If wheat tiller numbers are below target, consider applying a green up fertilizer application. Green up is typically mid-February for southeast Missouri. You have approximately a 30-day window between green-up and jointing for additional tillering. In fields with thin stands, a green-up application should be applied. However, with adequate tillering and plant development, this should be delayed until pre-jointing, Feekes 5, around mid-March.

Specifically, in fields with less than 60 tillers per square foot at green-up, apply 30 to 40 pounds of nitrogen to increase tillering and head size. For fields with 60-80 tillers per square foot apply 20 to 30 pounds. Applying nitrogen at green up in a field with over 90 tillers can lead to a thick lush canopy which may increase the risk of disease, lodging and injury from a late cold snap. The time of greatest nitrogen uptake is between jointing (Feekes 6) and flowering. Therefore, pre-jointing applications would supply this upcoming demand and reduce plant damage from ground applicators. Research shows a yield boost by splitting applications on less nitrogen efficient sandy and clay soils. Tissue tests just before jointing can help determine nitrogen needs at jointing.

Remember that low organic matter, usually found in sandy soils of southeast Missouri, are also prone to low sulfur conditions and sulfur fertilizers should be part of the nutrient program to prevent deficiency. Most low sulfur soils require 10 to 15 pounds per acre of sulfur.

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”. This publication can also be found online at http://extension.missouri.edu/.

Dr. Anthony Ohmes, Agriculture Specialist, University of Missouri Extension, Charleston, MO.
Question and Answer from Flood Damage

What is fallow field syndrome?
Sometimes, but not in every incidence, crops planted in a field in which no crop was planted (or died from flooding) the previous year grow and perform poorly. The Missouri crop most often affected is corn. Visual symptoms appear similar to phosphorus deficiency, and often the symptoms appear in fields that test high for P.

The cause of fallow field syndrome (FFS) is unknown, but it might be related to beneficial fungi called mycorrhizae. These fungi grow in and around roots and increase phosphorous uptake, and are dependent on host plants to complete their life cycle. If plants are not grown in a field, mycorrhizal growth and spores are substantially reduced. Plants grown the next year might be slow to be infected because of the relatively low number of spores in the soil.

Planting a cover crop in prevented planting fields might decrease the potential for FFS next year. Almost any cover crops species, except members of the radish family, will be helpful.

Is wheat straw from plants infected with Fusarium fungi toxic to animals?
This answer is based on a document prepared by Ohio State University. For more information, see http://corn.osu.edu/newsletters/2010/2010-19/mycotoxin-q-a.

Yes. Straw from scabby fields does contain vomitoxin and other mycotoxins. Results from studies done at the University of Illinois (with laboratory tests done at North Dakota State University) confirmed that vomitoxin levels might exceed 2 ppm in wheat straw, even in fields treated with fungicide. As a result, the same caution exercised when handling and feeding scabby grain should be exercised when dealing with moldy straw. Get the straw tested before using it for silage or bedding. The risk of contamination is much lower when straw is used for bedding; however, you should still avoid straw with very high levels of vomitoxin because it is impossible to tell how much the animals will munch on the straw. Little information is available on hay, but wheat hay is much more likely to be consumed by animals than straw.

Answers provided by Bill Wiebold, Agronomy Professor, University of Missouri Extension, Columbia, MO.
The establishment of a $1.00 per head Missouri state beef checkoff assessment will go to a vote. Cattle producers will be required to register in order to vote on the checkoff. Registration is now available at your local FSA office or online: [http://agriculture.mo.gov/councils/](http://agriculture.mo.gov/councils/)

Registration closes March 4, 2016, and ballots will be mailed to registered producers on April 4, 2016.

With all the negative publicity about cattle production and consumption of beef, I think everyone needs to take a hard look at what the state check-off has to offer. Read below to see what your dollars will be doing for MO beef.

