Twospotted Spider Mites Emerge In Some Dry Areas Of Illinois

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Hot, dry weather and twospotted spider mites go together. Reports of spotty infestations are beginning to surface in some areas of the state. Robert Bellm, crop systems educator in the Edwardsville Extension Center, reported on August 9 that twospotted spider mites could be found in several southwestern Illinois counties, including Clinton, Jersey, Montgomery, and Washington. Robert indicated that soybean plants along field edges were most severely infested, particularly where the ditch banks had been mowed or sprayed for weeds. His description matches the typical scenario, in which spider mites begin moving toward greener and more succulent plants, such as border row soybeans. As hot and dry conditions persist in some areas of the state, the mites could become an increasing problem. Producers are encouraged to watch this potential development closely and make sure they scout fields, especially border rows, for this pest.

Spider mites have piercing and sucking mouthparts that they insert directly into leaf cells and use to remove fluid. As mite injury intensifies, small discolored spots (yellow or white stippling) become apparent. Stipples may appear on both sides of leaves, but they are most noticeable on the undersurface. Damage to soybean plants is caused by the reduction in chlorophyll within leaf tissues, resulting in reduced photosynthetic efficiency. Soybean plants that are severely damaged become bronzed, and the leaves fall prematurely from the plants. During outbreak years, such as 1988, yield reductions of 40 percent to 60 percent are common in many Illinois fields.

All life stages of twospotted spider mites may be found on soybean plants – eggs, one six-legged larval stage, two eight-legged nymphal stages, and adults. The speed of development is temperature-dependent, and generations may be completed in a range of 4 to 14 days. Although mites cannot fly, they are quite efficient at dispersal, moving to leaf tips on crowded plants from which they are easily blown to other plants in the field or to adjacent fields.

The suggested economic threshold for twospotted spider mites is to consider a rescue treatment when 20 percent to 25 percent of plants are discolored before pod set or when 10 percent to 15 percent discoloration is observed after pod set. Border row treatments also should be considered in lieu of treating entire fields. Harvest restrictions will need to be adhered to if rescue treatments become necessary. For Lorsban 4E, a treatment should not be made to soybeans within 28 days before harvest. Dimethoate has a 21-day harvest interval. These are the primary insecticides that have been used to limit spider mite injury in previous outbreak years. Before using either of these products, growers should consult the labels and follow all pertinent label instructions.

Twospotted spider mites and stippling on soybean leaf.
Photo courtesy of Robert Bellm.

Twospotted spider mite injury to border row soybean plants near the border of Clinton and Washington Counties, August 9.
Photo courtesy of Robert Bellm.

If you find spider mites becoming more of a problem in your area, please share your observations and I'll pass the information on to other readers. Δ

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