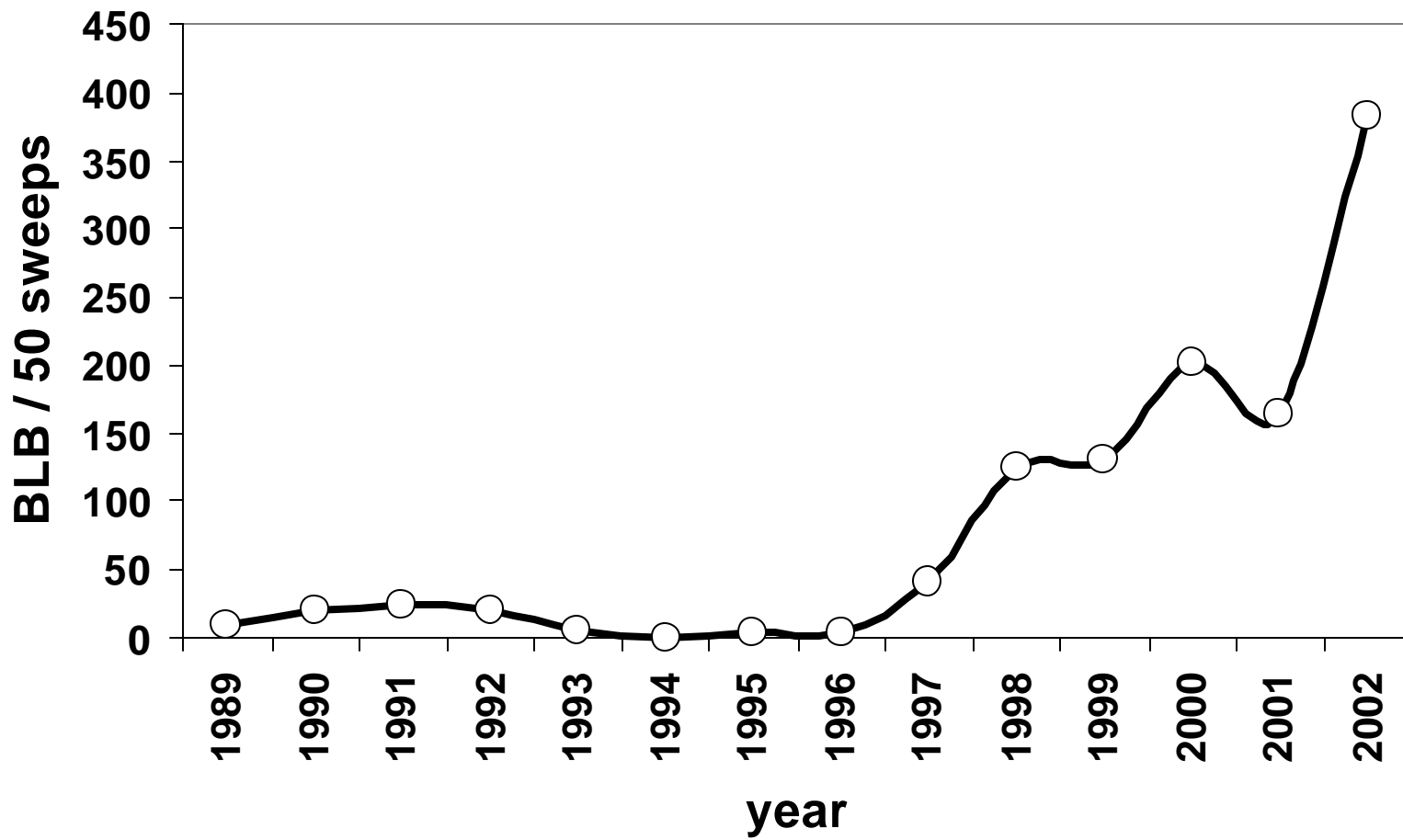


Marlin E. Rice
Department of Entomology
Iowa State University

Second generation bean leaf beetle abundance Ames, IA (1989-2002)



Cruiser[®]

- Syngenta Crop Protection
- thiamethoxam
- neonicotinoid class of chemistry
- systemic seed treatment
- interferes with nervous system receptors
- not yet labeled for soybeans (2004?)

