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Cooperative Extension Service

Farm Update

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AGRICULTURE & NATURAL RESOURCES EDUCATION
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Grain Day Legacy Series - Red Crown Rot in Soybean

The 2026 Grain Day Legacy Series begins next Wednesday, January 21, at 9:00 a.m. at the Daviess County Extension office. Dr. Carl Bradley, Extension Soybean Disease specialist at the Princeton Research Station, will be up to discuss a problem that has not yet been confirmed in Daviess County, but one to be on the watch for. Red crown rot disease of soybean has been confirmed across the river in southern Indiana and in a few far western Kentucky counties. This meeting will meet the requirements for private pesticide applicator renewal for those who need it and will offer commercial pesticide applicator CEUs. Dr. Bradley has been conducting field research in western Kentucky and Illinois for the past three years. He is going to share what he has learned about how the disease develops in the field and how to manage it.

Red crown rot can occur on leaves, lower stems, and roots of soybean plants. On leaves, symptoms first appear as yellow flecks that occur between veins. These chlorotic flecks may continue to develop into yellowing between the leaf veins, while veins remain green, very similar to sudden death syndrome. Leaf symptoms are caused by a phytotoxin produced by the causal fungus, which moves through the plant and accumulates in leaves. Lower stem and root symptoms may be observed prior to leaf symptoms. Infections result in a reddish discoloration of lower stems areas just above the soil line and roots. During the late soybean development

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stages, white fungal growth may develop on roots and lower stems. Fungal fruiting structures may develop, which are red to reddish-orange, spherical, and less than 1/16 inch in diameter.

Red crown rot can be confused with other soybean diseases, which can make diagnosis difficult. The most accurate diagnosis requires a laboratory analysis, and symptomatic soybean samples from Kentucky fields can be submitted to the University of Kentucky Plant Disease Diagnostic Laboratory through my office. Potential look-alike diseases that have symptoms of interveinal chlorosis/necrosis on soybean leaves include sudden death syndrome (SDS), southern stem canker, and brown stem rot. Of these three diseases, only SDS and southern stem canker are currently known to occur in Kentucky, while brown stem rot occurs further north than Kentucky. Although these diseases have similar leaf symptoms to red crown rot, red crown rot generally can be distinguished by the reddish discoloration of lower stems and roots. Observance of the red, spherical perithecia on lower stems and roots is also distinctive to plants affected by red crown rot

Treating soybean seeds with a fungicide seed treatment that includes red crown rot on the label may help protect against early infections by the red crown rot fungus. Planting soybeans into soil temperature less than 77°F will help reduce infections by the red crown rot fungus. Management of soybean cyst nematode (SCN) may help reduce potential interactions between SCN and the red crown rot fungus, which have been shown to have an antagonistic effect on soybean plants when both are present.

Grain Yield Contest Recognition

Daviess County farms were recognized for their state-wide accomplishments at the Kentucky Commodity Conference awards celebration last Thursday evening in Bowling Green.

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The highest overall yield measured in the Kentucky Extension corn yield contest was a non-irrigated tillage class field of Scott Zoglmann at 329.88 bushels per acre. The highest overall non-irrigated no-till class yield was accomplished by Goetz Brothers Farms at 320.25 bushels per acre. The highest irrigated tillage class yield was by McKay Farms at 313.41 bushels per acre. The highest tillage white corn class was measured on Gene Glenn and Sons at 258.72 bushels per acre. The highest no-till white corn class entry was measured on the farm of Pat and Brian Thompson at 222.42 bushels per acre.

In the Kentucky Extension soybean contest, Tanner Stroup had the second highest yield measured in the state as a full season irrigated entry at 99.85 bushels per acre. Goetz Brothers Farms has the second highest full season non-irrigated entry at 97.38 bushels per acre. The highest irrigated double crop yield was measured on Ken-Maur Farms at 69.05 bushels per acre. Neil and Kevin Rudy had the second highest irrigated double crop yield at 68.98 bushels per acre. Goetz Brothers Farms had the second highest non-irrigated double crop yield at 72.54 bushels per acre.