



BEEF CATTLE TIME

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Winter 2005

Weed Control in Tall Fescue Pastures and Hayfields

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Plant Sciences*

Weeds are usually considered one of the biggest problems in tall fescue pastures and hayfields across the state. Buttercup, musk thistle, buckhorn plantain and horsenettle are just a few of the weeds that can move quickly into fields and begin to cause production losses. There are several things you can do to minimize weed problems: have correct stand and fertility problems, identify weeds, spray at the appropriate time and select the proper herbicide.

Correct stand and soil fertility. Weeds move into fields because they are able to outcompete the existing plants. We have all seen thick, aggressive stands of tall fescue that have little weed pressure. The lack of weeds is due to the good stand. There is no space for weed seed to germinate and grow. To minimize weed pressure, you have to have a strong stand of grass. You may kill all the weeds this year; but if large portions of the ground remain bare, a new crop of weeds will germinate and grow. Be sure that poor soil fertility is not the reason for the poor stand. A soil test will give you the information needed for proper fertilization and liming. Soil test and follow the recommendations now. Once any fertility problems have been corrected, evaluate the stand of grass. If it is weak, consider replanting next fall.

Identify the weeds. Before using herbicides, you should know the specific weeds you are trying to kill. Certain weeds are more difficult to kill, so herbicides chosen, application timings and rates used may vary. If you can't identify your weeds, bring a sample to your local Extension office for help with identification and specific herbicide recommendations.

Spray at the appropriate time. There are many ways to classify weeds, but the most practical way is by their growth season. Knowing whether a weed grows during the winter or summer is essential in choosing

the proper time to spray. For winter weeds, such as buttercup, musk thistle and buckhorn plantain, herbicide should be applied during either December or March. After two to three days of warm weather, the weed will be growing enough to take up the herbicide.

Some weeds, such as horsenettle, pigweed and cocklebur, germinate and grow only during the summer, from May to October/November. The winter or spring application will not control when they are not up. A late-May or June herbicide application is needed for these weeds. Summer sprays are more difficult, mainly due to all of the sensitive crops that are around. Cotton, soybeans, tomatoes and tobacco can be severely damaged by drift from herbicides. Be careful to know the surrounding crops before using herbicides, particularly during the summer.

Select the proper herbicide. There are many herbicides available. Be sure to use one that is labeled for pasture and hay. It is illegal to use any herbicide on pastures and hayfields that has not been approved for that purpose. The fact that it works does not mean it is safe. Read and follow all label instructions when using herbicides.

Many weeds can be controlled adequately with 2,4-D. Buttercup and musk thistle can be almost totally controlled with a 2 pints per acre application. If buckhorn or broadleaf plantain are present, increase the rate to 4 pints per acre. This higher rate will take out both red and white clover. If you apply it in December, you can replant clovers in February or March.

Some new herbicides are available for weeds that are more difficult to control, particularly summer weeds such as horsenettle and tall ironweed — Grazon P+D, Surmount, and PastureGard are examples. Specific recommendations will depend on where your farm is, which weed you have and other factors.

Weeds are often a more difficult and damaging pest than need be. Following these recommendations should help you minimize weed growth, improve the yield of your pastures and hayfields, as well as improve the performance of cattle.

Beef Trade A Hot Button

*Emmit L. Rawls, Professor
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Export trade is becoming a bigger factor in our beef cattle markets. Before the BSE case in Canada on May 20, 2004, our export trade had been growing, especially with Japan, South Korea and Mexico. In 2002 Japan purchased 33 percent of our exports, South Korea 24 percent, Mexico 26 percent, Canada 10 percent and other countries 8 percent.

The United States is known for its high quality, safe supply of beef. The importance of export markets for variety meats is less well known. According to the Meat Export Federation, beef tongues are in demand in Japan as a delicacy. Since our case of BSE in December 2003, the Japanese border has been closed. As a result, most beef tongues are going into pet food, where the value is only 5 percent of what it would have been if sold to Japan. Formerly, 70 percent of our beef tongues were exported. In 2000, we exported 49 percent of our variety meat production.

In my opinion, some of the best use of checkoff dollars has been for the development of export markets. However, we have seen how international trade, both exports and imports, can create unexpected volatility in prices for fed cattle, cull cows and bulls, as well as feeder cattle. Currently total exports are only about 2.5 percent of total U.S. production. In 2002, exports were about 10 percent of production. Last year was unusual in that exports were higher due to Canada's case of BSE, i.e. we shipped beef to customers they lost. What impact would regaining that 7.5 percent of the export market have on U.S. markets? Increasing exports by that amount would remove 7.5 percent of production from our domestic supply. As a rule, for every 1 percent the domestic supply is reduced, prices increase 1.6 percent. So, a 7.5 percent reduction in supply should increase prices by 12 percent. Based on \$85 finished cattle, that would add \$10 per hundred or \$120 per head (1200 lb. animal) to the value of a finished animal. A "trickle down" would be bid into feeder cattle prices. This could put an additional \$17 per hundred on 700 pound feeders. Yes, despite record feeder cattle prices in 2004, we would have had even higher prices had the export markets not closed. In addition, hide and offal prices are down about \$2 per hundred based on a thousand-pound animal. This is a \$20 to \$24 per head reduction in the value of each animal harvested.

The United States has negotiated to ship animals under 20 months of age to Japan. At this point, the age of the animals must be determined by production records. This has real implications for animal identification. Canada has at least a two-year lead in experience with animal identification, which is already required there. USDA is hoping to come up with a method, "which is acceptable to the Japanese," for objectively sorting cattle under 21 months of age at the packing

plant. South Korea has yet to agree to the same terms as Japan, probably due to other trade issues.

The beef market continues to be volatile because of many factors related to anticipated supply and demand. For example, the market is anxious over the opening of the Canadian border to cattle under 30 months of age. This is expected late in the first quarter of 2005 or soon thereafter. It will result in additional cattle to be processed in U.S. plants as well as additional feeder cattle moving into feedlots. Based on the earlier rule proposed, no cattle will be allowed to move from Canada to grazing operations in the United States. Cattle-Fax estimates that if the border is opened in the first quarter, 300,000 feeder cattle and 500,000 fed cattle will enter the U.S. during 2005. Since the mid-90s, Canada has exported an average of 140,000 head of feeder cattle and calves yearly (except for 2002 — due to drought 450,000 were exported). During that same period the we exported 131,000 head of feeders and calves to Canada. Fed cattle imports from Canada have averaged 723,000 head during from 1998 to 2002. Cattle-Fax expects an average U.S. fed cattle price of \$82 per hundred versus a USDA projection of \$85 in 2005. The opening of Japan and other export markets will be key to supporting U.S. prices at a time when increased cattle are coming in from Canada. Hopefully, that process can move ahead quickly. Do not expect Australia and other countries to back off their efforts to replace U.S. beef in Southeast Asia or those former U.S. customers to return to prior demand levels rapidly.

Cow Cost and Profitability

*James B. Neel, Professor
Animal Science*

The annual variable cost of producing a weaned feeder calf has a great impact on the profitability of cow-calf operations. So, what's new?

Most producers think that market weight, other production traits and market price are more important than costs in making a profit. These are important but not the most important. The cost of production explains most of the variation in profits of cow-calf operations.

Research, conducted over a 10-year period at South Dakota State, revealed that cost of production had a greater impact on profitability than any other factors. Based on profitability, 148 cow herds were divided into low-, medium- and high-profit groups. Differences in size of operation, weaning weights, pregnancy rates and calf death losses had no significant effect across the profitability groups.

The cost of doing business set the high-profit group apart from the other two groups. The high-profit group had lower costs. Their total cost per hundred pounds of weaned calf was \$21 less than the medium-profit group. On a per-cow basis, high profit producers spent \$116 less per cow year. Quite a difference.

What is the big cost item in producing weaned

feeder calves? It is feed costs. Also, reports from Illinois and Iowa support this. Farm management specialists across the nation report that feed makes up 50 to 75 percent of the annual variable costs. UT farm management specialists report that feed make up 60 percent of these costs.

What is the big item in the feed bill? UT research revealed that 94 percent of the total feed required by a cow-calf unit to produce a weaned calf was consumed by the cow.

Based on these studies, producers should conclude that practices to keep feed costs at an acceptable minimum level should be evaluated. The first would be to develop and maintain a herd of cows that require less feed. Mature size of the cows is the big item. Producers should maintain cows that, when mated to an appropriate sire, would produce feeder cattle of value to the industry and do so efficiently.

Other alternative management practices that would contribute to reduced costs would include developing and maintaining a short calving season; developing a cattle and forage management program to match, as closely as possible, the herd's nutrient needs and pasture's quality and availability; maintain legumes in pasture; harvest hay at appropriate maturity to ensure quality; store and feed hay to reduce waste (see following articles); and if purchasing feed, compare cost of nutrients and not volume.

For additional information on management alternatives to reduce the cost of maintaining the beef cow herd, contact your local University of Tennessee Extension office.

Evaluate Hay Storage and Feeding Procedures

*James B. Neel, Professor
Animal Science*

The methods of storing and feeding hay can have a great impact on the winter feed bill and the profitability of cow-calf operations. Now, in the midst of winter feeding, would be a good time to evaluate the hay storage procedure used last spring and summer and the feeding practices carried out this winter. (see following article) Both impact the volume of hay available as well as the cost of winter feeding.

Hay is the primary winter feed for Tennessee cow-calf operations. Approximately 91 percent of the hay fed to beef herds is harvested and stored in large round bales.

Eighty two percent of Tennessee's cow-calf producers store these large bales outside, uncovered, on the ground. Exposure to weather and moisture from the ground result in a large amount wasted or rotted hay that is not suitable to meet the cattle's nutrient needs.

Research conducted at the University of Tennessee showed that large round bales stored outside, uncovered, on the ground had dry matter losses of 28 percent.

Similar research at other experiment stations reported losses up to 35 percent. This is a lot of hay lost.

Depending on the length of the winter feeding period and availability of grazing, from 1.5 to 2.0 tons of hay would be required to winter a late-winter to early-spring calving, mature beef cow. A 28 percent loss of dry matter in hay stored outside on the ground means significantly less hay available. Extra hay to replace the spoiled hay would increase the cost to winter the brood cow. If 1.5 tons of hay is required to winter a cow, spoilage increases that amount to 1.92, and the cost of the hay would go up from \$75 to \$92 per cow. In herds where 2.0 tons would be needed to feed the mature brood cow, 2.56 tons of hay would be needed and the cost would increase from \$100 to \$128.

Winter feeding is the most expensive phase of producing a feeder calf. Store large bales of hay to keep spoilage at a minimum. As you feed this winter, take a look at the amount of hay you have that is not suitable as feed for cattle. You can easily see the amount spoiled as the bales are moved to feeding areas. Think of the spoiled hay as money lost.

Make plans to reduce hay spoilage and winter feed costs for next year's hay crop. Contact your local University of Tennessee Extension Office for information on hay storage practices to reduce spoilage and the winter feed bill for your cow herd.

Feeding Hay During The Winter

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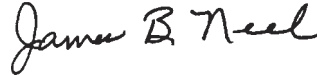
Winter feeding is the most expensive part of cow-calf production. There may be some disagreement with this statement, but when the cost of hay and the additional expense of wasted hay is considered, it is very easily the most expensive. Reports from the University of Illinois indicate that feed losses, even with a round bale feeder, can be as high as 30 percent. Unlimited access to large round bales can produce losses of 25 to 50 percent. Producers can significantly reduce the amount wasted by implementing certain feeding management practices.

Probably the most common method of avoiding large-package hay loss during feeding is to use a hay "ring" or other type of hay feeder, such as a wagon that has been modified to allow hay feeding. A number of cattle producers advocate unrolling large round bales for feeding. This will work if cattle are provided with the correct amount of hay for one feeding when the hay is unrolled. However, excess hay will quickly become bedding. Mechanical hay unrollers are available; but alternative methods, such as unrolling on a slight slope, may work in certain areas. Exercise caution when unrolling hay on a hillside because a large round bale can become a safety hazard.

Here are some other feeding tips:

- **Don't use muddy areas when feeding.** A rocky outcrop or old road bed works well for minimizing mud. Other producers create a bed of coarse gravel to use with rings. Good, clean sod works the best.
- **Cut and remove the strings on the bales as they are fed.** This makes it easier on the cows and may reduce the tangling of strings around the base of the hay feeder. These strings are also very easily entangled around the "bush hog" when clipping pastures. Also, ingestion of plastic strings can cause problems for cattle.
- **Slightly hungry cows clean up better.** If stretching hay supplies, it may pay to allow cows a little longer to clean up previously fed hay. Feeding twice daily what the cows will clean up will keep losses down. They will be hungry and will come up to the feed. It is important that all the cows be able to eat

when using this feeding procedure. But, avoid this when cold fronts are approaching or if cows are thin (feed to maintain cows in body condition score of 5 or higher).



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From:

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