

AGRICULTURE & NATURAL RESOURCES

Carlisle County ANR Newsletter October, 2024

Cooperative Extension Service
Carlisle County
65 John Roberts Road
Bardwell, KY 42023-0518
(270) 628-5458
Fax: (270) 628-3722
extension.ca.uky.edu

Dates to Remember:

Women in Ag Program-Nov. 7-Young Center-Clinton-flyer attached

Winter Grain Meeting for Producers-Dec. 11, Amberg Shop-flyer attached

Cloverbuds-Third Tuesday each month– Sept.17th -flyer attached or call Chuck or Brooke

4-H Bead Club-Second Monday November-flyer attached-contact Amber or Melinda

Walter Hayes Memorial Tournament-October 19-flyer attached

4-H Woodworking Club-flyer attached-Contact Amber

4-H Art Club-flyer attached-Contact Amber

Commodity Conference- Jan. 16, 2025-Bowling Green



Cooperative Extension Service

Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, physical or mental disability or reprisal or retaliation for prior civil rights activity. Reasonable accommodation of disability may be available with prior notice. Program information may be made available in languages other than English. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating. Lexington, KY 40506



Disabilities
accommodated
with prior notification.

CLOVERBUD AFTERSCHOOL CLUB



Make a fun and nutritional snack each day, explore the seven curriculum areas of 4-H listed below through hands-on activities, and learn about good character and citizenship!

Maximum 25 youth. **Grades K-3.**

3rd Tuesday of Each Month
(September 2024 - April 2025)

3:30-4:30

Call to Register 270-628-5458

**CARLISLE COUNTY
EXTENSION OFFICE**



College of Agriculture,
Food and Environment
Cooperative Extension Service

Cooperative Extension Service
Agriculture and Natural Resources
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4-H Youth Development
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LEXINGTON, KY 40546



Disabilities
accommodated
with prior notification.

We have found this soybean disease in Carlisle County.

University of Kentucky

College of Agriculture, Food & Environment

Extension Plant Pathology



Martin-Gatton
College of Agriculture, Food and Environment
Cooperative Extension Service

Plant Pathology Fact Sheet

PPFS-AG-S-25

Red Crown Rot of Soybean

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Plant Pathology
Extension Specialist

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Plant Pathology
Extension Associate

INTRODUCTION

Red crown rot is a soybean disease that was first confirmed in Kentucky in 2021 and first confirmed in the neighboring state of Illinois in 2018. Historically, red crown rot had been considered a disease that occurred in states further south than Kentucky (i.e., Louisiana and Mississippi). From measurements conducted within a few Kentucky soybean fields in 2021, small areas affected by red crown rot had grain yields that were approximately 70% less than non-symptomatic areas of these fields. Although the current distribution of red crown rot in Kentucky appears to be limited, the disease has the potential to cause major yield losses.

SYMPTOMS & SIGNS

Symptoms of red crown rot can occur on leaves, lower stems, and roots of soybean plants.

On leaves, symptoms first appear as chlorotic (yellow) flecks that occur between veins (FIGURE 1). These chlorotic flecks may continue to develop into interveinal chlorosis (yellowing between the leaf veins, while veins remain green) and interveinal necrosis (dead areas between the leaf veins, while veins remain green) (FIGURE 2). Leaf symptoms are caused by a phytotoxin produced by the causal fungus, which moves through the plant and accumulates in leaves. These leaf symptoms generally are not observed until soybean plants reach the reproductive stages of development (beginning flowering and beyond).



FIGURE 1. YELLOW (CHLOROTIC) FLECKS OCCURRING ON SOYBEAN LEAFLETS BETWEEN THE MAIN VEINS, CAUSED BY RED CROWN ROT. **FIGURE 2.** INTERVEINAL CHLOROSIS (YELLOWING BETWEEN THE VEINS) AND NECROSIS (DEAD TISSUE BETWEEN THE VEINS) ON SOYBEAN LEAFLETS, CAUSED BY RED CROWN ROT.

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 (FIGURE 3). During the late soybean development stages (pod and seed development and later), white fungal growth (mycelia) may develop on roots and lower stems, and fungal fruiting structures (perithecia) also may develop (FIGURE 3). Perithecia are red to reddish-orange, spherical, and less than 1/16 inch in diameter (FIGURES 3 & 4).



FIGURE 3. RED DISCOLORATION OF LOWER SOYBEAN STEM AND ROOTS CAUSED BY RED CROWN ROT, AND WHITE MYCELIA (WHITE FUNGAL GROWTH) AND RED, SPHERICAL FRUITING BODIES (PERITHECIA) PRODUCED BY THE RED CROWN ROT FUNGUS.

FIGURE 4. REDDISH-ORANGE SPHERICAL FRUITING BODIES (PERITHECIA) ON A SOYBEAN ROOT, PRODUCED BY THE RED CROWN ROT FUNGUS.

FIGURE 5. A PATCH OF PREMATURELY DEAD SOYBEAN PLANTS SEVERELY AFFECTED BY RED CROWN ROT.

