



BEEF CATTLE TIME

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Fall Fertilization of Pastures and Hayfields

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A solid fertilization plan is one of the keys to a successful forage production program. To produce forage for grazing or hay, you must provide nutrients needed by the plants in adequate quantities. Usually, fertilization is considered a springtime procedure. However, there are many reasons to apply fertilizer in the fall.

1. Stockpile tall fescue. Applying fall nitrogen to tall fescue can increase growth for winter grazing, which can reduce hay feeding by one or two months.
2. Cheaper prices during fall. Fertilizer is often cheaper in the fall compared to spring. Also, finding time to get the work done may be easier in the fall.
3. Only one application is needed if clovers are used. If clovers are used in a tall fescue pasture, no nitrogen is needed during the spring. Since all the potash and phosphate required for a year can be applied at one time, applying all of these, plus the nitrogen for stockpiling, can mean that only one fertilizer application is needed each year.
4. Improve cold tolerance of Bermuda grass. Since Tennessee is on the northern border for Bermuda grass, the potential for winter kill exists across most of the state. A fall application of potash and phosphate will also help improve cold tolerance.

Pay attention to the following points when fertilizing in the fall.

When to fertilize - To stockpile tall fescue, fertilize after fall rains begin when the fescue has begun to regrow after the summer heat and drought. Pastures should be grazed or clipped to remove all summer growth.

How much to fertilize - For stockpiling tall fescue, use approximately 60 lbs of nitrogen per acre. There is no way to know how much phosphate and potash to apply without a soil test. Fall is also a good time to take soil samples to determine the fertility of the pas-

tures. Soil test results tell what nutrients are needed and how much to apply. No soil test means guessing at the amount of fertilizer needed. You may be spending more money than needed or not putting on enough of some nutrients. Take a soil test to be sure.

What to fertilize with - Determining which form of nitrogen to use is the biggest consideration. The two main types of nitrogen fertilizer used in Tennessee are urea and ammonium nitrate. Urea is 46 percent nitrogen, while ammonium nitrate is 34 percent nitrogen. Ammonium nitrate is best for fall fertilization because there is a greater potential for nitrogen loss with urea during the fall. Nitrogen from urea can be lost to the atmosphere as ammonia when conditions are hot with moderate moisture. Temperatures 75 F or above with high soil pH and moisture can result in the loss of 20 – 30 percent of the nitrogen from urea applied to the soil surface and not incorporated by rainfall, since all of the nitrogen is in the ammonia form. If urea is used for fall fertilization, it is best to apply it when rain is expected within 2 – 3 days or else use a urease inhibitor to delay conversion of the urea to the ammonium form.

Fall fertilization is a management tool that can be used on most cattle farms in Tennessee. Phosphate and potash are stable in the soil so a once-a-year application is adequate. Fall application of these nutrients fits nicely with a stockpiling program, since nitrogen can be added with the potash and phosphate to make a balanced fertilizer application. Consider putting on fertilizer this fall and then using clovers next spring to provide the nitrogen you need for a solid forage production program.

Controlled Calving Season a Worthwhile Goal for '06

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Animal Science

Having calves during a short period improves the timing of management practices and the marketability of calves, makes record keeping easier, and invariably results in improved profitability.

Only 30 percent of beef cow-calf producers in Tennessee have a controlled calving season. This means that a majority of producers are missing out on the advantages of limiting the calving season to no more than 90 days.

There are a number of reasons (excuses) given for not controlling the calving season. A 365-day calving season may allow using fewer bulls, require less management and result in calves available for sale at various times during the year.

Do the advantages outweigh the disadvantages? This question must be answered by individual producers, but consider this: very few, if any, beef producers who have achieved a controlled calving season would voluntarily give it up.

There are a number of considerations, such as

1. What calving season(s) should be selected?
2. What are the best methods for separating the bull from the cow herd?
3. What are the exact steps to follow to obtain the desired calving season?

Each of these questions may have different answers depending on your situation. Starting a controlled calving season for 2006 could be as simple as

- Building or utilizing an existing paddock for separating your bull(s).
- Pulling the bull in late June or sometime in July to prevent late spring and summer calves.
- Visiting your Extension office for more details on setting your calving season.

Plan Ahead to Reduce Stress When Weaning Calves

*Clyde Lane, Jr., Professor
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Now is the time to start thinking about weaning calves this fall. Weaning, in combination with a 45-day preconditioning program, can add weight and value.

Many producers market their calves directly off the cow because of the possible sickness, weight loss and the bawling. Research has shown that fence-line weaning is a better way to wean calves and can reduce stress and associated problems.

This weaning process has a few key components. First, the cows and calves should be moved into the weaning pen a few days before the weaning process begins. During this time, calves can learn from their dams where the feed and water are located. They can also learn from their dams that it is alright to eat the feed and drink the water. At weaning, remove the cows from the weaning area and leave the calves in place.

Calves that cannot see or hear their dams undergo greater stress. Price et al. conducted a research trial on different methods of weaning. Results of the trial are presented in Table 1 on the next page.

As noted in the table, four different methods of weaning were evaluated. The observations indicate that calves weaned by the fence-line method spend less time vocalizing (bawling) than calves weaned away from their dams. The fence-line-weaned calves also spent less time walking around in the pen than calves weaned in a separate pasture away from the cows. In addition, these calves spent more time either resting or eating than calves weaned using pasture or drylot separation. Common sense indicates that calves eating, resting and not bawling are less stressed, will be better able to withstand disease challenges and will have greater gains.

Management practices such as castration, dehorning and vaccinations should be completed prior to weaning. Such practices at weaning can add additional stress at an already stressful time. Completing the vaccinations prior to weaning can also help prevent sickness that may occur at weaning.

The key to reducing stress during the weaning process is utilizing those techniques that keep calves calm and eating. Fence-line weaning is the best way to wean calves while keeping the stress level low.

Reference

Price, E. O., J. E. Harris, R. E. Borgwardt, M. L. Sween and J. M. Connor. 2003. Fenceline contact of beef calves with their dams at weaning reduces the negative effects of separation on behavior and growth rate. *Journal of Animal Science* 81:116.

Don't Forget to Stockpile Fescue

*Clyde Lane, Jr., Professor
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August is the time to start planning for reducing winter feeding of the cow herd. Removing the animals from a field of nearly 100 percent fescue and fertilizing it with 60 units of nitrogen will encourage fall plant growth. Be sure to keep animals off the field until frost or later. Providing one acre of stockpiled fescue per cow is desirable. When the fescue is to be grazed, use some electric fencing to limit the amount of grass available at one time. This will reduce the waste and help delay the time when stored feed must be used. Just remember that cows can harvest grass cheaper and with less labor than a beef producer can feed harvested hay.

Tennessee Cattle Perform Well In Feedlot

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Results are in from the 2004 – 2005 Tennessee Beef Evaluation conducted in cooperation with the Tri-County Steer Carcass Futurity in Iowa. A total of 58 steers and 19 heifers owned by eight producers were fed at the Bruce Bentley Farm in Macedonia, Iowa. The cattle were processed at the Tyson (formerly IBP) plant in Denison, Iowa on April 19 and May 24. The cattle

Table 1. Percentage of Calves That Were Exhibiting Various Behaviors During First Three Days of Weaning by Different Methods *

Variable	Nonweaned (pasture)	Fence line contact (pasture)	Separated (pasture)	Separated, preconditioned to hay (drylot)	Separated, not preconditioned to hay (drylot)
Eating	41.1% ^a	37.3% ^a	23.7% ^c	28.9% ^b	21.5% ^c
Walking	8.6% ^a	10.1% ^{ab}	28.1% ^c	9.6% ^{ab}	14.8% ^b
Lying down	22.9% ^a	23.3% ^a	16.0% ^b	21.9% ^a	20.6% ^{ab}
Vocalizations/h/10-calf group	0.1 ^a	216.7 ^b	434.6 ^c	371.2 ^{bc}	518.2 ^c

^{a,b,c}Rows with treatment means with different superscripts differ P<0.05

*Price et al. 2003. Journal of Animal Science 81:116.

performed well in the feedlot and produced excellent carcasses. The steers gained 3.71 and the heifers 3.24 with an overall gain of 3.60. Steers normally gain 8 percent better than heifers. The feed-to-gain ratio was 6.16 pounds of feed per pound of gain. Forty-nine percent of the group yielded grade 1 & 2 and 77.6 percent of the cattle graded low choice or better. With industry goals set at 70 percent yield grade 1 & 2 and 70 percent graded Low Choice or better, the group missed the yield grade target but surpassed the quality grade goal. Eighty-eight percent of the cattle were black-hided and 27 percent of the black-hided cattle were Certified Angus Beef (national average is 15 percent CAB). Five, or 7 percent, of the cattle graded Prime. The group marketed had .43 inches of fat cover, which is within the normal target of .40 to .45 inches of fat cover. The current industry average is .53 inches of fat cover, but notice that the percent of choice for the group was much higher than the current national average of 57 percent. The national average is 10 percent yield grade 4. The Tennessee group had two head or 2.6 percent yield grade 4. There were no light (under 550 lbs) or heavy (over 950 lbs) carcasses. Three head, or 1.6 percent, had disposition scores of 3.0 or higher on a 6 point scale. The Iowa data on many cattle shows a loss of \$62/head for cattle with a disposition score of 3.09 or higher. Feed costs were \$27.16 per hundredweight and the total cost of gain was \$40.85 a hundredweight. The group locked in the corn price at \$1.68/bushel.

The Tennessee Beef Evaluation is a program to assist beef producers in determining how their cattle perform in the feedlot and what kind of carcasses they produce. This information can then be used to modify the breeding and management program as needed. Some producers have used the data to promote the sale of their feeder cattle to buyers, using past performance of herd mates as evidence of what the buyer might expect from

their cattle. While not intended as a way to make additional money on the calf crop, this year the cattle did have a good return. In the past, cattle in this program have been shipped in November, with a minimum of five head of steers or heifers. If enough producers wish to send their cattle at other times of the year, it can be done if a load of 60 to 70 head can be assembled. For further information contact your county Extension agent or Emmitt L. Rawls with UT Extension in Knoxville.

Premise Registration to Get Underway

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The Tennessee Department of Agriculture under the leadership of Dr. Charlie Hatcher, newly appointed Animal Identification Coordinator, will begin the registration of all premises having livestock later this summer. The program is the first step in the National Animal Identification System (NAIS). At this time, the program is strictly voluntary.

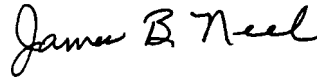
Why would anyone want to volunteer? There is an increasing demand for source- and age-verified feeder cattle in the private sector. So, by getting your premises registered, you can get ahead of the process and be better prepared for the NAIS, which is proposed to become mandatory in 2009. Under that system, if there is an outbreak of a foreign animal disease or a bioterrorism event, the animal health authorities could trace every premises an animal has been on during its lifetime within 48 hours. All you have to do is fill out a simple form available at the Farm Service Agency, County Extension Office, County Farm Bureau Office and other locations frequented by livestock producers. Take or send the form to the Farm Service Agency office where it will be properly entered into the system. A short time later you will receive your premises number.

Value-Added Feeder Cattle Marketing

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Check out the schedule for value-added marketing opportunities in late summer and fall. They are listed on the Internet at <http://picktnproducts.org/cattlegrading/schedule.html>. If you do not have Internet access, just check with your market operator or you county Extension agent for the closest value-added marketing opportunities. Most of these programs require a 30- to 45-day weaning period before the sale date, as well as a double vaccination program. This means planning is required to have a weaning facility, feeding troughs and a definite plan and schedule for meeting requirements by the sale dates. Some marketing agencies are selling electronic identification (EID) tags to be used in special sales.

Make sure you apply the tags correctly. The tags need to go in the left ear with the electronic button on the inside of the ear placed about 1/4 of the way out from the head and between the two ribs of cartilage. Use the appropriate applicator so that the electronic devices inside the tags are not crushed.



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Beef Cattle Time

From:

Leader/Agent

Visit the UT Extension Web site at
<http://www.utextension.utk.edu/>

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