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**2025 Cost of Production**

# **Hay: Round Bale and Silage**



## Guidelines For Estimating Hay Production Costs - 2025 Round Bale Hay and Silage

Date: February, 2025

**\*\*revised 2025 MASC (**

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 management 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:



[The Farm Machinery Custom and Rental Rate Guide](#) is also available to help determine machinery costs.

### Contact Us

For more information, contact a Farm Management Specialist.

- [manitoba.ca/agriculture](http://manitoba.ca/agriculture)
- [mbfarmbusiness@gov.mb.ca](mailto: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.

| Dry Hay Production Costs - 2025    |                       |                      |          |                       |                      |           |                  |                      |           |           |
|------------------------------------|-----------------------|----------------------|----------|-----------------------|----------------------|-----------|------------------|----------------------|-----------|-----------|
|                                    | Alfalfa Hay           |                      |          | Alfalfa-Grass Hay     |                      |           | Greenfeed Hay    |                      |           | Your Farm |
|                                    | Annual (Years 2 to 5) |                      |          | Annual (Years 2 to 8) |                      |           |                  |                      |           |           |
|                                    | Production Costs      |                      |          | Production Costs      |                      |           | Production Costs |                      |           |           |
|                                    | (as fed)              | (Dry Matter-DM)      |          | (as fed)              | (DM)                 |           | (as fed)         | (DM)                 |           |           |
|                                    | \$/acre               | \$/ton               | \$/ton   | \$/acre               | \$/ton               | \$/ton    | \$/acre          | \$/ton               | \$/ton    |           |
| A. Operating Costs                 |                       |                      |          |                       |                      |           |                  |                      |           |           |
| Forage Seed & Treatment            | -                     |                      |          | -                     |                      |           | -                |                      |           |           |
| Nurse Crop Seed                    | -                     |                      |          |                       |                      |           | \$25.00          |                      |           |           |
| Establishment (amortized)          | \$38.98 <sup>1</sup>  |                      |          | \$35.47 <sup>2</sup>  |                      |           | -                |                      |           |           |
| Fertilizer                         | \$103.28              |                      |          | \$80.94               |                      |           | \$80.93          |                      |           |           |
| Herbicide/Insecticide              | \$0.00                |                      |          | \$0.00                |                      |           | \$16.00          |                      |           |           |
| Fuel                               | \$11.11               |                      |          | \$7.74                |                      |           | \$13.11          |                      |           |           |
| 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                     | \$33.25               |                      |          | \$9.19                |                      |           | \$15.25          |                      |           |           |
| Twine/Net Wrap                     | \$5.64                |                      |          | \$4.44                |                      |           | \$4.56           |                      |           |           |
| Plastic Silage Wrap                | -                     |                      |          | -                     |                      |           | -                |                      |           |           |
| Other Costs                        | \$2.00                |                      |          | \$2.00                |                      |           | \$2.00           |                      |           |           |
| Land Taxes                         | \$15.00               |                      |          | \$15.00               |                      |           | \$15.00          |                      |           |           |
| Interest on Operating              | \$8.96                |                      |          | \$6.81                |                      |           | \$7.46           |                      |           |           |
| Total Operating                    | \$247.90              |                      |          | \$188.43              |                      |           | \$206.32         |                      |           |           |
| B. Fixed Costs                     |                       |                      |          |                       |                      |           |                  |                      |           |           |
| Land Cost                          | \$75.14               |                      |          | \$75.14               |                      |           | \$75.14          |                      |           |           |
| Machinery Costs                    | \$53.79               |                      |          | \$53.79               |                      |           | \$53.79          |                      |           |           |
| Storage Costs                      | \$0.00                |                      |          | \$0.00                |                      |           | \$0.00           |                      |           |           |
| Total Fixed                        | \$128.94              |                      |          | \$128.94              |                      |           | \$128.94         |                      |           |           |
| Total Operating & Fixed            | \$376.84              |                      |          | \$317.37              |                      |           | \$335.25         |                      |           |           |
| C. Labour                          |                       |                      |          |                       |                      |           |                  |                      |           |           |
|                                    | \$32.40               |                      |          | \$32.40               |                      |           | \$40.50          |                      |           |           |
| Total Costs                        | \$409.24              | \$116.92             | \$132.87 | \$349.77              | \$125.36             | \$143.35  | \$375.75         | \$132.78             | \$154.63  |           |
| Total Costs (\$/lb.)               |                       | \$0.058              | \$0.066  |                       | \$0.063              | \$0.072   |                  | \$0.066              | \$0.077   |           |
| Total Costs (\$/1500 lb. bale)     | \$87.07               |                      |          | \$94.53               |                      |           | \$98.88          |                      |           |           |
| Profitability & Breakeven Analysis |                       |                      |          |                       |                      |           |                  |                      |           |           |
| Estimated Farmgate                 |                       | As Fed               | DM       |                       | As Fed               | DM        |                  | As Fed               | DM        |           |
| Price \$ per ton                   |                       | \$155.00             | \$176.14 |                       | \$115.00             | \$131.50  |                  | \$115.00             | \$133.93  |           |
| 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                      |                       | \$542.50             |          |                       | \$320.85             |           |                  | \$325.45             |           |           |
|                                    |                       |                      |          |                       |                      |           |                  |                      |           |           |
| Marginal Returns                   |                       | (as fed)             | (DM)     |                       | (as fed)             | (DM)      |                  | (as fed)             | (DM)      |           |
| Over Operating Costs               | \$/acre               | \$/ton               | \$/ton   | \$/acre               | \$/ton               | \$/ton    | \$/acre          | \$/ton               | \$/ton    |           |
| Over Operating Costs               | \$294.60              | \$84.17              | \$95.65  | \$132.42              | \$47.46              | \$54.27   | \$119.13         | \$42.10              | \$49.03   |           |
| Over Total Costs (Net Profit)      | \$133.26              | \$38.08              | \$43.27  | (\$28.92)             | (\$10.36)            | (\$11.85) | (\$50.30)        | (\$17.78)            | (\$20.70) |           |
| Operating Expense Ratio            | 45.7%                 |                      |          | 58.7%                 |                      |           | 63.4%            |                      |           |           |
| Breakeven Price (\$/ton)           |                       |                      |          |                       |                      |           |                  |                      |           |           |
| Operating Costs                    |                       | \$70.83              | \$80.49  |                       | \$67.54              | \$77.23   |                  | \$72.90              | \$84.90   |           |
| Total Costs                        |                       | \$116.92             | \$132.87 |                       | \$125.36             | \$143.35  |                  | \$132.78             | \$154.63  |           |
| Breakeven Yield (tons/acre)        |                       |                      |          |                       |                      |           |                  |                      |           |           |
| Operating Costs                    |                       | 1.599                | 1.407    |                       | 1.639                | 1.433     |                  | 1.794                | 1.540     |           |
| Total Costs                        |                       | 2.640                | 2.323    |                       | 3.041                | 2.660     |                  | 3.267                | 2.806     |           |
| Cost of Standing Hay (\$/lb.)      |                       | \$0.039 <sup>3</sup> |          |                       | \$0.040 <sup>3</sup> |           |                  | \$0.044 <sup>4</sup> |           |           |
| Cost of Standing Hay (\$/ton)      |                       | \$78.87              |          |                       | \$80.31              |           |                  | \$87.20              |           |           |
| On-Farm Harvest Cost (\$/ton)      |                       | \$38.06              |          |                       | \$45.05              |           |                  | \$45.57              |           |           |

1. Alfalfa establishment (without nurse crop) net cost of \$155.91 (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 \$248.26 (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.

