BALE GRAZING TO BUILD SOIL HEALTH

Bale grazing is a winter-feeding management option for producers that has shown benefits in a variety of areas. The environment, overall goals and resources of the producer implementing bale grazing influence how it is carried out and the potential benefits that can be achieved.

This project is designed to address the resource concerns of land that was historically farmed with no inputs, subject to wind erosion and depleted to a point of no longer being productive. The goals of "Bale Grazing to Build Soil Health" include:

- Improve soil health, increase organic matter and fertility, eliminate use of commercial fertilizer
- Increase nutrient cycling and reduce nutrient runoff
- Improve herbage production and forage quality
- Improve herd health by extending grazing season
- Reduce feed and labor costs
- Create and/or maintain pollinator habitat

The yellow line indicates the designated bale grazing area for 2018-2019.

WHAT IS BALE GRAZING?

Bale grazing is a method of providing feed to livestock during the winter months. Through this system, livestock are allowed access to bales previously placed on a field or wintering site. Producers can regulate feed intake by implementing a rotation through the grazing system with electric fence.

BENEFITS OF BALE GRAZING

- Animals feed themselves
- Tractor use is concentrated
- Less manure to manage in the corral
- Manure is spread across landscape and can improve future forage prdouction
- Residual feed conserves soil moisture

Project Timeline & Report

DATE	PROJECT ACTIVITY
Fall 2016	Soil test
Spring 2018	Plant cover crop mixture, 15+ species
June – July 2018	Harvest hay on other hayland
July – October 2018	Count bees, every 2 weeks
September – October 2018	Graze cover crops. Installation of permanent fence around designated tree planting area. Tree planting area prepped. Hay hauled to grazing area. Set up portable windbreaks. Soil test.
November - December 2018	Distribute bales and set-up fences for grazing rotations. Bale graze through rotations with use of poly-wire to manage proper utilization of feed and forages. Evaluate BCS of livestock with every rotation.
April – May 2019	Monitor calving ease; Harrow through residue if needed.
May 2019	Perennial pollinator planting. Plant trees.
June – July 2019	Harvest hay on other hayland.
July-October 2019	Count bees, every 2 weeks
September – October 2019	Graze perennial pollinator planting. Hay hauled to grazing area. Set up portable windbreaks. Soil test.
November - December 2019	Distribute bales and set-up fences for grazing rotations. Bale graze through rotations. Evaluate BCS of livestock
April – May 2020	Monitor calving ease; Harrow through residue if needed.

Producer Perspective: “Fences were installed, tree site was prepped and hay was hauled to location. Just prior to turning the cows into the bale grazing site, bales were distributed across the location and temporary fence was installed to help regulate feed intake. Cows are performing well and seem to be doing a good job of cleaning up. On the final day or two of a rotation, we sometimes use grain as an incentive to get them to nose through the last bit of hay. A quick glance shows that manure is being spread all across the landscape. It is hopeful that this will help us to successfully establish a perennial pollinator planting next spring. Trees will be planted next spring. It will be nice to have these in the ground and growing. The cattle do a good job of finding wind protection by the bales or wind panels but an established shelter belt will really help to detur the wind.”

COVER CROP MIXTURE

- Buckwheat
- Flax
- Alfalfa
- Sweetclover
- Radish
- Hairy vetch
- Phacilia
- Pea
- Cowpea
- Safflower
- Millet
- Red clover
- Barley
- Sunflower
- Rape

SOIL HEALTH ASSESSMENT

Baseline analysis indicated that soil was limited in fertility.

BEE COUNTS

The number of bees appears to be reflective of the % bloom.