

Ted Bean, Trey English, Steve Molnar – Adapco, Inc.

Larvicides :

- Altosid – **SBG II**
- BTI (Aquabac , Fourstar BTI-CRG)
- Fourstar **45,90 and 180** day Briquettes
- Fourstar - BTI Briquettes
- Spheratax (*Bacillus sphaericus*) G or WSP
- BVA-2 larvicide/
pupacide oil
- **NEW Duplex BTI +
Altosid multiple brood**

Adulticides :

- **Dibrom/Trumpet- proven aerial product**
- **DeltaGard (no PBO, effective vs. resistant mosquitoes)**
- **Zenivex(no PBO, AquaZenivex is available**
- Permanone (permethrin)
- Fyfanon

Barriers

- Mavrik Perimeter
- Suspend Polyzone
- Wisdom (bifenthrin)

New from ADAPCO !

BIOGENTS' PRODUCTS: TRAPS



Biogents traps are the latest innovation in mosquito control traps, incorporate patented technology and were specifically developed for use against tiger mosquitoes.



BG-Sentinel
(active trap with ventilator)



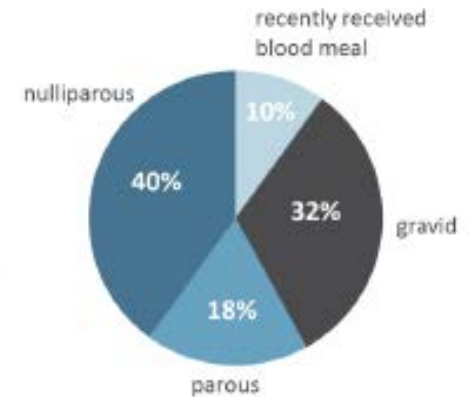
BG-GAT
(passive trap)

- ✓ Easy to handle and operate
- ✓ Environmentally friendly
- ✓ Does not use insecticides or pesticides
- ✓ Does not catch beneficial insects
- ✓ Safe for people and their pets
- ✓ Suited for use in the garden and in the house

Scientifically proven to be the best traps against tiger mosquitoes on the market!

What can they catch?

- *Aedes aegypti* & *Aedes albopictus* (tiger mosquitoes)
- *Aedes polynesiensis*
- *Culex quinquefasciatus* & *Culex pipiens* (house mosquitoes)



With the addition of CO₂:

- Additional mosquitoes such as *Ochlerotatus*, *Aedes vexans*, *Aedes cinereus*, *Anopheles* or *Coquillettidia*
- New World Sand Flies (*Phlebotominae*) and Black flies (*Simuliidae*)
- No-see-ums / Biting Midges (*Ceratopogonidae*)





More than 350 publications demonstrate the efficacy of this trap...

<https://www.zotero.org/groups/bg-sentinel/items>

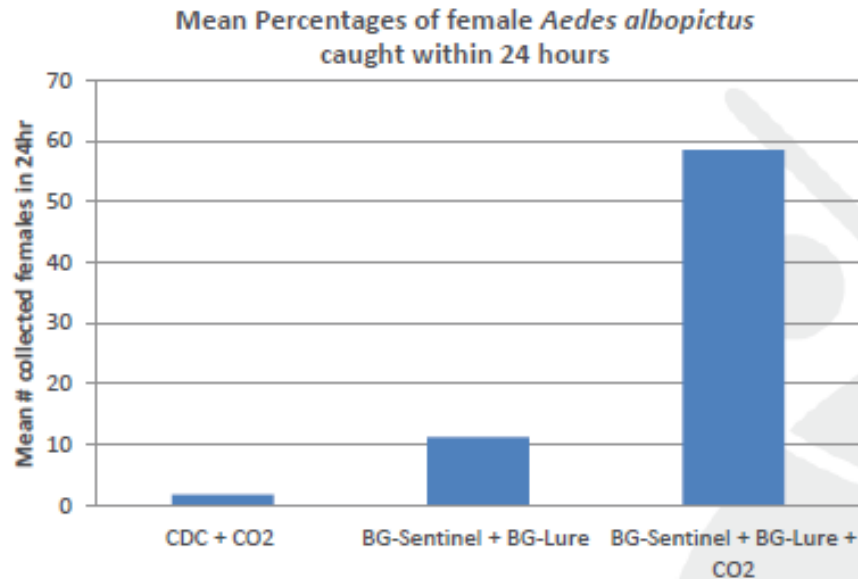
<http://www.bg-sentinel.com/>



How effective are Biogen traps vs. conventional traps?

