# 2024 Cost of Production Hay: Round Bale and Silage



ELT PLAN ON I



### Guidelines For Estimating Hay Production Costs - 2024 Round Bale Hay and Silage

#### Date: January, 2024

\*\*revised 2024 MASC data\*\*

This guide is designed to provide planning information and a format for calculating the costs of producing a forage crop of 100% alfalfa or alfalfa grass mixture for the purpose of feeding livestock or export in Manitoba. General Manitoba Agriculture recommendations are assumed in using fertilizers and chemical inputs. These figures provide an economic evaluation of the crops and estimated yields required to cover all costs. Costs include labour, investment and depreciation, but do not include managmement costs, nor do they necessarily represent the average cost of production in Manitoba.

The assumptions on which the costs were calculated are clearly defined in the supporting pages. They were developed using a combination of recommended practices and methods followed by many producers.

These budgets may be adjusted by putting in your own figures. As a producer, you are encouraged to calculate your own costs of production for your alfalfa hay crops. On each farm, costs and yields differ due to soil type, climate and agronomic practices.

This tool is available as an Excel worksheet at:



<u>The Farm Machinery Custom and Rental Rate Guide</u> determine machinery costs. is also available to help

#### Contact Us

For more information, contact a Farm Management Specialist.

- manitoba.ca/agriculture
- mbfarmbusiness@gov.mb.ca
- 1-844-769-6224

**Note:** This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and use of this information is the responsibility of the user. If you need help with a budget, contact a Farm Management Specialist.

				oduction (			~		1011	
		Alfalfa Hay al (Years 2			lfa-Grass I al (Years 2		G	reenfeed H	lay	-
		duction Co	sts	Production Costs			Pro			
	\$/acre	(as fed) <u>\$/ton</u>	(Dry Matter- <u>\$/ton</u>	DM) <u>\$/acre</u>	(as fed) <u>\$/ton</u>	(DM) <u>\$/ton</u>	\$/acre	(as fed) <u>\$/ton</u>	(DM) <u>\$/ton</u>	Your Farm
A. Operating Costs										
Forage Seed & Treatment	-			-			-			
Nurse Crop Seed	-				,		\$30.00			
Establishment (amortized)	\$39.40	1		\$36.32	2		-			
Fertilizer	\$106.25			\$83.78			\$88.05			
Herbicide/Insecticide	\$0.00			\$0.00			\$16.00			
Fuel	\$14.14			\$9.86			\$16.69			
Machinery Operating	\$13.28			\$13.28			\$13.28			
Machinery Lease	\$2.40			\$2.40			\$2.40			
Rental and Custom	\$14.00			\$11.16			\$11.32			
Crop Insurance	\$32.17			\$9.22			\$17.15			
Twine/Net Wrap	\$5.64			\$4.44			\$4.56			
Plastic Silage Wrap	-			-			-			
Other Costs	\$2.00			\$2.00			\$2.00			
Land Taxes	\$10.00			\$10.00			\$10.00			
Interest on Operating	<u>\$10.77</u>			<u>\$8.21</u>			\$9.52			
Total Operating	\$250.05			\$190.66			\$220.97			
B. Fixed Costs										
Land Cost	\$80.41			\$80.41			\$80.41			
Machinery Costs	\$55.47			\$55.47			\$55.47			
Storage Costs	\$0.00			\$0.00			\$0.00			
Total Fixed	\$135.88			\$135.88			\$135.88			
Total Operating & Fixed	\$385.93			\$326.54			\$356.85			
C. Labour	\$32.40			\$32.40			\$40.50			
Total Costs	\$418.33	\$119.52	\$135.82	\$358.94	\$128.65	\$147.11	\$397.35	\$140.41	\$163.52	
Total Costs (\$/lb.)		\$0.060	\$0.068		\$0.064	\$0.074	••••	\$0.070	\$0.082	
Total Costs (\$/1500 lb. bale)	\$89.01			\$97.01			\$104.56			
			Profitabilit	y & Breakev	en Analys	is				
Estimated Farmgate		As Fed	DM		As Fed	DM		As Fed	DM	
Price \$ per ton		\$160.00	\$181.82		\$120.00	\$137.21		\$120.00	\$139.75	
Yield per acre (ton)		3.50	3.08		2.79	2.44		2.83	2.43	
Total Yield (tons/300 acres)		1,050	924		837	732		849	729	
Gross Revenue		\$560.00			\$334.80			\$339.60		
		(as fed)	(DM)		(as fed)	(DM)		(as fed)	(DM)	
Marginal Returns	\$/acre	(as led) <u>\$/ton</u>	\$/ton	¢/aara	(as reu) <u>\$/ton</u>	(DW) <u>\$/ton</u>	¢/aara	(as reu) <u>\$/ton</u>	\$/ton	
Over Operating Costs	\$309.95	\$88.56	\$100.63	<u>\$/acre</u> \$144.14	\$51.66	\$59.07	<u>\$/acre</u> \$118.63	\$41.92	\$48.82	
Over Total Costs (Net Profit)	\$141.67	\$40.48	\$46.00	(\$24.14)	(\$8.65)	( <b>\$9.89</b> )		(\$20.41)	(\$23.76)	
Operating Expense Ratio	44.7%	<b>\$40.40</b>	φ <del>4</del> 0.00	(\$24.14) 56.9%	(\$0.05)	(\$9.09)	65.1%	(\$20.41)	(\$23.70)	
Breakeven Price (\$/ton)										
Operating Costs		\$71.44	\$81.19		\$68.34	\$78.14		\$78.08	\$90.93	
Total Costs		\$119.52	\$135.82		\$128.65	\$147.11		\$140.41	\$163.52	
Breakeven Yield (tons/acre)										
Operating Costs		1.563	1.375		1.589	1.390		1.841	1.581	
Total Costs		2.615	2.301		2.991	2.616		3.311	2.843	
Cost of Standing Hay (\$/lb.)		\$0.040	3		\$0.041	3		\$0.046	4	
										-
••••		\$80.02			\$82.14			\$92.64		
Cost of Standing Hay (\$/ton) On-Farm Harvest Cost (\$/ton)		\$80.02 \$39.50			\$82.14 \$46.51			\$92.64 \$47.77		

1. Alfalfa establishment (without nurse crop) net cost of \$157.59 (total cost minus estimated gross revenue) were amortized over 4 hay production years.

2. Alfalfa-grass establishment (with oat greenfeed nurse crop) net cost of \$254.23 (total cost minus estimated gross revenue) were amortized over 7 hay production years.

3. Cost of alfalfa and alfalfa-grass standing hay (includes: establishment, fertilizer, pesticide, land taxes, crop insurance, 5% of fuel and labour, 50% of other costs, and land costs.)

4. Cost of greenfeed standing hay (includes: seed; fertilizer; pesticide; land taxes; crop insurance; 40% of fuel; 20% of labour, machinery lease, and machinery operating; 50% of other costs, and land costs.)

Note: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user.

