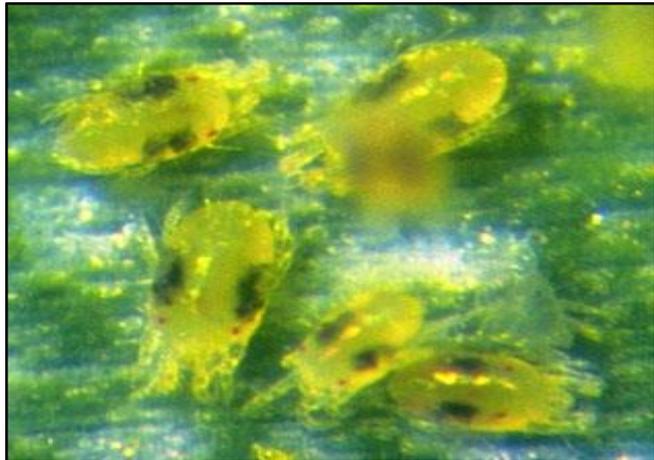




Two-spotted Spider Mite

Identification: Two-spotted spider mites are extremely small. Spider mites will appear as small moving specks on the leaves of soybean plants ... extremely small! They are yellowish-orange in color with two distinct black spots on each side of their body. The use of a 10x magnify hand lens will help you better identify mite infestation.

Life Cycle: Two-spotted spider mites typically over-winter in alfalfa fields and will infest soybean fields in mid-late summer. They are carried from alfalfa fields to soybean fields primarily by wind. Early infestation will typically occur on the southern and western edge of fields due to prevailing winds. Once mites have infected a crop, there can be as many as 7-10 generations throughout a single cropping season and they can result in as much as 40-60% reduction in soybean yields.



Natural Biological Control Methods:

1. Natural Predators: predatory spider mite, minute pirate bug, mite destroyer beetle
2. Fungal agent (fungus): *Neozygites floridana*

Insecticides Control Methods & Thresholds for

Soybeans: Spider mites damage soybeans by piercing the cells of plants with their mouthparts and sucking the juices from the cells. Visual spider mite damage will appear first on the top of the soybean leaf with a yellow or whitish spotting on the leaves.

Recommended thresholds are based on visual damage. An insecticide application is recommended if 25% of the leaves show discoloration prior to pod set or if 10% of the leaves show discoloration once the pods have set. Once thresholds have been met, an insecticide application is recommended. I suggest Lorsban 4E at a rate of 1 pint per acre. I do not recommend the use of a synthetic pyrethroid to control spider mites. Synthetic pyrethroid have shown



to have poor performance on two-spotted spider mites, but they have shown to have a high fatality rate on beneficial predators, such as predatory spider mites.

Insecticides Control Methods & Thresholds for Corn: Two Spotted Spider Mites damage corn by piercing the cells of plants with their mouthparts and sucking the juices from the cells. Visual spider mite damage will appear first on the top of the corn leaf with a *yellow or whitish spotting* on the leaves. Leaf discoloration caused by mite feeding can be easily identified by checking the undersurface of leaves for the presence of mites, eggs, and webbing. Spider mites produce webbing and a fine network of silken webs likely will be associated with mite colonies. Colorado State University suggests, “The simple guideline is to treat if damage is visible in the lower third of the plant, and mite colonies are present in the middle third.” Once the crop has reached the hard-dough stage, no economic benefit will result from the treatment.



Why more mites when it's dry? The fungal agent *neozygites floridana*, the fungus that biologically controls two-spotted spider mites, needs higher humidity and temperatures of 85°F or less to thrive. The fungus does not thrive under hot and dry conditions.

Photo Credits: Photos courtesy of Daren Mueller, Iowa State University, Bugwood.org, and University of Nebraska Cropwatch.

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