

Fuller Rose Beetle Pesticide Efficacy

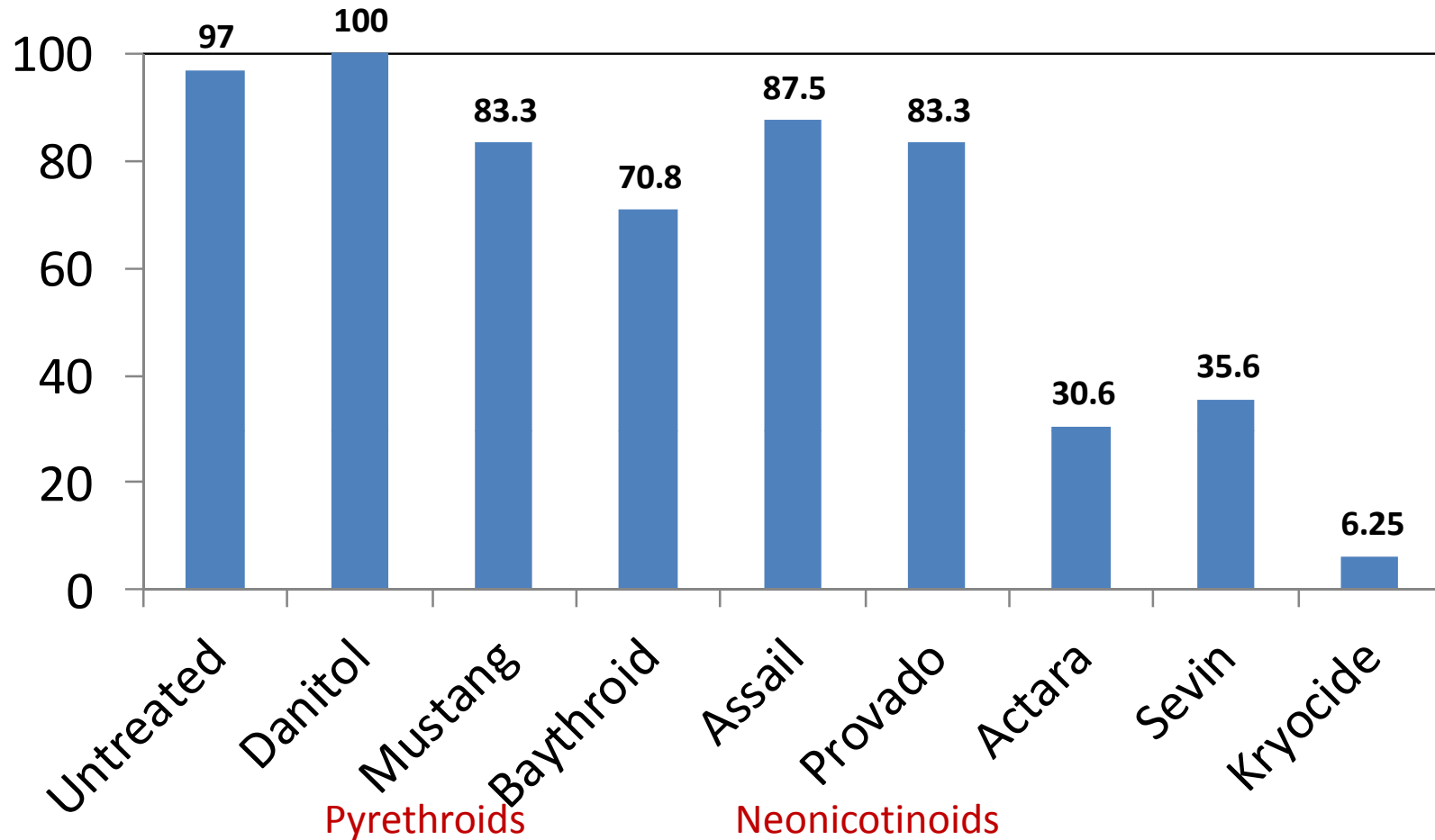


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Fuller rose beetle adult bioassay Plants sprayed with insecticides and adults placed on plants. Two plants/container, 3 containers per treatment. Adult survival and percentage leaf feeding after 2 weeks.