| Baled Silage Production Costs - 2025 |                       |                      |                |                            |                      |                |                        |                      |                |           |
|--------------------------------------|-----------------------|----------------------|----------------|----------------------------|----------------------|----------------|------------------------|----------------------|----------------|-----------|
|                                      | Alfalfa Baled Silage  |                      |                | Alfalfa-Grass Baled Silage |                      |                | Greenfeed Baled Silage |                      |                | Your Farm |
|                                      | Annual (Years 2 to 5) |                      |                | Annual (Years 2 to 8)      |                      |                |                        |                      |                |           |
|                                      | Production Costs      |                      |                | Production Costs           |                      |                | Production Costs       |                      |                |           |
|                                      | \$/acre               | (as fed)<br>\$/ton   | (DM)<br>\$/ton | \$/acre                    | (as fed)<br>\$/ton   | (DM)<br>\$/ton | \$/acre                | (as fed)<br>\$/ton   | (DM)<br>\$/ton |           |
| A. Operating Costs                   |                       |                      |                |                            |                      |                |                        |                      |                |           |
| Forage Seed & Treatment              | -                     |                      |                | -                          |                      |                | -                      |                      |                |           |
| Nurse Crop Seed                      | -                     |                      |                | -                          |                      |                | \$25.00                |                      |                |           |
| Establishment (amortized)            | \$65.79 <sup>1</sup>  |                      |                | \$44.54 <sup>2</sup>       |                      |                | -                      |                      |                |           |
| Fertilizer                           | \$103.28              |                      |                | \$80.94                    |                      |                | \$80.93                |                      |                |           |
| Herbicide/Insecticide                | \$0.00                |                      |                | \$0.00                     |                      |                | \$16.00                |                      |                |           |
| Fuel                                 | \$11.87               |                      |                | \$9.32                     |                      |                | \$14.69                |                      |                |           |
| 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                       | \$33.25               |                      |                | \$9.19                     |                      |                | \$15.25                |                      |                |           |
| 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                           | \$15.00               |                      |                | \$15.00                    |                      |                | \$15.00                |                      |                |           |
| Interest on Operating                | \$11.61               |                      |                | \$8.53                     |                      |                | \$8.84                 |                      |                |           |
| Total Operating                      | \$321.25              |                      |                | \$236.06                   |                      |                | \$244.46               |                      |                |           |
| B. Fixed Costs                       |                       |                      |                |                            |                      |                |                        |                      |                |           |
| Land Cost                            | \$75.14               |                      |                | \$75.14                    |                      |                | \$75.14                |                      |                |           |
| Machinery Costs                      | \$73.14               |                      |                | \$73.14                    |                      |                | \$73.14                |                      |                |           |
| Storage Costs                        | \$0.00                |                      |                | \$0.00                     |                      |                | \$0.00                 |                      |                |           |
| Total Fixed                          | \$148.28              |                      |                | \$148.28                   |                      |                | \$148.28               |                      |                |           |
| Total Operating & Fixed              | \$469.53              |                      |                | \$384.34                   |                      |                | \$392.74               |                      |                |           |
| C. Labour                            | \$37.80               |                      |                | \$37.80                    |                      |                | \$45.90                |                      |                |           |
| Total Costs                          | \$507.33              | \$73.63              | \$147.05       | \$422.14                   | \$77.46              | \$154.63       | \$438.64               | \$79.46              | \$158.93       |           |
| Total Costs (\$/lb.)                 |                       | \$0.037              | \$0.074        |                            | \$0.039              | \$0.077        |                        | \$0.040              | \$0.079        |           |
| Total Costs (\$/2000 lb. bale)       | \$73.53               |                      |                | \$76.75                    |                      |                | \$79.75                |                      |                |           |
| Profitability & Breakeven Analysis   |                       |                      |                |                            |                      |                |                        |                      |                |           |
| Estimated Farmgate                   |                       | As Fed               | DM             |                            | As Fed               | DM             |                        | As Fed               | 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             |                |           |
| Marginal Returns                     |                       | (as fed)             | (DM)           |                            | (as fed)             | (DM)           |                        | (as fed)             | (DM)           |           |
| Over Operating Costs                 | \$/acre               | \$/ton               | \$/ton         | \$/acre                    | \$/ton               | \$/ton         | \$/acre                | \$/ton               | \$/ton         |           |
|                                      | \$92.15               | \$13.37              | \$26.71        | \$63.69                    | \$11.69              | \$23.33        | \$59.14                | \$10.71              | \$21.43        |           |
| Over Total Costs (Net Profit)        | (\$93.93)             | (\$13.63)            | (\$27.23)      | (\$122.39)                 | (\$22.46)            | (\$44.83)      | (\$135.04)             | (\$24.46)            | (\$48.93)      |           |
| Operating Expense Ratio              | 77.7%                 |                      |                | 78.8%                      |                      |                | 80.5%                  |                      |                |           |
| Breakeven Price (\$/ton)             |                       |                      |                |                            |                      |                |                        |                      |                |           |
| Operating Costs                      |                       | \$46.63              | \$93.12        |                            | \$43.31              | \$86.47        |                        | \$44.29              | \$88.57        |           |
| Total Costs                          |                       | \$73.63              | \$147.05       |                            | \$77.46              | \$154.63       |                        | \$79.46              | \$158.93       |           |
| Breakeven Yield (tons/acre)          |                       |                      |                |                            |                      |                |                        |                      |                |           |
| Operating Costs                      |                       | 5.354                | 2.681          |                            | 4.292                | 2.150          |                        | 4.445                | 2.222          |           |
| Total Costs                          |                       | 8.456                | 4.234          |                            | 7.675                | 3.845          |                        | 7.975                | 3.988          |           |
| Cost of Standing Hay (\$/lb.)        |                       | \$0.022 <sup>3</sup> |                |                            | \$0.021 <sup>3</sup> |                |                        | \$0.023 <sup>4</sup> |                |           |
| Cost of Standing Hay (\$/ton)        |                       | \$44.14              |                |                            | \$42.91              |                |                        | \$45.94              |                |           |
| On-Farm Harvest Cost (\$/ton)        |                       | \$29.49              |                |                            | \$34.55              |                |                        | \$33.53              |                |           |

1. Alfalfa establishment (without nurse crop) net cost of \$263.16 (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 \$311.80 (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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## Forage Establishment Cost Summary - 2025