⇐Cruiser⇒

⇐untreated check⇒

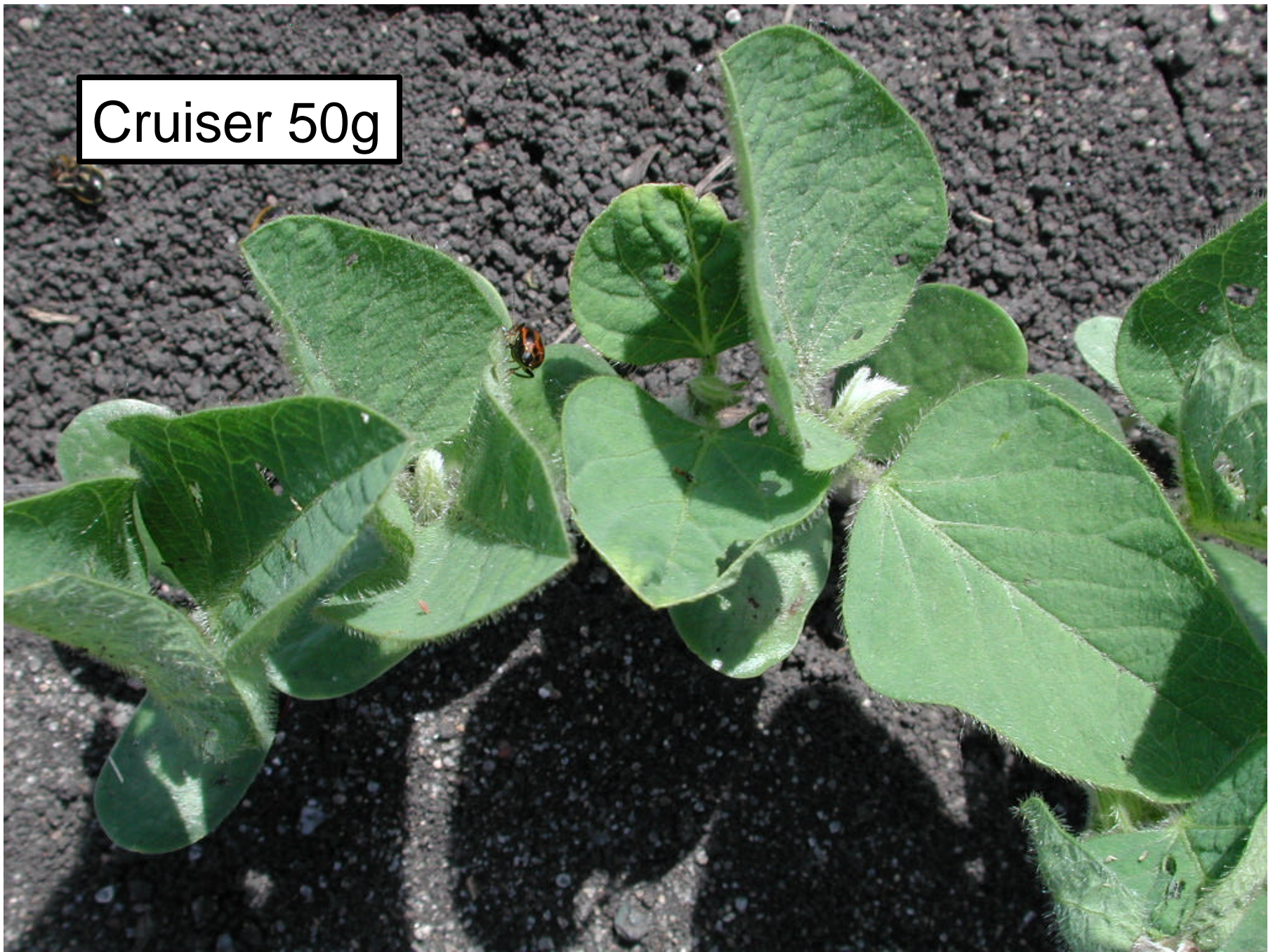
May 24

June 15



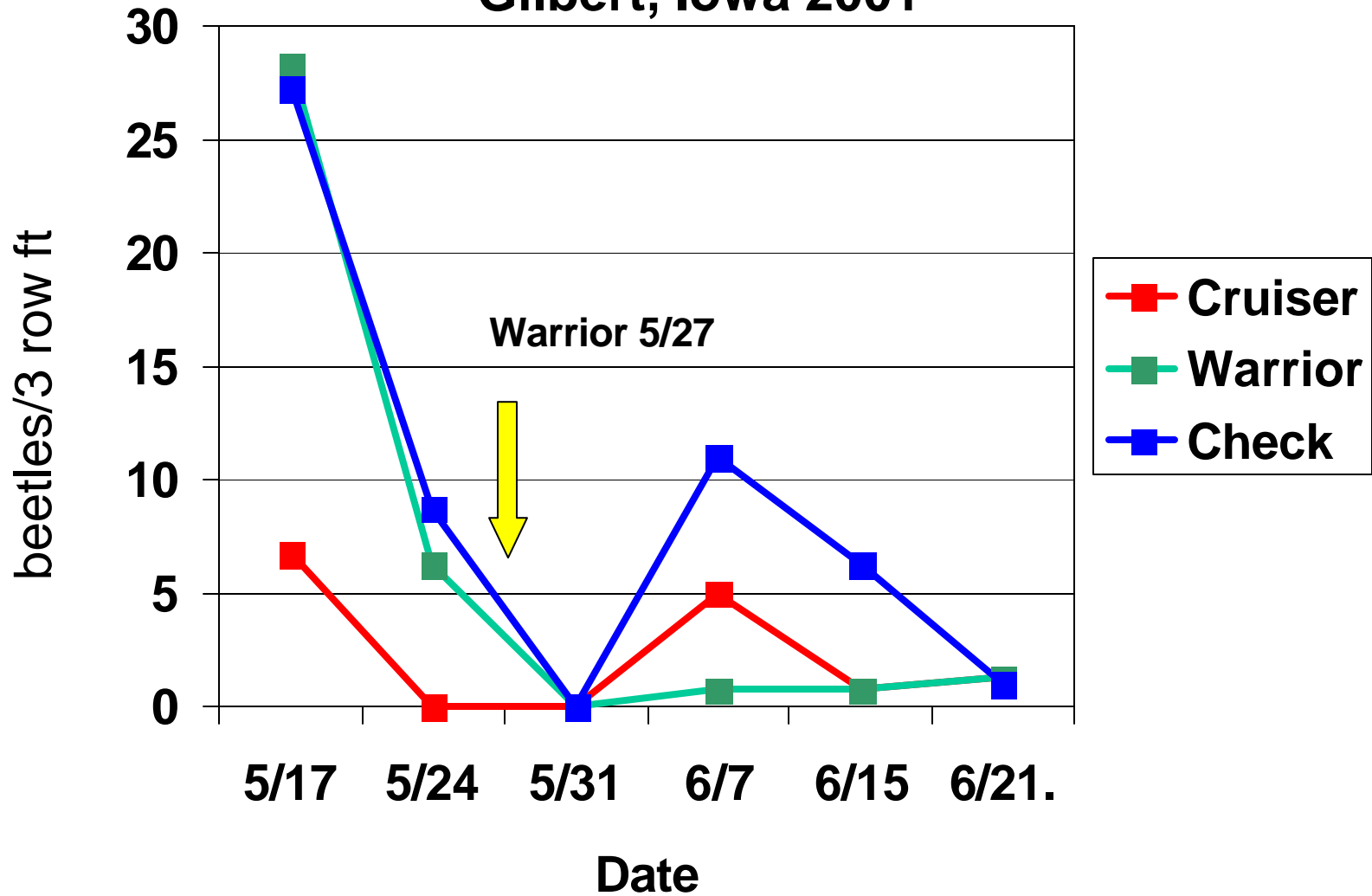
untreated check

Cruiser 50g

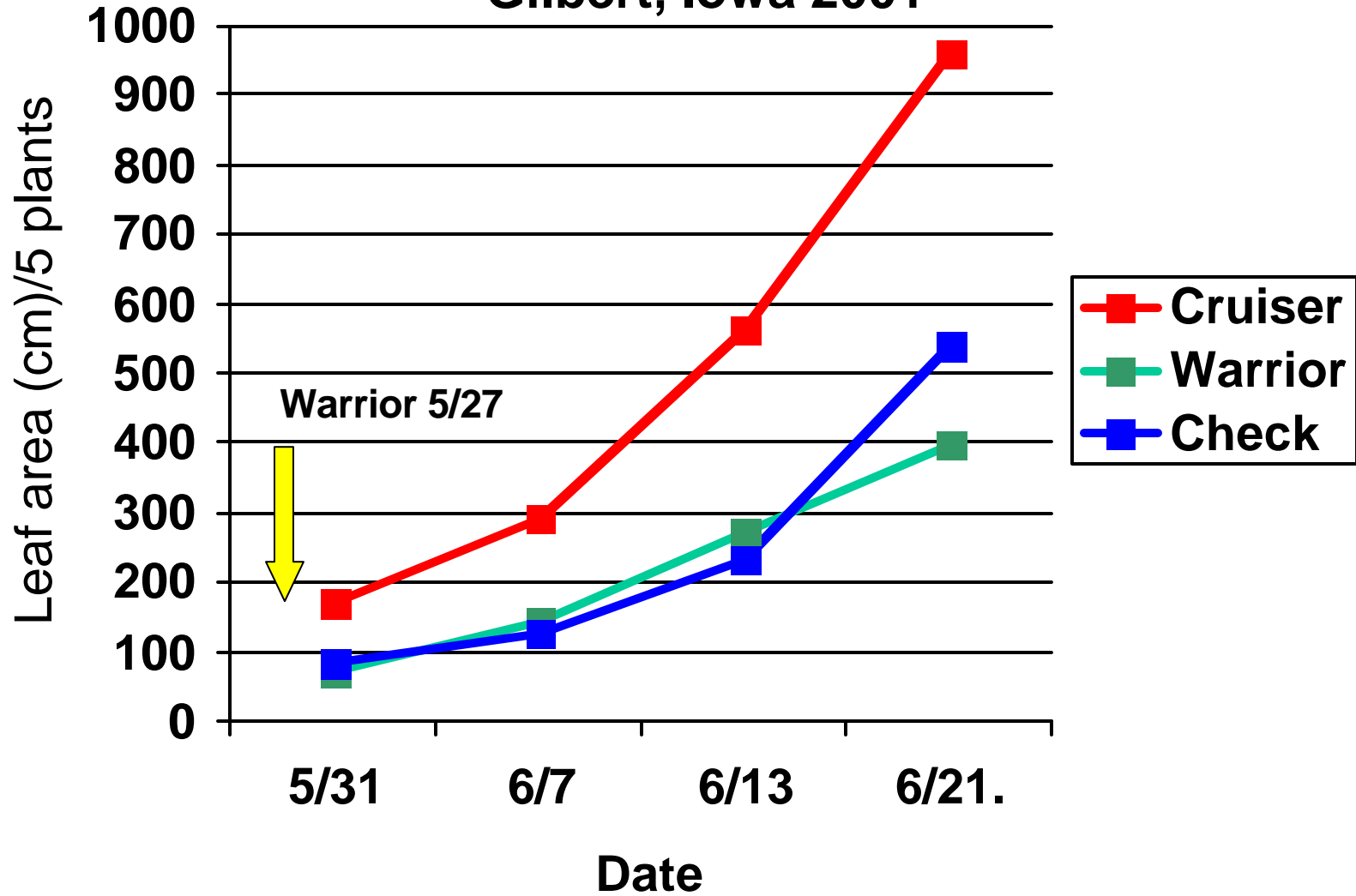


Showtime

Bean Leaf Beetles Gilbert, Iowa 2001



Bean Leaf Beetles Gilbert, Iowa 2001



Bean Leaf Beetle Insecticide Trial

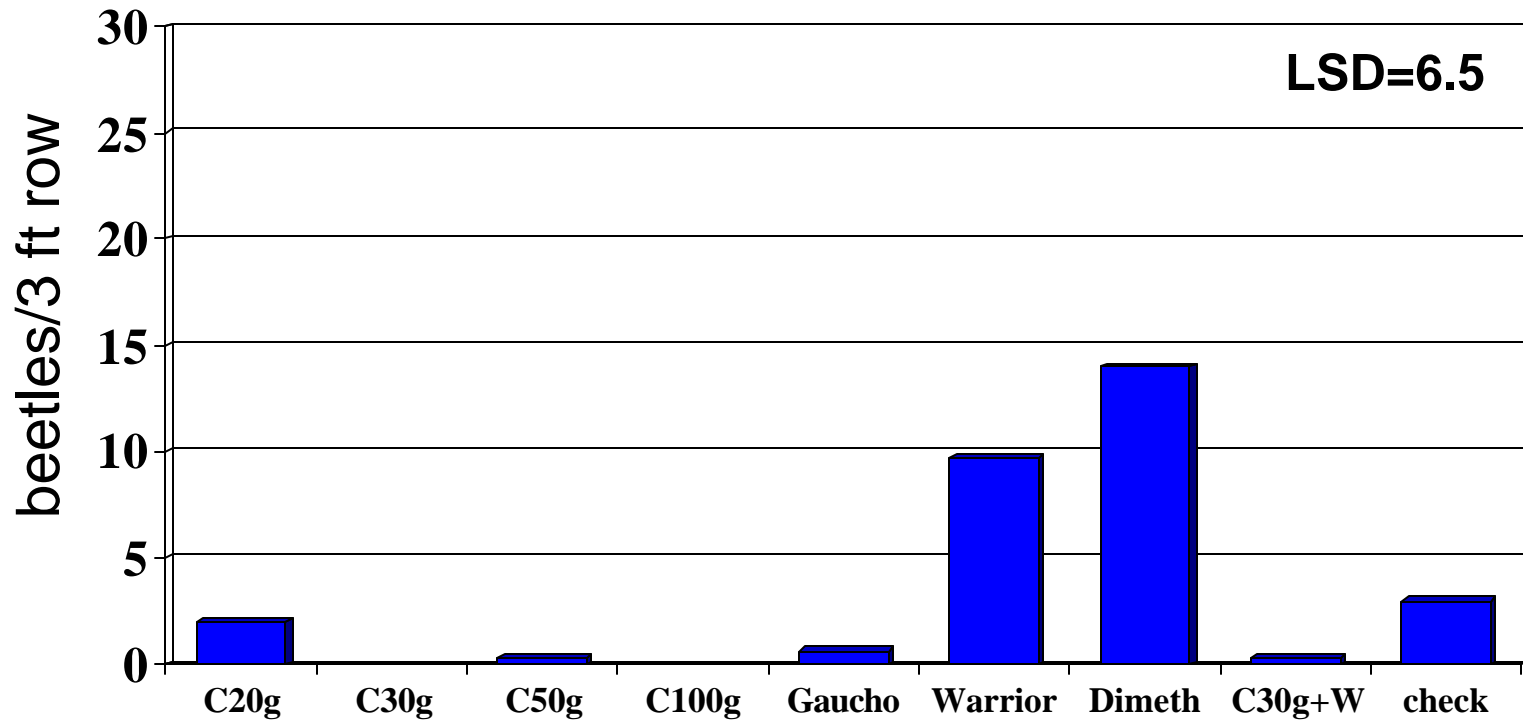
Gilbert, Iowa 2002

Product	Rate	Date
Cruiser	20 g/100 kg	4/30
Cruiser	30 g/100 kg	4/30
Cruiser	50 g/100 kg	4/30
Cruiser	100 g/100 kg	4/30
Gaucho	62.5 g/100 kg	4/30
Warrior	3.2 oz	5/17
Dimethoate	8 oz	5/17
Cruiser+Warrior	30 g + 1.92 oz	4/30+5/29
Check	---	---

