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## Soybean aphid biology

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# Soybean aphid biology

## **Abstract**

The soybean aphid was first reported in Iowa in 2000. It has survived the winter and colonies are now being found south of Decorah in Winneshiek County in northeastern Iowa. Aphid colonies were very small, often less than 10 aphids on a plant, and they were clustered on the underside of the newly developing trifoliate leaves. The aphids were difficult to find and checking 20 plants at random in several fields was not a large enough sample to detect these small populations

## **Keywords**

Entomology

## **Disciplines**

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# INTEGRATED CROP MANAGEMENT

## Soybean aphid biology

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**Ants collecting honeydew from soybean aphids on young soybean leaf.**

[Enlarge](#) [1]

Soybean aphid adults are about 1/16 inch in length, pale yellow or green, and have dark-tipped cornicles (tail pipes) on the back of the abdomen. These aphids feed through piercing-sucking mouthparts and have both wingless and winged forms.

The seasonal cycle of soybean aphids is complex. The primary host is buckthorn. Eggs are produced on buckthorn in fall and overwinter there. The nymphs hatch in spring, giving rise to wingless females. These wingless females reproduce without mating and produce winged females that migrate to soybean. These females produce wingless females that also reproduce without mating and give rise to active young on soybean plants in late May and June. There will be multiple generations of this insect in soybean throughout the summer.

Soybean aphids seem to do better in cooler environments (72-77°F, with relative humidity below 78 percent, optimum). When the temperature exceeds 81°F developmental time is lengthened.

Winged soybean aphids reportedly colonize soybean in stage V1, producing wingless females that feed especially on young and developing leaves. Aphids feed by sucking plant sap, which can cause leaf curling and plant stunting. As the plants grow, aphid populations expand to the middle of the plant and feed on the underside of leaves. Losses of up to 52 percent have been quantified from this injury with early-season infestations. At least in some locations studied, the impact of aphid feeding on soybean yield later in the season is minor, unless virus is present. Recent studies have found that the soybean aphid has the ability to

transmit the Iowa strain of soybean mosaic virus.

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