

# Department of Agricultural and Resource Economics

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## 2025 Tennessee Baleage Budgets

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The 2025 Tennessee Baleage Budgets were developed to assist producers and agricultural decision-makers in evaluating the profitability of various forage options. These budgets incorporate common production practices, management strategies, custom machinery hire rates and inputs typically used in forage production across Tennessee. The budgets are based on custom machinery rates, which include labor, operating, maintenance, and ownership costs.

Given the diverse nature of baleage production in the state, it is impossible to account for every possible scenario and circumstance. Therefore, this guide is intended to support decision-makers in planning efforts. To create a custom budget tailored to a specific field or operation, individuals are encouraged to use the University of Tennessee Extension's Excel-based spreadsheet tool available at [arec.tennessee.edu/extension/budgets](http://arec.tennessee.edu/extension/budgets).

This spreadsheet follows the same format as the budgets provided in this document but allows users to customize yields, input quantities and prices, machinery rates, and add any additional costs specific to individual fields or pasture production. This flexibility enables users to account for regional and site-specific production methods and input choices. This publication, along with the Excel spreadsheet, provides planning budgets for various forage types.

Fertilizer recommendations in the forage budgets are generally based on medium soil test results. Producers are encouraged to test soils to maximize the return on fertilizer investments. Fertilizer applications can then

be adjusted to align with soil test recommendations as forage plans are developed. To connect with a local Extension agent for personalized consultation and assistance, visit [utextension.tennessee.edu](http://utextension.tennessee.edu).



**Figure 1.** Tennessee baleage producers can use the forage budget calculator as a valuable risk management tool.

## **Disclaimer**

Significant variability exists in inputs, prices, and production methods across forage production. The information in this document is based on estimates and assumptions specific to Tennessee forage production and may not reflect all circumstances statewide. Regional differences are expected, and users are encouraged to incorporate farm-specific inputs, prices, and processes into budget calculations for greater accuracy.

## **Keys to Producing High-Quality Baleage**

Baleage is an effective forage preservation method that allows producers to maintain forage quality when weather conditions prevent proper drying for traditional hay. This process involves cutting forage with a hay harvester, wilting it to approximately 40-60 percent dry matter and then tightly baling and wrapping it immediately. Baleage is particularly beneficial when forage is at its optimal harvest stage (boot stage) but extended periods of dry, sunny weather are not available for hay production. By utilizing this method, producers can ensure high-quality forage even under less-than-ideal weather conditions.

## **Proper Wrapping for Effective Fermentation**

To successfully produce baleage, it is essential to use the appropriate wrapping technique. Bales should be wrapped promptly with specialized bale-wrapping equipment, applying five to six layers of plastic to create an airtight, anaerobic environment necessary for fermentation. Using fewer than four layers may reduce initial costs but can compromise the fermentation process, leading to spoilage and forage loss. Investing in adequate plastic coverage ensures proper preservation and maintains feed quality.

## **Protecting Wrapped Bales**

Once wrapped, bales must be stored properly to prevent damage from cattle, wildlife and environmental factors. Even small holes in the plastic can allow oxygen to enter, disrupting fermentation and causing spoilage. Regularly inspect bales for punctures and repair any damage immediately to maintain forage integrity.

## **Considerations and Management Challenges**

While baleage offers numerous benefits, it also presents some management challenges. Proper disposal of used plastic is necessary to minimize environmental impact, and producers must take precautions to prevent cattle from accessing discarded materials. Additionally, baleage is less flexible in terms of transport and handling compared to dry hay. Therefore, careful planning of storage and feeding strategies is essential to optimize its use within a forage system.

By following best practices in baleage production—timely harvesting, proper wilting, adequate wrapping and careful storage—Tennessee producers can maximize forage quality and efficiency, ensuring a reliable feed source throughout the year.

## **Baleage Budgets**

Cool Season Grass, Fescue	4
Cool Season Grass, Orchardgrass	5
Cool Season Grass/Clover, Fescue	6
Cool Season Grass/Clover, Orchardgrass	7
Cool Season Grass and Cool Season Grass and Clover Assumptions	8
Alfalfa	9
Alfalfa Assumptions	10
Bermudagrass	11
Bermudagrass Assumptions	12
Summer Annual, Crabgrass	13
Summer Annual, Millet	14
Summer Annual, Sorghum-Sudan	15
Winter Annual, Barley	16
Winter Annual, Rye	17
Winter Annual, Oats	18
Winter Annual, Ryegrass	19
Winter Annual, Triticale	20
Winter Annual, Wheat	21
Summer and Winter Annual Assumptions	22

**Cool Season Grass, Baleage**  
**Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Fescue	ton	4.80		\$ -	\$ -	\$ -	
<b>Expenses</b>								
Prorated Establishment Costs		acre	0.17	\$ 255.83	\$ 42.64	\$ 8.88	\$ 4.73	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 14.97	\$ 7.97	
	P2O5	lb	30.00	\$ 0.61	\$ 18.41	\$ 3.83	\$ 2.04	
	K2O	lb	30.00	\$ 0.41	\$ 12.26	\$ 2.56	\$ 1.36	
	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 5.30	\$ 2.82	
Lime & Application <sup>5,6</sup>	Custom Application	ton	0.33	\$ 43.63	\$ 14.40	\$ 3.00	\$ 1.60	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre	1.00	\$ 12.30	\$ 12.30	\$ 2.56	\$ 1.36	
	Custom Application	acre	1.00	\$ 11.81	\$ 11.81	\$ 2.46	\$ 1.31	
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
<b>Total Variable Expenses</b>					\$ 209.07	\$ 43.56	\$ 23.19	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Disk Mowing		cutting	2	\$ 16.50	\$ 33.00	\$ 6.88	\$ 3.66	
Tedding		cutting	2	\$ 6.67	\$ 13.34	\$ 2.78	\$ 1.48	
Raking		cutting	2	\$ 8.67	\$ 17.34	\$ 3.61	\$ 1.92	
Baling		cutting	2	\$ 15.17	\$ 30.34	\$ 6.32	\$ 3.37	
Hauling		bale	9.01	\$ 5.42	\$ 48.86	\$ 10.18	\$ 5.42	
Wrapping		bale	9.01	\$ 5.50	\$ 49.58	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 192.45	\$ 40.09	\$ 21.35	
Interest on Operating Capital	6 months	acre	\$ 209.07	8.0%	\$ 8.36	\$ 1.74	\$ 0.93	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 61.48	\$ 12.81	\$ 6.82	
<b>Total Budgeted Expenses</b>					\$ 409.89	\$ 85.39	\$ 45.47	
<b>Return to Land &amp; Management</b>								

