

Harvest Report: Importance of Assessing Crop Maturity, Determining Extent of Stalk and Ear Rot Severity

Wayne Crook, MU Extension Regional Agronomist: 660/288-3239

Wet and cool weather has hampered harvest and grain drying. According to the Missouri Agricultural Statistics Service as of October 14, 2009, corn harvest was 37 percent complete compared to the normal of 72 percent and 39 percent last year. Soybean harvest was 17 percent complete compared to 36 percent normal and 18 percent last year. In the north central region where we are located, corn harvest is 30 percent complete and soybean harvest is 19 percent complete.

First freeze of the fall ends the growing season for crops, but extended cool weather before frost may have stopped crop maturity early. Some reduced yields in both corn and soybeans can be expected because of unusual fall weather. There were several fields of green soybean plants around when the cold weather occurred. One concern is green soybeans, as off-colored soybeans can be docked in price at market time. In processing, green soybeans produce green soy oil, an undesirable quality for cooking. Green soybeans do not mature in the bin after harvest. The extent of the green-bean syndrome depends on how mature the seeds were when frozen. Producers can check their soybean seed by splitting them with a knife. If only the seed coat is green, the beans should be classified as yellow beans and not docked.

Corn, for the most part, has passed the critical stage of maturity called "black layer". Corn killed before black layer forms can be difficult to dry, both on the stalk and in the bin. Delaying harvest to allow corn to dry in the field leads to increased risk of stalk lodging.

We have received several reports of both stalk and ear rots. Unfortunately, there is little that can be done about them except to harvest as soon as possible and dry the corn down. The wet weather this summer and this fall is very conducive to stalk rot and ear rot development. Any corn plant that was damaged this summer is even more susceptible to invasion by stalk rots and ear rots. Fields should be scouted to evaluate stalk rot problems. At least 100 plants, scattered throughout the field should be assessed. Look for visible symptoms and test stalk firmness at the lower internodes with thumb and forefinger. If more than 15 percent of the stalks are rotted, schedule for the earliest harvest possible because significant lodging is possible.

Fields should be scouted for ear rots for several reasons:

1. Ear rot diseases can reduce yield and quality of the corn
2. Some ear rot fungi may produce mycotoxins which are harmful, and can be fatal to livestock
3. Ear rots can continue to be a problem in storage, if the grain is not stored under optimum conditions

Recognizing which stalk and ear rots are present in a field is important for future management decisions. Susceptibility to these diseases differs amongst hybrids, so choosing a hybrid with a better disease package can help reduce disease risk in subsequent years. Rotation to soybean can also decrease disease pressure since some pathogens reside in corn residue.