Sudden Death Syndrome (SDS) is caused by the soil borne fungus *Fusarium solani*. Soil borne pathogens enter into host plants through the root system. Therefore, foliar fungicides would not control SDS.

Sudden Death Syndrome foliage symptoms begin in the upper canopy after reproductive development begins. Symptoms include yellow blotches between leaf veins that turn reddish brown in the center. The leaf veins will stay green. Leaf tissue will dry and leaves will curl upwards. Similar symptoms can be caused by stem canker and brown stem rot, but neither of these diseases are common in Missouri.

Conditions favoring Sudden Death Syndrome include high soil moisture during vegetative growth stages and frequently associated with below normal temperatures at or near bloom. SDS may be found in both upland and river bottom fields. However, do not hold off on irrigating beans that are filling pods. SDS is usually found in patches; therefore, manage the rest of the field for maximum yield. Infection is sometimes associated with fields that have Soybean Cyst Nematode (SCN). If you planted a variety susceptible to SCN or have never tested a field for SCN, consider sampling this fall after harvest.

Losses associated with Sudden Death Syndrome will range from trace losses up to 80% loss depending on variety and when symptoms first appear. The later it appears, less yield loss associated. Most common yield loss range is 5 to 15%.

Management options: variety selection, improving drainage, staggering planting dates, avoid continuous soybeans, manage SCN and timely harvest. New addition to management includes the seed treatment fluopyram (ILeVo). For more information contact University of Missouri Extension and ask for IPM Guide 1002, "Soybean Diseases."

*Anthony Ohmes, Agronomy Specialist, University of Missouri Extension, Jackson, MO.*
Anaplasmosis Season

The majority of anaplasmosis cases are reported in late summer and fall. Anaplasma marginale causes disease by infecting red blood cells. The infected blood cells are removed from the body by the immune system causing anemia. In mild cases, animals may have elevated temperature, depression, and pale mucous membranes. In severe cases, animals may have yellowing around the eyes, severe depression or nervousness, and eventually die. If herds are not monitored closely, the first sign may be dead animals.

The disease progresses rapidly until the immune system kicks in or treatment is provided. Long acting injectable oxytetracycline is the antimicrobial used most often for treating Anaplasmosis. The recommended dose is 10mg per pound of body weight every 72 hours for a total of three to four treatments. This treatment only halts the development of the bacteria; the animal must still be able to mount an immune response and replace the red blood cells that were lost in order to recover. Early treatment with antibiotics increases the odds that an animal can respond to the disease challenge. ***Remember, oxytetracycline for treatment of Anaplasmosis is considered extra-label drug use and must be prescribed by the herd veterinarian!***

Animals that recover from infection with Anaplasmosis become carriers. Carrier animals have life-long immunity and rarely show clinical disease again, but they do serve as a reservoir of the organism within herds. It was once believed that carrier animals could be eliminated with repeated doses of injectable oxytetracycline. New studies show that repeated injections are not effective at eliminating the carrier status of animals.

There are three strategies to control Anaplasmosis: minimize transmission, feed antimicrobials (CTC), and vaccination. To minimize transmission means to control ticks and biting flies which transmit the disease through their bite. Transmission can also occur via blood contaminated equipment such as needles, dehorners, or castrating equipment. Needles should be changed between every animal and equipment disinfected to minimize the risk of Anaplasmosis transmission.

Feeding chlortetracycline (CTC) is the only approved antimicrobial for control of Anaplasmosis. This needs to be fed during arthropod vector season which can span from March through November in this part of the country. Some approvals for feeding of CTC require it be hand fed daily. Be sure to read and follow the feeding directions on the label as to whether the product needs to be hand fed daily or can be offered free choice.

The last method for control of Anaplasmosis is vaccination of animals. There is not a commercially licensed vaccine available, however, MO veterinarians can order an experimental vaccine that was developed at LSU. The vaccine has been deemed safe for animals, but no research has been done to demonstrate its effectiveness at preventing and controlling the disease. The general consensus of veterinarians using the vaccine in the state is that it reduces the number and severity of disease events where Anaplasmosis has been problematic.

This time of year be suspicious of Anaplasmosis if cattle have fever, depression, poor appetite, constipation, yellow membranes, nervousness, or are dead. Information from MU Guide: Control of Anaplasmosis in Missouri.