**Promotion**
- Increase producer’s net return by $60 per calf through the state checkoff
- Enhance promotion activities in MO with the goal of growing beef consumption by 10% by 2020
- Create awareness that beef is healthy, sustainable and ethical

**Education**
- Educate all MO youth and educators about beef production and dietary benefits
- Grow consumer trust and confidence in beef and beef production
- Increase funding to education in the classroom activities

**Research**
- Conduct farm gate production research benefiting farm operation in forage management and feed efficiency
- Protect and promote beef receptiveness with sound research

**Marketing**
- Identify new marketing outlets for beef in MO and reinstate statewide campaigns through radio, print and billboard promotions
- Develop partnership with Missouri meat processors and direct producer marketers to create awareness and develop co-branded MO beef and beef products

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Enrollment for the Show-Me-Select Heifer Program for spring calving is due February 1, 2016. These would be yearling heifers bred to calve January – April of 2017. If you would like to sell heifers in the December 3, 2016 sale at Fruitland or any other Show-Me-Select sale for spring calving you need to enroll.

***Please contact Erin Larimore 573-243-3581 if you have any questions on the program or for an enrollment form or visit [www.semobeeef.com](http://www.semobeeef.com)**
Federal Aid Programs for the State of Missouri

Following is a summary of key federal disaster aid programs that can be made available as needed and warranted under President Obama’s disaster declaration issued for the State of Missouri.

Assistance for Affected Individuals and Families Can Include as Required:

- Rental payments for temporary housing for those whose homes are unlivable. Initial assistance may be provided for up to three months for homeowners and at least one month for renters. Assistance may be extended if requested after the initial period based on a review of individual applicant requirements. (Source: FEMA funded and administered.)

- Grants for home repairs and replacement of essential household items not covered by insurance to make damaged dwellings safe, sanitary and functional. (Source: FEMA funded and administered.)

- Grants to replace personal property and help meet medical, dental, funeral, transportation and other serious disaster-related needs not covered by insurance or other federal, state and charitable aid programs. (Source: FEMA funded at 75 percent of total eligible costs; 25 percent funded by the state.)

- Unemployment payments up to 26 weeks for workers who temporarily lost jobs because of the disaster and who do not qualify for state benefits, such as self-employed individuals. (Source: FEMA funded; state administered.)

- Low-interest loans to cover residential losses not fully compensated by insurance. Loans available up to $200,000 for primary residence; $40,000 for personal property, including renter losses. Loans available up to $2 million for business property losses not fully compensated by insurance. (Source: U.S. Small Business Administration.)

- Loans up to $2 million for small businesses, small agricultural cooperatives and most private, non-profit organizations of all sizes that have suffered disaster-related cash flow problems and need funds for working capital to recover from the disaster’s adverse economic impact. This loan in combination with a property loss loan cannot exceed a total of $2 million. (Source: U.S. Small Business Administration.)

- Loans up to $500,000 for farmers, ranchers and aquaculture operators to cover production and property losses, excluding primary residence. (Source: Farm Service Agency, U.S. Dept. of Agriculture.)

- Other relief programs: Crisis counseling for those traumatized by the disaster; income tax assistance for filing casualty losses; advisory assistance for legal, veterans’ benefits and social security matters.

How to Apply for Assistance:

Affected individuals and business owners in designated areas can begin the disaster application process by registering online at www.DisasterAssistance.gov or by calling 1-800-621-FEMA (3362). Disaster assistance applicants, who have a speech disability or hearing loss and use TTY, should call 1-800-462-7585 directly; for those who use 711 or Video Relay Service (VRS), call 1-800-621-3362. The toll-free telephone numbers will operate from 7 a.m. to 10 p.m. (local time) seven days a week until further notice. Applicants registering for aid should be prepared to provide basic information about themselves (name, permanent address, phone number), insurance coverage and any other information to help substantiate losses.

FEMA’s mission is to support our citizens and first responders and ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.

Stay informed of FEMA’s activities online: videos and podcasts available at www.fema.gov/media-library and www.youtube.com/fema; follow us on Twitter at www.twitter.com/fema and on Facebook at www.facebook.com/fema.
2016 Crop Budgets

2016 Crop Budgets

The 2016 Southeast Missouri Crop Budgets and Crop Budgets with Crop Rent Analysis, can be found on my web site at the links below. The crop budgets are in both Excel and PDF format.

http://extension.missouri.edu/scott/crop-budgets.aspx

On the Crop Budget Spreadsheet, there are Two Crop Decision Aid Worksheets to assist in making decisions on which crops to plant based on variable production costs and changes in yields and prices. The Crop Decision Aid - Breakeven Worksheet calculates the yield and price between two crops that give equal net returns. Crop Decision Aid - Net Returns Worksheet calculates the net return between two crops based on changes in yield and price.

