Extension
UNIVERSITY OF WISCONSIN–MADISON

Wisconsin's Grazing Roots

Grazing Glossary



Terms and Tools to Support the Success of Managed Grazing

Grazing requires little equipment and infrastructure when compared to other conventional farming practices. Yet, getting established in the world of grazing can sometimes feel like learning a whole new language, and there are many helpful tools and terms that beginning graziers may not be familiar with yet.

This resource is intended to be a comprehensive introduction to the language and world of grazing, featuring terms and tools with short descriptions and to help beginning graziers and grazing planners build expertise helpful to managing their own farms and writing grazing plans. This resource is framed around 'managed grazing.' Central to understanding the systems and terms that follow, it's important to understand what 'managed grazing' refers to, first, so that is the first and most critical definition in the Grazing Glossary:

Managed Grazing: a cost-savings, pasture-based forage and livestock management approach that relies on planned rotation of a herd or flock at least once every three days to a new area of pasture, adequate residual height of forages left after grazing (4-6"), rest periods for forages to fully recover before being grazed again (~30 days, depending on conditions), and stocking decisions aligned with carrying capacity of the land and intake goals to optimize livestock performance, supply high-quality forage, improve farm profitability, and improve environmental outcomes

Like any active language and culture, the language and world of grazing is constantly evolving with new terms, tools, and technology each year. Requests to add terms to this glossary can be made by contacting the UW-Madison Extension grazing team.

Learning the Language: Terms & Tools

Adaptive grazing or adaptive multi-paddock grazing: a form of managed grazing that uses high stocking densities, multiple paddocks, frequent moves of livestock with short grazing intervals, and long rest periods, sometimes associated with overgrazing and overly long rest periods

Animal Unit: the equivalent of one 1,000 lb animal

Anthesis: the flowering and fertilization stage of a plant when pollen is shed

Average Daily Gain: weight gained each day averaged over a defined period of time, typically reported as lb/day

Baleage: forage harvested at about 50% moisture as bales and wrapped tightly in plastic to ferment with the goal of improved nutrition and more flexible harvest schedules

Bale Grazing: a managed winter-feeding system where hay bales are preplaced in a grid in a pasture or field and livestock are progressively given access to enough feed for a few days at a time using temporary or virtual

fencing; *by feeding bales in place, producers can reduce labor and equipment use while enhancing nutrient cycling and soil fertility*

Bale Unrolling: a feeding system where hay bales are progressively rolled out in a pasture or field, as needed, for livestock to access and consume, typically with the goal of more even distribution of mulch and nutrients from manure

Body Condition Score: a numerical evaluation of an animal's fat reserves and overall condition, based on visual and physical assessment

Breaks: temporary subdivisions of a pasture or paddock, often using portable fencing designed to allocate a specific amount of forage to be grazed over several hours or days

Brix Meter (Refractometer): a field device used to estimate the carbohydrate and energy density of standing forage by measuring the concentration of Total Soluble Solids (TSS) in plant sap

Carrying Capacity: the number of animals a given area can support for the entire growing season based on forage supply

Clipping: the practice of mowing pasture vegetation for the purpose of removing grass seedheads or reducing weed pressure

Cool Season Grass: grass species adapted to northern temperate regions that use a photosynthetic pathway that allows growth during cooler, lower light periods of the year.

Continuous Grazing: a grazing management system in which livestock have unrestricted access to a single pasture for an extended period, with little or no planned rest for forage plants, also referred to as set-stocking

Corn Stover: remaining above-ground biomass of corn (i.e., stalks, leaves, husks, cobs) leftover after corn grain harvest

Cover Crops: any number of mostly annual species of grasses, legumes, and forbs that are planted or interseeded with the intent of reducing soil and nutrient losses and improving soil health and functionality; may be used to reclaim outwinter areas, graze, or harvest for forage

Crop Residue Grazing: the practice of grazing the leftover residue once a crop has been harvested, also known as gleaning (i.e., grazing corn stover)