Numerous independent scientific studies demonstrate that Biogen traps are the most effective trap for *Aedes aegypti* and the tiger mosquito *Aedes albopictus*, even without the addition of CO₂.

The following graph displays the results from a field comparison of traps (with and without CO₂) for collecting *Aedes albopictus* in North Virginia: **BG-Sentinel vs. CDC traps**



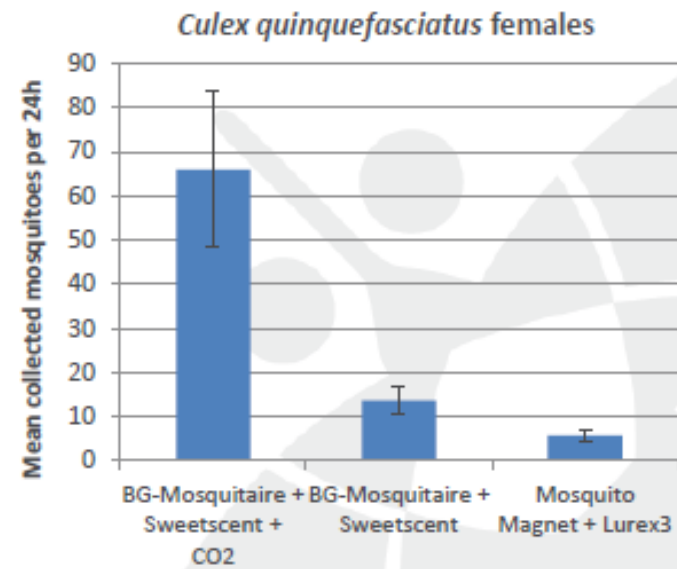
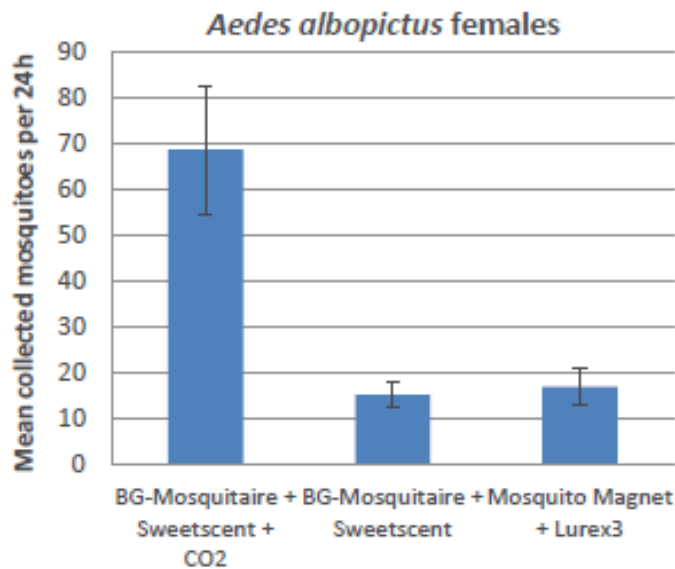
Meeraus W.H., Armistead J.S & Aria J.R. (2008): Field comparison of novel and gold standard traps for collecting *Aedes albopictus* in northern Virginia. *Journal of the American Mosquito Control Association* 24(2): 344-348.



EFFICACY DATA

How effective are Biogen traps vs. conventional traps?