	Alfalfa	Baled Sil	age	Alfalfa-G	rass Baled	l Silage	Greenf	eed Baled	Silage	
	Annua	I (Years 2 fluction Cos	to 5)	Annu	al (Years 2 luction Cos	to 8)		luction Cos		_
	\$/acre	(as fed) \$/ton	(DM) \$/ton	\$/acre	(as fed) \$/ton	(DM) \$/ton	\$/acre	(as fed) \$/ton	(DM) \$/ton	Your Farr
A. Operating Costs	<u> </u>		<u> </u>	<u></u>			<u> </u>			
Forage Seed & Treatment	-			-			-			
Nurse Crop Seed	-			-			\$30.00			
Establishment (amortized)	\$70.29	1		\$46.83	2		-			
Fertilizer	\$106.25			\$83.78			\$88.05			
Herbicide/Insecticide	\$0.00			\$0.00			\$16.00			
Fuel	\$15.11			\$11.86			\$18.69			
Machinery Operating				\$17.95						
, , ,	\$17.95						\$17.95			
Machinery Lease	\$2.40			\$2.40			\$2.40			
Rental and Custom	\$20.67			\$16.35			\$16.56			
Crop Insurance	\$32.17			\$9.22			\$17.15			
Twine/Net Wrap	\$8.28			\$6.60			\$6.60			
Plastic Silage Wrap	\$29.15			\$23.24			\$23.24			
Other Costs	\$2.00			\$2.00			\$2.00			
Land Taxes	\$10.00			\$10.00			\$10.00			
Interest on Operating	\$14.14			\$10.36			\$11.19			
Total Operating	\$328.42			\$240.59			\$259.83			
B. Fixed Costs										
Land Cost	\$80.41			\$80.41			\$80.41			
Machinery Costs	\$75.40			\$75.40			\$75.40			
Storage Costs	\$0.00			\$0.00			\$0.00			
Total Fixed	\$155.81			\$155.81			\$155.81			
Total Operating & Fixed	\$484.22			\$396.40			\$415.64			
C. Labour	\$37.80			\$37.80			\$45.90			
Total Costs	\$522.02	\$75.77	\$151.31	\$434.20	\$79.67	\$159.05	\$461.54	\$83.61	\$167.22	
Total Costs (\$/Ib.)	<b><i><u></u></i><b></b></b>	\$0.038	\$0.076	<b>V</b> 101.20	\$0.040	\$0.080	<b></b>	\$0.042	\$0.084	
Total Costs (\$/2000 lb. bale)	\$75.66	ψ0.000	<i><b>Q</b></i> <b>0.070</b>	\$78.94	ψ0.040	<b>\$0.000</b>	\$83.92	ψ0.04L	ψ <b>0.00</b> 4	
	<i><b></b><i></i></i>		-	-			\$00.01			
				y & Breakev	en Analys	SIS				
Estimated Farmgate		<u>As Fed</u>	DM		As Fed	DM		<u>As Fed</u>	DM	
Price \$ per ton		\$60.00	\$119.83		\$55.00	\$109.80		\$55.00	\$110.00	
Yield per acre (ton)		6.89	3.45		5.45	2.73		5.52	2.76	
Total Yield (tons/300 acres)		2,067	1,035		1,635	819		1,656	828	
Gross Revenue		\$413.40			\$299.75			\$303.60		
GIUSS Revenue									(DM)	
GIOSS Revenue		-			(as fod)				(1910)	
	¢ /	(as fed)	(DM)	¢/= ===	(as fed)	(DM)	¢ /	(as fed)	A 14	
Marginal Returns	<u>\$/acre</u>	(as fed) <u>\$/ton</u>	\$/ton	<u>\$/acre</u>	<u>\$/ton</u>	<u>\$/ton</u>	\$/acre	<u>\$/ton</u>	<u>\$/ton</u>	
Marginal Returns Over Operating Costs	\$84.98	(as fed) <u>\$/ton</u> \$12.33	<u>\$/ton</u> \$24.63	\$59.16	\$/ton \$10.86	<u>\$/ton</u> \$21.67	\$43.77	<u>\$/ton</u> \$7.93	\$15.86	
Marginal Returns Over Operating Costs Over Total Costs (Net Profit)	\$84.98 ( <b>\$108.62)</b>	(as fed) <u>\$/ton</u> \$12.33	\$/ton	\$59.16 ( <b>\$134.45</b> )	\$/ton \$10.86	<u>\$/ton</u>	\$43.77 ( <b>\$157.94)</b>	<u>\$/ton</u>		
Marginal Returns Over Operating Costs	\$84.98	(as fed) <u>\$/ton</u> \$12.33	<u>\$/ton</u> \$24.63	\$59.16	\$/ton \$10.86	<u>\$/ton</u> \$21.67	\$43.77	<u>\$/ton</u> \$7.93	\$15.86	
Marginal Returns Over Operating Costs Over Total Costs (Net Profit) Operating Expense Ratio Breakeven Price (\$/ton)	\$84.98 ( <b>\$108.62)</b>	(as fed) <u>\$/ton</u> \$12.33 (\$15.77)	\$/ton \$24.63 (\$31.49)	\$59.16 ( <b>\$134.45</b> )	\$/ton \$10.86 (\$24.67)	\$/ton \$21.67 (\$49.25)	\$43.77 ( <b>\$157.94)</b>	\$/ton \$7.93 (\$28.61)	\$15.86 ( <b>\$57.22)</b>	
Marginal Returns Over Operating Costs Over Total Costs (Net Profit) Operating Expense Ratio	\$84.98 ( <b>\$108.62)</b>	(as fed) <u>\$/ton</u> \$12.33	<u>\$/ton</u> \$24.63	\$59.16 ( <b>\$134.45</b> )	\$/ton \$10.86	<u>\$/ton</u> \$21.67	\$43.77 ( <b>\$157.94)</b>	<u>\$/ton</u> \$7.93	\$15.86	
Marginal Returns Over Operating Costs Over Total Costs (Net Profit) Operating Expense Ratio Breakeven Price (\$/ton)	\$84.98 ( <b>\$108.62)</b>	(as fed) <u>\$/ton</u> \$12.33 (\$15.77)	\$/ton \$24.63 (\$31.49)	\$59.16 ( <b>\$134.45</b> )	\$/ton \$10.86 (\$24.67)	\$/ton \$21.67 (\$49.25)	\$43.77 ( <b>\$157.94)</b>	\$/ton \$7.93 (\$28.61)	\$15.86 ( <b>\$57.22)</b>	
Marginal Returns Over Operating Costs Over Total Costs (Net Profit) Operating Expense Ratio Breakeven Price (\$/ton) Operating Costs Total Costs	\$84.98 ( <b>\$108.62)</b>	(as fed) <u>\$/ton</u> \$12.33 (\$15.77) \$47.67	\$/ton \$24.63 (\$31.49) \$95.19	\$59.16 ( <b>\$134.45</b> )	\$/ton \$10.86 (\$24.67) \$44.14	\$/ton \$21.67 (\$49.25) \$88.13	\$43.77 ( <b>\$157.94)</b>	\$/ton \$7.93 (\$28.61) \$47.07	\$15.86 (\$57.22) \$94.14	
Marginal Returns Over Operating Costs Over Total Costs (Net Profit) Operating Expense Ratio Breakeven Price (\$/ton) Operating Costs Total Costs Breakeven Yield (tons/acre)	\$84.98 ( <b>\$108.62)</b>	(as fed) <u>\$/ton</u> \$12.33 (\$15.77) \$47.67 \$75.77	\$/ton \$24.63 (\$31.49) \$95.19 \$151.31	\$59.16 ( <b>\$134.45</b> )	\$/ton \$10.86 (\$24.67) \$44.14 \$79.67	\$/ton \$21.67 (\$49.25) \$88.13 \$159.05	\$43.77 ( <b>\$157.94)</b>	\$/ton \$7.93 (\$28.61) \$47.07 \$83.61	\$15.86 (\$57.22) \$94.14 \$167.22	
Marginal Returns Over Operating Costs Over Total Costs (Net Profit) Operating Expense Ratio Breakeven Price (\$/ton) Operating Costs Total Costs Breakeven Yield (tons/acre) Operating Costs	\$84.98 ( <b>\$108.62)</b>	(as fed) <u>\$/ton</u> \$12.33 (\$15.77) \$47.67 \$75.77 5.474	\$/ton \$24.63 (\$31.49) \$95.19 \$151.31 2.741	\$59.16 ( <b>\$134.45</b> )	\$10.86 (\$24.67) \$44.14 \$79.67 4.374	\$/ton \$21.67 (\$49.25) \$888.13 \$159.05 2.191	\$43.77 ( <b>\$157.94)</b>	\$/ton \$7.93 (\$28.61) \$47.07 \$83.61 4.724	\$15.86 (\$57.22) \$94.14	
Marginal Returns Over Operating Costs Over Total Costs (Net Profit) Operating Expense Ratio Breakeven Price (\$/ton) Operating Costs Total Costs Breakeven Yield (tons/acre) Operating Costs Total Costs	\$84.98 ( <b>\$108.62)</b>	(as fed) <u>\$/ton</u> \$12.33 (\$15.77) \$47.67 \$75.77 5.474 8.700	\$/ton \$24.63 (\$31.49) \$95.19 \$151.31 2.741 4.357	\$59.16 ( <b>\$134.45</b> )	\$10.86 (\$24.67) \$44.14 \$79.67 4.374 7.894	\$/ton \$21.67 (\$49.25) \$88.13 \$159.05 2.191 3.954	\$43.77 ( <b>\$157.94)</b>	\$/ton \$7.93 (\$28.61) \$47.07 \$83.61 4.724 8.392	\$15.86 (\$57.22) \$94.14 \$167.22 2.362 4.196	
Marginal Returns Over Operating Costs Over Total Costs (Net Profit) Operating Expense Ratio Breakeven Price (\$/ton) Operating Costs Total Costs Breakeven Yield (tons/acre) Operating Costs Total Costs Cost of Standing Hay (\$/lb.)	\$84.98 ( <b>\$108.62)</b>	(as fed) <u>\$/ton</u> \$12.33 (\$15.77) \$47.67 \$75.77 5.474 8.700 \$0.023	\$/ton \$24.63 (\$31.49) \$95.19 \$151.31 2.741 4.357	\$59.16 ( <b>\$134.45</b> )	\$/ton \$10.86 (\$24.67) \$44.14 \$79.67 4.374 7.894 \$0.022	\$/ton \$21.67 (\$49.25) \$88.13 \$159.05 2.191 3.954	\$43.77 ( <b>\$157.94)</b>	\$/ton \$7.93 (\$28.61) \$47.07 \$83.61 4.724 8.392 \$0.025	\$15.86 (\$57.22) \$94.14 \$167.22 2.362 4.196	
Marginal Returns Over Operating Costs Over Total Costs (Net Profit) Operating Expense Ratio Breakeven Price (\$/ton) Operating Costs Total Costs Breakeven Yield (tons/acre) Operating Costs	\$84.98 ( <b>\$108.62)</b>	(as fed) <u>\$/ton</u> \$12.33 (\$15.77) \$47.67 \$75.77 5.474 8.700	\$/ton \$24.63 (\$31.49) \$95.19 \$151.31 2.741 4.357	\$59.16 ( <b>\$134.45</b> )	\$10.86 (\$24.67) \$44.14 \$79.67 4.374 7.894	\$/ton \$21.67 (\$49.25) \$88.13 \$159.05 2.191 3.954	\$43.77 ( <b>\$157.94)</b>	\$/ton \$7.93 (\$28.61) \$47.07 \$83.61 4.724 8.392	\$15.86 (\$57.22) \$94.14 \$167.22 2.362 4.196	

