

Missouri Ag News

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Herbicide Resistance

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Herbicide resistance management requires a proactive approach to controlling weeds. This proactive formula must include:

- starting with a clean seed bed, residual chemistry both pre-emergence (PRE) and/or post-emergence (POST)
- scouting fields early and often for emerging weeds
- proper identification of emerging weeds especially when using post-emergence chemistry
- rotating mode of action groups
- rotating crops when possible
- POST application timing must target weed size between 1 and 3 inches tall
- proper spray tip selection and water volume to provide adequate PRE and POST application coverage
- effectively removing weed escapes prior to producing seed
- and avoiding overuse or misuse of any one herbicide.

A program void of a proactive approach to managing weeds will result in loss of potential crop yield, even if resistance is not currently a factor in a particular field on your farm.

Starting clean and staying clean is critical when managing resistant weeds. Do not plant soybeans, for example, into existing weeds. Products such as paraquat or glufosinate should be considered



Pigweed is resistant to many herbicides.

just prior or at planting to burn down existing broadleaves, in particular pigweed and ragweed species. It was mentioned above but cannot be stressed enough

that POST application timing is critical regardless of chemistry being used in any program. This is not a new concept. Prior to the implementation of glyphosate resistant crops, the number one reason for POST application failures was waiting too long and weeds were too big. Weed

Continued...Herbicide Resistance

science research over the years has consistently shown that the greatest yield loss attributed to weeds is during the first 3 weeks after crop emergence. Research also indicates that the maximum control potential is achieved when weeds are between 1 and 3 inches tall. When we speak specifically of Palmer pigweed and waterhemp, being punctual is critical.

These weeds have an average growth rate of one inch per day. When we consider maximum control to end at 3 inches, applicators have on average a three day window to effectively control these weeds.

For more information on herbicide chemistry, mode of action groups, weed control ratings, and a host of other information to effectively prepare a proactive and

punctual herbicide management program contact your local MU extension office and ask for Missouri Manual 171 "Pest Management Guide: Corn, Cotton, Grain Sorghum, Rice, Soybean, Winter Wheat" or find it on the web at <http://extension.missouri.edu/>.

Anthony Ohmes, Agronomy Specialist, University of Missouri Extension, Charleston, MO.

Show Me Select Heifer Sale

Saturday, May 5 starting at 1:00 p.m.

Fruitland Livestock Auction in Fruitland, MO

There are 181 bred heifers available due to calve from August 25 to November 29, 2012. 63% of the heifers are A.I. bred with some fetal sexed. 158 heifers are black, 17 black-white-faced, 2 red, 2 red-white-faced, and 2 grey selling in the sale. If you are looking for registered stock there will be 47 registered Angus and 6 registered Simmental for sale.

All of these heifers were born and raised on the farms and have known sires and birthdates. They were weighed, pelvic checked and most synchronized and A.I. bred. The genetics are tremendous on this set of heifers with several stacked generations for calving, growth and carcass traits.

If you have questions or need a catalog you can visit the website at semobeef.com or contact Roger Eakins at 573-243-3581, eakinsr@missouri.edu or Kendra Graham at 573-224-5600 ext. 8, grahamkk@missouri.edu.

Farm to School

The Healthy, Hunger-Free Kids Act of 2010 (HHFKA) amended Section 18 of the Richard B. Russell National School Lunch Act (NSLA) to establish a Farm to School program that will assist eligible entities through grants and technical assistance in implementing farm to school programs improving children's access to local food. The United States Department of Agriculture (USDA) Food & Nutrition Service (FNS) is charged with implementing the farm to school program and supports efforts that improve access to local foods.

To fulfill the farm to school mandate in the HHFKA, effective October 1, 2012, \$5 million will be provided annually to the USDA for support of grants, technical assistance, and the Federal administrative costs related to the farm to school program.

The request for application (RFA) purpose is:

- To provide background information and context related to farm to school activities at USDA;
- To describe the types of grants available;
- To describe which entities are eligible to apply for grant funds;
- To solicit applications from eligible entities;
- To describe the requirements for submitting a successful application;
- To describe how applications will be reviewed and selected;
- To describe the terms and conditions that grantees must adhere to; and
- To invite comments and feedback to inform future Farm to School grant and program design.

Grant funds will be made available on a competitive basis, subject to availability of Federal funds. Applicants are encouraged to first submit a Letter of Intent and then apply for either a Planning Grant or an Implementation Grant, only one application per eligible entity is permitted. Planning grants are expected to range from \$20,000 - \$45,000 and represent approximately 25 percent of the total awards. Implementation grants are expected to range from \$65,000 - \$100,000 and represent approximately 75 percent of the total awards. Applicants must provide at least 25 percent of the costs of the grant project as the Federal share of costs for this grant cannot exceed 75 percent of the total cost of the project, as required by the HHFKA.

FNS will conduct two webinars providing training on how to submit an RFA and address questions regarding the application process.

Implementing grants - May 15, 1:00 EST

Planning grants - May 17, 1:00 EST

Webinar notification will be communicated via the USDA Farm to School website at <http://www.fns.usda.gov/cnd/f2s>

The Southeast Missouri Food Bank is looking for donations of specialty crops. The food bank will bring a 24 foot box truck to pick up available produce. Edible produce (seconds are welcome) but should be in a crate or box. Call four to seven days ahead of time and specify if a refrigerated truck is needed.

Contact James Landewee, Operations Director at 573-651-0400. He will provide you with a tax receipt for anything you donate to use as a tax right-off.

Does Your Hay Have Enough Nutrients for Cattle?

Hay harvesting time is coming up quickly and the longer you wait to cut your hay, the lower the nutrient value becomes. Stage of maturity at harvest time is one of the most important factors affecting forage quality. A 20 percent loss in total digestible nutrients (TDN) and a 40 percent loss in protein can occur when harvesting is delayed by only ten days after the optimal harvesting stage. As the hay matures, the plant begins to form seeds. The nutrients the plant takes up goes into the seed production and the leaves and stems loose nutrients. Poor availability of nutrients in the stems and leaves make the animals have to eat more hay to get the proper nutrients, or forces the producer to supplement animals with concentrates. This in turn increases the cost to feed that animal, reducing overall profits. Another situation that arises in cattle and horses when cutting fescue late is fescue toxicity. This is caused by an endophyte that grows in the fescue and is found mainly in

the seed head. The endophyte, when eaten by horses and cattle, causes unthriftiness, depressed weight gains, rough hair coat, abortion in horses, and in extreme cases loss of hooves or tails in cattle from reduced blood circulation. Animals that are exposed to the endophyte have elevated body temperatures. I saw a classic example of fescue toxicity in cattle just the other day driving past a pond



harvesting their hay early enough. However, when they do get around to harvesting their hay the real problem arises when the nutritional value of the hay is lower than what their cattle need. The best time to cut fescue is when it is boot stage and a few seed heads can be seen. Another way to improve the nutritional content of fescue hay is to broadcast clover into the field in February.

Be aware of the nutrient content of your hay by having it tested through a certified lab. You can then determine the best way to supply the right amount of nutrients to your cattle by supplementing with grains or possibly buying better hay. Two websites that maintain a listing of all hay for sale in Missouri and

surrounding states are with cattle in the middle of it with the temperature only 65-70 degrees. Cattle will stand in ponds to try and cool their high body temperature caused by the endophyte.

surrounding states are www.haybarn.com and www.agebb.missouri.edu/haylst/index.htm. Remember, **CUT HAY IN MAY!**

Of course there is always a long list of obstacles such as weather, family, and other jobs that prevent farmers from

Kendra Graham, Livestock Specialist, University of Missouri Extension, Greenville, MO.

Compressed Natural Gas in your Future?

With the development of new techniques for removing natural gas from rock formations, the price of natural gas has dropped sharply. In late March “the price of a million B.T.U.’s of natural gas fell below \$2.20 for the first time since 2002, while oil prices slipped but remained above \$100 a barrel. The last time natural gas was this inexpensive, oil cost about \$20 a barrel” (New York Times, March 30, 2012). At \$2.20 per million BTU of natural gas, the price equivalent for gasoline would be below \$1 per gallon without a compression or storage cost.

Utilization of natural gas for motor fuel is not new. However, in order to utilize natural gas as a motor fuel it must be compressed, not unlike propane. Several of the major automobile manufacturers have vehicles that can be converted to compressed natural gas (CNG) for motor fuel. Most of what Ford offers has been fleet vehicles, typically used in urban areas. Honda offers the Civic GX CNG, a natural gas vehicle direct from the factory. Equivalent fuel economy is that of a conventional vehicle.

There are no CNG refueling centers in Southeast Missouri, the closest center is at St. Louis, but there are home compression

devices that can be purchased and installed. Natural gas must be available on site. The device will typically take natural gas from the utility and compress it for use in the vehicle. There is no compressed gas stored on site.

There has been recent interest in using natural gas to fuel stationary irrigation engines. I have discussed this application with a company in Arkansas. A conventional diesel engine can be converted to run partially on natural gas, however, there is a conversion cost, which may be prohibited. If there is not natural gas available at the irrigation pump, then compressed natural gas must be transported to the site. In West Texas, Western Kansas and Western Oklahoma it is not uncommon to have natural gas available to operate irrigation engines.

As long as the price of natural gas remains low, and the price of other motor fuels high, there is no doubt that there will be conversion of engines to this cheaper fuel. Natural gas has the added benefit of clean burning, with fewer emissions than gasoline or diesel.

Van Ayers, Agriculture and Rural Development Specialist, University of Missouri Extension, Bloomfield, MO.

A home compressor being developed by Honda and FuelMaker Corporation.



2012 Recommended Nitrogen Rates

Rice planting is in full swing and with pre-flood nitrogen (N) applications fast approaching careful consideration should be given to identification of the proper N rate and time of application for your rice crop. The 2012 recommended N rates and distribution for rice varieties is now available on the University of Arkansas Division of Agriculture Cooperative Extension Service Website and available on the publications tab listed under the 'Rice' heading. Four new varieties were added this year and include Caffey, CL 152, CL 162, and Jazzman-2. The recommended N rates listed here are the base N rate recommendation for rice produced on silt loam soils following soybean in rotation. Please refer to the 2012 recommended N rates table for determining N rates for clay soils and other Early N Rate adjustments. Caffey (LA) is an early short stature medium grain rice variety and is comparable in maturity to Jupiter and Neptune. The recommended N rate for Caffey produced on silt loam soils is 135 total lbs N/A applied in a standard two-way split with 90 lbs N/A applied pre-flood and 45 lbs N/A applied at beginning internode elongation (BIE). CL 152 (LA) is an early semidwarf long-grain Clearfield rice variety with very good lodging resistance. The recommended N rate for CL 152 produced on silt loam soils is 150



Botryococcus braunii, a green microalga.

total lbs N/A applied in a standard two-way split with 105 lbs N/A applied pre-flood and 45 lbs N/A applied at BIE. CL 162 (MS) is an early long grain Clearfield rice variety developed by Mississippi State University. The variety is comparable in height to CL151 but has better lodging resistance and is similar in maturity to CL151. The recommended N rate for CL 162 produced on silt loam soils is 135 total lbs N/A applied in a standard two-way split with 90 lbs N/A applied pre-flood and 45 lbs N/A applied at BIE. Jazzman-2 (LA) is an early-maturing, semidwarf, Jasmine-type aromatic long-grain variety. Jazzman-2 is about 4 inches shorter and 4 days earlier than Jazzman. The recommended N rate for Jazzman-2 produced on silt loam soils is 135 total lbs N/A applied in a standard two-way split with 90 lbs N/A applied pre-flood and 45 lbs N/A applied at BIE. Management of pre-flood N applications is an important component in determining rice yield and disease potential. Please refer to the Rice Production Handbook-MP 192 for more information regarding proper N management for Arkansas Rice Production.

