GRAZING FUNDAMENTALS

A comprehensive guide to making the most of your pastures in New Hampshire.

NatGLC
NATIONAL GRAZING LANDS COALITION

GRANITE STATE GRAZIERS

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WHAT IS LIVESTOCK GRAZING?
WHY IS IT IMPORTANT?

Livestock grazing is "allowing livestock to directly consume growing forage; grasses, legumes and forbs, in a pasture or rangeland. It is harvesting by animal instead of by machines." [1]
(Oregon State University 1)

Here in the Northeast, we are disadvantaged with the cold climate and rocky soil. One thing we can control is our ability to grow and maintain thriving pastures. Well managed grazing is the healthiest use of our land and its systems.

Agriculture is facing an impending crisis due to multiple factors:

- Widespread soil erosion and decreasing land productivity in the face of climate variability
- Declining population of agriculture producers
- Unprecedented levels of farm debt and bankruptcies
- Growing global population that is increasing the demand for food

Farmers recognize that grazing livestock is one of the best ways to restore and utilize land resources.

ABOUT

[1] Discuss the role of grazing in a pasture-livestock system
Oregon State University

WHAT IS YOUR VISION? WHAT ARE YOUR GOALS?

Personal:
What are you looking to accomplish personally with your farm or homestead? Is this operation meant to sustain you and your family? Are you planning on selling product and making money?

Social/Community based:
Within your community, how are you planning on being involved? Will you allow people to visit your farm, will you sell product directly to the customer, on farm or at a farmer's market?

Environmental based:
What practices are important to you in regard to environmental impact? Will you practice environmentally sound grazing habits? Will you follow recommended guidelines concerning regenerative farming practices?

Financial based:
Is this a business endeavor or more of a supplemental income? Do you plan on tracking your profits and expanding into new markets to make more money?

After a deep evaluation of your goals and visions, it is time to take on the work. This guide will help you through the many things that need to be considered when taking on a farm or homestead. As you move through it, keep your goals and visions in mind in order to make the best decisions possible.

MANAGEMENT CONSIDERATIONS

Consider the following questions in order to gauge what your property has to offer and how your pastures may need to be managed. Keep your answers in mind as you navigate the rest of the toolkit.

- How established are my pastures? Are they healthy enough to handle grazing?
- What species of livestock am I going to graze? Is the breed selected for grazing, appropriate for your climate, and suitable for handling based on experience?
- What kind of stocking density can my acerage support?
- What style of grazing am I planning to employ (e.g. rotational, strip, continuous)
- What is the weather like in my area? Do I need to build structures, or is there enough tree cover for warm or cold days.
- Is there established fencing on the property, or will I need to decide on how to fence my livestock?
- Is there a current water source on the property?

*Your local NRCS, FSA, and UNH extension offices can guide you through answering these questions.

GLOSSARY

Back Fence: Moving to the adjourning pasture; fencing the animals off from the pasture they just grazed in.

Bud box: An additional pen within your staging area to allow for easier manipulation of cattle.

Drag: Using equipment to spread manure, soil or other material evenly through an area.

Forage: Edible parts of a plant that livestock feed on or can be harvested for later feeding.

Headlock/stanchion: An upright frame built to hold the head of an animal in place.

NRCS: Natural Resource Conservation Service; a branch of the USDA that provides education and technical support in order to conserve natural resources.

Paddock: A fenced in area where animals are kept and allowed to graze.

Residue: The amount of grass left un-grazed after your animals are moved.

Rotation: Moving animals from one paddock to the next.

Soil type: Categories of soil, including sand, loam and clay.

Spring flush: The rapid growth of forage first thing in the spring, can be hard to keep up with.

Squeeze shoot: A narrow corridor used to separate individual cattle and restrain them for various purposes.

Stand: Proportion of plant species in a managed unit such as a forest or pasture.

Stockpiling: The practice of saving forage around Aug. that will be grazed late into the fall/early winter, even throughout the winter months. See Resources for more information.

Stocking rate: The number of animals grazing per acre. Example: 30 acres of pasture, 30 animals. Stocking rate is 1 animal per acre.

Stocking density: Typically expressed in pounds per acre. If you have 30 animals averaging 1,000 pounds, then 30,000 pounds released onto 30 acres of pasture would have a stocking density of 1,000 pounds/ acre.

Therefore, if you were to break up your 30 acres into 1 acre paddocks, and put all 30 animals onto each, the stocking density would be 30,000 pounds per acre.

UNH Extension: University of New Hampshire Extension; providing educational and technical support through various online and in person services.

Infrastructure

This section covers land, fencing and water. These systems can present some of the biggest up-front investments, but they are vital to a successful operation.

Soils formed out of glacial till – material deposited by receding glaciers more than ten thousand years ago – are most common in NH. These are often sandy loams with varying slopes and drainage, and often plenty of stones – one of the reasons that these locations may be better suited to perennial forages over cultivated crops.

LAND - SOIL

The base for solid grazing and land management in general is soil. Your soils can be the greatest limiting factor or the thing that makes your grazing aspirations possible.

Soil type can vary greatly throughout the state of New Hampshire, and throughout your property. Having the details about each soil type and where they are located will help make decisions on how each area can be utilized.

Soil types are well mapped in NH using NRCS Web Soil Survey [1] and come with many recommendations within it. This is a good place to start in order to learn about what general soils are present on your property.

After you have identified your soil type(s) and are acquainted with their benefits and limitations, the next step is to perform a soil test on your specific pastures.

The UNH Cooperative Extension has available resources to aid with soil testing. On their website, you will find the step-by-step process of collecting samples as well as where to send your samples for testing [2] When your results come back, they can assist you in analyzing the results and make recommendations based on them.

The Natural Resource Conservation Service (NRCS) is available to use once you have your soil test results back [3]. They can provide you with various programs that may help with cost share soil amending, seeding, etc..

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[1] NRCS Web Soil Survey
https://websoilsurvey.nrcs.usda.gov/app/

[2] Soil Testing Forms
https://extension.unh.edu/resource/soil-testing-forms

[3] Enviornmental Quality Incentives Program
https://www.nrcs.usda.gov/programs-initiatives/eqip-environmental-quality-incentives

FENCING

When choosing a fencing option, consider these factors:

- Species of animal
- Temperament of animal
- Familiarity with fencing (both animal and human)
- Available equipment
- Available funds

Fencing varies widely in price, difficulty of installation and level of security. Knowing your livestock and how they interact with fences as well as your capability as a producer to install and maintain said fencing is very important making the final call.

Fencing and Species

High tensile (permanent):
Cattle, sheep, goats, pig, other large ruminants. Not recommended for poultry.

Temporary netted fences:
Sheep, goats, chickens, pigs, turkeys. Can be used in conjunction with high tensile as interior fencing.

Fencing Basics:

- Make sure your fence charger is appropriately sized
- Always keep your fence on unless you are working on it.
- A permanent perimeter fence is important when using temporary fencing
- Make sure your fencing is suitable for all sizes of livestock within your herd

PERMANENT FENCING

High tensile fencing is used primarily in permanent fencing scenarios as perimeter fencing, comprised of high carbon steel wire attached to wooden posts. Tension points along the fence create a very secure, strong fencing system. This fence type can be easily customized based on species/size of livestock by adding or subtracting strands of fence.

High tensile fencing is very secure and easy for livestock to see, is less likely to be damaged due to its strength and offers long lasting conductibility to allow for the use of temporary fencing within its bounds.

This type of fencing requires regular maintenance such as checking tension, replacing broken or rotten posts, and periodic assessment of wire health. This fence type has a more significant upfront cost but is offset by its longevity and security.*

*NRCS offers programs to offset the initial costs of high tensile fencing setups.

Resource: https://www.rammfence.com/fence/horse-fencing-accessories/electric-fence-accessories/connectors-and-tensioners/rail-fence-tensioner

Resource: https://www.rammfence.com/fence/flex-fence-for-horses/raceline-coated-wire

Resourcehttps://www.blueridgefenceco.com/agricultural-fencing/high-tensile-fencing/

TEMPORARY FENCING

Temporary fencing is meant to be broken down and moved often to accommodate changes in herd size, fields, or grazing needs. It is used within a more permanent perimeter fence, and works well to divide large fields into smaller paddocks for grazing management.

Temporary fencing includes netted fencing varieties for smaller species, such as chickens and sheep, as well as electric fencing with metal posts, a method used for larger species, like cattle and pigs.

Netted temporary fencing uses fiberglass or plastic posts with electric rope, twine or tape netting, and is easiest to install by hand. This fencing type has a lower cost and is easily movable and flexible, making it ideal for rotational grazing. The downside to netted fencing is its longevity due to wear and tear from regular use.

Electric fencing with metal posts is considered semi-permanent, as it requires more labor to break down and move. There are different types of electric fencing, including with plastic step ins, but this specific style uses metal posts and plastic insulators. If you have a pasture that you want to section off and does not need to constantly change, this fencing type is ideal.

:https://layswesternwearandfeed.com/products/electric-fence-t-post-extended-insulator

https://ksfgc.org/2021/04/20/5-things-you-should-know-when-using-temporary-electric-fencing/

WATER

WATER SYSTEMS

Clean water is imperative to your livestock's overall quality of life and condition. Keeping water close to grazing animals has been shown to create more uniform pasture utilization. There are many ways to get water to your animals, but before you figure out how to transport it to them, a sustainable water source must be identified.

HERE ARE SOME COMMON WATER SOURCES USED IN NH.

Surface water, such as streams, rivers, and lakes, are typically the easiest option because of their size, but have some potential challenges that should be considered when making your decision. These challenges include possible contaminations due to livestock or wild animal manure and chemical run off, both of which cannot be controlled if allowing livestock direct access.

Water wells: A water well is a hole drilled into the ground to access water contained in an aquifer[1]. Once drilled, a pipe and pump is used to bring the water from the source to wherever it is needed.

Drilled Well: A mechanically drilled well will be much deeper and often more reliable in throughout the entire season.

Dug Well: Dug wells are often older and are not as deep, this may lead to them drying out in the warmer months.

If the property you have acquired has any type of well it is recommended you test the water before using. Always remember to cut power to your well before testing.

[1] Wells
https://groundwater.org/wells/

WATER WELLS

It is best to monitor existing water wells to evaluate the depth of low water and if the well is deep enough. There are a variety of at-home tests you can do to measure the depth of the well, which can be found in the resources section of the toolkit under WATER. Always remember to turn off power to your well before conducting any tests.

Although older water wells can be usable, the quality and quantity of the water in the well should be analyzed before deciding to use it. The New Hampshire Department of Environmental Services (NHDES) advises owners of private water wells to collect samples and send them to a credited laboratory. A link to show where you can get your well water tested is listed in the resources section of the toolkit.

Drilled water wells generally have lower contamination risks because they are disconnected from surface contaminants due to their scale and continued casing. In the summer months, they are more reliable in their ability to avoid drying out in large part due to their depth. These wells are more expensive than other water well types, and their depth needed to extend the gallons per minute can vary greatly from site to site.

Resource: groundwater.org/wells

History of water wells in New Hampshire

Old farm wells are common across the New Hampshire landscape. They supplied farms and houses with a reliable source to water. Often, the unused wells have become stagnant and can have high pathogen and heavy metal levels.

Since old wells were most likely hand dug, they are not usually very deep, which makes them vulnerable to running out of water in the dry time of year.

Modern wells are similar to old wells in that they serve the same function, but generally have better water quality and function. These wells are dug or drilled by licensed professionals and need to consider various points before constructed, including potential for ground water contamination and local surface geology. NHDES requires all private wells to be registered into the Water Well Inventory Database, created in 1984.

THREE WAYS OF GETTING POWER TO PUMPS

Gas Powered

Great for remote locations where electricity isn't available paired with a storage tank and gravity feed pipeline system. Gas pumps require more management than other options because you have to manually turn the pump on and off when filling the storage tank.

Solar Powered

These pump types *can* work well in remote locations, but you need to have good sun exposure. Management of this system is less intensive than a gas pump because the storage tank has a float switch that controls the water level in the tank, negating the need to manually turn the pump on and off.

Electric Powered

Hard wired systems with a pressure tank and a pressurized system are usually the pumps that require the least maintenance. This system doesn't have to rely on gravity for pressure so the pipeline layout can stretch across more varied terrain.

WATER DELIVERY SYSTEM

Pipeline irrigation is the method of transporting water from a main water source through a system of pipes for agricultural use.

Gravity: Gravity pipelines use the force of gravity to carry water from a high elevation to a lower area.

Trough: Troughs come in all shapes, sizes and materials. When deciding what to use, consider how often you will be moving that trough. If you will be moving it frequently and the flow rate is over 4-5gpm (gallons per minute) then a smaller tank is better.

Tank and haul: Using a trough and hauling water using a large tank. This is the most management and time intensive but can work for areas that cannot support the above systems.

Float valve: A float valve can make water management at the trough much simpler. A float valve is installed inside your water trough and will automatically refill as your livestock drink. There are various styles of float valve to choose from each having different benefits. Choose your style based off of water flow, and size of trough.

Pressurized: Pressurized pipelines are more flexible in where water can be delivered, namely uphill from the water source.

Surface/shallow burial: These pipelines sit on the surface or are buried shallowly into the ground. While it must be drained each year before freezing to prevent splitting, it is the easiest to install. The surface pipeline allows for the easiest movement or adding water points. Ease of installment and low cost make it great for beginners.

Deep burial: A frost free line is an option to get your water source closer to your sacrifice area for winter time.

Resource: https://extension.oregonstate.edu/animals-livestock/beef/tips-livestock-care-high-temperatures

ANIMAL HANDLING

The ability to confine your livestock in order to handle them is very important for different reasons, including sickness, injury, giving birth, identification, loading onto a trailer and more.

The most important consideration when deciding how to confine your animals is to have a *safe* and *secure* area where you can *fully* confine an animal if necessary.

This may be a barn, a headlock/stanchion, or a pen of some sort. Depending on the handle-ability of your livestock, your facility may need to change.

Livestock that is handled on a regular basis will likely be easier to confine than less handled animals (this could vary by breed, age and species).

Going any deeper into handling livestock is beyond the scope of this document. We have added links on ***Resources*** *page, found on page 30.*

COMMON HANDLING OPTIONS*

- Round pen made of individual panels
- Headlock/stanchion
- Squeeze shoot
- Barn stall
- Bud box setup

As your farm scales up, you may want to consider expanding handling facilities in order to accommodate your growing herd size and a more regular need to handle them. Understanding how to move your animals and the ways they respond to movement and pressure is important.

*Definitions of these terms can be found on the **Glossary** page (pg. 4) at the beginning of this document.

FORAGE SPECIES *

Whether you have established pastures on your farm or are planning to cultivate open or forested areas into pasture, there are a few things to consider when it comes to growing forage in New Hampshire.

Many types of forage thrive here in the state but success varies based on the condition of your soil, climate, land use history and management style(s).

*The grasses, legumes and cereal grains that make up your pastures.

FORAGE CONSIDERATIONS

Consider the following before seeding your pastures:

-Warm or cool season grasses
-Species of livestock being fed
-Rotational or continuous grazing
-Palatability of forage
-Annual or perennial
-Soil type of the property

This section will address these questions and provide examples of common pasture grasses. For a more in depth assessment, you can find Selecting Forage Species guide from UMass Extension and more in the 'Forage' section within the Resources section of this document.

TYPES OF GRASS SPECIES

Cool Season: These grasses grow in spring and again later in the fall. Examples of common cool season grasses include: Orchard Grass (perennial), Smooth Bromegrass (perennial), Tall Fescue (perennial), Birdsfoot Trefoil (perennial) and Alfalfa (perennial).

Warm Season: Species grown from June through September. These grasses grow well once the cool weather grasses slow down due to their tolerance of dry and hot weather. Examples of warm season grasses are: Switchgrass (perennial), Millet (annual), Big Bluestem (perennial) and Sudan Grass (annual).

Cereal Grains: Grasses that produce edible grains. These grains can be grown in spring or winter depending on the species. Examples of cereal grains include: Wheat, Rye, Oats and Barley (all species annual).

Having a variety of species will create a productive pasture for your livestock. Due to soil type variability, you may need to use different seed mixes for different pastures. Once you have an idea of what grasses fit your livestock, you can choose to purchase separate seed bags and mix yourself or buy premixed mixes. Many companies offer premixed forage bags including local feed stores, like Blue Seal.

Most grasses and clovers do best with a soil pH of 6.0-6.5, regardless of species. Some grasses, like alfalfa, generally do better with a higher pH, between 6.5-7.0.

Smooth Bromegrass

Resource:
https://www.gostarseed.com/products/smooth-bromegrass/

Smooth Bromegrass: Good for early pasture grazing, can grow in extreme temperatures, and is known for being drought hardy. Slow to regrow after initial grazing, and prefers a well drained silt or clay loam. It has the ability to grow in a dense sod up to four feet high, and produces a higher quality forage than orchard grass or tall fescue. Prefers to grow in a soil pH of 5.5 or higher.

Orchard Grass

Resource:
http://www.lhseeds.com/dactylis-glomerata-orchardgrass

Orchard Grass: Fast dense growth with a quick regrowth after initial grazing. Is able to adapt and grow in a variety of soil conditions and environments. Prefers a soil pH between 6.0 and 7.0, and grows best when paired with a legume. It can be grazed heavily early in the growing season to keep quality and palatability higher.

Tall Fescue

Resource:
https://tugofwarseeds.com/products/tall-fescue

Tall Fescue: Grows well in high traffic grazing areas, and can do well to extend pasture season. Can adapt to a wide range of soil ph levels, and does better on acidic soils than other grasses. It can add much needed forage for stockpiling in winter months. This grass is usually best paired with red clover. Has a reputation for not being very palatable.

Birdsfoot Trefoil: This legume is preferred for ruminant's to graze on as it doesn't cause bloating like other legumes. Prefers to grow in moist but well drained soil conditions and is highly palatable (no standing water). This legume does better in low fertility soils than other legume options, but can not tolerate over grazing (having some leaves is necessary for proper regrowth).

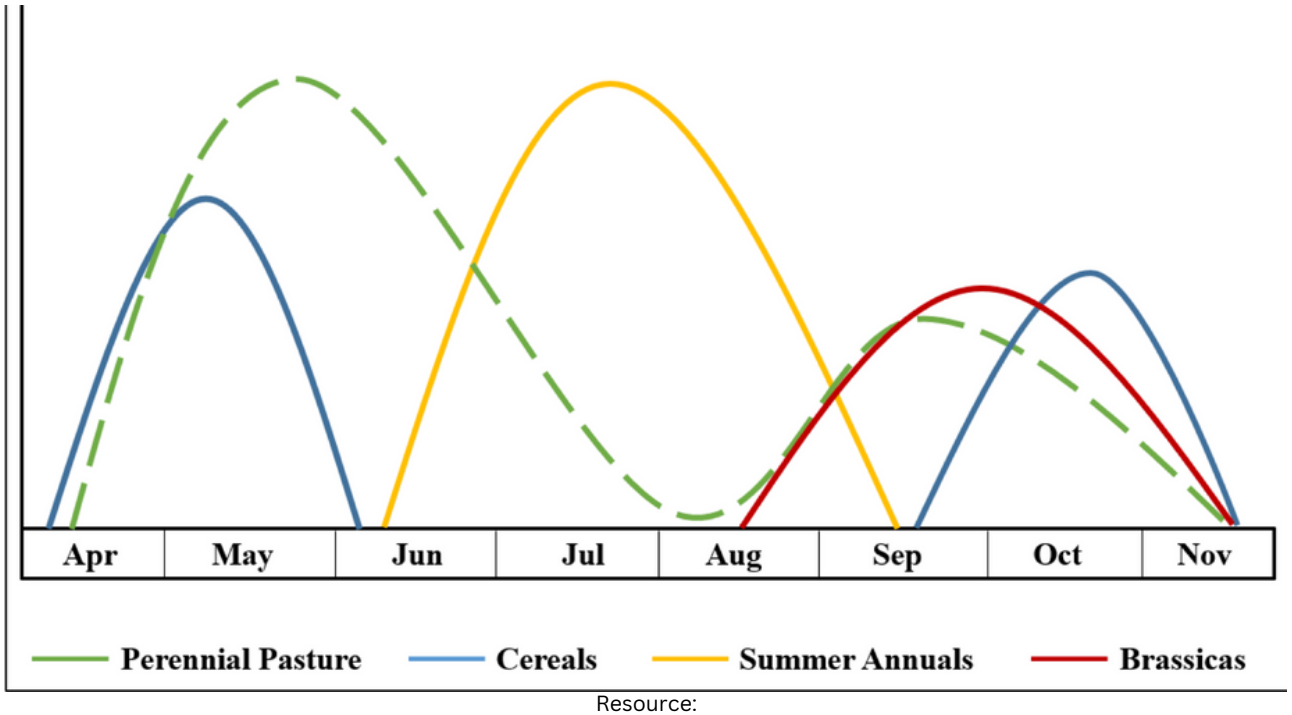
Resource:
https://alseed.com/eight-great-reasons-to-seed-grass-with-your-alfalfa-hay/

Alfalfa: This legume is extremely drought hardy and pairs well with grasses that need higher nitrogen availability in the soil. It is high in nutrient content and grows best in a soil pH of 6.0 to 6.5. Highly palatable to all grazing species but can cause bloat in ruminants. Its taproot prefers deep soil to allow maximum growth and proper nitrogen fixation. Alfalfa is is a great, nutrient dense forage species but it can be very difficult to manage. Managing a full stand of alfalfa here in New Hampshire is uncommon, although you may see it mixed into other species within a pasture.

Resource:
https://alseed.com/eight-great-reasons-to-seed-grass-with-your-alfalfa-hay/

Resource:
https://alseed.com/eight-great-reasons-to-seed-grass-with-your-alfalfa-hay/

Winter Cereal Grains: Prefers full sun locations, with well drained loam or loam clay combination soil pH of 6.0 or higher. This crop can be planted in early spring for an extended grazing season in the fall and is usually chosen over other annual seeding options.



Resource:
https://alseed.com/eight-great-reasons-to-seed-grass-with-your-alfalfa-hay/

The above graph displays the fluctuation of forage growth throughout the year. As discussed previously, cool season grasses grow best in the spring and have a resurgence in the early fall. This phenomenon is referred to as the 'summer slump' due to the hot and dry conditions starting and production decreasing .

To account for the summer slump, warm season grasses fill the void due to their adaptability during the warmer months. As the season progresses, cereal grains will increase production and bring the pasture into winter.

It is vital to have a diversified pasture to ensure you have enough quality forage to get through the growing season. With ever changing weather patterns and rising feed costs, having a well seeded pasture will allow your livestock to maintain throughout the growing season.

Rules of thumb:

- You can increase stocking density to make a bigger impact on forages. A good way to manage spring flush.
- Quickly moving animals through paddocks during spring flush can also aid during that time.
- Try to back fence any previously grazed areas to allow for proper rest and regrowth.
- Try to leave at least 6 inches of residue during grazing.

LAND RECLAMATION

Restoring old pastures, forested areas and degraded pastures back to productivity.

WHERE DO I START?

Graziers often take on new pastures or hayfields that have not been actively managed for some time. These areas are typically low in fertility, and forage species may be crowded out by weeds or even brush and tree seedlings. However, with time and effort it's possible to bring these areas back into productive forage.

Soil fertility

Start the process of soil fertility with a soil test to give you an idea of what nutrients need to be amended into your soil. It is typical for significant quantities of lime to be added – often three or four tons per acre – to bring the pH back into the desired range. Plant nutrients can come from a variety of sources: fertilizers and other soil amendments, manure, or composts.

Managing Vegetation

You can begin to address weeds at the same time you're addressing soil fertility. Simply mowing or grazing areas a few times may be enough to bring about significant improvements in areas with light weed infestations. Many species don't tolerate repeated defoliation the same way grasses do, and they begin to fade away after getting cut a few times each season. While livestock may browse on brush or woody species, cutting or pruning away stems or the trunks of saplings will give you faster results.

There are some weeds that are difficult to manage with grazing or physical removal alone. **Smooth bedstraw** is an invasive weed in pastures and hayfields across the state, but it's not palatable for grazing and its low growth habit allows to escape removal by mowing. **Multiflora rose** is an invasive shrub that grows in disused pastures, and its vigorous root system can send up new shoots that outpace all but the most aggressive removal efforts. In these cases, combining mowing with herbicides can be helpful. Keep in mind, however, that using herbicides without addressing soil fertility or grazing or mowing management, will not bring about long-term improvements.

Resource:
https://weedid.cals.vt.edu/profile/358

Resource:
https://extension.unh.edu/blog/2018/04/invasive-spotlight-multiflora-rose

REINTRODUCING FORAGE SPECIES

Reseeding pastures and hayfields is expensive and labor intensive. Many unmanaged areas can have desirable forage grasses and legumes growing in them, and if they still make up a significant proportion of the stand, it's much easier to coax them back into production than to attempt to replace them entirely. Removing competing weeds and improving soil fertility have the added benefits of allowing existing forage species to flourish.

It is possible to gradually introduce new species to forage stands with simple and inexpensive methods. One of the most popular of these is **frost seeding**, where you scatter seed over the ground in late winter or early spring and rely on the soil heaving as it freezes and thaws to bury it. Cattle can also be used to overseed a pasture. Although germination rates can be low, allowing your cattle to naturally consume forage and elinate the seeds onto the pasture can produce areas of growth.

When reseeding completely is called for, you will need to suppress or eliminate the existing vegetation. There are two common methods to completely reseed - conventional tillage and no-till seeding. Conventional tillage – plowing and disking the field to prepare a good seedbed – is a viable option if the soil is not too steep or rocky. No-till seeding, where the existing sod is killed or suppressed by herbicides or intense grazing before introducing seed with equipment that can place it in the soil, requires less time and fuel, and is better adapted to areas where tillage is not appropriate.

No-till drill used to plant seeds of different sizes.

Resource:
https://www.remlingermfg.com/agricultural-products/no-till-drills/

SACRIFICE AREA

Sacrifice areas are a must for all livestock operations small or large.

What is a sacrifice area?

A sacrifice area is an area which is designed to confine livestock that has been prepared for a set amount of concentrated livestock impact for an extended amount of time.

GETTING STARTED

What is the purpose of a sacrifice area?

During inclement weather - rain season, winter months, or during the "summer slump" - it is best to keep livestock separate from prime grazing land to avoid lasting forage damage and to maintain livestock health.

Sacrifice areas provide the following advantages:

- Avoid muddy pastures that can lead to lasting forage damage, health issues within your herd including slippery footing and various infections from the mud
- Pastures do not provide the same nutrients during winter months
- Allowing pastures enough time to regrow during the summer when rain may be scarce

Sacrifice areas are not only good for the environment during certain phases of weather, but it is also key to livestock health. At the end of the day, this all hits the bottom line of profitability.

WINTER AND SPRING - CHOOSING A LOCATION

Choosing a single pasture or a completely separate off pasture area to use as a sacrifice area will keep pastures healthy and livestock happy. Depending on the weather, time of year, or size of your herd, you may have multiple sacrifice areas. In the winter, you may keep the animals close to "home" or the barn and during grazing season, it may be a chosen field closer to your grazing areas.

Things to consider when choosing a sacrifice area:

Does the area have good drainage?
You do not want to choose a low spot where water may pool and cause muddiness.

Is there shelter available?
This can be a tree line or a more formal shelter.

Is it accessible by foot and vehicle?
You will most likely need to bring food and water to the animals and need to make sure that is possible in all kinds of weather.

Are you able to confine animals there or nearby in case of sickness or other needs?

Is your fencing secure and appropriate for the species of animal or age of animals?

Is the area large enough for your group of livestock?
They need space to eat, move, and lay down comfortably.

When you confine livestock to one area you will get a concentration of nutrients. These nutrients will come from manure and leftover hay or grain. Working hard to distribute these nutrients as evenly as possible throughout the area is important. This can be done by moving around your hay feeders or changing up where you feed. As you move feed around, you are distributing the livestock manure as well as any waste hay. Waste hay that is left behind can often drop seed, leading to natural forage growth!

SPRING IS HERE, NOW WHAT?

Spring cleanup of your sacrifice area can, and often times *should* be, quite easy *if* the proper steps were followed during the winter. In the spring time, once your livestock are back out on prime pasture, you can drag your sacrifice areas and prepare them for seeding.

Many farmers will seed these areas after animals have moved off, using an annual seed mix that will grow quickly and last only for one season. They may graze this area with livestock during the regular season or use it at the end of a grazing year to extend their season a bit longer. Either way, this ground should be covered with forage to utilize the nutrient dense area as well as prepare it best for the next time you will use it as a sacrifice area.

These winter areas can also be grazed during the summer for short periods of time. The key to your winter sacrifice area is to let it grow back up so when your livestock return to it, it will extend your grazing time and also give you a good base for mud control throughout the winter and spring.

Sacrifice areas make a big impact on the environment, the health of your pastures and livestock, and if utilized properly, can be a huge asset.

Resource:
https://u.osu.edu/beef/2019/11/06/reducing-pasture-damage-during-winter-feeding/

The information provided in this toolkit is just the basics of what it takes to graze livestock. Although this resource comes from professional sources and experience, there are no one size fits all solutions when it comes to grazing--every farm and every farmer are different!

If you are interested in grazing, we encourage you to use this toolkit and the resources provided at the end as a starting point on your journey to develop your own grazing operation to fit your goals, lifestyle and vision.

Happy grazing!

RESOURCES

Listed below are an array of resources available to farmers and homesteaders in the New Hampshire area, some referenced within the text above.

These resources range from soil testing to government programs.

Although extensive, these are not all of the resources available to you. If you have a resource in mind that was beneficial to you and would like it added, please let us know using our contact information found on page 32.

