



Crazy Top of Corn

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INTRODUCTION

Crazy top of corn is a disease that has been observed more frequently in Kentucky due to heavy and intense spring rains. Although some crazy top symptoms are distinct, other symptoms of this disease may not be as familiar and are easily confused with herbicide or insect damage. This publication describes the symptoms and cause of disease, conditions that favor disease development, and information for disease management.

SYMPTOMS

Crazy top symptoms are frequently observed in low areas of fields or on field edges. The most recognizable symptom of crazy top is tassel proliferation or tassel malformation (FIGURES 1 & 2). Plants can reach full height and have only deformed tassels or ear shoots, or they may be stunted and symptomatic in the early vegetative stages. Shortened internodes are common, resulting in severely stunted plants. All affected plants usually have some level of abnormal growth and may not produce pollen or have a viable ear (FIGURE 3). Plants can have a bushy appearance, with excess leaf growth and tillering, shortened internodes, and yellow-

striped or yellow leaves (FIGURES 4, 5 & 6). In these cases, affected plants may not produce a tassel, and the symptoms can be confused with herbicide injury by ALS-inhibitors (Group 2) or stinkbug damage.



FIGURE 1. CLASSIC TASSEL PROLIFERATION SYMPTOM OF CRAZY TOP IN CORN, VISIBLE IN IMAGE CENTER.

FIGURE 2. EAR SHOOT PROLIFERATION AND TASSEL DEFORMATION ON A SHORTENED PLANT DUE TO CRAZY TOP.

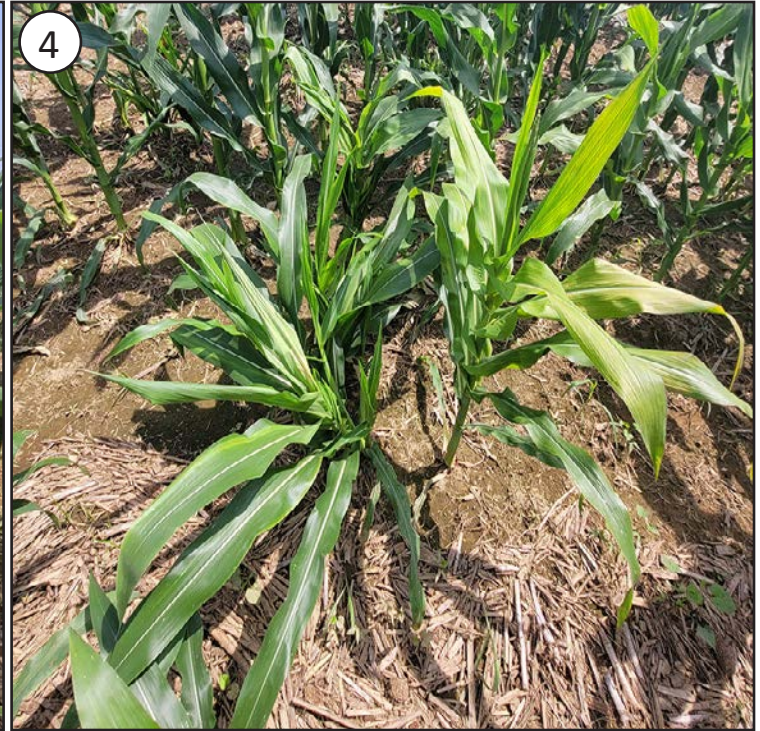


FIGURE 3. SHORTENED INTERNODES ON THE STALK OF A CORN PLANT AFFECTED BY CRAZY TOP. **FIGURE 4.** TILLERING (LEFT) AND YELLOWING (RIGHT) OF PLANTS AFFECTED BY CRAZY TOP. **FIGURE 5.** STUNTED PLANT WITH SHORTENED INTERNODES AND YELLOW STRIPING ON LEAVES CAUSED BY CRAZY TOP. **FIGURE 6.** TILLERING AND BUSHY APPEARANCE OF PLANTS CAUSED BY CRAZY TOP

DISTINGUISHING CRAZY TOP FROM OTHER PEST ISSUES

Stinkbug feeding can cause tillering, and deformed ears. However, evidence of insect feeding is usually visible as oval-shaped holes with yellow margins on leaves as they unroll from the whorl, or a hole and area of decomposing tissue in the stalk. This feeding damage can help distinguish stinkbug damage from crazy top. Likewise, misapplication of ALS-inhibiting herbicides can cause shortened internodes that resemble crazy

top symptoms. Check herbicide application records and symptom patterns to distinguish herbicide injury from crazy top. Crazy top is usually found in wet or low-lying areas of fields, or on field edges, and symptoms can appear randomly or sporadically in these and other areas of the field. Herbicide injury typically follows a spray pattern that corresponds with application.

CAUSE & DISEASE DEVELOPMENT

Crazy top is caused by the oomycete *Sclerophthora macrospora*. This fungus-like organism survives as thick-walled overwintering spores, called oospores, in soil or infected plant tissue. Many weedy and wild grass species, sorghum, and small grains (such as wheat), also serve as hosts for this pathogen.

Heavy rains and ponding in fields or field edges cause the oospores to germinate and produce a swimming spore, called a zoospore. These zoospores move in water and can infect corn when water containing zoospores splashes or moves into the whorl or growing tissues of corn seedlings.

Corn is most susceptible to infection before the five-leaf-collar growth stage (V5). Prolonged wet field conditions and heavy rains that cause splashing, ponding, or flooding can contribute to disease development.

DISEASE MANAGEMENT

Crazy top is not often economically damaging, but the disease has been observed more frequently because of the increase in intense or heavy rain events in Kentucky. Management is not typically needed. Cultural practices—such as managing weedy grass hosts that can serve as sources of inoculum—can help reduce the potential for disease development. Improving drainage can also help prevent infection and disease development.

ADDITIONAL RESOURCES

- Plant Pathology Extension Publications
<https://plantpathology.ca.uky.edu/extension/publications>

Acknowledgments

The author is grateful to Travis Legleiter (Weed Extension Specialist), Raul Villanueva (Entomology Extension Specialist) and Paul Vincelli (Plant Pathology Extension Specialist) for reviewing this publication.

Editor: Cheryl Kaiser, Extension Plant Pathology Support
Photos: Kiersten Wise, University of Kentucky

October 2021