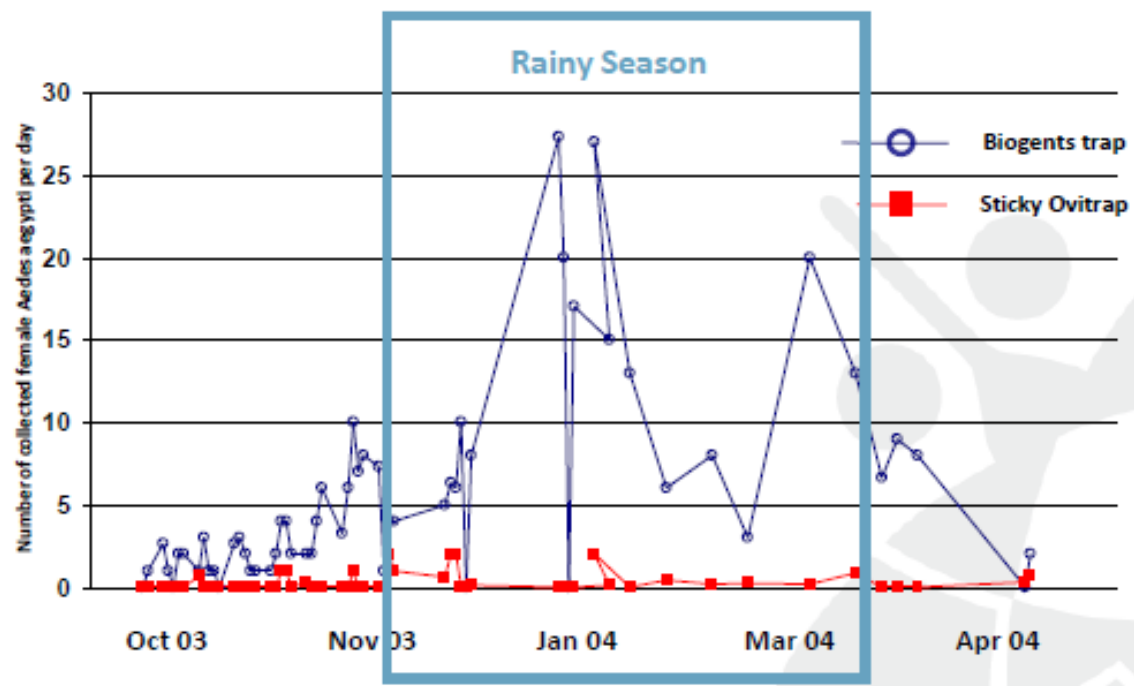
The following graphs display the results from a field comparison of traps (with and without CO₂) for collecting *Aedes aegypti* and *Culex quinquefasciatus* in Lake Charles, Louisiana: **BG-Sentinel vs. Mosquito Magnet® traps**



Willis, S. et al. (2015): Mosquito Trap Comparisons Using Biogen Lures. Louisiana Mosquito Control Association

How sensitive are Biogenets traps?

The following graph displays the results from a field comparison of traps for monitoring *Aedes aegypti* in Belo Horizonte, Brazil: **BG-Sentinel vs. Sticky Ovitrap**



