

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

Item	Description	Unit	Quantity	Price	Amount (\$/acre)	Your Farm
Variable Expenses						
Fertilizer ¹	N	lb	120.00	\$ 0.48	\$ 57.60	_____
	P2O5	lb	30.00	\$ 0.34	\$ 10.20	_____
	K2O	lb	30.00	\$ 0.23	\$ 6.90	_____
	Custom Application	acre	3.00	\$ 5.00	\$ 15.00	_____
Lime ²	Custom Application	ton	0.33	\$ 21.00	\$ 6.93	_____
Overseeding ³	Fescue or Orchardgrass	lb	2.00	\$ 1.00	\$ 2.00	_____
No-Till Drill, Rental		acre	0.17	\$ 8.00	\$ 1.36	_____
Weed Control ⁴						
Post-Emerge	2,4-D Ester 4EC	pt	1.00	\$ 2.04	\$ 2.04	_____
	Custom Application	acre	1.00	\$ 5.00	\$ 5.00	_____
Twine		bale	5.00	\$ 0.24	\$ 1.19	_____
Machinery						
Fuel		acre	1.00	\$ 27.67	\$ 27.67	_____
Oil & Filter		acre	1.00	\$ 4.51	\$ 4.51	_____
Repairs & Maintenance		acre	1.00	\$ 33.68	\$ 33.68	_____
Interest on Operating Capital 6 months		acre	\$ 174.08	8.0%	\$ 6.96	_____
			Total Variable Expenses		\$ 181.05	_____
Fixed Expenses						
Establishment Cost	Prorated over 6 years	acre	1.00	\$ 31.99	\$ 31.99	_____
Machinery						
Depreciation		acre	1.00	\$ 16.41	\$ 16.41	_____
Interest		acre	1.00	\$ 20.24	\$ 20.24	_____
Housing & Insurance		acre	1.00	\$ 1.79	\$ 1.79	_____
			Total Fixed Expenses		\$ 70.44	_____
Labor Expenses						
Labor ⁵		hour	5.83	\$ 8.50	\$ 49.58	_____
			Total Budgeted Expenses		\$ 301.07	_____

Footnotes:

¹60 lbs of nitrogen applied in March, 30 lbs applied in May, and 30 lbs applied in September to produce fall cutting of hay.

²Lime is applied at the rate of 2 tons every 6 years.

³Overseed 12 lbs once over 6 years. Prorated over stand-life.

⁴Weed spray is done every other year at a rate of 2 pt/acre, to supplement clipping and control broadleaf weeds.

⁵Labor expense is \$8.50 per hour, including wages, Social Security and Medicaid taxes and payroll administration costs.

Cool Season Grass, Hay
Estimated Machinery and Labor Requirements per Acre

Month	Operation	Power Unit	Implement	Hours per Acre	
				Machine	Labor
Mar	Fertilize	Custom	Custom	---	---
Mar	Post-Emerge (2-4,D Ester 4EC)	Custom	Custom	---	---
May	Mow	Tractor, 70 hp	Mower-Conditioner, 9'	0.37	0.46
May	Tedder, 10'	Tractor, 70 hp	Tedder, 10'	0.10	0.13
May	Rake	Tractor, 70 hp	Rake, 18'	0.19	0.24
May	Bale	Tractor, 70 hp	Baler, Round, 5 x 4	0.40	0.50
May	Stack & Move	Tractor, 70 hp	Front-End Loader/Spear	0.40	0.50
May	Fertilize	Custom	Custom	---	---
Jun	Mow	Tractor, 70 hp	Mower-Conditioner, 9'	0.37	0.46
Jun	Rake	Tractor, 70 hp	Rake, 18'	0.19	0.24
Jun	Bale	Tractor, 70 hp	Baler, Round, 5 x 4	0.40	0.50
Jun	Stack & Move	Tractor, 70 hp	Front-End Loader/Spear	0.40	0.50
Sep	Fertilize	Custom	Custom	---	---
Oct	Mow	Tractor, 70 hp	Mower-Conditioner, 9'	0.37	0.46
Oct	Rake	Tractor, 70 hp	Rake, 18'	0.19	0.24
Oct	Bale	Tractor, 70 hp	Baler, Round, 5 x 4	0.40	0.50
Oct	Stack & Move	Tractor, 70 hp	Front-End Loader/Spear	0.40	0.50
Oct	Overseed	Tractor, 70 hp	No-Till Drill, Rental	0.47	0.59
				Total	5.83

Estimated Machinery Expenses per Acre

Machine	Hours per Acre	Variable Cost			Total Variable Costs	Fixed Cost			Total Fixed Costs
		Fuel	Oil & Filter	Repairs		Depreciation	Interest	Housing & Insurance	
Tractor, 70 hp	4.67	27.67	4.51	9.90	42.08	5.99	7.12	0.54	13.64
Mower-Conditioner, 9'	1.10	0.00	0.00	5.65	5.65	3.05	4.97	0.41	8.42
Tedder, 10'	0.10	0.00	0.00	0.05	0.05	0.04	0.07	0.02	0.13
Rake, 18'	0.57	0.00	0.00	0.40	0.40	0.33	0.38	0.10	0.81
Baler, Round, 5 x 4	1.21	0.00	0.00	16.08	16.08	5.22	5.72	0.57	11.52
Front-End Loader/Spear	1.21	0.00	0.00	1.60	1.60	1.78	1.98	0.15	3.92
Total		\$ 27.67	\$ 4.51	\$ 33.68	\$ 65.86	\$ 16.41	\$ 20.24	\$ 1.79	\$ 38.45
Total Machinery Cost									\$ 104.31

Break-even Analysis

		<u>Yield/Acre</u>		<u>Break-even Price/Ton</u>
Break-even Price over Total Variable Expenses:	Below-Average Yield	1.5	tons	\$ 120.70
	Average Yield	2.5	tons	\$ 72.42
	Above-Average Yield	3.5	tons	\$ 51.73
Break-even Price over Total Budgeted Expenses:	Below-Average Yield	1.5	tons	\$ 200.71
	Average Yield	2.5	tons	\$ 120.43
	Above-Average Yield	3.5	tons	\$ 86.02