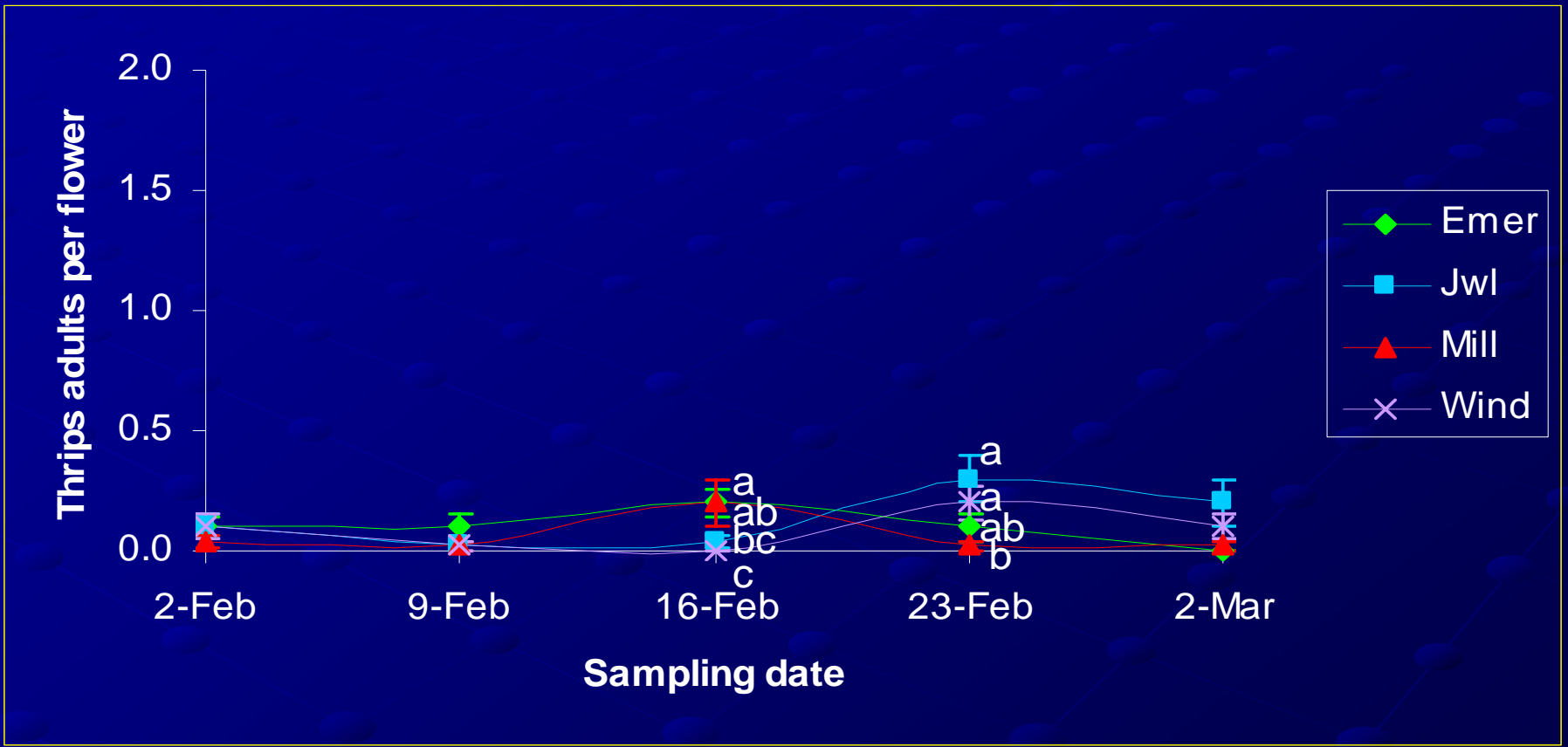


# Farm 2: Variety

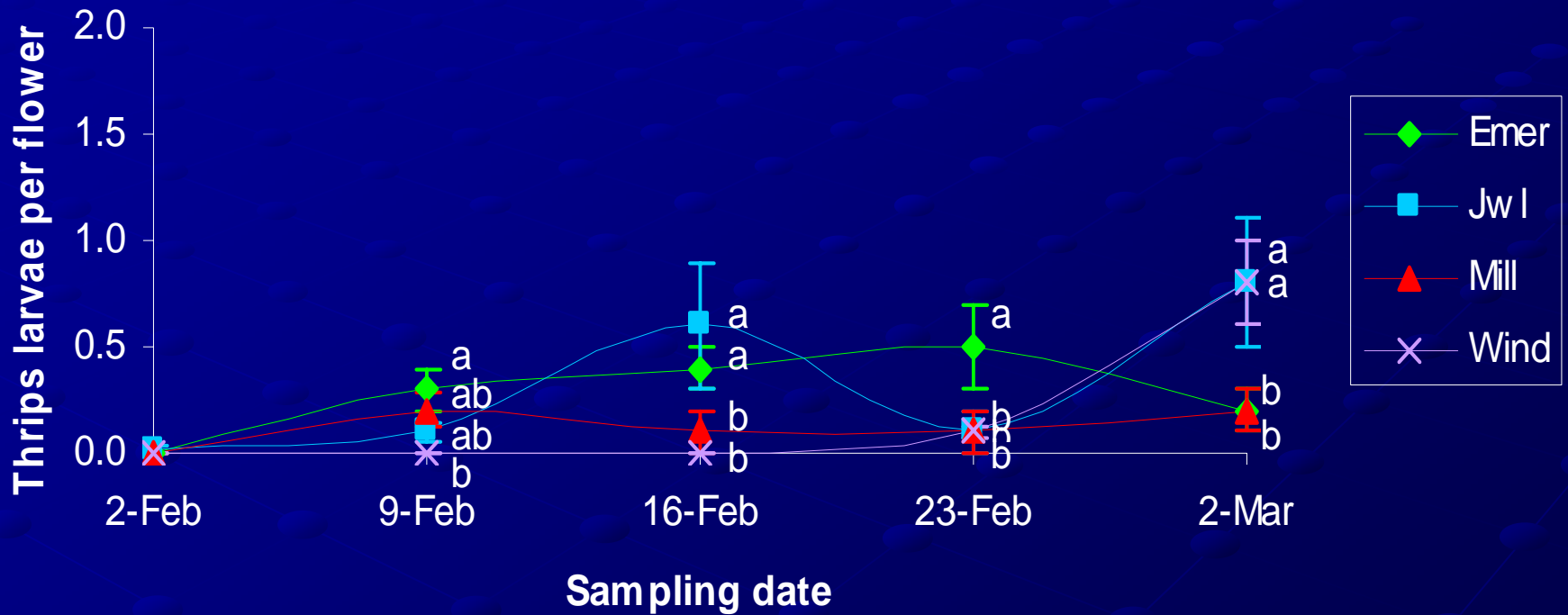
# Sticky Traps



# Adults per Flower



# Larvae per Flower



# Conclusions

- There were no significant differences in thrips numbers among thresholds
- Emerald had significantly higher numbers of thrips than at least 2 of the other varieties on farm 1
- This trend was not as evident on farm 2, most likely due to the smaller numbers of thrips present there

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