ECO1 ***for environmental sustainability***

Culture and application of *Bacillus thuringiensis israelensis on* mosquito larvae

Experimental Report

ECO1 *for* Sustainability.
271 Cedar Court, Lamaha Gardens.
info@eco-1.org
www.eco-1.org

Bti culture preparation

Methodology

Step 1
Insert cotton bud containing Bti sample into prepared hole in a mature coconut.

Step 2
Seal with sterile cotton wool and melted candle wax.

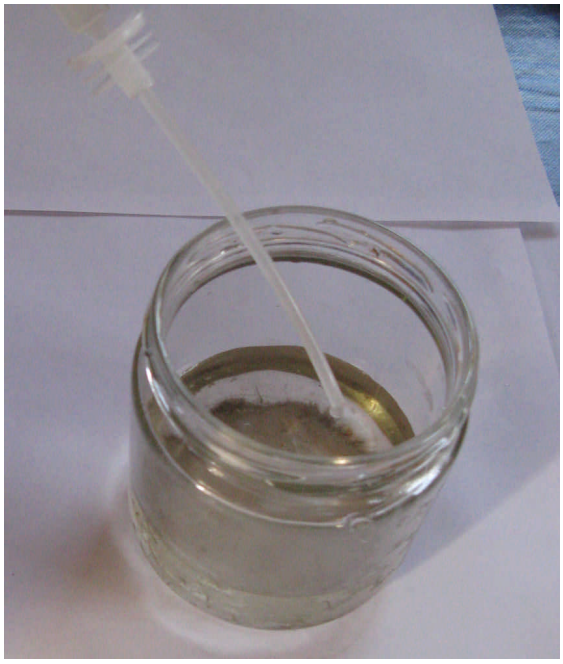
Step 3
Shake twice a day for 96 hours.

Step 4
Extract liquid (our culture was frozen for approximately 2 months before use on larvae).

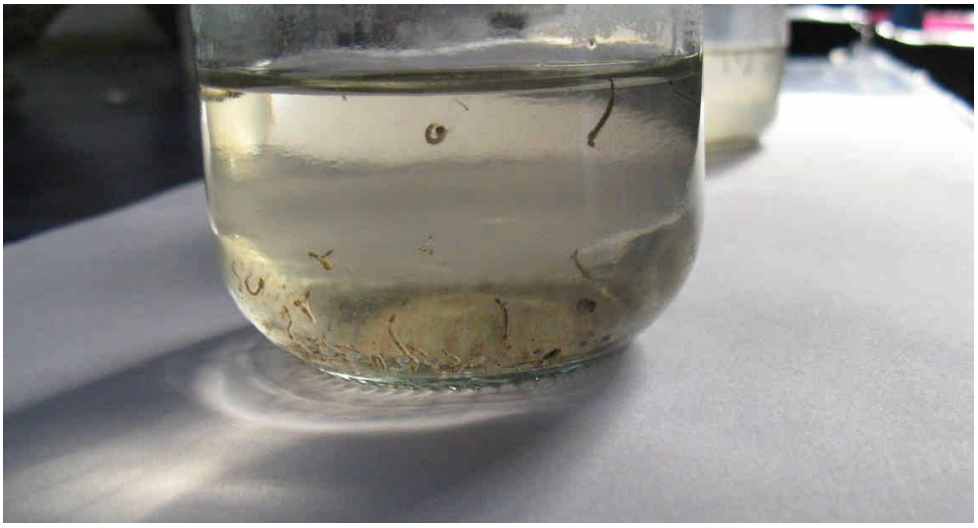
Application of Bti to mosquito larvae

Methodology
Step 1
Collect samples of mosquito larvae

Step 2
2ml of Bti culture (as extracted from coconut) is applied to sample containing target population

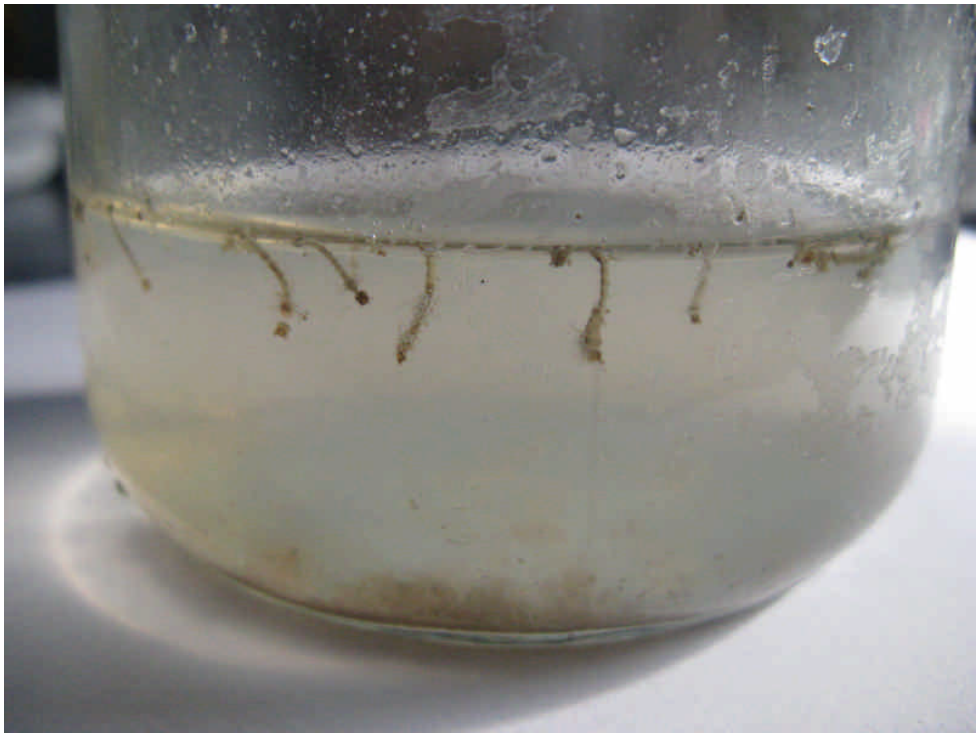


Target population with control population sample in background



Step 3
Observe:

Within 24 hours 70% of target population is noted dead. 99% is dead after 48 hours, while the control population remained at its previous count.



Above: Mostly dead target population

Note:
Two concentrations of Bti culture where used in the experiment:

2ml of the culture was applied and it was observed that 70% of the larvae had died after 24 hrs, 99% after 24 after 48; and 0.2 ml of culture was also applied to a different larvae population where 50% died after 24 hours and 99% after 48 hours.

Conclusion
Bti can be successfully cultured locally in coconut is highly effective in the elimination of mosquito larvae.

Further information:
Bti kits were supplied by a project under the Canadian International Development Agency (CIDA), GENCAPD, and consisted of cotton swabs containing the bacteria, as well as sterile cotton pads for sealing the coconuts.