The Two Summary Worksheets compare the economic returns of irrigated and non-irrigated crops. First develop a budget for each crop that will be in the analysis. Update crop yields and prices in rows 5 and 6.

Crop Scouting School

First three weeks in February 2016

Fisher Delta Research Center, Portageville, MO

Contact Tina Clarke to register at 573-379-5431

Only 20 students will be accepted

If you are considering your seed order for vegetables, do not delay. Severe weather conditions and a wet season have contributed to some types of seeds being in short supply. Varieties that have been available in 2014 or 2015 may not be available now.
SE Crop Meetings in February

Missouri Cotton Production / Outlook Conference
February 9, 2016
Fisher Delta Research Center
Portageville, Missouri
Registration: 7:30 a.m.  Program: 8:00 a.m.
CEU’s will be applied for.

Agenda:
7:30 am  Registration
8:00 am  ‘iPiPE, Integrated Pest Information Platform for Extension and Education”-Dr. Moneen Jones, Research Entomologist, Fisher Delta Research Center
8:20 am  Cotton Irrigation with a MU Extension Phone App - Dr. Gene Stevens, Professor, Fisher Delta Research Center
8:40 am  Cotton Weed Control-Anthony Ohmes, University of Missouri Extension
9:00 am  Cotton Variety Trials and Research-Andrea Jones, Fisher Delta Research Center

Products from Industry, 5@ 10 minutes

9:50 am  Break
10:10 am  Products from Industry, 5@10 Minutes each
11:00 am  Cover Crops and Soil Health – Zack Straatmann, Fisher Delta Research Center
11:30 am  Cotton Outlook and Marketing Strategies-David Reinbott-University of Missouri Extension
12:00 pm  Introduction of Sponsors-Dr. Mike Milam, Regional Agronomist, Dunklin County
12:10 pm  Lunch

Contact Andrea Jones, 573-379-5431 for more information.

2016 Missouri Rice Conference
February 17, 2016
Time: 8:10 a.m. – 1:00 p.m.
Registration at 8:00 a.m.
Location: Malden Community Center
Business Hwy. 25 Malden, MO
CEUs will be applied for

Agenda:
8:00 am  –  Registration, coffee, doughnuts
8:15 am  –  Welcome
8:30 am  –  Furrow Irrigated Row Rice - Dr. Michael Aide, Research SEMOSU
9:00 am  –  Rice Weed Control - Jim Heiser, Fisher Delta Research Center
9:30 am  –  Rice Research / Varieties- Matt Rhine, Fisher Delta Research Center
10:00 am –  Break
10:30 am –  Rice Economics - David Reinbott, University of Missouri Extension
11:10 am –  Rice Production Issues -- Dr. Charles Wilson, UAR Rice Research Stuttgart
12:10 pm –  Lunch

Contact Sam Atwell, 573-748-5531 for more information.
Registration is now open!
Join your grape and wine colleagues for a comprehensive program of speakers from throughout the United States!

The Show-Me Grape and Wine Conference: educational workshops and presentations

**Wednesday and Thursday, March 16 and 17, 2016**
Hampton Inn & Suites Columbia (at the University of Missouri)

*For attendees who wish to make a reservation to stay at the hotel, a block of rooms is being held until **Sunday, February 14, 2016.***

The Show-Me Grape and Wine Symposium: presentations on scientific research in the Midwest

**Friday, March 18, 2016**
University of Missouri campus

Free to attend but you must register, as seating is limited.
Please see the [event web page](http://gwi.missouri.edu/events/) for details on speakers, topics, schedules, and hotel reservation info.

Registration ends Monday, March 7, 2016. All registration is online through the [event registration website](http://gwi.missouri.edu/events/)

**Prices:**
- Full Conference $125
- Day One only (Wednesday, March 16) $90
- Day Two only (Thursday, March 17) $35

All of us at the University of Missouri Grape and Wine Institute look forward to seeing you.