1. Alfalfa establishment (without nurse crop) net cost of \$281.17 (total cost minus estimated gross revenue) were amortized over 4 hay production years.

2. Alfalfa-grass establishment (with oat greenfeed nurse crop) net cost of \$327.84 (total cost minus estimated gross revenue) were amortized over 7 hay production years.

3. Cost of alfalfa and alfalfa-grass standing silage (includes: establishment, fertilizer, pesticide, land taxes, 5% of fuel and labour, 50% of other costs, and land costs.)

4. Cost of greenfeed standing silage (includes: seed; fertilizer; pesticide; land taxes; crop insurance; 40% of fuel; 20% of labour, machinery lease, and machinery operating; 50% of other costs, and land costs.)

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		Alfalfa Cross			
	Alfalfa Hay Establ. <sup>1</sup> \$/acre	Alfalfa-Grass Hay Establ. <sup>2</sup> \$/acre	Alfalfa Baled Silage Establ. <sup>3</sup> \$/acre	Alfalfa-Grass Baled Silage Establ. <sup>4</sup> \$/acre	Your Farm
	wacie		\$/acie	ψασιε	Tourrain
A. Operating Costs	¢40.50	¢20.00	¢40.50	¢00.00	
Forage Seed & Treatment Nurse Crop Seed	\$42.50	\$36.00 \$15.00	\$42.50	\$36.00 \$15.00	
	-	\$15.00	-	\$15.00	
Establishment (amortized) Fertilizer	- \$106.25	- \$99.72	- \$106.25	- \$99.72	
Herbicide/Insecticide		1	+	1	
	\$35.00	\$35.00	\$35.00	\$35.00	
Fuel	\$22.33	\$18.27	\$23.30	\$19.55	
Machinery Operating	\$13.28	\$13.28	\$23.76	\$17.95	
Machinery Lease	\$2.40	\$2.40	\$2.40	\$2.40	
Rental and Custom	\$8.00	\$7.20	\$11.82	\$10.56	
Crop Insurance	\$5.00	\$5.00	\$5.00	\$5.00	
Twine/Net Wrap	\$3.20	\$2.88	\$4.73	\$4.22	
Plastic Silage Wrap	-	-	\$16.65	\$14.87	
Other Costs	\$2.00	\$2.00	\$2.00	\$2.00	
Land Taxes	\$10.00	\$10.00	\$10.00	\$10.00	
Interest on Operating	\$11.25	\$11.10	\$12.75	\$12.25	
Total Operating	\$261.22	\$257.85	\$296.16	\$284.53	
B. Fixed Costs					
Land Cost	\$80.41	\$80.41	\$80.41	\$80.41	
Machinery Costs	\$55.47	\$55.47	\$75.40	\$75.40	
Storage Costs	\$0.00	\$0.00	\$0.00	\$0.00	
Total Fixed	\$135.88	\$135.88	\$155.81	\$155.81	
Total Operating & Fixed	\$397.09	\$393.73	\$451.97	\$440.34	
C. Labour	\$40.50	\$40.50	\$45.90	\$45.90	
Total Costs	\$437.59	\$434.23	\$497.87	\$486.24	
Total Costs (\$/Ib.)					
	Profitabili	ty & Breakeven Ana	lysis		
Estimated Farmgate					
Price \$ per ton	\$140.00	\$100.00	\$55.00	\$45.00	
Yield per acre (ton)	2.00	1.80	3.94	3.52	
Gross Revenue	\$280.00	\$180.00	\$216.70	\$158.40	
Marginal Baturna	¢/a	¢/0	¢/0	¢/c	
Marginal Returns Over Operating Costs	<u>\$/acre</u> \$18.78	<u>\$/acre</u> (\$77.85)	<u>\$/acre</u> (\$79.46)	<u>\$/acre</u> (\$126.13)	
Over Total Costs (Net Profit)		(, ,	(, ,	(. ,	
Operating Expense Ratio	(\$157.59) 93.3%	(\$254.23) 143.3%	(\$281.17) 136.7%	(\$327.84) 179.6%	
Operating Expense Ratio	93.3%	143.3%	130.7%	179.0%	
Establishment Cost (amortized)	\$39.40	\$36.32	\$70.29	\$46.83	
Years of Production	4	7	4	7	

