Grazing Recycles Nutrients
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Over the past 10 years increasing numbers of cattle producers have started to intensively graze pastures to maximize pasture as a source of feed. Rotational grazing is a management intensive system that concentrates animals within a relatively small area (paddock) for a short period of time e.g. 1-3 days for beef cattle. A pasture may be divided into multiple paddocks. The animals are then moved to another paddock while the other paddocks are allowed to recover and regrow. Animals are moved according to a flexible schedule based on herd size, the amount of land available, quality of forages in the paddock and forage consumption.(1) Continuous grazing is use of one pasture. The type of grazing system implemented on a farm has major implications regarding pasture fertility.

Missouri researchers estimated that grazing animals recycle 75-85% of forage nutrients consumed. An even distribution of manure throughout a paddock is required for productive plant and animal growth. Intensity of grazing rotations affects the manure coverage in paddocks. In a rotational grazing system there is an even distribution of manure because the animals are forced to consume forage in the paddock before being moved to another paddock. The Missouri researchers calculated that under continuous grazing practices, 27 years would be needed to obtain one manure pile per every square yard within a pasture. Conversely, the pasture was divided into paddocks and a two day rotation was used. Then two years would be needed to achieve an even distribution of manure within the paddock.(2)

The location of hay feeding areas will impact the distribution of nutrients within a field. Manure will be deposited near the feeding areas. Depending on weather conditions and the potential for creating mud and ruts in the pasture, feeding areas may be moved throughout the pasture to insure a more even distribution of nutrients. Whenever hay is baled, nutrients are removed from the field and exported to the feeding area. Kentucky researchers have estimated that a ton of grass hay (fescue, orchard grass) removes the following nutrients from the soil: 12 lbs. of phosphate and 50 lbs. of potash.(3) If these nutrients are not replaced; soil reserves will be depleted over time. Consequently, there will be a reduction in crop yields. Soil testing determines the amount of fertilizer that needs to be applied to maintain hay yields.

Cooperative extension agents can assist producers in the design of rotational grazing systems for their farms. Virginia Tech livestock budgets have shown that the implementation of rotational system can maximize profitability for cow/calf producers. There are Virginia livestock producers who have increased net profits by $200 per head due to the implementation of rotational grazing systems on their farms. Rotational grazing systems can maximize farm profitability by recycling nutrients which results in a major reduction of purchased fertilizer inputs.

The Seventh Annual Tri-State Beef Cattle conference will be held at the Washington County Fairgrounds in Abingdon, Virginia on August 12th. This year’s conference will address topics of interest to both stocker and cow-calf producers. The conference will be a one-day event and will include educational sessions covering such topics as beef cattle outlook, pre-weaning calf management and its effects on post-weaning performance, respiratory diseases and pinkeye, commodity feed and mineral supplementation. There will once again be virtual tours of operations from each of the three states and then a time of questions and answers with the producers themselves.

A trade show will be open during the conference, with many of the animal health, feed, and marketing organizations involved in the region’s beef industry there for participants to meet and learn more about their products and services.

The conference will begin with registration at 8:00 a.m. and the program beginning at 9:20 a.m. The trade show will open at 8:00 a.m.

The meeting is being sponsored by Virginia Cooperative Extension, University of Tennessee Extension, and North Carolina Cooperative Extension. Registration information and complete details will be available through your county Extension Office. Registration for the conference is $20 before August 5 and $25 after August 5. Additional information can be obtained from Dr. Scott Greiner, Extension Beef Specialist, Virginia Tech, phone 540-231-9159, email sgreiner@vt.edu, or on the web at http://www.apsc.vt.edu/extension/beef/index.html or through your local Extension office.