Bean Leaf Beetles

Gilbert, Iowa

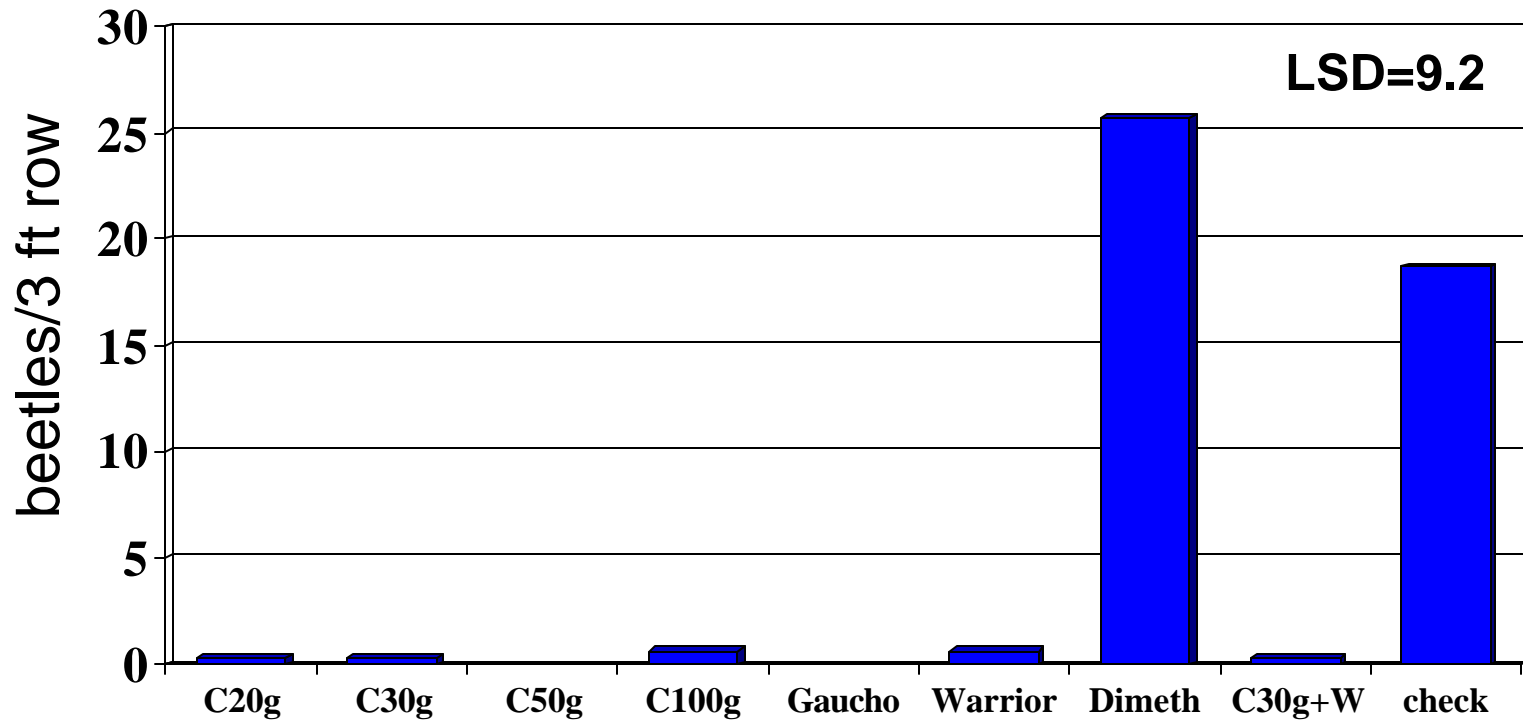
May 16, 2002



Bean Leaf Beetles

Gilbert, Iowa

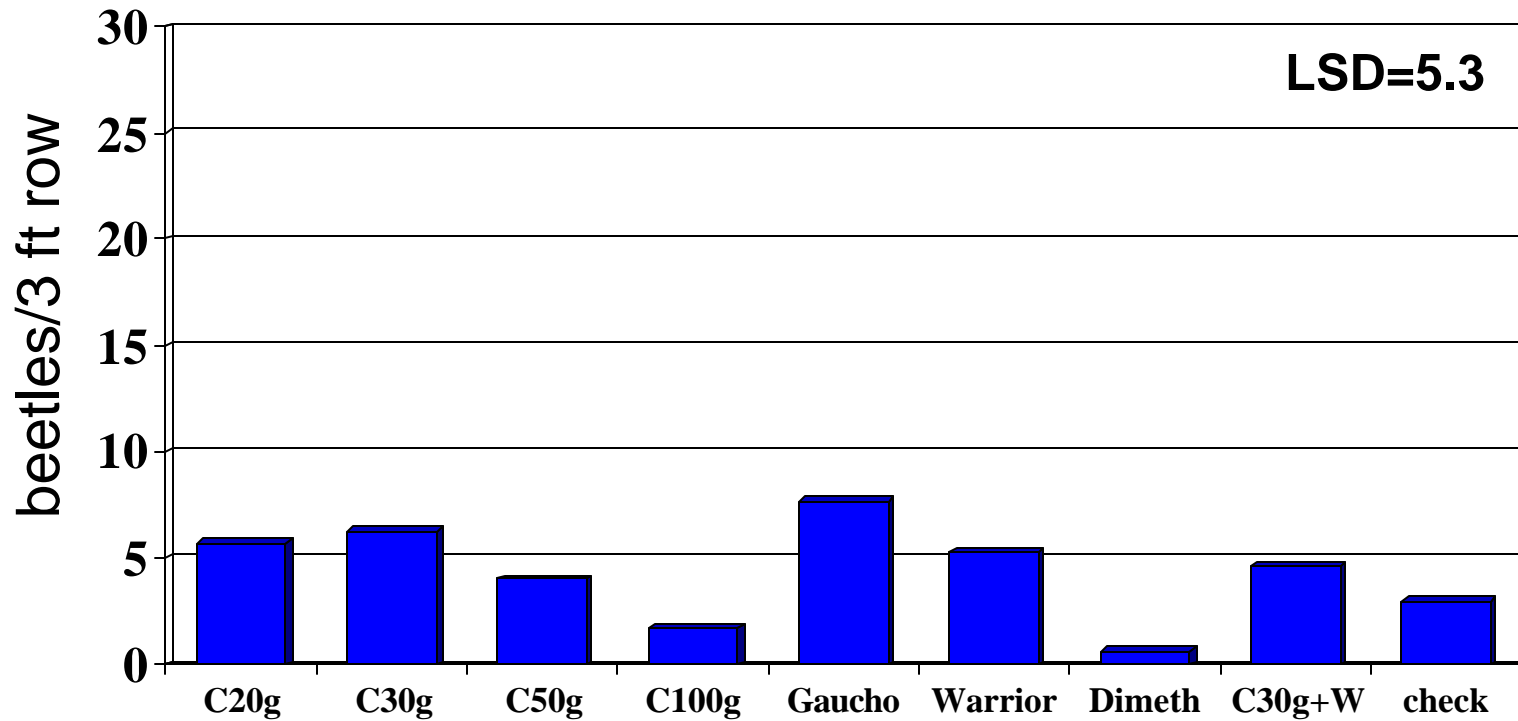
May 23, 2002



Bean Leaf Beetles

Gilbert, Iowa

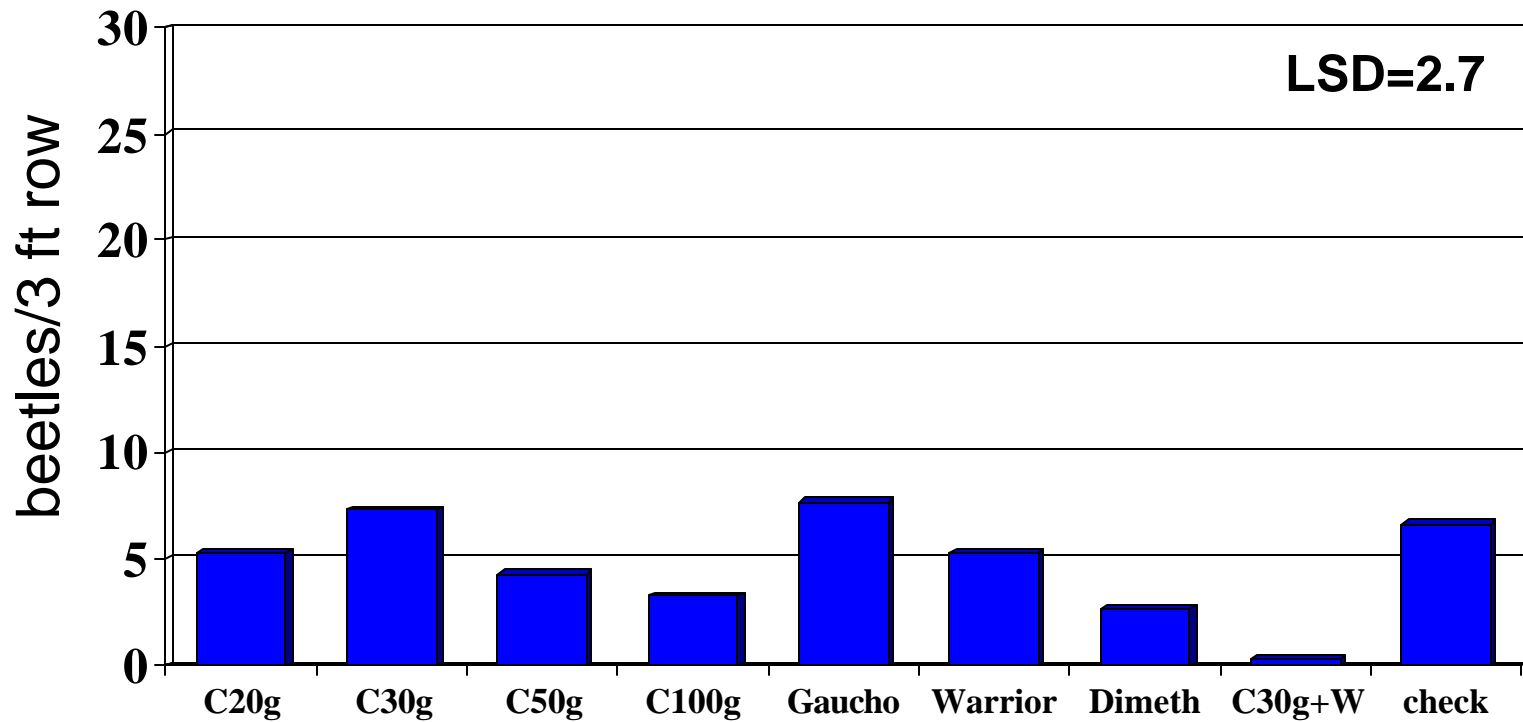
May 31, 2002



Bean Leaf Beetles

