



# *Aedes aegypti* and *Aedes albopictus* Response to Four Popular Ovitrap in Outdoor Screen Enclosures

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# Objective

Evaluate efficacy of the BG-GAT, In2Care, CDC-AGO, and Springstar Trap-N-Kill



*Aedes aegypti*



# Research Questions

1. How attractive are ovitraps to mosquitoes compared to other man-made and natural water-holding containers?
2. How do ovitraps differ in effects on mosquito production?
3. Will mosquitoes auto-disseminate toxicants in ovitraps?





# Ovitrap Treatments



# Ovitrap Active Ingredients

BG-GAT – bifenthrin @ 1 fl. oz./gal applied @ 1 g/1000 sq. ft. or 7.9 ml/300 in<sup>2</sup>

Springstar Trap-N-Kill – dichlorovos

In2Care – pyriproxyfen & *Beauveria bassiana*

CDC-AGO – sticky adhesive cylinder

Negative Control – untreated plastic container





# Experimental Site





# Oviposition Containers



- Twenty 3<sup>rd</sup> instars placed in each ovitrap and oviposition container





# Adult Mosquito Release

- 100 gravids were released in each treatment enclosure





# Mosquito Recovery

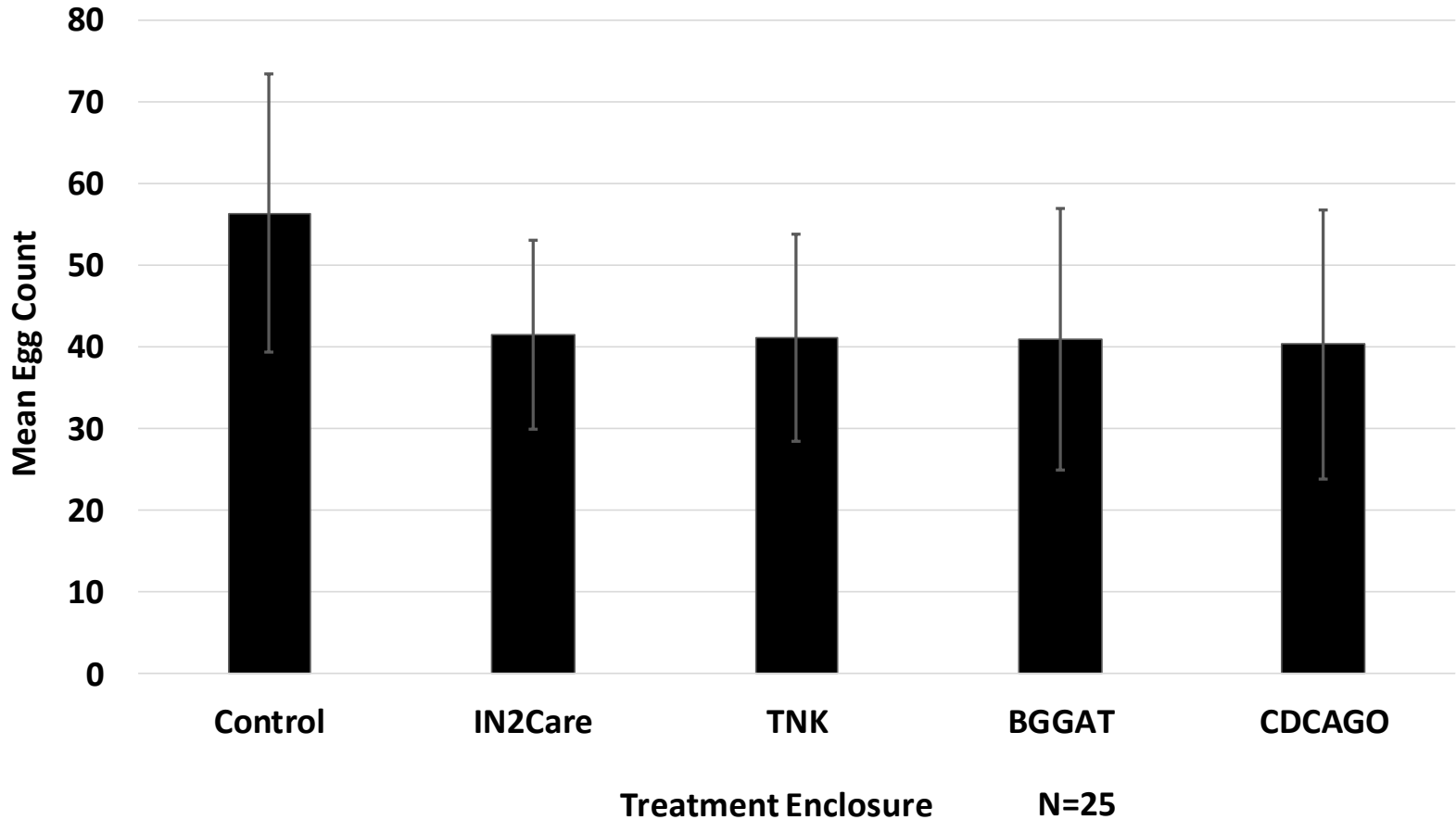
- 2 days after release larvae, pupae, and adults were recovered and placed in labeled containers in lab incubator



