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Mite watch 2006

Carol Pilcher
Iowa State University

Richard O. Pope
Iowa State University, ropope@iastate.edu

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Abstract

Whenever hot, dry weather persists, spider mite populations may develop on both corn and soybean. Twospotted spider mites, *Tetranychus urticae*, are serious pests of many crops throughout the United States. Producers in areas of Iowa where the weather remains dry should be on the lookout for spider mite infestations.

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Insects and Mites

Mite watch 2006

by Carol Pilcher and Rich Pope, Department of Entomology

Whenever hot, dry weather persists, spider mite populations may develop on both corn and soybean. Twospotted spider mites, *Tetranychus urticae*, are serious pests of many crops throughout the United States. Producers in areas of Iowa where the weather remains dry should be on the lookout for spider mite infestations.



Twospotted spider mite. (Marlin E. Rice)

Although many species of mites can injure plants, it is the twospotted spider mite that attacks soybean and is the primary mite on corn in Iowa. Most spider mites are greenish white to yellow, although some can be orange or red. The twospotted spider mite is named for the two dark spots on the sides of the abdomen, which are digested food visible through the translucent body. Three or four spots may be apparent and are most prominent on adult mites.

Injury to crops is caused when numerous spider mites insert their sucking mouthparts into the vascular tissue of leaves. On close inspection, characteristic signs are tiny yellow spots, or stipples, on leaves. As the injury becomes more severe, leaves turn yellow, then brown or bronze, and finally die and drop off. Soybean plants injured by mites mature early, have increased shattering, produce smaller seeds, and may produce wrinkled seeds. Early and severe mite injury left untreated can eliminate yields. More typical mite injury, occurring during late vegetative and early reproductive growth, reduces soybean yields 40–60 percent. Spider mites can cause yield reductions as long as green pods are present. Soybean plants can recover from substantial amounts of mite injury after treatment, although less compensation is possible in later developmental stages.

Before treating injured fields, check that living mites are present. Examine other areas of the field, especially downwind, to identify the extent of the infestation in healthy plants. Because they are small and stay on the undersides of leaves, spider mites can be difficult to see. One way to spot them is to tap leaves against a white piece of paper and look for slowly moving yellow dots on the paper. A hand lens is useful to distinguish spider

mites from thrips, which are noticeably elongated insects that move more rapidly than spider mites. Thrips are another sap feeder that are not uncommon but rarely, if ever, cause economic damage to soybean in Iowa.

When normal weather patterns with locally dry conditions occur, treatment is recommended when plants in infested areas have substantial stippling or leaf yellowing and live mites. Treatment may be delayed if cooler temperatures and high humidity are expected; however, scattered thunderstorms and rain alone cannot reduce mite infestations. Closely monitor infested fields if treatments are delayed, and treat before mites cause browning and leaf drop. Spot treat if the infestation is localized, but check other areas for mites.

Under drought conditions, treatment is recommended if leaves in infested areas are stippled and live mites are present. Before treating, check the entire field (and adjacent fields) for mites. Under very dry conditions, mites usually will occur throughout the field and spot treatments are unlikely to prevent the infestation from spreading. If mites are found throughout the field (even in low numbers) in addition to the more heavily infested areas, treat the entire field. Closely monitor treated fields for reinfestations. Avoid unnecessary sprays, but treat before injury becomes severe and leaves drop.

Late infestations can be difficult to control because mites accelerate soybean maturity and increase shattering. Consequently, if infested fields still have green pods but seeds are filling, it may be better to accept some yield loss from mites and not treat, rather than treat and have shattering but be unable to harvest. Carefully check for harvest intervals on insecticides used if treatment is warranted.

Carol Pilcher is the interim director of Iowa State University Extension's Pest Management and the Environment program and coordinator of the Integrated Pest Management program. Rich Pope is an extension program specialist in entomology with responsibilities in integrated pest management.