

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

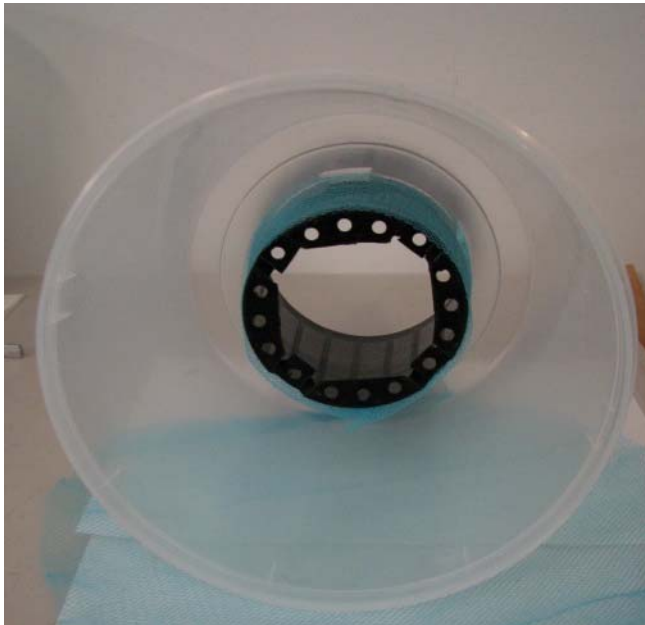
1. Entire side wall of GAT
covered
2. Bottom screen composed of
bednet
3. We always used a bednet
bottom screen as it
prevented KD mosquitoes
from recovering, and it
stopped ants from eating
mosquitoes.



Lab trials of bednets

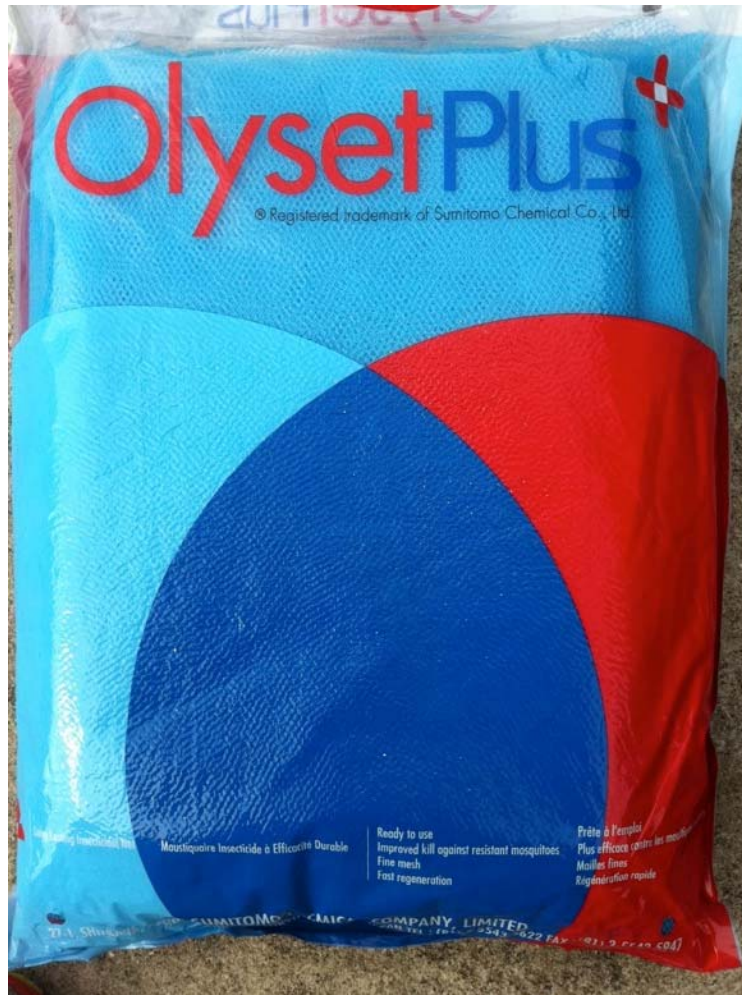
Test killing capacity of Bestnet
Netprotec (deltamethrin LLIN) in
the top of a GAT