1. Alfalfa hay establishment (without nurse crop) net cost of \$157.59 (total cost minus estimated gross revenue) were amortized over 4 hay production years.

2. Alfalfa-grass hay establishment (with oat greenfeed nurse crop) net cost of \$254.23 (total cost minus estimated gross revenue) were amortized over 7 hay production years.

3. Alfalfa silage establishment (without nurse crop) net cost of \$281.17 (total cost minus estimated gross revenue) were amortized over 4 hay production years.

4. Alfalfa-grass silage establishment (with oat greenfeed nurse crop) net cost of \$327.84 (total cost minus estimated gross revenue) were amortized over 7 hay production years.

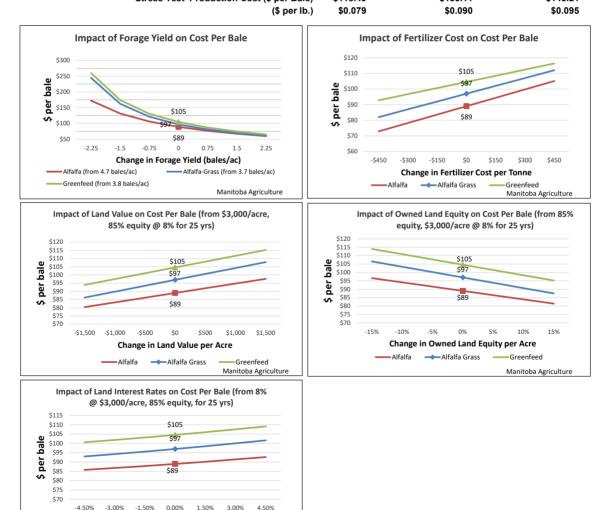
Note: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user.

#### Baled Silage Wrapper Cost Summary (\$ per Bale)

#### Increase/Decrease # Bales Wrapped per Year 25%

	Alfa	alfa Baled Si	lage	Alfalfa-	fa-Grass Baled Silage		
Based on # Bales Wrapped Per Year	1,656	2,070	2,588	1,320	1,650	2,063	
Cost per Wrapped Silage Bale							
Plastic Silage Wrap Cost	\$4.23	\$4.23	\$4.23	\$4.23	\$4.23	\$4.23	
Silage Wrapper - Fuel Usage	\$0.36	\$0.36	\$0.36	\$0.36	\$0.36	\$0.36	
Machinery Costs	\$3.61	\$2.89	\$2.31	\$4.53	\$3.62	\$2.90	
Labour (Additional for wrapper only)	\$0.78	<u>\$0.78</u>	<u>\$0.78</u>	<u>\$0.98</u>	<u>\$0.98</u>	\$0.98	
Total (\$ per bale)	\$8.98	\$8.26	\$7.68	\$10.10	\$9.20	\$8.4	

#### **Risk & Sensitivity Analysis (Stress Test) Baseline Values:** Alfalfa Alfalfa Grass Greenfeed Production (Bales per acre) 4.7 3.7 3.8 Production Cost (\$ per bale) \$89.01 \$97.01 \$104.56 Production Cost (\$ per lb.) \$0.060 \$0.064 \$0.070 Amount Added Changed Cost (\$ per bale) Change in Forage Yield (bales per acre) -0.75 \$17.17 \$24.37 \$26.12 Change in Land Value (from \$3,000) \$500 \$2.87 \$3.60 \$3.55 Percent Change in Owned Land Equity (from 85%) -5% \$2.53 \$3.17 \$3.13 Change in Land Interest Rate (from 8%) 1.50% \$1.18 \$1.49 \$1.46 Change in Machinery Interest Rate (from 8.5%) 1 50% \$0.37 \$0.46 \$0.45 Change in Fertilizer Cost (\$ per tonne) \$150 \$5.37 \$5.01 \$3.93 Total Change in Cost (\$ per bale) \$29.49 \$38.10 \$38.65 'Stress Test' Production Cost (\$ per Bale) \$118.49 \$135.11 \$143.21



Note: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user.

