



# Grazing Gazette

Volume 6, Issue 4

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This newsletter is a joint effort from the following organizations:



Dean Thomas, Grazing Specialist and Area 6 Soil Health Tech.  
dean.thomas@fillmoreswcd.org  
dean.thomas@mn.nacdnet.net  
507-765-3878, ext #3



Fillmore & Houston Counties  
Michael Cruse, Educator  
mjcruse@umn.edu  
Fillmore: 507-765-3896  
Houston: 507-725-5807

Winona County Extension  
Jake Overgaard, Educator  
over0128@umn.edu

U of M Beef Team  
Eric Mousel, Educator  
emmousel@umn.edu  
218-327-5958



Tom Gervais, Grazing Specialist  
Thomas.Gervais@mn.usda.gov  
218-720-5308

Lance Smith, Grazing Specialist  
Lance.Smith@mn.usda.gov  
507-337-0025

Jeff Duchene, Grazing Specialist  
Jeff.Duchene@mn.usda.gov  
218-346-4260



*If you would like to receive this newsletter by email please send a request to:*  
**ruesi001@umn.edu**

## Cover Crop Field Day

*Jake Overgaard, UMN Extension Educator*

**On June 23<sup>rd</sup> from 10:00-11:30 am**  
**a field day will be held near Lanesboro on cover crop management, focusing on termination, and residue management.**

Attendees will learn from local farmer, Brian Hazel, who is hosting the field day. Brian will share his experience with cover crops and discuss the challenges and successes he's had. We'll assess the current corn crop's growth and discuss any impact the cover crop has had on plant growth, if any. In addition, cover crops resources will be shared.

The field day location is off Highway 250, 5.5 miles north of Lanesboro. The field entrance is across from 290<sup>th</sup> Street.

Pre-registration is not required, but encouraged to aid in planning. You can register online, <https://z.umn.edu/cc23>, or by calling Winona County Extension at [507-457-6440](tel:507-457-6440).

This field day is funded by the Minnesota Environmental and Natural Resources Trust Fund as recommended by the Legislative-Citizen Commission on MN Resources (LCCMR).

## Minnesota Grazing School

MN GLCA | UMN Extension | USDA NRCA

September 8 - 9, 2017  
Grand Rapids, MN  
Cost = \$100/per person



\$50 for each additional person from the same operation  
\*Current GLCA members get a \$10 discount\*

To register online or for more information visit [www.mnglca.org](http://www.mnglca.org)  
Or contact: Debbie Thoof [@ 507.865.4436](tel:507.865.4436)

### Featuring:

Grazing basics - Plant Identification - Rotational grazing -  
Grazing exercises in the field - Work with faculty on a grazing plan for your farm - Network with other graziers

# Deep Thoughts About Forages

By: Tim Gervais, Regional Grazing Specialist

When choosing forage species for livestock feed there are many considerations. Some of the aspects that concern livestock producers may be yield, forage quality, palatability, longevity, drought, flood, or disease resistance, among others.

To complicate things, we must not only decide which forage species to plant, but which *variety* of forage, as each species has multiple varieties selected by breeders to promote different traits. And just when you decide which forage species meets your needs, then you must decide whether you want to plant species singly or in a mix, and what proportion of each species in that mix.

It can be a daunting decision to make considering that we are generally only planting forage stands once every 5- 10 years, and we want our choice to be the right one so that the forage stand can be productive and contribute to the profitability of the farm over that time period.

## Functional Groups

It's important to understand that there are different types of forage that have different applications. The following are functional groups, meaning different types of forage species that act in distinctly different ways. There are many species within each functional group.

Cool Season Perennial Grasses: these are the most common forage types in most of MN. Some examples are timothy, orchardgrass, tall fescue, reed canarygrass, quackgrass and smooth brome grass. These are species that grow best in cooler temperatures, generally from 65 degrees to 75 degrees. They are long lived and spread through root systems or nodes on the base of the plant, or from seed.

Warm Season Perennial Grasses: many grasses native to North America fall into this category. Some notables are big bluestem, switchgrass and indiagrass. These grasses generally are slow to grow until warm temperatures set in, from 75-90 degrees. Most of their growth will occur in July and August. They are known for their deep root systems. They spread by seed and tillering from root systems.

Legumes: legumes are broadleaved plants that "fix" nitrogen from the atmosphere and deposit it in the soil. Alfalfa, birdsfoot trefoil, vetch and clover fall into this category. Legumes can be perennial or annual.

Other: there are many other forage species that are not widely used. They can be either annual or perennial. These types are often used to fill niches that aren't covered by other forage types, or for some other specific purpose. Examples are turnips, chickory, rape, or radish



## Adaptability

The most important factor in selecting forage species is adaptability to the site. The species you select must be adapted to the soils, drainage class, climate and any other site variables that come into play. A good example of a non-adapted site would be planting creeping foxtail (likes poorly drained soils, drought intolerant) on a coarse, well drained sandy site. Another example would be planting a warm season annual in a climate that rarely exceeds 75 degrees during the growing season. If you plant a forage species in a site it is not adapted to, the stand may survive but it may not produce up to its potential.

The first step is to identify the soil type, using your county's Soil Survey information. Then you can determine drainage class, texture and other features that may help you select an adapted forage species.

## Forage Quality

Forage quality is a moving target. More important than trying to select for species that have high forage quality is to discern what the nutrient requirements are for the kind and class of livestock you are feeding. To do this, you can refer to the National Research Council's "Nutrient Requirements for Beef Cattle". Once you have determined the nutrient needs for your herd or herds, the next step is to sample forages, either green or stored, to determine if the nutrients provided by the forage are adequate for the herd.

A few generalizations can be made in respect to forage quality for any functional group:

- ◆ Forage quality is a MOVING TARGET! It can vary from day to day. The largest driver of forage quality is plant maturity. As a plant ages, cell walls thicken, reducing the amount of digestible fiber and therefore energy available to the livestock. Crude protein (CP) levels also drop. Plant maturity at harvest is far more important to forage quality than species to species variability.
- ◆ Annual species tend to have higher digestibility and energy levels than perennial species
- ◆ Legumes tend to carry higher CP levels than grasses, often in the 15-30% range.
- ◆ In stored forages, the process of harvesting and storing the forage is more important in respect to forage quality than species (within functional groups). Generally balage or haylage is higher quality than dry hay. Ultimately it is up to you whether the added cost of equipment and plastic wrap and time in processing to produce a higher quality product offsets the reduced cost of producing dry hay.

## Yield

Yield is an aspect of forage that is easier to gather data on. Yield IS quite variable between forage species, and even between varieties within species. Yield per acre for most cool season grasses and legumes will range from 1.5-5 tons per acre, depending on soil fertility, soil drainage, temperature and rainfall.

Further detail is available by reviewing the full varietal trials by University of Minnesota and University of Wisconsin . The data can be accessed at the following websites:

UMN Trials: <https://www.maes.umn.edu/publications/field-crop-trials/2016>

UW Trials: <http://www.uwex.edu/ces/forage/alf11.htm>

Finally, in regards to yield, it is very important to monitor and optimize soil fertility in order to maximize yield. Please refer to the document "*Fertilizer Guidelines for Agronomic Crops in Minnesota*" for fertility recommendations for forage stands. Use your soil test results and yield goal to determine nutrient needs for your planned seeding.

Good luck with your new seeding. Please contact your local NRCS office for further questions.

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