

US EPA ARCHIVE DOCUMENT

Integrated Mosquito Management

What It Is...What It Isn't

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Integrated Mosquito Management

What It Is

Knowledge-based

Surveillance-driven

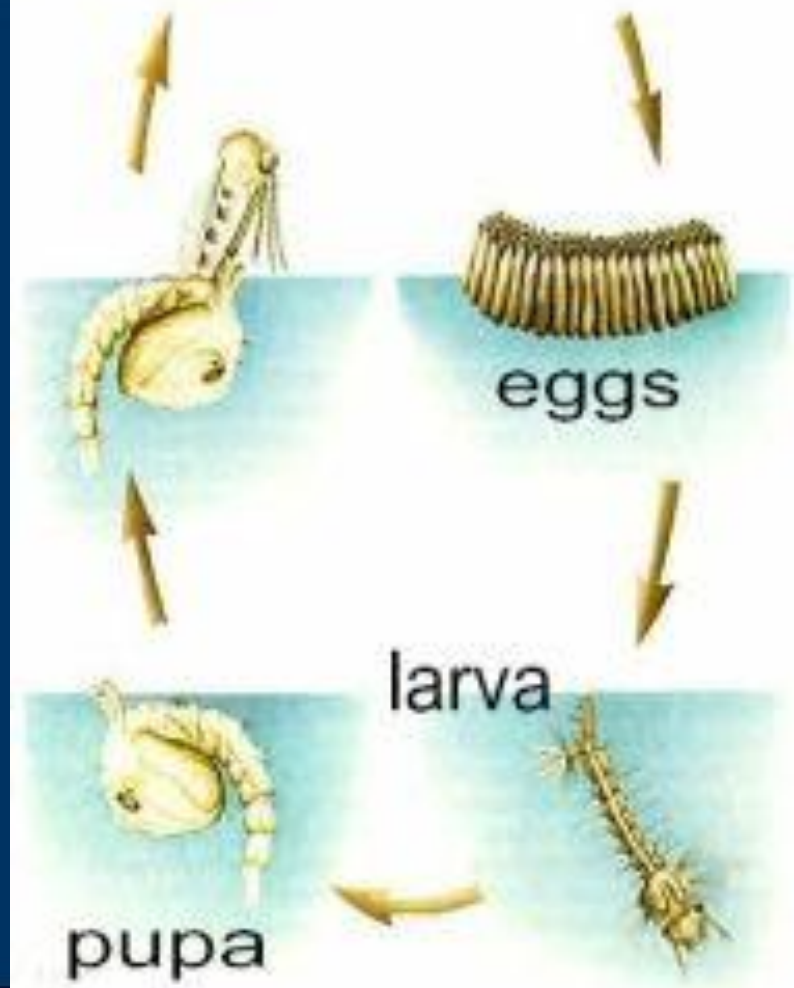
Resource-limited

Elements: **Public Education/Community Involvement**
 Surveillance
 Source reduction
 Larval Control
 Adult Control





adult



eggs

larva

pupa



Reproductive Capabilities

- 4 Generations at 16 weeks
 - 25% Mortality 49,843,353,164
 - 50% Mortality 12,974,633,789
 - 75% Mortality 810,914,612







Public Education/Community Involvement



Surveillance - Larvae





Source Reduction/Modification







Larval Control - Predators



Clint McCullough (c)1998





6 14 '99

Larvicides

- **Microbials**

- *Bacillus thuringiensis israeliensis*
- *Bacillus sphaericus*
- Spinosad

- **Chemical**

- Juvenile Hormone Analogs
- Monomolecular Films
- Oils
- Temephos



Adult Survey





Adulticides

- **Residual Barriers**
 - **Nontargets**
- **Thermal Fogs**
 - **Resource intensive**
- **Ultra Low Volume**
 - **Calibration/maintenance**
 - **Certification**



Ultra Low Volume



ULV DROPLET SIZE

THE VOLUME OF **ONE BB SHOT**

WOULD MAKE;