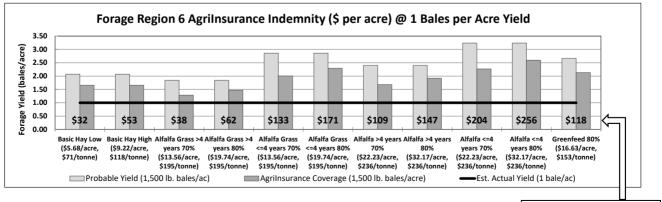
**Change in Interest Rate** 

-Greenfeed Manitoba Agriculture

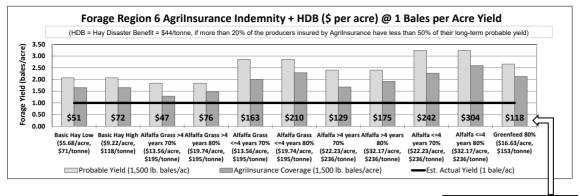
-Alfalfa Grass -

Alfalfa

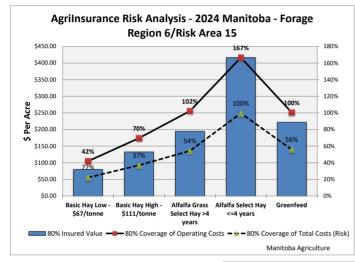
			Agrilns	urance A	Analysis						
						MASC For	age Region	Map	MASC F	orage Ins	urance
Forage Region 6	Basic	•			s - Select H	ay			elect Hay		Greenfeed
Risk Area 15	80% Cov	-	More Than 4		4 Years or		More Than 4		4 Years or L		
*Based on 2024 MASC data*	Low - \$67/tonne	High - \$111/tonne	70% Coverage	80% Coverage	70% Coverage	80% Coverage	70% Coverage	80% Coverage	70% Coverage	80% Coverage	80% Coverage
Hay Acres	160	160	160	160	160	160	160	160	160	160	160
overage											
Probable Yield - IC (tons/acre)	1.551	1.551	1.378	1.378	2.148	2.148	1.798	1.798	2.432	2.432	1.996
Probable Yield (1,500 lb. bales/ac)	2.07	2.07	1.84	1.84	2.86	2.86	2.40	2.40	3.24	3.24	2.66
Prob. Total No. of 1,500 lb. Bales	331	331	294	294	458	458	384	384	518	518	426
Premium (\$/Acre)	\$5.68	\$9.22	\$13.56	\$19.74	\$13.56	\$19.74	\$22.23	\$32.17	\$22.23	\$32.17	\$16.63
Premium (Total \$) = A x C	\$909	\$1,475	\$2,170	\$3,158	\$2,170	\$3,158	\$3,557	\$5,147	\$3,557	\$5,147	\$2,661
Premium Cost (% of Insured) = E/M	7.1%	6.9%	7.9%	10.1%	5.1%	6.5%	8.2%	10.4%	6.1%	7.7%	7.5%
verage Calculation											
0	1.241	1.241	0.965	1.102	1.504	1.718	1.259	1.438	1.702	1.946	1.597
Coverage (tons/acre) = B x % Coverage (\$/ton)	\$64.41	1.241 \$107.05	0.965 \$176.90	\$176.90	1.504 \$176.90	\$176.90	1.259 \$214.10	\$214.10	\$214.10	1.946 \$214.10	\$139.00
	۵04.41 1.65	\$107.05 1.65	\$170.90 1.29	\$170.90 1.47	\$170.90 2.01	\$170.90 2.29	φ214.10 1.68	φ214.10 1.92	φ214.10 2.27	φ214.10 2.59	\$139.00 2.13
Coverage (1,500 lb. bales/acre) Coverage No. of 1,500 lb. Bales	265	265	206	235	321	367	269	307	363	2.39 415	341
Coverage (\$/bale)	\$48.31	\$80.29	\$132.68	\$132.68	\$132.68	\$132.68	\$160.57	\$160.57	\$160.57	\$160.57	\$104.25
Coverage (\$/acre) = H x I	\$79.93	\$132.85	\$132.00 \$170.71	\$194.95	\$132.08 \$266.06	\$303.92	\$100.57 \$269.55	\$100.37 \$307.87	\$100.37 \$364.39	\$416.63	\$104.23 \$221.98
Coverage (Total \$) = A x M	\$12,789	\$132.05	\$170.71	\$194.95	\$200.00	\$48,627	\$269.55 \$43,127	\$49,259	\$364.39 \$58,303	\$66,661	\$35,517
	φ12,703	Ψ <b>Ζ 1,2</b> 33	Ψ <b>2</b> 7,51 <del>4</del>	ψ <b>31,131</b>	φ <del>4</del> 2,570	φ <del>4</del> 0,027	φ43,127	ψ <del>4</del> 3,233	<b>400,000</b>	<b>400,001</b>	ψ <b>3</b> 3,317
dmenity Calculation			(a == )	, ,							
Avg. Forage Yield (bales/acre)	1.0	-	(0.75 to	,							
Avg. Total No. of 1,500 lb. Bales	160	160	160	160	160	160	160	160	160	160	160
Percent of Probable Yield	48%	48%	54%	54%	35%	35%	42%	42%	31%	31%	38%
Forage Indemnity (bales/acre) = J - O	0.65	0.65	0.29	0.47	1.01	1.29	0.68	0.92	1.27	1.59	1.13
Forage Indemnity (tons/acre) = H - O	0.491	0.491	0.215	0.352	0.754	0.968	0.509	0.688	0.952	1.196	0.847
Forage Indemnity (% of coverage)	39.6%	39.6%	22.3%	31.9%	50.1%	56.3%	40.4%	47.8%	55.9%	61.5%	53.0%
Est. Forage Indemnity (\$/acre) = I x S	\$31.63	\$52.56	\$38.03	\$62.27	\$133.38	\$171.24	\$108.97	\$147.30	\$203.82	\$256.06	\$117.73
Estimated Forage Indemnity = A x U	\$5,060	\$8,410	\$6,085	\$9,963	\$21,341	\$27,398	\$17,436	\$23,568	\$32,611	\$40,969	\$18,837
y Disaster Benefit Calculation											
Significant MB hay yield loss	Ye	S	(more than 20	0% of the pro	ducers insure	d by Agrilnsu	urance have le	ess than 50%	of their long-t	erm probable	e yield)
Est. HDB (\$/acre) = S x \$39.92/ton	\$19.60	\$19.60	\$8.58	\$14.05	\$30.10	\$38.64	\$20.32	\$27.46	\$38.00	\$47.74	n/a
Est. Hay Disaster Benefit = A x Y	\$3,136	\$3,136	\$1,373	\$2,248	\$4,815	\$6,182	\$3,251	\$4,394	\$6,080	\$7,638	n/a
tal Indemnity + HDB											
. Est. Indemnity + HDB (\$/acre) = U + Y	\$51.22	\$72.16	\$46.62	\$76.32	\$163.48	\$209.88	\$129.29	\$174.76	\$241.82	\$303.80	\$117.73
Est.Indemnity + HDB = V + Z	\$8,196	\$11,545	\$7,459	\$12,211	\$26,157	\$33,581	\$20,687	\$27,962	\$38,691	\$48,608	\$18,837
•	, . ,	. ,	.,	• •	, -	,.	,	, , , , ,	,	,	
eakeven Calculation	4.450	4.455	0.000	0.000	4 407	4 000	4 455	4 000	4 500	4 700	4 4 7 7
Est. Breakeven yield (tons/acre)	1.153	1.155	0.888	0.990	1.427	1.606	1.155	1.288	1.598	1.796	1.477
Est. Breakeven yield (bales/acre)	1.537	1.540	1.184	1.321	1.903	2.142	1.540	1.717	2.131	2.394	1.970
sts Not Covered By Agrilnsurance											
Operating Costs	\$110.73	\$57.82	\$19.95	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Operating & Fixed Costs	\$246.61	\$193.69	\$155.83	\$131.59	\$60.48	\$22.62	\$116.38	\$78.06	\$21.54	\$0.00	\$134.86
Total Costs	\$279.01	\$226.09	\$188.23	\$163.99	\$92.88	\$55.02	\$148.78	\$110.46	\$53.94	\$1.70	\$175.36
rilnsurance Risk Ratio	(Agrilnsuran	ce Coveraci	e / Cost)								
Operating Costs	42%	70%	90%	102%	140%	159%	108%	123%	146%	167%	100%
Total Costs	22%	37%	48%	54%	74%	85%	64%	74%	87%	100%	56%



