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	University of Kentucky College of Agriculture, Food and Environment <i>Cooperative Extension Service</i>
	<h2>Farm Update</h2> <p>extension.ca.uky.edu</p> <p>AGRICULTURE & NATURAL RESOURCES EDUCATION</p> <p>Clint Hardy Daviness County Extension Office</p>

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Soybean Interveinal Chlorosis

Symptoms of soybean leaves with interveinal chlorosis and interveinal necrosis have been observed in several fields across Kentucky recently. Interveinal chlorosis/necrosis is when the leaf tissue between the main leaf veins turns chlorotic (yellow) or necrotic (brown/dead), but the main veins remain green. There are a few diseases or disorders that can cause these symptoms.

Sudden death syndrome (SDS), caused by the fungus *Fusarium virguliforme*, is generally observed at some level every year in Kentucky. Although symptoms are observed on the leaves, the SDS fungus actually infects through roots and never makes it to above-ground plant parts. The leaf symptoms are caused by a toxin produced by the fungus that moves up through the plant and accumulates in the leaves. When split open, the middle of the taproot may appear discolored gray to brown when plants are affected by SDS. On a somewhat rare occasion, masses of *F. virguliforme* spores with a blue tint visible to the naked eye may be present on the roots of plants affected by SDS. Management of SDS occurs prior to planting by choosing the most resistant varieties available. Two fungicide seed treatments with proven efficacy against SDS also can help with management of this disease (ILEVO from BASF and SALTRO from Syngenta). Fields

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with high populations of soybean cyst nematode may be at greater risk of severe SDS symptoms and fields planted early in the season in cool soil temperatures may be at the greatest risk of infection and severe SDS symptoms.

Southern stem canker, caused by the fungus *Diaporthe aspalathi*, is also frequently observed on soybeans in Kentucky, especially when susceptible varieties are planted in fields that have been continuous soybean (non-rotated). In addition to the interveinal chlorosis/necrosis symptoms on the leaves, plants affected by southern stem canker also will have dark-colored lesions on the stem that will begin at the nodes and will spread across the stem.

Management of southern stem canker begins with planting the most resistant varieties available and rotating to non-host crops (i.e. corn, grain sorghum, wheat). Results from University of Kentucky field research trials have not shown any effect of foliar fungicides on this disease.

Red crown rot, caused by the fungus *Calonectria ilicicola*, is a new disease in Kentucky. It was first found in the state in 2021 in a few fields in Graves County. In addition to interveinal chlorosis/necrosis symptoms on the leaves, the lower stem and root area around the soil line will have a red discoloration. Small, red-colored spherical fungal structures known as perithecia will eventually form on the lower stem and roots. Rotating to non-host crops is an important step in managing this disease. If found, it is important to contact the Extension Office to get an accurate diagnosis and to help provide information about the distribution of this new disease in Kentucky.

Brown stem rot, caused by the fungus *Cadophora gregata*, is a disease not likely to occur on a frequent basis in Kentucky. This disease is generally found in states further north than Kentucky. To eliminate brown stem rot as the cause of the symptoms, stems can be split open with a knife to look for brown discoloration of the pith.

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Interveinal chlorosis/necrosis symptoms can also be caused by phytotoxicity from fungicide products that contain either prothioconazole or tebuconazole. These symptoms are more likely to appear when fungicides are sprayed when temperatures are hot. In this case, symptoms will only appear on leaves that were sprayed with the fungicide and symptoms will not spread to new leaves.

Southern Corn Leaf Rust Confirmed

Southern corn leaf rust was confirmed in Daviess County last week in early stages of initial infection. SCLR prefers low humidity and temperatures in the lower 80's so continued development should be expected, although drier weather will slow development. The good news is corn in the dough or dent stage prior to SCLR establishment in the field is safe from yield loss and no fungicide or additional fungicide is needed. If SCLR is found on late corn in milk or earlier reproductive stages, fungicide will help prevent the spread and yield loss.

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