**Cool Season Grass, Establishment**  
**Estimated Expenses per Acre**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)
<b>Expenses</b>					
Burndown		acre	1.00	\$ 15.66	\$ 15.66
Seed	Fescue	lb	17.50	\$ 1.33	\$ 23.28
Fertilizer	N	lb	30.00	\$ 0.60	\$ 17.96
	P2O5	lb	60.00	\$ 0.61	\$ 36.81
	K2O	lb	60.00	\$ 0.41	\$ 24.53
	Custom Application	acre	1.00	\$ 12.71	\$ 12.71
Lime & Application	Custom Application	ton	2.00	\$ 43.63	\$ 87.26
<b>Total Variable Expenses</b>					\$ 218.21
<b>Custom Machinery Cost</b>					
Spraying		acre	1	\$ 11.81	\$ 11.81
No-till Drill		acre	1	\$ 17.08	\$ 17.08
<b>Total Custom Machinery Cost</b>					\$ 28.89
Interest on Operating Capital	6 months	acre	\$ 218.21	8.0%	\$ 8.73
<b>Total Budgeted Expenses</b>					\$ 255.83

**Establishment  
Prorated Over  
Years<sup>9</sup>**  
6

**Cool Season Grass, Baleage**  
**Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Orchardgrass	ton	4.80		\$ -	\$ -	\$ -	
<b>Expenses</b>								
Prorated Establishment Costs		acre	0.17	\$ 270.88	\$ 45.15	\$ 9.41	\$ 5.01	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 14.97	\$ 7.97	
	P2O5	lb	30.00	\$ 0.61	\$ 18.41	\$ 3.83	\$ 2.04	
	K2O	lb	30.00	\$ 0.41	\$ 12.26	\$ 2.56	\$ 1.36	
	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 5.30	\$ 2.82	
Lime & Application <sup>5,6</sup>	Custom Application	ton	0.33	\$ 43.63	\$ 14.40	\$ 3.00	\$ 1.60	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre	1.00	\$ 12.30	\$ 12.30	\$ 2.56	\$ 1.36	
	Custom Application	acre	1.00	\$ 11.81	\$ 11.81	\$ 2.46	\$ 1.31	
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
<b>Total Variable Expenses</b>					\$ 211.58	\$ 44.08	\$ 23.47	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Disk Mowing		cutting	2	\$ 16.50	\$ 33.00	\$ 6.88	\$ 3.66	
Tedding		cutting	2	\$ 6.67	\$ 13.34	\$ 2.78	\$ 1.48	
Raking		cutting	2	\$ 8.67	\$ 17.34	\$ 3.61	\$ 1.92	
Baling		cutting	2	\$ 15.17	\$ 30.34	\$ 6.32	\$ 3.37	
Hauling		bale	9.01	\$ 5.42	\$ 48.86	\$ 10.18	\$ 5.42	
Wrapping		bale	9.01	\$ 5.50	\$ 49.58	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 192.45	\$ 40.09	\$ 21.35	
Interest on Operating Capital	6 months	acre	\$ 211.58	8.0%	\$ 8.46	\$ 1.76	\$ 0.94	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 61.87	\$ 12.89	\$ 6.86	
<b>Total Budgeted Expenses</b>					\$ 412.49	\$ 85.94	\$ 45.76	
<b>Return to Land &amp; Management</b>								

**Cool Season Grass, Establishment**  
**Estimated Expenses per Acre**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)
<b>Expenses</b>					
Burndown		acre	1.00	\$ 15.66	\$ 15.66
Seed	Orchardgrass	lb	12.50	\$ 3.02	\$ 37.75
Fertilizer	N	lb	30.00	\$ 0.60	\$ 17.96
	P2O5	lb	60.00	\$ 0.61	\$ 36.81
	K2O	lb	60.00	\$ 0.41	\$ 24.53
	Custom Application	acre	1.00	\$ 12.71	\$ 12.71
Lime & Application	Custom Application	ton	2.00	\$ 43.63	\$ 87.26
<b>Total Variable Expenses</b>					\$ 232.68
<b>Custom Machinery Cost</b>					
Spraying		acre	1	\$ 11.81	\$ 11.81
No-till Drill		acre	1	\$ 17.08	\$ 17.08
<b>Total Custom Machinery Cost</b>					\$ 28.89
Interest on Operating Capital	6 months	acre	\$ 232.68	8.0%	\$ 9.31
<b>Total Budgeted Expenses</b>					\$ 270.88

**Establishment  
Prorated Over  
Years<sup>9</sup>**  
6

**Cool Season Grass Clover, Baleage**  
**Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065		
<b>Income</b>										
Hay	Fescue/Clover	ton	4.80		\$ -	\$ -	\$ -			
<b>Expenses</b>										
<b>Prorated Establishment Costs</b>					acre	0.17	\$ 294.18	\$ 49.03	\$ 10.21	\$ 5.44
Fertilizer	N <sup>4</sup>	lb	60.00	\$ 0.60	\$ 35.92	\$ 7.48	\$ 3.98			
	P2O5	lb	30.00	\$ 0.61	\$ 18.41	\$ 3.83	\$ 2.04			
	K2O	lb	30.00	\$ 0.41	\$ 12.26	\$ 2.56	\$ 1.36			
	Custom Application	acre	1.00	\$ 12.71	\$ 12.71	\$ 2.65	\$ 1.41			
Lime & Application <sup>5,6</sup>	Custom Application	ton	0.33	\$ 43.63	\$ 14.40	\$ 3.00	\$ 1.60			
	Weed Control									
Post-Emerge <sup>7</sup>	Herbicide Application	acre	1.00	\$ 12.30	\$ 12.30	\$ 2.56	\$ 1.36			
	Custom Application	acre	1.00	\$ 11.81	\$ 11.81	\$ 2.46	\$ 1.31			
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -			
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -			
<b>Total Variable Expenses</b>					\$ 166.83	\$ 34.76	\$ 18.51			
<b>Return over Variable Expenses</b>										
<b>Custom Machinery Cost</b>										
Disk Mowing		cutting	2	\$ 16.50	\$ 33.00	\$ 6.88	\$ 3.66			
Tedding		cutting	2	\$ 6.67	\$ 13.34	\$ 2.78	\$ 1.48			
Raking		cutting	2	\$ 8.67	\$ 17.34	\$ 3.61	\$ 1.92			
Baling		cutting	2	\$ 15.17	\$ 30.34	\$ 6.32	\$ 3.37			
Hauling		bale	9.01	\$ 5.42	\$ 48.86	\$ 10.18	\$ 5.42			
Wrapping		bale	9.01	\$ 5.50	\$ 49.58	\$ 10.33	\$ 5.50			
<b>Total Custom Machinery Cost</b>					\$ 192.45	\$ 40.09	\$ 21.35			
Interest on Operating Capital	6 months	acre	\$ 166.83	8.0%	\$ 6.67	\$ 1.39	\$ 0.74			
Cash Rent		acre	1		\$ -	\$ -	\$ -			
<b>Storage</b>										
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 54.89	\$ 11.44	\$ 6.09			
<b>Total Budgeted Expenses</b>					\$ 365.96	\$ 76.24	\$ 40.60			
<b>Return to Land &amp; Management</b>										

