

A photograph of a vast field of blue flax flowers in bloom, stretching towards a line of trees in the distance under a bright, cloudy sky. The top of the image is partially covered by a green banner with white text, and a yellow vertical bar is on the right side of the banner.

# Crop Planning Guide

## 2022



# Crop Planning Guide 2022

Each year, the Ministry of Agriculture develops the Crop Planning Guide to help producers estimate the costs and returns of producing common crops.

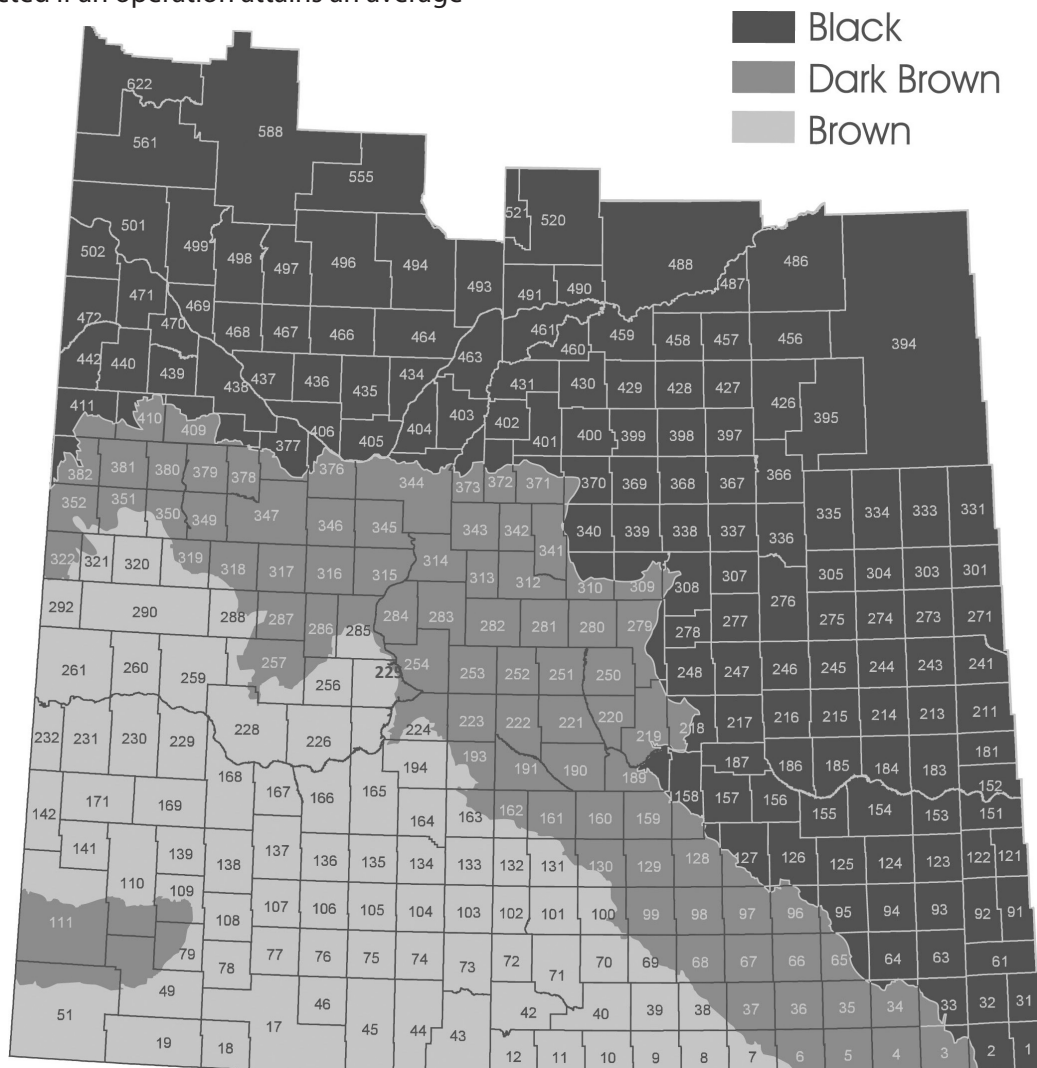
The detailed calculations in this guide are based on the inputs and returns associated with attaining a target yield in the 80th percentile for each soil zone. Actual costs and yields on each farm will differ due to the condition and type of equipment, the selection of crop protection products and other inputs, agronomic practices, soil class and weather conditions. Producers are expected to set their own target yields and costs. A downloadable spreadsheet is available on [saskatchewan.ca/crops](https://saskatchewan.ca/crops) by searching for Crop Planning Guide.

The general agronomic and economic assumptions that apply to all crops remain consistent with previous years. Each crop has its own page with agronomic information and a blank column for producers to input their own costs and revenues. This guide also includes a yield sensitivity analysis that summarizes returns that can be expected if an operation attains an average

yield, rather than the target yields used in the detailed calculations. This is intended to help producers baseline their yields and to assess any economic benefits of increasing their inputs and management efforts.

In the last year, commodity prices have fluctuated greatly. The prices used in this document represent the most recent estimates available from Agriculture and Agri-Food Canada. We recognize that price estimates used in this guide may not accurately reflect current and local prices. Similarly, crop input prices like fertilizer have been highly volatile in late 2021 and the estimated prices may change. Producers are encouraged to use the worksheets in this guide or the online calculator to input their own numbers for reference.

Ministry regional specialists are also available to provide advice about appropriate agronomic practices and cost assumptions.

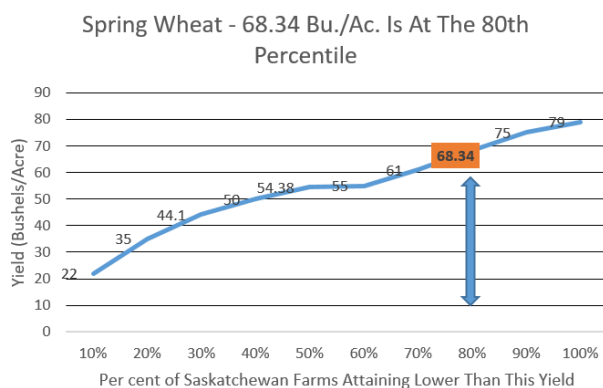


# Table of Contents

|  |          |
|--|----------|
| <b>General Assumptions for All Soil Zones.....</b> | <b>3</b> |
| <br><b>Coarse Grains</b>                           |          |
| Feed Barley.....                                   | 5        |
| Malt Barley.....                                   | 6        |
| Corn.....  | 7        |
| Fall Rye, Hybrid.....                              | 8        |
| Oats.....  | 9        |
| Durum Wheat.....                                   | 10       |
| Hard Red Spring Wheat.....                         | 11       |
| Winter Wheat.....                                  | 12       |
| <br><b>Oilseeds</b>                                |          |
| Canola.....  | 13       |
| Flax.....  | 14       |
| Brown Mustard.....                                 | 15       |
| Oriental Mustard.....                              | 16       |
| Yellow Mustard.....                                | 17       |
| Sunflower.....                                     | 18       |
| <br><b>Pulses</b>                                  |          |
| Soybean.....                                       | 19       |
| Desi Chickpea.....                                 | 20       |
| Kabuli Chickpea, Large.....                        | 21       |
| Kabuli Chickpea, Small.....                        | 22       |
| Large Green Lentils .....                          | 23       |
| Red Lentils .....                                  | 24       |
| Edible Green Peas .....                            | 25       |
| Edible Yellow Peas .....                           | 26       |
| Black Bean.....                                    | 27       |
| Faba Bean.....                                     | 28       |
| <br><b>Speciality Crops</b>                        |          |
| Camelina.....                                      | 29       |
| Canary Seed.....                                   | 30       |
| Caraway.....                                       | 31       |
| Coriander.....                                     | 32       |
| Fenugreek.....                                     | 33       |
| Quinoa.....  | 34       |

# General Assumptions for All Soil Zones

1. **Crop prices** are the average annual crop year farm gate price adopted from Agriculture and Agri-Food Canada's most recent winter farm income forecast data or from reports of local grain buyers, vetted through regional crop specialists. The farm gate price represents the actual payment received by farmers. This includes crops sold through forward contracts and at spot prices. Crop prices can shift quickly and drastically due to market conditions, making information outdated within this guide. Producers should always check current prices and adjust figures as needed.
2. **Targeted crop yields** represent the five-year average of the 80th percentile of production for each crop in each soil zone. That is, for each of the past five years the point where 80 per cent of producers would have attained a lower yield for that crop is determined (see the image below for an example). That value for each of the five years is then averaged. The calculation uses producer data submitted to Saskatchewan Crop Insurance Corporation and released each spring. These target yields reflect a higher level of management, improvements in plant genetics and enhanced nutrient and crop protection management. Producers should adjust the target yield to meet their goals and management style.