Areas of symptomatic plants in fields generally occur non-uniformly within patches. Soybean plants that are severely affected by red crown rot may die prematurely, while non-affected plants remain green (FIGURE 5).



CAUSE & DISEASE DEVELOPMENT

Red crown rot is caused by the fungus *Colonectria ilicicola*. This fungus overwinters and survives in the soil as specialized structures known as microsclerotia. The fungus may begin to infect soybean roots shortly after planting. The greatest infection of roots occurs when soil temperatures are between 77°F and 86°F. The fungus has a broad host range, which includes alfalfa and peanut as other agriculturally important hosts.

DISEASES WITH SIMILAR SYMPTOMS

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 your local Kentucky county Extension 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.

Lower stem and root symptoms caused by *Rhizoctonia* root rot also can potentially be confused with symptoms caused by red crown rot. *Rhizoctonia* root rot may cause reddish-brown lesions on roots and hypocotyls (FIGURE 6); however, these lesions tend to be sunken and girdling, whereas the red discoloration caused by red crown rot generally is not. In addition, *Rhizoctonia* root rot is more likely to first be observed when plants are in the seedling to early-vegetative stages, and red crown symptoms may appear later in the season. Also, perithecia will only be present on lower stems and roots of plants affected by red crown rot.



FIGURE 6. REDDISH-BROWN SUNKEN AND GIRDLING LESIONS ON SOYBEAN HYPOCOTYLS AND ROOTS DUE TO RHIZOCTONIA ROOT ROT.

DISEASE MANAGEMENT

- Rotating to a non-host crop for 2 or more years may help reduce inoculum levels of the red crown rot fungus in the soil.
- 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 when soil temperature is less than 77°F may 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.
- Currently, no commercial soybean varieties are marketed with resistance to red crown rot.
- Additionally, no foliar fungicides include red crown rot on their labels, and fungicides will not be effective in managing red crown rot if applied.

ADDITIONAL RESOURCES

- An Overview of Soybean Seedling Diseases (CPN-1008)
<https://cropprotectionnetwork.org/publications/an-overview-of-soybean-seedling-diseases>
- An Overview of Stem Canker (CPN-1006)
<https://cropprotectionnetwork.org/publications/an-overview-of-stem-canker>
- An Overview of Sudden Death Syndrome (CPN-1011)
<https://cropprotectionnetwork.org/publications/an-overview-of-sudden-death-syndrome>

September 2023

Acknowledgement

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Editor: Cheryl Kaiser, Plant Pathology Extension Support

Photos: University of Kentucky—Carl Bradley (1, 2, 3, 5,6) and Kelsey Mehl (4)

Walter Hays Memorial Tournament.

7th Annual
CatQuest on the Confluence
Wickliffe Waterfront Boat Ramp
Wickliffe, KY

October 19, 2024

\$100 Entry/\$20 Big Fish
(per boat)
100% Payback

Sign In & Livewell Check
5:30-6:00am

Fishing Times 7:00 am - 3:00pm
Must be in line-up no later than 4:00pm

3 fishermen per boat, no age restriction

KY State Fishing Rules Apply

5 fish max - only 2 fish over 35" allowed

No trailering (if Wickliffe boat ramp water levels allow)

For more information contact
Joe Ben Hogancamp
270-331-8334
jbhogancamp@hotmail.com

CATCH & RELEASE TOURNAMENT - ONLY LIVING FISH WILL BE WEIGHED



KENTUCKY
COOPERATIVE EXTENSION

4-H Art Club

5-6 PM

FOURTH THURSDAY EACH MONTH

Ages 9-13

Free

Get creative with paints, clays, yarns, and more
Create State Fair worthy entries

Spaces limited, call to sign up

Carlisle County Extension Office
65 John Roberts Dr,
Bardwell, KY 42023
270-628-5458
An equal opportunity organization

4-H Woodworking Club

5-6 PM



**Second
Thursday each
month**

Ages 9-13

Free

Build State Fair Items
Learn Basic Tool Skills
Paint or Stain Projects

Spaces limited, call to sign up

Carlisle County Extension Office
65 John Roberts Dr.
Bardwell, KY 42023
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An equal opportunity organization



Green Bean and Ham Soup

4 cups fresh green beans, trimmed and cut into 1-inch pieces	3 whole carrots, peeled and sliced	¼ teaspoon black pepper
3 cups russet potatoes, unpeeled and cubed	1 pound fully cooked ham, cut into bite-sized pieces	1 teaspoon garlic powder
2 small onions, thinly sliced	9 cups water	1 cup half and half
	1 teaspoon salt	2 tablespoons corn starch
		¼ cup cold water

Place green beans, potatoes, onions, carrots, ham and the nine cups water into a large soup pot; **cover** and bring to a **boil**. **Reduce** heat to medium and **simmer**, uncovered, about 45 minutes or until the vegetables are tender. **Remove** the pot from the heat and **add** the salt, black pepper, garlic powder and half and half. **Return** to heat and bring to a **simmer** again. **Combine** corn starch and

the ¼ cup cold water in a small bowl. When simmer begins, **combine** the corn starch mixture into the soup and stir well. Allow the soup to remain on the heat for 5-7 more minutes while it thickens.

