Update on Gravid Aedes Trap: alternative pesticides

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Trials of bednets side wall

Test killing capacity of deltamethrin LLIN in the top of a GAT

1. Entire side wall of GAT covered
2. Bottom screen composed of bednet
3. We always used a bednet bottom screen as it prevented KD mosquitoes from recovering, and it stopped ants from eating mosquitoes.
Lab trials of bednets

Test killing capacity of Bestnet Netprotec (deltamethrin LLIN) in the top of a GAT

1. Outer wall of entry funnel covered and
2. Bednet bottom screen
Olyset Plus
Bednet from Somitomo

• Contains pyrethrin and PBO (Piperonyl butoxide), a synergist

• Kills faster than conventional bednet

• Effective against SP resistant mosquitoes.
Escape from GAT treated with bednets

Treatments:
1. Standard GAT sprayed with Mortein surface spray
2. Olyset Plus around inside of top;
3. Olyset Plus around outside of funnel
**Killing speed of bednets**

Treatments:
1. Standard GAT sprayed with Mortein surface spray
2. Olyset Plus around inside and funnel;
3. Deltamethrin bednet around inside and funnel

Olyset plus kills as fast as Mortein and 2X faster than standard bednet
Escape from bednet treated GATs

Treatments:
1. Standard GAT sprayed with Mortein surface spray;
2. Olyset Plus around inside and funnel;
3. Deltamethrin bednet around inside and funnel

Escape from bednet treated GATs is minimal
Field trials (latin square) of killing agents

While results not significantly different, the funnel bednet performed as well as the Mortein standard.
By popular demand we tested the performance of a GAT that only had bednet as the bottom screen.

While no significant difference was found ($P = 0.06$), we feel that we need bednet around funnel too.
RECOMMENDATIONS

1. BEDNETS ARE A GOOD ALTERNATIVE KILLING AGENT IN GAT TOPS
2. OLYSET PLUS BEDNET KILLS FASTER AND SHOULD BE EFFECTIVE AGAINST SP RESISTANT MOSQUITOES
3. A BEDNET SKIRT SURROUNDING THE ENTRY FUNNEL SHOULD BE USED
4. A BEDNET BOTTOM MESH SHOULD ALSO BE USED: IT HELPS WITH KD, AND PREVENTS ANT PREDATION OF DEAD MOSQUITOES
5. THE BEDNET BOTTOM COULD SIMPLY BE BEDNET DISC THAT YOU PLACE ON TOP OF STANDARD MESH.
6. THUS THE GAT PACKAGE COULD INCLUDE A FEW SKIRTS AND DISCS.
7. FUTURE WORK ON LONGEVITY OF THE BEDNET SHOULD BE UNDERTAKEN.