3. **Seeding rates** are determined by seed size, expected mortality, germination and desired plant population.
4. **Seed costs** are based on the use of certified seed and low-disturbance direct seeding, collected from producers and vetted through regional crop experts.
5. **Variety selection** should be made to best suit the agro-climatic conditions. More information can be found by searching for Varieties of Grain Crops at [saskatchewan.ca/crops](http://saskatchewan.ca/crops).
6. **Fertilizer** needs are highly variable and must be adjusted to meet conditions. The calculations in this guide are based on most-recent prices from a selection of dealers throughout the province and the estimated amount of nutrients removed from the soil in order for the crop to attain the target yield. These are not recommended application rates for specific operations. The ministry encourages producers to soil test on a consistent basis in order to measure soil fertility and calculate the total crop

nutrient application required to achieve targeted crop yields. This is consistent with 4R Nutrient Stewardship management practices. For pulse crops, producers should focus on applying the correct inoculant. It is recommended to follow the guidelines for safe rates of fertilizer application with the seed when determining the right rate of phosphorous. Producers are reminded to adjust both the volume of nutrients applied and the price of each nutrient.

7. **Crop protection** efforts must be adjusted to meet each producer's conditions. The assumptions in this guide cover common applications to demonstrate potential costs. These are not recommended crop protection applications for specific operations. Producers must cost their individual responses to weed, insect and disease pressures. Please refer to the Guide to Crop Protection available at [saskatchewan.ca/crops](http://saskatchewan.ca/crops).

The costs of crop protection products are calculated using the full registered rate of application and suggested retail prices from a selection of dealers across the province. Prices can vary significantly by vendor. Refer to the Guide to Crop Protection for registered pest control products.

**Insect and disease control** efforts will be aided by extended crop rotations, which reduce yield losses due to disease. Extended crop rotations also help ensure that management tools, such as resistant varieties and fungicides, remain effective by reducing selection pressure on the pathogen population. This guide assumes that commonly-encountered insects or crop diseases are controlled through the use of the appropriate product given the crop and insect or disease combinations.

**Weed control** efforts presented reflect the practice of herbicide layering as much as possible. Herbicide layering helps prevent and manage herbicide-resistant weed populations. Layering may involve the use of two or more modes of action for control of some weeds. The timing and number of applications used to estimate herbicide costs are indicated in a chart on each crop's specific page. Below are the descriptions to the applications in the chart:

- **Pre-Harvest:** Pre-harvest glyphosate treatment to the previous crop. The benefit of perennial weed control from this application accrues to the crop that is planted after the application.
- **Post-harvest fall application:** Typically for winter annual weeds. The benefit of this application will also accrue to the crop that is planted after the application.
- **Pre-Seed:** Pre-seed burn off that replaces tillage in a low-disturbance direct seeding system. There are two windows of application presented in the chart which represent one or two herbicides used at the pre-seed timing where the primary activity is on emerged weeds. Soil-active herbicides that may be mixed with the burn off applications are treated separately below. Typically, the

first application will be glyphosate. When glyphosate is applied alone, it is assumed that this is done at 360 grams of acid equivalent (active) per acre. If a second application is indicated, this will be a tank mix partnered with glyphosate for burn off purposes and has limited residual impact, if any. In a tank mix, the rate of glyphosate is assumed to be 180 grams acid equivalent (active) per acre.

- **Soil Application:** Soil-active herbicide that provides residual soil activity for control of emerging weeds beyond emergence and into the crop growth period. These are typically added for herbicide resistance management but also to contribute to increased crop yields by eliminating early weeds. Rates of some soil-active herbicides are adjusted for typical organic matter levels in the different soil zones.
  - **In-Crop:** In-crop foliar application opportunities are provided for up to three herbicides. These are applied either in a mix or as separate sequential applications where tank mixing is not compatible. There are three windows of application allotted as indicated by each column in the chart.
  - **Desiccation:** Harvest aid application prior to harvest. This is done for the purpose of rapid dry down of the crop to facilitate timely harvest. This does not include glyphosate, which may be included as a mix with some harvest aid options.
8. **Machinery operating** costs include fuel usage and repair. Fuel costs are based on estimated fuel consumptions for the various farming operations with diesel fuel priced at \$0.901/litre. Machinery repair rates are based on the ministry's 2020-21 Custom Rate and Rental Guide and are set at 2.6 per cent of the yearly machinery investment cost.
  9. **Custom work and hired labour** is made up of costs for custom farm operations, such as custom trucking and custom spraying. Skilled labour is assumed to be \$26.40 per hour for 2022.
  10. **Crop insurance premiums** are the five-year average of the premiums paid by producers who attain the targeted yield for the soil zone. The premiums used in this guide do not reflect actual producers' costs given surcharges and taxes.
  11. **Hail insurance premiums** are based on average coverage per acre of \$350 multiplied by rate of 3.5% = \$12.25/acre.
  12. **Utilities** include the costs of electricity, natural gas, water and telephone expenses based on the standard farm business rates of major utility providers.
  13. **Interest on variable expenses** is calculated using a rate of 3.01 per cent on all variable expenses. The interest is applied for eight months for all crops except hybrid fall rye and winter wheat. For these two crops, the interest costs

are calculated for 18 months.

14. **Building repair** rates are 2.4 per cent of building investment per acre.
15. **Business overhead** is made up of legal, accounting, insurance, licenses and miscellaneous. Business overhead costs are indexed by applying the farm input price index to Statistics Canada's 2016 Census of Agriculture.
16. **Machinery investment** is calculated by applying an interest rate to 75 per cent of machinery investment and an opportunity cost to the remaining 25 per cent that would have been provided as a down payment on machinery. This is a new approach to calculating these costs and is consistent with the Ministry of Agriculture's Custom Rate and Rental Guide assumptions. An interest rate at 5 per cent and an opportunity cost rate of 1.5 per cent are utilized. These calculations are applied to the average investment in machinery by soil zone. Based on Statistics Canada data, it is estimated that a brown soil zone farm has \$340.30 per cultivated acre invested in machinery, a dark brown soil zone farm has \$383.75 per cultivated acre invested and a black soil zone farm has \$434.32 invested per cultivated acre. Machinery costs are substantial and these are average rates per soil zone. Producers are reminded to adjust these figures to meet their unique circumstances.
17. **Machinery depreciation** is calculated using a straight-line formula at 10.7 per cent annual depreciation rate.
18. **Building investment** cost is calculated at a 1.63 per cent interest of annual building investment. Based on data provided by Statistics Canada, it is estimated that a brown soil zone farm has \$22 per cultivated acre invested in buildings, a dark brown soil zone farm has \$29 per cultivated acre invested and a black soil zone farm has \$40 per cultivated acre invested.
19. **Building depreciation** is calculated at five per cent per year on a straight-line basis of building investment.
20. **Land investment** cost is calculated at a 1.63 per cent interest return on investment of \$2,070 per cultivated acre in the brown soil zone, \$2,380.50 per cultivated acre in the dark brown soil zone and \$2,225.25 per cultivated acre in the black soil zone. This year's calculations show lower costs for land investment because borrowing conditions have become more favourable. Producers should adjust this figure to reflect payments they make towards land. This is where any land rental rates should be accounted for.
21. **Labour and management** refers to owner/operator labour and management and is not included in these estimates.