Infrastructure

Land:

[Land for Good]
Connecting and supporting farmers and landowners with land access, tenure and transfer. Keeping farmland as working farms.
Website: LandforGood.org

[Soil Testing Forms]
Forms from UNH Extension. Navigate to the form that best fits your soil testing needs.
Website: Extension.unh.edu/resource/soil-testing-forms

Fencing:

[Wellcroft Fence Systems]
Online fencing needs store.
Website: Wellscroft.com

Water:

[NRCS Irrigation and Water Management]
Offered programs and assistance from NRCS related to irrigation and water systems.
Website: Nrcs.usda.gov/getting-assistance/other-topics/organic/nrcs-assistance-for-organic-farmers/irrigation-and-water-management

[NH State Water Testing]
State of NH website for water well testing.
Website: Des.nh.gov/water/drinking-water/private-wells

[Small Community Well Siting Guide]
State of NH guide to installing water wells on private property.
Website: Des.nh.gov/water/sites/g/files/ehbemt341/files/documents/wd-20-02.pdf

Animal Handling

Low Stress Cattle Handling: The Basics

MSU Extension guide on handling cattle in a low stress manor to create safer environments.

Website: https://www.canr.msu.edu/uploads/236/58549/LowStressHandling.pdf

Handling Large Farm Animals

UNH Extension easy to follow guide on how to handle farm animals.

Website: https://extension.unh.edu/sites/default/files/migrated_unmanaged_files/Resource002669_Rep3955.pdf

Bud Box Animation

Easy to follow pictures and diagrams of a bud box.

Website: https://www.youtube.com/watch?v=aICghJbSS-A

Forage

Pasture Production with Selected Forage Species

Breakdown of forage species specific to NH.

Website: https://extension.unh.edu/sites/default/files/migrated_unmanaged_files/Resource000487_Rep509.pdf

Selected Forage Species

Extensive breakdown of forage and their uses, conditions, and more.

Website: https://ag.umass.edu/sites/ag.umass.edu/files/fact sheets/pdf/selecting_forage_species_15_06.pdf

USDA Plants Database

Ability to search for plants and obtain guides, photos, face sheets and more.

Website: https://plants.usda.gov/home

Forage continued

[Common Grasses and Meadow Plants]
Identifying common grasses and meadow plants in NH.
Website: https://extension.unh.edu/sites/default/files/migrated_unmanaged_files/Resource006122_Rep8712.pdf

[Managing Cereal Grains for Forage]
UVM Extension resource on growing cereal grains in pasture for hay production and forage.
Website: https://www.uvm.edu/sites/default/files/media/managing-cereal-grains-for-forage.pdf

Land Reclamation

[Land Reclamation for NH Farms]
GSG video guide to explain land reclamation basics.
Website: https://www.youtube.com/watch?v=YkYndu8WPl0

Sacrfice Areas

[Care and Condition of Sacrifice Areas]
Penn State Extension resource covering sacrifice area basics.
Website: https://extension.psu.edu/care-and-condition-of-sacrifice-areas

Stockpiling

[Stockpiling Forage for Winter Grazing]
In depth explanation of stockpiling in order to feed grass throughout the winter months.
Website: https://extension.psu.edu/stockpiling-forage-for-winter-grazing

General:

Granite State Graziers
Website: https://grazenh.com

National Grazing Lands Coalition
Nationwide nonprofit providing high quality technical assistance on privately owned grazing lands.
Website: https://www.grazinglands.org

University of New Hampshire Extension (UNH Ext.)
Providing a wide array of agricultural resources to NH residents.
Website: https://extension.unh.edu/

United State Department of Agriculture (USDA)
Website: https://www.usda.gov

Natural Resource Conservation Service (NRCS)
Website: https://www.nrcs.usda.gov

Northeast Pasture Consortium
Website: https://grazingguide.net

Maine Pasture Management Course
A free, online self-study course originally developed by the University of Minnesota but modified to fit with Maine pasture conditions.
Website: https://extension.umaine.edu/livestock/pasture-course/

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GRANITE STATE GRAZIERS

WHO WE ARE

Granite State Graziers supports New Hampshire residents who raise animals on pasture and seek to implement pasture management systems that improve soil health and water quality. We act as a clearinghouse for information, conduct educational programs and events, and provide online resources.

CONTACT INFO

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THANK YOU

This guide is intended to be a living document and will evolve thanks to your input and questions. Please contact us at info@grazenh.com with any feedback and/or questions.

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