Gilbert, Iowa

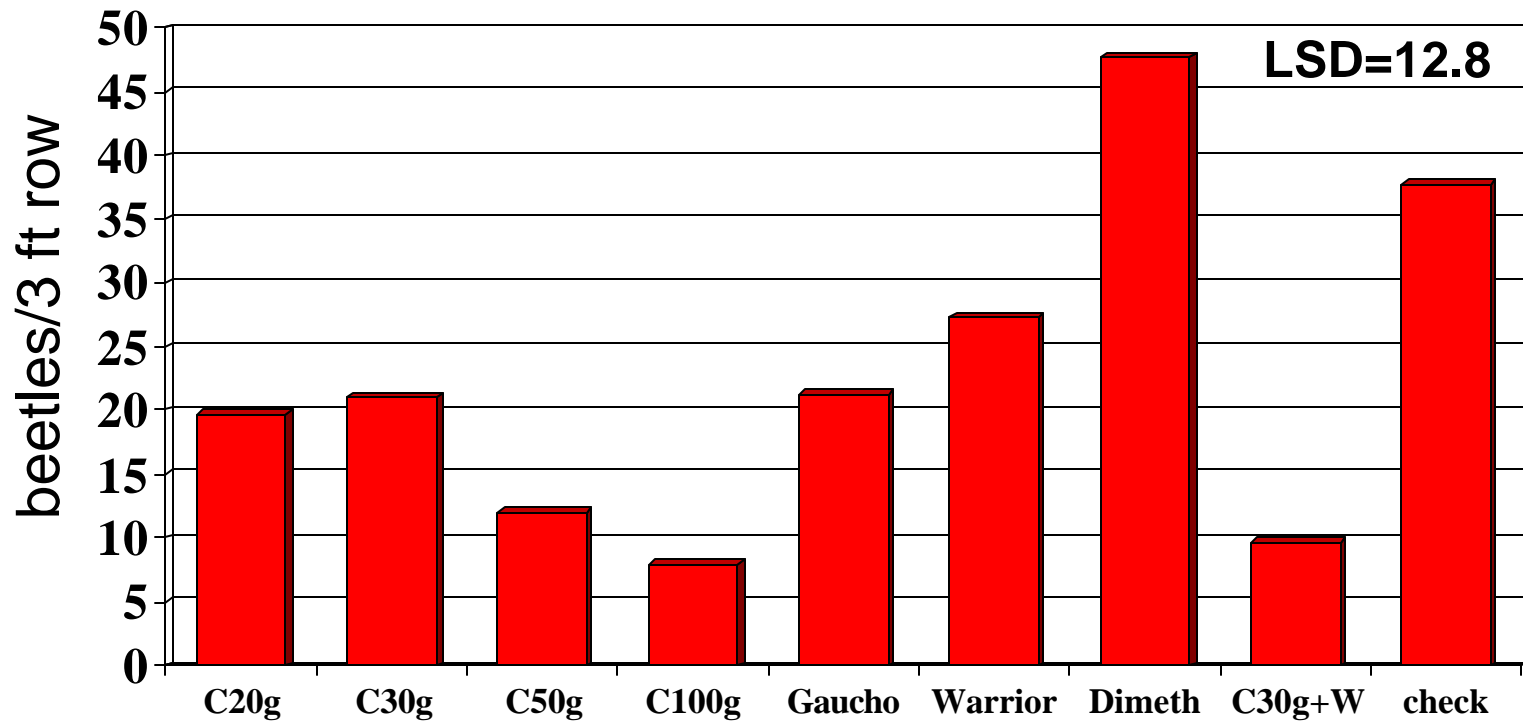
June 5, 2002



Bean Leaf Beetles

Gilbert, Iowa

Early-season populations, 2002

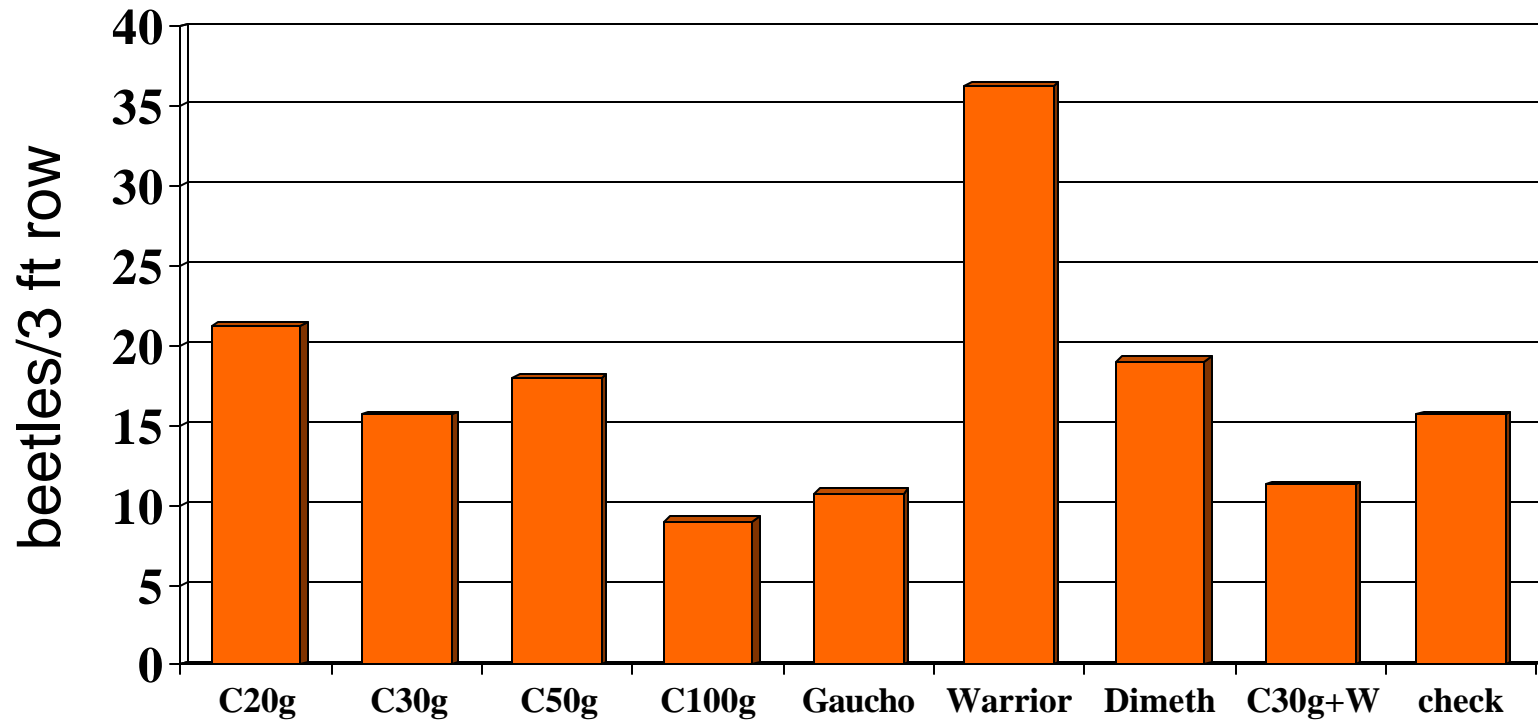




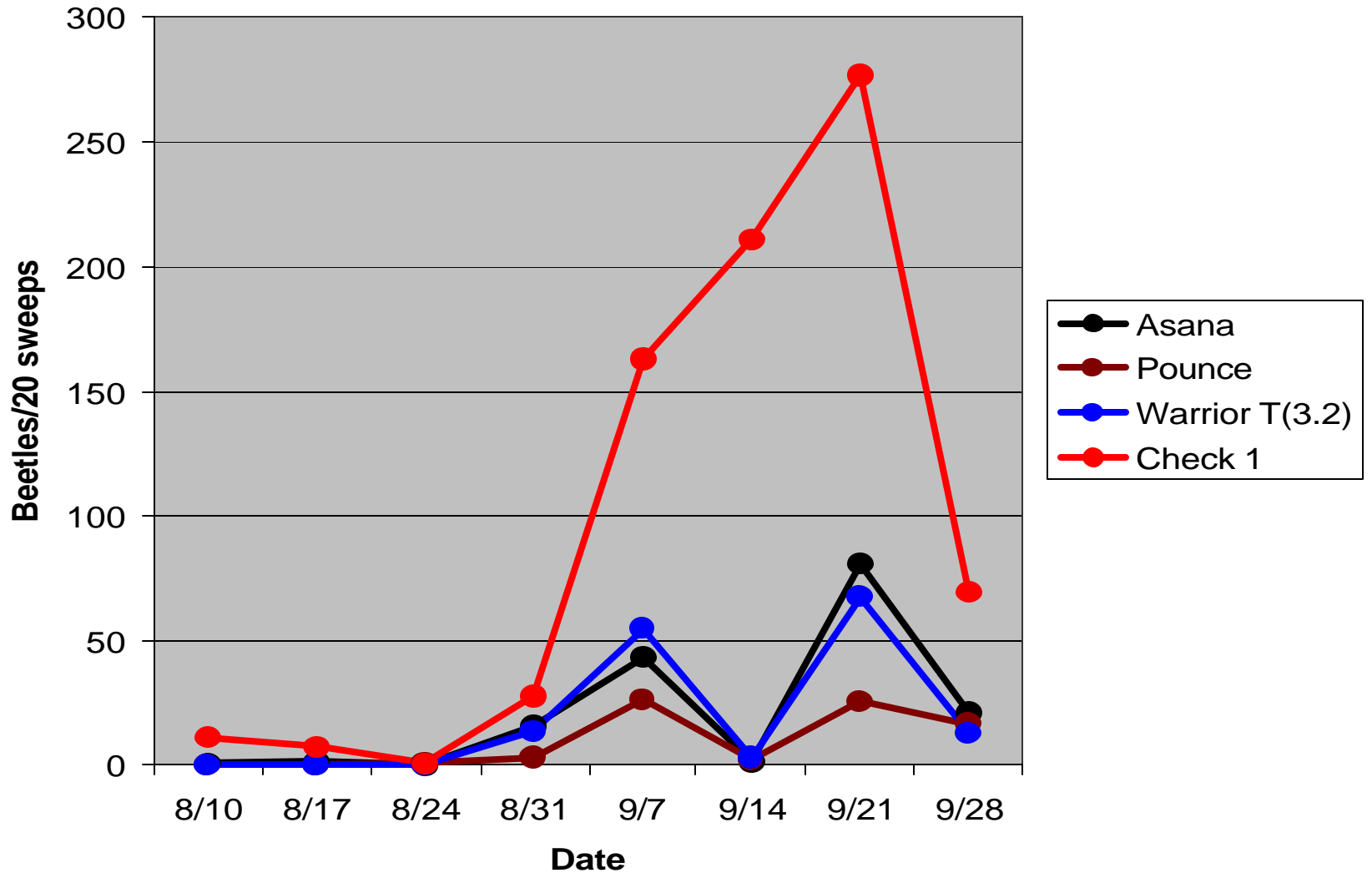
Bean Leaf Beetles

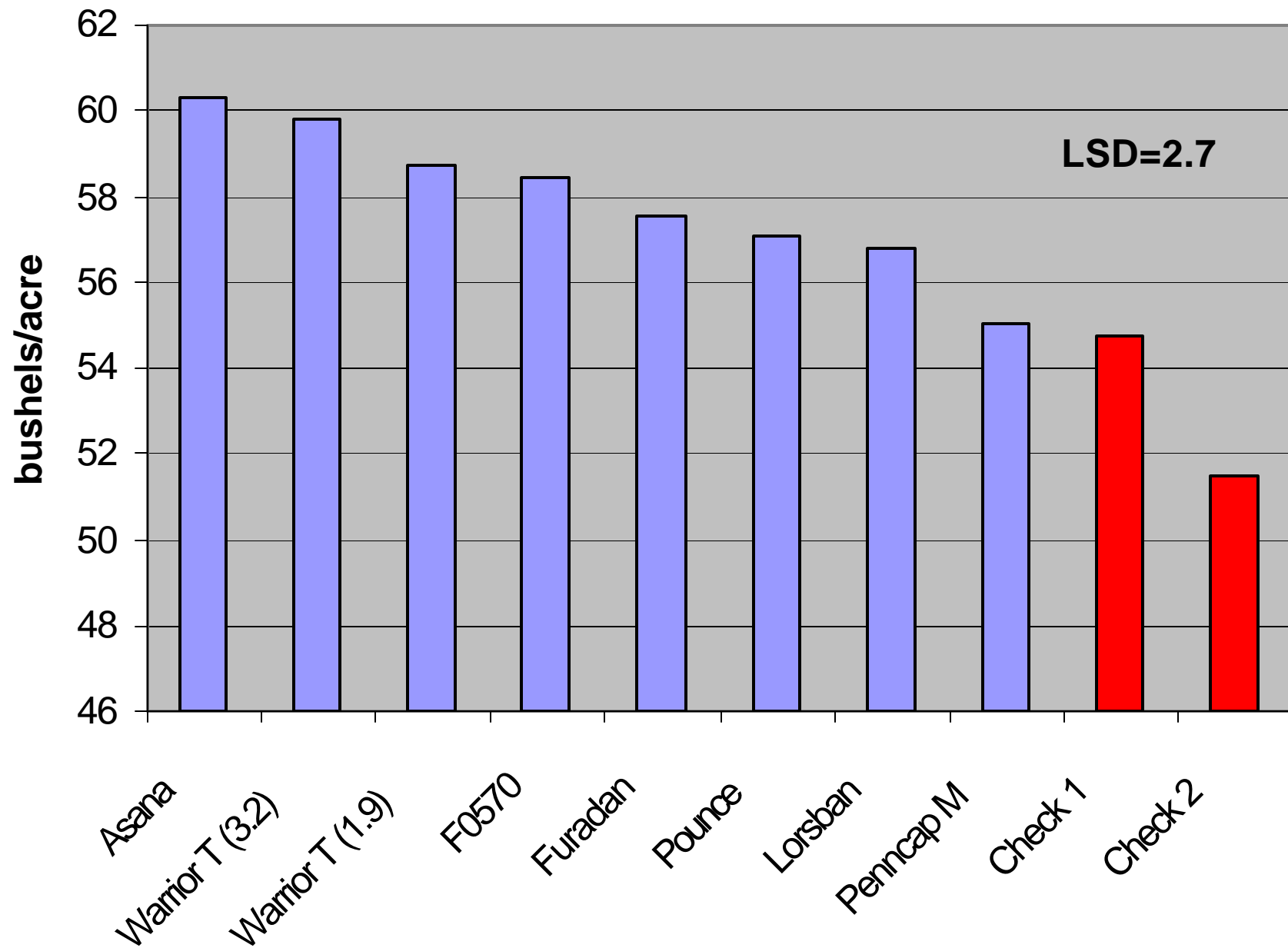
Gilbert, Iowa

