Chapter 10 C. Habitat Management Tools: Grazing for Wildlife Habitat Enhancement

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Prescribed grazing

Prescribed grazing/browsing couples the use of foraging livestock that are selective in what they feed on with land management. It is a method of improving pasture forage production and livestock performance, and maintaining quality wildlife habitat by subdividing large areas of pastureland into smaller areas (paddocks) and grazing those areas in a flexible rotation when the plants are ready (mainly indicated by height). In this way, high quality forage is rationed out to meet livestock needs, while plants already grazed are protected from being eaten again until they have adequately recovered. It is the animals in these systems that are acting the same as equipment or fire to affect the vegetation in a plant community. When wildlife habitat enhancement is the planned objective, ruminants can be a very effective and rewarding management tool.

Considerations

When planning a grazing system for wildlife habitat enhancement it is important to first clearly identify the specific goals of the system. Identifying whether the land manager is looking to incorporate enhanced wildlife management practices into an existing managed agricultural production program, or rather is interested in using animals as a management tool for enhancement of an unmanaged tract of land will really help guide the planning approach. Ask yourself, how many animals, and what type of animal is going to be involved in the production plan? What are the daily food, water, and space requirements for these animals? What types of wildlife are present on the land under consideration and on adjacent parcels? What types of wildlife are commonly found within the region? What are the specific wildlife habitat enhancement goals of the land manager?

After identifying the specific production and wildlife habitat enhancement goals, determining the number and type of animals to be used, and outlining their daily requirements, it is time to inventory the resources required to manage them. After this assessment is complete a plan to manage the livestock to enhance or maintain wildlife habitat may be developed.

Production goals

Identifying production goals is an important step in planning a grazing program. Livestock producers who aim to incorporate enhanced wildlife habitat practices into their production models most likely will maintain primary focus on ensuring that dairy, food, or fiber yields continue to maintain economic viability and remain primarily unaffected by shifts in management for wildlife habitat. This can be difficult if working with a grass-based dairy producer who would like to maintain production and forage quality, while managing for grassland birds on a limited land base. However, if a landowner is managing a less nutritionally demanding type of livestock, such as non-lactating dairy heifers on grass, the likelihood of providing habitat for nesting birds without significantly impacting the weight gains for heifers is greater.

When considering the dairy objective, the planner may want to consider designing a grazing system with an increased stocking density (concentrated number of animals grazing an area at a given moment, expressed as Animal Unit/Acre/Time Period) prior to the start of the bird nesting season, and then decrease the density by increasing paddock size and decreasing the occupancy period during periods when birds are actively nesting

in pastures. This practice may significantly decrease the number of nests trampled by cattle. Additionally, the planner may want to consider a rotation system with a wildlife refuge set aside. In this system paddocks are alternately grazed while a centralized refuge area is retained. The refuge would be seeded with plants that would maintain forage quality until after the bird nesting season. Forage plants that would work well in this system include red and white clover, Kentucky bluegrass, and other leguminous plants. A similar system can be used for a heifer operation. However, feeding of some previously harvested forage (e.g., hay, alfalfa, or silage) within a few sacrifice paddocks stocked at high densities, will allow the producer to dramatically increase the size of the refuge area.

In both cases the production goals have been identified and planning recommendations are based on meeting those production objectives, while also introducing some management approaches that will enhance habitat for grassland birds and other wildlife species. This same approach can be taken for managing a variety of habitats using different types of livestock. Additional planning examples will be presented throughout this chapter.

Livestock considerations

Different types of livestock impact their environments to varying degrees and may exhibit foraging tendencies that are more or less suited for the desired habitat enhancement goals. Dairy cattle and many breeds of sheep tend to be grass foragers. Virtually all goat breeds, some sheep breeds, and a few cattle breeds, most noteworthy the Scottish Highland and the American Milking Devon, are browsers of both herbaceous and woody vegetation. While dairy cattle and sheep may effectively be used as a management tool for enhancing grassland bird habitat, they may not be an effective choice in managing for deer, turkeys, cottontails, and other wildlife dependent upon old field and shrubland type habitats. Additionally, animal size will certainly dictate the area necessary to meet daily food requirements, and may relate to the potential for erosion or compaction should management take place in wet areas, or fields with excessive slopes or sensitive stream bank resources.

An example of appropriate animal selection for wildlife habitat enhancement is the use of meat goats to control herbaceous vegetation to aid in the establishment of a planted forest riparian buffer. As long as the trees are protected, the goats can be allowed to graze small strips along the riparian corridor for short periods of time to control herbaceous vegetation that may out-compete planted tree seedlings. Overall, most goat breeds are not fond of getting their feet wet, and will stay off stream banks. Additionally, their size will help minimize compaction and erosion as long as the area is not overstocked.

Should a management plan call for a very low stocking density during a certain period of the grazing season for promotion of bird nesting habitat, the planner may want to consider employing a meat or wool producing sheep breed to move through these paddocks relatively quickly. Their harvest will promote a healthier stand for subsequent grazing after the nesting season. However, their small size and varied foraging habits will leave vegetation with varying heights and plenty of protection for the birds.

Livestock selection is an important part in planning for wildlife habitat enhancement. Should a manager and planner decide to utilize a type of livestock that is not already an integral part of their grazing system, the University Cooperative Extension livestock specialist and/or Natural Resources Conservation Service (NRCS) planner should be contacted for assistance in determining the animal's specific resource requirements. Other producers that have experience with the particular type of livestock under consideration are also good sources of information. For example, if considering adding goats to a grazing system, it is important to know that goats do not like to get wet. An experienced producer will know that without some sort of shelter a landowner may have a bunch of goats on his front porch or in the house after the first significant rain event.

Livestock requirements

Determining livestock daily resource requirements is essential to the success of a livestock-based wildlife habitat management program. Of course the two primary requirements for any type of animal are adequate feed and cool clean water. Generally, installing a water supply system is a cost effective and worthwhile investment, and will be discussed later in this chapter. Additional requirements may include salt, minerals, and supplemental feed, among other things. The Cooperative Extension livestock specialist or planner from NRCS should be able to identify these requirements in addition to estimating the area necessary to meet daily food needs.

Wildlife considerations

Wildlife considerations must start with identifying the types of wildlife prevalent in the area, and what types of wildlife the land manager would like to plan for. Generally, when using livestock to manage for wildlife in the Northeast, habitats of common consideration for livestock producers include grassland and old fields or shrubland. Lost and degraded habitat is probably one of the most detrimental impacts to wildlife in the Northeast. Both managed and unmanaged farmland hold immense potential to provide tremendously valuable habitat. Planners and land managers should contact local experts in federal, state, and local organizations for assistance in identifying what plant species and type of cover are most suited to the wildlife they would like to plan for. After identifying the requirements of targeted wildlife, one can begin to plan a livestock grazing system that helps to meet their needs.

Livestock management resource inventory and planning

After identifying livestock production and wildlife goals and contacting appropriate technical staff, it is time to start the planning process. Begin with a resource inventory and acquire materials and equipment required to contain livestock within desired areas.

Resource inventories must begin with the two most important facets in managing livestock: fencing and water. Livestock must be controlled in such a manner that the land manager can place animals where they want for as long as they want. Proper grazing management requires dependable fencing. With the development of low-impedance electric fence energizers and portable fences, controlling livestock has become easier and less expensive. Energizers are available to fit all needs and circumstances. There are models that run on 120 or 220 volts, 12 volt auto or marine batteries, solar energy or flashlight batteries. The various models have different power outputs suitable for different types of livestock and different kinds of fencing. Discuss your fencing and livestock situation with an experienced dealer to select the energizer that will meet your needs.

Water systems can also be designed from simple and cost effective materials. Three quarter inch black plastic pipe often costs less then 11 cents a foot. Coupled with a sensible layout with numerous spickets placed along the system that allow for flexible positioning of stock tanks, permanent water systems are very easy to install. Temporary systems can involve gravity feeding from a larger tank on a small trailer or hay wagon, or pumping water from ponds or surface water using small gas powered pumps. Contact the local NRCS field office or supply store for assistance in sourcing parts and designing a system that works for you.

Often times it is helpful, after thoroughly walking the land intended for grazing, to contact your local NRCS office for assistance in planning a grazing system using digital aerial photography to calculate acreages, and draw out a rough design of how and where livestock will be moved, and for how long they will be there. Additionally, there are several computer programs designed to assist producers in estimating daily feed requirements and, depending upon wildlife goals, these can be used to establish a rough rotation schedule. It is important to remember that a successful grazing plan is one that is flexible. Walk your grazed land! The best way to know how the animals and the land are responding to a particular grazing strategy is to walk it and see for yourself.

Managing land for wildlife habitat enhancement with livestock can be a very rewarding and effective experience. Walking the land and identifying the needs of the livestock and targeted wildlife will provide the land manager and planner with a significant amount of information to get started with planning a grazing system. After selecting the wildlife practices to be utilized and the livestock to be used in achieving that goal, thoroughly identify both the needs of the wildlife and the livestock. Consult regional experts, successful land managers, and applicable industry personnel. This is often the fastest way to obtain an immense amount of information about how to plan for your goals. When the fencing and water planning is complete, and a rough plan has been established, introduce the livestock and begin to observe. They and the land base will quickly tell you how things are going. If you remember that this is a flexible system that will adapt and respond to your management decisions, implementing a prescribed grazing plan can be an incredible method for creating additional habitat that will benefit many types of wildlife in the Northeast.

Suggested reading

Gordon, I. and P. Duncan. 1988. Pastures new for conservation. New Scientist 117:54-59.

Murphy, B. Greener pastures on your side of the fence: better farming with voisin management-intensive grazing (4th Edition). Arriba Publishing, Colchester, VT. 379 pp.

Savory, A. and J. Butterfield. 1999. Holistic management: a new framework for decision-making. Island Press

Wallisdevries, M. et al. 1998. Grazing and conservation management. Kluwer Academic Publishers, The Netherlands. 374 pp.

Biography

Tyler Webb is a Soil Conservationist with the USDA-NRCS in St. Albans, VT. His primary interests involve managing holistic landscapes using livestock as a tool for meeting resource goals and for harvesting solar dollars from Vermont grasslands. He is also the owner and operator of Stony Pond Farm, a grass-based organic diversified livestock farm in Fairfield, VT.