

# PLANT DISEASE AND INSECT ADVISORY



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Oklahoma State University  
127 Noble Research Center  
Stillwater, OK 74078



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## Caterpillars “Leafing” a Mess in Your Trees? Tom A. Royer, Extension Entomologist



As trees leaf out this spring, they provide a bounteous smorgasbord for hungry caterpillars. We have received reports of noticeable infestations of spring/fall cankerworm, linden looper, and various leafrollers or leaf tiers on oaks and other trees this spring. When numerous, they become a concern to homeowners. The following is a short description of these caterpillars along with a brief life history, and some recommendations for management.

Spring cankerworm is also known as the “inchworm”. Caterpillars range in color from green to dark brown to nearly black and measure about 1 inch when full-grown. They have two pair of abdominal prolegs. When disturbed, they often let themselves down on a strand of webbing, and can thus be moved from tree to tree with the wind. They

also will stand nearly erect on their prolegs, giving them the appearance of small twigs. Spring cankerworm overwinters as a larva that pupates in late winter through spring. Adult moths begin to mate and emerge in late February. The female moth is wingless, and measures about ½ inch in length and has a set of stiff, reddish spines that point towards the tip of the abdomen. She crawls up the trunk of the tree and deposits up to 100 eggs in the crevices of the bark. The larvae feed for 3-5 weeks before they move to the soil. They remain there through the summer and fall, and pupate in late winter.

There are numerous leafrollers, leafrollers and leaf tiers that infest trees. Most are the caterpillar stage of various “tortricid” moths. The oak leafroller and oak leaf tier are two caterpillars that occasionally infest oaks in large numbers. The oak leaf tier and leafroller caterpillars come in various shades of green and measure up to ¾ inches when mature. These two insects resemble each other, but differ in how they web leaves together.



Leafrollers roll or fold one leaf and bind it with a strand of silk. Leaf tiers bind two or more



leaves together with strands of silk and feed between them. They may feed in groups when young, but usually feed singly as they mature. These moths undergo one generation each year. They pupate in their leaf nest, on the tips of twigs or in bark crevices. Adult moths will emerge in mid-May and lay eggs on the twigs of host plants that will hatch the following spring.

Both of these caterpillars will drop down on a silken thread when disturbed, creating a nuisance to homeowners that walk under infested trees. Control of either of these caterpillars is not necessary in most years because their numbers are kept in check by numerous natural enemies such as parasitic flies and wasps, disease, predator insects and birds. Even if the caterpillars become numerous, a healthy tree can withstand a complete defoliation early in the growing season. New transplants, or trees weakened by weather or other factors may require control. These caterpillars are very susceptible to products containing *Bacillus thuringiensis*, such as Javelin<sup>R</sup>, Dipel<sup>R</sup>, Bactospeine<sup>R</sup> or Ortho's<sup>R</sup> B.t. Biospray. This product is less effective on older larvae because they must consume it for effective control. Young and older caterpillars can also be controlled with the naturalyte ingredient spinosad that is found in Conserve<sup>R</sup> and some retail insecticide products as well as other insecticides that are labeled for these pests in ornamentals. Control is best achieved before caterpillars become full-grown, and it is essential to get thorough coverage, since they are often slightly protected within their "nest".

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## Wheat Disease Update

### Bob Hunger, Extension Plant Pathologist

Here are some observations I made during the last week around Stillwater and on trips to Marshall, Lahoma, and southwestern OK, as well as observations from Extension Educators and producers in OK and colleagues in other states.

- On April 26, I rated my fungicide trials for foliar diseases. Plants (Jagger) in the trial near Perkins were mostly at the 3/4ths berry stage and had a very low leaf rust incidence/severity (05S was my highest reading). Flag and F-1 leaves (first leaf below a flag leaf) were the only living leaves; all others were dead from lack of water. Plants in the trial near Stillwater, which were at the 1/4 to 1/2 berry stage) had some powdery mildew low on the plant and leaf rust ratings around the 15S range on flag and F-1 leaves. Around Stillwater in various breeder and demonstration plots, I found leaf rust, stripe rust, and powdery mildew as well as BYDV spots.
- On April 27, I rated breeder plots near Marshall and Lahoma. At Marshall, both stripe rust and leaf rust were present. In contrast, I found primarily stripe rust near Lahoma with leaf rust only at a very low incidence. On susceptible varieties, I had a few ratings for leaf rust at Marshall as high as 90S, but mostly in the 50-65S range. Stripe rust was severe at Marshall, but was more difficult to rate because of sporulation shutting-off. At Lahoma, stripe rust was also starting to shut-down, and a lot of necrosis was associated with the susceptible checks. However, in some plots stripe rust was still quite severe (Figure 1A and 1B).
- On April 28 I participated in field tours in southwestern OK (both near Altus). In this area I saw low incidences/severities of leaf and stripe rust. Most of the wheat in this area was about at the milk stage.

- Also near Lahoma, Ray Sidwell and I did find strawbreaker in a sample Ray had. No lodging had yet occurred, but the lesions at the stem bases were consistent with those that occur to this disease (Figure 2).

Other reports from Oklahoma include:

- Bart Cardwell (Garfield County Extension Educator) reported severe stripe rust in a field near Carrier, OK.
- Richard Sherrod (producer near Ponca City) has seen severe rust in his fields.
- Roy Don Hanan (McClain County Extension Educator) sent me a report and pictures of severe stripe rust on ‘Custer’ in McClain County. The reaction does not look as severe as occurs on fully susceptible varieties, but certainly there will be an impact on yield and test weight because the wheat is mostly at the “finishing-flowering” stage.
- Rick Kochenower (Area Research & Extension Specialist – Panhandle) reported spraying of many acres in northwestern OK because of rust (primarily stripe rust)

Below are some reports from other states:

- Arkansas (April 18): Wheat plots at Marianna (east-central Arkansas) were heading to flowering, and stripe rust had increased a lot since I was there 10 days ago. Hot spots in susceptible varieties were >90%. Temperatures are still favorable, but insufficient moisture may be limiting spread. When I looked real hard I did find a few small leaf rust pustules on lower leaves of a known susceptible variety, but upper leaves were free of leaf rust. There was some mildew, leaf blotch, Stagonospora blotch and BYD, but none of these were very serious. Stripe rust remains the only significant disease so far. (Gene Milus, Professor/wheat pathologist, University of Arkansas).



Figure 1. Reaction of a very susceptible wheat to stripe rust (A) and spores of stripe rust accumulated on a mower at Lahoma (B).



Figure 2. Appearance of lesions on stem bases indicative of strawbreaker (eyespot or foot rot).

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Dr. Richard Grantham  
Director, Plant Disease and Insect Diagnostic Laboratory

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