**Cool Season Grass/Clover Hay, Establishment**  
**Estimated Expenses per Acre**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)
<b>Expenses</b>					
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66
Seed	Fescue	lb	17.50	\$ 1.33	\$ 23.28
	Red Clover	lb	4.00	\$ 3.33	\$ 13.32
	White Clover	lb	2.00	\$ 4.57	\$ 9.14
	N	lb	30.00	\$ 0.60	\$ 17.96
Fertilizer	P2O5	lb	60.00	\$ 0.61	\$ 36.81
	K2O	lb	60.00	\$ 0.41	\$ 24.53
	Custom Application	acre	1.00	\$ 12.71	\$ 12.71
Lime & Application	Custom Application	ton	2.00	\$ 43.63	\$ 87.26
<b>Total Variable Expenses</b>					\$ 240.67
<b>Custom Machinery Cost</b>					
Spraying		acre	1	\$ 11.81	\$ 11.81
No-till Drill		acre	1	\$ 17.08	\$ 17.08
Broadcast Seeding		acre	1	\$ 15.00	\$ 15.00
<b>Total Custom Machinery Cost</b>					\$ 43.89
Interest on Operating Capital	6 months	acre	\$ 240.67	8.0%	\$ 9.63
<b>Total Budgeted Expenses</b>					\$ 294.18

**Establishment**  
**Prorated Over Years<sup>9</sup>**  
 6

**Cool Season Grass Clover, Baleage**  
**Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)
<b>Income</b>							
Hay	Orchardgrass/Clover	ton	4.80		\$ -	\$ -	\$ -
<b>Expenses</b>							
<b>Prorated Establishment Costs</b>							
Fertilizer	N <sup>4</sup>	lb	60.00	\$ 0.60	\$ 35.92	\$ 7.48	\$ 3.98
	P2O5	lb	30.00	\$ 0.61	\$ 18.41	\$ 3.83	\$ 2.04
	K2O	lb	30.00	\$ 0.41	\$ 12.26	\$ 2.56	\$ 1.36
	Custom Application	acre	1.00	\$ 12.71	\$ 12.71	\$ 2.65	\$ 1.41
Lime & Application <sup>5,6</sup>	Custom Application	ton	0.33	\$ 43.63	\$ 14.40	\$ 3.00	\$ 1.60
Weed Control							
Post-Emerge <sup>7</sup>	Herbicide Application	acre	1.00	\$ 12.30	\$ 12.30	\$ 2.56	\$ 1.36
	Custom Application	acre	1.00	\$ 11.81	\$ 11.81	\$ 2.46	\$ 1.31
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -
<b>Total Variable Expenses</b>					\$ 169.34	\$ 35.28	\$ 18.79
<b>Return over Variable Expenses</b>							
<b>Custom Machinery Cost</b>							
Disk Mowing		cutting	2	\$ 16.50	\$ 33.00	\$ 6.88	\$ 3.66
Tedding		cutting	2	\$ 6.67	\$ 13.34	\$ 2.78	\$ 1.48
Raking		cutting	2	\$ 8.67	\$ 17.34	\$ 3.61	\$ 1.92
Baling		cutting	2	\$ 15.17	\$ 30.34	\$ 6.32	\$ 3.37
Hauling		bale	9.01	\$ 5.42	\$ 48.86	\$ 10.18	\$ 5.42
Wrapping		bale	9.01	\$ 5.50	\$ 49.58	\$ 10.33	\$ 5.50
<b>Total Custom Machinery Cost</b>					\$ 192.45	\$ 40.09	\$ 21.35
Interest on Operating Capital	6 months	acre	\$ 169.34	8.0%	\$ 6.77	\$ 1.41	\$ 0.75
Cash Rent		acre	1		\$ -	\$ -	\$ -
<b>Storage</b>							
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 55.29	\$ 11.52	\$ 6.13
<b>Total Budgeted Expenses</b>					\$ 368.57	\$ 76.79	\$ 40.89
<b>Return to Land &amp; Management</b>							

Round  
4x5  
1065

**Cool Season Grass/Clover Hay, Establishment**  
**Estimated Expenses per Acre**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)
<b>Expenses</b>					
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66
Seed	Orchardgrass	lb	12.50	\$ 3.02	\$ 37.75
	Red Clover	lb	4.00	\$ 3.33	\$ 13.32
	White Clover	lb	2.00	\$ 4.57	\$ 9.14
Fertilizer	N	lb	30.00	\$ 0.60	\$ 17.96
	P2O5	lb	60.00	\$ 0.61	\$ 36.81
	K2O	lb	60.00	\$ 0.41	\$ 24.53
	Custom Application	acre	1.00	\$ 12.71	\$ 12.71
Lime & Application	Custom Application	ton	2.00	\$ 43.63	\$ 87.26
<b>Total Variable Expenses</b>					\$ 255.14
<b>Custom Machinery Cost</b>					
Spraying		acre	1	\$ 11.81	\$ 11.81
No-till Drill		acre	1	\$ 17.08	\$ 17.08
Broadcast Seeding		acre	1	\$ 15.00	\$ 15.00
<b>Total Custom Machinery Cost</b>					\$ 43.89
Interest on Operating Capital	6 months	acre	\$ 255.14	8.0%	\$ 10.21
<b>Total Budgeted Expenses</b>					\$ 309.24

