Now that we are past the cooler weather and in some cases, plant shock from herbicide drift, plants should be well into vine production.

Keep an eye open for anthracnose, gummy stem and downy mildew.

Anthracnose has been confirmed in at least one field in the bootheal region. The race was undetermined. Prevention includes mancozeb, azoxystrobin, pyraclostrobin or cymoxanil.

Gummy stem has been confirmed in several Florida fields as well as in Virginia. Some resistance has occurred to pyraclostrobin and azoxystrobin but mancozeb and cymoxanil can be utilized for prevention. Using more than one mode of action can help to overcome resistant strains of disease.

Cucurbit downy mildew has been confirmed as far north as South Carolina. This disease affects all cucurbits including cantaloupe, muskmelon, watermelon, pumpkin and squash. Chlorothalonil, trifloxystrobin and mancozeb are good options for protection. Formulations that contain more than one control may be most beneficial.

The Midwest Vegetable Production Guide for Commercial Growers (www-btny.purdue.edu/Pubs/ID/ID-56) is an excellent source of information with options for disease prevention. As always, once a decision is made concerning what chemical to apply, follow the label recommendations for the most effective application.

Sarah Denkler, Agronomy Specialist, University of Missouri, Bloomfield, MO
Shipping Stress and Pregnancy Loss

Stress causes animals to release stress related hormones. These hormones can cause other hormones to be released which alter the uterine environment in which the embryo is developing. The embryo is extremely vulnerable between days 5 and 42 – when it has migrated to the uterus and before it has become definitively attached to the uterus.

Loading animals onto a trailer and hauling them can be one of these stressors. Therefore, in order to minimize the risk of pregnancy loss associated with hauling cattle, shipping should be done between days 1 – 4 following insemination or after day 45. Shipping cows between days 5 and 42 should be avoided as it causes around a 10% decrease in pregnancy rates. There have been some reports of embryonic loss from shipping up to 60 days after insemination. Even if you are shipping during the recommended time points, care should still be taken to minimize stress such as not overloading trailers and handling cattle calmly and gently.

Erin Larimore, Livestock Specialist, University of Missouri, Jackson, MO.

<table>
<thead>
<tr>
<th>Effect of time of transport after insemination on pregnancy rates.</th>
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<td><strong>Days after insemination that transportation occurred</strong></td>
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<td>1 to 4</td>
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<td>Synchronized pregnancy rate</td>
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<td>% pregnancy loss compared to transport on days 1 to 4</td>
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<td>Breeding season pregnancy rate</td>
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<td>*Loss compared to percent pregnant prior to transportation (pregnancy determined by transrectal ultrasonography)</td>
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Adapted from Harrington et al. 1995 and Merrill et al. 2007
Loans to Benefit Specialty Crops

U.S. Department of Agriculture (USDA) Missouri Farm Service Agency (FSA) State Executive Director, Mark Cadle, today announced that producers who apply for FSA farm loans also will be offered the opportunity to enroll in new disaster loss protections created by the 2014 Farm Bill. The new coverage, available from the Noninsured Crop Disaster Assistance Program (NAP), is available to FSA loan applicants who grow non-insurable crops, so this is especially important to fruit and vegetable producers and other specialty crop growers.

“FSA is opening its doors wider so that more specialty farmers know of our array of services,” said Cadle. “And new, underserved and limited income specialty growers who apply for farm loans could qualify for basic loss coverage at no cost, or higher coverage for a discounted premium.”

The basic disaster coverage protects at 55 percent of the market price for crop losses that exceed 50 percent of production. Covered crops include “specialty” crops, for instance, vegetables, fruits, mushrooms, floriculture, ornamental nursery, aquaculture, turf grass, ginseng, honey, syrup, hay, forage, grazing and energy crops. FSA allows beginning, underserved or limited income producers to obtain NAP coverage up to 90 days after the normal application closing date when they also apply for FSA credit.

In addition to free basic coverage, beginning, underserved or limited income producers are eligible for a 50 percent discount on premiums for the higher levels of coverage that protect up to 65 percent of expected production at 100 percent of the average market price. Producers also may work with FSA to protect value-added production, such as organic or direct market crops, at their fair market value in those markets. Targeted underserved groups eligible for free or discounted coverage are American Indians or Alaskan Natives, Asians, Blacks or African Americans, Native Hawaiians or other Pacific Islanders, Hispanics, and women.

FSA offers a variety of loan products, including farm ownership loans, operating loans and microloans that have a streamlined application process.