1. Outer wall of entry funnel
covered and
2. Bednet bottom screen



Olyset Plus

Bednet from Somitomo

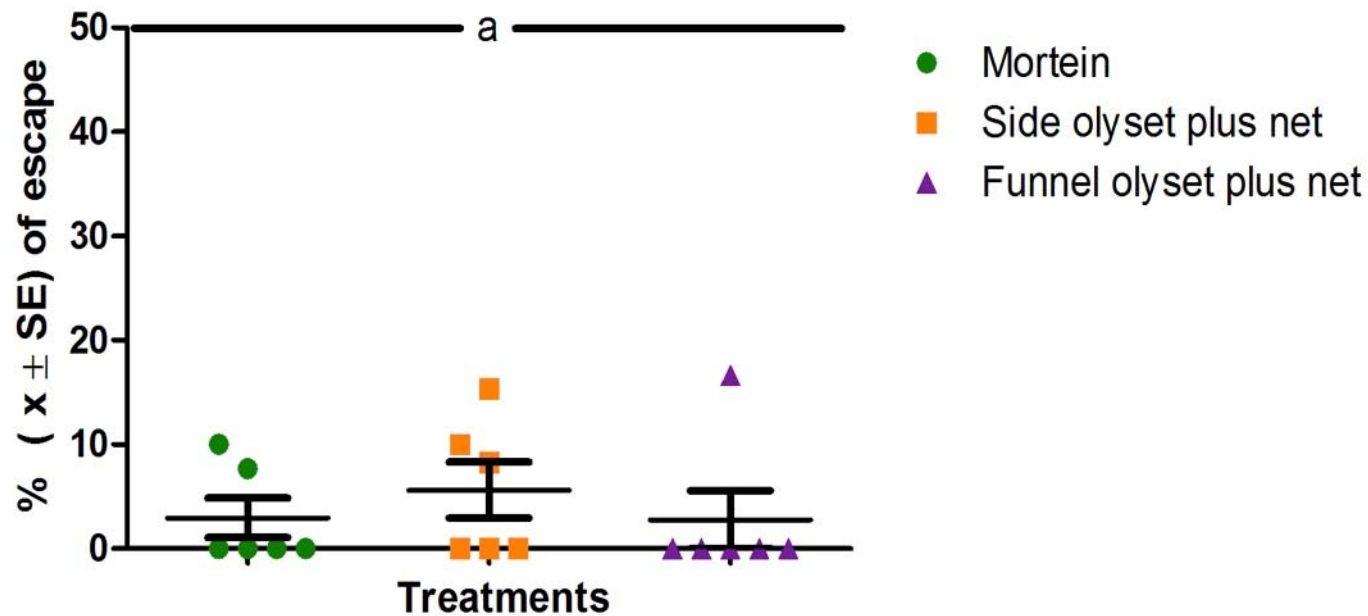


- Contains pyrethrin and PBO (Piperonyl butoxide), a synergist
- Kills faster than conventional bednet
- Effective against SP resistant mosquitoes.

Escape from GAT treated with bednets

Treatments:

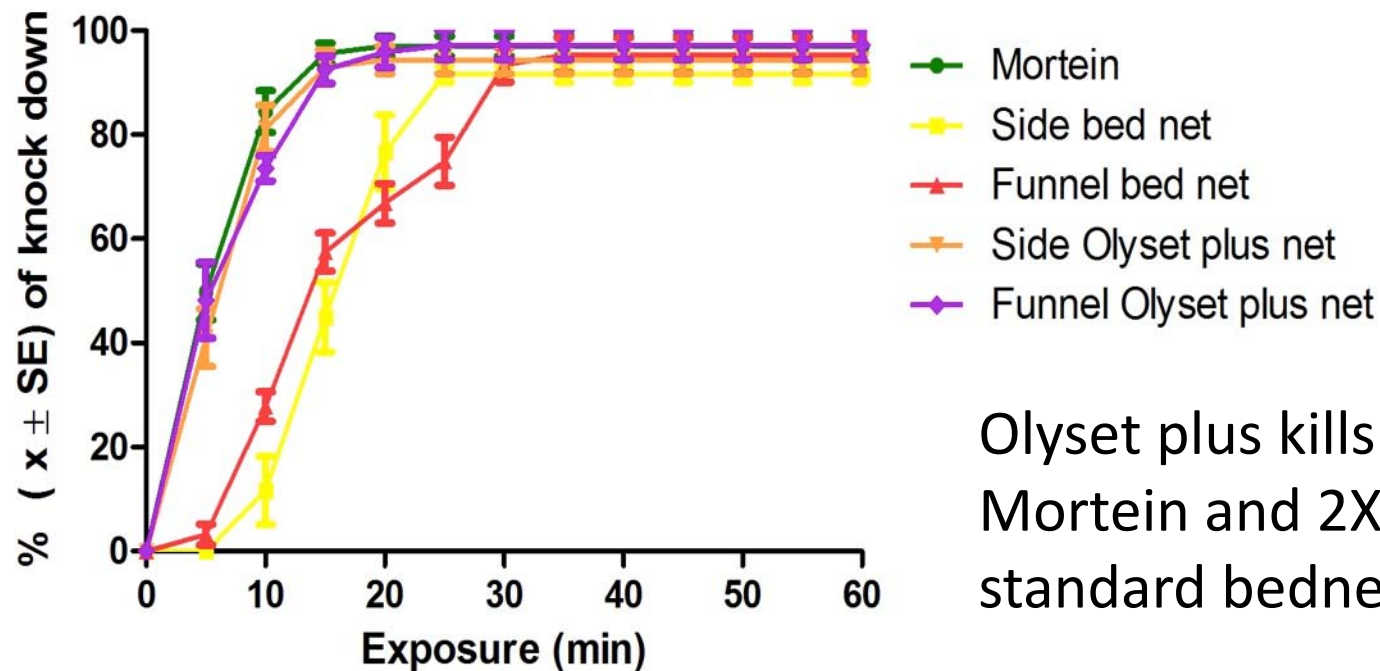
1. Standard GAT sprayed with Mortein surface spray
2. Olyset Plus around inside of top;
3. Olyset Plus around outside of funnel



