

## **EORDC FESCUE STUDY ECONOMIC ANALYSIS OF PREPARING TALL FESCUE FOR WINTER GRAZING**

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Feeding livestock during fall and winter months can be very costly. One way to lower feed costs is to stockpile tall fescue for winter grazing.

Tall fescue is an excellent forage to stockpile for late fall and winter grazing. This grass is capable of producing superior quality forage and relatively high yields compared to other grasses. Tall fescue will stay greener than other grasses during winter months and even grow a little during warm days. This fall forage is highly digestible and leaf deterioration after a frost is relatively low.

When considering stockpiling tall fescue for winter months, there are several factors affecting the quality and yield. Producers should time the last summer harvest or clipping to approximately August 1st, so that tall fescue can begin to regrow for fall grazing. Greater yields and higher quality forage can be achieved by pushing this last harvest date back even further.

Yield and quality of stockpiled forages are greatly affected by an application of nitrogen fertilizer. Nitrogen should be applied soon after the last summer harvest. Higher yields and better quality forage will result from an August application of nitrogen fertilizer as compared to a September application. Research has shown that 50 pounds of actual nitrogen per acre will stimulate adequate growth. Applications above 50 pounds per acre actual nitrogen will not result in significant yield improvements. Because summer annual grasses such as crabgrass and foxtail take up large quantities of nitrogen, choose to stockpile vigorous tall fescue fields that are free of weeds.

When applying nitrogen in summer, keep in mind problems with volatilization. Ammonium nitrate is an excellent form to use because it is more stable during dry weather. Urea is cheaper, but you may lose all of the nitrogen when conditions are favoring volatilization. If you do use a urea based fertilizer, apply to a dry surface and just before a minimum of ½ inch rain. Do not use urea on fields surface-limed within the past three months.

Let's look at the cost of applying fertilizer to build up fescue. The 1997 fall price for urea was \$234.83 per ton. To rent a buggy spreader, it will cost you an additional \$5 per ton. If we decide to build up 20 acres of fescue at 50 lbs N/A, what would the cost be?

$$\begin{array}{rcl} 109 \text{ lbs of urea} \times .46 \text{ (\% nitrogen in urea)} & = & 50 \text{ lbs} \\ 20 \text{ acres} \times 109 \text{ lbs of fertilizer per acre} & = & 2180 \text{ lbs of urea} \end{array}$$

2180 lbs of urea costs us approximately \$256. The cost per acre would be \$12.80. At this cost, you have forgone the expense of labor, fuel, etc. Spreading cost is approximately \$5 per ton.

In southeastern Ohio, fall stockpiled fescue has produced more than a ton of additional forage per acre when compared to no fertilization. Therefore, if we are able to produce an extra ton of forage per acre worth approximately \$70 per ton (value of dry, stored hay):

20 acres x \$70 per ton of additional forage = \$1400 worth of forage  
Total costs: \$1400 worth of forage  
              - 261 cost of fertilizer & buggy  
              \$1139 approximate value of forage

If we assume 70% utilization of the forage then our net value is \$797.30.

Management of stockpiled tall fescue is a key to cutting feed costs. Turning livestock into a large pasture will waste 60 to 70 percent of the forage. Restrict access to a three day supply of forage for November grazing. In early fall, the nutritive value of stockpiled fescue will most likely support weaned calves and stockers, but as winter progresses it becomes more suitable for dry cows. Mineral supplement is recommended for all animals grazing dormant forages.

September 4, 1997, two plots of tall fescue were selected to study the effects of stockpiling on forage quality. Each plot measured twenty by twenty feet. The last harvest of hay on the plots was July 31, 1997. Treatment of 50 lbs per acre actual nitrogen was applied to a plot selected at random and the other plot received no fertilization. The fescue plot was fertilized September 4.

January 7, 1998, each plot was forage tested at the Ohio State University Research Extension Analytical Laboratory. The fertilized pasture plot crude protein content was 10.5% on a 100% dry matter basis and the unfertilized plot tested 8.2% crude protein.

Stockpiling tall fescue not only provides for additional forage, but may also result in a forage of higher nutritional quality. Let's consider the nutritional needs of a 900 lb two-year-old heifer nursing calves -- first 3 to 4 month postpartum; 10 lb milk per day. Daily requirements are (as a percent of DM):

Dry matter intake .....	19.2 lbs
Crude Protein .....	10.4%
TDN .....	68.5%

To meet the crude protein requirements of this heifer on our unfertilized pasture (8.2% CP), we would need to feed approximately 1.054 lbs soybean meal (SBM), 50% crude protein (CP) per day. If we feed this heifer for the next 60 days an extra 1.054 lbs SBM per day, we would have fed 63.24 lbs SBM. One hundred heifers on this program will need 6324 lbs of SBM. If SBM costs \$236 per ton, then we would spend \$746.23. For the same animal on our stockpiled fertilized pasture (10.5% CP), we would not need supplemental soybean meal. However, each diet would need to be supplemented to meet the TDN requirements.

SCENARIO	CRUDE PROTEIN SUPPLEMENT COST OF UNFERTILIZED			
	CP in forage	CP in ration	Heifer/day	\$/100 heifer 60 days
Stockpiled fescue	10.5	10.4	0	0
Unfertilized fescue	8.2	10.4	.124	\$746.23

Winter-grazing saves producers money and time. Planning the date of the last summer harvest and nitrogen application will help to produce a good quality fall and winter forage.

For more information on stockpiling tall fescue, call us at (740) 732-5681 in Noble County or (740) 432-9300 in Guernsey County, or stop by the Extension office and pick up Agronomy Factsheet AGF-023.

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