



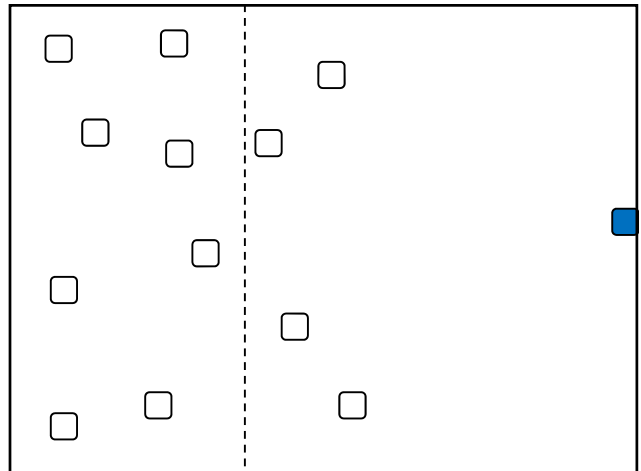
Options for Winter Feeding?





Thomas Mershon Missouri Cattle Farmer Hay Unrolling

In general we've been happy with the nutrient distribution that it provides but just like you mentioned, when the ground isn't frozen we get lots of mud and ruts that tear up the pastures. When the ground is frozen we struggle with trying to get old tractors to start in sub zero temperatures.





Nutrient Value per Acre by Bale Grazing Densities				
Bale Grazing Density	N	P ₂ O ₅	K ₂ O	Organic Matter
Low (2 tons/acre)	35	18	80	???
Medium (4 tons/acre)	70	36	159	???
High (6 tons/acre)	105	54	239	???

Note: Assumes 75% of P and K and 50% of N in hay are effectively utilized.



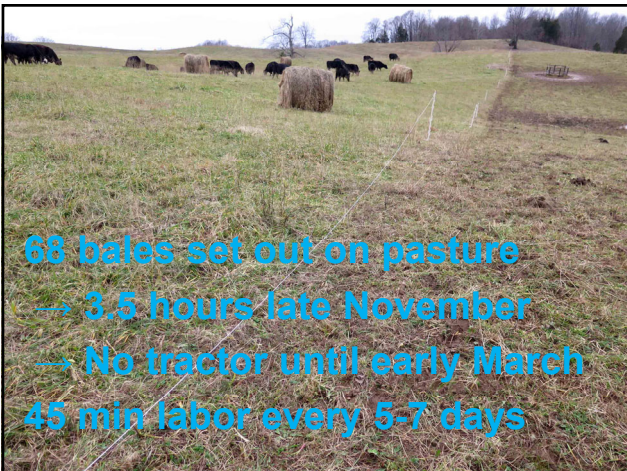
Will it Destroy the Pastures?



Long-Run Pasture Productivity?



How would the Labor and Machinery Cost Compare?



Jungnitsch Research

Bale Grazing vs. Dry-Lot:

- Bale-grazing directly pasture
- Dry-lot Manure spread pasture

Paul Jungnitsch, 2008 University of Saskatchewan Master's Thesis

Forage Response Two Years

	lbs / acre	% <i>Inc.</i>
Control	2098	--
Dry Lot - Spread	3019	44%
Bale Grazing	6843	226%

Note: Pasture growth the two years after winter feeding; Jungnitsch 2008

Forage Response Protein Levels (1st year)

	Protein	% <i>Inc.</i>
Control	10.2%	--
Dry Lot - Spread	10.6%	4%
Bale Grazing	18.4%	80%

Note: Protein levels of pasture forage one year after winter feeding, Jungnitsch 2008 .

Cattle Urine

Contains:

- 67% of nitrogen (N)
- 90% of potassium (K)

Nutrients most important hay?

How to capture on feeding pad?

Other Advantages Bale Grazing

- Improved nutrition
 - mixing bales with stockpile
- Improved herd health
 - Clean coats all winter long



**Kentucky State University
"Dry-Lot"**



**Kentucky State University
Feeding Pad**



**Kentucky State University
Bale Grazing
2020-21**



**Progressive Forages
Bale Grazing
Articles:**

<https://www.progressiveforage.com/forage-types/grasses-and-grazing/winter-bale-grazing>

<https://www.progressiveforage.com/forage-production/management/fertilizer-value-of-hay-feeding>

**Bale Grazing
Requirements**

- 1) Advanced planning
- 2) Cattle trained to electric
- 3) Strength to roll/flip hayring