

Evaluation of Mosquiron 0.12P for the control of mosquito larvae in Michigan

Tom R. Wilmot

**Midland County Mosquito Control
Sanford, MI**





TUMAINI (CRT) INC.
CONTROLLED RELEASE TECHNOLOGIES
Mosquito Control Solutions



Labels:

MOSQUIRON® 0.12CRD Novaluron
Insecticide

MOSQUIRON® 0.12P Novaluron
Insecticide

MSDS:



Mosquiron®

**A Controlled Release Formulation of the Insect Growth Regulator Novaluron
for Control of Mosquito Larvae**

Product Attributes

- Non-dust, odour free, requires no mixing
- Dispersion throughout the mosquito larval habitats
- Available in different shapes and sizes for different larval habitats
- Available in packages suitable for Commercial/Professional and Domestic users



Patented Formulation

MOSQUIRON® 0.12P

Novaluron Insecticide

A Controlled Release Formulation of the Insect Growth Regulator Novaluron
for Control of Mosquito Larvae

ACTIVE INGREDIENT:

Novaluron: N-[[[3-chloro-4-[1,1,2-trifluoro-2-(trifluoromethoxy)ethoxy]phenyl]amino]carbonyl]
-2,6- difluorobenzamide

% BY WT

0.12%

INERT INGREDIENTS:

99.88%

TOTAL

100.00%

KEEP OUT OF REACH OF CHILDREN
CAUTION

EPA Reg. No. 66222-231-89382

EPA Est. 89593-ITA-001

NET CONTENTS: 10 lbs



Study Site



Methods

Application Rates for Mosquiron® 0.12P Novaluron Insecticide

Water Volume (Gal)	Water Volume (Liters)	Number of Pellets (Low organic matter)	Number of Pellets (High organic matter content)	Application rate (grams)
2.65 or less	10 or less	1	2	1 - 2
13.2	50	5	10	5 - 10
66	250	25	50	25 - 50
132	500	100	200	100 - 200
330	1250	250	500	250 - 500