Crown: the base of a perennial forage plant where roots and shoots meet and new growth originates

Culling: the strategic removal of livestock from a herd or flock for any number of genetic, fitness, reproductive, behavioral, or health factors, with the goal of improving herd or flock performance

Cycle: one complete rotation including grazing period and rest period; for cool season pastures, this is typically about 30 days, but varies from 21 to 45 days, depending on the time of year

Digestibility: the metric that defines livestock's ability to extract nutrients from feedstuffs

Dormancy: a temporary period of little or no forage growth, driven by environmental conditions like drought, heat, or winter

Dry Matter (DM): forage plant material, where nutrients are contained, that remains after the water is removed; most rations and animal intake are calculated on a dry matter basis

Dry Matter Intake (DMI): the total dry matter consumed by animals, usually reported as a daily number for an individual animal, herd, or flock

Dry-Off: the intentional cesssation of milking to transition livestock to a dry period before new offspring are born

Dry Period: the non-milking rest phase for a lactating animal before new offspring are born, typically lasting 40-60 days

Feed Deficit: occurs when the feed demand is higher than the growth rate

Fencing: permanent and temporary barriers used to contain livestock and create paddocks and breaks that support managed grazing

- **Energizer:** a device powered by electricity, solar panels, or batteries that supply electric pulses to a fenceline
- **Ground Rod:** a metal rod driven into the soil and connected to the energizer to complete the electrical circuit
- **High-tensile Wire:** smooth, galvanized steel wire with high breaking strength (12.5 gauge or heavier) commonly used in permanent fencing along the perimeter and interior fencelines because of its durability, low maintenance, and extended lifespan
- **Interior Fencing:** permanent or temporary inner fencing used to subdivide pastures into paddocks or breaks for managed grazing
- **Perimeter Fencing:** the outermost fence of the pasture which serves as the primary livestock containment structure
- **Pigtail Post:** a temporary post made of metal with a looped insulated top (resembling a pigtail) that can be used to quickly and easily set up or move polywire and/or polytape
- **Polytape:** a wide, ribbon-like fencing material made of woven plastic strands and conductive metal filaments, which is typically more visible to livestock than polywire
- **Polywire:** a lighweight temporary electric fencing material made of plastic strands woven with conductive metal filaments
- **Reel:** a spool device used to store, transport, and quickly set up or retrieve polywire and polytape
- **Step-in Post:** a lightweight temporary post, typically made of plastic, with molded clips and a foot pedal that can be quickly installed to set up temporary electric fencing
- **Temporary Fencing:** any fencing used temporarily, typically to subdivide areas of pasture into paddocks (daily forage allotments) or to exclude livestock from sensitive areas utilizing polywire
- **Tumblewheel:** a portable fencing system featuring a wheel-shaped frame that can be rolled forward to create or adjust paddock boundaries
- **Virtual Fence:** a livestock management technology that uses GPS-enabled collars to create invisible pasture boundaries, where collars give audio cues when livestock approach a boundary and, if needed, transmit an electric shock to keep them contained in the virtual fence boundary
- **Voltimeter:** a device used to test and measure voltage on an electric fence

Flash Grazing: a rapid rotation through paddocks, allowing the herd to graze off just the first few inches of forage. This is typically done once in spring/early summer and allows the paddocks to be staged for staggered growth throughout the season

Forage: edible plant material that is consumed by grazing livestock fresh or mechanically harvested, including leaves, stems, and shoots of species like grasses, legumes, or forbs

Forage Allocation: the amount of forage budgeted for an animal, herd, or flock for a specific period of time to ensure forage supply and forage demand are balanced

Forage Analysis: laboratory testing of forage samples to determine nutrient composition and feeding value

Forage Biomass: above-ground live plant tissue of forages potentially available to grazing livestock