Eiras, A.. et al. (Data not published): Personal Communicati

BG-GAT (Gravid *Aedes* Trap) – PASSIVE TRAP

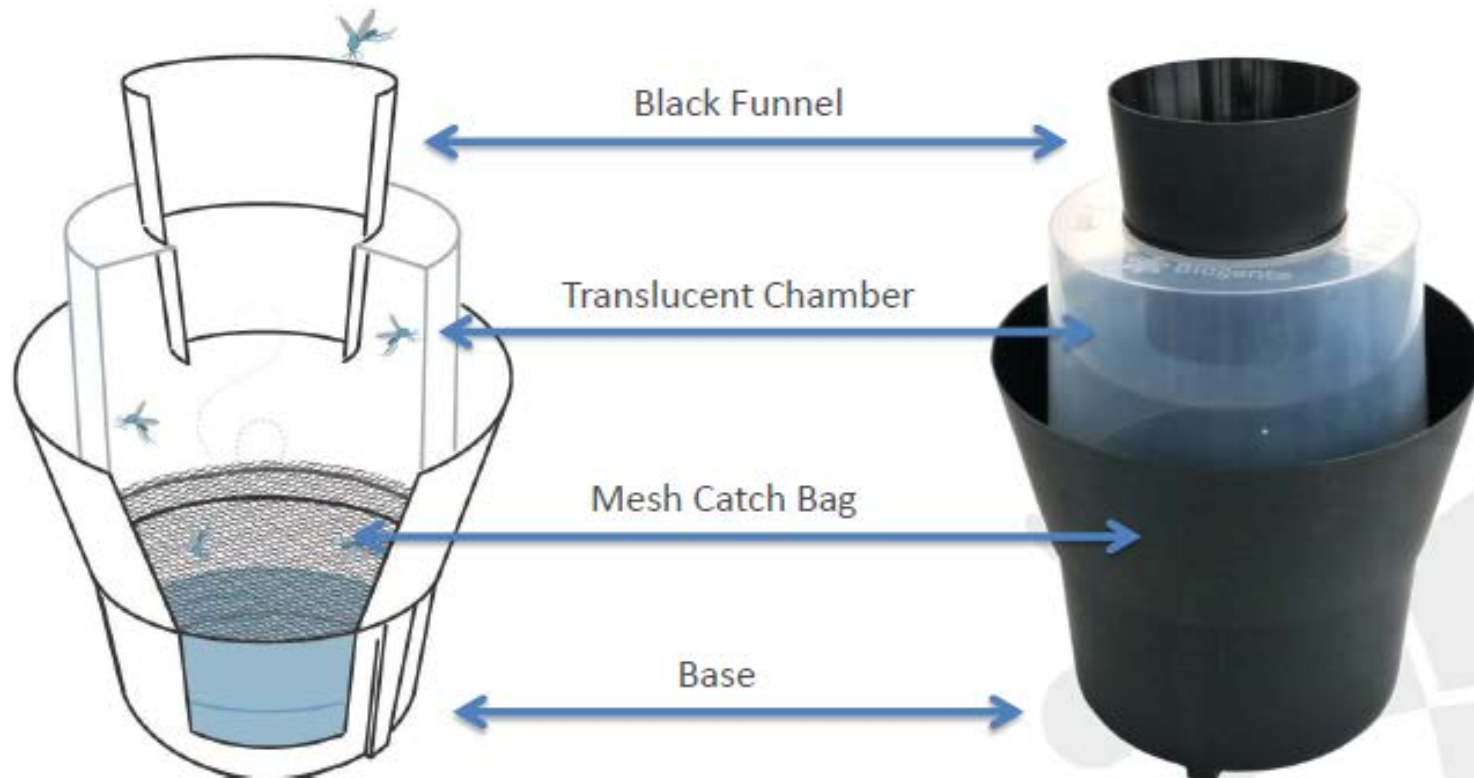


Biogents' passive gravid *Aedes* trap, the BG-GAT, attracts female *Aedes* mosquitoes with water and ovipositioning cues and traps them in a transparent chamber.



Specifications	End-User Price
Passive! No power supply needed and no additional CO ₂ is needed	Available in multiples of 12 Starting @ 19.00 EUR
Environmentally friendly, resistance breaking	
Low maintenance and easy to set-up	
Adult mosquitoes are caught and not damaged	
An affordable addition to the Biogents suction traps	

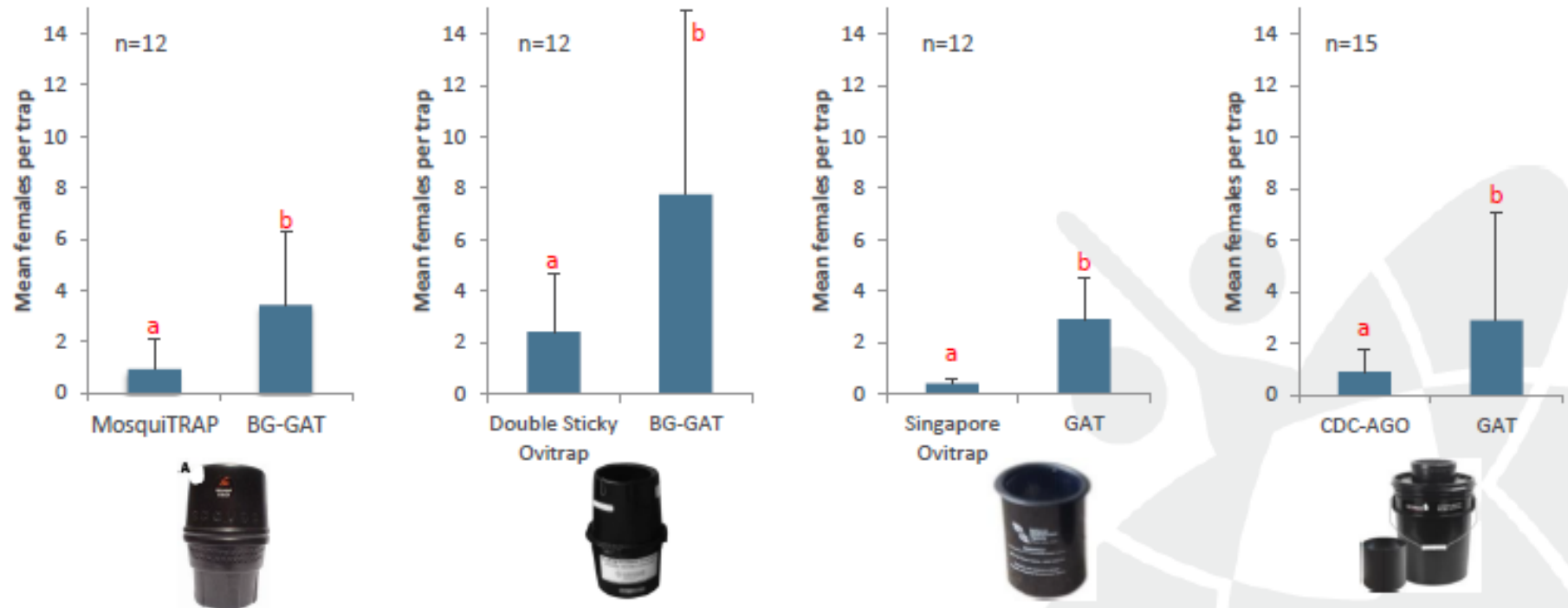
BG-GAT (Gravid *Aedes* Trap) – PASSIVE TRAP



Female mosquitoes are attracted by water and oviposition cues and enter the transparent chamber where they are contaminated by killing agents.