adult emergence, 2002



Bean Leaf Beetle Insecticide Evaluation Nashua, 2001





Bean Leaf Beetle

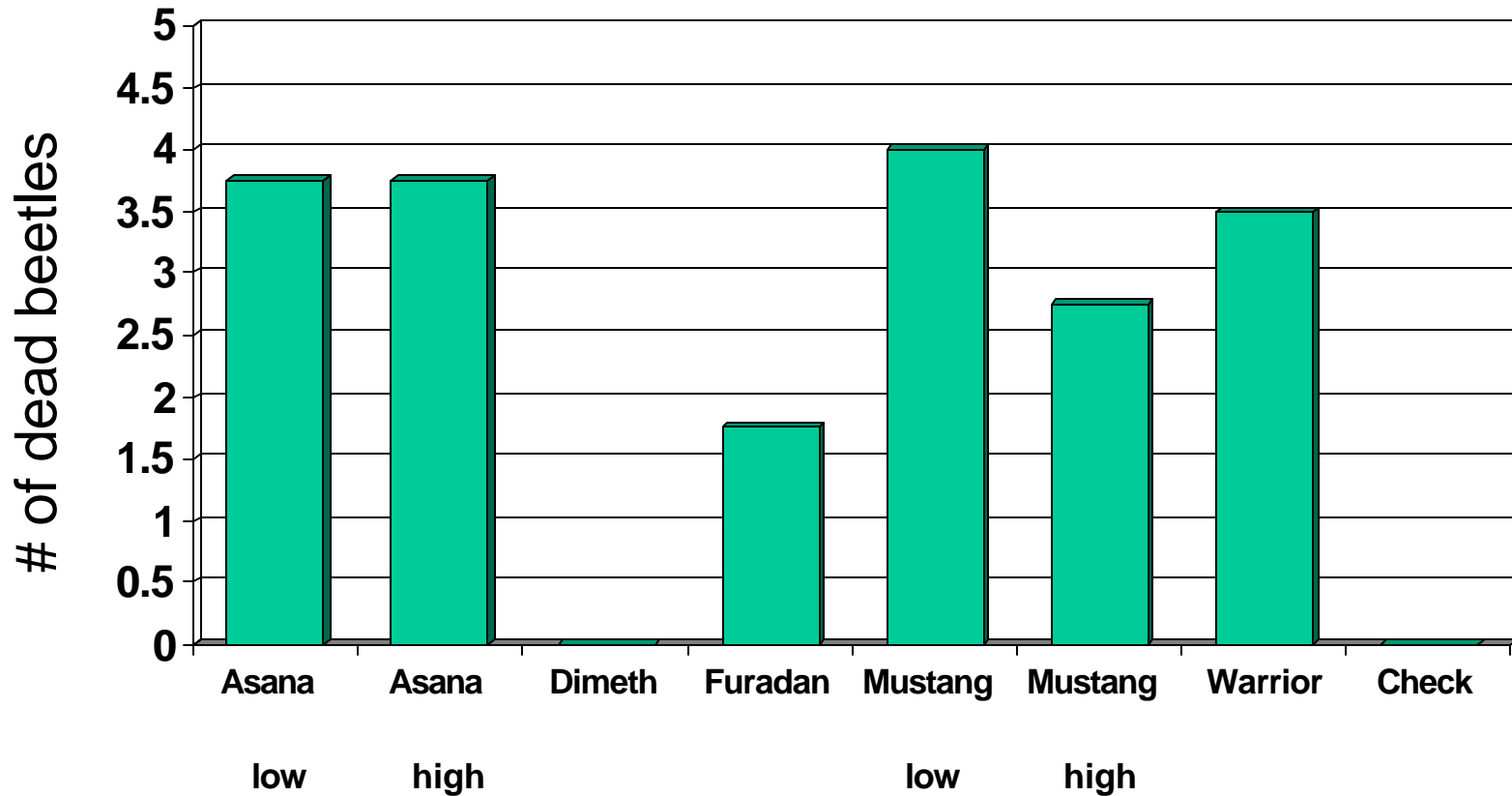
Laboratory Insecticide Trial

- Asana 5.8 oz (low), 9.6 oz (high)
- dimethoate 8 oz
- Furadan 8 oz
- Mustang 3 oz (low), 4.3 oz (high)
- Warrior 1.92 oz
- check