# 2022 Feed Barley

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 69.4   | 78.5       | 90.0   |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 5.50   | 5.50       | 5.50   |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 381.70 | 431.75     | 495.00 |

### Expenses Per Acre

#### Variable Expenses/Acre

|   |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 25.52         | 28.13         | 31.90         |
| - Seed Treatments/Inoculants                  |  | 0.68          | 0.75          | 0.85          |
| Fertilizer - Nitrogen                         |  | 98.54         | 110.52        | 127.83        |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 27.28         | 30.69         | 35.81         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 23.93         | 23.93         | 23.93         |
| - Insecticides                                |  | 21.89         | 21.89         | 21.89         |
| - Fungicides                                  |  | 0.00          | 0.00          | 19.35         |
| Machinery Operating - Fuel                    |  | 12.25         | 15.31         | 19.14         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 20.80         | 21.05         | 21.05         |
| Crop Insurance Premium                        |  | 8.06          | 6.46          | 5.76          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 5.28          | 5.72          | 6.74          |
| <b>Total Variable Expenses (D)</b>            |  | <b>268.56</b> | <b>290.92</b> | <b>342.68</b> |

#### Other Expenses/Acre

|                                 |  |              |               |               |
|---------------------------------|--|--------------|---------------|---------------|
| Building Repair                 |  | 0.52         | 0.69          | 0.95          |
| Property Taxes                  |  | 4.24         | 5.55          | 8.42          |
| Business Overhead               |  | 2.09         | 3.19          | 3.74          |
| Machinery Depreciation          |  | 36.41        | 41.06         | 46.47         |
| Building Depreciation           |  | 1.10         | 1.45          | 2.00          |
| Machinery Investment            |  | 14.04        | 15.83         | 17.92         |
| Building Investment             |  | 0.36         | 0.48          | 0.66          |
| Land Investment                 |  | 34.16        | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> | <b>107.53</b> | <b>116.87</b> |

Labour and Management\* (F)

|                                   |  |               |               |               |
|-----------------------------------|--|---------------|---------------|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>361.48</b> | <b>398.45</b> | <b>459.55</b> |
|-----------------------------------|--|---------------|---------------|---------------|

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 113.14 | 140.83 | 152.32 |
| Return Over Total Expenses (C-G)    |  | 20.22  | 33.30  | 35.45  |

#### Break Even Yield (bu./ac.)

|                            |  |       |       |       |
|----------------------------|--|-------|-------|-------|
| To Cover Variable Expenses |  | 48.83 | 52.89 | 62.31 |
| To Cover Total Expenses    |  | 65.72 | 72.44 | 83.55 |

#### Break Even Price (\$/bu.)

|                            |  |      |      |      |
|----------------------------|--|------|------|------|
| To Cover Variable Expenses |  | 3.87 | 3.71 | 3.81 |
| To Cover Total Expenses    |  | 5.21 | 5.08 | 5.11 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |        |        |
|------------------------------------|--|--------|--------|--------|
| Provincial Average Yield (bu./ac.) |  | 52.82  | 65.58  | 77.16  |
| Return Over Variable Expenses      |  | 21.95  | 69.77  | 81.70  |
| Return Over Total Expenses         |  | -70.97 | -37.76 | -35.17 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** Seeding rates are based on a target plant stand in plants per square foot. This guide assumes a producer will seed to achieve 25 plants per square foot in the black soil zone, 22 in the dark brown soil zone and 20 in the brown soil zone, with a thousand kernel weight of 45 grams and 85 per cent emergence.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 96 lb./ac. N and 42 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, 83 lb./ac. N and 36 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and 74 lb./ac. N and 32 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Diverse crop rotations are recommended to help reduce disease pressure and suppress weeds to manage herbicide resistance. Barley is a very competitive crop that will suppress growth of weeds. Feed barley markets may be more tolerant of weed escapes than malt barley.

### Crop Protection

**Insect control:** Cutworms, aphids, thrips, mites, grasshoppers, armyworm, slugs and wireworms might require control. Seed treatments are available for wireworm control.

**Disease control:** Cereal crops can be affected by both leaf diseases and fusarium head blight (FHB). When disease pressure is moderate, a single application at FHB timing can be effective in managing both types of diseases. This estimation includes the cost of a single fungicide application in the black soil zone. When disease pressure is high, an additional fungicide application for leaf diseases may be required. Fungicide applications should be made based on field history and disease risk during the growing season.

**Weed control:** Because barley is competitive, growers can often reduce the number of herbicide applications from those listed. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
|                                |              | ✓        | ✓ |      | ✓       | ✓ |   |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.



# 2022 Malt Barley

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 56.8   | 64.3       | 73.7   |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 6.11   | 6.11       | 6.11   |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 347.05 | 393.00     | 450.49 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 32.61         | 35.69         | 40.61         |
| - Seed Treatments/Inoculants                  |  | 0.82          | 0.90          | 1.02          |
| Fertilizer - Nitrogen                         |  | 79.89         | 90.55         | 103.86        |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 22.17         | 25.58         | 28.99         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 59.45         | 59.45         | 63.78         |
| - Insecticides                                |  | 21.89         | 21.89         | 21.89         |
| - Fungicides                                  |  | 19.35         | 19.35         | 19.35         |
| Machinery Operating - Fuel                    |  | 12.25         | 15.31         | 19.14         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 20.80         | 21.05         | 21.05         |
| Crop Insurance Premium                        |  | 6.61          | 5.29          | 4.68          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 6.02          | 6.45          | 7.08          |
| <b>Total Variable Expenses (D)</b>            |  | <b>306.19</b> | <b>327.97</b> | <b>359.88</b> |

### Other Expenses/Acre

|                                 |  |              |               |               |
|---------------------------------|--|--------------|---------------|---------------|
| Building Repair                 |  | 0.52         | 0.69          | 0.95          |
| Property Taxes                  |  | 4.24         | 5.55          | 8.42          |
| Business Overhead               |  | 2.09         | 3.19          | 3.74          |
| Machinery Depreciation          |  | 36.41        | 41.06         | 46.47         |
| Building Depreciation           |  | 1.10         | 1.45          | 2.00          |
| Machinery Investment            |  | 14.04        | 15.83         | 17.92         |
| Building Investment             |  | 0.36         | 0.48          | 0.66          |
| Land Investment                 |  | 34.16        | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> | <b>107.53</b> | <b>116.87</b> |

Labour and Management\* (F)

|                                   |  |               |               |               |
|-----------------------------------|--|---------------|---------------|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>399.11</b> | <b>435.49</b> | <b>476.75</b> |
|-----------------------------------|--|---------------|---------------|---------------|

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 40.86  | 65.03  | 90.61  |
| Return Over Total Expenses (C-G)    |  | -52.06 | -42.49 | -26.26 |

### Break Even Yield (bu./ac.)

|                            |  |       |       |       |
|----------------------------|--|-------|-------|-------|
| To Cover Variable Expenses |  | 50.11 | 53.68 | 58.90 |
| To Cover Total Expenses    |  | 65.32 | 71.28 | 78.03 |

### Break Even Price (\$/bu.)

|                            |  |      |      |      |
|----------------------------|--|------|------|------|
| To Cover Variable Expenses |  | 5.39 | 5.10 | 4.88 |
| To Cover Total Expenses    |  | 7.03 | 6.77 | 6.47 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |         |         |        |
|------------------------------------|--|---------|---------|--------|
| Provincial Average Yield (bu./ac.) |  | 43.26   | 53.79   | 67.52  |
| Return Over Variable Expenses      |  | -41.87  | 0.69    | 52.67  |
| Return Over Total Expenses         |  | -134.79 | -106.83 | -64.20 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** Seeding rates are based on a target plant stand in plants per square foot. This guide assumes a producer will seed to achieve 25 plants per square foot in the black soil zone, 22 in the dark brown soil zone and 20 brown soil zone, with a thousand kernel weight of 45 grams and 85 per cent emergence.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 83 lb./ac. N and 36 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, 74 lb./ac. N and 32 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and 68 lb./ac. N and 30 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Diverse crop rotations are recommended to help reduce disease pressure and suppress weeds to manage herbicide resistance. Barley is a very competitive crop that will suppress growth of weeds.

