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*Your link to the Universities for ag extension and research information.*

## Beef Industry Will Change, Will You?

Nobody needs to tell producers about the high cost of inputs; fertilizer, feed, corn, byproducts, hay and fuel. What are producers in the livestock industry to do? Producers have some options: change business as usual and adapt to the environment, don't change and complain persistently, or have a herd dispersal. The latter may not be an option for those wanting to stay in business or younger producers wanting a future and that is exactly what producers need to think about—lifestyle farming is probably not very viable with feed, fertilizer and hay prices where they are, so what are you going to do?

Recently, Dr. Vern Pierce, a State Ag Economist with the Commercial Ag Beef Focus team, challenged producers to stop working and thinking in the mode of “business as usual” because the nature of the beast has changed and producers have to be willing to change as well. Pierce dared producers to stop thinking and doing everything so independently. “In order to thrive in this new economy it is more important than ever for producers to work with neighbors and friends in their communities to stay economically viable.” A great example of this is the Premier Beef groups throughout Missouri, including Mid-Missouri Premier Beef Members. These beef producers work together to bid mineral and animal health supplies at a discounted rate because they can buy in larger quantities than they would otherwise be able to do individually.

With the influx of distiller's grains in the central Missouri area becoming readily available, working with fellow producers can become an economic necessity as feed prices continue to climb. A great example of this is buying wet distiller's grain in the summer (when prices are low), mixing it with low quality forage, ensiling the mix and feeding it in the winter to beef cows. This can be done with low-cost facilities.

Chris Zumbrunnen, MU Livestock Specialist, Milan, worked with a producer who feeds several thousand stockers and beef cows in northern Missouri. In this scenario, they used wet distiller's grains with solubles from an ethanol plant and mixed it with CRP grass which did not have much feed value (including cedar seedlings, warm season grass seed-heads, etc., in other words very poor quality). They mixed the two together, ensiled the mix and tested it through a nutrition livestock laboratory. The results yielded a palatable feed that was 16% crude protein and cost less than \$50 per ton. One producer who owns several head of beef cattle tried this method; however several producers working together could do this in a coordinated effort. Nebraska has also done research on ensiling wet distiller's grains and mixing it with low quality forage such as straw or fescue. Additional information can be found at: [http://beef.unl.edu/byprodfeeds/manual\\_03\\_01.shtml](http://beef.unl.edu/byprodfeeds/manual_03_01.shtml)

Midwestern producers are poised to stay viable and even thrive if they are willing to think “outside the traditional box” and use technologies and feeding strategies not used 5 or 10 years ago. Today's livestock climate has changed, meaning producers will continue to have to change if they want to remain in the business. This might mean doing something differently than just going down to the local feed store and getting a few bags of feed to stay in the livestock business. For more information on ensiling wet distillers grains, contact your local extension livestock specialist.

Author: Wendy Flatt, Livestock Specialist

## Bloat

Bloat is a digestive disorder that usually only effects ruminant animals (cattle, sheep, goats). It is characterized by a distended rumen, which is one of the four stomach compartments in ruminants. With bloat, gas that is normally produced and expelled by belching cannot escape and accumulates in the rumen. Frothy and dry are the two varieties of bloat. Frothy bloat is more dangerous and is associated with a build up of foam in the rumen. In a case of dry bloat, gas forms in pockets and is trapped in the upper portions of the rumen. Bloat is potentially deadly, but awareness of the causes, signs, treatments and preventions can reduce the incidence of and death from bloat in your animals.

### Causes

Pasture plants known to be associated with bloat are alfalfa, clovers and wheat pasture. Bloat seldom occurs on pastures with an adequate mix of grasses and legumes or grass only pastures. The bloat-causing potential of plants is related to the ease with which they are digested by rumen microbes. Plants that are digested easier and faster can cause the microbes to produce more gas and foam. A high grain ration in a feedlot or fresh immature alfalfa pasture provide a readily digestible feedstuff that is an energy source for bacterial growth and rapid slime and gas production, possibly leading to bloat. Both of these diets can also provide small particles and slime that contribute to the matrix that traps particles and gas in the rumen.