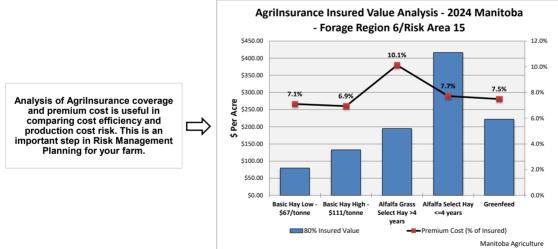
Forage Insurance Indemnity

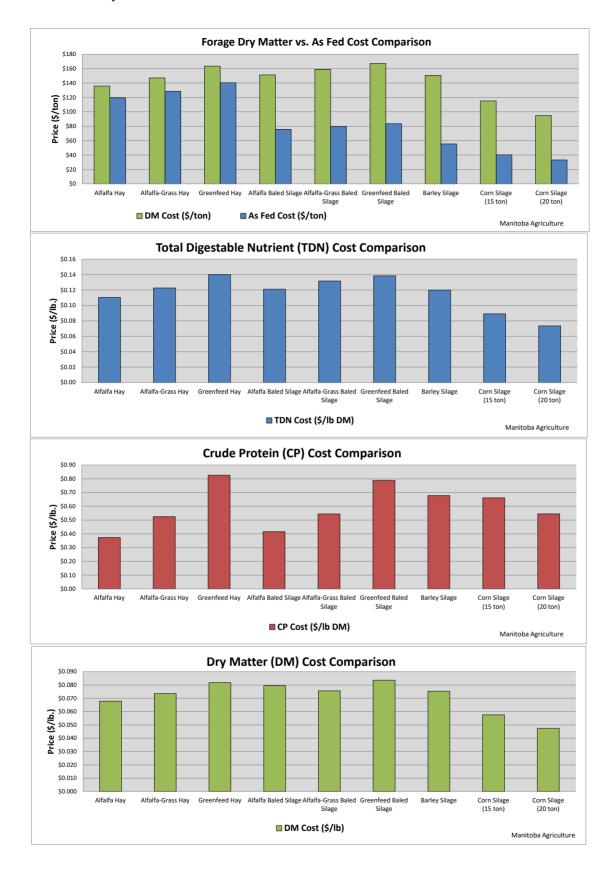


Forage Insurance Indemnity



Analysis of your Agrilnsurance coverage of operating and total costs is an important step in Risk Management Planning for your farm.





Bale Weight (lbs.) Estimated Storage Loss

	Estimated Y	ield of Fora	ige - Tons pe	r Acre <sup>1</sup>				
		Dry Hay		Wrapped Bale Silage				
	Alfalfa	Alfalfa-Grass	Greenfeed	Alfalfa	Alfalfa-Grass	Greenfeed		
Years	tons/acre	tons/acre	tons/acre	tons/acre	tons/acre	tons/acre		
(establishment year) 1	2.0	1.8	2.83	3.94	3.52	5.52		
2	3.6	3.2		7.09	6.27			
3	3.6	3.2		7.09	6.27			
4	3.6	3.0		7.09	5.87			
5	3.2	2.8		6.30	5.48			
6		2.6			5.09			
7		2.4			4.70			
8		2.3			4.50			
9								
10								
11								
Total Yield (tons)	14.0	19.5	2.83	27.6	38.2	5.52		
Average Yield (tons/acre)	3.50	2.79	2.83	6.89	5.45	5.52		
Avg. Dry Matter Yield (tons/acre)	3.08	2.44	2.43	3.45	2.73	2.76		
Bales (per acre)	4.7	3.7	3.8	6.9	5.5	5.5		
Years production	4	7	1	4	7	1		
Years rotation	5	8	1	5	8	1		
Agrilnsurance - Individual Coverage	1.00	1.00	1.00	1.00	1.00	1.00		

Wrapped Silage

2,000 5%

	Forage Analysis										
		Dry Hay		Wr	apped Bale Si	lage					
	Alfalfa	Alfalfa-Grass	Greenfeed	Alfalfa	Alfalfa-Grass	Greenfeed					
Crude protein DM (CP)%	18.2	14.0	9.9	18.2	14.6	10.6					
Energy DM (TDN) %	61.5	60.0	58.4	62.5	60.4	60.4					
As fed moisture %	12.1	12.6	14.2	50.0	50.0	50.0					

1. Users are reminded to adjust fertilizer rates when making changes to forage yields.

Forage yields are based on Forage Region #6 average yields with an IC of 1.25. Baled Silage DM yields are increased 12%.

<u>Dry Hay</u> 1,500 20%

Seed & Treatment									
Crop	Seeding Rate <u>per Acre</u>	Price <u>per Unit</u>	Cost <u>per Acre</u>						
Alfalfa Hay									
Alfalfa hay	<b>10</b> lb.	<b>\$4.25</b> /lb.	\$42.50						
Alfalfa-Grass Hay									
Alfalfa-grass hay	<b>10</b> lb.	<b>\$3.60</b> /lb.	\$36.00						
Oat greenfeed (nurse crop)	<b>1.25</b> bu	<b>\$12.00</b> /bu	\$15.00						
Greenfeed Hay									
Oats	<b>2.50</b> bu	<b>\$12.00</b> /bu	\$30.00						

Fertilizer <sup>1</sup>										
Fortilizer Type	Bulk Price	Actual Nutrient	Nitrogen	Sulphur						
<u>Fertilizer Type</u> Nitrogen: (urea) 46-0-0	<u>\$/tonne</u> \$825	<u>\$/lb.</u> \$0.814	<u>Usage</u> 100%	<u>Usage</u>						
Nitrogen: (NH3) 82-0-0	\$1,300	\$0.719	0%	-						
Nitrogen: (liquid) 28-0-0	\$500	\$0.810	0%	-						
Phosphorus: 11-52-0	\$1,075	\$0.766	-	-						
Potash: 0-0-60	\$625	\$0.473	-	-						
Sulphur: 20.5-0-0-24	\$600	\$0.439	-	100%						
MES S15: 13-33-0-15	\$1,000	\$0.635	-	0%						

	A	Amount of Actual Pounds of Elements Applied Per Acre								
	Nitrogen		Phosphorus		Potash		Sulphur		Total	
<u>Crop</u>	<u>lbs.</u>	\$/acre	<u>lbs.</u>	<u>\$/acre</u>	<u>lbs.</u>	<u>\$/acre</u>	<u>lbs.</u>	<u>\$/acre</u>	<u>\$/acre</u>	
Alfalfa Hay										
Alfalfa hay	0	\$0.00	60	\$56.26	65	\$30.71	17	\$19.28	\$106.25	
Alfalfa-Grass Hay										
Alfalfa-grass hay	0	\$0.00	45	\$42.20	52	\$24.57	15	\$17.01	\$83.78	
Oat greenfeed (nurse crop)	50	\$21.65	50	\$46.89	30	\$14.17	15	\$17.01	\$99.72	
Greenfeed Hay										
Oats	80	\$59.92	30	\$28.13	0	\$0.00	0	\$0.00	\$88.05	

The fertilizer recommendation will vary depending on the soil type, climate and crop rotation. Manitoba Agriculture recommends that soil test sampling and analysis be conducted each year to produce a better baseline for fertility. On many Manitoba soil types, potash application can be reduced based on soil test results. Custom soil sampling and analysis typically costs \$1.00 to \$2.00/acre.