Establishment  
Prorated Over Years<sup>9</sup>  
6

### Cool Season Grass and Cool Season Grass and Clover Assumptions

1. The budget is based on custom rates for machinery processes. Labor, operating, maintenance, and ownership costs are included in these rates. The baling rate includes binding.
2. The budget is based on no-till establishment.
3. Based on inline tube wrapping.
4. Sixty pounds of nitrogen will be applied in March, with the remainder applied during the growing season. If clover is included, it is assumed that 60 pounds of nitrogen will come from the clover.
5. Lime prorated at one ton over three years.
6. For a more accurate fertilizer and lime recommendation, take a soil sample. ([Instructions on how to take a soil sample.](#))
7. The post-emergence weed control is based on an average of three common practices. Burndown is a common practice. For weed control and/or burndown recommendations, contact the county Extension office. ([County office contact information.](#))
8. Storage loss is based on an average of multiple studies.
9. Establishment pro-rated expenses for hay are set for six years.



**Alfalfa, Baleage**  
Estimated Expenses per Acre<sup>1,2,3,4</sup>

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round
<b>Income</b>								
Hay	Alfalfa	ton	6.40		\$ -	\$ -		4x5 1065
<b>Expenses</b>								
Prorated Establishment Costs		acre	0.25	\$ 461.97	\$ 115.49	\$ 18.05	\$ 9.61	
Fertilizer	N	lb	15.00	\$ 0.60	\$ 8.98	\$ 1.40	\$ 0.75	
	P2O5	lb	60.00	\$ 0.61	\$ 36.81	\$ 5.75	\$ 3.06	
	K2O	lb	190.00	\$ 0.41	\$ 77.67	\$ 12.14	\$ 6.46	
	Boron	lb	2.00	\$ 0.99	\$ 1.98	\$ 0.31	\$ 0.03	
	Custom Application	acre	1.00	\$ 12.71	\$ 12.71	\$ 1.99	\$ 1.06	
Lime & Application <sup>5,6</sup>	Custom Application	ton	0.67	\$ 43.63	\$ 29.23	\$ 4.57	\$ 2.43	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre	2.00	\$ 7.83	\$ 15.66	\$ 2.45	\$ 1.30	
	Custom Application	acre	2.00	\$ 11.81	\$ 23.62	\$ 3.69	\$ 1.97	
Pest Control	Pest Control Application	acre	1.00	\$ 6.51	\$ 6.51	\$ 1.02	\$ 0.54	
	Custom Application	acre	1.00	\$ 11.81	\$ 11.81	\$ 1.85	\$ 0.98	
<b>Total Variable Expenses</b>					\$ 340.48	\$ 53.20	\$ 28.19	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Disk Mowing		cutting	4	\$ 16.50	\$ 66.00	\$ 10.31	\$ 5.49	
Tedding		cutting	4	\$ 6.67	\$ 26.68	\$ 4.17	\$ 2.22	
Raking		cutting	4	\$ 8.67	\$ 34.68	\$ 5.42	\$ 2.89	
Baling		cutting	4	\$ 15.17	\$ 60.68	\$ 9.48	\$ 5.05	
Hauling		bale	12.02	\$ 5.42	\$ 65.14	\$ 10.18	\$ 5.42	
Wrapping		bale	12.02	\$ 5.50	\$ 66.10	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 319.29	\$ 49.89	\$ 26.57	
Interest on Operating Capital	6 months	acre	\$ 340.48	8.0%	\$ 13.62	\$ 2.13	\$ 1.13	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 101.01	\$ 15.78	\$ 8.40	
<b>Total Budgeted Expenses</b>					\$ 673.39	\$ 105.22	\$ 55.89	
<b>Return to Land &amp; Management</b>								

**Alfalfa, Establishment**  
Estimated Expenses per Acre

Item	Description	Unit	Quantity	Price	Amount (\$/acre)
<b>Expenses</b>					
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66
Seed	Alfalfa	lb	17.50	\$ 10.02	\$ 175.35
Fertilizer	N	lb	15.00	\$ 0.60	\$ 8.98
	P2O5	lb	60.00	\$ 0.61	\$ 36.81
	K2O	lb	190.00	\$ 0.41	\$ 77.67
	Boron	lb	2.00	\$ 0.99	\$ 1.98
	Custom Application	acre	1.00	\$ 12.71	\$ 12.71
Lime & Application	Custom Application	ton	2.00	\$ 43.63	\$ 87.26
<b>Total Variable Expenses</b>					\$ 416.43
<b>Custom Machinery Cost</b>					
Spraying		acre	1	\$ 11.81	\$ 11.81
No-till Drill		acre	1	\$ 17.08	\$ 17.08
<b>Total Custom Machinery Cost</b>					\$ 28.89
Interest on Operating Capital	6 months	acre	\$ 416.43	8.0%	\$ 16.66
<b>Total Budgeted Expenses</b>					\$ 461.97

**Establishment  
Prorated Over  
Years<sup>9</sup>**  
4

## Alfalfa Assumptions

1. The budget is based on custom rates for machinery processes. Labor, operating, maintenance, and ownership costs are included in these rates. The baling rate includes binding.
2. The budget is based on no-till establishment.
3. Based on Roundup Ready Alfalfa.
4. Based on inline tube wrapping.
5. Lime prorated at two tons over three years.
6. For a more accurate fertilizer and lime recommendation, take a soil sample. ([Instructions on how to take a soil sample.](#))
7. The post-emergence weed control is based on an average of three common practices. Burndown is a common practice. For weed control and/or burndown recommendations, contact the county Extension office. ([County office contact information.](#))
8. Storage loss is based on an average of multiple studies.
9. Establishment pro-rated expenses for hay are set for four years.

