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Soybean and Corn Progress Report: Late-Season Disease Development

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The September 13th USDA Crop Progress & Condition Report noted that 21% of the soybean crop in west central Missouri was turning color and 10% were dropping leaves. As the soybean crop continues to mature, growers are encouraged to scout their fields and note insect damage and pod feeding, as well as late season disease development. Numerous fields throughout west central Missouri were infected with Cercospora leaf spot this season. Cercospora leaf spot is the fungus responsible for purple seed stain. In most fields, foliage symptoms do not progress down the plants more than one to two nodes. Similarly, affected pods may be seen at the uppermost nodes. From surveying local fields recently, I have observed the characteristic round, reddish purple lesions on the top pods. Infected seed will show a pink to dark purple discoloration and can range from small specks to large blotches, which cover the entire surface of the seed coat. Growers are encouraged to check soybean fields, to determine the extent and severity of this disease. Since the Cercospora leaf spot disease can infect the seed, seed from heavily-infected fields should not be used for seed in 2010.

On September 18, soybean rust was confirmed on soybean leaves from fields in southeastern Missouri. When soybean rust develops on plants at the R6 (full pod) stage or later, soybean yield will not be reduced.

In the USDA Crop Progress and Condition Report released on September 13th, 33% of the corn crop in west central Missouri was mature and 4% had been harvested. As we continue towards harvest, corn growers should scout their fields for stalk rot infection. Generally, factors that stressed the plant during the grain filling stage of development have been correlated with an increase in stalk rot severity. Stresses such as water shortage, low potassium to nitrogen ratio, significant foliar disease pressure, extended periods of cloudy weather, and hail damage may be associated with stalk rot infection, especially if these stresses occurred during August and September. When scouting fields, growers should specifically investigate the interior tissue of the stalk. If the cells are dissolved, stalk firmness and strength will be noticeably poor. Harvest corn quickly if severe stalk rot infestations are found.

Weather conditions were conducive this year for the development of Diplodia ear and stalk rot. Hence, plant pathologists suspect them to be more widespread than normal. Stalks infected with Diplodia may show brown discoloration of their lower internodes. Stalks will become spongy and mats of white fungal growth may be evident on infected tissues. With regards to Diplodia ear rot, growers are encouraged to record any hybrid differences they notice. Hybrids do vary in their susceptibility to Diplodia ear and stalk rot. See the below image of an ear infected with Diplodia ear rot: