



Forage Recycling for Higher Yield?

Triangle Cross Livestock 2002

Mike Mallett, County Extension Agent-Agriculture

Lampasas County

Summary:

Hay mulching or recycling hay in warm season perennial pastures (coastal bermuda) increased forage production while providing higher quality.

Objective:

The introduction of recycling forage in established coastal bermudagrass fields is designed to conserve moisture, increase forage yields and quality, and improve the soil fertility.

Materials and Methods:

A coastal bermudagrass field was selected for a nutrient recycling study. Initial inspection of the field indicated soil compaction and little organic matter.

In December 2001, feeding with round bales of hay began in this selected field to a group of 24 cow/calf pairs. Cattle were forced to clean up the hay before another bale was placed in the field. Hay was fed using a hay ring. Feeding of hay continued through March 10. The hay ring was moved to a fresh site upon placing each fresh bale for the cattle.

The selected field has not been "hayed" for five years. It has been in a rotational grazing system.

On April 22, 2002 weed control was initiated using 2,4-D Ester and 300 lbs. per acre of liquid 32-0-0-3 fertilizer was applied to the field. This field on May 3 & 4, 2002 received 0.65 of rainfall. Total rainfall from January 1, 2002 through May 20, 2002 on this field totaled 6.82 inches.

This field was grazed from December 2001 through April 15, 2002 and then the cattle were moved off.

Three clippings were made from the "hay fed" (mulched) area and the control was made May

20, 2002.

Results and Discussion:

The forage response to hay recycling was compared as to yield and quality.

Visual observation noted a more lush growth of forage in the area where hay was fed. Also, in these areas there appeared to be fewer winter annuals, i.e. Little Barley and Rescue Grass. The forage growth was noted as being approximately three inches greater in height. This visual effect is attributed to the hay residue and the added manure. It should be noted that the areas where the hay was placed in the rings, forage growth is late. This may be due in part to added hay residue still in evidence and the area not being worked by cattle hooves.

The “hay fed” areas produced significantly higher hay yields in addition to greater forage quality.

“Hay Fed Area”	“Control”
Yield: 2,130# per acre	Yield: 1, 125# per acre
Crude Protein: 16.9%	12.3%

The influence of recycling hay in the study suggests greater rainfall capture and moisture conservation. Also, there is the added benefit of forage quality provided by the recycled nutrients from the hay and cattle. By adding back to the soil these nutrients, soil compaction will dissipate. In drought times as experienced at this initial clipping, the use of this management practice could be used by producers to stretch limited rainfall and possibly reduce commercial fertilizer requirements.

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