- Daily survival/mortality recorded
- Egg count estimates made by wiping containers with cloth and examining under microscope
- Ovitrap were rotated clockwise through all five enclosures
- Except for In2Care, oviposition containers kept in same enclosure and rotated clockwise one position

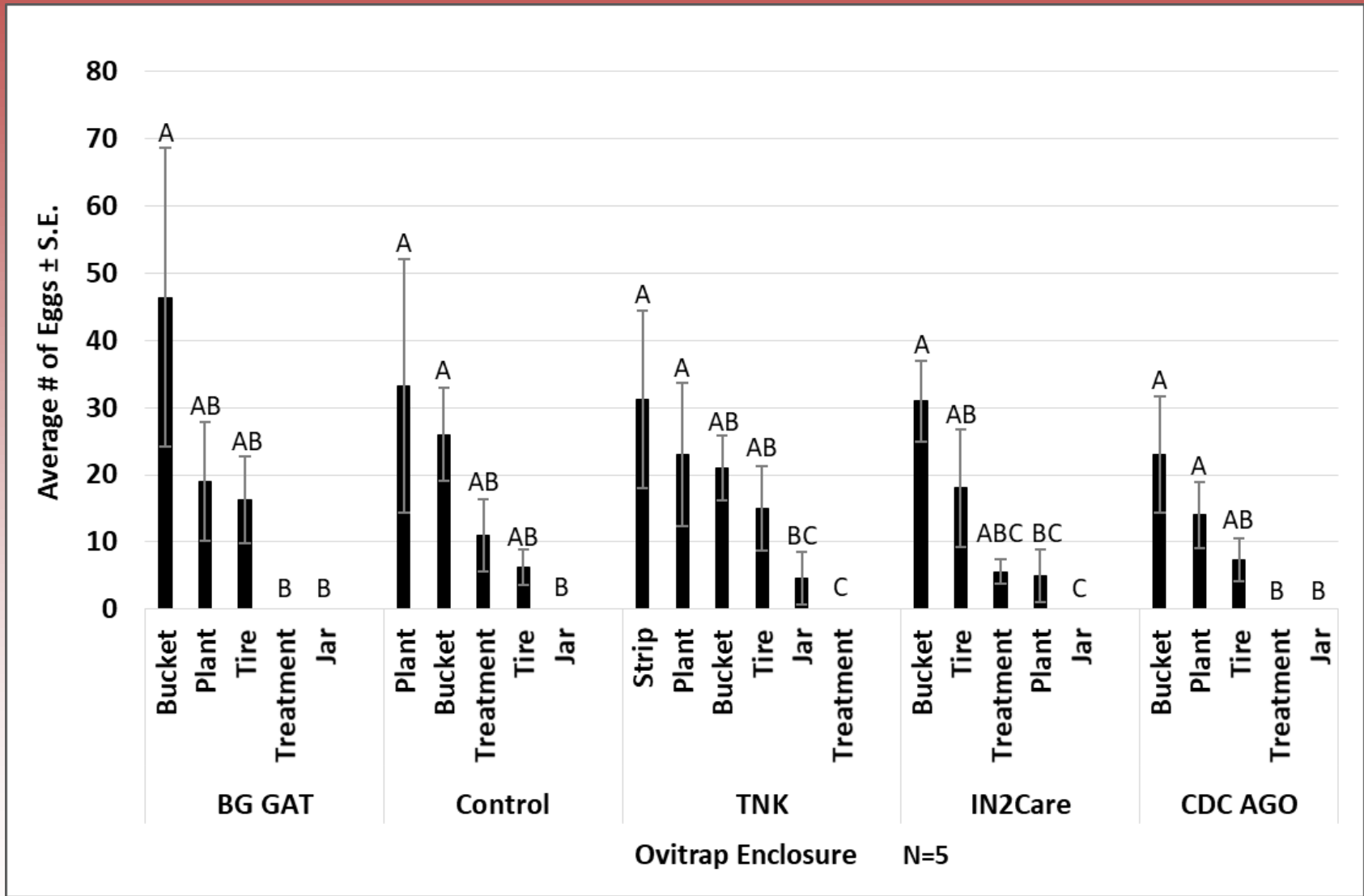


# Oviposition Attraction by Treatment

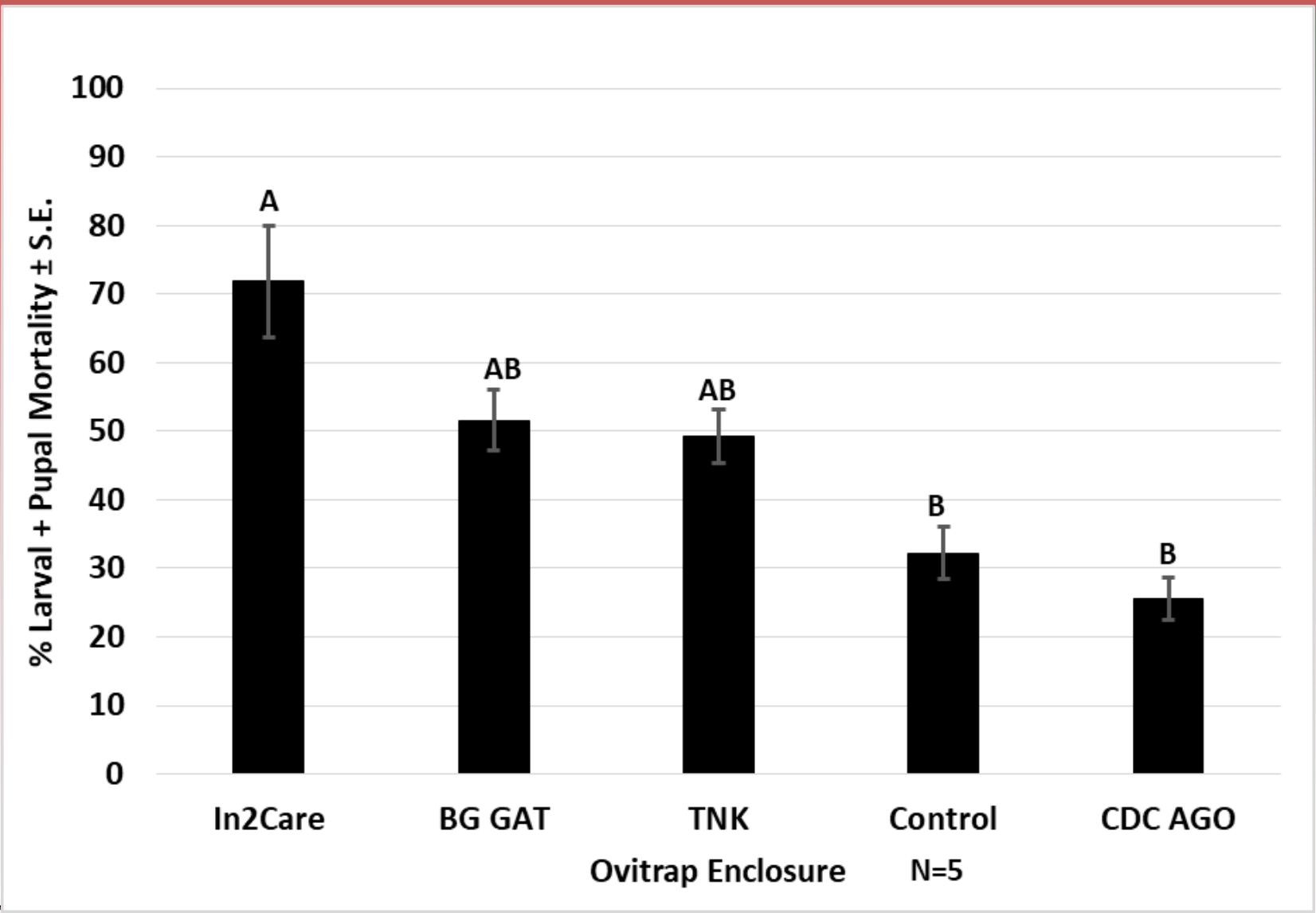




# Oviposition Attraction by Container



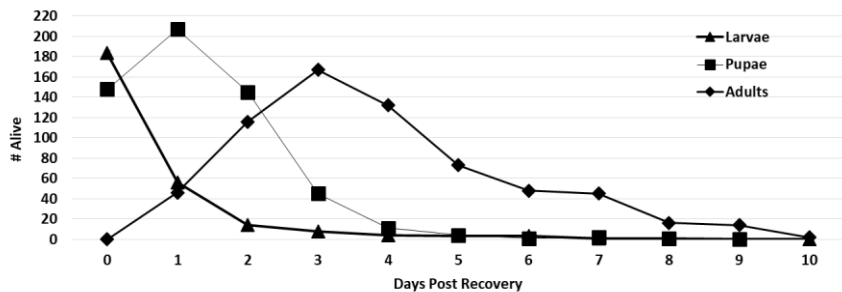
# Larval & Pupal Mortality by Treatment Enclosure



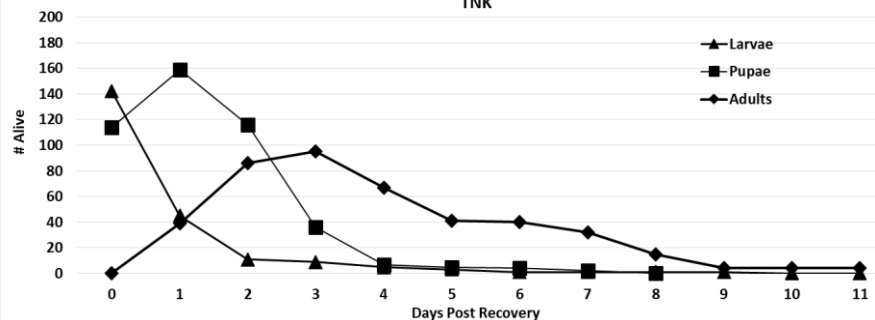