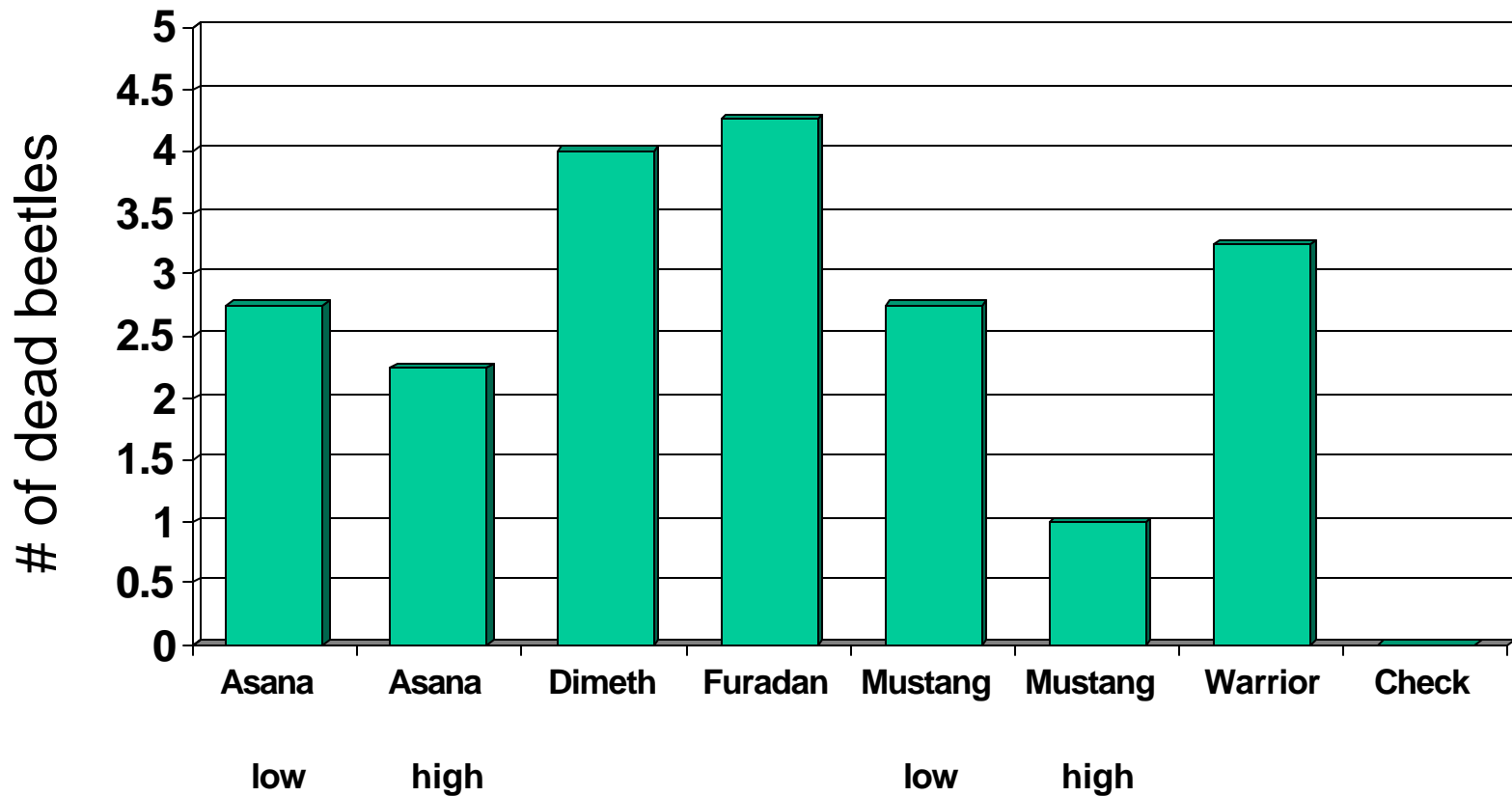
Bean Leaf Beetle Laboratory Insecticide Trial

Mortality at 4 hours post treatment



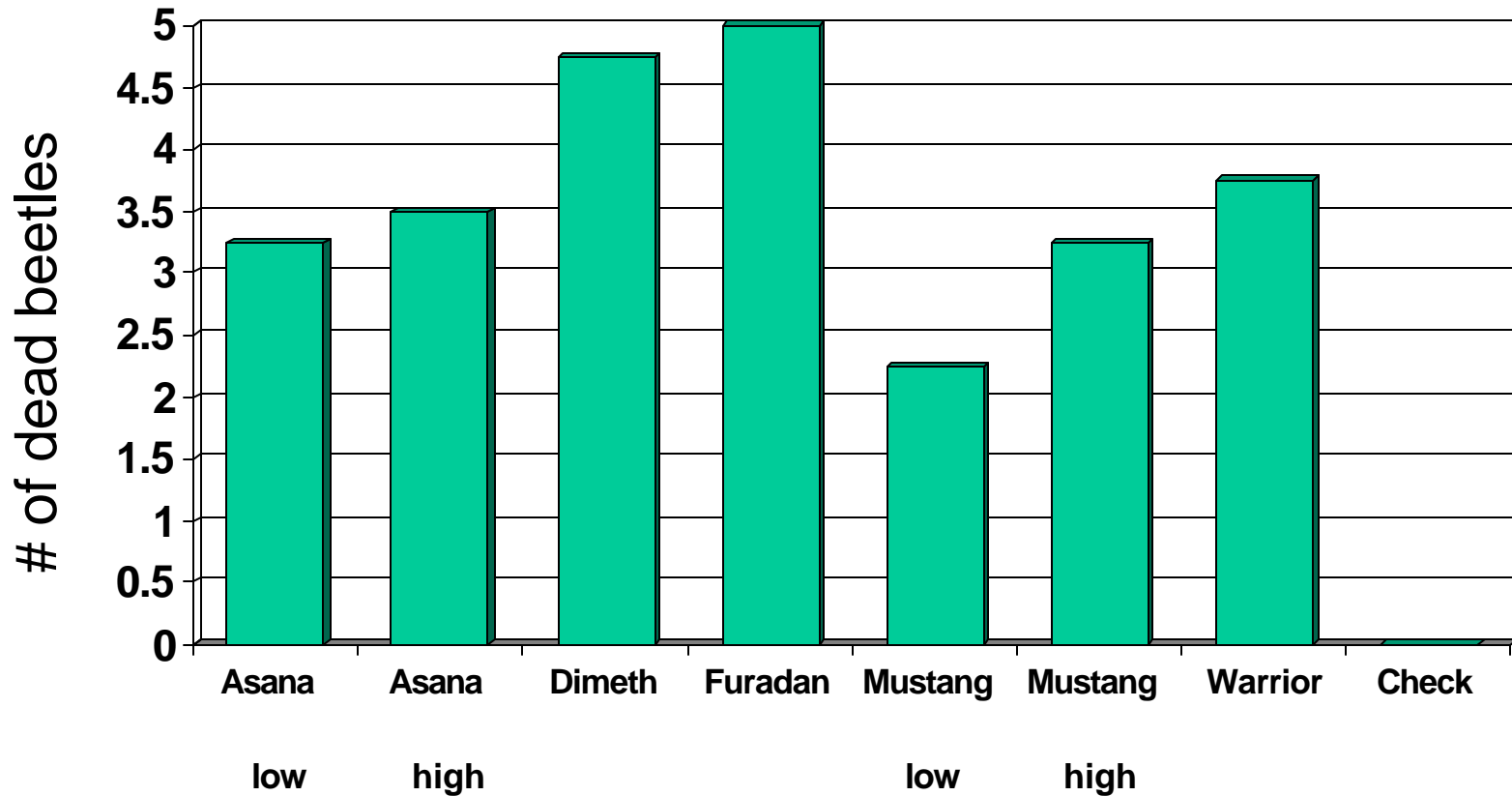
Bean Leaf Beetle Laboratory Insecticide Trial

Mortality at 24 hours post treatment



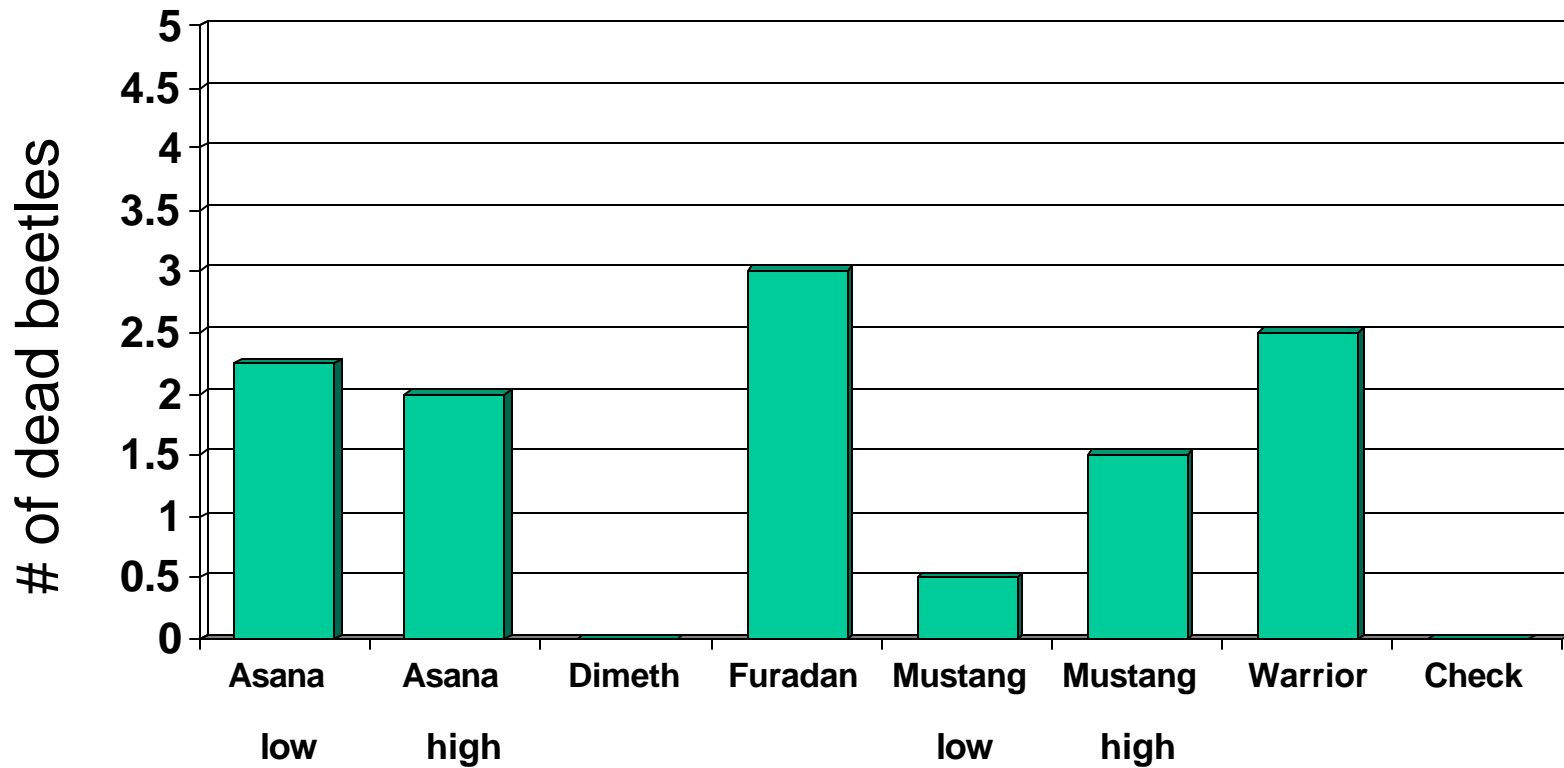
Bean Leaf Beetle Laboratory Insecticide Trial