% survival of adult beetles

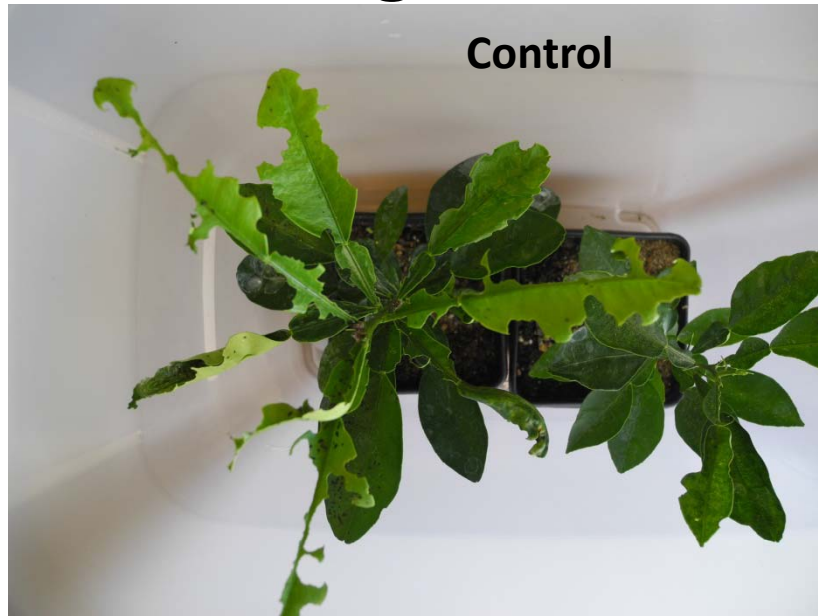


Mixed in 500 gpa

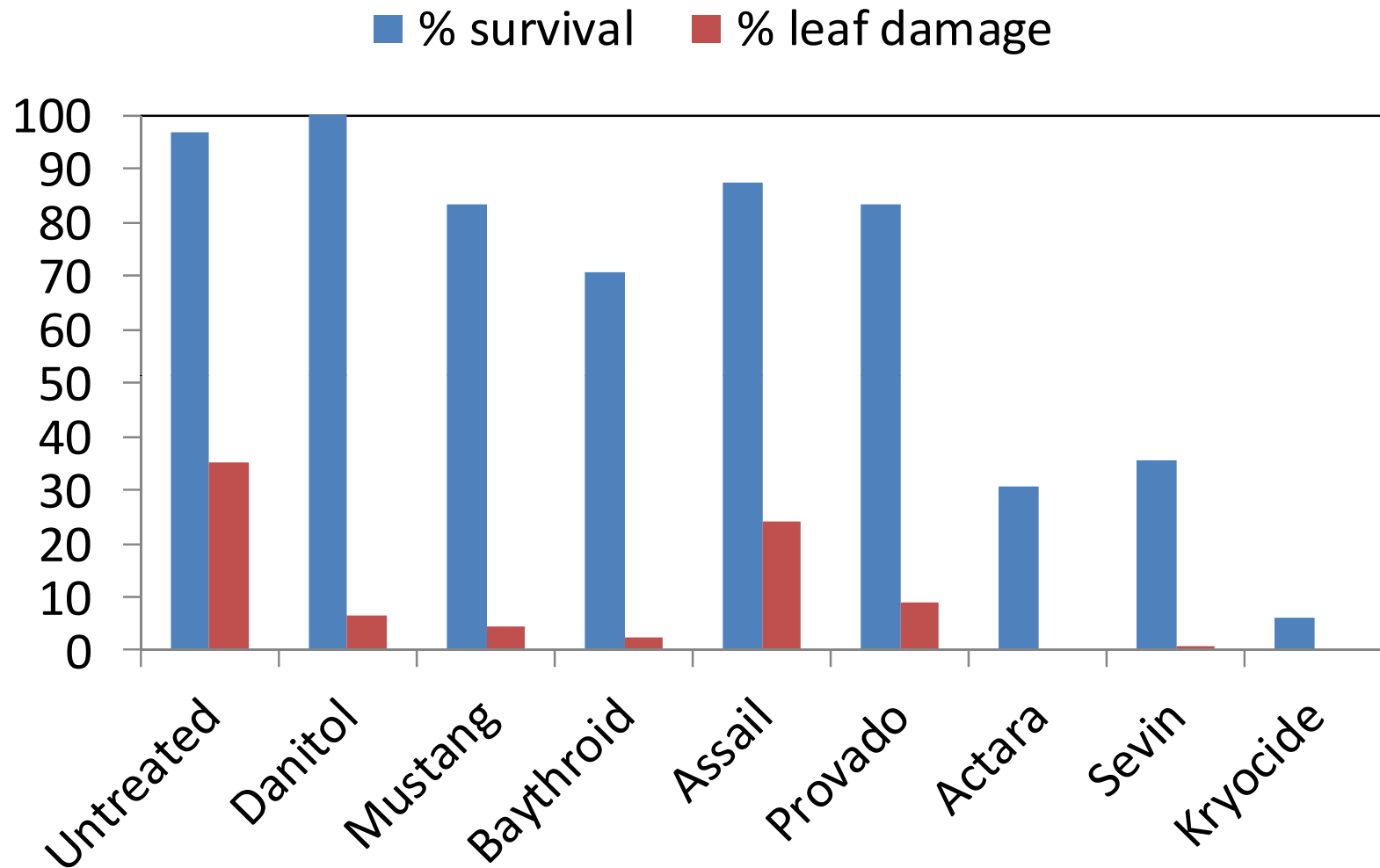
Danitol 2.4 EC - 23.3 oz
Assail 30 SG - 10 oz
Mustang - 4.3 oz
Provado 1.6 F - 20 oz