Note: RE-TREAT EVERY 90 DAYS



Methods



1 pellet, $N = 8$

2 pellet, $N = 4$

Control, $N = 4$

Methods

- 1 dip sample:
S, L, P
- Collect all pupae



Methods



Results

Mosquito species identified

Culex restuans,
Aedes japonicus

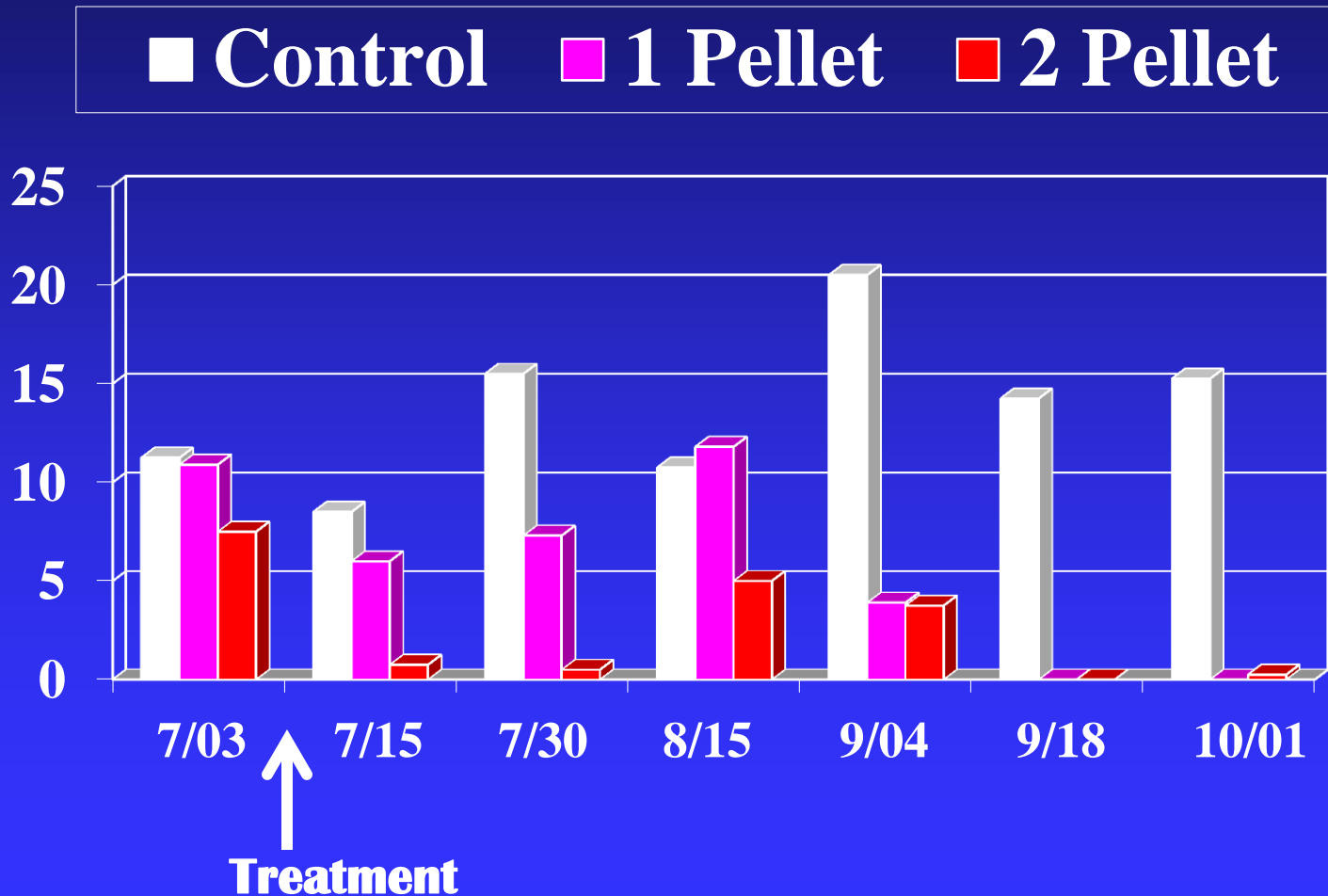
Culex pipiens

Aedes triseriatus, Anopheles punctipennis



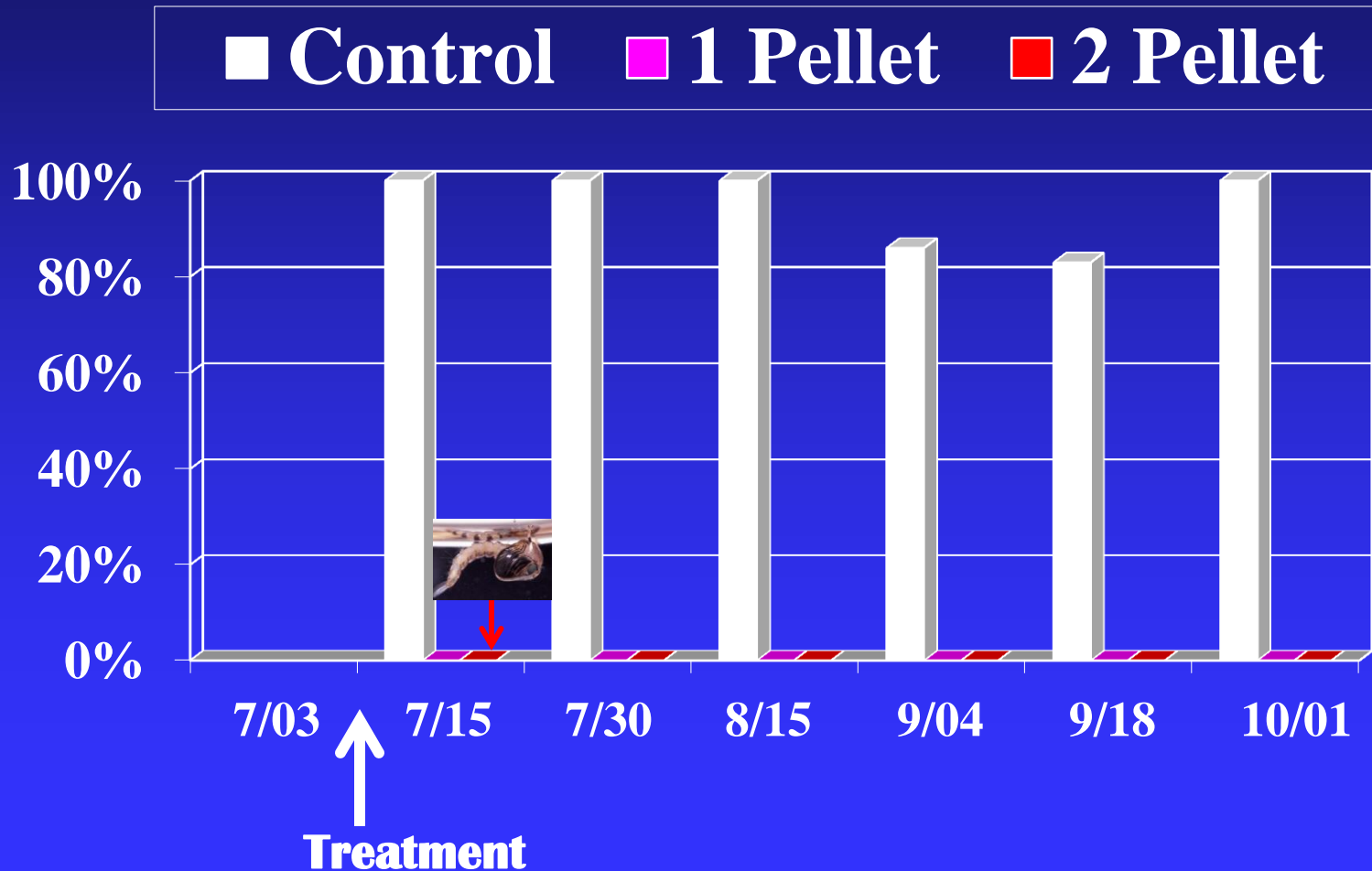
Results

Number of Larvae (1 dip sample)