Mortality at 48 hours post treatment



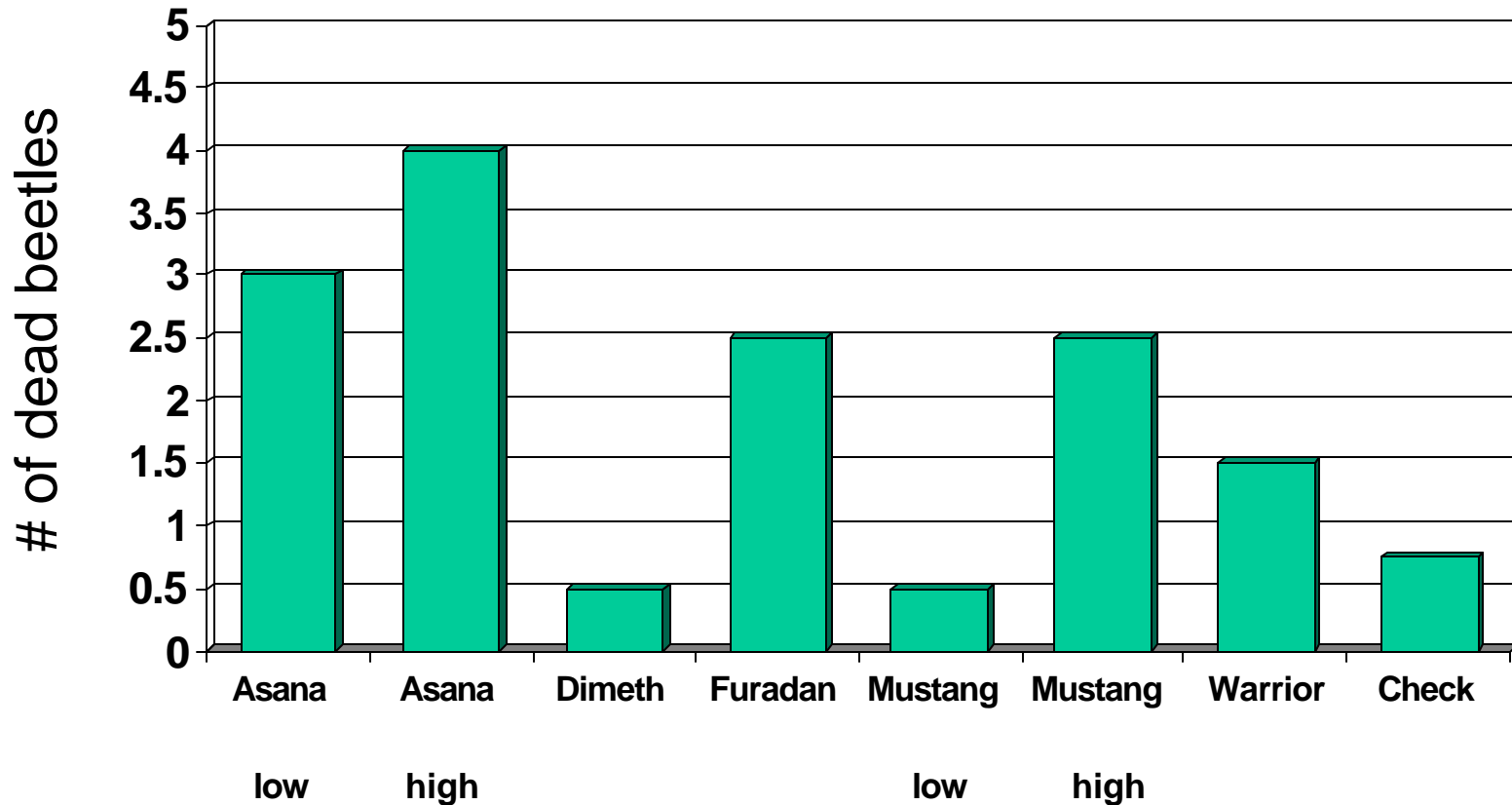
Bean Leaf Beetle Laboratory Insecticide Trial

Mortality at 9 days post treatment

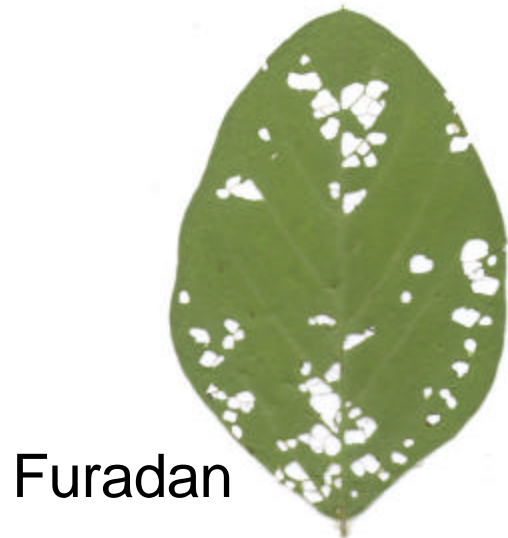


Bean Leaf Beetle Laboratory Insecticide Trial

Mortality at 16 days post treatment



Bean leaf beetle injury
48 hours feeding @ 9 days post treatment



Insecticides and Harvest Interval

- **Ambush** **60 days**
- **Pounce** **60 days**
- **Warrior** **45 days**
- **Lorsban** **28 days**
- **Asana** **21 days**
- **Mustang** **21 days**
- **Penncap-M** **20 days**
- **Sevin XLR** **5 days**



Questions?

Soybean Preharvest Interval Responsibility & Liability

- Insecticides & preharvest interval
 - Ambush, Pounce = 60 days
 - Warrior = 45 days
 - Lorsban = 28 days
- Comments received from Iowa Department of Agriculture and Land Stewardship (IDALS) and EPA.

Soybean Preharvest Interval

Responsibility & Liability

- Who is responsible and liable for following label if insecticide is custom applied to farmer's field?
- IDALS Section 206.11.3(b): *It shall be unlawful for any person to use or cause to be used any pesticide contrary to its labeling or to rules of the state of Iowa if those rules differ from or further restrict usage.*
- Harvesting a crop prior to the interval stated on the label would be illegal.

Soybean Preharvest Interval Responsibility & Liability

- Who is liable to follow the label?
 - The applicator of the pesticide
 - If applicator has informed farmer of PHI, then this could mitigate any enforcement actions against the applicator
- Is custom applicator required to inform farmer?
 - No, but this would be wise stewardship of insecticide and good business

Soybean Preharvest Interval

Responsibility & Liability

- Any potential problems with early harvest of soybeans?
 - Yes: Food, Drug and Cosmetic Act, Chap. IV, Sec. 402 (2B) states: A food shall be deemed to be adulterated if it bears or contains a pesticide chemical residue that is unsafe with the meaning of Sec. 408(a)
 - Food with residue that exceeds established pesticide tolerance then is unsafe
 - Contaminated seed could create problems at elevator or potential sales with international markets

