MOLDY TOMATO LEAVES

In mid-June Erik was surprised to find a high tunnel tomato greenhouse overwhelmed by TOMATO LEAF MOLD, fungal pathogen, Fulvia fulva (synonym Cladosporium fulvum). This fungus only affects tomatoes and is most often a problem on high-tunnel tomatoes at the end of the season when the houses are crammed full of foliage. Leaf mold symptoms first appear as randomly scattered, light-green or yellowish spots developing on upper surface of older leaves. On the underside of the leaf, these spots appear velvet-like and begin as an off-color tan, eventually maturing to a dark, olive-brown. As the disease progresses, multiple lesions on leaves cause the leaves to progressively turn yellowish-brown, wilt, desiccate and then drop off prematurely.

These lesions produce large numbers of spores on the underside of infected leaves, and these spores are easily spread to other plants via air currents, splashing water, tools and even clothes transport spores! In order to germinate, spores need conditions of high humidity (above 85%) or wet plant surfaces and temperatures between 40-94°F, with optimum temperatures being between 75-78°F. Most infections occur through leaf stomata and symptoms may appear approximately 10 days after inoculation, with spore formation beginning a few days thereafter.

This fungus survives on contaminated seed and serves as the primary source of inoculum. It can also overwinter saprophytically on crop debris, as sclerotia and/or conidia (spores), which may persist in the soil for about one year. The best approach to controlling this fungus is to minimize leaf wetness by avoiding overhead watering of foliage, moving stagnant air with circulating fans, staking up plants and trying to maintain adequate plant and row spacing.

Fungicides can help prevent problems but need to be applied as soon as the first symptoms are detected. Reapply fungicides according to the label directions as long as environmental conditions favor disease development. Fungicides are effective against Tomato Leaf Mold (e.g. Topsin-M, Vangard, Scala, Elevate, Switch, Rovral and Endura); however, if possible, the best approach is to modify the environmental conditions. When Tomato Leaf Mold has been a problem, all plant material should be removed and destroyed at the end of the season, and the high tunnel/greenhouse disinfected.


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