### Crop Protection

**Insect control:** Cutworms, aphids, thrips, mites, grasshoppers, armyworm, slugs and wireworms might require control. Seed treatments are available for wireworm control.

**Disease control:** Cereal crops can be affected by both leaf diseases and fusarium head blight (FHB). When disease pressure is moderate, a single application at FHB timing can be effective in managing both types of diseases. This estimation includes the cost of a single fungicide application. When disease pressure is high, an additional fungicide application for leaf diseases may be required. Fungicide applications should be made based on field history and disease risk during the growing season.

**Weed control:** Because barley is competitive, growers can often reduce the number of herbicide applications from those listed. A soil-applied herbicide was used to manage Group 1 resistant wild oats. Refer to the Guide to Crop Protection available at [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for more information about Group 1 resistance. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       |   |   |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Corn

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 65.0   | 71.7       | 94.5   |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 5.61   | 5.61       | 5.61   |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 364.43 | 401.96     | 530.03 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 96.00         | 96.00         | 96.00         |
| - Seed Treatments/Inoculants                  |  | 24.30         | 24.30         | 24.30         |
| Fertilizer - Nitrogen                         |  | 93.21         | 102.53        | 134.49        |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 26.43         | 28.99         | 38.37         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 53.22         | 42.22         | 53.22         |
| - Insecticides                                |  | 20.96         | 20.96         | 20.96         |
| - Fungicides                                  |  | 0.00          | 0.00          | 0.00          |
| Machinery Operating - Fuel                    |  | 13.69         | 17.12         | 21.39         |
| - Repair                                      |  | 11.46         | 12.59         | 13.90         |
| Custom Work and Hired Labour                  |  | 49.04         | 45.48         | 58.26         |
| Crop Insurance Premium                        |  | 7.31          | 8.58          | 8.60          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 8.25          | 8.33          | 9.77          |
| <b>Total Variable Expenses (D)</b>            |  | <b>419.35</b> | <b>423.57</b> | <b>496.40</b> |

### Other Expenses/Acre

|                                 |  |               |               |               |
|---------------------------------|--|---------------|---------------|---------------|
| Building Repair                 |  | 0.52          | 0.69          | 0.95          |
| Property Taxes                  |  | 4.24          | 5.55          | 8.42          |
| Business Overhead               |  | 2.09          | 3.19          | 3.74          |
| Machinery Depreciation          |  | 47.16         | 51.81         | 57.22         |
| Building Depreciation           |  | 1.10          | 1.45          | 2.00          |
| Machinery Investment            |  | 18.18         | 19.97         | 22.06         |
| Building Investment             |  | 0.36          | 0.48          | 0.66          |
| Land Investment                 |  | 34.16         | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b> |  | <b>107.81</b> | <b>122.41</b> | <b>131.76</b> |

Labour and Management\* (F)

|                                   |  |               |               |               |
|-----------------------------------|--|---------------|---------------|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>527.16</b> | <b>545.99</b> | <b>628.16</b> |
|-----------------------------------|--|---------------|---------------|---------------|

### Return Per Acre

|                                     |  |         |         |        |
|-------------------------------------|--|---------|---------|--------|
| Return Over Variable Expenses (C-D) |  | -54.92  | -21.61  | 33.63  |
| Return Over Total Expenses (C-G)    |  | -162.73 | -144.03 | -98.13 |

### Break Even Yield (bu./ac.)

|                            |  |       |       |        |
|----------------------------|--|-------|-------|--------|
| To Cover Variable Expenses |  | 74.75 | 75.50 | 88.49  |
| To Cover Total Expenses    |  | 93.97 | 97.32 | 111.97 |

### Break Even Price(\$/bu.)

|                            |  |      |      |      |
|----------------------------|--|------|------|------|
| To Cover Variable Expenses |  | 6.46 | 5.91 | 5.25 |
| To Cover Total Expenses    |  | 8.12 | 7.62 | 6.65 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |         |         |         |
|------------------------------------|--|---------|---------|---------|
| Provincial Average Yield (bu./ac.) |  | 51.57   | 62.99   | 82.67   |
| Return Over Variable Expenses      |  | -130.04 | -70.20  | -32.62  |
| Return Over Total Expenses         |  | -237.85 | -192.62 | -164.38 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Variety Selection:** Corn varieties are not listed in the Varieties of Grain Crops found on [saskatchewan.ca/crops](http://saskatchewan.ca/crops). Please contact your retailer for more information.

**Seeding:** A plant population of 30,000 plants/ac. is used for all three soil zones.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 101 lb./ac. N and 45 lb./ac. P<sub>2</sub>O<sub>5</sub> for black soil zone and 77 lb./ac. N and 34 lb./ac. P<sub>2</sub>O<sub>5</sub> in dark brown soil zone and 70 lb./ac. N and 31 lb./ac. P<sub>2</sub>O<sub>5</sub> in brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Extended crop rotations can be used to reduce disease pressure by allowing infected residue to decompose between host crops. This is particularly important for residue-borne diseases caused by bacteria, such as Goss's Wilt, as fungicides will not protect against this disease. Corn is not competitive with weeds. Some herbicide choices in corn can significantly restrict cropping options the following year.

### Crop Protection

**Insect control:** Cutworms, wireworms, seedcorn maggot, corn rootworm, aphids, spider mite, grasshoppers, European corn borer, corn earworm and armyworms might require control. Seed treatments are available for wireworm and seedcorn maggot control. Varieties resistant to European corn borer, corn earworm, and corn rootworm are available.

**Disease control:** The cost of fungicide is not included in this estimate. Disease risk assessment is encouraged to guide fungicide application decisions.

**Weed control:** Corn must be kept free of weeds until 10 leaf tips are visible to prevent significant yield loss. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
|                                |              | ✓        | ✓ | ✓    | ✓       | ✓ |   |             |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.



# 2022 Hybrid Fall Rye

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 41.3   | 57.5       | 65.4   |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 5.99   | 5.99       | 5.99   |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 247.63 | 344.31     | 391.45 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 50.72         | 50.72         | 50.72         |
| - Seed Treatments/Inoculants                  |  | 0.00          | 0.00          | 0.00          |
| Fertilizer - Nitrogen                         |  | 63.92         | 89.22         | 101.20        |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 17.05         | 23.87         | 27.28         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 28.02         | 28.02         | 28.02         |
| - Insecticides                                |  | 9.49          | 9.49          | 9.49          |
| - Fungicides                                  |  | 0.00          | 0.00          | 0.00          |
| Machinery Operating - Fuel                    |  | 12.25         | 15.31         | 19.14         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 20.80         | 20.80         | 21.05         |
| Crop Insurance Premium                        |  | 7.77          | 7.05          | 5.89          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 10.58         | 12.23         | 13.15         |
| <b>Total Variable Expenses (D)</b>            |  | <b>244.92</b> | <b>283.17</b> | <b>304.37</b> |

### Other Expenses/Acre

|                                 |  |              |               |               |
|---------------------------------|--|--------------|---------------|---------------|
| Building Repair                 |  | 0.52         | 0.69          | 0.95          |
| Property Taxes                  |  | 4.24         | 5.55          | 8.42          |
| Business Overhead               |  | 2.09         | 3.19          | 3.74          |
| Machinery Depreciation          |  | 36.41        | 41.06         | 46.47         |
| Building Depreciation           |  | 1.10         | 1.45          | 2.00          |
| Machinery Investment            |  | 14.04        | 15.83         | 17.92         |
| Building Investment             |  | 0.36         | 0.48          | 0.66          |
| Land Investment                 |  | 34.16        | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> | <b>107.53</b> | <b>116.87</b> |

