Extension Shoppers Guide article for 4-4-17

Determining Stocking Rates for Native Pastures

Submitted by: David Kehler, Butler County Extension Ag Program Coordinator

The goal of grazing management is to market a valuable product at a profit, while maintaining or improving the productivity of grazing land resources. Grazing management relies on several principles and practices. Of these, stocking rate has the largest impact on both animal performance and forage resources. Understanding grazing management principles is one of the keys to the ultimate profitability of the operation.

Stocking rate is defined as the land area allocated to each grazing animal for a specific length of time. Stocking rate influences: • How well the plant can recover from grazing during the growing season • Future forage production • The quality of the available forage • Animal performance • Long-term change in species composition

For grazed forages to remain productive, grazing use must be matched to the pasture's carrying capacity. Determining stocking rates requires knowledge of forage production and grazing pressure. The amount of forage available for harvest is affected by many variables. Forage production varies between pastures and locations within a pasture. Grazing pressure is the ratio of forage demand to the amount of forage available. It can be measured in terms of the number of animal unit months (AUM) per acre, and can also be based on a calculation of forage consumption. When matching grazing pressure and carrying capacity, the goal is to devise a management system that will optimize animal and forage production over the long-term, rather than attempting to maximize either factor by itself. A manager's goal should be to use a moderate stocking rate, but be prepared to change stocking rate, remove livestock or supply additional feed during periods of drought or other stress situations.

Calculating the stocking rate; The most important "rule of thumb" is "Take Half-Leave Half". This means that at the end of the growing season, one half of the annual production remains. This is vital to the overall health of the plants, and is needed to provide an adequate fuel load for a late spring burn. To achieve this goal, we should calculate for a 25% to 30% consumption of the average annual production. This is because 20% to 25% is lost to trampling and other natural causes. The next consideration is the forage production. This can range from .5 to 1.5 ton per acre. The average for native pastures in good condition is about 1 ton of dry matter per acre. The estimated pounds consumed by each animal is figured by multiplying the average weight of the animal times the number of grazing days, times the consumption percentage of 2-3%. Dividing this by the amount of acres times the production will give us the assumed percentage consumed. An example of this would be: a 550 lb steer with a gain of 2.25 lbs for 86 days averages about 650 lbs and will consume about 1400 lbs. Allowing 2.5 acres per head at a 1 ton yield will provide 5000 lbs for a 28% consumption. This is only an example.

Another way of looking at it on average grass would be to consider stocking yearling pastures around 240 - 250 pounds/acre for grazing till July 15, 165 - 175 pounds/acre for grazing till August 15, and 95 - 105 pounds/acre for grazing till October 15. For cow/calf pairs I would suggest 135 - 145 pounds/acre stocking for grazing for the full summer (6 month) season.