

Management of Soybean Aphid

KEY POINTS

- Aphids can begin colonizing soybeans as early as May but outbreaks usually occur from flowering through early pod set.
- Heavy aphid infestations can result in severe yield losses; controlling aphids is most critical during the early reproductive stages (R1-R4).
- Routine scouting is necessary to estimate aphid populations and to determine if insecticide applications are necessary.



Figure 1. Heavy infestation of aphids on the underside of soybean leaves.

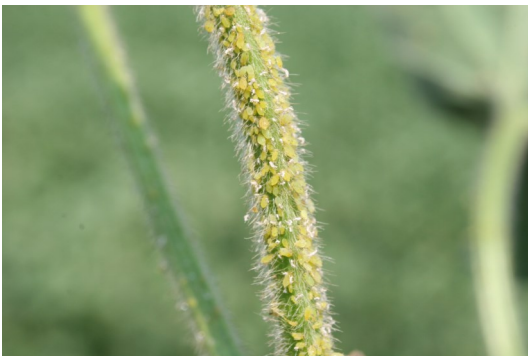


Figure 2. Aphid feeding on soybean stem.

Impact on Your Crop

- Aphids remove water and nutrients from the plant with their piercing-sucking mouthparts.
- Aphid feeding can cause leaf puckering, stunting, reduced pod and/or seed counts, and smaller seeds.
- Heavy aphid infestations can result in severe yield losses.

Scouting

- The soybean aphid is small, pale yellow to green in color, with distinct black cornicles near the end of the abdomen (Figures 1 and 2).
- There are both winged and wingless forms. The presence of the winged form often indicates migration.
- Aphids initially colonize the underside of young leaves. As the season progresses, they move down to the middle of the plant and feed on stems and pods.
- Aphids excrete a substance called 'honeydew' on which sooty mold can grow. This can give soybean leaves a black appearance and interferes with photosynthesis.
- The presence of lady beetles (beneficial insect that feeds on aphids) and ants (feed on the honeydew) on soybean often indicates that there is an aphid infestation.

Management

- Effective management requires consistent field scouting from seedling stage through pod-fill to track aphid populations.
- Insecticides can be very effective at controlling aphid populations. The early reproductive stages are the critical time to protect yield potential.
- For soybean growth stages R1 through R5, treatment is justified when an average of 250 aphids per plant is found on over 80% of the plants in the field and populations appear to be increasing.

Sources:

Pedersen, P. 2007. Soybean aphid. Iowa State University. <http://extension.agron.iastate.edu>.
Koch, R. and Potter, B. 2014. Scouting for soybean aphid. University of Minnesota. <http://www.extension.umn.edu>.
Tilmon, K. 2014. Soybean aphid scouting and management. South Dakota State University. <http://igrow.org>.
Web sources verified 04/18/18.

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