Labour and Management\* (F)

|                                   |  |               |               |               |
|-----------------------------------|--|---------------|---------------|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>337.85</b> | <b>390.70</b> | <b>421.24</b> |
|-----------------------------------|--|---------------|---------------|---------------|

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 2.71   | 61.14  | 87.08  |
| Return Over Total Expenses (C-G)    |  | -90.22 | -46.39 | -29.79 |

### Break Even Yield (bu./ac.)

|                            |  |       |       |       |
|----------------------------|--|-------|-------|-------|
| To Cover Variable Expenses |  | 40.89 | 47.27 | 50.81 |
| To Cover Total Expenses    |  | 56.40 | 65.23 | 70.32 |

### Break Even Price (\$/bu.)

|                            |  |      |      |      |
|----------------------------|--|------|------|------|
| To Cover Variable Expenses |  | 5.92 | 4.93 | 4.66 |
| To Cover Total Expenses    |  | 8.17 | 6.80 | 6.45 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |         |         |         |
|------------------------------------|--|---------|---------|---------|
| Provincial Average Yield (bu./ac.) |  | 32.68   | 44.09   | 52.36   |
| Return Over Variable Expenses      |  | -49.17  | -19.07  | 9.27    |
| Return Over Total Expenses         |  | -142.10 | -126.60 | -107.60 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](https://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** Certified seed is needed every year for hybrids. A seeding rate of 0.8 units/ac. is used for all soil zones. One unit is equal to one million viable seeds.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 76 lb./ac N and 32 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, 67 lb./ac. N and 28 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and 48 lb./ac. N and 20 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Diverse crop rotations are recommended to help reduce disease pressure and suppress weeds to manage herbicide resistance. Fall rye is a very competitive crop that will suppress growth of spring germinating weeds.

### Crop Protection

**Insect control:** Cutworms, aphids, thrips, mites, grasshoppers, armyworm, slugs and wireworms might require control. Seed treatments are available for wireworm control.

**Disease control:** The cost of fungicide is not included in this estimate. A disease risk assessment is encouraged to guide fungicide application decisions.

**Weed control:** Rye has very few herbicide options. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
|                                |              | ✓        | ✓ |      | ✓       | ✓ |   |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Oats

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 63.6   | 90.1       | 132.9  |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 6.00   | 6.00       | 6.00   |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 381.30 | 540.78     | 797.58 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 50.35         | 50.35         | 50.35         |
| - Seed Treatments/Inoculants                  |  | 1.04          | 1.04          | 1.04          |
| Fertilizer - Nitrogen                         |  | 57.26         | 81.23         | 119.84        |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 15.35         | 21.32         | 31.55         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 24.78         | 24.78         | 24.78         |
| - Insecticides                                |  | 21.89         | 21.89         | 21.89         |
| - Fungicides                                  |  | 0.00          | 0.00          | 19.35         |
| Machinery Operating - Fuel                    |  | 12.25         | 15.31         | 19.14         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 20.80         | 21.05         | 21.05         |
| Crop Insurance Premium                        |  | 7.35          | 8.56          | 8.11          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 4.72          | 5.46          | 6.93          |
| <b>Total Variable Expenses (D)</b>            |  | <b>240.11</b> | <b>277.45</b> | <b>352.46</b> |

### Other Expenses/Acre

|                                   |  |               |               |               |
|-----------------------------------|--|---------------|---------------|---------------|
| Building Repair                   |  | 0.52          | 0.69          | 0.95          |
| Property Taxes                    |  | 4.24          | 5.55          | 8.42          |
| Business Overhead                 |  | 2.09          | 3.19          | 3.74          |
| Machinery Depreciation            |  | 36.41         | 41.06         | 46.47         |
| Building Depreciation             |  | 1.10          | 1.45          | 2.00          |
| Machinery Investment              |  | 14.04         | 15.83         | 17.92         |
| Building Investment               |  | 0.36          | 0.48          | 0.66          |
| Land Investment                   |  | 34.16         | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b>   |  | <b>92.92</b>  | <b>107.53</b> | <b>116.87</b> |
| Labour and Management* (F)        |  |               |               |               |
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>333.04</b> | <b>384.98</b> | <b>469.33</b> |

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 141.19 | 263.33 | 445.12 |
| Return Over Total Expenses (C-G)    |  | 48.26  | 155.80 | 328.25 |
| <b>Break Even Yield (bu./ac.)</b>   |  |        |        |        |
| To Cover Variable Expenses          |  | 40.02  | 46.24  | 58.74  |
| To Cover Total Expenses             |  | 55.51  | 64.16  | 78.22  |

### Break Even Price (\$/bu.)

|                            |  |      |      |      |
|----------------------------|--|------|------|------|
| To Cover Variable Expenses |  | 3.78 | 3.08 | 2.65 |
| To Cover Total Expenses    |  | 5.24 | 4.27 | 3.53 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |        |        |
|------------------------------------|--|--------|--------|--------|
| Provincial Average Yield (bu./ac.) |  | 43.44  | 68.08  | 106.99 |
| Return Over Variable Expenses      |  | 20.53  | 131.03 | 289.48 |
| Return Over Total Expenses         |  | -72.40 | 23.50  | 172.61 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](https://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** A seed rate of 135 lb./ac. is used in all soil zones.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 90 lb./ac. N and 37 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, 61 lb./ac. N and 25 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and 43 lb./ac. N and 18 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Diverse crop rotations are recommended to help reduce disease pressure as well as suppress weeds to manage herbicide resistance. Oat is a very competitive crop that will suppress growth of spring germinating weeds. Wild oats cannot be controlled in tame oats with herbicides.

### Crop Protection

**Insect control:** Cutworms, aphids, thrips, mites, grasshoppers, armyworm, slugs and wireworms might require control. Seed treatments are available for wireworm control.

**Disease control:** Leaf diseases may result in yield losses in oat crops. Fungicide application can be used to protect leaf tissue from disease infection. This estimation includes the cost of a single fungicide application in the black soil zone. Fungicide application should be based on disease pressure in the field.

**Weed control:** Because oats are very competitive, growers can often reduce the number of herbicide applications from those listed. Some buyers of milling oats do not allow the use of pre-harvest glyphosate in their contracts. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
|                                | ✓            | ✓        | ✓ |      | ✓       |   |   |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Durum Wheat

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown |
|--|---------|--------|------------|
| Target Yield (bu./ac.) (A)                 |         | 48.9   | 57.7       |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 12.50  | 12.50      |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 610.88 | 721.13     |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |
|---|--|---------------|---------------|
| Seed  |  | 44.80         | 49.49         |
| - Seed Treatments/Inoculants                  |  | 0.81          | 0.90          |
| Fertilizer - Nitrogen                         |  | 107.86        | 126.50        |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 27.28         | 31.55         |
| - Sulphur and Other                           |  | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 16.74         | 16.74         |
| - Insecticides                                |  | 21.89         | 21.89         |
| - Fungicides                                  |  | 19.35         | 19.35         |
| Machinery Operating - Fuel                    |  | 12.25         | 15.31         |
| - Repair                                      |  | 8.85          | 9.98          |
| Custom Work and Hired Labour                  |  | 22.30         | 22.05         |
| Crop Insurance Premium                        |  | 7.01          | 8.64          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          |
| Interest on Variable Expenses                 |  | 6.11          | 6.80          |
| <b>Total Variable Expenses (D)</b>            |  | <b>310.73</b> | <b>345.68</b> |