Growers need not apply for an FSA loan, nor be a beginning, limited resource, or underserved farmer, to be eligible for Noninsured Crop Disaster Assistance Program assistance. To learn more, visit www.fsa.usda.gov/nap or www.fsa.usda.gov/farmloans, or contact your local FSA office at https://offices.usda.gov.

The Noninsured Crop Disaster Assistance Program was made possible through the 2014 Farm Bill, which builds on historic economic gains in rural America over the past six years, while achieving meaningful reform and billions of dollars in savings for the taxpayer. Since enactment, USDA has made significant progress to implement each provision of this critical legislation, including providing disaster relief to farmers and ranchers; strengthening risk management tools; expanding access to rural credit; funding critical research; establishing innovative public-private conservation partnerships; developing new markets for rural-made products; and investing in infrastructure, housing and community facilities to help improve quality of life in rural America. For more information, visit http://www.usda.gov/farmbill.
Crop and Farm Update

Corn Development
Corn is across the board in development. There is V5+ corn that has been side dressed to newly emerged seedlings. Vegetative staging of corn requires counting collars. The collar is where the leaf blade and sheath come together. V1 – V5 is, in general, easy to stage unless weather related damage has caused the earliest leaves to be lost. The picture is of V5 corn where the first leaf is uniquely rounder than following leaves. As corn reaches V6 and beyond, the rapid growth rate causes the smallest lower leaves to tear away from the plant. After this point it may become necessary to dig up a plant and split the stalk vertically to view internode elongation. The first node above the first elongated internode will be V5. Count nodes up to the top collar will give you the latest V stage. For more information and photos you can view slides from Kentucky: http://www2.ca.uky.edu/agc/pubs/ agr/agr202/agr202.pdf

Corn Insects
There is some cutworm activity. Cutworm larvae (picture) are nocturnal feeders which leave evidence of cut plants either at the soil line or just below the soil line. Feeding can occur from emergence to V4/V5 stages. Scout fields in the morning looking for evidence of feeding. Larvae may be hiding below litter or soil, therefore, some digging around may be necessary to confirm presence of larvae. Rescue insecticide treatments may be required when 2% or more of plants have been cut and larvae are present. For more information on products available for rescue treatment consult the “Pest Management Guide” M171. There is also a black cutworm guide: http://extension.missouri.edu/p/G7112

Grain Sorghum Development
Scout milo fields for cutworm as well, threshold is same as corn.
Grain sorghum goes through 9 stages of development based on the Kansas State University, “How a Sorghum Plant Develops.” Stage 0 is emergence which corresponds to VE – V2. Stage 1 is V3 –
V4. Stage 3 is V5 which is when dry matter accumulation begins to increase corresponding to a higher demand for nutrients. This occurs approximately 20 days after emergence (as seen on the chart).

Stage 4 is when milo changes from producing leaves to producing a seed head (reproductive phase). Stage 4, the total number of leaves have been determined (not all emerged) and head size will soon be determined. Stage 4 occurs approximately 30 days after emergence and is where stalk growth increases rapidly.

Sidedressing nitrogen should begin between Stage 3 and Stage 4. Nutrients need to be available at Stage 4 to maximize yield potential. Consult the grain sorghum management sheet for more information: http://extension.missouri.edu/scott/documents/Ag/Agronomy/Grain-Sorghum-Production-Economics.pdf. There is also an article from Arkansas Row Crops newsletter: http://www.arkansas-crops.com/2015/05/11/sidedress-grain-sorghum/

Soybean Weed Control
With wet weather and potentially further delays in planting, the residuals that went out may begin to break down sooner than one would want. Scout fields at planting to determine if a burndown herbicide labeled for pigweed is necessary behind the planter. When determining to spray the POST application timing, base the application timing on pigweed size (<4”). This may not correspond to a set number of days after planting or emergence, especially the way the end of May is turning out. Pictured is Palmer amaranth (pigweed). Refer to Pest Management Guide M171 for POST options.

Quick Reference Management Guides
We have been working hard putting together a series of 2 page quick reference management guides for the crops we grow in Southeast Missouri. They can be found and other agronomy guides at the following link. More will be coming in the weeks and months ahead.

http://extension.missouri.edu/scott/AgronomyHorticulture.aspx

Anthony Ohmes, Agronomy Specialist, University of Missouri Extension, Jackson, MO
NRCS Extends Application Deadline for Two Initiatives

The USDA’s Natural Resources Conservation Service is extending until June 5 the deadline for landowners to apply for financial assistance for the Mississippi River Basin Healthy Watersheds Initiative (MRBI) and the Missouri Ozark Highlands Restoration Partnership (OHRP).