|   | Alfalfa Hay<br>Establ. <sup>1</sup><br>\$/acre | Alfalfa-Grass<br>Hay<br>Establ. <sup>2</sup><br>\$/acre | Alfalfa Baled<br>Silage<br>Establ. <sup>3</sup><br>\$/acre | Alfalfa-Grass<br>Baled Silage<br>Establ. <sup>4</sup><br>\$/acre | Your Farm |
|---|--|---|--|--|-----------|
| <b>A. Operating Costs</b>                     |  |   |  |  |           |
| Forage Seed & Treatment                       | \$42.50  | \$36.00   | \$42.50  | \$36.00  |           |
| Nurse Crop Seed                               | -  | \$12.50   | -  | \$12.50  |           |
| Establishment (amortized)                     | -  | -   | -  | -  |           |
| Fertilizer                                    | \$103.28                                       | \$95.17   | \$103.28   | \$95.17  |           |
| Herbicide/Insecticide                         | \$35.00  | \$35.00   | \$35.00  | \$35.00  |           |
| Fuel  | \$17.55  | \$14.36   | \$18.30  | \$15.36  |           |
| Machinery Operating                           | \$13.28  | \$13.28   | \$18.67  | \$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                                    | \$15.00  | \$15.00   | \$15.00  | \$15.00  |           |
| Interest on Operating                         | \$9.27   | \$9.03  | \$10.33  | \$9.98   |           |
| <b>Total Operating</b>                        | <b>\$256.48</b>                                | <b>\$249.82</b>   | <b>\$285.68</b>  | <b>\$276.02</b>  |           |
| <b>B. Fixed Costs</b>                         |  |   |  |  |           |
| Land Cost                                     | \$75.14  | \$75.14   | \$75.14  | \$75.14  |           |
| Machinery Costs                               | \$53.79  | \$53.79   | \$73.14  | \$73.14  |           |
| Storage Costs                                 | \$0.00   | \$0.00  | \$0.00   | \$0.00   |           |
| <b>Total Fixed</b>                            | <b>\$128.94</b>                                | <b>\$128.94</b>   | <b>\$148.28</b>  | <b>\$148.28</b>  |           |
| <b>Total Operating &amp; Fixed</b>            | <b>\$385.41</b>                                | <b>\$378.76</b>   | <b>\$433.96</b>  | <b>\$424.30</b>  |           |
| <b>C. Labour</b>                              |  |   |  |  |           |
|   | \$40.50  | \$40.50   | \$45.90  | \$45.90  |           |
| <b>Total Costs</b>                            | <b>\$425.91</b>                                | <b>\$419.26</b>   | <b>\$479.86</b>  | <b>\$470.20</b>  |           |
| <b>Total Costs (\$/lb.)</b>                   |  |   |  |  |           |
| <b>Profitability &amp; Breakeven Analysis</b> |  |   |  |  |           |
| <b>Estimated Farmgate</b>                     |  |   |  |  |           |
| Price \$ per ton                              | \$135.00                                       | \$95.00   | \$55.00  | \$45.00  |           |
| Yield per acre (ton)                          | 2.00   | 1.80  | 3.94   | 3.52   |           |
| <b>Gross Revenue</b>                          | <b>\$270.00</b>                                | <b>\$171.00</b>   | <b>\$216.70</b>  | <b>\$158.40</b>  |           |
| <b>Marginal Returns</b>                       |  |   |  |  |           |
|   | <u>\$/acre</u>                                 | <u>\$/acre</u>  | <u>\$/acre</u>   | <u>\$/acre</u>   |           |
| Over Operating Costs                          | \$13.52  | (\$78.82)   | (\$68.98)  | (\$117.62)   |           |
| <b>Over Total Costs (Net Profit)</b>          | <b>(\$155.91)</b>                              | <b>(\$248.26)</b>                                       | <b>(\$263.16)</b>  | <b>(\$311.80)</b>  |           |
| <b>Operating Expense Ratio</b>                | <b>95.0%</b>                                   | <b>146.1%</b>   | <b>131.8%</b>  | <b>174.3%</b>  |           |
| <b>Establishment Cost (amortized)</b>         |  |   |  |  |           |
| <b>Years of Production</b>                    | <b>4</b>                                       | <b>7</b>  | <b>4</b>   | <b>7</b>   |           |

1. Alfalfa hay establishment (without nurse crop) net cost of \$155.91 (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 \$248.26 (total cost minus estimated gross revenue) were amortized over 7 hay production years.

3. Alfalfa silage establishment (without nurse crop) net cost of \$263.16 (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 \$311.80 (total cost minus estimated gross revenue) were amortized over 7 hay production years.

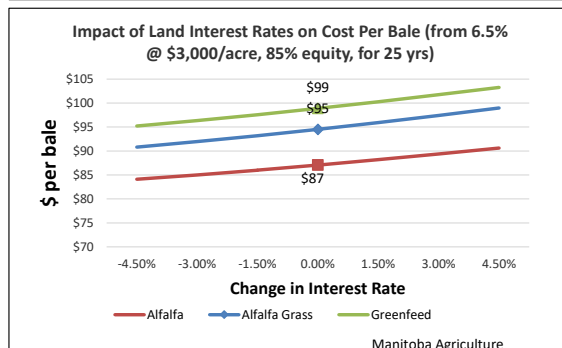
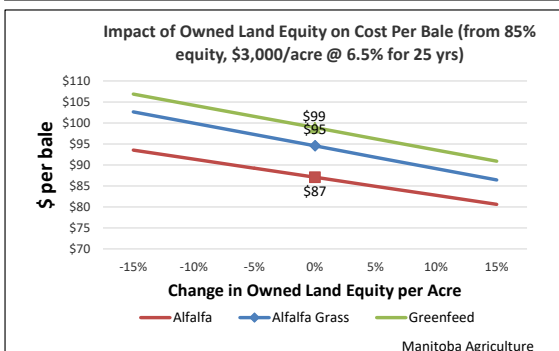
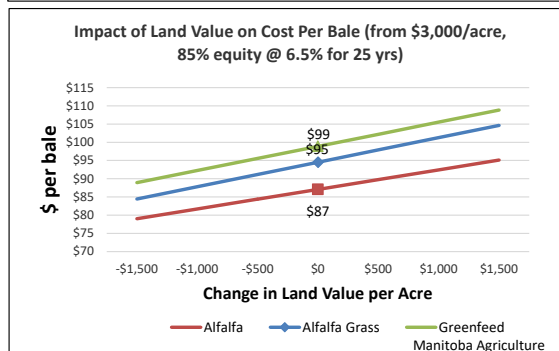
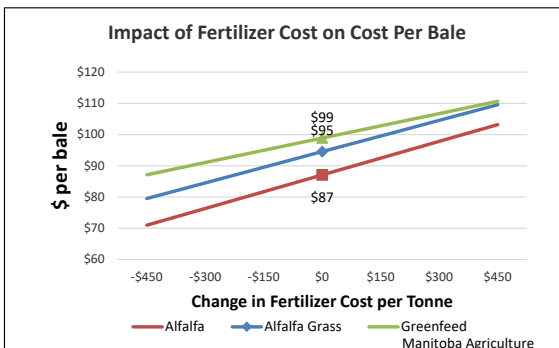
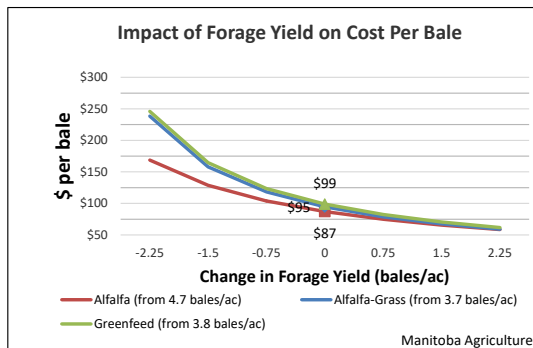
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**Baled Silage Wrapper Cost Summary (\$ per Bale)**Increase/Decrease # Bales Wrapped per Year **25%**

| Based on # Bales Wrapped Per Year    | Alfalfa Baled Silage |               |               | Alfalfa-Grass Baled Silage |               |               |
|--------------------------------------|----------------------|---------------|---------------|----------------------------|---------------|---------------|
|                                      | 1,656                | 2,070         | 2,588         | 1,320                      | 1,650         | 2,063         |
| <b>Cost per Wrapped Silage Bale</b>  |                      |               |               |                            |               |               |
| Plastic Silage Wrap Cost             | \$4.23               | \$4.23        | \$4.23        | \$4.23                     | \$4.23        | \$4.23        |
| Silage Wrapper - Fuel Usage          | \$0.29               | \$0.29        | \$0.29        | \$0.29                     | \$0.29        | \$0.29        |
| Machinery Costs                      | \$3.50               | \$2.80        | \$2.24        | \$4.40                     | \$3.52        | \$2.81        |
| Labour (Additional for wrapper only) | <u>\$0.78</u>        | <u>\$0.78</u> | <u>\$0.78</u> | <u>\$0.98</u>              | <u>\$0.98</u> | <u>\$0.98</u> |
| <b>Total (\$ per bale)</b>           | <b>\$8.80</b>        | <b>\$8.10</b> | <b>\$7.54</b> | <b>\$9.89</b>              | <b>\$9.01</b> | <b>\$8.31</b> |

**Risk & Sensitivity Analysis (Stress Test)**

|  |                     |                                   |                      |                  |
|--|---------------------|-----------------------------------|----------------------|------------------|
| <b>Baseline Values:</b>                            |                     | <b>Alfalfa</b>                    | <b>Alfalfa Grass</b> | <b>Greenfeed</b> |
| Production (Bales per acre)                        |                     | 4.7                               | 3.7                  | 3.8              |
| Production Cost (\$ per bale)                      |                     | \$87.07                           | \$94.53              | \$98.88          |
| Production Cost (\$ per lb.)                       |                     | \$0.058                           | \$0.063              | \$0.066          |
|  | <b>Amount Added</b> | <b>Changed Cost (\$ per bale)</b> |                      |                  |
| Change in Forage Yield (bales per acre)            | -0.75               | \$16.79                           | \$23.74              | \$24.70          |
| Change in Land Value (from \$3,000)                | \$500               | \$2.68                            | \$3.37               | \$3.32           |
| Percent Change in Owned Land Equity (from 85%)     | -5%                 | \$2.15                            | \$2.70               | \$2.66           |
| Change in Land Interest Rate (from 6.5%)           | 1.50%               | \$1.13                            | \$1.42               | \$1.40           |
| Change in Machinery Interest Rate (from 7%)        | 1.50%               | \$0.36                            | \$0.45               | \$0.45           |
| Change in Fertilizer Cost (\$ per tonne)           | \$150               | \$5.37                            | \$5.01               | \$3.93           |
| <b>Total Change in Cost (\$ per bale)</b>          |                     | <b>\$28.49</b>                    | <b>\$36.69</b>       | <b>\$36.46</b>   |
| <b>'Stress Test' Production Cost (\$ per Bale)</b> |                     | <b>\$115.56</b>                   | <b>\$131.22</b>      | <b>\$135.34</b>  |
| <b>(\$ per lb.)</b>                                |                     | <b>\$0.077</b>                    | <b>\$0.087</b>       | <b>\$0.090</b>   |



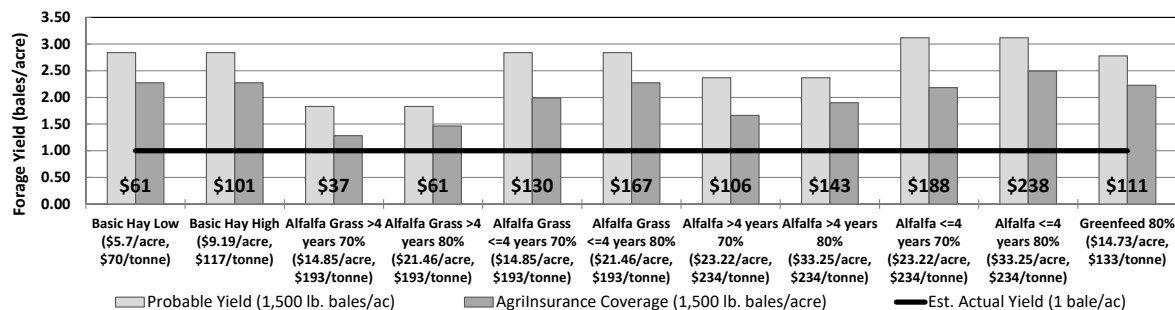
**Note:** This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user.

## AgrInsurance Analysis

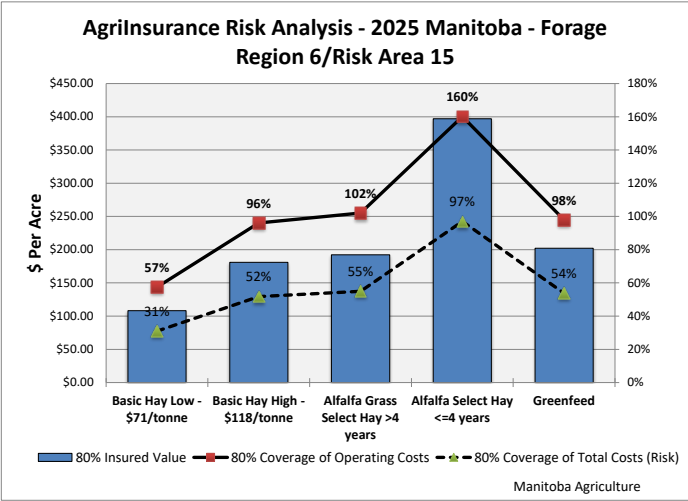
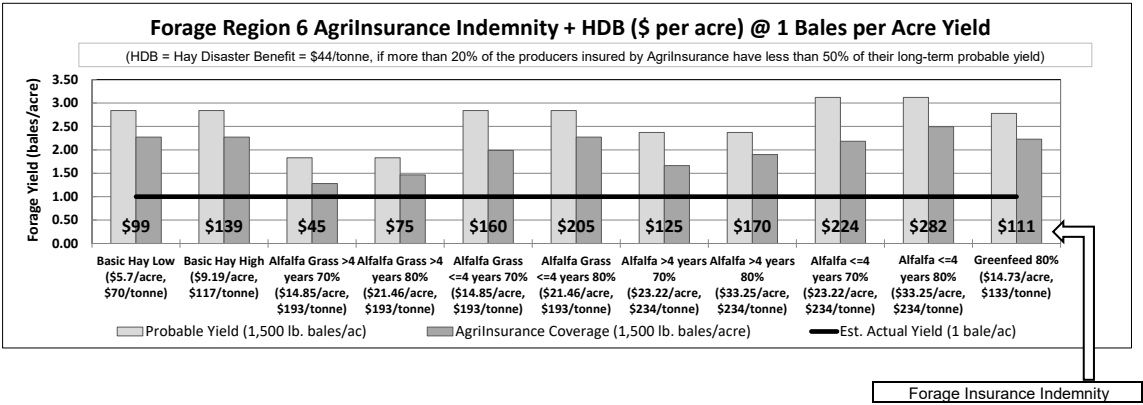
[MASC Forage Region Map](#)
[MASC Forage Insurance](#)