### Signs

An animal may have a mild case of bloat and recover from it without you ever knowing. In a case of severe bloat, the following signs may be observed: rumen distended on the left side, frequent defecation and urination, bellowing, staggering, kicking at the belly and breathing difficulty.

### Treatment

If you believe an animal has bloat, immediately remove the animal from the suspected feed source. At this point, it is advisable to act quickly and call a veterinarian. Stomach tubing the animal is the first step to determine if it is frothy or dry bloat. Gas can usually be expelled through the tube in the case of dry bloat and solve the problem. For frothy bloat, there are anti-foaming agents that can be administered. In cases of severe bloat, the rumen can be punctured through the paralumber fossa (left hollow of the flank) with a trocar and cannula to allow the accumulated gas to escape.

## Prevention

Regular feeding of some hay, silage or grain will help. The most effective prevention of bloat is Bloat Guard® (Poloxalene). On wheat pasture, bloat danger is greatest the first two to four weeks of rapid wheat growth in the spring. Bloat Guard® might be fed at this time. Feeding 150 to 200 milligrams of Rumensin® or Bovatec per head daily in a supplement can provide some protection against bloat.

Make sure animals are full when first turned out on legume pastures in the spring. Do not start animals grazing when forage is wet from dew or rain. In general, if a pasture contains at least 50 percent grass, there should be little or no danger of bloat.

For more detailed information on bloat see:

[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex6769](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex6769)

*Author: Dee Cooper, Livestock Specialist*

## Fencing in Missouri

The old saying of “*good fences make good neighbors*” is very valid. Many quarrels have been prevented by properly built and maintained fences.

Fence law in Missouri is governed by state statute beginning in 1808, and has undergone about seven law changes to its present form. With seven changes in 200 years, it is easy to see it takes time to make changes. The most recent change to Chapter 272 was in 2001.

The majority of Missouri counties are general fence law counties, but a few counties have opted by election into optional county fencing statute. All the counties in the central region (Audrain, Benton, Boone, Callaway, Carroll, Chariton, Cole, Cooper, Howard, Moniteau, Morgan, Osage, Pettis and Saline) are general fence law counties. All the following information is based upon general fence law.

By definition, a lawful fence is any fence consisting of posts and wire or boards at least 4 feet high (and mutually agreed upon by adjoining landowners or decided upon by the associate circuit court), with posts set firmly in the ground no more than 12 feet apart.

One issue in fencing is who pays for construction and repairs. The most recent law change modified and clarified the responsibilities. *If both parties have livestock* against a division fence then both parties are responsible for paying for half the cost of construction, as well as required to maintain the right-hand half.

If one party does not have livestock against the division fence, then that party is not required to construct or repair the fence. If a landowner builds the entire division fence (i.e. neighbor did not need the fence), he/she must report the total cost to the associate circuit judge, who will authorize the cost to be recorded on each neighbor's deed. If the neighbor later places livestock against the division fence, then the landowner who built the fence can get reimbursed for one-half the construction costs.

The right-hand rule was a custom in Missouri for many years, but finally in 2001 it became law. It basically says that neighbors who cannot agree on who is to build and maintain which portion of the fence shall apply the right-hand rule. Each neighbor stands on his/her land looking at the fence and is responsible for the right-hand half of the fence, assuming both parties have a need for a fence.

Landowners are free to agree on unique arrangements for contributions, construction or maintenance of division fences. The agreements should be in writing, signed, notarized and recorded against the land title of all landowners sharing the division fence. Verbal agreements will not work in this case, as they violate the statute of frauds, which requires that agreements dealing with land and those taking longer than one year be in writing to be enforceable in court. Also, only recorded written agreements will bind successor owners (buyers, gift recipients and heirs).