Trenton Roberts, Research Assistant Professor in Crop, Soil and Environmental Sciences, University of Arkansas.

2012 Nitrogen Recommendations

<u>Variety</u>	<u>Total N Rate</u>	<u>Preflood Nz Rate</u>	<u>Midseason N Rate_y</u>	<u>Late Boot N Rate_x</u>
	(lbs N/A)	(lbs N/A)	(lbs N/A)	(lbs N/A)
Arize 1003	90	60	0	30
Bengal	150	105	45	<p>z Nitrogen rate for rice on silt loam soils following soybean in rotation. Rates may need to be adjusted for soil factors, thin stands, and other rotational crops.</p> <p>y Midseason N may be applied in a single application between beginning internode elongation and 1/2 inch internode elongation.</p> <p>x The midseason N application for these hybrids should be applied at boot rather than at internode elongation. Refer to the DD50 for proper timing of this application.</p> <p>w Total of 120 but may be split 75-45 or 90-30.</p> <p>Early N Rate Adjustments</p> <p>1. Increase early N rate by 30 lbs/A if rice is grown on clay soils.</p> <p>2. Increase early N rate by 20 lbs/A if: i) rice follows RICE in rotation ii) the stand density if < 10 plants per sq. ft.</p> <p>3. Increase early N rate by 10 lbs/A if rice follows GRAIN SORGHUM, WHEAT, CORN, or COTTON in rotation .</p> <p>4. Decrease early N rate by 10 lbs/A if: i) rice follows SETASIDE or FALLOW that is not continuously tilled in rotation</p> <p>5. Omit early N rate if: i) rice follows FISH, LONG-TERM PASTURE, or FIRST YEAR AFTER CLEARING in rotation. Nitrogen Source Conversions Urea Needed (lbs) = [lbs N recommended * 100] /45 Ammonium Sulfate Needed (lbs) = [lbs N recommended * 100]/21</p>
Bowman	135	90	45	
Caffey	135	90	45	
Catahoula	150	105	45	
Cheniére	150	105	45	
CL 111	150	105	45	
CL 131	135	90	45	
CL 142 AR	150	105	45	
CL 151 _w	120	75	45	
CL 152	150	105	45	
CL162	135	90	45	
CL 171 AR	135	90	45	
CL 181 AR	135	90	45	
CL 261	135	90	45	
Cocodrie	150	105	45	
Cybonnet	150	105	45	
Cypress	150	105	45	
Della	110	65	45	
Drew	135	90	45	
Francis	150	105	45	
Jazzman	135	90	45	
Jazzman 2	135	90	45	
Jefferson	150	105	45	
JES	120	75	45	
Jupiter	150	105	45	
Neptune	135	90	45	
Presidio	135	90	45	
Rex	150	105	45	
Rice Tec CL XL	120	90	0	
729	150	120	0	
745	135	90	45	
723	135	90	45	
Roy J	150	105	45	
Taggart	150	105	45	
Templeton	135	90	45	
Trenasse	150	105	45	
Wells	150	105	45	

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Future Meetings & Events -

2012 Women in Boots and Blue Jeans: An Ag Risk Management Conference, June 20, 2012 from 9:30am to 3pm in Jackson, MO at the Cape Girardeau County University of Missouri Extension Center

Webinar - Legal Issues with Direct Marketing: Part I is May 7 at 7:00pm <https://univmissouri.adobeconnect.com/a777176616/r8rvewyda9u/> and Part II is May 14 at 7:00pm <https://univmissouri.adobeconnect.com/a777176616/r4fwlplfel1u/>

Webinar - Farm to School Grants Notification of the webinar will be communicated via the USDA Farm to School website at <http://www.fns.usda.gov/cnd/f2s>. Tuesday, May 15, 12:00pm CST Implementation grants and Thursday, May 17, 12:00pm CST Planning grants

For information on commodities and markets visit - <http://extension.missouri.edu/seregion/fmmkt.htm>