Stem elongation, initiated at jointing, indicates the increased demand for nitrogen fertilizer. It is critical to have adequate nitrogen in an available form for wheat during this phase of growth. It is critical to monitor wheat for nitrogen stress, especially if nitrogen was applied early in the year and/or soils are prone to leaching or denitrification. Wheat may respond to nitrogen applied up to the second node, described as Feekes 7. If possible, avoid nitrogen applications after these stages because typically by the time nitrogen is available to the plant it is a cosmetic response and there is risk of burning the upper leaves, in particular the flag leaf, described as Feekes 8 to 9.

Flag leaf (Feekes 9) health is critical, since it is the primary leaf for photosynthate production during head development (Feekes 10 to 11). Monitor plants closely following Feekes 8 for disease and insect pests. An early season disease that sometimes moves into our area is stripe rust. Also, monitor fields for insects, in particular true armyworm since this pest can rapidly defoliate flag leaves and clip heads.

For more information on wheat management during stem elongation contact your local MU Extension office and ask for IPM 1022 “Management of Soft Winter Wheat” or find it on the web at http://ipm.missouri.edu/pubs.htm.

Anthony Ohmes, Agronomy Specialist, University of Missouri, Jackson, MO.
Alfalfa Weevil Management

Alfalfa weevils lay eggs in fall, winter and spring. Larvae grow through four stages (instars). After enough degree days above 48 have been collected egg hatch begins and larvae move up alfalfa stems to feed inside the plant terminal. Third and fourth instar stages feed on foliage outside terminal, with a large amount of foliage possibly consumed leaving a skeletonized stem.

Scouting should begin in early April and continue to scout as feeding gets progressively more intense through April. Scouting with a sweep net will help identify presence of larvae, however, the most effective technique is to collect ten alfalfa stems in five locations in the field and tap them into a white bucket. Handle stems carefully when clipping so larvae do not fall to the ground. The economic threshold is an average of one or more larvae per stem and 30% terminal feeding damage.

Early harvest is an option for management, however it is best for the crop to not harvest earlier than 10 days prior to normal growth stage of 1/10 bloom. Harvest could be done by cutting for hay or grazing. University of Missouri research found that 95% of weevils can be reduced with mechanical harvest and a 90% reduction by grazing. If grazing, be cautious of bloat and damage to the alfalfa crowns from trampling during wet conditions.

Dr. Wayne Bailey has published an article with more information and products available for control of larvae: http://ipm.missouri.edu/IPCM/2015/3/Alfalfa-Weevil-Larval-Management-Options-for-2015/

Anthony Ohmes, Agronomy Specialist, University of Missouri, Jackson, MO.

Spring AgMarketing Teleconferences

Wednesday, April 22
12:00 noon until 1:30 p.m. via Adobe Connect.

Periodically, MU ag economists and regional extension specialists conduct teleconferences to provide Missouri farmers, extension specialists, and other interested people with current information on the outlook for Missouri crops and livestock.

Regional Extension Specialists volunteer to host local group sessions or participate individually. MU ag economists present current outlook information and analysis and respond to questions from the audience.

At the April conference, Ron Plain, David Reinbott, and Joe Horner will discuss fundamental analysis of cattle, hogs, corn, soybeans, wheat, and dairy and Pat Guinan will give a weather update.

If you’d like to register or would like additional information, please reply to whiteJ@missouri.edu by April 20 and I’ll send the code for connecting to the conference.
Fisher Delta Research Center, Portageville, is hosting a free Pesticide Collection Event for Missouri farmers and households, provided by the Missouri Department of Natural Resources and University of Missouri Extension. Drop-off will be available 8 a.m. to 1 p.m., Saturday, May 30. The following items will be accepted: pesticides, insecticides, herbicides, fertilizers containing herbicides or pesticides, fungicides, rodenticides, dewormers and fly tags. MU’s Fisher Delta Research Center is located at 147 West State Highway T in Portageville.

The collection is for Missouri residents only. Farm chemicals from businesses, pesticide production facilities, distributors or retailers, and the like will not be accepted.