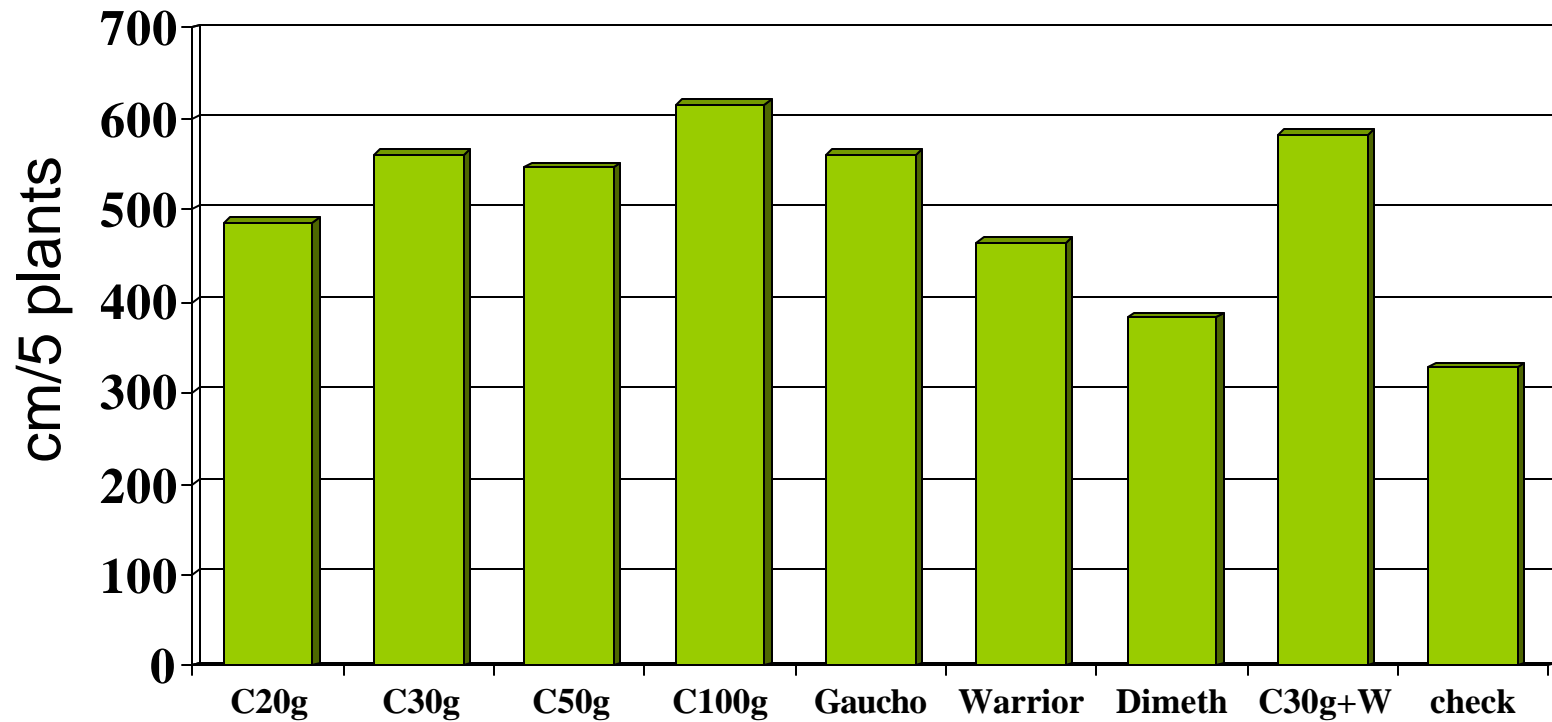
Soybean Preharvest Interval Responsibility & Liability

- Solution
 - Custom applicator should document that he has informed farmer of PHI and date chemical was applied
 - Farmer should determine when PHI will expire and not harvest soybeans before label-stated interval

Soybean Leaf Area

Gilbert, Iowa

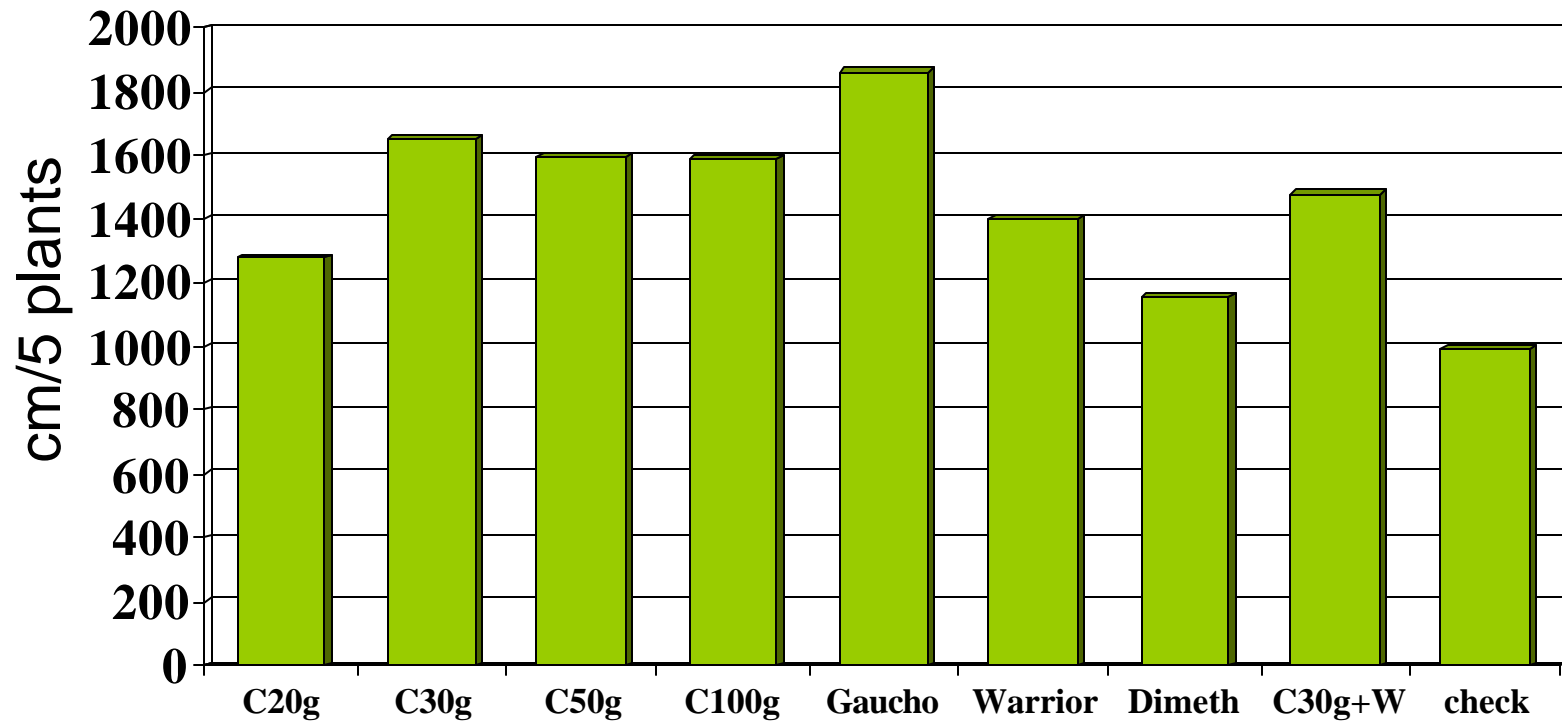
June 6, 2002



Soybean Leaf Area

Gilbert, Iowa

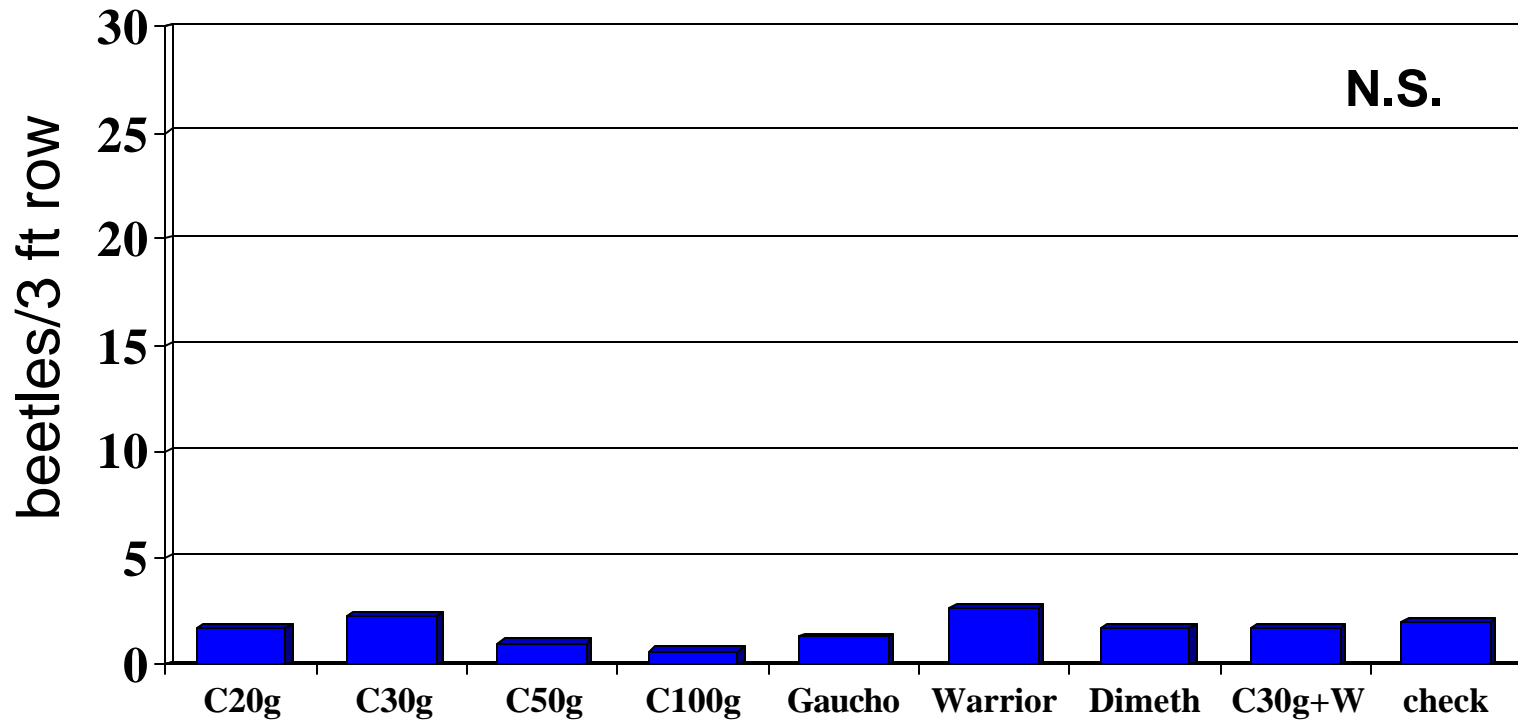
June 13, 2002



Bean Leaf Beetles

Gilbert, Iowa

June 20, 2002



Bean Leaf Beetles

Gilbert, Iowa

June 12, 2002

