

Combating giant ragweed

The presence of glyphosate-resistant giant ragweed has been confirmed in Northeast Kansas. The populations were eight-times more resistant to glyphosate than susceptible giant ragweed. Giant ragweed control has also become difficult for many producers in Missouri.

When either a corn or soybean crop experiences season-long interference with giant ragweed, yield losses can be as high as 30 to 50 percent. Growers can achieve control by applying a burndown treatment with 2,4-D or dicamba with glyphosate.

On populations of glyphosate-resistant giant ragweed in soybeans, an application of Valor XLT + glyphosate followed by a post-emergence application of glyphosate provides 100-percent control. Other pre-emergence products that provide good control are Gangster, Authority First and Sonic. Herbicide programs that combined Halex GT + atrazine provided 100-percent control of giant ragweed in corn.

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upcoming workshops

Feb. 20 - *Crop Management Strategies in an Era of Uncertainty*

New Oak Vineyards, Wellington

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Mar. 14 - *The Mysteries of Gardening*

National World War I Museum, Kansas City

816.252.5051

Feb. 26-Oct. 22 - *Grape Production*

Bourgeois Winery, Rocheport

573.882.6656

Grapes offer opportunity in Missouri

In West Central Missouri, as in other parts of the state, landowners are becoming increasingly interested in installing vineyards. Large and small, these landowners are seeing the grape and wine industry in Missouri grow, and more importantly they want to become a part of that growth. Wine grapes in Missouri are enjoying a trendy ascension; there is evidence this movement will continue with extraordinary success.

If you are considering entering into grape production for your farming enterprise, it is important to develop the necessary knowledge that this field requires. From site selection to pruning, operating a vineyard is unlike any other agricultural venture.

Serious consideration of your resources will be the first step to determine if vineyard management should be in your future. Financial reserves are a necessary component in this process. After installation of the vines, three full seasons will be required before the first harvest will occur.

When transitioning into grape production, it is essential to consider the rate at which you convert

acreage. Due to the learning curve, coupled with the longevity of grape vines (roughly 25 years), the recommendation is to begin on a small scale. This will allow some room for adjustment as you become more familiar with growing practices. This approach will also decrease potential economic injury of any rookie mistakes. Keep in mind that the grapes grown in Missouri and other Midwestern states are not necessarily the same as those grown on the East or West coasts, so production practices will be different.

To learn more about grape production, or other alternative agriculture enterprises, visit the Missouri Alternatives Center at <http://agebb.missouri.edu/mac>, the Institute for Continental Climate Viticulture and Enology at <http://iccve.missouri.edu> or contact your local University of Missouri Extension office. To learn more about the wine industry, visit <http://www.missouriwine.org>. Take advantage of opportunities to participate in conferences and network with other vintners.

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Seed production strategies

Nitrogen fertilization of tall fescue fields to be used for seed production depends on two management strategies: removing stubble after the seed crop is harvested and timing. Remove stubble to a height of 3 to 4 inches to encourage tiller development, which is key to producing high seed yields. Variations in nitrogen application rates depend on whether the same field is used for grazing cattle. Many producers who graze cattle after harvesting seed apply nitrogen in August to maximize dry matter availability for their cattle. In this case, 50 to 60 additional pounds of nitrogen should be applied in late December or early January to maximize seed production.

If no nitrogen is applied in August, producers should apply 70 to 100 pounds of nitrogen in late December or early January to maximize seed production. Nitrogen applied too early (late summer or early fall) may be lost or metabolize by fall growth and be unavailable for the seed crop. Nitrogen applied too late (late winter or early spring) may cause lodging and excessive vegetative growth rather than heavier seed heads.



Detractors of tall fescue rightfully point out that it is lower in quality than other forages, contains an endophyte that affects livestock performance and isn't suitable for wildlife. But tall fescue is extremely versatile and grows easily in Missouri. Uses include silage, seed production, grazing, haying and winter stockpiling. Each of these different uses requires a different nitrogen fertilization strategy.

The primary use of fescue in Missouri is for grazing animals. Tall fescue dry matter availability for grazing is highest in spring (April to June) and fall (September and October), with more than 60 percent of growth occurring during the spring. There is more than enough forage for cattle grazing during this spring growing period so it makes little sense to apply nitrogen fertilizer prior to this season. Instead, nitrogen should be applied in May to stretch the growing season into the summer

and increase dry matter availability in the fall.

Fall growth is dependent on the weather. If you suspect the amount of dry matter may not be enough for cattle grazing in the late summer or early fall, then it is a good idea to apply additional nitrogen immediately before this second peak growing period. Ideally, nitrogen would be applied in August at a rate of 40 to 80 pounds. Stick to the lower end of the range if the weather has been dry and to the higher end of the range if rainfall has been adequate.

Nitrogen fertilization strategies for pastures that are to be used for winter grazing vary. Nitrogen should still be applied in August at a rate of 40 to 80 pounds, depending on the weather. The only difference is that animals must be removed from the pasture at the time of application and kept off until after the first freeze, at which time

Match nitrogen fertilization with the intended use of tall fescue

Fescue can be used for silage, seed production, grazing, haying and winter stockpiling

they can be turned loose to graze throughout the winter.

The key to maximizing dry matter availability for haying is to apply nitrogen when the fescue begins to green up in the spring (March) and apply additional nitrogen after each hay cutting to maximize regrowth. Don't overlook the importance of including legumes in your tall fescue, no matter whether it is to be used for grazing or hay. Legumes increase overall forage quality and reduce the negative effects of

the endophyte in tall fescue. When making up a sufficient portion of available forages (greater than 30 percent), legumes reduce the need for nitrogen application of any kind.

Different uses of tall fescue require different fertilization approaches.

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Myths about body condition and calving difficulties

Maintaining the cow's body condition is a concern after a harsh winter. Adequate nutrition during the last 60 days of gestation plays a big role in the overall health of the calf and cow and can increase calf survival rate by 20 percent. This is reflected in the vigor of the calf at birth, the amount and quality of colostrum the cow has available and the cow's mothering drive.

Studies show that underfeeding protein and energy do not reduce

dystocia (calving difficulty). Underfeeding does decrease calf vigor, delay uterine involution, increase interval to first estrus (heat), delay breeding and decrease conception rates following calving.

Overly fat cows and heifers (body condition score of 8 or better on a 9-point scale) can cause calving difficulties. Virgin heifers should ideally be a high 6 or low 7 on body condition, which would mean no ribs visible, some filling of the brisket and a filled-in but not bulging tailhead. Thin heifers and cows do not have the strength to withstand

the birthing process and give birth to weaker calves. Underfeeding a heifer nearly guarantees that she won't breed back for you. Thin cows will be much slower to rebreed and calve later during the next season.

If body condition scores for your cows are 4 or less or they are beginning to lose body weight and condition, add energy and/or protein through a supplementation program.

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Consider inoculants when seeding legumes

Many legume plants, with the right soil pH and the correct inoculant bacteria, will provide ample nitrogen for production. If soybeans are planted every two to three years, there is no need to inoculate the soybean seed. However, if a pasture or Conservation Reserve Program field is converted to soybean production, the seed should be inoculated. Likewise, legume seed for a new pasture should be inoculated. Many of the legumes have their own specific inoculants. Red and white clovers need clover inoculants, lespedeza needs the cowpea inoculant strain, alfalfa needs alfalfa inoculants and birdsfoot trefoil has its own specific strain. Clover or cowpea inoculants will not work for birdsfoot trefoil.

Alfalfa seed planted into an old pasture or a crop field must be inoculated to perform well. If the seed is not inoculated, the stand may be adequate but it will never produce well without the addition of high rates of nitrogen fertilizer. A good stand of alfalfa can provide up to 200 pounds of nitrogen per acre, but only with the right soil pH and the right inoculant. There is no way to correct application of an improper inoculant. Note that although alfalfa seed may be sold as coated seed, coated seed is not necessarily inoculated. Coated seed may have inoculant, lime and/or fungicide.

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Selecting apple and peach cultivars for home planting

Success in growing apple and peach trees in home planting largely depends on the cultivar selected. Apple and peach trees produced from seeds differ from their parents in fruit types and quality. Trees that are produced by grafting ensure trueness to cultivar.

Apples, because of their large size as standard trees, are more in need of dwarfing than peaches. Select apple cultivars that are grafted on dwarf (MM 111), semi-dwarf (M 7a) and supreme dwarf (M.9) rootstocks. Select peach cultivars that are grafted on standard rootstocks. Semi-dwarf and supreme dwarf apples may require staking.

Apple trees require cross-pollination so you have to plant at least two cultivars that bloom at the same time. Peach trees will bear an acceptable crop with self-pollination.

Apple trees are susceptible to fungus disease, apple scab, cedar apple rust and powdery mildew, and the bacterial disease fire blight. Resistant cultivars are Pristine, Redfree, Liberty, Goldrush, Jonafree and Enterprise. Select peach cultivars for cold hardiness; Madison, Reliance, Cresthaven, Bell of Georgia and Encore.

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Agricultural entrepreneurship: The Old Trails Region of Missouri

Residents in the Old Trails Region of Eastern Jackson, Lafayette, Ray, Saline, Cooper and Pettis counties are engaged in a project based on the theory that the economy and community cannot function independently. With help from MU Extension's Community Economic and Entrepreneurial Development program, this region intends to build on a blend of local food production, agriculture, history and entrepreneurship.

Product export alone has not created industries in the famed food and wine regions of the world. Consumers want to both experience the taste of local foods and build memories while exploring the place of origin. Buy-in from local residents supporting artisan, agriculture efforts combined with local entrepreneurial efforts will forge the experience consumers are seeking. An important factor is for local service industries to recognize the value of this regional experience. They can complete the package by offering overnight accommodations, retail of local products, hours that fit consumer patterns, interactive activities and knowledge of the community. Community decision-makers can assist in these efforts by securing funding and creating an environment friendly to business development and agriculture.

This long-term project has the dual goal of attracting consumers and entrepreneurs to the region while generating desirable jobs and careers to retain local youth. Old Trails Region communities may not see an immediate turn around. But the Bordeaux Region of France, only slightly larger than Platte County, generates more than \$19 billion through the production and sale of grapes and wine. Napa Valley, which began development in the early 1900s, is an economic driver for communities north of San Francisco. Interestingly, that regional effort was accomplished by looking to Missouri's early wine industry as a model.

With this holistic approach to community economic development, the Old Trails Region might one day be known world round as a hot spot for food, wine and agriculture entrepreneurship.

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