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

Untreated: 97%
Danitol: 100%
Mustang: 83.3%
Baythroid: 70.8%
Assail: 87.5%
Provado: 83.3%
Actara: 30.6%
Sevin: 35.6%
Kryocide: 6.25%

Mixed in 500 gpa

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

Neonicotinoids:
- Baythroid XL - 6.4 oz
- Actara 25 WG - 5.5 oz
- Sevin XLR - 5 qts
- Kryocide - 20 lbs
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 mintes)
- 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