



# Insect Repellent Trials Employing a Modified K&D Module

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# Outdoor Screen Caged Studies



# Biting Counts of Released Mosquitoes



# Hand-In-Cage Testing



# K & D Module

Klun, J. A. and M. Debboun. 2000. A new module for quantitative evaluation of repellent efficacy using human subjects. *J. Med. Entomol.* 37: 177-181



# K&D Module Deployed



# Modifications

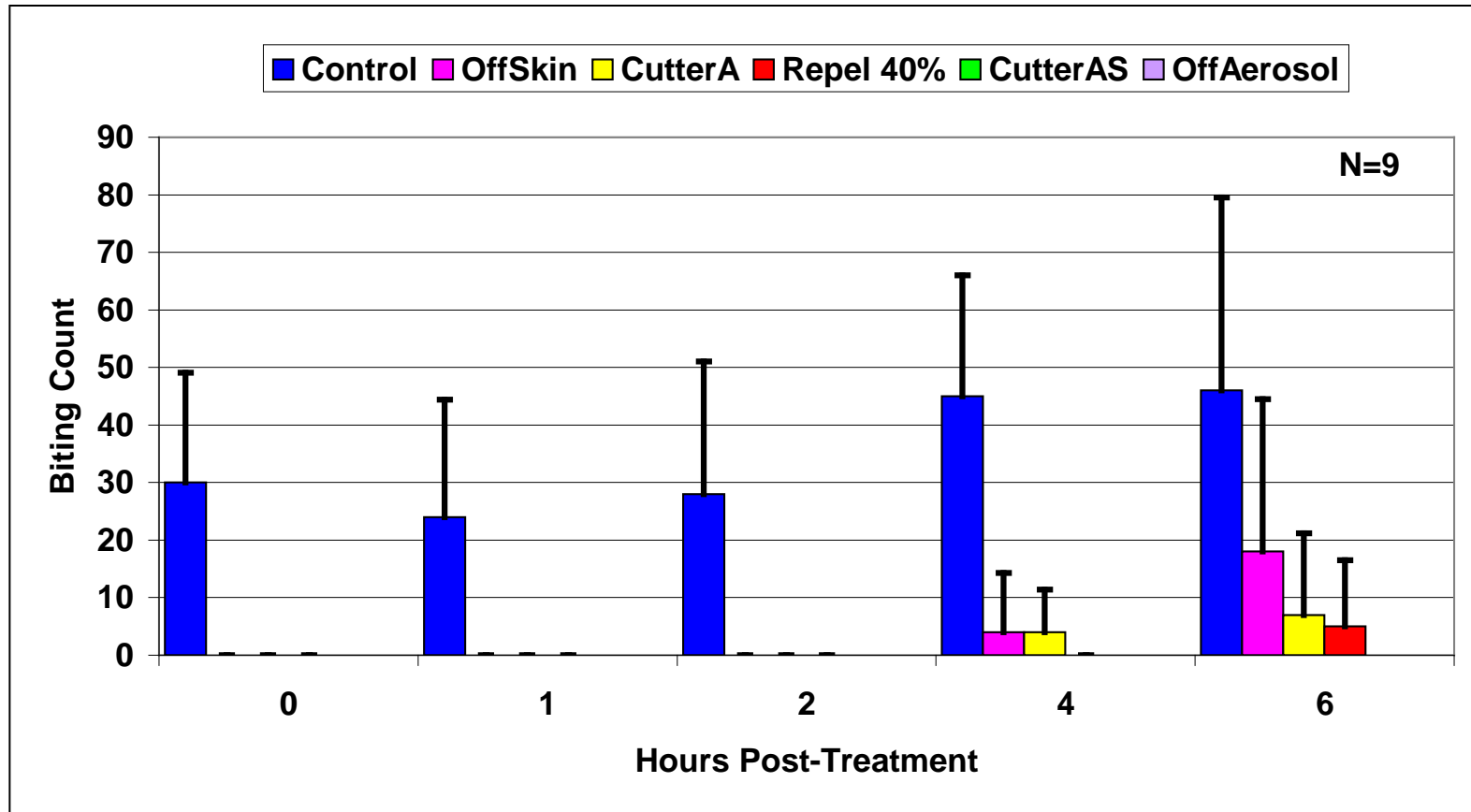
- **Species**
- **# Mosquitoes**
- **Exposure Time**
- **Exposure Interval**
- **Repellent Interaction Mitigation**
- **Evaluator Protocol**