Contact C.J. Plassmeyer, Missouri Department of Natural Resources, at 573-751-0616, with questions. Visit dnr.mo.gov/env/hwp/pesticide for future collection sites and dates, as well as recommendations for safe transport of the chemicals to the drop-off. For directions to Fisher Delta Research Center, go to delta.cafnr.org/contact.
Ideally, grass needs a minimum of 6 inches of growth before grazing for longevity of stand and summer plant survival. Roots mimic what you see on the surface. Plants that are continually grazed at or below 4 inches without a chance for rest will have short roots. Root development stops as plants set seed, therefore areas that cannot be grazed or cut for hay should be mowed to avoid energy going to seed production.

Grass grown on low phosphorus soils have less root development, less phosphorus, magnesium, calcium, and protein content compared to soils with Bray I phosphorus levels of 20 pounds per acre or above. Applying phosphorus on low testing soils has improved magnesium uptake during lush spring growth. Grass tetany has been associated with low levels of magnesium in new spring growth that cattle consume. Do not overlook the importance of soil testing and phosphorus levels in grass pastures.

Now is also the time to control spring weeds such as thistles and buttercup. Cattle prefer grazing pastures where weeds have been controlled according to a study by Kevin Bradley, MU Extension Weed Scientist. View the link to a video on the study Dr. Bradley conducted: https://www.youtube.com/watch?v=qXhBTkpBjWU.

Products containing 2,4-D, dicamba, triclopyr, picloram, aminopyralid, or pre-mixed products are safe at labeled rates on grass species but can kill or severely injure desirable broadleaves in grass-legume pasture mixes. Always read label for proper rates, target weeds, and grazing or harvest restrictions.

For more information contact a University of Missouri Extension Center and ask for IPM 1031: “Weed and Brush Control for Forages, Pastures, and Noncropland.” You can also find it on the web at: http://extension.missouri.edu/p/ipm1031

Anthony Ohmes, Agronomy Specialist, University of Missouri, Jackson, MO.

*Pictured: 19 day old - Brachypodium differences in root system architecture on various nitrogen and phosphorus conditions. Representative examples on control (a), low-N (c) and low-P (e) media. Arrows point to lateral roots, arrowheads point to axile roots. - Paul A. Ingram, Jinming Zhu, Aabid Shariff, Ian W. Davis, Philip N. Benfey, Tedd Elich. High-throughput imaging and analysis of root system architecture in *Brachypodium distachyon* under differential nutrient availability. Phil. Trans. R. Soc. B: 2012 367 1559-1569; DOI: 10.1098/rstb.2011.0241. Published 23 April 2012.*
SOLAR FOR FARM, HOME, & BUSINESS

INTERACTIVE PROGRAM FOR SOUTHEAST MISSOURI

Dr. Van Ayers, Community Development Specialist – Bloomfield
Frank Wideman, Natural Resources Engineer - Perryville
Joel Tatum, Livestock Specialist - Greenville

PROGRAM DETAILS:

- How solar works - components / options
- What is net metering – working with your utilities to interconnect
- How do the incentives work - tax credits, depreciation, grants
- Applying for grants that are available
- What about passive solar
- How much solar do I need
- Will my utility help with my project
- Benefits of solar energy

Perryville - April 7 & 8
2 night session 6:30 -8:30 PM
Perryville Higher Education Center 108 Progress Drive, Perryville, MO 63775. (Directions- Just off of Hwy 51 between Edgemont and St. Joseph streets)
For more information or to RSVP contact Frank Wideman at 573-547-4504

Greenville - April 22 & 23
2 night session 6:30 -8:30 PM
Greenville High School 178 Walnut Street, Greenville, MO 63944. For more information or to RSVP contact Joel Tatum at 573-224-5600 Ext. 8.

Bloomfield - April 10
Morning session and tour 7:00 AM
Katy’s House Restaurant, 307 EAST Court Street Bloomfield, MO. Breakfast $8 per person (Program following breakfast then tour). For more information or to RSVP contact Van Ayers 573-568-3344.
China’s Insatiable Appetite for US Sorghum

The numbers are in and it’s looking good for US sorghum farmers. I’m talking about the latest data out of the USDA Foreign Agricultural Service which shows demand from the export market continues to increase with US sorghum commitments reaching 300 million bushels.

This meets the USDA’s export projections just six months into the 2014/15 marketing year, which is pretty incredible. The majority of this export demand comes from China who represents 288 million bushels, or 96%, of total US grain sorghum exports.