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

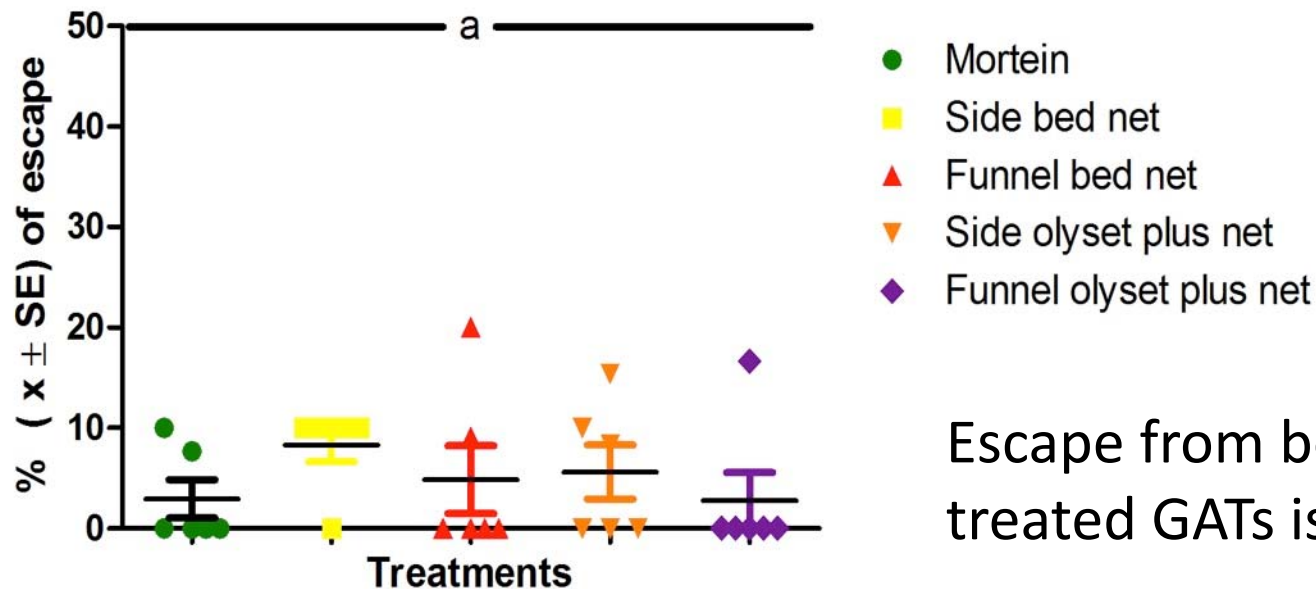


Olyset plus kills as fast as Mortein and 2X faster than standard bednet

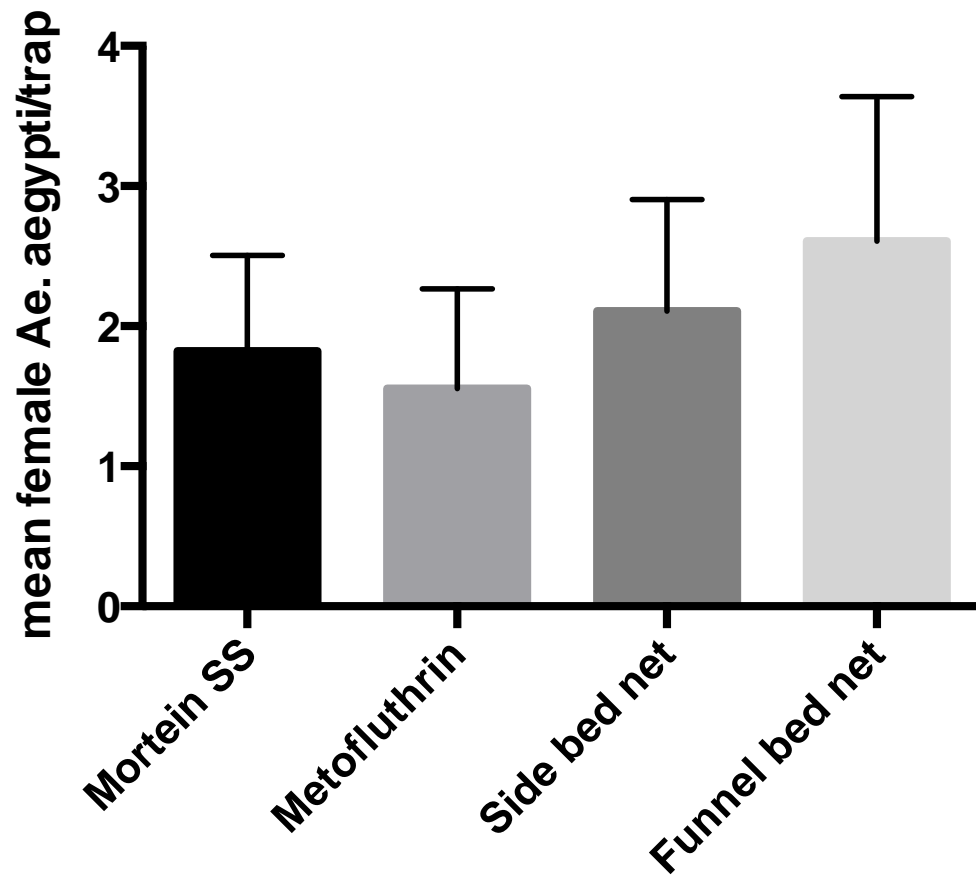
Escape from bednet treated GATs

Treatments:

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

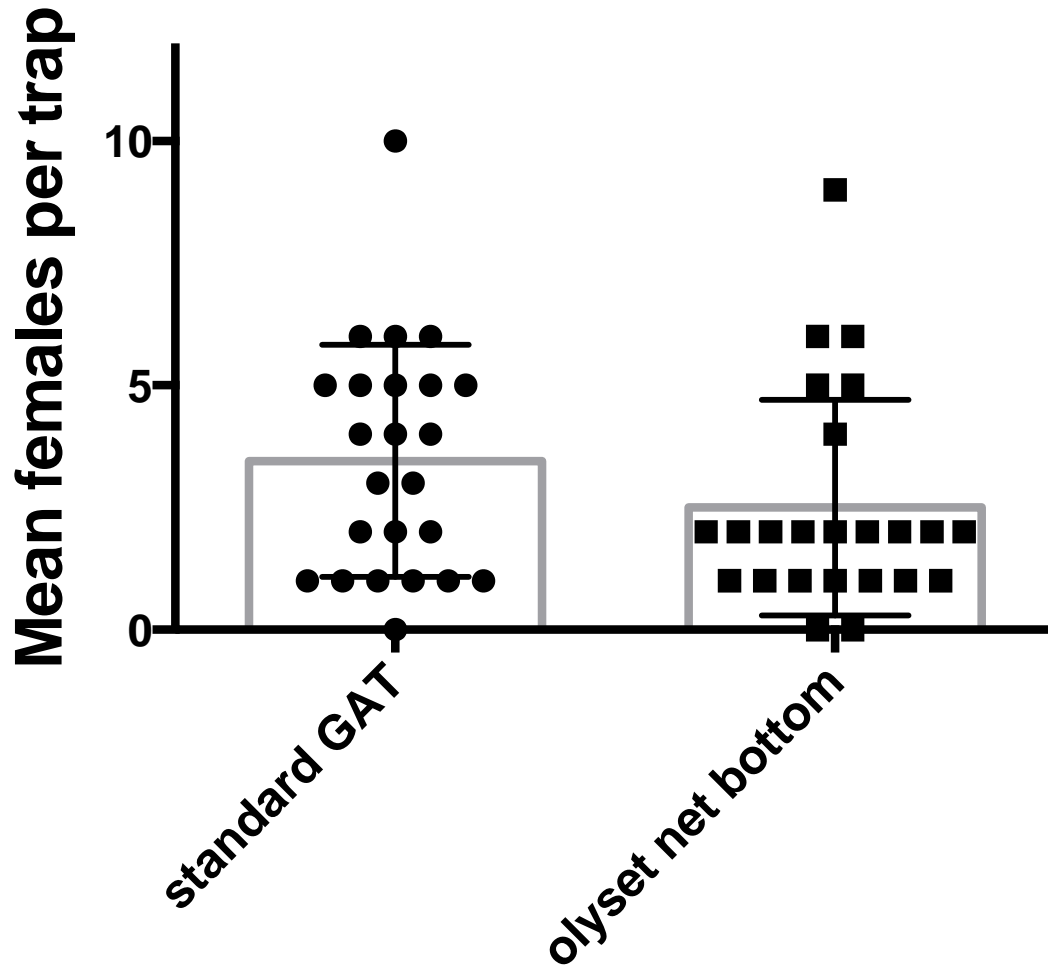


Field trials (latin square) of killing agents



While results not significantly different, the funnel bednet performed as well as the Mortein standard

Bednet only as bottom screen



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.