Forage Demand: amount of forage required per animal each day for metabolic function and growth; excludes supplements being fed in addition to pasture (for cattle, 4% of body weight includes a buffer for trampled forages and can be used to calculate daily forage demand in grazing systems)

Forage Equipment: tools and equipment used to grow, manage, and harvest forage for stored feed

- **No-till Drill:** a seeding implement that places seed in the soil with minimal disturbance of existing vegetation and crop residue, commonly used for pasture renovation and interseeding
- **Baler:** equipment used to gather and compress harvested forage into round or square bales
- **Broadcast Seeder:** a seeding implement that spreads seed across the soil surface, commonly used for frost seeding and cover crop establishment
- **Brush Mower or Brush Hog:** a heavy-duty mower used to clip pasture or set back woody vegetation and overgrown pasture
- **Discbine:** refers to a disc mower-conditioner that cuts forages and crimps or crushes stems to expedite drying
- **Rake:** equipment used to gather cut forage into windrows to improve drying and prepare the crop for baling
- **Tedder:** equipment used to spread and fluff cut forage, with the goal of increasing exposure to air to expedite drying
- **Wrapper:** a machine used to apply airtight plastic film around forage bales to facilitate fermentation and produce baleage

Forage Maturity: the growth stage of plants in a forage or grazing system from emergence to physiological maturity, typically in reference to the quality of forages as feed for livestock where more mature forages yield more but quality and palatability decreases

Forage Nutritive Value: the inherent nutrient content of forage

- **Crude Protein:** a rough value based on nitrogen content that describes the protein content of a feed or forage
- **Energy:** the concentration of available, digestible carbohydrates and fats in a forage or feed
- **Fiber**: the physical cell walls that give a plant its structure, which rumen microbes can utilize to produce energy for the ruminant animal in the form of volatile fatty acids. It has two components:
    - **Neutral Detergent Fiber (NDF):** the total cell wall content which describes the "bulkiness" of a feed
    - **Acid Detergent Fiber (ADF):** the least digestible parts of the cell wall

- **Neutral Detergent Fiber Digestibility (NDFD):** the proportion of NDF that the rumen microbes can break down into usable energy
- **Minerals:** the elemental profile of a forage, feed, or supplement essential for metabolic function and growth, consisting of macrominerals (Ca, P, Mg, K, Na, Cl, and S) and trace or microminerals (Se, Zn, Cu, Mn, Co, I, and Fe) in ruminants

Forage Quality: the combined consideration of forage nutritive value and palatability to identify the value of forage to meet animal performance and production

Forage Utilization: the amount of feed that is actually consumed by a grazing herd in comparison to what is refused, trampled, etc.

Forb: a broadleaf plant that is not a grass or legume but contributes to pasture diversity, yield and quality, especially in the case of sheep and goat grazing (i.e., plantain, dandelion, chicory)

Frame Score: an index that uses cattle hip height at any age to estimate mature size and weight

Freshen: when livestock give birth to offspring and begin their lactation cycle, derived from a sense of renewal and refreshing of milk production following a dry-off period

Frost-seeding: a practice of broadcasting pasture seed onto an existing pasture in late winter or early spring, when the top few inches of soil are thawing during daytime and freezing again at night. The freeze-thaw action works the seed down into the soil allowing for seed-soil contact and improved germination. Works best with clover seed, not recommended with alfalfa or grass seed

GIS: Geographic information systems, commonly used in planning and mapping (i.e., ArcGIS, QGIS)

Gleaning: the practice of grazing the remaining residue once an annual crop has been harvested (i.e., grazing corn stover)

Grass: any plant species of the Poaceae family, often featuring narrow leaves with thin, flat blades

Grazier: a farmer or manager who raises animals using managed grazing

Grazing Efficiency: percentage of total forage produced that is actually consumed by livestock, typically 50% in efficient managed grazing systems, based on the "take half, leave half" rule

Grazing Pressure: the intensity at which a pasture is grazed, which is affected by the relationship between livestock demand and available forage

Grazing Stick: a field tool used to estimate forage height and density to predict available dry matter and inform management decisions

Grazing Wedge: a visual representation of the forage biomass available in each paddock on the farm at a given time used to predict future pasture availability and make management decisions

Growing Point: the point on a forage plant where new growth begins, typically at the crown for cool-season grass species

Growth Rate: daily pasture growth calculated as the total amount of current forage biomass divided by the number of days since the last calculation (growth on a daily basis)

Haylage: forage harvested at 30 to 60% moisture as bales and stored in an airtight bunker or silo to ferment with the goal of improved nutrition and more flexible harvest schedules

Inoculant: a microbial product like *rhizobia* mixed with legume seed to promote nitrogen fixation or a substrate that can be used or applied to balage or haylage to promote fermentation

Intake: the amount of feed and/or supplements that livestock actually consume

Interseeding: the practice of drilling grass or legume seed into an existing pasture or hay stand using a no-till drill; works best on a thin or damaged stand

Irrigation: supplying water to pasture for forage growth, especially on sandy soils or during periods of drought (i.e., K-line irrigation)

Leader-Follower Grazing: a grazing strategy in which one herd with higher intake or energy requirements (leaders) grazes a paddock first, giving them access to the highest quality forage and moving them before all the forage is removed, and then another herd with lower nutritional needs (followers) grazes a paddock directly after to utilize the remaining lower quality forage

Legume: any plant species of the Fabaceae family, featuring an ability to form a symbiotic relationship with rhizobia bacteria in the soil to harness atmospheric nitrogen for plant growth

Livestock Handling: facilities and equipment used to safely capture, sort, restrain, and manage livestock

- **Alleyway:** a narrow passage to guide livestock between pens, sorting areas, handling equipment, and loading facilities
- **Anti-backup Device:** a gate or spring-loaded device that allows livestock to move forward but prevents them from backing up, seen often in small ruminant systems
- **Automated Gate System:** an electronically programmed gate, which typically works in tandem with livestock collars, used to regulate cow flow between paddocks and barns (i.e., Grazeway)
- **Bud Box:** a small rectangular pen that leverages livestock behavior to move animals into a single-file handling alley or chute
- **Chute:** a narrow livestock handling structure designed to safely restrain animals, usually used for weighing and health treatments
- **Corral Panels:** steel panels that livestock can see through, which can be used to create temporary or permanent livestock handling areas
- **Holding Pen:** an area that temporarily holds livestock before or after handling activities
- **Scale:** equipment for weighing livestock and to monitor rate of gain
- **Sweep Tub:** a curved holding area with a pivoting gate that encourages livestock movement into a handling alley or chute

Managed Grazing: a cost-saving, pasture-based livestock management approach that relies on planned livestock rotation at least every three days on perennial pasture, adequate forage residual left after grazing (4-6”), rest periods for forages to fully recover (~30 days, depending on conditions), and stocking decisions aligned with carrying capacity of the land and intake goals to optimize livestock performance, supply high-quality forage, improve farm profitability, and reduce environmental impacts

Management intensive grazing: a term used to describe managed grazing that emphasizes the important role that management plays in a successful system

Mineral Feeder: a device usually made of dense plastic placed in pasture to provide livestock with free-choice minerals, vitamins, or other supplements

Mob Grazing: a grazing strategy where livestock intensively graze a small area at a very high stocking density for a short time, often as little as 4 to 6 hours, before being moved to allow for a long recovery period

Occupancy Period: the duration of a herd's residence within a specific paddock.

