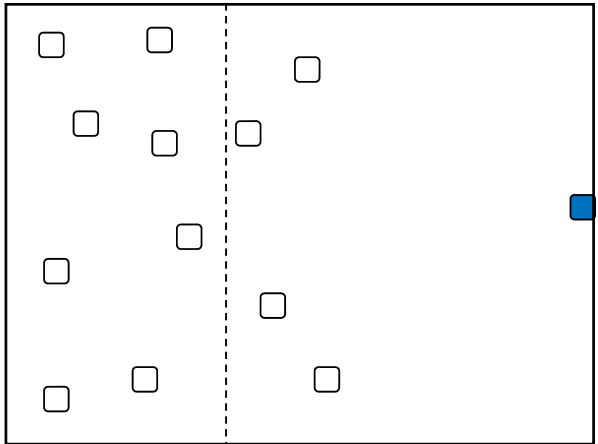




**Cost of Hay?  
\$60-80 per ton**

Fertilizer Value Estimation for Hay Feeding				
Excellent Nutrient Distribution				
	Price (\$/unit)	lbs per Ton Hay	% Effective as Fertilizer	Nutrient Value /Ton
Nitrogen	\$0.40	35	75%	\$10.50
P <sub>2</sub> O <sub>5</sub>	\$0.30	12	75%	\$2.70
K <sub>2</sub> O	\$0.30	53	75%	\$11.93
<b>Total</b>				<b>\$25.13</b>







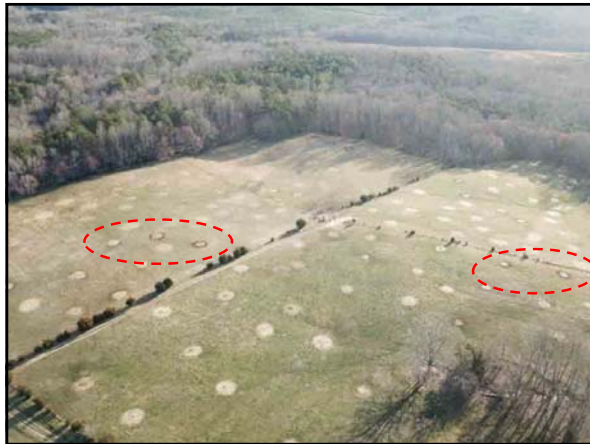
## Bale Grazing Requirements

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



Nutrient Value per Acre by Bale Grazing Densities				
Bale Grazing Density	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> 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.*





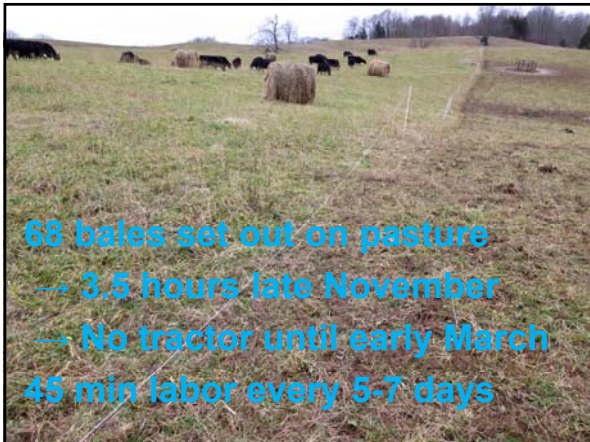
## Seeding Mix Recommendation

- Chicory
- Plantain
- Italian Ryegrass
- Annual Lespedeza
- Clovers
- Orchardgrass





**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	<b>44%</b>
Bale Grazing	6843	<b>226%</b>

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

### Forage Response Protein Levels (1<sup>st</sup> year)

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

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

## Cattle Urine

### Contains:

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

*How to capture this in drylot?*

*Nutrients most important hay?*

Nutrient Value Effective Capture			
Nutrient Capture	25 Cows	50 Cows	100 Cows
10% (Poor)	\$200	\$300	\$700
25% (Fair)	\$400	\$800	\$1,700
50% (Good)	\$800	\$1,700	\$3,400
75% (Excellent)	\$1,300	\$2,500	\$5,000

*Note: Assumes 2.0 tons hay/cow per year*

## Ohio County Cattle Farmer

“We put in a gravel pad about 7 years ago. We created a wintering area around the gravel pad.

***The result was large stockpiles of manure that I didn't have time to spread and was poorly utilized.”***

## Other Advantages Bale Grazing

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