Baythroid XL - 6.4 oz
Actara 25 WG - 5.5 oz
Sevin XLR - 5 qts
Kryocide – 20 lbs

Leaf Feeding



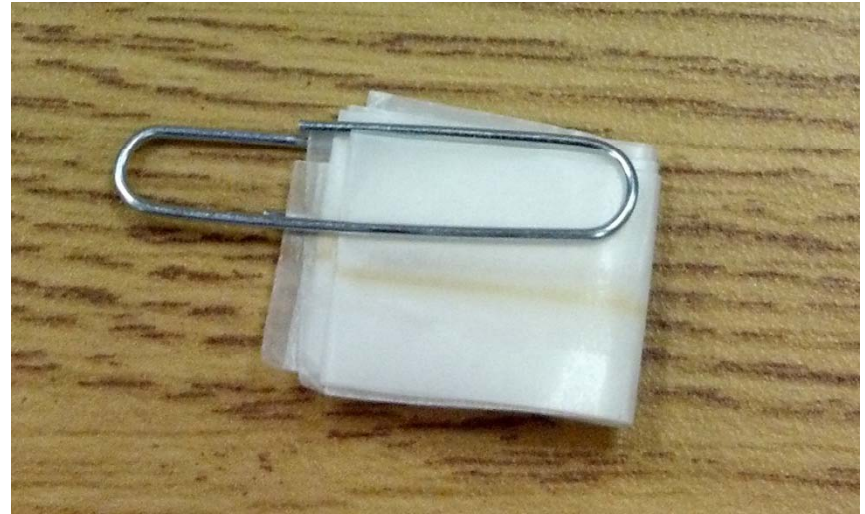
Adult beetle survival and leaf feeding



% heavy leaf damage where at least 25% of the leaf was nibbled away

Goal: Develop a dip tank treatment to kill eggs

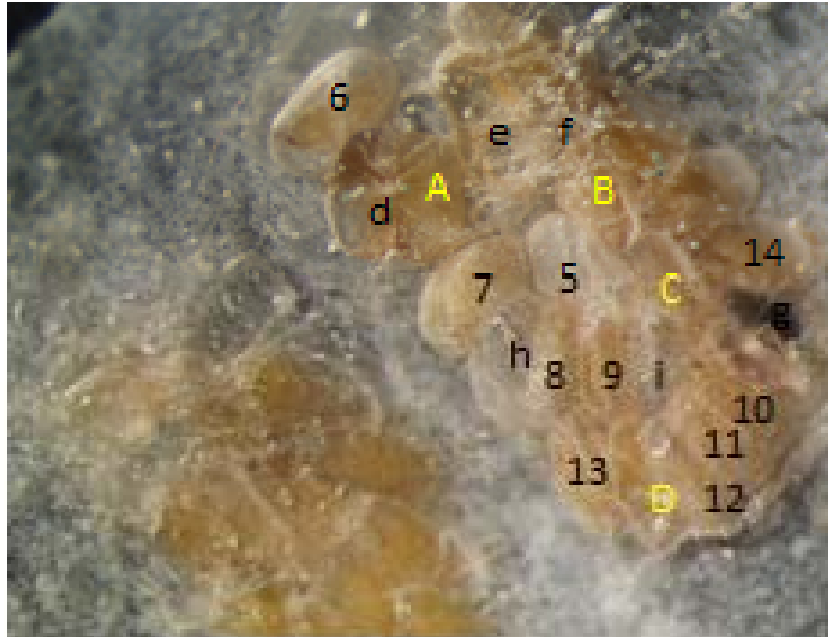
Fuller rose beetle egg testing



- **Treat the eggs with a fungicide (2% potassium sorbate for 15 minutes)**
- **Dip the eggs in various concentrations of insect growth regulators with the goal of preventing egg hatch**

