Soybean Aphid Biology in Wisconsin

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UW Entomology
Soybean Aphid in Wisconsin

vegetative R1 R3 R5
aphid density
6/15 7/1 7/15 8/1 8/15 9/1
Soybean Aphids Host-Alternate

6/15 7/1 7/15 8/1 8/15 9/1

aphid density
Aphid Severity / Buckthorn Distribution

R2-R4 Growth Stages
July 21 to August 19, 2003

Average Number of Aphids per Plant
- 0 - 200
- 201 - 500
- 501 - 1000
- 1001 - 2000
- 2001 - 4500

WI DATCP

WISCOMP

Rhamnus cathartica
Common Buckthorn

- windbreaks, woodlots

- Aphid migration - long distance - ?

- Local control not likely to reduce aphid severity
Aphid Immigration & Establishment - June/July

- Aphid “spreading out” phase, to 100%
- NOT an indicator of eventual severity
Rapid Aphid Increase-
July/August

Potential doubling time: 1.4 days

Actual (field) doubling time: as few as 4 days
Critical Scouting Window

![Graph showing aphid density from 6/15 to 9/1 with peaks at V6 and R4 stages.](image-url)
Insecticide Timing

- Manage **future**, not **current** population

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R1  R3
Insecticide Timing

- Risk of rebound
- Critical pod-set period not protected
Insecticide Timing

aphid density

R1  R3  R5

6/15  7/1  7/15  8/1  8/15  9/1
Critical Scouting Window

- Ideally: sample 2X within a week
- 25-40 plants per field, away from edges
Scouting: Appearance of Aphid Colonies
The Good

12-spotted Lady Beetle

The Bad

Bean Leaf Beetle-Red Phase
Lady Beetle Larva
Multicolored Asian Lady Beetle
Aphid Suppression by Lady Beetle Predation, 2001

- Predators absent
- Predators present

Soybean Aphids per Leaf

Predators Introduced

7/13 7/20 7/27 8/3 8/10
Natural Enemies and Aphid Regulation

Reduction
Natural Enemies and Aphid Regulation

Suppression

Reduction
Soybean Aphid Parasite
Soybean Aphid Parasite
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