1. Users are reminded to adjust silage yields when making changes to fertilizer rates.

		Chemic	als	
	Weed Control	Insect Control	Forage Removal	Total Cost
<u>Crop</u> Alfalfa Hay	<u>\$/acre</u>	<u>\$/acre</u>	<u>\$/acre</u>	<u>\$/acre</u>
Alfalfa hay	\$0.00	\$0.00		\$0.00
Alfalfa establishment	\$20.00	\$0.00	\$15.00	\$35.00
Alfalfa-Grass Hay Alfalfa-grass hay	\$0.00	\$0.00		\$0.00
Oat greenfeed (nurse crop)	\$20.00	\$0.00	\$15.00	\$35.00

Other Costs (\$/acre)

Rental and Custom Work Seeding (\$/ace)

Application (\$/acre)

Baling (\$/bale) Bale Moving (\$/bale)

General (\$/acre)

Labour Hours per Acre

Hours per acre

Mower/Conditioner (\$/acre)

Total (\$/acre)

Total (\$/acre)

\$2.00

\$0.00

\$0.00

\$0.00

\$0.00

\$3.00

\$0.00

\$8.00

1.5

\$40.50

Operating Costs											
Interest Rate on Operating Hay machinery repair		9.00% 3.50% (% of total investment)				Twine/net Bales per	wrap cost per unit	unit	\$60.00 50		
Land Taxes (\$/acre)	\$10.00					Plastic Silage Wrap Cost			\$150.00		
Fuel Cost (\$/litre)	\$1.40					Bales per	Roll Silage W	35.5 (bales/roll)			
Labour Cost per Hour	\$27.00					Silage Wrapper - Fuel Usage 0.26 (Litres / ba					)
	Dry Hay				Greenfeed				pped Bale Si	Ŭ	Greenfeed
	Alfalfa Hay		Alfalfa Grass		Нау		Alfalfa		Alfalfa G		Нау
Field Fuel Cost (\$/acre)	Establishment \$22.33	Production \$14.14	Establishment \$18.27	Production \$9.86	Production \$16.69		Establishment \$23.76	Production \$16.65	Establishment \$19.55	Production \$11.86	Production \$18.69
Crop Insurance <sup>1</sup> (\$/acre)		Select_Hay 80% Coverage		Basic_Hay High - \$97/tonne	80% Coverage		Select_Hay 80% Coverage		Basic_Hay High - \$97/tonne	80% Coverage	
	\$5.00	\$32.17	\$5.00	\$9.22	\$17.15		\$5.00	\$32.17	\$5.00	\$9.22	\$17.15

\$2.00

\$0.00

\$0.00

\$0.00

\$3.00

\$0.00

\$11.16

1.2

\$32.40

\$2.00

\$0.00

\$0.00

\$0.00

\$0.00

\$3.00 \$0.00 \$0.00

\$11.32

1.5

\$40.50

\$2.00

\$0.00

\$0.00

\$0.00

\$0.00

\$3.00

\$0.00

1.7

\$11.82

\$45.90

\$2.00

\$0.00

\$0.00

\$0.00

\$3.00

\$0.00

1.4

\$37.80

\$20.67

\$2.00

\$0.00

\$0.00

\$0.00

\$0.00

\$3.00 \$0.00

\$10.56

\$45.90

1.7

\$2.00

\$0.00

\$0.00

\$0.00

\$3.00

\$0.00

\$16.35

\$37.80

1.4

\$2.00

\$0.00

\$0.00

\$0.00

\$0.00

\$3.00

\$0.00

\$16.56

1.7

\$45.90

\$2.00

\$0.00

\$0.00

\$0.00

\$0.00

\$3.00 \$0.00

\$7.20

1.5

\$40.50

\$2.00

\$0.00

\$0.00

\$0.00

\$0.00 \$3.00 \$0.00

\$14.00

1.2

\$32.40

Operating Costs

1. Crop insurance: (2022 rates) Forage Establishment Insurance for \$80/ac coverage. Annual Insurance for Alfalfa Select\_Hay coverage in MASC (Forage Region 6) with LTAY yield=2.432 tons/acre and for Alfalfa Grass Basic\_Hay coverage with LTAY 4 Years or Less Stand yield=2.148 tons/acre. Annual Insurance for Greenfeed 80% Coverage coverage in MASC (Risk Area 15) with LTAY yield=1.996 tons/acre including \$0.52/acre EMI coverage.

Field Fuel Usage											
		Number of Field Operations									Trucks
						SP				spin	3/4 ton
		cultivate	tandem disk	harrow	air drill	sprayer	hay rake	hay bine	round baler	spreader	pickup
Crop	L/acre	1.29	1.85	0.75	2.42	0.42	0.26	1.48	1.32	0.42	0.5
Alfalfa Hay											
Alfalfa hay	10.10	0	0	0	0	0	3	3	3	1	0.5
Alfalfa establishment	15.95	1	2	2	1	1	2	2	2	0	0.5
Alfalfa-Grass Hay											
Alfalfa-grass hay	7.04	0	0	0	0	0	2	2	2	1	0.5
Oat greenfeed (nurse crop)	13.05	1	2	2	1	1	0	1	1	1	0.5
Greenfeed Hay											
Oats	11.92	1	0	1	1	2	2	2	2	0	0.5