Micromite 80 WGS
Esteem 0.86 EC
Applaud 70 DF

Micromite 100 ppm, Spray Aide 0.25%, 26 days

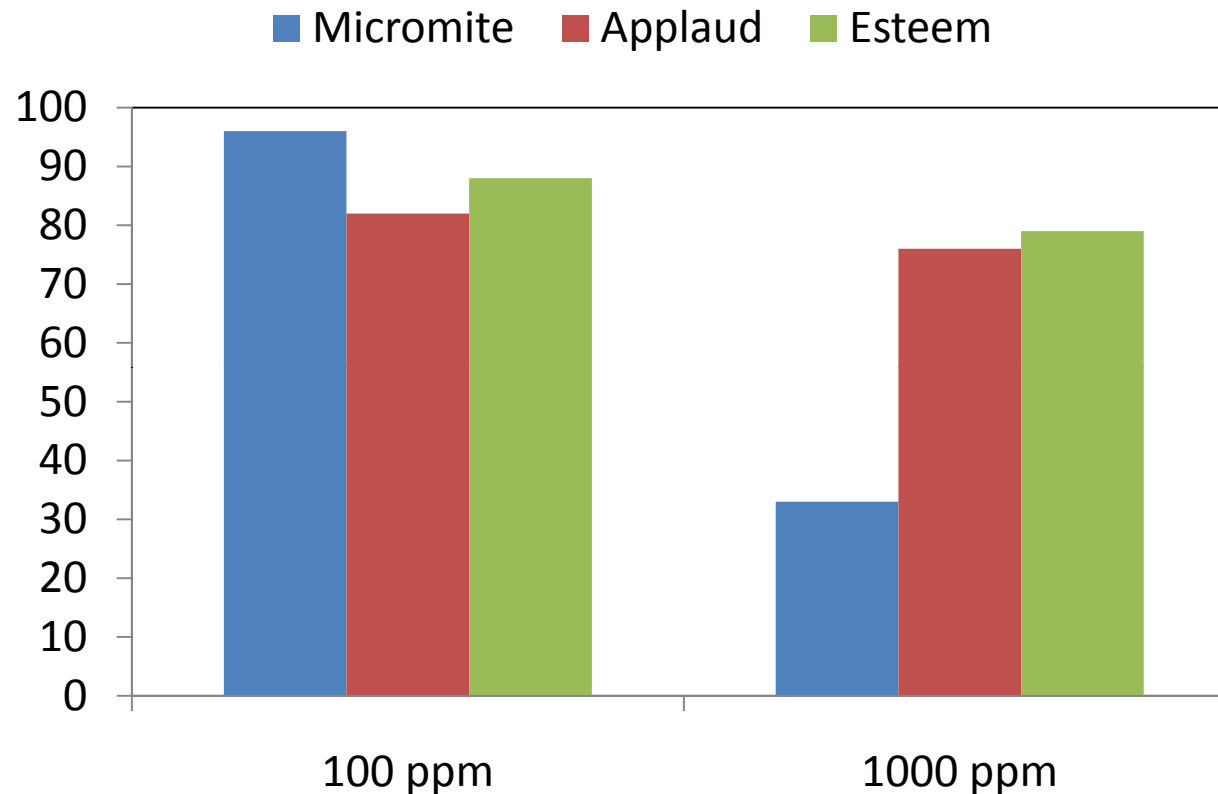


1-5: hatched eggs
6-14: larvae moving
A-D: dried out, unhatched
a-i: moldy



% Egg Survival when eggs are dipped in insect growth regulators

Field rates in 500 gpa
Micromite: 75 ppm
Applaud: 480 ppm
Esteem: 26 ppm



**Combine pesticide with 0.25% Spray Aide (1 qt in 100 gal),
Soak 2-3 minutes, wait 3 weeks for eggs to hatch**

Previous Tests of Adult Beetles (mortality)

- **Neonicotinoid: *Actara, Provado, Assail**
- **Pyrethroid: Danitol, Mustang, Baythroid**
- **Carbamate: *Sevin**
- **Stomach poison: *Kryocide/Cryolite**

Future Tests of Adult Beetles (mortality & ability to lay eggs)

- **Organophosphate: Malathion**
- **Carbamate: Carzol, Lannate**
- **Insect growth regulator (stop egg laying): Micromite, Esteem**

Future Tests of larvae in the soil

- **Systemic neonicotinoids: Admire, Platinum**