| Forage Region 6<br>Risk Area 15            |  | Basic Hay<br>80% Coverage |                       | Alfalfa Grass - Select Hay  |                 |                 |                 | Alfalfa - Select Hay |                 |                 |                 | Greenfeed       |
|--|--|---------------------------|-----------------------|---|-----------------|-----------------|-----------------|----------------------|-----------------|-----------------|-----------------|-----------------|
|  |  | Low -<br>\$71/tonne       | High -<br>\$118/tonne | 70%<br>Coverage   | 80%<br>Coverage | 70%<br>Coverage | 80%<br>Coverage | 70%<br>Coverage      | 80%<br>Coverage | 70%<br>Coverage | 80%<br>Coverage | 80%<br>Coverage |
| *Based on 2024 MASC data*                  |  |                           |                       |   |                 |                 |                 |                      |                 |                 |                 |                 |
| A. Hay Acres                               |  | 160                       | 160                   | 160   | 160             | 160             | 160             | 160                  | 160             | 160             | 160             | 160             |
| <b>Coverage</b>                            |  |                           |                       |   |                 |                 |                 |                      |                 |                 |                 |                 |
| B. Probable Yield - IC (tons/acre)         |  | 2.131                     | 2.131                 | 1.373   | 1.373           | 2.131           | 2.131           | 1.781                | 1.781           | 2.338           | 2.338           | 2.087           |
| C. Probable Yield (1,500 lb. bales/ac)     |  | 2.84                      | 2.84                  | 1.83  | 1.83            | 2.84            | 2.84            | 2.37                 | 2.37            | 3.12            | 3.12            | 2.78            |
| D. Prob. Total No. of 1,500 lb. Bales      |  | 454                       | 454                   | 293   | 293             | 454             | 454             | 379                  | 379             | 499             | 499             | 445             |
| E. Premium (\$/Acre)                       |  | \$5.70                    | \$9.19                | \$14.85   | \$21.46         | \$14.85         | \$21.46         | \$23.22              | \$33.25         | \$23.22         | \$33.25         | \$14.73         |
| F. Premium (Total \$) = A x C              |  | \$912                     | \$1,470               | \$2,376   | \$3,434         | \$2,376         | \$3,434         | \$3,715              | \$5,320         | \$3,715         | \$5,320         | \$2,357         |
| G. Premium Cost (% of Insured) = E/M       |  | 5.3%                      | 5.1%                  | 8.8%  | 11.2%           | 5.7%            | 7.2%            | 8.8%                 | 11.0%           | 6.7%            | 8.4%            | 7.3%            |
| <b>Coverage Calculation</b>                |  |                           |                       |   |                 |                 |                 |                      |                 |                 |                 |                 |
| H. Coverage (tons/acre) = B x %            |  | 1.705                     | 1.705                 | 0.961   | 1.098           | 1.492           | 1.705           | 1.247                | 1.425           | 1.637           | 1.870           | 1.670           |
| I. Coverage (\$/ton)                       |  | \$63.50                   | \$106.14              | \$175.09  | \$175.09        | \$175.09        | \$175.09        | \$212.28             | \$212.28        | \$212.28        | \$212.28        | \$121.00        |
| J. Coverage (1,500 lb. bales/acre)         |  | 2.27                      | 2.27                  | 1.28  | 1.46            | 1.99            | 2.27            | 1.66                 | 1.90            | 2.18            | 2.49            | 2.23            |
| K. Coverage No. of 1,500 lb. Bales         |  | 364                       | 364                   | 205   | 234             | 318             | 364             | 266                  | 304             | 349             | 399             | 356             |
| L. Coverage (\$/bale)                      |  | \$47.63                   | \$79.61               | \$131.32  | \$131.32        | \$131.32        | \$131.32        | \$159.21             | \$159.21        | \$159.21        | \$159.21        | \$90.75         |
| M. Coverage (\$/acre) = H x I              |  | \$108.27                  | \$180.97              | \$168.26  | \$192.25        | \$261.23        | \$298.52        | \$264.72             | \$302.50        | \$347.50        | \$396.97        | \$202.07        |
| N. Coverage (Total \$) = A x M             |  | \$17,324                  | \$28,955              | \$26,921  | \$30,759        | \$41,797        | \$47,764        | \$42,354             | \$48,400        | \$55,601        | \$63,515        | \$32,331        |
| <b>Indemnity Calculation</b>               |  |                           |                       |   |                 |                 |                 |                      |                 |                 |                 |                 |
| O. Avg. Forage Yield (bales/acre)          |  | 1.00                      |                       | (0.75 tons/acre)  |                 |                 |                 |                      |                 |                 |                 |                 |
| P. Avg. Total No. of 1,500 lb. Bales       |  | 160                       | 160                   | 160   | 160             | 160             | 160             | 160                  | 160             | 160             | 160             | 160             |
| Q. Percent of Probable Yield               |  | 35%                       | 35%                   | 55%   | 55%             | 35%             | 35%             | 42%                  | 42%             | 32%             | 32%             | 36%             |
| R. Forage Indemnity (bales/acre) = J - O   |  | 1.27                      | 1.27                  | 0.28  | 0.46            | 0.99            | 1.27            | 0.66                 | 0.90            | 1.18            | 1.49            | 1.23            |
| S. Forage Indemnity (tons/acre) = H - O    |  | 0.955                     | 0.955                 | 0.211   | 0.348           | 0.742           | 0.955           | 0.497                | 0.675           | 0.887           | 1.120           | 0.920           |
| T. Forage Indemnity (% of coverage)        |  | 56.0%                     | 56.0%                 | 22.0%   | 31.7%           | 49.7%           | 56.0%           | 39.9%                | 47.4%           | 54.2%           | 59.9%           | 55.1%           |
| U. Est. Forage Indemnity (\$/acre) = I x S |  | \$60.65                   | \$101.36              | \$36.94   | \$60.93         | \$129.91        | \$167.21        | \$105.50             | \$143.29        | \$188.29        | \$237.76        | \$111.32        |
| V. Estimated Forage Indemnity = A x U      |  | \$9,703                   | \$16,218              | \$5,911   | \$9,749         | \$20,786        | \$26,753        | \$16,881             | \$22,926        | \$30,127        | \$38,041        | \$17,811        |
| <b>Hay Disaster Benefit Calculation</b>    |  |                           |                       |   |                 |                 |                 |                      |                 |                 |                 |                 |
| X. Significant MB hay yield loss           |  | Yes                       |                       | (more than 20% of the producers insured by AgrInsurance have less than 50% of their long-term probable yield) |                 |                 |                 |                      |                 |                 |                 |                 |
| Y. Est. HDB (\$/acre) = S x \$39.92/ton    |  | \$38.12                   | \$38.12               | \$8.42  | \$13.89         | \$29.62         | \$38.12         | \$19.84              | \$26.94         | \$35.41         | \$44.71         | n/a             |
| Z. Est. Hay Disaster Benefit = A x Y       |  | \$6,099                   | \$6,099               | \$1,348   | \$2,223         | \$4,739         | \$6,099         | \$3,174              | \$4,311         | \$5,665         | \$7,153         | n/a             |
| <b>Total Indemnity + HDB</b>               |  |                           |                       |   |                 |                 |                 |                      |                 |                 |                 |                 |
| AA. Est. Indemnity + HDB (\$/acre) = U + Y |  | \$98.77                   | \$139.48              | \$45.37   | \$74.82         | \$159.53        | \$205.33        | \$125.34             | \$170.23        | \$223.70        | \$282.46        | \$111.32        |
| AB. Est. Indemnity + HDB = V + Z           |  | \$15,802                  | \$22,317              | \$7,259   | \$11,971        | \$25,525        | \$32,852        | \$20,055             | \$27,237        | \$35,792        | \$45,194        | \$17,811        |
| <b>Breakeven Calculation</b>               |  |                           |                       |   |                 |                 |                 |                      |                 |                 |                 |                 |
| Est. Breakeven yield (tons/acre)           |  | 1.615                     | 1.618                 | 0.876   | 0.975           | 1.407           | 1.582           | 1.138                | 1.268           | 1.528           | 1.713           | 1.548           |
| Est. Breakeven yield (bales/acre)          |  | 2.154                     | 2.158                 | 1.168   | 1.301           | 1.876           | 2.110           | 1.517                | 1.691           | 2.037           | 2.284           | 2.064           |
| <b>Costs Not Covered By AgrInsurance</b>   |  |                           |                       |   |                 |                 |                 |                      |                 |                 |                 |                 |
| Operating Costs                            |  | \$80.16                   | \$7.46                | \$20.17   | \$0.00          | \$0.00          | \$0.00          | \$0.00               | \$0.00          | \$0.00          | \$0.00          | \$4.25          |
| Operating & Fixed Costs                    |  | \$209.09                  | \$136.40              | \$149.11  | \$125.12        | \$56.14         | \$18.84         | \$112.12             | \$74.34         | \$29.33         | \$0.00          | \$133.18        |
| Total Costs                                |  | \$241.49                  | \$168.80              | \$181.51  | \$157.52        | \$88.54         | \$51.24         | \$144.52             | \$106.74        | \$61.73         | \$12.27         | \$173.68        |
| <b>AgrInsurance Risk Ratio</b>             |  |                           |                       |   |                 |                 |                 |                      |                 |                 |                 |                 |
| Operating Costs                            |  | 57%                       | 96%                   | 89%   | 102%            | 139%            | 158%            | 107%                 | 122%            | 140%            | 160%            | 98%             |
| Total Costs                                |  | 31%                       | 52%                   | 48%   | 55%             | 75%             | 85%             | 65%                  | 74%             | 85%             | 97%             | 54%             |