Field comparisons of the BG-GAT to conventional traps in Australia with *Ae. aegypti*

Captured female *Ae. aegypti* per trap per week



BIOGENTS' 2 + 1 CONCEPT

Using various trap types to control *Aedes*

2 BG-GAT
(Passive Traps)



+

1 BG-Bowl
(Suction Traps)



- ✓ Cost effective (~\$50)
- ✓ Easy to handle and operate
- ✓ Environmentally friendly
- ✓ Does not use insecticides or pesticides = sustainable
- ✓ 3 year life time warranty

Concept: Continuous use leads to increasing vector mortality, reduction of human biting rates and disease transmission.

Mass trapping together with an initial source reduction could prove to be an effective large-scale vector control method for *Aedes aegypti* and *Aedes albopictus*.

NEW !!!

BG-COUNTER



The BG-Counter is a key component of an innovative and autonomous mosquito trap station:

- It differentiates mosquitoes from other insects and counts them
- It then wirelessly transmits the results to a cloud server
- Via the web application you can manage the mosquito traps and get new insights into daily activity patterns, adult density indices, population dynamics and effectiveness of your control activities



Jay Kiser – 8:40 am Thursday !



The development of the BG-Counter was partly supported by the EU's 7th Framework Programme (grant 306105, acronym MCD), the continuation of the development is being supported by the EU's Horizon 2020 programme (grant 691131, acronym REMOSIS)

BG-COUNTER

BG-Counter station with BG-Sentinel 2 trap, CO₂ tank, battery, stand and rain shield. The station runs on solar power.



BG-Counter



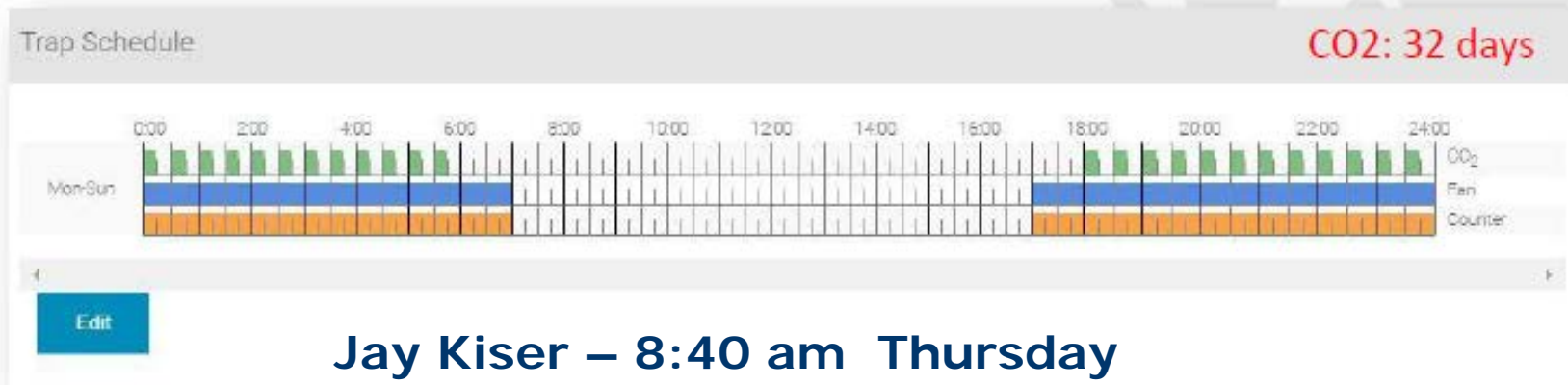
Top View



(solar panel not displayed here)

REMOTE CONTROL

- Switch on and off the ventilator, BG-Counter and CO2



New in 2016 from ADAPCO !

- Maruyama MD300 duster



- Maruyama MD181 mister + ULV attachment
 - Light weight
 - Sub 25 VMD



Looking forward to 2017 !

Ted Bean - VA, MD, DE, PA,
WV, NJ, NY, MA, RI, NH, ME, CT, VT

Trey English –
GA, SC



Steve Molnar –
AL, KY, NC, TN
FL Panhandle



Creating value, growing together