Erin Larimore, Livestock Specialist, University of Missouri Extension, Jackson, MO.
Be on the Lookout for Kudzu Bugs

Megacopta cribraria, also called the bean plataspid, kudzu bug, kudzu beetle, globular stink bug and lablab bug, is a shield bug native to India and China, where it is an agricultural pest of lablab beans and other legumes.

Hosted by wisteria, green beans, and other legumes, the insect sucks juice from the stems of soybean plants and reduces crop yield. However, when the insect infests kudzu, another invasive species, it appreciably reduces the growth of that plant. The kudzu bug was introduced from Asia, where it is widespread. It is the only representative of the family Plataspidae in North and South America. The insect taps through the veins of plants to reach the phloem, using piercing sucking mouthparts. As a result, injury to plants likely results from nutrient and moisture loss, rather than a direct loss of biomass from removal of plant tissue. On soybeans, the kudzu bug adults and nymphs feed on stems (last instar nymphs with purplish wing pads), while small nymphs have been observed feeding on leaf veins.

In 2011, yield losses of up to 47% were recorded in Georgia on untreated beans on a research station near Midville; only two kudzu bugs were found at this location the previous fall. In North Carolina, two kudzu bugs were found at the Upper Coastal Plain Research Station near Rocky Mount in the fall of 2011.

Since then it has spread rapidly throughout the South. It has been a problem on soybeans the last several years in Arkansas. On August 29 and September 1 of 2016, I found four kudzu bug adults on a kudzu plant mass in Northern Dunklin County.

Finding kudzu bugs on kudzu last year was a wake-up call. This was the first report of this invasive pest in SE Missouri. Kudzu bug, once established in an area, can migrate to soybean fields with areas located nearest to kudzu being highest risk. In Tennessee, this migration has been in July, preferentially but not exclusive to flowering soybeans. Kudzu bug is a sap feeder, not a pod feeder with a threshold of 25 nymphs per (immature kudzu bugs) per 25 sweeps.

Since kudzu bugs can spread from kudzu to soybeans, I was interested to see if I could find them on kudzu this early in the season. On June 29, I found eight first instar nymphs on kudzu in the same location as last year. On July 6, I found four adults.

Since that time, they have been found in low numbers in soybean fields in Dunklin County and Clay County, Arkansas. It only takes a short time before they become an economic pest after leaving kudzu.

Mike Milam, Regional Agronomy Specialist, University of Missouri Extension, Kennett, MO.
Produce Safety Alliance (PSA) Grower Training

October 18, 2017
8:00am – 5:30pm CDT

Cost: $50.00 per person

Includes PSA Training Manual ($50), Association of Food and Drug Officials (AFDO) Certificate of Completion ($35), light refreshments, lunch ($15) and speakers (~$100). Payment must be made at the time of registration, and WILL NOT be accepted at the door.

Who Should Attend:
Fruit and vegetable growers and others interested in learning about produce safety, the Food Safety Modernization Act (FSMA) Produce Safety Rule and Good Agricultural Practices (GAPs). The PSA Grower Training Course is one way to satisfy the FSMA Produce Safety Rule requirement outlined in §112.22 (c) that requires "At least one supervisor or responsible party for your farm must have successfully completed food safety training at least equivalent to that received under standardized curriculum recognized as adequate by the Food and Drug Administration."

Workshop costs supported by a Missouri Department of Agriculture Specialty Crop Block Grant.

Participants will learn about produce safety practices and key parts of the FSMA Produce Safety Rule as outlined within each of seven modules. There will be time for questions so participants should come prepared to share experiences during discussions in each of these areas:

- Introduction to Produce Safety
- Worker Health, Hygiene, and Training
- Soil Amendments
- Wildlife, Domesticated Animals, and Land Use
- Agricultural Water (Production and Postharvest)
- Postharvest Handling and Sanitation
- How to Develop a Farm Food Safety Plan

In order to receive the AFDO certificate, participants must attend all seven modules.
Crop Update

**Corn**
USDA will release their Supply and Demand and production estimates tomorrow September 12. The trade is expecting the corn yield will be cut at least 1.0 bushel to 168.2 bushels/acre which will result in a 100 million reduction in the ending stocks to 2.18 billion. For ending stocks to fall below 1.5 billion bushels, the yield will need to be 160.0 bushels per acre or less.

Technically, December futures has nearby support at $3.55. The next support level is at $3.44. Price resistance is back at the old support level at $3.75. There is a lot price resistance from $3.75 to $4.15. Seasonally, December corn futures has an average rally from August to September based on closing prices of 30 cents/bu. If the price support at $3.44 holds, $3.74 would be the price target. Unless there is a production surprise, I expect December futures to trade in the $3.44 to $3.75 range.