Forage Region 6 AgrInsurance Indemnity (\$ per acre) @ 1 Bales per Acre Yield

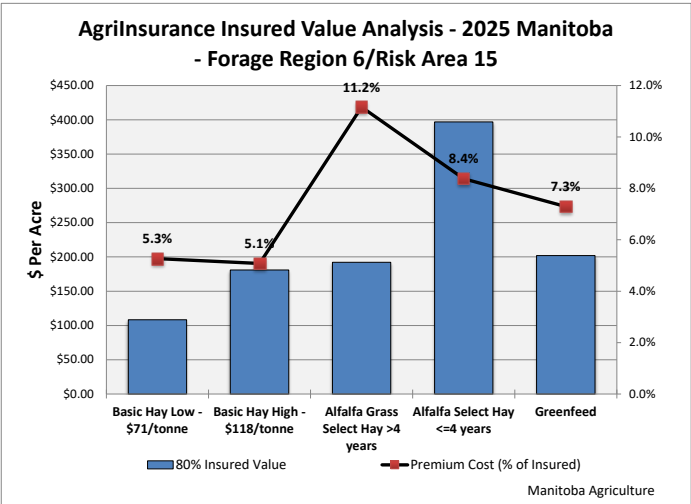


Forage Insurance Indemnity

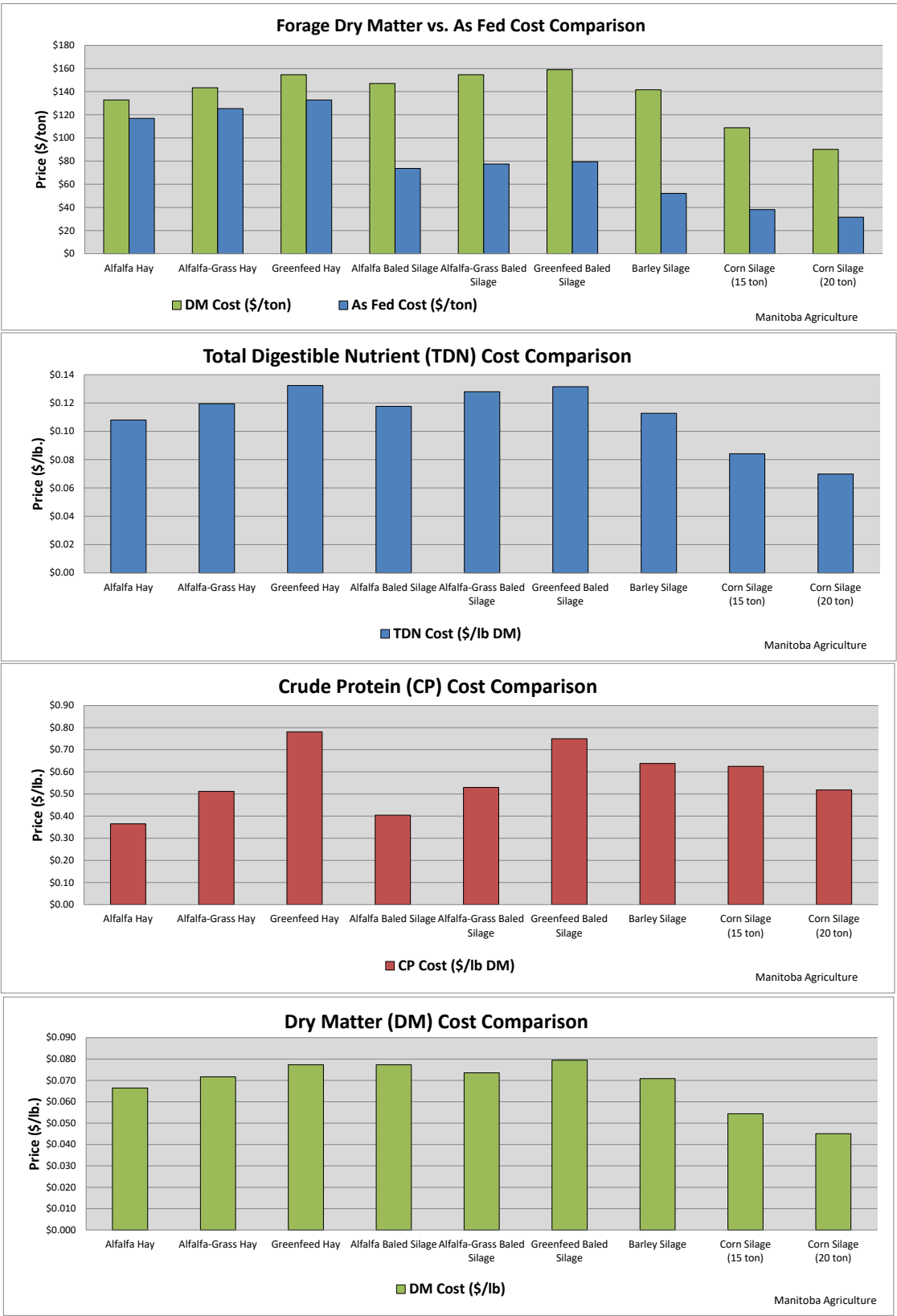


Analysis of your AgrilInsurance coverage of operating and total costs is an important step in Risk Management Planning for your farm.

Analysis of AgrilInsurance coverage and premium cost is useful in comparing cost efficiency and production cost risk. This is an important step in Risk Management Planning for your farm.







### Estimated Yield of Forage - Tons per Acre <sup>1</sup>

|  | <u>Years</u> | <u>Dry Hay</u>               |                                    |                                | <u>Wrapped Bale Silage</u>   |                                    |                                |
|--|--------------|------------------------------|------------------------------------|--------------------------------|------------------------------|------------------------------------|--------------------------------|
|  |              | <u>Alfalfa<br/>tons/acre</u> | <u>Alfalfa-Grass<br/>tons/acre</u> | <u>Greenfeed<br/>tons/acre</u> | <u>Alfalfa<br/>tons/acre</u> | <u>Alfalfa-Grass<br/>tons/acre</u> | <u>Greenfeed<br/>tons/acre</u> |
| (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           |                              |                                    |                                |                              |                                    |                                |
| <b>Total Yield (tons)</b>                  |              | 14.0                         | 19.5                               | 2.83                           | 27.6                         | 38.2                               | 5.52                           |
| <b>Average Yield (tons/acre)</b>           |              | 3.50                         | 2.79                               | 2.83                           | 6.89                         | 5.45                               | 5.52                           |
| <b>Avg. Dry Matter Yield (tons/acre)</b>   |              | 3.08                         | 2.44                               | 2.43                           | 3.45                         | 2.73                               | 2.76                           |
| <b>Bales (per acre)</b>                    |              | 4.7                          | 3.7                                | 3.8                            | 6.9                          | 5.5                                | 5.5                            |
| <b>Years production</b>                    |              | 4                            | 7                                  | 1                              | 4                            | 7                                  | 1                              |
| <b>Years rotation</b>                      |              | 5                            | 8                                  | 1                              | 5                            | 8                                  | 1                              |
| <b>AgriInsurance - Individual Coverage</b> |              | 1.00                         | 1.00                               | 1.00                           | 1.00                         | 1.00                               | 1.00                           |
|  |              | <u>Dry Hay</u>               |                                    |                                | <u>Wrapped Silage</u>        |                                    |                                |
| <b>Bale Weight (lbs.)</b>                  |              | 1,500                        |                                    |                                | 2,000                        |                                    |                                |
| <b>Estimated Storage Loss</b>              |              | 20%                          |                                    |                                | 5%                           |                                    |                                |

### Forage Analysis

|                        | <u>Dry Hay</u> |                      |                  | <u>Wrapped Bale Silage</u> |                      |                  |
|------------------------|----------------|----------------------|------------------|----------------------------|----------------------|------------------|
|                        | <u>Alfalfa</u> | <u>Alfalfa-Grass</u> | <u>Greenfeed</u> | <u>Alfalfa</u>             | <u>Alfalfa-Grass</u> | <u>Greenfeed</u> |
| 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%.

