TECHNICAL NOTES

U. S. DEPARTMENT OF AGRICULTURE IOWA STATE OFFICE
NATURAL RESOURCES CONSERVATION SERVICE DES MOINES, IOWA

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Subject: CREATING A PRESCRIBED GRAZING PLAN

In Iowa, grazing plans are quite often a part of an overall conservation plan for the farm. Cropland fields may be used in the grazing system for grazing crop residue, harvesting hay for supplemental feeding, and grazing hay fields later in the grazing season. This technical note will address Creating a Prescribed Grazing Plan primarily on the acres to be used for grazing.

Note: When referring to "producer" in this technical note, it may also mean landowner or both landowner and producer, depending on individual circumstances.

Initial Inventory

Provide the producer an aerial photograph with the pasture acres outlined. Encourage the producer to think about how he/she would like to divide up the pasture and to mark on the map the location of potential fences. While the final plan may look quite different from this original map, it can help get the producer to take "ownership" of the plan.

Prior to going to the farm the planner needs to get acquainted with the farm using an aerial photo and soils map. A topography map can also be useful. Make a note of water sources and fences.

View the farm, preferably by walking. As much of this as possible should be done with the producer. You need to determine the producer's goals and objectives, and this can be a good time to get this information. On rented land you may need to know the goals and objectives of both the landowner and producer.

Observations While Viewing the Property

Determine what type of pasture vegetation is present.

Is there good plant density, diversity, and vigor? Use this information to help make an estimate of available forage in the system.

Are there weeds present and are they noxious weeds? What type of treatment will be needed to reduce them to a manageable level? Will it require broadcast spraying to control them or can spot spraying work? Will some of the weeds be eaten by the

livestock? High stock density, especially in the spring, will result in grazing animals eating many weeds such as rag weed and Queen Anne's lace.

Are there legumes? What type and what percent of the stand?

What is the average sward height? Look at the forage quality and availability, especially in periods of the year with more stress.

Make some estimate of efficiency of utilization by the grazing animals. Look for spot grazing, severe overgrazing and/or mosaic grazing pattern.

Complete a Pasture Condition Score. This would be best done with the producer so that he/she could do this in the future to monitor changes in the system due to improvements in the system.

Pay attention to the condition of the livestock. Look at their health and estimate body condition score.

Get an estimate from the producer on the average weight of the livestock. This is important when determining the forage needs of the grazing animals.

Find out from the producer the dates of the calving season and when he/she typically weans the livestock. It is also important to know if the calves are weaned on grass or taken to a drylot.

Look for soil erosion problems. If there are problems, will it require structural practices, seeding, or will rest in a rotational system be adequate?

Look at manure piles to estimate the quality of forage being consumed. The Forage Quality Photo Guide from Texas A&M at the following link can be very useful: http://tcebookstore.org/tmppdfs/18601229-L5359.pdf. Also look for the presence of dung beetles, as they are an indication of a healthy system.

Note any obvious fertility differences in the pasture. Is there a large contrast between the color of the grass around a urine spot or is the difference more subtle?

Observe the soil tilth in the pasture for compaction or water holding capacity.

Get a feel from the producer as to how often he/she is willing to move the grazing animals. Use this information to help determine the number of paddocks. Note how paddocks might be divided easily.

Is there a need for managed access to streams and/or ponds?

Are livestock concentration areas in a location that could affect water quality?

Is the location of mineral feeders, watering facilities, and any supplemental feeding areas resulting in lower or higher pasture utilization and/or water quality?

Conservation Points After Viewing the Farm

As a beginning, if the farm has multiple pastures and livestock have access to all pastures, try to get the producer to shut the gates to better manage the system and give some pastures a rest.

Using the producer's ideas (hopefully they started a design on the map you gave him/her originally), encourage him/her to begin subdividing the pasture. Also encourage him/her to monitor any changes in the system.

Encourage the producer to have a soil test completed. This will establish a baseline for the fertility and pH will be particularly important if the intention is to interseed legumes in the future.

If herbicides will need to be broadcast sprayed, to reduce weeds to a manageable level, have them get started on that program prior to doing any interseeding.

Discuss ways to start a grazing program by installing some temporary fencing, if they are not prepared to establish permanent fences.

Discuss the installation of a watering system. Don't overlook using multiple sources such as ponds, creeks, wells, and rural water. When talking about allowing livestock access to creeks or ponds, talk about the benefit of having managed access areas because of safety to the livestock and improvement to water quality.

Look for ways to improve water availability such as more ponds and/or improved pipeline systems.

Talk about a logical timetable for making improvements and implementing the prescribed grazing system. The system needs to meet the management desire and ability of the producer and not what the planner thinks is the best. However, have the producer consider at least a weekly rotation for a beef cow herd and 2-3 days for a stocker or dairy operation. Ultimately, a move twice per week for beef cows and daily move for dairy or stockers would be preferable.

Determine what conservation practices are needed to implement the system. Then try to evaluate them by cost and what will benefit the system the most to help in determining a priority for installation.

Look "down the road" when planning fence and water system layouts so that if the producer wants to increase the number of paddocks it can be done with the least cost and change to the existing system.

Talk to the producer about how and when he/she should monitor the system to evaluate the improvements and see if things are "headed in the right direction".

Plan Development

The Prescribed Grazing (528) Standard specifies what needs to be included in a grazing plan. When working with the producer, it is important for them to understand

the kind of forage present in the system. He/she also needs to know the expected quantity and quality of this forage. In most situations, both the quantity and quality of forage will improve as the grazing plan is implemented. It is important for the producer to understand this will take a period of years, maybe three to five or more, for this to happen.

Just as most producers want to know how many bushels of corn a field will produce, he/she needs to have an idea of how many grazing animals the grazing system will support. Provide him/her a livestock/forage balance that will show if there will be any expected forage surpluses and/or deficiencies. Also provide some alternatives of how to manage any surpluses or deficiencies.

Some producers will only want a grazing plan that covers the growing season, while others may want a plan and forage/livestock balance that would show the entire calendar year. At a minimum, provide them what they want.

Provide information to the producer so they understand how to use forage heights to help manage the system. They need to understand that different plants have different needs for maintaining minimum forage heights. Grazing below 1000 – 1200 pounds of forage (typically 3-4" height depending upon forage) will reduce intake by the grazing animal, which reduces production.

Evaluation of the Prescribed Grazing Plan

There are many things to consider in evaluating the plan and the system implemented by the producer. Forage heights are generally referenced as a primary tool. But this can be hard to show year-round management. A more comprehensive approach is to use Pasture Condition Scoring. This can more effectively show the effectiveness of the entire grazing system and the response to the improvements. It also provides direction for further improvements that might be necessary in the system to reach the goals and objectives of the producer and his/her grazing plan.

The producer can also help manage the grazing system and monitor improvements by keeping grazing records. At a minimum, the producer needs to record what kind and how many animals grazed the system. They need to document the date the animals entered a pasture (paddock) and the date they left the pasture (paddock). Other information that could be useful is the height of the forage going into the pasture and the height when leaving the pasture. They need to keep a record of fertilizer and/or manure applied, beyond what the grazing animals defecated, and any herbicide treatments.

Information from the following publication was used to develop this technical note.

Creating a Prescribed Grazing Plan - Arkansas NRCS Technical Note September 2006.
ftp://ftp-fc.sc.egov.usda.gov/GLTI/technical/publications/pasture-score-guide.pdf