



July 15, 2005

## **Spider mites beginning to infest dry Iowa.**

Reports are coming in of soybean fields suffering from spider mites as well as **isolated** fields with more than 250 soybean aphids per plant. The present hot, dry weather conditions are particularly conducive for the development of spider mite populations.

The spider mites and soybean aphids both feed on soybean leaves, and both species have piercing sucking mouthparts. However, aphids feed deeper into the leaves in vascular tissue. Mites are smaller with mouthparts designed to pull fluid directly from plant cells. As a result of these differences, mite damage results in the leaf changing colors to yellow and the surface curling. During heavy spider mite infestations leaves will drop off the plant. Aphid feeding does not result in the leaf turning yellow. Heavy aphid infestations can change the color of leaves, with leaves looking dark gray or even black. This is due to honeydew (a sugary, sticky substance excreted by aphids) that is infested with sooty mold.

Both spider mites and aphids are capable of moving great distances. Mites are readily blown by wind, so landscape features that disrupt air flow, (tree lines, houses, or even telephone poles) can help spider mite populations establish. Localized infestations of both spider mites and aphids can begin in spotty, isolated areas of a soybean field. However, under certain conditions both pests can spread across large areas. Spider mite infestations usually start on field edges, especially where dust has settled on leaves. It is thought that dust dries the leaf surface, protecting mites from disease, or perhaps that the dust provides a surface for the mites to anchor webs.

**Long story short:** Growers should be aware of the similarities and differences between these two pests, and adjust their management plans accordingly. The most noticeable difference between the spider mite and aphid damage is that spider mite damage results in the leaf changing color to yellow and can cause plant defoliation, while there is no characteristic yellowing of leaves from aphids feeding on the plants. Note the yellowing of soybean leaves alone is not sufficient to confirm spider mite infestations; yellowing can be caused by nutrient deficiencies as well as some plant diseases. Growers should confirm that these symptoms are due to spider mites by collecting leaf samples and looking for the mites on the underside of leaves.

Several insecticides are recommended for managing spider mites and soybean aphids, with some products appropriate for both pests. For more information about two-spotted spider mites and their control please refer to the upcoming Integrated Crop Management (ICM) newsletter for more specific information on registered chemical products (an on-line version of the ICM newsletter is available on the Web at: <http://www.ipm.iastate.edu/ipm/icm/indices/insectsandmites.html> ).

The Iowa Soybean Aphid Task Force Web page [www.soybeanaphid.info](http://www.soybeanaphid.info) offers more information on identifying and managing soybean aphids. Images of spider mite damage can be seen on the web at: <http://www.ent.iastate.edu/imagegal/plantpath/soybean/spidermite/>

**Source:** Matthew Oneal, ISU Department of Entomology.