Outwintering: a management practice where livestock remain outdoors and are fed stockpiled pasture, hay, and/or supplemental feed in designated pastures rather than being housed during the winter months

Overgrazing: grazing forages to a height less than four inches or before they have had a sufficient recovery and regrowth period, reducing plant vigor, productivity, and persistence

Paddock: a subunit of pasture typically defined by interior fencing that is sometimes grazed as-is or subdivided further into breaks for rotational grazing

PaddockTrac: an ultrasonic sensor developed by University of Missouri Extension, which can be mounted to an ATV and operated on pasture to estimate forage height and biomass to generate a grazing wedge using on-farm data *(not commercially available)*

Pasture Condition Scoring: an inventory of a pasture's soils, forages, and resource concerns to identify management opportunities and monitor their improvement over time

Pasture Condition Scoresheet: an evaluative scoring tool used by grazing planners and NRCS to quantitatively and qualitatively assess the current pasture condition and monitor its evolution over time

Pasture.io: a subscription-based, tool developed in Australia that utilizes satellite imagery to collect data on leaf greenness, known more technically as normalized difference vegetative index (NDVI), to estimate forage height and biomass to generate a grazing wedge

Pasture Renovation: a collection of practices intended to improve pasture composition and performance

Plant Tissue Test: laboratory analysis of tissue from a crop plant to measure the concentration of nutrients in it during the growing season

Pugging: soil surface damage caused by animal traffic in wet conditions, which can result in compaction, damage to vegetative cover, and uneven ground

Refusal: the avoidance of areas of pasture or specific plant species due to unpalatability or other anti-quality factors (i.e. manure or urine spots)

Relative Feed Value (RFV): an index for ranking forages based on combining digestibility and intake potential; developed to be used to compare varieties and market alfalfa hay (Ball et al., 2001)

Relative Forage Quality (RFQ): an index for ranking forages based on total digestible nutrients (TDN) and intake potential; matches animal performance better than RFV across many forage types (Ball et al., 2001)

Reproductive Growth: the growth stages of forages as they approach anthesis and the production of mature seeds. In grasses, this is typically defined as beginning with the emergence of the flag leaf and the boot stage, which is when the developing seedhead starts emerging. In legumes and forbs, these stages begin with early bloom

Residence Period: the length of time that livestock remain in a subdivided area of pasture like a paddock or break before being moved to a new area

Residual: the forage left behind in the pasture after grazing. For cool season pastures, 4 to 6 inches of residual should be left to ensure forages maintain photosynthesis and have adequate carbohydrate reserve to recover and regrow between grazing events and to persist in the pasture over time

Rest: the period of time between grazing events when forages are left unharvested and ungrazed to recover and regrow before grazing again. For cool season pastures, typically averaging 30 days, depending on growing conditions

Rising Plate Meter: a forage measurement tool that utilizes a weighted plate on a vertical shaft to estimate forage mass by combining compressed sward height and density

Rotation: the movement of livestock through a series of subsections or paddocks within a larger pasture area to provide fresh forage and allow forages adequate time to recover and regrow before being grazed again. Twelve hours up to three days in each paddock usually ensures good performance of cool season pastures

Rotation Length: days until cows return to the same paddock

Roughage: indigestible part of the diet or feed that provides fiber, important for maintaining a healthy mat in the rumen

Rumen: the largest chamber of a ruminant's disgestive system, where microbes ferment feed and produce nutrients and energy that can be absorbed and utilized by the animal

Ruminant: classes of livestock that contain a four chambered stomach, featuring the rumen, reticulum, omasum, and abomasum, which uniquely rely on a microbiome to digest and utilize feed like grasses

Rust: a common fungal disease in cool-season perennial pastures featuring dusty orange spore pustules that appear in warm, humid summer conditions, caused by species in the Puccinia genus

Sacrifice Area: a designated area of the pasture where livestock can be responsibly kept during periods when pastures need to be protected from animal traffic, to prevent damage elsewhere on the farm

Selective Grazing: behavior of livestock that pick and choose plant species to graze that are more desirable or palatable than other plant species in a mixed sward, often exacerbated under set stocking scenarios

Set Stocking: the practice of confining a herd or flock to a single pasture area for an entire season, also known as continuous grazing

