

# Beneficial Use of Light Traps

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## INTRODUCTION:

What are light traps? Light traps take advantage of the fact that nocturnal insects are attracted to UV light. An insect flies to the UV light emitted by the trap, and falls into a 36" cubed screened cage. Light traps are designed to attract insects of all types, and their use is constantly increasing around the world. Light traps play an important role in some pest management strategies. They have proven to be effective as a non pesticide tool for reducing and suppressing moth pests, such as adults of tomato pinworm and cabbage loopers.

Black light traps have been shown to be effective at trapping many pests which attack the fruits of agricultural crops. They can also be used in determining the flight habits of moths that are not attracted to baits, such as the peach twig borer and navel orangeworm. The black light traps gives a farmer an accurate means of determining when to scout and spray for moths.

## MATERIALS AND METHODS:

There are five main parts to the light trap: 1) the power regulator, 2) the photocell, 3) the 36" cubed screen, Cage, 4) a UV bulb, 5) and a 12volt DC marine battery. The light trap is what the bulb is attached to by the current supports. The trap has metal plates resembling a plus sign, with the light bulb in the center. The regulator is a small rectangular box that converts the power into a form that the light can accept. A photocell is what detects sunlight and darkness. It controls the light so that when its dark it activates power and when its daytime it deactivates power. The 36" cube screen provides a one-way entry inside the trap to prohibit the insects from exiting out of it. Last but not least, the 12volt battery. This is indeed the heart of the simply because without it power isn't possible.



## RESULTS AND DISCUSSION:

Traps are checked for moths and sugarcane beetles twice a week. When the contents from the light traps are analyzed, a variety of different insects are tallied according to what is captured. Majority of the insects that are caught in the light traps are *Helicoverpa zea*, *Heliothis virescens*, or sugarcane beetles. They range anywhere from 10 to 20 per trap including dead moths. These moths are collected and brought back to the laboratory for use in experiments.

## REFERENCES:

Albert W. Hartstack, Jr., J.P. Hollingsworth, D.A. Lingquist. Agricultural Research Service, USDA, College Station, Texas.

[http://www.biology.ualberta.ca/uasm/alg/downloads/light\\_trap\\_02](http://www.biology.ualberta.ca/uasm/alg/downloads/light_trap_02)

<http://ucce.ucdavis.edu/files/repositoryfiles/cal602p12-64969>

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