#### Guidelines: Hay Production Costs

			Fixed	Costs			
Land			T IXCU	Machinery - Hay			
Average Land value (\$/acre)		\$3,000		Total Investment (\$/acre)			\$379.50
Dry Hay Crop acres		300		Residual Value (End of Useful Life	e)		25%
Baled Silage Crop acres		300		Useful Life (years)			15
Owned Land Equity		85%		Owned Equipment Equity	`		55%
Land Financed (\$450 per acre) Land Opportunity Cost (Investmen	(Data)	15%		Equipment Financed (\$171 per ac Machinery Opportunity Cost (Invest			45% 1.50%
Land cost (\$/acre)	(Rate)	1.50%		Machinery Cost - Hay (\$/acre)	imeni Rate)		1.50%
Finance Rate & Term	8.000%	25	Years	Finance Rate & Term	8.500%	7	Years
Principle & Interest Cost		\$42.16	. ouro	Principle & Interest Cost			\$33.36
Owned Land Opportunity Cost		\$38.25		Machinery Depreciation Cost			\$18.98
Total Cost		\$80.41		Owned Machinery Opportunity Co	st		<u>\$3.13</u>
				Total Cost			\$55.47
Machinery Lease cost (\$/acre)		\$2.40		Machinery - Baled Silage			
Machinery Lease Cost (practe)		φ2.40		Total Investment (\$/acre)			\$133.33
				Residual Value (End of Useful Life	e)		20%
Total Land & Machinery Debt (\$	/acre)	\$681		Useful Life (years)			15
				Owned Equipment Equity			55%
				Equipment Financed (\$60 per acre			45%
				Silage Storage Opp. Cost (Investme			1.50%
				Machinery Cost - Baled Silage (\$			
				Finance Rate & Term Principle & Interest Cost	8.500%	1	Years \$11.72
				Machinery Depreciation Cost			\$7.11
				Owned Machinery Opportunity Cost	st		\$1.10
				Total Cost			\$19.93
		Hav Equi	oment Invento	ory and Current Values			
	Market	Forage	Forage		Market	Forage	Forage
Power & Misc Equipment	Value	Usage %	Allocation	Harvest Equipment	Value	Usage %	Allocation
MFD Tractor 100HP	\$140,000	50%	\$70,000	Mower/Conditioner	\$44,000		\$44,000
2WD Tractor 60HP	\$44,000	50%	\$22,000	Hay Rake	\$16,500		\$16,500
	\$0	0%	\$0	Baler	\$60,000		\$60,000
	\$0 \$0	0%	\$0 \$0	Dalei	\$00,000 \$0		\$00,000 \$0
	\$0 \$0						
		0%	\$0 \$0		\$0		\$0
	\$0	0%	\$0		\$0		\$0
	\$0	0%	\$0		\$0		\$0
Total	\$0	0%	\$0 \$92,000	Total	\$0	0%	\$0 \$120,500
Total			<b>\$92,000</b>	Total			\$120,500
	Market	Forage	Forage		Market	Forage	Forage
Seeding, Tillage, Spraving	Value	Usage %	Allocation	Trucks & Trailers	Value	Usage %	Allocation
Cultivator	\$11,000	20%	\$2,200	enter equipment here	\$0	0%	\$0
Harrow 50ft	\$11,000	20%	\$2,200		\$0	0%	\$0
Air tank	\$11,000	20%	\$2,200		\$0		\$0
Air drill 40ft	\$33,000	20%	\$6,600		\$0		\$0
PT sprayer	\$10,000		\$2,000		\$0		\$0
Fisplayer	\$10,000 \$0	20 % 0%	\$2,000 \$0		\$0 \$0		\$0 \$0
			\$0 \$0				
	\$0	0%	-		\$0		\$0
Total	\$0 \$76,000	0%	\$0 \$15,200	Total	\$0	0%	\$0 \$0
			\$15,200	Total			φU
Owned Equipment TOTAL	\$227,700						
	Bal	ed Silage E	Equipment Inv	entory and Current Values			
	Market	Forage	Forage		Market	Forage	Forage
Miscellaneous Equipment	Value	Usage %	Allocation	Harvest Equipment	Value	Usage %	Allocation
enter equipment here	\$0	0%	\$0	Silage Bale Wrapper	\$40,000	100%	\$40,000
	\$0	0%	\$0		\$0		\$0
	\$0	0%	\$0		\$0		\$0
	\$0	0%	\$0		\$0		\$0
Total			\$0	Total			\$40,000
Silage Equipment TOTAL	\$40,000	]					
	Appuel			nent Inventory	Appus	Forces	Eoroaco
Souding Tillago Corrector	Annual	Forage	Forage	Trucko 8 Troiloro	Annual	Forage	Forage
Seeding, Tillage, Spraying	Lease	Usage %	Allocation	Trucks & Trailers	Lease	Usage %	Allocation
enter equipment here	\$0	0%	\$0	3/4 ton pickup	\$9,600	15%	\$1,440
	\$0	0%	\$0		\$0		\$0
	\$0	0%	\$0		\$0		\$0
	\$0	0%	\$0		\$0		\$0
	\$0	0%	\$0		\$0		\$0
	\$0	0%	\$0		\$0	0%	\$0
Total	\$0		\$0	Total			\$1,440

 Total
 \$0
 \$0

 Leased Equipment TOTAL
 \$1,440
 \$2.40 per acre

 \* Leased equipment costs are listed under Operating Costs on the Summary Page.
 \$1,440
 \$2.40 per acre

#### **Other Assumptions**

#### **Fuel Costs:**

Includes fuel used for field work, and trucking in inputs.

#### **Machinery Operating Costs:**

Includes costs for maintenance, repairs, licenses and insurance.

#### Crop Insurance: (2023 rates)

Forage Region 6 - Establishment Insurance at \$80/ac coverage and annual Select\_Hay insurance at 80% coverage. Risk Area 15 - Greenfeed Insurance at 80% coverage.

#### Other Costs:

Includes overhead expenses: hydro, telephone, accounting, buildings, supplies and insurance, etc.

#### **Bale Moisture:**

Bale moisture based on: 12.1% alfalfa hay; 12.6% alfalfa-grass hay; 14.2% greenfeed hay; 50% alfalfa baled silage; 50% alfalfa-grass baled silage and 50% greenfeed baled silage.

#### Land Taxes:

The average for the province was based on land tax assessment and mill rates of a sample of municipalities growing crops less provincial tax rebate.

#### Interest On Operating:

Interest charges on operating costs are calculated at 9% for six months.

#### Land Cost:

Based on approximate average land values. Budget assumed 15% financed at 8% for 25 years, plus 1.5% land equity opportunity cost. Budget can be used to estimate cashflow by removing investment cost.

P&I Cost (based on \$270,000 Mortgage) = \$25,293 payments per year) / 600 acres = \$42.16/acre) Investment = (Total Investment x Owned Equity %) x Investment Rate % (eg. ((\$3,000 x 85%) x 1.5%) = \$38.25/acre)

#### **Machinery Cost:**

Based on approximate average machinery values. Budget assumed 45% financed at 8.5% for 7 years, depreciation costs over 15 years with a 25% residual value, plus 1.5% machinery equity opportunity cost. Budget can be used to estimate cashflow by removing depreciation and investment cost.

P&I Cost (based on \$102,465 + \$18,000 Loan) = \$20,019 + \$3,517 payment per year) / 600 + 300 acres = \$33.36 + \$11.72/acre)

Depreciation (Useage Cost) = (Total Investment - Residual Value) / Years Useful Life (eg.  $(\$379.50 - (\$379.50 \times 25\%))$ ) / 15 = \$18.98/acre) Investment = (Total Investment x Owned Equity %) x Investment Rate % (eg.  $(\$379.50 \times 55\%) \times 1.5\%$ ) = \$3.13/acre)

#### **Estimated Farmgate Values:**

Forage prices are based on estimated prices for fall/winter 2023/24.

#### Storage Cost:

Dry hay storage costs are estimated at \$0.00 per acre.

#### Profitability & Breakeven Analysis:

Gross Revenue = Price per unit x Yield per acre (eg. alfalfa: \$160.00/ton x 3.5 ton/ac = \$560.00/ac)

Net Profit = Gross Revenue - Total Cost (eg. alfalfa: \$560.00 gross revenue - \$418.33 total cost = \$141.67 per acre)

Operating Expense Ratio = (Operating Cost / Gross Revenue) x 100 (eg. alfalfa: \$250.05 operating expense / \$560.00 gross revenue = 44.7%)

Breakeven Price = Cost / Target Yield (eg. alfalfa cost \$418.33 / 3.5 ton = \$119.52 per ton)

Breakeven Yield = Cost / Price per Unit (eg. alfalfa cost \$418.33 / \$160.00 ton = 2.61 ton)

#### January, 2024

#### Contact Us

For more information, contact a Farm Management Specialist.

- manitoba.ca/agriculture
- mbfarmbusiness@gov.mb.ca
- 1-844-769-6224

## **Contact us**

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