**Bermudagrass, Baleage Estimated  
Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Bermudagrass	ton	9.60		\$ -	\$ -		
<b>Expenses</b>								
Prorated Establishment Costs		acre	0.10	\$ 286.36	\$ 28.64	\$ 2.98	\$ 1.59	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 7.48	\$ 3.98	
	P2O5	lb	40.00	\$ 0.61	\$ 24.54	\$ 2.56	\$ 1.36	
	K2O	lb	80.00	\$ 0.41	\$ 32.70	\$ 3.41	\$ 1.81	
	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 2.65	\$ 1.41	
Lime & Application <sup>5,6</sup>	Custom Application	ton	0.67	\$ 43.63	\$ 29.23	\$ 3.05	\$ 1.62	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre	1.00	\$ 12.30	\$ 12.30	\$ 1.28	\$ 0.68	
	Custom Application	acre	1.00	\$ 11.81	\$ 11.81	\$ 1.23	\$ 0.66	
Pest Control	Pest Control Application	acre	1.00	\$ 6.51	\$ 6.51	\$ 0.68	\$ 0.36	
	Custom Application	acre	1.00	\$ 11.81	\$ 11.81	\$ 1.23	\$ 0.66	
<b>Total Variable Expenses</b>					\$ 254.80	\$ 26.54	\$ 14.13	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Disk Mowing		cutting	4	\$ 16.50	\$ 66.00	\$ 6.88	\$ 3.66	
Tedding		cutting	4	\$ 6.67	\$ 26.68	\$ 2.78	\$ 1.48	
Raking		cutting	4	\$ 8.67	\$ 34.68	\$ 3.61	\$ 1.92	
Baling		cutting	4	\$ 15.17	\$ 60.68	\$ 6.32	\$ 3.37	
Hauling		bale	18.03	\$ 5.42	\$ 97.71	\$ 10.18	\$ 5.42	
Wrapping		bale	18.03	\$ 5.50	\$ 99.15	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 384.91	\$ 40.09	\$ 21.35	
Interest on Operating Capital	6 months	acre	\$ 254.80	8.0%	\$ 10.19	\$ 1.06	\$ 0.57	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 97.48	\$ 10.15	\$ 5.41	
<b>Total Budgeted Expenses</b>					\$ 649.90	\$ 67.70	\$ 36.05	
<b>Return to Land &amp; Management</b>								

**Bermudagrass, Establishment  
Estimated Expenses per Acre**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)
<b>Expenses</b>					
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66
Seed	Bermudagrass	lb	6.50	\$ 8.48	\$ 55.12
Sprigging	Bermudagrass	acre		\$ 0.00	\$ -
Fertilizer	N	lb	60.00	\$ 0.60	\$ 35.92
	P2O5	lb	40.00	\$ 0.61	\$ 24.54
	K2O	lb	40.00	\$ 0.41	\$ 16.35
	Custom Application	acre	1.00	\$ 12.71	\$ 12.71
Lime & Application	Custom Application	ton	2.00	\$ 43.63	\$ 87.26
<b>Total Variable Expenses</b>					\$ 247.56
<b>Custom Machinery Cost</b>					
Spraying		acre	1	\$ 11.81	\$ 11.81
No-till Drill		acre	1	\$ 17.08	\$ 17.08
Sprigging		acre	1	\$ -	\$ -
<b>Total Custom Machinery Cost</b>					\$ 28.89
Interest on Operating Capital	6 months	acre	\$ 247.56	8.0%	\$ 9.90
<b>Total Budgeted Expenses</b>					\$ 286.36

**Establishment  
Prorated Over  
Years<sup>9</sup>  
10**

## Bermuda Assumptions

1. The budget is based on custom rates for machinery processes. Labor, operating, maintenance, and ownership costs are included in these rates. The baling rate includes binding.
2. The budget is based on no-till establishment.
3. Based on inline tube wrapping.
4. Nitrogen is applied in split applications.
5. Lime prorated at one ton over three years.
6. For a more accurate fertilizer and lime recommendation, take a soil sample. ([Instructions on how to take a soil sample.](#))
7. The post-emergence weed control is based on an average of three common practices. Burndown is a common practice. For weed control and/or burndown recommendations, contact the county Extension office. ([County office contact information.](#))
8. Storage loss is based on an average of multiple studies.
9. Establishment pro-rated expenses for hay are set for 10 years.

**Summer Annual, Baleage  
Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Crabgrass	ton	4.80		\$ -	\$ -	\$ -	
<b>Expenses</b>								
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66	\$ 3.26	\$ 1.74	
Seed	Crabgrass	lb	5.00	\$ 6.66	\$ 33.30	\$ 6.94	\$ 3.69	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 14.97	\$ 7.97	
	P2O5	lb	30.00	\$ 0.61	\$ 18.41	\$ 3.83	\$ 2.04	
	K2O	lb	60.00	\$ 0.41	\$ 24.53	\$ 5.11	\$ 2.72	
Lime & Application <sup>5,6</sup>	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 5.30	\$ 2.82	
	Custom Application	ton	0.50	\$ 43.63	\$ 21.82	\$ 4.54	\$ 2.42	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre		\$ 12.30	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
<b>Total Variable Expenses</b>					\$ 210.97	\$ 43.95	\$ 23.40	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Spraying		acre	1	\$ 11.81	\$ 11.81	\$ 2.46	\$ 1.31	
No-till Drill		acre	1	\$ 17.08	\$ 17.08	\$ 3.56	\$ 1.89	
Disk Mowing		cutting	1	\$ 16.50	\$ 16.50	\$ 3.44	\$ 1.83	
Tedding		cutting	1	\$ 6.67	\$ 6.67	\$ 1.39	\$ 0.74	
Raking		cutting	1	\$ 8.67	\$ 8.67	\$ 1.81	\$ 0.96	
Baling		cutting	1	\$ 15.17	\$ 15.17	\$ 3.16	\$ 1.68	
Hauling		bale	9.01	\$ 5.42	\$ 48.86	\$ 10.18	\$ 5.42	
Wrapping		bale	9.01	\$ 5.50	\$ 49.58	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 174.33	\$ 36.32	\$ 19.34	
Interest on Operating Capital	6 months	acre	\$ 210.97	8.0%	\$ 8.44	\$ 1.76	\$ 0.94	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 59.06	\$ 12.30	\$ 6.55	
<b>Total Budgeted Expenses</b>					\$ 393.74	\$ 82.03	\$ 43.68	
<b>Return to Land &amp; Management</b>								