### Other Expenses/Acre

|                                 |  |              |               |
|---------------------------------|--|--------------|---------------|
| Building Repair                 |  | 0.52         | 0.69          |
| Property Taxes                  |  | 4.24         | 5.55          |
| Business Overhead               |  | 2.09         | 3.19          |
| Machinery Depreciation          |  | 36.41        | 41.06         |
| Building Depreciation           |  | 1.10         | 1.45          |
| Machinery Investment            |  | 14.04        | 15.83         |
| Building Investment             |  | 0.36         | 0.48          |
| Land Investment                 |  | 34.16        | 39.28         |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> | <b>107.53</b> |

Labour and Management\* (F)

|                                   |  |               |               |
|-----------------------------------|--|---------------|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>403.65</b> | <b>453.21</b> |
|-----------------------------------|--|---------------|---------------|

### Return Per Acre

|                                     |  |        |        |
|-------------------------------------|--|--------|--------|
| Return Over Variable Expenses (C-D) |  | 300.15 | 375.45 |
| Return Over Total Expenses (C-G)    |  | 207.23 | 267.92 |
| <b>Break Even Yield (bu./ac.)</b>   |  |        |        |
| To Cover Variable Expenses          |  | 24.86  | 27.65  |
| To Cover Total Expenses             |  | 32.29  | 36.26  |

### Break Even Price(\$/bu.)

|                            |  |      |      |
|----------------------------|--|------|------|
| To Cover Variable Expenses |  | 6.36 | 5.99 |
| To Cover Total Expenses    |  | 8.26 | 7.86 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |        |
|------------------------------------|--|--------|--------|
| Provincial Average Yield (bu./ac.) |  | 38.95  | 47.77  |
| Return Over Variable Expenses      |  | 176.15 | 251.45 |
| Return Over Total Expenses         |  | 83.23  | 143.92 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](https://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** Seeding rates are based on a target plant stand in plants per square foot. This guide assumes a producer will seed to achieve 22 plants per square foot in dark brown soil zone and 20 in the brown soil zone, with a thousand kernel weight of 42.1 grams and 85 per cent emergence. Durum is recommended in the brown and dark brown soil zones.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 102 lb./ac. N and 40 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and 89 lb./ac. N and 35 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Diverse crop rotations are recommended to help reduce disease pressure and suppress weed growth. Like all cereals, durum is relatively competitive crop against weeds.

### Crop Protection

**Insect control:** Wheat midge, cutworms, aphids, thrips, mite, grasshoppers, armyworms, slugs, wheat stem sawfly and wireworms might require control. Varietal blends with resistance are available if heavy wheat midge pressures are anticipated. Wheat stem sawfly-resistant varieties are available. Seed treatments are available for wireworm control. An insecticide application to control wheat midge is assumed, but in practice should be made based on scouting to determine economic risk. No insecticide applications for wheat midge would be required for midge tolerant varieties.

**Disease control:** Cereal crops can be affected by both leaf diseases and fusarium head blight (FHB). When disease pressure is moderate, a single application at FHB timing can be effective in managing both types of diseases. This estimation includes the cost of a single fungicide application. When disease pressure is high an additional fungicide application for leaf diseases might be required. Fungicide applications should be made based on field history and disease risk during the growing season.

**Weed control:** Durum lacks many options for soil-applied herbicides for herbicide-layering programs. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
|                                |              | ✓        | ✓ |      | ✓       | ✓ |   |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.



# 2022 Hard Red Spring Wheat

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 48.1   | 57.3       | 64.3   |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 10.56  | 10.56      | 10.56  |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 508.25 | 605.30     | 679.01 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 24.37         | 26.92         | 30.60         |
| - Seed Treatments/Inoculants                  |  | 0.67          | 0.74          | 0.84          |
| Fertilizer - Nitrogen                         |  | 105.19        | 126.50        | 141.15        |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 26.43         | 31.55         | 35.81         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 56.43         | 59.95         | 63.33         |
| - Insecticides                                |  | 21.89         | 21.89         | 21.89         |
| - Fungicides                                  |  | 19.35         | 19.35         | 19.35         |
| Machinery Operating - Fuel                    |  | 12.25         | 15.31         | 19.14         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 22.30         | 22.05         | 23.05         |
| Crop Insurance Premium                        |  | 5.05          | 4.59          | 4.78          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 6.39          | 7.13          | 7.79          |
| <b>Total Variable Expenses (D)</b>            |  | <b>324.64</b> | <b>362.43</b> | <b>396.15</b> |

### Other Expenses/Acre

|                                 |  |              |               |               |
|---------------------------------|--|--------------|---------------|---------------|
| Building Repair                 |  | 0.52         | 0.69          | 0.95          |
| Property Taxes                  |  | 4.24         | 5.55          | 8.42          |
| Business Overhead               |  | 2.09         | 3.19          | 3.74          |
| Machinery Depreciation          |  | 36.41        | 41.06         | 46.47         |
| Building Depreciation           |  | 1.10         | 1.45          | 2.00          |
| Machinery Investment            |  | 14.04        | 15.83         | 17.92         |
| Building Investment             |  | 0.36         | 0.48          | 0.66          |
| Land Investment                 |  | 34.16        | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> | <b>107.53</b> | <b>116.87</b> |

Labour and Management\* (F)

|                                   |  |               |               |               |
|-----------------------------------|--|---------------|---------------|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>417.57</b> | <b>469.96</b> | <b>513.02</b> |
|-----------------------------------|--|---------------|---------------|---------------|

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 183.61 | 242.87 | 282.86 |
| Return Over Total Expenses (C-G)    |  | 90.68  | 135.34 | 165.99 |

### Break Even Yield (bu./ac.)

|                            |  |       |       |       |
|----------------------------|--|-------|-------|-------|
| To Cover Variable Expenses |  | 30.74 | 34.32 | 37.51 |
| To Cover Total Expenses    |  | 39.54 | 44.50 | 48.58 |

### Break Even Price (\$/bu.)

|                            |  |      |      |      |
|----------------------------|--|------|------|------|
| To Cover Variable Expenses |  | 6.75 | 6.32 | 6.16 |
| To Cover Total Expenses    |  | 8.68 | 8.20 | 7.98 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |        |        |
|------------------------------------|--|--------|--------|--------|
| Provincial Average Yield (bu./ac.) |  | 37.85  | 47.77  | 55.12  |
| Return Over Variable Expenses      |  | 75.06  | 142.02 | 185.92 |
| Return Over Total Expenses         |  | -17.87 | 34.49  | 69.05  |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](https://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** Seeding rates are based on a target plant stand in plants per square foot. This guide assumes a producer will seed to achieve 25 plants per square foot in the black soil zone, 22 in the dark brown soil zone and 20 in the brown soil zone, with a thousand kernel weight of 34.5 grams and 85 per cent emergence.

**Fertilization:** Fertility costs are based on nutrient removal rates given the target yield. These are: 106 lb./ac. N and 42 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, 95 lb./ac. N and 37 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and 79 lb./ac. N and 31 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Rotation plays an important role in the suppression of weed growth. A break between cereal crops will help reduce disease pressure by allowing infested crop residue to decompose.

### Crop Protection

**Insect control:** Wheat midge, cutworms, aphids, thrips, mites, grasshoppers, armyworms, slugs, wheat stem sawfly and wireworms might require control. An insecticide application to control wheat midge is assumed, but in practice should be made based on scouting to determine economic risk. No insecticide application for wheat midge would be required for midge tolerant varieties. Please refer to the Guide to Crop Protection available at [saskatchewan.ca/crops](https://saskatchewan.ca/crops) for registered pest control products for specific pests.

**Disease control:** Cereal crops can be affected by both leaf diseases and fusarium head blight (FHB). When disease pressure is moderate, a single application at FHB timing can be effective in managing both types of diseases. This estimation includes the cost of a single fungicide application. When disease pressure is high, an additional fungicide application for leaf diseases may be required. Fungicide applications should be made based on field history and disease risk during the growing season.

