

According to the USDA Crop Progress and Condition report as of Sunday, October 25<sup>th</sup>, corn harvest is only 43% complete, 32 days behind the normal of 80%. The statewide moisture average for harvested corn is 19%, with a reported average of 16-21%. In the October 25<sup>th</sup> USDA report, soybean harvest was 28% complete, representing a 31% deviation from the normal of 59%. With the consistent rainfall patterns west central Missouri has experienced, crop quality and condition has declined and in some situations, there is warranted concern. Dr. Bill Wiebold, Crop Production Specialist with the University of Missouri, notes that wet weather has caused seeds to sprout prior to harvest in some locations.

Generally, sprouting before maturity is prevented in corn and soybean seeds. However, the growth hormone that prevents germination and sprouting is at low concentrations in the seed at maturity. As a result, seeds from corn and soybean plants can germinate on the ear or in the pod, if certain weather events occur. According to Dr. Wiebold, “if the ear remains upward and the husks do not completely cover the ear tip, water from rain or even a heavy dew may run down the inside of the husks and pool at the butt end of the ear.” In such a situation, if temperatures are above 50°F, kernels will likely germinate. (See below image; photo credit: Dr. Bill Wiebold, University of Missouri Extension).

With regards to the regional soybean crop, there have been instances of pod splitting and sprouting inside the pod. During wetting and drying cycles, mature soybean seeds will expand and contract. Because soybean pod walls do not expand as much as the seeds, expanding seeds exert heavy pressure on the pod wall and can cause the wall to rupture. If the seed remains swollen and within the pod, the exposed seeds may germinate if wet conditions and adequate temperatures persist. If the seed dries and shrinks, the seed may fall from the pod and “shattering” will occur. Seed shattering will be dependent on several factors, including the variety and also the speed and frequency of temperature and moisture fluctuations. The amount of seed shattering increases as the number and speed of wetting and drying cycles increases.

As expected, premature sprouting is quite damaging to grain quality and producers need to be aware of any potential problems prior to long-term storing of seed. Damaged seed will be more vulnerable and prone to invasion by fungi and insects.