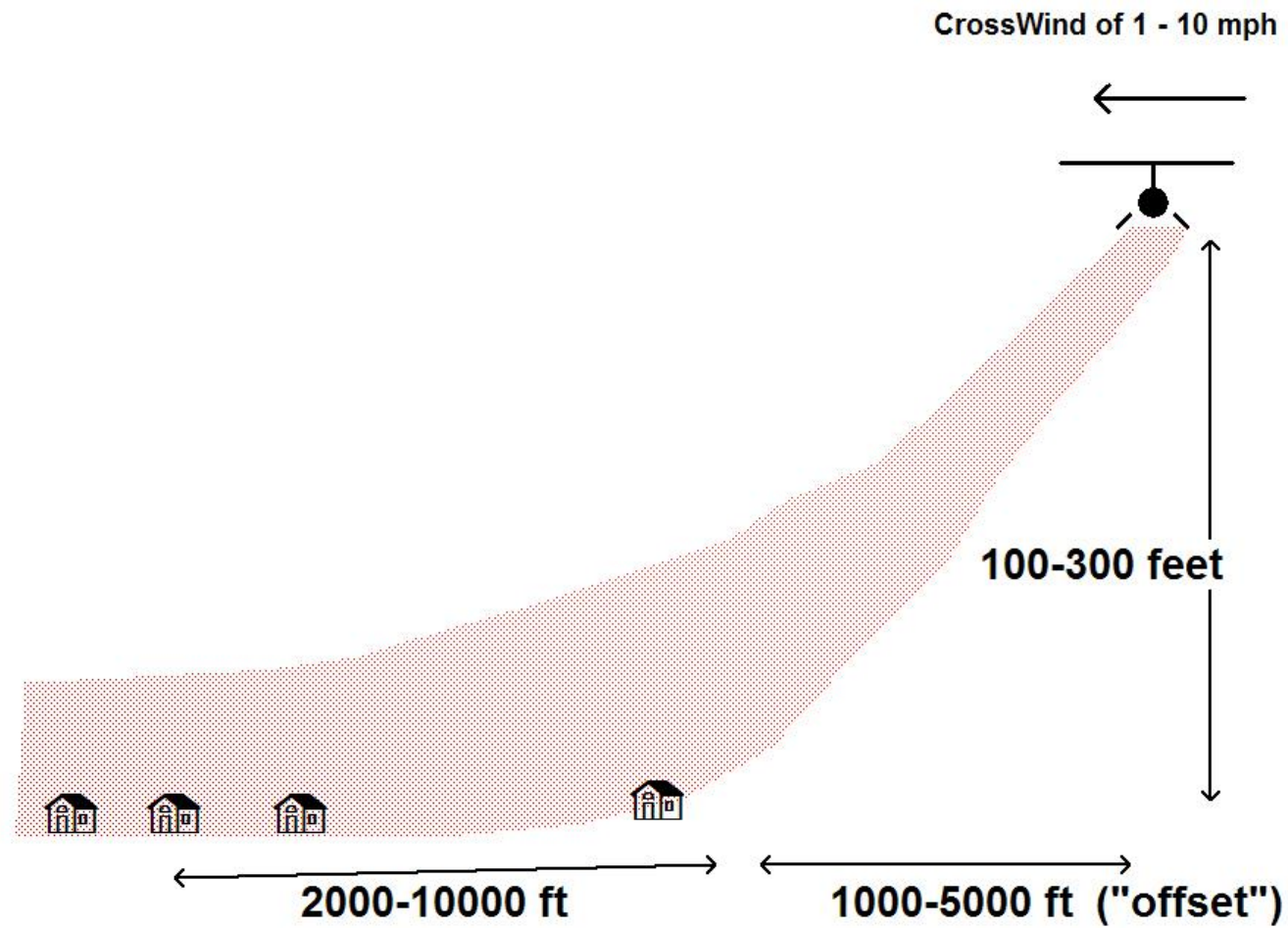
9,761,000	20 μm	DROPLETS
15,079,991	17 μm	DROPLETS
74,088,000	10 μm	DROPLETS

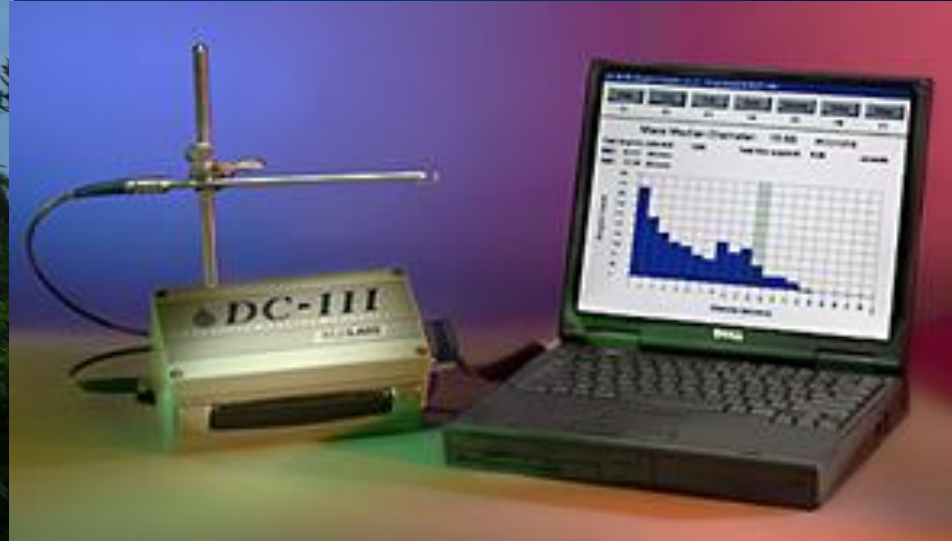
TIME REQUIRED FOR A DROPLET OF MALATHION TO FALL 10 FEET*

Droplet Size (Microns)	Time in Minutes	Downwind Drift (FT)
10	12.5	2,200
20	3.2	569
30	1.4	252
50	0.5	94
80	0.4	64



***In 2 mph wind, assuming gravity only**





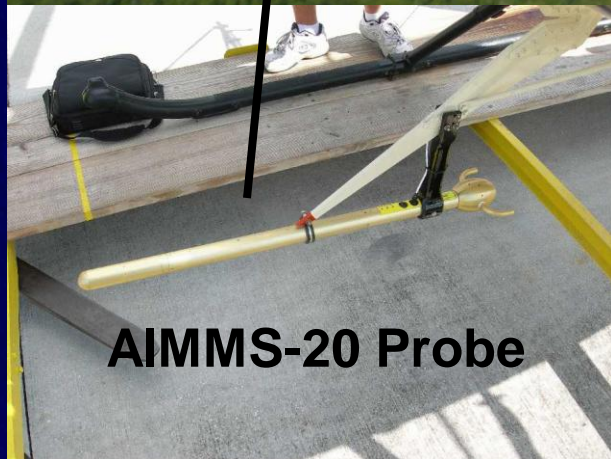
AIMMS-20 Onboard Meteorological Package



Tail GPS Antenna



Front GPS Antenna



AIMMS-20 Probe



**Processor and
Inertial Unit**



**Wingman GPS
System**

Integrated Mosquito Management

What It Is

- Public Education
- Community Involvement
- Surveillance
- Source reduction
- Larval Control
- Adult Control



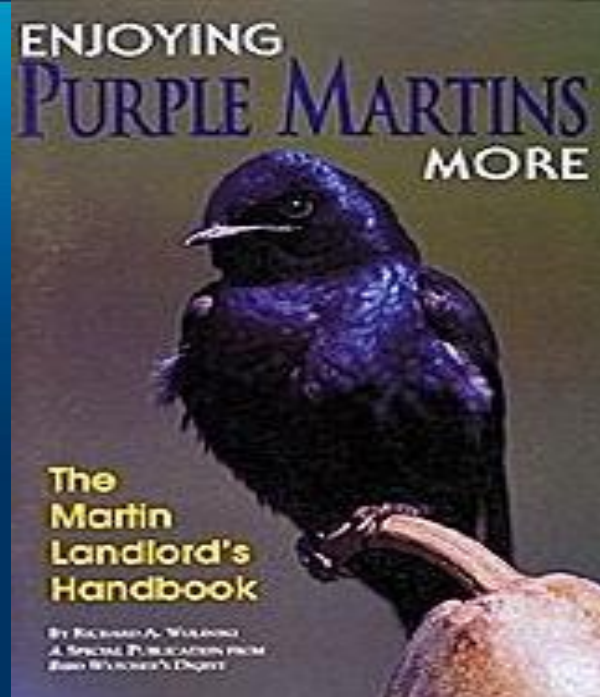
Integrated Mosquito Management

What It Is Not

- **Does not seek eradication**
- **Pesticide Averse**
- **Unless circumstances dictate, sole reliance on:**
 - **Source Reduction**
 - **Biorational Larvicides**
 - **Chemical larvicides/adulticides**
 - **Traps**
 - **Repellents**
 - **Natural Predators**







Integrated Mosquito Management is a comprehensive mosquito prevention/control strategy that utilizes available mosquito control methods singly or in combination to exploit the known vulnerabilities of mosquitoes in order to reduce their numbers to tolerable levels while maintaining a quality environment.