# Larval, Pupal, and Adult Survival by Ovitrap Enclosure

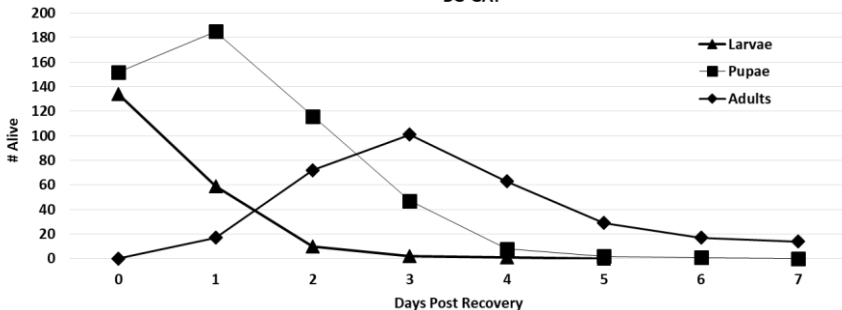
CONTROL



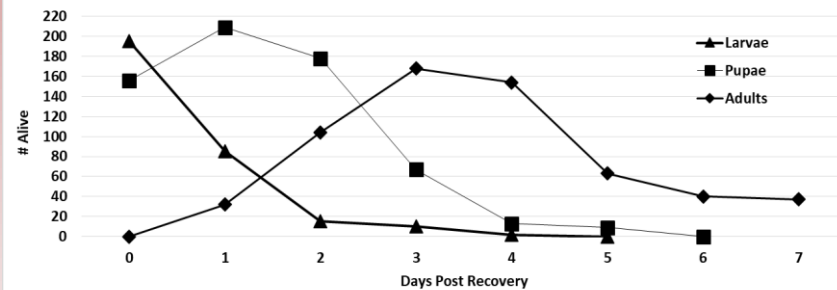
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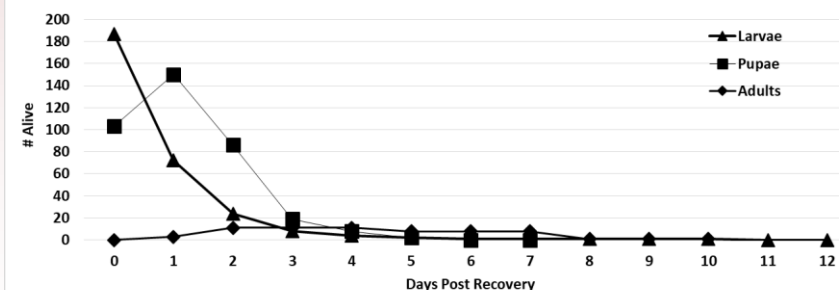
BG-GAT