| Seed & Treatment           |                                  |                           |                          |
|----------------------------|----------------------------------|---------------------------|--------------------------|
| <u>Crop</u>                | <u>Seeding Rate<br/>per Acre</u> | <u>Price<br/>per Unit</u> | <u>Cost<br/>per Acre</u> |
| <b>Alfalfa Hay</b>         |                                  |                           |                          |
| Alfalfa hay                | 10 lb.                           | \$4.25 /lb.               | \$42.50                  |
| <b>Alfalfa-Grass Hay</b>   |                                  |                           |                          |
| Alfalfa-grass hay          | 10 lb.                           | \$3.60 /lb.               | \$36.00                  |
| Oat greenfeed (nurse crop) | 1.25 bu                          | \$10.00 /bu               | \$12.50                  |
| <b>Greenfeed Hay</b>       |                                  |                           |                          |
| Oats                       | 2.50 bu                          | \$10.00 /bu               | \$25.00                  |

| Fertilizer <sup>1</sup>   |                                |                                   |                           |                          |
|---------------------------|--------------------------------|-----------------------------------|---------------------------|--------------------------|
| <u>Fertilizer Type</u>    | <u>Bulk Price<br/>\$/tonne</u> | <u>Actual Nutrient<br/>\$/lb.</u> | <u>Nitrogen<br/>Usage</u> | <u>Sulphur<br/>Usage</u> |
| Nitrogen: (urea) 46-0-0   | \$700                          | \$0.690                           | 100%                      | -                        |
| Nitrogen: (NH3) 82-0-0    | \$1,150                        | \$0.636                           | 0%                        | -                        |
| Nitrogen: (liquid) 28-0-0 | \$475                          | \$0.770                           | 0%                        | -                        |
| Phosphorus: 11-52-0       | \$1,150                        | \$0.857                           | -                         | -                        |
| Potash: 0-0-60            | \$550                          | \$0.416                           | -                         | -                        |
| Sulphur: 20.5-0-0-24      | \$500                          | \$0.355                           | -                         | 100%                     |
| MES S15: 13-33-0-15       | \$1,000                        | \$0.540                           | -                         | 0%                       |

| Crop                       | Amount of Actual Pounds of Elements Applied Per Acre |         |            |         |        |         |         |         | Total<br>\$/acre |
|----------------------------|--|---------|------------|---------|--------|---------|---------|---------|------------------|
|                            | Nitrogen   |         | Phosphorus |         | Potash |         | Sulphur |         |                  |
|                            | lbs.   | \$/acre | lbs.       | \$/acre | lbs.   | \$/acre | lbs.    | \$/acre |                  |
| Alfalfa Hay                |  |         |            |         |        |         |         |         |                  |
| Alfalfa hay                | 0  | \$0.00  | 60         | \$60.19 | 65     | \$27.03 | 17      | \$16.06 | \$103.28         |
| Alfalfa-Grass Hay          |  |         |            |         |        |         |         |         |                  |
| Alfalfa-grass hay          | 0  | \$0.00  | 45         | \$45.14 | 52     | \$21.62 | 15      | \$14.17 | \$80.94          |
| Oat greenfeed (nurse crop) | 50   | \$18.37 | 50         | \$50.16 | 30     | \$12.47 | 15      | \$14.17 | \$95.17          |
| Greenfeed Hay              |  |         |            |         |        |         |         |         |                  |
| Oats                       | 80   | \$50.84 | 30         | \$30.09 | 0      | \$0.00  | 0       | \$0.00  | \$80.93          |

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.

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

## Operating Costs

|                            |                               |                              |                      |
|----------------------------|-------------------------------|------------------------------|----------------------|
| Interest Rate on Operating | 7.50%                         | Twine/net wrap cost per unit | \$60.00              |
| Hay machinery repair       | 3.50% (% of total investment) | Bales per unit               | 50 (\$1.20/bale)     |
| Land Taxes (\$/acre)       | \$15.00                       | Plastic Silage Wrap Cost     | \$150.00 (per roll)  |
| Fuel Cost (\$/litre)       | \$1.10                        | Bales per Roll Silage Wrap   | 35.5 (bales/roll)    |
| Labour Cost per Hour       | \$27.00                       | Silage Wrapper - Fuel Usage  | 0.26 (Litres / bale) |

|                                       | Dry Hay       |                               |                   |                                    |               | Wrapped Bale Silage |            |                   |            |               |
|---------------------------------------|---------------|-------------------------------|-------------------|------------------------------------|---------------|---------------------|------------|-------------------|------------|---------------|
|                                       | Alfalfa Hay   |                               | Alfalfa Grass Hay |                                    | Greenfeed Hay | Alfalfa Hay         |            | Alfalfa Grass Hay |            | Greenfeed Hay |
|                                       | Establishment | Production                    | Establishment     | Production                         | Production    | Establishment       | Production | Establishment     | Production | Production    |
|                                       | \$17.55       | \$11.11                       | \$14.36           | \$7.74                             | \$13.11       | \$18.67             | \$13.08    | \$15.36           | \$9.32     | \$14.69       |
| Field Fuel Cost (\$/acre)             |               |                               |                   |                                    |               |                     |            |                   |            |               |
| Crop Insurance <sup>1</sup> (\$/acre) |               | Select_Hay<br>80%<br>Coverage |                   | Basic_Hay<br>High -<br>\$118/tonne | 80% Coverage  |                     |            |                   |            |               |
|                                       | \$5.00        | \$33.25                       | \$5.00            | \$9.19                             | \$15.25       | \$5.00              | \$33.25    | \$5.00            | \$9.19     | \$15.25       |
| Other Costs (\$/acre)                 | \$2.00        | \$2.00                        | \$2.00            | \$2.00                             | \$2.00        | \$2.00              | \$2.00     | \$2.00            | \$2.00     | \$2.00        |
| Rental and Custom Work                |               |                               |                   |                                    |               |                     |            |                   |            |               |
| Seeding (\$/acre)                     | \$0.00        | -                             | \$0.00            | -                                  | \$0.00        | \$0.00              | -          | \$0.00            | -          | \$0.00        |
| Application (\$/acre)                 | \$0.00        | \$0.00                        | \$0.00            | \$0.00                             | \$0.00        | \$0.00              | \$0.00     | \$0.00            | \$0.00     | \$0.00        |
| Mower/Conditioner (\$/acre)           | \$0.00        | \$0.00                        | \$0.00            | \$0.00                             | \$0.00        | \$0.00              | \$0.00     | \$0.00            | \$0.00     | \$0.00        |
| Baling (\$/bale)                      | \$0.00        | \$0.00                        | \$0.00            | \$0.00                             | \$0.00        | \$0.00              | \$0.00     | \$0.00            | \$0.00     | \$0.00        |
| Bale Moving (\$/bale)                 | \$3.00        | \$3.00                        | \$3.00            | \$3.00                             | \$3.00        | \$3.00              | \$3.00     | \$3.00            | \$3.00     | \$3.00        |
| General (\$/acre)                     | \$0.00        | \$0.00                        | \$0.00            | \$0.00                             | \$0.00        | \$0.00              | \$0.00     | \$0.00            | \$0.00     | \$0.00        |
| Total (\$/acre)                       | \$8.00        | \$14.00                       | \$7.20            | \$11.16                            | \$11.32       | \$11.82             | \$20.67    | \$10.56           | \$16.35    | \$16.56       |
| Labour Hours per Acre                 |               |                               |                   |                                    |               |                     |            |                   |            |               |
| Hours per acre                        | 1.5           | 1.2                           | 1.5               | 1.2                                | 1.5           | 1.7                 | 1.4        | 1.7               | 1.4        | 1.7           |
| Total (\$/acre)                       | \$40.50       | \$32.40                       | \$40.50           | \$32.40                            | \$40.50       | \$45.90             | \$37.80    | \$45.90           | \$37.80    | \$45.90       |

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=2.338 tons/acre and for Alfalfa Grass Basic\_Hay coverage with LTAY 4 Years or Less Stand yield=2.131 tons/acre. Annual Insurance for Greenfeed 80% Coverage coverage in MASC (Risk Area 15) with LTAY yield=2.087 tons/acre including \$0.52/acre EMI coverage.