**Summer Annual, Baleage**  
**Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Millet	ton	6.40		\$ -	\$ -	\$ -	
<b>Expenses</b>								
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66	\$ 2.45	\$ 1.30	
Seed	Millet	lb	20.00	\$ 1.98	\$ 39.60	\$ 6.19	\$ 3.29	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 11.22	\$ 5.98	
	P2O5	lb	30.00	\$ 0.61	\$ 18.41	\$ 2.88	\$ 1.53	
	K2O	lb	60.00	\$ 0.41	\$ 24.53	\$ 3.83	\$ 2.04	
Lime & Application <sup>5,6</sup>	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 3.97	\$ 2.12	
	Custom Application	ton	0.50	\$ 43.63	\$ 21.82	\$ 3.41	\$ 1.82	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre		\$ 12.30	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
<b>Total Variable Expenses</b>					\$ 217.27	\$ 33.95	\$ 18.08	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Spraying		acre	1	\$ 11.81	\$ 11.81	\$ 1.85	\$ 0.98	
No-till Drill		acre	1	\$ 17.08	\$ 17.08	\$ 2.67	\$ 1.42	
Disk Mowing		cutting	1	\$ 16.50	\$ 16.50	\$ 2.58	\$ 1.37	
Tedding		cutting	1	\$ 6.67	\$ 6.67	\$ 1.04	\$ 0.55	
Raking		cutting	1	\$ 8.67	\$ 8.67	\$ 1.35	\$ 0.72	
Baling		cutting	1	\$ 15.17	\$ 15.17	\$ 2.37	\$ 1.26	
Hauling		bale	12.02	\$ 5.42	\$ 65.14	\$ 10.18	\$ 5.42	
Wrapping		bale	12.02	\$ 5.50	\$ 66.10	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 207.15	\$ 32.37	\$ 17.24	
Interest on Operating Capital	6 months	acre	\$ 217.27	8.0%	\$ 8.69	\$ 1.36	\$ 0.72	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 64.97	\$ 10.15	\$ 5.41	
<b>Total Budgeted Expenses</b>					\$ 433.10	\$ 67.67	\$ 36.04	
<b>Return to Land &amp; Management</b>								

**Summer Annual, Baleage  
Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Sorghum-Sudan	ton	6.40		\$ -	\$ -	\$ -	
<b>Expenses</b>								
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66	\$ 2.45	\$ 1.30	
Seed	Sorghum-Sudan	lb	30.00	\$ 0.83	\$ 24.90	\$ 3.89	\$ 2.07	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 11.22	\$ 5.98	
	P2O5	lb	30.00	\$ 0.61	\$ 18.41	\$ 2.88	\$ 1.53	
	K2O	lb	60.00	\$ 0.41	\$ 24.53	\$ 3.83	\$ 2.04	
	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 3.97	\$ 2.12	
Lime & Application <sup>5,6</sup>	Custom Application	ton	0.50	\$ 43.63	\$ 21.82	\$ 3.41	\$ 1.82	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre		\$ 12.30	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
<b>Total Variable Expenses</b>					\$ 202.57	\$ 31.65	\$ 16.85	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Spraying		acre	1	\$ 11.81	\$ 11.81	\$ 1.85	\$ 0.98	
No-till Drill		acre	1	\$ 17.08	\$ 17.08	\$ 2.67	\$ 1.42	
Disk Mowing		cutting	1	\$ 16.50	\$ 16.50	\$ 2.58	\$ 1.37	
Tedding		cutting	1	\$ 6.67	\$ 6.67	\$ 1.04	\$ 0.55	
Raking		cutting	1	\$ 8.67	\$ 8.67	\$ 1.35	\$ 0.72	
Baling		cutting	1	\$ 15.17	\$ 15.17	\$ 2.37	\$ 1.26	
Hauling		bale	12.02	\$ 5.42	\$ 65.14	\$ 10.18	\$ 5.42	
Wrapping		bale	12.02	\$ 5.50	\$ 66.10	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 207.15	\$ 32.37	\$ 17.24	
Interest on Operating Capital	6 months	acre	\$ 202.57	8.0%	\$ 8.10	\$ 1.27	\$ 0.67	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 62.67	\$ 9.79	\$ 5.21	
<b>Total Budgeted Expenses</b>					\$ 417.81	\$ 65.28	\$ 34.76	
<b>Return to Land &amp; Management</b>								

**Winter Annual, Baleage**  
**Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Barley	ton	4.00		\$ -	\$ -	\$ -	
<b>Expenses</b>								
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66	\$ 3.92	\$ 2.08	
Seed	Barley	lb	125.00	\$ 0.43	\$ 53.75	\$ 13.44	\$ 7.16	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 17.96	\$ 9.56	
	P2O5	lb	40.00	\$ 0.61	\$ 24.54	\$ 6.14	\$ 3.27	
	K2O	lb	40.00	\$ 0.41	\$ 16.35	\$ 4.09	\$ 2.18	
Lime & Application <sup>5,6</sup>	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 6.36	\$ 3.38	
	Custom Application	ton	0.50	\$ 43.63	\$ 21.82	\$ 5.45	\$ 2.90	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre		\$ 12.30	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
<b>Total Variable Expenses</b>					\$ 229.38	\$ 57.34	\$ 30.54	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Spraying		acre	1	\$ 11.81	\$ 11.81	\$ 2.95	\$ 1.57	
No-till Drill		acre	1	\$ 17.08	\$ 17.08	\$ 4.27	\$ 2.27	
Disk Mowing		cutting	1	\$ 16.50	\$ 16.50	\$ 4.13	\$ 2.20	
Tedding		cutting	1	\$ 6.67	\$ 6.67	\$ 1.67	\$ 0.89	
Raking		cutting	1	\$ 8.67	\$ 8.67	\$ 2.17	\$ 1.15	
Baling		cutting	1	\$ 15.17	\$ 15.17	\$ 3.79	\$ 2.02	
Hauling		bale	7.51	\$ 5.42	\$ 40.71	\$ 10.18	\$ 5.42	
Wrapping		bale	7.51	\$ 5.50	\$ 41.31	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 157.93	\$ 39.48	\$ 21.02	
Interest on Operating Capital	6 months	acre	\$ 229.38	8.0%	\$ 9.18	\$ 2.29	\$ 1.22	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 59.47	\$ 14.87	\$ 7.92	
<b>Total Budgeted Expenses</b>					\$ 455.95	\$ 113.99	\$ 60.70	
<b>Return to Land &amp; Management</b>								