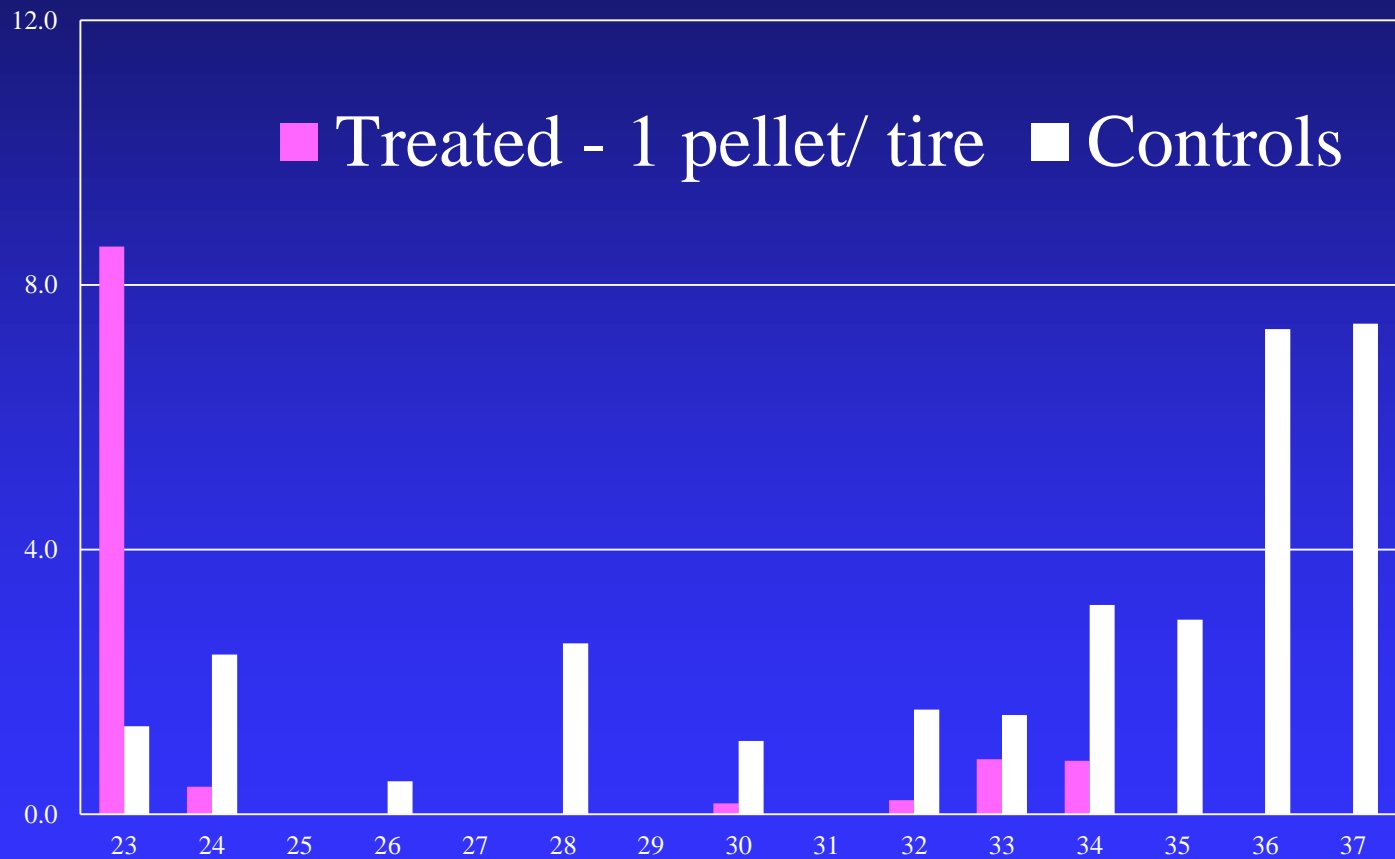
Results

Pupae - Percent Emergence



Results – SCMAC

Number of Larvae (L3/L4)



Discussion

- **Non-specificity;**
limit to habitat that can be treated
- **Growth Regulator;**
More difficult to assess efficacy

Discussion

- 100% inhibition of adult emergence for 3 months (Midland County)
- Simple to use formulation
- Different mode of action than most larvicides – resistance management

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