# Repellent Screening

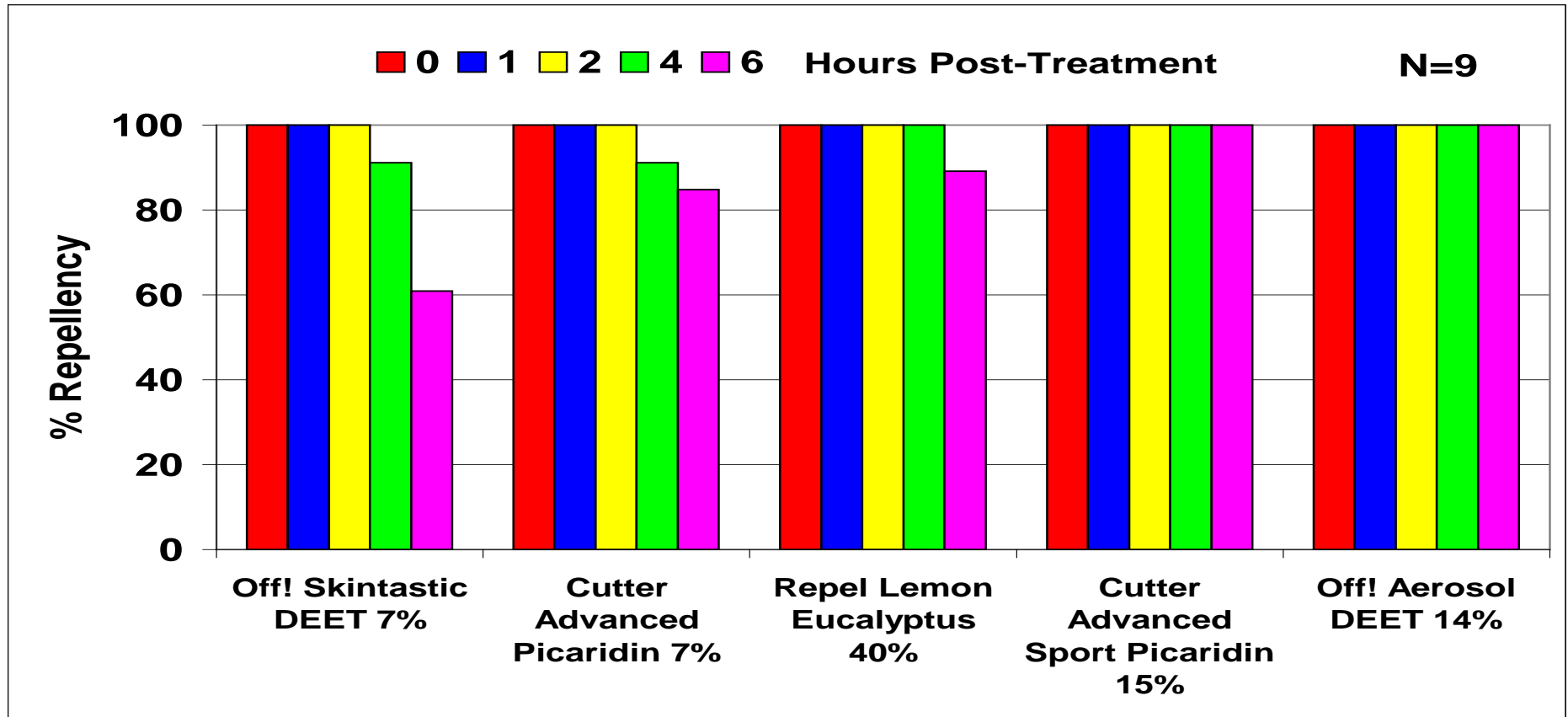




# Comparative Biting Counts by Treatment & Time Interval



# Percent Repellency by Time Interval & Product



# Conclusions

- Modified K&D technique offers high throughput
- Excellent screening tool
- Less people required (a BIG +)
- High replication
- Simultaneous, side by side evaluation
- Excellent repeatability
- Fewer variables
- Field testing still important—but problematic

# Acknowledgments

- Funding provided in part by Florida Department of Agriculture & Consumer Services and TyraTech Inc.
- K&D modules supplied by Precision Plastics, Beltsville, MD
- These studies were approved by the Florida A&M University Institutional Review Board
- All human subjects gave written informed consent before participating in studies