

Elstel Farm & Seeds

“The Crabgrass Seed Folks”

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FACT SHEET 2003

Applying Controlled Rotational Grazing To ‘Red River’ Crabgrass

In the most basic sense, controlled rotational grazing is grazing (utilizing) the forage to the recommended residue height and then deferring grazing to allow recovery and re-growth. It is “controlled” because there is a plan to graze the forage properly within the grazing being done at any grazing event time. That grazing and plan are monitored. And, that grazing and plan are adjusted as needed to stay within the grazing guidelines of that given grazing. Different grazings often have a different set of grazing rules to follow.

‘Red River’ crabgrass has not been subjected to grazing system comparisons in detailed research. Nor has any other forage crabgrass to our knowledge. However, innumerable observations have been made in actual grazings and simulated grazing research has been done via research clipping trials. Some may argue that a clipping trial does not present the same force on the forage as livestock grazing, but it presents the basic perimeters to serve as a guide to grazing management. The objective of this writing is to summarize some research information and grazing observations in practice and to provide some guidelines so the grazer may have information to help make better grazing management decisions.

The research information presented herein is from some Noble Foundation, Agricultural Division research and that organization is given due credit. Practical grazing observations have come from personal pastures, client pastures, and other pastures. The research is from a study of a good forage type of hairy crabgrass (*Digitaria ciliaris*) that was studied before the release of Red River crabgrass. The principles and basic responses are the same. The soil was a silt loam. The fertilization was a total of 134-46-60 lbs/ac nitrogen-phosphorous-potassium. The nitrogen was applied in two applications of 67 lbs/acre. The trial contained six harvest treatments ranging from “overgrazed” to “hay harvest at seed maturity”. To be more brief, for this report, treatments are re-grouped to present the yields more generally for a guide to grazing management. More detailed study is available in the Noble Foundation report: ([Crabgrass For Forage: Management from the 1990’s](#). Pub. No.: NF-FO-99-18. Pages 29-32. Phone: 580-223-5810).

Grazing by mower (harvesting) produced the following forage yields. Grazing often and at a one inch residue, produced 5994 lbs/ac (100% basis). Grazing often and at a three inch residue produced 6689 lbs/ac (112% basis compared to the first treatment). Grazing correctly, at a good recovery and re-growth of about eight to 10 inches and up to the green head stage and grazed at a three inch residue, produced 7930 lbs/ac (132% basis compared to the first treatment). Harvesting at the seed ripe hay stage produced 10,511 lbs/ac (175% basis compared to the first treatment).

One can readily visualize from this data, that proper grazing can very strongly influence forage yield and animal yield per acre. A yield increase of 12% to 32% basically translates to a likewise increase in production efficiency, i. e., a 12% to 32% better efficiency of fertilizer and fertilizer dollars, equipment

dollars, land dollars, overhead dollars, etc., and animal yield per acre. For the same expense inputs, why not manage in a manner (properly) to get the upper level yield and thus dilute the cost per grazing day or animal product yield per acre? That is the most basic of reasons for controlled rotational grazing. It is the main driving force for controlled rotational grazing at the grass roots level.

Controlled Rotational Grazing In Practice: The numbers above can serve well to help us set up the actual grazings to gain the upper level pasture yield from Red River crabgrass and other good crabgrass. First, the operator must have a means to manage the crabgrass pastures properly and to remove livestock from the pasture if a crisis occurs. There must be a good **BALANCE** of expected forage production and stocking rate. Stocking rate is dependant on all inputs, but an **initial guide** for **well cultured** Red River Crabgrass fertilized at 100 lbs/ac nitrogen, is about 750 to 1200 lbs of beef per acre in Oklahoma dryland pastures above the 30 inch rainfall belt. There is extreme variation and a record of stocking rate will help fine tune each case. There should be **RESERVES** to use in case stocking rate is not correct for the year. These reserves may be other pastures, hay, feeding, selling, etc. These should be planned from the beginning and not at the point of need. There should be **FLEXIBILITY** in the grazing. If the pasture gets grazed to the minimum residue height, livestock should not be there any longer. To stay and overgraze seriously reduces re-growth and recovery for that season and therefore total yield.

It is **not best**, but crabgrass can be grazed in a continuous grazing approach. In this case stocking rate should normally be set to a level to allow the grass to be grazed down gradually over weeks and months of summer. The grass will accumulate in early season and the stocking rate will not keep it utilized. That is the normal for a well stocked continuous grazed pasture. As summer progresses and growth is slowed, the livestock will consume the accumulation. In this case there is usually plenty of seed made for volunteer management. At the end of the summer, the pasture can be grazed completely down to the three inch residue, or if there is excess the last of the forage can be harvested for hay. Even in this case of continuous grazing, if the grass gets short, the livestock should be removed.

Controlled rotational grazing is **the best way to go**. This allows control of: the grazing period days, the average residue height left and the uniformity of the grazing, the recovery and re-growth, and the days needed for the recovery. Any paddock number is probably better than one. In general, paddock numbers of four to eight are good, and 10 to 12 are excellent for a one herd operation. When four paddocks are used, that means that for a one herd operation, 75% of the paddocks and total area will be under recovery at any given time. Higher paddock numbers give more recovery time per paddock. Strip grazing of any paddock number can be done to great advantage for dairy and upper level managed beef operations. Strip grazing at one to three day graze periods is good.

The basic approach to grazing in rotational paddocks is to initiate grazing when the Red River crabgrass is well covered and four to eight inches tall. The first grazing should take the grass to about a three inch residue. Later grazings, when growth should be taller, should take the grass down to a range of about a three to eight inch height. One advantage of grazing Red River Crabgrass is that it does not lose quality nearly as much as other summer grasses if it gets a little over-grown. As the season ends, grazings can be to the minimum recommended height of about three inches. Another advantage of grazing Red River Crabgrass is that it can be grazed short at the end of the season with no concern to save a good root system because it is going to die at first freeze anyway. Days of recovery period are about three weeks under good growing conditions and longer under dry or other suppressive conditions. Always manage recovery for seed for volunteer stands. We hope this information is a help to your grazing management. We know it is not the final answer. We will be pleased to visit more about your grazing management if you wish.

We have several other fact sheets available to help you. Most are on our farm web page. You can contact us for paper copies if you wish. The fact sheets are: Fact Sheet 1994-1997, Red River Crabgrass Establishment and Production Management; Fact Sheet 1998, Red River Crabgrass and Winter Pasture Double Cropping; Fact Sheet 1999, Managing Red River Crabgrass For Volunteer Stands; Fact Sheet 2000, Using Nurse Crops and Companion Forages to Establish Red River Crabgrass Stands; Fact Sheet 2001, Crabgrass and Legume Mixtures; Fact Sheet 2002, Tillage/Renovation For Red River Crabgrass. We also have several reprints of papers we presented at the American Forage and Grassland Council meetings on Red River Crabgrass. Feel free to request copies as you wish.