“We are excited about these new funding opportunities for Missouri farmers, ranchers and foresters, and we want to offer more time for our customers to consider how these programs might benefit them,” State Conservationist J.R. Flores said.

The newest round of MRBI focuses on helping farmers and ranchers in five Missouri watershed areas install conservation measures that will contribute to cleaner water flowing into the Mississippi River and, ultimately, the Gulf of Mexico. Through MRBI, $9.6 million in financial assistance will be available over the next four years to address critical natural resource concerns in these watersheds.

James Bayou – St. John’s Diversion Ditch and Mud Ditch (Mississippi and New Madrid Counties);

Upper Buffalo Creek Ditch (Dunklin County);

Bear Creek – West Yellow Creek (Linn County);

Peno Creek and Spencer Creek (Ralls and Pike counties);

Sugar Creek and Mission Creek – Missouri River (Buchanan and Platte counties).

OHRP provides $1.2 million in new funding over the next three years to help landowners improve the health and resiliency of forest ecosystems where Mark Twain National Forest and private lands meet in southern Missouri.

Forest land owners in 27 Missouri counties are eligible to apply for funds to develop and implement forest management plans. The Forest Service will target funds to the Mark Twain National Forest in an effort to remove invasive species and improve water quality. Overall implementation of this project, on both private and public lands, will reduce wildfire threats by advancing conservation practices such as forest stand improvement, firebreaks, prescribed burning and brush management.

Additionally, implementation will reduce sedimentation in surface water and improve habitat for numerous threatened and endangered species. These funds will allow forest land owners to address priority resource concerns including forest health, plant and water quality degradation, fish and wildlife habitat and soil erosion.

For more information about these and other NRCS programs, visit www.mo.nrcs.usda.gov

Curt McDaniel, United States Department of Agriculture Natural Resources Conservation Service, 573-876-9363 USDA is an Equal Opportunity Provider and Employer
Congratulations to the consignors of the May 2015 Show-Me-Select heifer sale for fall calving. Eighteen producers worked diligently to provide a great lineup of heifers with remarkable quality. Demand was lower than our December sale with only 53 registered buyers, but the sale still maintained an average price of $2,743, a $90 increase in averages over the May sale one year ago. There were 31 actual buyers who took home anywhere from one to twenty heifers each. Purchased heifers traveled to surrounding areas including Illinois, Arkansas, and Tennessee.

Heifers in the Show-Me-Select program have met minimum standards for reproductive soundness, pelvic size, frame size, muscle thickness, body condition and weight. In addition, they have undergone a comprehensive health program and are guaranteed bred. There were 213 heifers in the offering; mostly Angus or Angus cross, with some Simmental, SimAngus, and Black Herefords. There were nearly 70 head of registered stock in the offering.

The top consignment average went to a first time Show-Me-Select participant, Chase Gray, Sikeston. His registered black Hereford Show-Me 4H heifer brought $3,200. She was halter broke and bred to a Red Angus bull.

The second high consignment average was $2,995 on 11 head of registered Angus heifers consigned by Turner Farms, Belgrade. The Turner’s have participated in the program and sale since 2008 and have multiple generations of artificial insemination (AI) genetics behind their heifers. Nine of the eleven consignments were Tier II qualification. Turner’s also had the highest selling consignment of the sale: $3,900 – a GAR Prophet daughter, AI bred to Hoover Dam, carrying a bull calf.

The average sale price was $2,743. There was a $120 premium for AI bred heifers and heifers with Tier II qualification averaged $100 - $300 more than Tier I heifers depending if they were AI or natural service bred. There was a $100 to $200 advantage for selling heifers with a known fetal sex depending if they were sold as a mix, all bull, or all heifer calves. Buyers are willing to pay more for more information and top genetics.

The next Show-Me-Select sale for the southeast region will be held on December 5 at Fruitland Livestock Auction. Please visit SEMObeef.com for more information about the Show-Me-Select program and requirements.

Erin Larimore, Livestock Specialist
University of Missouri Extension
684 West Jackson Trail
573-243-3581
LarimoreE@missouri.edu
If you are interested in receiving this publication via e-mail or being removed from the email list please send a request to denklers@missouri.edu.

Future Meetings & Events -

**Missouri State Fair - August 13-23, 2015.** Sedalia, MO. For more information visit www.mostatefair.com or call 1-800-422-FAIR.

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

**2014 Farm Bill** - http://extension.missouri.edu/scott/Farm-bill.aspx