**Weed control:** Spring wheat has many herbicide options to choose from. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
|                                |              | ✓        | ✓ | ✓    | ✓       |   |   |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Winter Wheat

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 51.8   | 52.9       | 63.9   |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 8.57   | 8.57       | 8.57   |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 444.01 | 453.44     | 547.88 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 35.10         | 35.10         | 35.10         |
| - Seed Treatments/Inoculants                  |  | 8.69          | 8.69          | 8.69          |
| Fertilizer - Nitrogen                         |  | 78.56         | 79.89         | 97.20         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 24.73         | 25.58         | 30.69         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 49.59         | 53.12         | 56.50         |
| - Insecticides                                |  | 21.89         | 21.89         | 21.89         |
| - Fungicides                                  |  | 0.00          | 19.35         | 19.35         |
| Machinery Operating - Fuel                    |  | 12.25         | 15.31         | 19.14         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 22.30         | 22.05         | 23.05         |
| Crop Insurance Premium                        |  | 9.99          | 8.59          | 9.42          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 12.98         | 14.27         | 15.78         |
| <b>Total Variable Expenses (D)</b>            |  | <b>300.40</b> | <b>330.31</b> | <b>365.25</b> |
| Other Expenses/Acre                           |  |               |               |               |
| Building Repair                               |  | 0.52          | 0.69          | 0.95          |
| Property Taxes                                |  | 4.24          | 5.55          | 8.42          |
| Business Overhead                             |  | 2.09          | 3.19          | 3.74          |
| Machinery Depreciation                        |  | 36.41         | 41.06         | 46.47         |
| Building Depreciation                         |  | 1.10          | 1.45          | 2.00          |
| Machinery Investment                          |  | 14.04         | 15.83         | 17.92         |
| Building Investment                           |  | 0.36          | 0.48          | 0.66          |
| Land Investment                               |  | 34.16         | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b>               |  | <b>92.92</b>  | <b>107.53</b> | <b>116.87</b> |
| Labour and Management* (F)                    |  |               |               |               |
| <b>Total Expenses (D+E+F)=(G)</b>             |  | <b>393.33</b> | <b>437.84</b> | <b>482.12</b> |

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 143.61 | 123.13 | 182.63 |
| Return Over Total Expenses (C-G)    |  | 50.68  | 15.60  | 65.76  |
| <b>Break Even Yield (bu./ac.)</b>   |  |        |        |        |
| To Cover Variable Expenses          |  | 35.05  | 38.54  | 42.62  |
| To Cover Total Expenses             |  | 45.90  | 51.09  | 56.26  |

### Break Even Price (\$/bu.)

|                            |  |      |      |      |
|----------------------------|--|------|------|------|
| To Cover Variable Expenses |  | 5.80 | 6.24 | 5.71 |
| To Cover Total Expenses    |  | 7.59 | 8.28 | 7.54 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |        |        |
|------------------------------------|--|--------|--------|--------|
| Provincial Average Yield (bu./ac.) |  | 40.79  | 44.09  | 54.01  |
| Return Over Variable Expenses      |  | 49.17  | 47.54  | 97.62  |
| Return Over Total Expenses         |  | -43.76 | -59.99 | -19.25 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** Seeding rates are based on a target plant stand in plants per square foot. This guide assumes a producer will seed to achieve 30 plants per square foot in the black soil zone, 28 in the dark brown soil zone and 25 in the brown soil zone, with a thousand kernel weight of 36 grams and 85 per cent emergence.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 81 lb./ac. N and 40 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, 69 lb./ac. N and 34 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and 68 lb./ac. N and 33 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Diverse crop rotations are recommended to help reduce disease pressure and suppress weeds to manage herbicide resistance. Winter wheat is a very competitive crop that will suppress the growth of spring germinating weeds.

### Crop Protection

**Insect control:** Wheat midge, cutworms, aphids, thrips, mites, grasshoppers, armyworms, slugs and wireworms might require control. Seed treatments are available for wireworm control.

**Disease control:** Fungicide applications in winter wheat typically target leaf diseases. This estimation includes the cost of a single fungicide application for leaf diseases in the black and dark brown soil zone. Fungicide applications should be made based on field history and disease risk during the growing season. Winter wheat can be affected by both leaf diseases and fusarium head blight (FHB). However, winter wheat crops typically pass the susceptible growth stage when conditions favor FHB development.

**Weed control:** Winter wheat is prone to infestation with winter annual weeds, particularly downy and Japanese brome. Herbicide choices were made with this weed in mind, but should be adjusted on individual farms based on the weeds present. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       | ✓ |   |             |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Canola

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 42.33  | 47.18      | 51.15  |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 17.01  | 17.01      | 17.01  |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 720.03 | 802.53     | 870.06 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 75.73         | 75.73         | 75.73         |
| - Seed Treatments/Inoculants                  |  | 9.00          | 9.00          | 9.00          |
| Fertilizer - Nitrogen                         |  | 118.51        | 133.16        | 143.81        |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 40.93         | 46.04         | 49.45         |
| - Sulphur and Other                           |  | 7.89          | 8.42          | 9.21          |
| Plant Protection - Herbicides                 |  | 58.24         | 58.24         | 66.28         |
| - Insecticides                                |  | 2.46          | 2.46          | 2.46          |
| - Fungicides                                  |  | 0.00          | 14.18         | 14.18         |
| Machinery Operating - Fuel                    |  | 12.97         | 16.21         | 20.27         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 21.05         | 21.05         | 21.05         |
| Crop Insurance Premium                        |  | 13.09         | 10.51         | 10.96         |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 7.71          | 8.46          | 9.05          |
| <b>Total Variable Expenses (D)</b>            |  | <b>391.90</b> | <b>429.92</b> | <b>459.87</b> |

### Other Expenses/Acre

|                                 |  |              |               |               |
|---------------------------------|--|--------------|---------------|---------------|
| Building Repair                 |  | 0.52         | 0.69          | 0.95          |
| Property Taxes                  |  | 4.24         | 5.55          | 8.42          |
| Business Overhead               |  | 2.09         | 3.19          | 3.74          |
| Machinery Depreciation          |  | 36.41        | 41.06         | 46.47         |
| Building Depreciation           |  | 1.10         | 1.45          | 2.00          |
| Machinery Investment            |  | 14.04        | 15.83         | 17.92         |
| Building Investment             |  | 0.36         | 0.48          | 0.66          |
| Land Investment                 |  | 34.16        | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> | <b>107.53</b> | <b>116.87</b> |

Labour and Management\* (F)

|                                   |  |               |               |               |
|-----------------------------------|--|---------------|---------------|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>484.82</b> | <b>537.45</b> | <b>576.74</b> |
|-----------------------------------|--|---------------|---------------|---------------|

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 328.13 | 372.61 | 410.19 |
| Return Over Total Expenses (C-G)    |  | 235.21 | 265.08 | 293.32 |
| <b>Break Even Yield (bu./ac.)</b>   |  |        |        |        |
| To Cover Variable Expenses          |  | 23.04  | 25.27  | 27.04  |
| To Cover Total Expenses             |  | 28.50  | 31.60  | 33.91  |

### Break Even Price (\$/bu.)

|                            |  |       |       |       |
|----------------------------|--|-------|-------|-------|
| To Cover Variable Expenses |  | 9.26  | 9.11  | 8.99  |
| To Cover Total Expenses    |  | 11.45 | 11.39 | 11.28 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |        |        |
|------------------------------------|--|--------|--------|--------|
| Provincial Average Yield (bu./ac.) |  | 34.83  | 40.12  | 44.53  |
| Return Over Variable Expenses      |  | 200.56 | 252.52 | 297.59 |
| Return Over Total Expenses         |  | 107.64 | 144.99 | 180.72 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** A seeding rate of five lb./ac. is used for each soil zone.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 108 lb./ac. N and 58 lb./ac. P<sub>2</sub>O<sub>5</sub> and 18 lb./ac. S for the black soil zone, 100 lb./ac. N and 54 lb./ac. P<sub>2</sub>O<sub>5</sub> and 16 lb./ac. S for the dark brown soil zone and 89 lb./ac. N and 48 lb./ac. P<sub>2</sub>O<sub>5</sub> and 15 lb./ac. S for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation will help to reduce root maggot and pressure from diseases, such as clubroot, by reducing or maintaining low pathogen levels in the field.