**Soybeans**
For soybeans, the average trade guess for yield is 48.8 bu./ac down from 49.4 in August. Production is projected to be down slightly and ending stocks are to be trimmed 30 million bushels to 442 million bushels. Just as in corn, there is no treat of running out of soybeans at this time.

Technically, November futures has nearby support at $9.60 then at $9.30 and $9.20. Resistance is in the $9.80 to $10.10 price range. Seasonally, November soybean futures has an average rally from August to September based on the closing prices of 80 cents/bu. If the price support at $9.10 holds, $9.90 would be a price target.

**Cotton**
We are looking at a big cotton crop and increasing ending stocks. How much negative impact the hurricanes will have on cotton production is unknown at this time. It is important for a cotton producer to remain in close contact with his cotton buyer to get the most current price quotes.

Technically, December futures has ran into resistance at 75.5 cents. Support is at 71.5 cents and then at 66.5 cents. Unless there is significant production damage, prices could fall back into the 71.0 to 69.0 cent price range.

**Rice**
U.S. rice ending stocks remain tight compared to the world ending stocks. For cash rice quotes, contact your rice buyer to get the most current price quotes and cash price outlook.

Technically, November futures continues to climb higher on less acres and declining ending stocks for new crop U.S. rice. Near term support is at $12.60 and the next resistance levels is at $13.50. Keeping a trailing stop 25 to 50 cents below the market would be a good idea.

David Reinbott, Agronomy Specialist, University of Missouri Extension, Benton, MO.
Future Meetings & Events -

**Intensive Grazing Management School** - October 10-12, 2017. Reynolds County Educational Building in Centerville, MO. For more information, please contact Joyce Pyles, Office Manager at 573-648-1035 or email at pylesv@missouri.edu

**Produce Safety Alliance Grower Training: Food Safety Modernization Act** - October 18, 2017 from 8:00 a.m. to 5:30 p.m. at the Butler county Extension Center at 614 Lindsay Ave., Suite 3 in Poplar Bluff, MO. Fee is $50.00 and registration must be completed ahead of time. Call the University of Missouri Extension Center to register at 573-686-8064.

**SEMO Performance Tested Bull Sale** - October 20, 2017. Beginning at 7 pm at the Farmington Livestock Barn, Farmington, MO. Go to semobeef.com for more information and bull requirements.

**Pearls of Production: Women in Agriculture Conference** - November 3-4, 2017. Columbia, MO. For more information or to register visit muconf.missouri.edu/womenandagriculture.

**Cattle Handling Workshop** - November 6, 2017. Gravel Hill 4C Arena, Burfordville, MO. Craig Payne, Director of Veterinary Extension will discuss cattle behavior and stockmanship and how this applies to facility design. There will be a walkthrough of cattle handling systems.


**Southeast Missouri Regional Corn Meeting** - Wednesday, December 13, 2017 at the Miner Convention Center, Miner, MO. Registration at 8:00; Meeting 8:30 a.m. - 1:00 p.m. Contact Anthony Ohmes (573) 243-3581 or David Reinbott 573-545-3516 to register.

**Missouri Regional Soybean Meeting** - Wednesday, January 17, 2018 at the Miner Convention Center, Miner, MO. Registration at 8:00; Meeting 8:30 a.m. - 1:00 p.m. Contact Anthony Ohmes (573) 243-3581 or David Reinbott 573-545-3516 to register.

**Cattle A.I. School** - January 19-20, 2018. 8 am to 5 pm at the Farmington Auction Barn, 1600 Woodlawn Drive, Farmington, MO. Cost is $250/person with $100 non-refundable deposit due Jan. 2, 2018. Enrollment taken in order of deposit received. Topics:

Reproductive Anatomy, Cattle Physiology, Estrus Synchronization, Nutrition, Bull Selection, Semen thawing, CIDR application and Artificial insemination. Mail $100 non-refundable deposit to SFC Extension, 1 West Liberty, Suite 101, Farmington MO 63640.

**Missouri Regional Cotton Meeting** - Tuesday, February 6, 2018. Location to be determined.

**Commodities and markets** - http://extension.missouri.edu/scott/crop-budgets.aspx

Contributions to this publication are made by University of Missouri agriculture food and natural resource specialists. If you would like to receive this publication please send an email with request to: denklers@missouri.edu