Yield: 12, 1 cup servings

Nutritional Analysis: 140 calories, 4.5 g fat, 2 g saturated fat, 25 mg cholesterol, 670 mg sodium, 14 g carbohydrate, 3 g fiber, 3 g sugar, 10 g protein



Buying Kentucky Proud is easy. Look for the label at your grocery store, farmers' market, or roadside stand.

<http://plateitup.ca.uky.edu>

Kentucky Green Beans

SEASON: June to September

NUTRITION FACTS: One-half cup of unseasoned green beans has 15 calories, is low in fat and sodium and provides fiber, vitamin A and potassium.

SELECTION: Choose slender, firm, smooth, crisp beans with slightly velvet-like pods with a bright, green color. Bean pods should be free of blemishes and have small seeds.

STORAGE: Beans can be stored unwashed in plastic bags in the refrigerator crisper for 3 to 5 days. Wash just before preparation.

Source: www.fruitsandveggiesmatter.gov

PREPARATION: Wash and remove stems and strings. Cook by steaming in a small amount of water until tender-crisp, about 5 to 8 minutes. They can also be cooked directly in soups or stews. Green beans go well with seasonings such as chives, dill, marjoram, mint oregano, thyme, lemon, mustard or onion.

KENTUCKY GREEN BEANS

Kentucky Proud Project

County Extension Agents for Family and Consumer Sciences

University of Kentucky, Dietetics and Human

Nutrition students

November 2015

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COOPERATIVE
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KENTUCKY
College of Agriculture,
Food and Environment

4- H Bead Club

Ready to unleash your inner artist?
Join our Bead Club and create
beautiful, one-of-a-kind pieces!
Projects are eligible for entry in the
county fair next summer.



Ages 9-14

Free

Second Monday November- April

5:00-6:00 PM

Spaces are limited, call to sign up

Carlisle Co. Extension Office

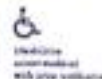
270-628-5458

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Women in Ag

ANNUAL SEMINAR

FARM STRESS/RURAL MENTAL HEALTH- DR. CHERYL WITT
JACKSON PURCHASE DISTILLERY - LLOYD JONES
KY TAX UPDATE - JENNIFER ROGERS
FSA UPDATE - MYKALA JEWELL

NOVEMBER 7, 2024
9:00AM-1:00PM
YOUNG CENTER
CLINTON, KY

 Cooperative
Extension Service

Contact your local Extension Office to RSVP
by Friday Nov. 1 to ensure your free meal.

Ballard 270-665-9118
Carlisle 270-628-5458
Hickman 270-653-2231
Fulton 270-236-2351

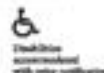
LUNCH
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UK Cooperative Extension Service Winter Grain Meeting

WEDNESDAY
DECEMBER 11, 2024
9:00 AM

AMBERG FARMS
6299 State Route 1128
Hickman, KY 42050



Session Title

Welcome
Grain Market Update
Corn Disease Update
Weed Update
Beaver Mitigation Program

Speakers

Local County Agent
Dr. Grant Gardner
Dr. Kiersten Wise
Dr. Larry Steckel
Micah Seavers

Lunch is sponsored by **Nutrien**
Ag Solutions[®]

KY & TN Commercial Applicator Points pending

***RSVP by calling your local county extension office by
Friday, December 6th to ensure your free meal***

Fulton - 270- 236-2351

Carlisle - 270-628-5458

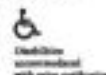
Hickman - 270-653-2231

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Free Soybean Cyst Nematode Testing (paid for by KY Soybean Promotion Board):

The Kentucky Soybean Board is continuing to fund free soybean cyst nematode (SCN) testing. Fall and Spring (before planting) are the best times to collect soil samples from fields for SCN testing. Samples for SCN testing are sent to the University of Illinois Plant Clinic. The KY Soybean Board will get the bill, and you'll get the results. In the past, I have "allotted" the number of samples per county, based on soybean acreage; however, we have not gotten very close to the total number of 400 samples that the KY Soybean Board has agreed to pay for. So for now, I don't see a need to have an allotment of samples per county. I do ask that all samples do go through County Agents and County Extension Offices, so that we do have some control over the number of samples, however. Please urge your farmers to take advantage of this free SCN testing!

Dr. Carl Bradley-University of Kentucky

Bring your soil sample to the office and I have the correct form to mail with the sample. I have had a few in the past take advantage of this. It is a good program the cost is \$25.00 per sample. The KY Soybean Board pays for this. Be sure, when you bring your sample in that you tell us it is for Soybean Cyst Nematode Testing. Thanks Chuck

Information released by



Chuck Flowers
Carlisle County Extension Agent
Agriculture and Natural Resources



University of Kentucky
College of Agriculture,
Food and Environment
Cooperative Extension Service

Carlisle County
P O Box 518
Bardwell, KY, 42023-0518

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