**Winter Annual, Baleage  
Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Rye	ton	4.00		\$ -	\$ -	\$ -	
<b>Expenses</b>								
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66	\$ 3.92	\$ 2.08	
Seed	Rye	lb	125.00	\$ 0.48	\$ 60.00	\$ 15.00	\$ 7.99	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 17.96	\$ 9.56	
	P2O5	lb	40.00	\$ 0.61	\$ 24.54	\$ 6.14	\$ 3.27	
	K2O	lb	40.00	\$ 0.41	\$ 16.35	\$ 4.09	\$ 2.18	
	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 6.36	\$ 3.38	
Lime & Application <sup>5,6</sup>	Custom Application	ton	0.50	\$ 43.63	\$ 21.82	\$ 5.45	\$ 2.90	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre		\$ 12.30	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
<b>Total Variable Expenses</b>					\$ 235.63	\$ 58.91	\$ 31.37	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Spraying		acre	1	\$ 11.81	\$ 11.81	\$ 2.95	\$ 1.57	
No-till Drill		acre	1	\$ 17.08	\$ 17.08	\$ 4.27	\$ 2.27	
Disk Mowing		cutting	1	\$ 16.50	\$ 16.50	\$ 4.13	\$ 2.20	
Tedding		cutting	1	\$ 6.67	\$ 6.67	\$ 1.67	\$ 0.89	
Raking		cutting	1	\$ 8.67	\$ 8.67	\$ 2.17	\$ 1.15	
Baling		cutting	1	\$ 15.17	\$ 15.17	\$ 3.79	\$ 2.02	
Hauling		bale	7.51	\$ 5.42	\$ 40.71	\$ 10.18	\$ 5.42	
Wrapping		bale	7.51	\$ 5.50	\$ 41.31	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 157.93	\$ 39.48	\$ 21.02	
Interest on Operating Capital	6 months	acre	\$ 235.63	8.0%	\$ 9.43	\$ 2.36	\$ 1.25	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 60.45	\$ 15.11	\$ 8.05	
<b>Total Budgeted Expenses</b>					\$ 463.43	\$ 115.86	\$ 61.69	
<b>Return to Land &amp; Management</b>								

**Winter Annual, Baleage**  
**Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Oats	ton	4.00		\$ -	\$ -	\$ -	
<b>Expenses</b>								
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66	\$ 3.92	\$ 2.08	
Seed	Oats	lb	125.00	\$ 0.49	\$ 61.25	\$ 15.31	\$ 8.15	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 17.96	\$ 9.56	
	P2O5	lb	40.00	\$ 0.61	\$ 24.54	\$ 6.14	\$ 3.27	
	K2O	lb	40.00	\$ 0.41	\$ 16.35	\$ 4.09	\$ 2.18	
Lime & Application <sup>5,6</sup>	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 6.36	\$ 3.38	
	Custom Application	ton	0.50	\$ 43.63	\$ 21.82	\$ 5.45	\$ 2.90	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre		\$ 12.30	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
<b>Total Variable Expenses</b>					\$ 236.88	\$ 59.22	\$ 31.53	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Spraying		acre	1	\$ 11.81	\$ 11.81	\$ 2.95	\$ 1.57	
No-till Drill		acre	1	\$ 17.08	\$ 17.08	\$ 4.27	\$ 2.27	
Disk Mowing		cutting	1	\$ 16.50	\$ 16.50	\$ 4.13	\$ 2.20	
Tedding		cutting	1	\$ 6.67	\$ 6.67	\$ 1.67	\$ 0.89	
Raking		cutting	1	\$ 8.67	\$ 8.67	\$ 2.17	\$ 1.15	
Baling		cutting	1	\$ 15.17	\$ 15.17	\$ 3.79	\$ 2.02	
Hauling		bale	7.51	\$ 5.42	\$ 40.71	\$ 10.18	\$ 5.42	
Wrapping		bale	7.51	\$ 5.50	\$ 41.31	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 157.93	\$ 39.48	\$ 21.02	
Interest on Operating Capital	6 months	acre	\$ 236.88	8.0%	\$ 9.48	\$ 2.37	\$ 1.26	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 60.64	\$ 15.16	\$ 8.07	
<b>Total Budgeted Expenses</b>					\$ 464.92	\$ 116.23	\$ 61.89	
<b>Return to Land &amp; Management</b>								

**Winter Annual, Baleage**  
**Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Ryegrass	ton	4.00		\$ -	\$ -	\$ -	
<b>Expenses</b>								
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66	\$ 3.92	\$ 2.08	
Seed	Ryegrass	lb	25.00	\$ 0.87	\$ 21.75	\$ 5.44	\$ 2.90	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 17.96	\$ 9.56	
	P2O5	lb	40.00	\$ 0.61	\$ 24.54	\$ 6.14	\$ 3.27	
	K2O	lb	40.00	\$ 0.41	\$ 16.35	\$ 4.09	\$ 2.18	
	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 6.36	\$ 3.38	
Lime & Application <sup>5,6</sup>	Custom Application	ton	0.50	\$ 43.63	\$ 21.82	\$ 5.45	\$ 2.90	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre		\$ 12.30	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
<b>Total Variable Expenses</b>					\$ 197.38	\$ 49.34	\$ 26.28	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Spraying		acre	1	\$ 11.81	\$ 11.81	\$ 2.95	\$ 1.57	
No-till Drill		acre	1	\$ 17.08	\$ 17.08	\$ 4.27	\$ 2.27	
Disk Mowing		cutting	1	\$ 16.50	\$ 16.50	\$ 4.13	\$ 2.20	
Tedding		cutting	1	\$ 6.67	\$ 6.67	\$ 1.67	\$ 0.89	
Raking		cutting	1	\$ 8.67	\$ 8.67	\$ 2.17	\$ 1.15	
Baling		cutting	1	\$ 15.17	\$ 15.17	\$ 3.79	\$ 2.02	
Hauling		bale	7.51	\$ 5.42	\$ 40.71	\$ 10.18	\$ 5.42	
Wrapping		bale	7.51	\$ 5.50	\$ 41.31	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 157.93	\$ 39.48	\$ 21.02	
Interest on Operating Capital	6 months	acre	\$ 197.38	8.0%	\$ 7.90	\$ 1.97	\$ 1.05	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 54.48	\$ 13.62	\$ 7.25	
<b>Total Budgeted Expenses</b>					\$ 417.68	\$ 104.42	\$ 55.60	
<b>Return to Land &amp; Management</b>								

