

Barrier Treatments: Trials and the Surge of Private Applicators in Delaware - James Joachimowski

- A. Private applicators
 - 1. Great increase in the past few years
 - 2. 51 companies currently involved in some kind of mosquito control
 - 3. Advertising is increasing questions about services
 - 4. What are the private contractors doing?
 - a) Do there services work
 - b) What are they spraying
 - c) How are they spraying
 - d) Do these things work in areas with bad mosquitoes
- B. Finding the answers
 - 1. Made phone calls
 - a) What is being used
 - b) How are you using it
 - 2. Did a little research
 - 3. Bottom line - do barrier sprays really work?
- C. Chikungunya
 - 1. FL locally transmitted case - 7/17/14
 - 2. First imported case in DE 7/24/14
 - 3. Increased the need for answers
- D. Field trials
 - 1. Lincoln
 - a) Abandoned property in an older town
 - b) Control site was 200 yards away
 - c) Pretreating
 - (1) Landing rates of 10-20 per minute
 - (2) Set CDC traps
 - d) Treated heavy vegetation with Bifenthrin
 - 2. Crabapple Rd
 - a) 3/4 acre site
 - b) Heavily vegetated abandoned property
 - c) Lots of breeding sites
 - d) Landing rates of 10-30 per minutes
 - e) Treated with a green product - Essentria IC3
 - 3. Briar Lane
 - a) Landing rates of 4-5 per minute
 - b) Treated with Cyfluthrin (?)
 - 4. Bigstone Beach
 - a) 1/3 acre site
 - b) Open wooded area near salt marsh
 - c) *Anopheles* spp and *Aedes* spp
 - d) Treated with Bifenthrin
 - 5. Procedure
 - a) Surveillance
 - (1) Sites were trapped pre and post treatment
 - (2) 38 trap nights
 - b) Used Stihl backpack sprayer
 - c) Applied at maximum rate
 - 6. Results
 - a) Lincoln site

- (1) Immediate knockdown
 - (2) Month long control of *Ae albopictus*
 - b) Crabapple site
 - (1) No immediate knockdown
 - (2) Product was not terribly effective
 - (3) Did not see a strong push of mosquitoes into treated site from untreated site
 - c) Briar Lane site
 - (1) Noticed a reduction in *Ae albopictus*
 - (2) Trapping methods used were different so no comparison
 - d) Bigstone site
 - (1) Mixed results
 - (2) Did see a decrease in species in traps
- E. Bottom line
- a) Treatments can be effective
 - b) It is a potential tool for use by mosquito control
 - c) Don't know about non-target effects