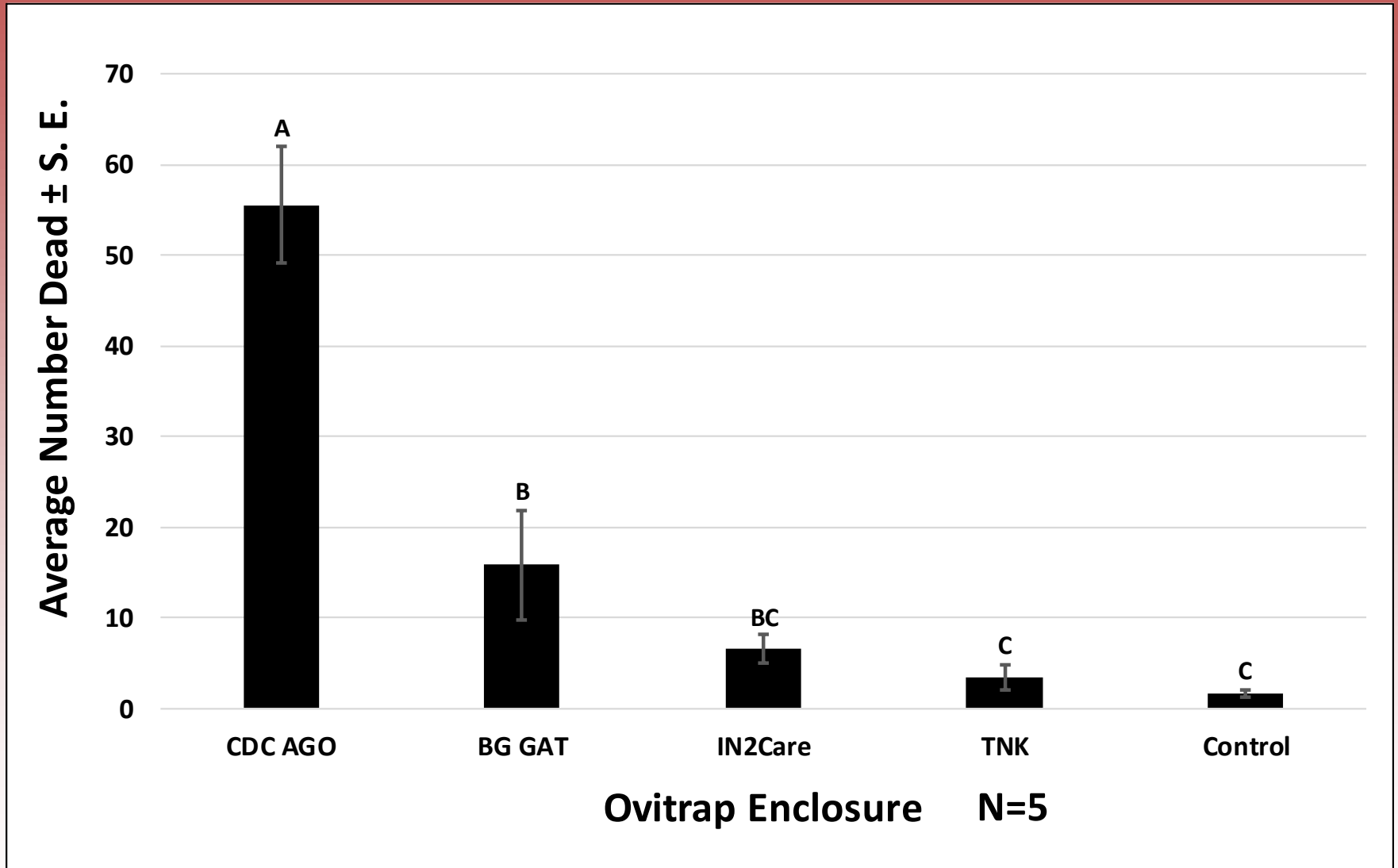
CDC-AGO



IN2CARE



# Adult Mortality by Ovitrap Enclosure





# Conclusions

1. There was no significant difference in the attraction of gravid mosquitoes as measured by oviposition among the 5 ovitrap treatment enclosures.
2. The greatest larval + pupal mortality occurred in the In2Care enclosure.
3. The In2Care enclosure was the only treatment that resulted in a significant reduction in adult production attributed to autodissemination of pyriproxyfen.
4. The CDC-AGO consistently trapped on average more than 50% of the released gravid mosquitoes.



This project was funded in part by a grant from the  
Florida Department of Agriculture & Consumer Services

# Questions?

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