## Field Fuel Usage

|                            |        | Number of Field Operations |             |        |           |               |          |          |             |                  | Trucks            |
|----------------------------|--------|----------------------------|-------------|--------|-----------|---------------|----------|----------|-------------|------------------|-------------------|
|                            |        | cultivate                  | tandem disk | harrow | air drill | SP<br>sprayer | hay rake | hay bine | round baler | spin<br>spreader | 3/4 ton<br>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               |

| Fixed Costs                                    |           |         |            |                          |  |         |            |          |       |
|--|-----------|---------|------------|--------------------------|--|---------|------------|----------|-------|
| <u>Land</u>                                    |           |         |            |                          | <u>Machinery - Hay</u>                         |         |            |          |       |
| Average Land value (\$/acre)                   |           | \$3,000 |            |                          | Total Investment (\$/acre)                     |         |            | \$379.50 |       |
| Dry Hay Crop acres                             |           | 300     |            |                          | Residual Value (End of Useful Life)            |         |            | 25%      |       |
| Baled Silage Crop acres                        |           | 300     |            |                          | Useful Life (years)                            |         |            | 15       |       |
| Owned Land Equity                              |           | 85%     |            |                          | Owned Equipment Equity                         |         |            | 55%      |       |
| Land Financed (\$450 per acre)                 |           | 15%     |            |                          | Equipment Financed (\$171 per acre)            |         |            | 45%      |       |
| Land Opportunity Cost (Investment Rate)        |           | 1.50%   |            |                          | Machinery Opportunity Cost (Investment Rate)   |         |            | 1.50%    |       |
| <u>Land cost (\$/acre)</u>                     |           |         |            |                          | <u>Machinery Cost - Hay (\$/acre)</u>          |         |            |          |       |
| Finance Rate & Term                            | 6.500%    |         | 25         | Years                    | Finance Rate & Term                            | 7.000%  |            | 7        | Years |
| Principle & Interest Cost                      |           | \$36.89 |            |                          | Principle & Interest Cost                      |         |            | \$31.69  |       |
| Owned Land Opportunity Cost                    |           | \$38.25 |            |                          | Machinery Depreciation Cost                    |         |            | \$18.98  |       |
| Total Cost                                     |           | \$75.14 |            |                          | Owned Machinery Opportunity Cost               |         |            | \$3.13   |       |
|  |           |         |            |                          | Total Cost                                     |         |            | \$53.79  |       |
| <br>Machinery Lease cost (\$/acre)             |           |         |            |                          | <br><u>Machinery - Baled Silage</u>            |         |            |          |       |
|  |           | \$2.40  |            |                          | Total Investment (\$/acre)                     |         |            | \$133.33 |       |
| <br>Total Land & Machinery Debt (\$/acre)      |           |         |            |                          | Residual Value (End of Useful Life)            |         |            | 20%      |       |
|  |           | \$681   |            |                          | Useful Life (years)                            |         |            | 15       |       |
|  |           |         |            |                          | Owned Equipment Equity                         |         |            | 55%      |       |
|  |           |         |            |                          | Equipment Financed (\$60 per acre)             |         |            | 45%      |       |
|  |           |         |            |                          | Silage Storage Opp. Cost (Investment Rate)     |         |            | 1.50%    |       |
|  |           |         |            |                          | <u>Machinery Cost - Baled Silage (\$/acre)</u> |         |            |          |       |
|  |           |         |            |                          | Finance Rate & Term                            | 7.000%  |            | 7        | Years |
|  |           |         |            |                          | Principle & Interest Cost                      |         |            | \$11.13  |       |
|  |           |         |            |                          | Machinery Depreciation Cost                    |         |            | \$7.11   |       |
|  |           |         |            |                          | Owned Machinery Opportunity Cost               |         |            | \$1.10   |       |
|  |           |         |            |                          | Total Cost                                     |         |            | \$19.34  |       |
| <br>Hay Equipment Inventory and Current Values |           |         |            |                          |  |         |            |          |       |
| <u>Power &amp; Misc Equipment</u>              |           |         |            | <u>Harvest Equipment</u> |  |         |            |          |       |
|  | Market    | Forage  | Forage     |                          | Market   | Forage  | Forage     |          |       |
|  | Value     | Usage % | Allocation |                          | Value  | Usage % | Allocation |          |       |
| MFD Tractor 100HP                              | \$140,000 | 50%     | \$70,000   | Mower/Conditioner        | \$44,000                                       | 100%    | \$44,000   |          |       |
| 2WD Tractor 60HP                               | \$44,000  | 50%     | \$22,000   | Hay Rake                 | \$16,500                                       | 100%    | \$16,500   |          |       |
|  | \$0       | 0%      | \$0        | Baler                    | \$60,000                                       | 100%    | \$60,000   |          |       |
|  | \$0       | 0%      | \$0        |                          | \$0  | 0%      | \$0        |          |       |
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|  | \$0       | 0%      |            |                          |  |         |            |          |       |

\* Leased equipment costs are listed under Operating Costs on the Summary Page.



## 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: (2024 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 7.5% for six months.

### **Land Cost:**

Based on approximate average land values. Budget assumed 15% financed at 6.5% 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) = \$22,135 payments per year / 600 acres = \$36.89/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 7% 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) = \$19,013 + \$3,340 payment per year / 600 + 300 acres = \$31.69 + \$11.13/acre)

Depreciation (Useage Cost) = (Total Investment - Residual Value) / Years Useful Life (eg. (\$379.50 - (\$379.50 x 25%)) / 15 = \$18.98/acre)

Investment = (Total Investment x Owned Equity %) x Investment Rate % (eg. (\$379.50 x 55%) x 1.5%) = \$3.13/acre)

### **Estimated Farmgate Values:**

Forage prices are based on estimated prices for fall/winter 2024/25.

### **Profitability & Breakeven Analysis:**

Gross Revenue = Price per unit x Yield per acre (eg. alfalfa: \$155.00/ton x 3.5 ton/ac = \$542.50/ac)

Net Profit = Gross Revenue - Total Cost

(eg. alfalfa: \$542.50 gross revenue - \$409.24 total cost = \$133.26 per acre)

Operating Expense Ratio = (Operating Cost / Gross Revenue) x 100

(eg. alfalfa: \$247.90 operating expense / \$542.50 gross revenue = 45.7%)

Breakeven Price = Cost / Target Yield (eg. alfalfa cost \$409.24 / 3.5 ton = \$116.92 per ton)

Breakeven Yield = Cost / Price per Unit (eg. alfalfa cost \$409.24 / \$155.00 ton = 2.64 ton)

**February, 2025**

### **Contact Us**

For more information, contact a Farm Management Specialist.

- [manitoba.ca/agriculture](http://manitoba.ca/agriculture)
- [mbfarmbusiness@gov.mb.ca](mailto:mbfarmbusiness@gov.mb.ca)
- 1-844-769-6224



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## Contact us

- Go to [manitoba.ca/agriculture](http://manitoba.ca/agriculture)
- Toll free at 1-844-769-6224
- Email us at [mbfarmbusiness@gov.mb.ca](mailto:mbfarmbusiness@gov.mb.ca)
- Follow us on Twitter [@MBGovAg](https://twitter.com/MBGovAg)
- Visit your nearest ARD/MASC Service Centre