To date, China has purchased approximately 67% of the total 2014/15 US grain sorghum crop. It seems Chinese customers can’t get enough, which is largely being used for feed. It's believed that Chinese end-users and importers simply don’t want to deal with the GMO issues surrounding corn imports, nor the tariff constrictions associated with corn. In simple terms, end-users want cheap sorghum rather than their $9 and $10 domestic corn.

There’s also another use for sorghum that is driving Chinese demand..."alcohol." I'm told that in China they use sorghum to make an alcoholic beverage called Biajiu. It is a clear, strong drink distilled from sorghum and is generally about 40 - 60% alcohol by volume. It's very apparent the Chinese demand for sorghum is having a huge effect on market dynamics. According to the United Sorghum Checkoff, the pull from the export market -- driven by China -- has led to the second highest value at the port paid to sorghum producers in the last 70 years. The demand is so great and the prices so good that sorghum is beginning to take some acres from corn, especially in the Plains, the Mid-South and the Delta regions. I've even heard reports of acres going to sorghum up in central Kansas. While demand and price strength is obviously buying up acres, there is some talk out of China that they are pressuring the WTO to try and block some of the US imports as they are undermining China’s domestic corn prices.

Nothing is confirmed, but it does make the idea of swinging acres to sorghum a bit riskier. Below is a chart of trade year data that shows China’s incredible surge in demand for US sorghum exports. Just keep in mind, sorghum can look great on paper, but many producers will tell you it’s much tougher to raise the big yields than it is to simply pencil them in. Also remember in many areas, if not properly planted or cared for during the growing season, it can stress the soil. Meaning whatever is planted behind it would experience a bit of a drag. I like the thought of growing more sorghum, but just make sure you talk with your local agronomist to find out if it's right for your specific operation.

(Source: Sorghum Checkoff)

World Sorghum Trade

(October/September Trade Year, Thousand Metric Tons)

![World Sorghum Trade Chart](Image)

USDA/EVS: Global Markets and Trade, February 2015
Future Meetings & Events -

Missouri's Complex Fence Laws via Lync. Thursday, April 2 in Reynolds County for $15.00 at 573-648-1035 and Cape Girardeau County Extension Center at 573-243-3581 from 6:30 to 8:30 PM.


Beef Reasearch & Teaching Farm, Columbia, MO, Wednesday, April 1, 2015
Enrollment Limit = 70. Contact Lena Johnson at 573-882-7327 or JohnsonLM@missouri.edu

Forage Systems Research Center, Linneus, MO, Thursday, April 2, 2015
Enrollment Limit = 120. Contact Racheal Foster-Neal at 660-895-5121 or FosterNealR@missouri.edu

Solar for Farm, Home and Business in 3 locations.

Perryville - April 7 & 8 - 2 night session 6:30 –8:30 PM. Perryville Higher Education Center 108 Progress Drive, Perryville, MO 63775. For more information or to RSVP contact Frank Wideman at 573-547-4504

Greenville - April 22 & 23 - 2 night session 6:30 –8:30 PM. Greenville High School 178 Walnut Street, Greenville, MO 63944. For more information or to RSVP contact Joel Tatum at 573-224-5600 Ext. 8.

Bloomfield - April 10 - Morning session and tour 7:00 AM. Katy’s House Restaurant, 307 EAST Court Street Bloomfield, MO. Breakfast $8 per person (Program following breakfast then tour). For more information or to RSVP Contact Van Ayers 573-568-3344.

Pesticide Collection Event Saturday, May 30, 2015 Fisher Delta Research Center at 147 West State Highway T in Portageville, MO from 8:00 am to 1:00 pm.

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
MU Extension Summer Camp

The Arts As A Portal to Science Communication.

July 12-16, 2015

Summer Art/Science Camp for ages 15-18

Sponsored by: MU Extension Community Arts Program (CAP), MU’s Christopher S. Bond Life Sciences Center and 4-H Center for Youth Development. CAP is offering one full residential camp scholarship (a $500 value) for a Missouri high school student. Go to http://extension.missouri.edu/communityarts/artandsciencecamp.aspx for more details or contact, wooleryl@missouri.edu.

Early registration is $500 by May 7, 2015 or $550 after May 7.