Shade Structures: fixed or portable living (i.e., trees) and non-living structures that block sunlight, used to reduce livestock heat stress

Small Ruminants: the livestock classes of sheep and goats, often referred to as 'small ruminants,' to differentiate the management and unique anatomy of these smaller framed species compared to cows

Soil Health: the continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans (NRCS)

Soil Probe: a steel tool used to collect cores of soil, usually 1" in diameter, to whatever depth is needed to send in for testing of nutrients and other soil factors

Soil Testing: the analysis of soil samples to assess soil fertility and support nutrient management decisions

- **Routine Soil Test:** a standard laboratory analysis used to assess soil fertility, soil pH, and provide fertilizer recommendations
- **Soil Health Test:** numerous soil health assessment tests are available that consider biological activity, organic carbon, and nutrient availability to monitor soil function and nutrient cycling over time

Spring Flush: the period of forage growth in cool-season perennial pastures (typically from mid May to mid June in the Upper Midwest), where forage growth rate peaks in response to warming temperatures and the initiation of reproductive growth of grasses

Stocking Density: the number of animals per acre on a given paddock or section of pasture at a particular time

Stocking Rate: the number of animals per acre across all grazing acres on a farm for the season

Stockpiling: the practice of allowing forage to accumulate in specific paddocks during the growing season to be grazed later, often in the fall or winter

Stockpile Grazing: setting aside a portion of pasture and allowing forages to accumulate for a period of up to 60 days in late summer, then grazing the stockpiled forage during the non-growing season

Summer Slump: the period in late summer when high temperatures result in slowed growth of cool season pastures (when coupled with low moisture conditions, the summer slump may be severe enough to induce dormancy)

Supplementation: the provision of specific nutrients (i.e., vitamins, minerals, energy) needed for livestock metabolic function, growth, and productivity to supply what forage and pasture may be lacking

Surplus: occurs when growth rate is higher than feed demand; positive pasture balance

Sward: all aboveground vegetation of a pasture

Take-Half, Leave-Half: a common rule of thumb in managed grazing to graze half the standing forage and leave the remaining half standing to support recovery and regrowth

Thrift (Thriftiness): refers to the overall health, vigor, and ability of livestock to efficiently grow and reproduce; conversely *ill-thrift* describes an animal that exhibits stunted growth or poor performance, despite adequate, quality feed

UAV: unmanned aerial vehicle, typically used to capture aerial imagery and data; sometimes referred to as "drones"

Underutilization: a condition of a grazing system where a significant portion of available forage remains ungrazed or the quality of forage prevents the livestock using all its available energy

Vegetative Growth: the 'leafier' growth stages of the pasture before and after the reproductive growth stage of grasses

Waterline: plastic pipeline used to supply water to livestock on pasture, which may be aboveground, shallow buried, or deep buried (frost-free) and is sized to optimize flow rate

Water Wagon: a water tank mounted to a wagon, used to provide a mobile source of water on pasture

Weaning: the transition of youngstock like lambs, kids, and calves away from their mothers to transition from a milk-based diet to forage

Weed: any species growing in pasture that is undesirable for forage, grazing, or management and is often in competition with desirable species

Windbreak: a natural (i.e., treeline) or built structure that reduces exposure to wind and other weather elements like rain and sleet to protect livestock

Windrow Grazing: cutting forage into windrows for livestock to consume on pasture to improve utilization or set reproductive cool season pastures back to vegetative growth

Youngstock: immature livestock that have not yet entered their primary production stage, typically including calves, lambs, kids, replacement heifers, and other growing animals

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References

Ball, D.M., M. Collins, G.D. Lacefield, N.P. Martin, D.A. Mertens, K.E. Olson, D.H. Putnam, D.J. Undersander, and M.W. Wolf. 2001. *Understanding Forage Quality*. American Farm Bureau Federation Publication 1-01. Park Ridge, IL.

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