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**March 16, 2016 – Conference Schedule**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:45</td>
<td>Managing complexity of pest management — Dean Volenberg</td>
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<tr>
<td>9:45</td>
<td>Adapting to Changing Science &amp; New Challenges — Jim Wolpert</td>
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<tr>
<td>11:00</td>
<td>Useful Mobile Apps for Vineyards and Wineries — Ed Hellman</td>
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<tr>
<td>11:45</td>
<td>Complimentary Lunch Buffet</td>
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<tr>
<td>1:00</td>
<td>Monitoring Ripening for Harvest and Winemaking Decisions — Joe Fiola</td>
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<tr>
<td>2:00</td>
<td>Wine stabilization and finishing — Misha Kwasniewski</td>
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<tr>
<td>3:15</td>
<td>Enological tannins and maintaining their presence in non-vitis vinifera species — Amy LaHue</td>
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<tr>
<td>4:15</td>
<td>Wine Quality from a Sensory and Chemical Point of View — Helene Hopher</td>
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<td>Missouri Wine Technical Group — Joe Fiola</td>
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<td>2:20</td>
<td>Investigation into the genetic basic leaf shape of grapes</td>
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<tr>
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**March 18, 2016 – Symposium Schedule**

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<td>1:15</td>
<td>Keynote: Adaptive grape growing in the mid-Atlantic’s challenging climate — Tony Wolf</td>
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<td>2:00</td>
<td>Effect of water availability and rootstocks on ‘Chambourcin’ vine physiology and grape quality</td>
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Future Meetings & Events -

Missouri Cotton Production and Outlook Conference - February 9, 2016. Fisher Delta Research Center, Portageville, MO. Registration 7:30 a.m., Meeting 8:00 a.m. - 1:00 p.m. Contact Andrea Jones (573) 379-5431 or Mike Milam (573) 888-4722 for more information.

Beginner Beekeeping Course - February 13, 2016. Fisher Delta Research Center, Portageville, MO. Time 8:00 a.m. - Noon. Cost: $50 + $8 booklet. Contact Tina at (573) 379-5431 to register and for more information.

MO Rice Production Conference - Wednesday, February 17, 2016. Malden Community Center, Business HWY 25 in Malden, MO from 8 am to noon. Lunch is provided.

Drone Webinar Wednesday February 17, 2016. 3-one hour sessions: begin at 7, 9 and 11 PST or 10, 12 and 2 EST https://drones.directionsmag.com

Prescribed Burn Workshop - Thursday, February 18, 2016. Thayer Elementary School Cafeteria in Thayer, MO. To reserve your seat at this free workshop, please contact the Oregon County Extension Center at 417-778-7490.

Fruit Tree Pruning Workshop - Friday, February 19, 2016. RR1, Box 1409B, Thayer, MO. Bring your pruners and dress for being outside. Fee: $10.00 To register call the Oregon County Extension Center at (417) 778-7490.

Your Farm, Your Business, Your Future – February 4, 11, 18, & 25 2016 Piedmont, MO. 6 pm to 9pm. The overall goal of this workshop is to help you, as the owner of a small business or a family member of one, to begin thinking about creating succession, estate, and retirement plans. Contact Kevin Anderson 573-323-4418.

Annie’s Project II – March 3, 10, 17, & 24 Van Buren, MO. 6 pm to 9 pm. If you are a farm woman with a passion for business involvement, you need to attend the four-week course designed just for you! This workshop will cover introduction to market terminology, basic hedging problems, futures contracts, cash contracts, options, livestock marketing, developing a marketing plan, and crop insurance. Contact Kevin Anderson at 573-323-4418.

Pesticide Collection Event: Free! - March 12, 2016 at the Fisher Delta Research Center, Portageville, MO. Time: 8:00 a.m. - 1:00 p.m. March 26, 2016 at Baker Implement, Poplar Bluff, MO. Time: 8:00 a.m. - 1:00 p.m. Missouri Department of Resources Web Site More Information

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

The University of Missouri Extension is an equal opportunity/ADA institution. Our programs are open to all. If you require special accommodations please let us know and we will make arrangements.