For more information on fence law and animal liability request G810 from your local county extension center or obtain a copy online: <http://extension.missouri.edu/explorepdf/agguides/agecon/g00810.pdf>

*Author: Mary Sobba, Agriculture Business Specialist*

## Managing Fruit Plants After the Historic April 2007 Freeze

The unprecedented freeze that occurred last spring will impact fruit harvested in 2008. One of the first things that growers are faced with in preparation for the upcoming growing season is pruning. When temperatures plummeted in April after a very warm March, many growers had already applied fertilizer. In more normal years, nitrogen fertilizer is used for reproductive and vegetative growth. However, with the loss of the fruit buds and/or fruit, nutrients normally diverted to the developing crop were available for the production of more vegetative shoots and leaves. Therefore, any nitrogen applied before (or after) the freeze promoted excessive vegetative growth. For this reason, fruit trees will require more hours of pruning this season. When pruning, the dead and diseased wood should

be removed first. Secondly, thinning out unproductive branches and those that shade other fruit-bearing shoots will be necessary to ensure sustained fruit production.

Unlike blueberry, blackberry and peach, apple trees go into a cycle of alternate bearing (excessive fruit set the year after a season of low fruit production). In 2008, apple trees will likely have a heavy crop load (barring any erratic weather). It will be important to apply adequate fertilizer to produce quality fruit. However, splitting the total amount of recommended fertilizer into two applications (before bloom and after fruit set) or more will help provide better sustained growth and help avoid leaching of the nitrogen if applied as ammonium nitrate. Using multiple fertilizer applications also gives the grower the opportunity to stop fertilizing if another catastrophic frost or freeze occurs. Multiple fertilizer applications are recommended for all fruit crops, starting pre-bud burst and ending by July 1. Fertilizer applications after this date promote late season growth, delay hardening and increase fruit bud susceptibility to winter injury.

Fruit removal (i.e., thinning) will be very important on peach and apple trees to balance the amount of fruit and vegetative growth. For apple, only one fruit per cluster should be retained. This should be done as early as possible, when the fruit is the size of a dime. For peach, strip off all small fruitlets, leaving 10 inches between each fruit. Peach branches often break when they are bearing too many fruit.

The incidence of pests may also be greater this growing season, depending on the pesticide applications used after the 2007 freeze. Many growers reduced their chemical applications or quit spraying completely after the freeze. Thus, uncontrolled pests from last year may increase pest populations this year. Fire blight on apple and pear trees may be worse this year on trees that were fertilized either before or after the 2007 freeze because of the excessive vegetative growth. Also, canker development may be worse than usual on peach trees after the April freeze and the low winter temperatures experienced recently. There may also be outbreaks of pests not normally seen in Missouri due to the erratic weather. Even though the true consequences of the freeze may not be known for a few years, woody fruit plants are often productive with optimum culture following unseasonable weather events.

*Author: Michele Warmund, Extension Fruit Specialist, WarmundM@missouri.edu*



## New Enology Emphasis in Food Science at MU

The University of Missouri will offer a food science degree with an emphasis in enology, providing students with in-depth education in the science and business of wine production. "Undergraduate students in this program, the first of its kind in the Midwest, will receive degrees in food science with at least 19 credit hours in enology and viticulture", said Ingolf Gruen, food science associate professor.

Courses are being phased in so that freshmen entering in the Fall 2008 semester can take the complete sequence. "Missouri's wine industry has grown from 50 to more than 70 wineries over the past five years", said Keith Striegler, director of the Institute for Continental Climate Viticulture and Enology, located on the MU campus and underwritten by the Missouri Department of Agriculture's Grape and Wine Board. A study commissioned by the Grape and Wine Board reports that the local wine industry employs almost 6,200 people and in 2007 generated an estimated \$70 million in federal, state and local tax revenue.

"Wineries create a job cluster of related businesses, providing jobs, particularly in small, rural communities", said Striegler.

"There is a shortage of trained people, and we are trying to fill a gap. The idea is we want to grow our own talent for Missouri and then the region," he said.

"Missouri's program will be one of the few such degree programs in the country and the only one offering a fully integrated "grape to glass" emphasis that ranges from viticulture operation to business management", said Gruen.

For more information on the MU food science undergraduate program, visit <http://foodscience.missouri.edu/>



## AG CONNECTION

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