**Winter Annual, Baleage**  
**Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Triticale	ton	4.00		\$ -	\$ -	\$ -	
<b>Expenses</b>								
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66	\$ 3.92	\$ 2.08	
Seed	Triticale	lb	100.00	\$ 0.52	\$ 52.00	\$ 13.00	\$ 6.92	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 17.96	\$ 9.56	
	P2O5	lb	40.00	\$ 0.61	\$ 24.54	\$ 6.14	\$ 3.27	
	K2O	lb	40.00	\$ 0.41	\$ 16.35	\$ 4.09	\$ 2.18	
Lime & Application <sup>5,6</sup>	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 6.36	\$ 3.38	
	Custom Application	ton	0.50	\$ 43.63	\$ 21.82	\$ 5.45	\$ 2.90	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre		\$ 12.30	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
<b>Total Variable Expenses</b>					\$ 227.63	\$ 56.91	\$ 30.30	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Spraying		acre	1	\$ 11.81	\$ 11.81	\$ 2.95	\$ 1.57	
No-till Drill		acre	1	\$ 17.08	\$ 17.08	\$ 4.27	\$ 2.27	
Disk Mowing		cutting	1	\$ 16.50	\$ 16.50	\$ 4.13	\$ 2.20	
Tedding		cutting	1	\$ 6.67	\$ 6.67	\$ 1.67	\$ 0.89	
Raking		cutting	1	\$ 8.67	\$ 8.67	\$ 2.17	\$ 1.15	
Baling		cutting	1	\$ 15.17	\$ 15.17	\$ 3.79	\$ 2.02	
Hauling		bale	7.51	\$ 5.42	\$ 40.71	\$ 10.18	\$ 5.42	
Wrapping		bale	7.51	\$ 5.50	\$ 41.31	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 157.93	\$ 39.48	\$ 21.02	
Interest on Operating Capital	6 months	acre	\$ 227.63	8.0%	\$ 9.11	\$ 2.28	\$ 1.21	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 59.20	\$ 14.80	\$ 7.88	
<b>Total Budgeted Expenses</b>					\$ 453.86	\$ 113.46	\$ 60.42	
<b>Return to Land &amp; Management</b>								

**Winter Annual, Baleage**  
**Estimated Expenses per Acre<sup>1,2,3</sup>**

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Amount (\$/ton)	Amount (\$/bale)	Round 4x5 1065
<b>Income</b>								
Hay	Wheat	ton	4.00		\$ -	\$ -	\$ -	
<b>Expenses</b>								
Burndown	Burndown	acre	1.00	\$ 15.66	\$ 15.66	\$ 3.92	\$ 2.08	
Seed	Wheat	lb	150.00	\$ 0.28	\$ 42.00	\$ 10.50	\$ 5.59	
Fertilizer	N <sup>4</sup>	lb	120.00	\$ 0.60	\$ 71.84	\$ 17.96	\$ 9.56	
	P2O5	lb	40.00	\$ 0.61	\$ 24.54	\$ 6.14	\$ 3.27	
	K2O	lb	40.00	\$ 0.41	\$ 16.35	\$ 4.09	\$ 2.18	
Lime & Application <sup>5,6</sup>	Custom Application	acre	2.00	\$ 12.71	\$ 25.42	\$ 6.36	\$ 3.38	
	Custom Application	ton	0.50	\$ 43.63	\$ 21.82	\$ 5.45	\$ 2.90	
Weed Control								
Post-Emerge <sup>7</sup>	Herbicide Application	acre		\$ 12.30	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
Pest Control	Pest Control Application	acre		\$ 6.51	\$ -	\$ -	\$ -	
	Custom Application	acre		\$ 11.81	\$ -	\$ -	\$ -	
<b>Total Variable Expenses</b>					\$ 217.63	\$ 54.41	\$ 28.97	
<b>Return over Variable Expenses</b>								
<b>Custom Machinery Cost</b>								
Spraying		acre	1	\$ 11.81	\$ 11.81	\$ 2.95	\$ 1.57	
No-till Drill		acre	1	\$ 17.08	\$ 17.08	\$ 4.27	\$ 2.27	
Disk Mowing		cutting	1	\$ 16.50	\$ 16.50	\$ 4.13	\$ 2.20	
Tedding		cutting	1	\$ 6.67	\$ 6.67	\$ 1.67	\$ 0.89	
Raking		cutting	1	\$ 8.67	\$ 8.67	\$ 2.17	\$ 1.15	
Baling		cutting	1	\$ 15.17	\$ 15.17	\$ 3.79	\$ 2.02	
Hauling		bale	7.51	\$ 5.42	\$ 40.71	\$ 10.18	\$ 5.42	
Wrapping		bale	7.51	\$ 5.50	\$ 41.31	\$ 10.33	\$ 5.50	
<b>Total Custom Machinery Cost</b>					\$ 157.93	\$ 39.48	\$ 21.02	
Interest on Operating Capital	6 months	acre	\$ 217.63	8.0%	\$ 8.71	\$ 2.18	\$ 1.16	
Cash Rent		acre	1		\$ -	\$ -	\$ -	
<b>Storage</b>								
Shrinkage Loss <sup>8</sup>		annual	15.0%		\$ 57.64	\$ 14.41	\$ 7.67	
<b>Total Budgeted Expenses</b>					\$ 441.90	\$ 110.47	\$ 58.83	
<b>Return to Land &amp; Management</b>								

### **Summer and Winter Annual Assumptions**

1. The budget is based on custom rates for machinery processes. Labor, operating, maintenance, and ownership costs are included in these rates. The baling rate includes binding.
2. The budget is based on no-till establishment.
3. Based on inline tube wrapping.
4. Nitrogen is applied in split applications.
5. Lime prorated at one ton over two years.
6. For a more accurate fertilizer and lime recommendation, take a soil sample. ([Instructions on how to take a soil sample.](#))
7. The post-emergence weed control is based on an average of three common practices. Burndown is a common practice. For weed control and/or burndown recommendations, contact the county Extension office. ([County office contact information.](#))
8. Storage loss is based on an average of multiple studies.



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