### Crop Protection

**Insect control:** Flea beetles, cutworms, lygus bugs, cabbage seedpod weevil, diamondback moth, bertha armyworm, alfalfa looper, cabbage looper and occasionally imported cabbageworm, grasshoppers and slugs might require control. Seed treatments are available for flea beetle and cutworm control.

**Disease control:** Sclerotinia stem rot is the main disease managed with the application of foliar fungicides. This estimation includes the cost of a single fungicide application in the dark brown and black soil zones. Disease pressure will vary from year to year and field to field and is influenced by environmental conditions. Fungicide application decisions should be made based on disease risk when the crop is susceptible to infection.

**Weed control:** A soil-active herbicide to reduce competition from cleavers was included in brown and dark brown soils. This was exchanged for a foliar tank mix option in the black soils. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       | ✓ | ✓ |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.



# 2022 Flax

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 26.0   | 29.5       | 33.1   |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 20.50  | 20.50      | 20.50  |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 532.59 | 605.37     | 677.94 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 33.87         | 36.69         | 39.51         |
| - Seed Treatments/Inoculants                  |  | 0.00          | 0.00          | 0.00          |
| Fertilizer - Nitrogen                         |  | 81.23         | 91.88         | 102.53        |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 15.35         | 17.91         | 19.61         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 51.53         | 48.27         | 29.88         |
| - Insecticides                                |  | 2.46          | 2.46          | 2.46          |
| - Fungicides                                  |  | 0.00          | 14.18         | 14.18         |
| Machinery Operating - Fuel                    |  | 12.25         | 15.31         | 19.14         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 20.80         | 21.05         | 21.05         |
| Crop Insurance Premium                        |  | 9.17          | 8.04          | 8.96          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 5.04          | 5.66          | 5.73          |
| <b>Total Variable Expenses (D)</b>            |  | <b>256.01</b> | <b>287.91</b> | <b>291.48</b> |

### Other Expenses/Acre

|                                   |  |               |               |               |
|-----------------------------------|--|---------------|---------------|---------------|
| Building Repair                   |  | 0.52          | 0.69          | 0.95          |
| Property Taxes                    |  | 4.24          | 5.55          | 8.42          |
| Business Overhead                 |  | 2.09          | 3.19          | 3.74          |
| Machinery Depreciation            |  | 36.41         | 41.06         | 46.47         |
| Building Depreciation             |  | 1.10          | 1.45          | 2.00          |
| Machinery Investment              |  | 14.04         | 15.83         | 17.92         |
| Building Investment               |  | 0.36          | 0.48          | 0.66          |
| Land Investment                   |  | 34.16         | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b>   |  | <b>92.92</b>  | <b>107.53</b> | <b>116.87</b> |
| Labour and Management* (F)        |  |               |               |               |
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>348.94</b> | <b>395.43</b> | <b>408.35</b> |

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 276.58 | 317.46 | 386.46 |
| Return Over Total Expenses (C-G)    |  | 183.65 | 209.94 | 269.59 |
| <b>Break Even Yield (bu./ac.)</b>   |  |        |        |        |
| To Cover Variable Expenses          |  | 12.49  | 14.04  | 14.22  |
| To Cover Total Expenses             |  | 17.02  | 19.29  | 19.92  |

### Break Even Price (\$/bu.)

|                            |  |       |       |       |
|----------------------------|--|-------|-------|-------|
| To Cover Variable Expenses |  | 9.85  | 9.75  | 8.81  |
| To Cover Total Expenses    |  | 13.43 | 13.39 | 12.35 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |        |        |
|------------------------------------|--|--------|--------|--------|
| Provincial Average Yield (bu./ac.) |  | 19.29  | 22.83  | 24.80  |
| Return Over Variable Expenses      |  | 139.44 | 180.11 | 216.92 |
| Return Over Total Expenses         |  | 46.51  | 72.59  | 100.05 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** Seeding rates used are 42 lb./ac. in the black soil zone, 39 lb./ac. in the dark brown soil zone and 36 lb./ac. in the brown soil zone.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 77 lb./ac. N and 23 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, 69 lb./ac. N and 21 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and 61 lb./ac. N and 18 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure by allowing infected crop residue to decompose between susceptible crops. Flax is not competitive against weeds and very sensitive to herbicide residues in the soil.

### Crop Protection

**Insect control:** Wireworms, cutworms, lygus bugs, potato aphid, grasshoppers, bertha armyworm, armyworm and beet webworm might require control.

**Disease control:** A single fungicide application for pasmo management has been included in this estimate. Early pasmo infection can result in losses of yield and quality. Fungicide application should be based on disease risk when the crop is susceptible to disease infection.

**Weed control:** Flax has limited herbicide options. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
|                                |              | ✓        | ✓ | ✓    | ✓       | ✓ |   |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Brown Mustard

## Economics

My Farm Brown

### Revenue Per Acre

|  |  |          |
|--|--|----------|
| Target Yield (lbs./ac.) (A)                |  | 1,080.30 |
| Estimated Farm Gate Price (\$/lb.) (B)     |  | 0.65     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |  | 702.20   |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |
|---|--|---------------|
| Seed  |  | 32.70         |
| - Seed Treatments/Inoculants                  |  | 0.54          |
| Fertilizer - Nitrogen                         |  | 54.59         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 19.61         |
| - Sulphur and Other                           |  | 7.89          |
| Plant Protection - Herbicides                 |  | 46.95         |
| - Insecticides                                |  | 3.28          |
| - Fungicides                                  |  | 0.00          |
| Machinery Operating - Fuel                    |  | 18.92         |
| - Repair                                      |  | 8.85          |
| Custom Work and Hired Labour                  |  | 20.30         |
| Crop Insurance Premium                        |  | 7.06          |
| Hail Insurance Premium                        |  | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          |
| Interest on Variable Expenses                 |  | 4.74          |
| <b>Total Variable Expenses (D)</b>            |  | <b>240.91</b> |
| Other Expenses/Acre                           |  |               |
| Building Repair                               |  | 0.52          |
| Property Taxes                                |  | 4.24          |
| Business Overhead                             |  | 2.09          |
| Machinery Depreciation                        |  | 36.41         |
| Building Depreciation                         |  | 1.10          |
| Machinery Investment                          |  | 14.04         |
| Building Investment                           |  | 0.36          |
| Land Investment                               |  | 34.16         |
| <b>Total Other Expenses (E)</b>               |  | <b>92.92</b>  |
| Labour and Management* (F)                    |  |               |
| <b>Total Expenses (D+E+F)=(G)</b>             |  | <b>333.83</b> |

### Return Per Acre

| Return Over Variable Expenses (C-D) |  | 461.29 |
|-------------------------------------|--|--------|
| Return Over Total Expenses (C-G)    |  | 368.37 |
| Break Even Yield (lbs./ac.)         |  |        |
| To Cover Variable Expenses          |  | 370.63 |
| To Cover Total Expenses             |  | 513.59 |

### Break Even Price (\$/lb.)

|                            |  |      |
|----------------------------|--|------|
| To Cover Variable Expenses |  | 0.22 |
| To Cover Total Expenses    |  | 0.31 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |
|------------------------------------|--|--------|
| Provincial Average Yield (lb./ac.) |  | 815.70 |
| Return Over Variable Expenses      |  | 289.30 |
| Return Over Total Expenses         |  | 196.38 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** A seed rate of six lb./ac. is used. The brown soil zone is recommended.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 41 lb./ac. N, 23 lb./ac. P<sub>2</sub>O<sub>5</sub> and 15 lb./ac. S. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Diverse crop rotations are recommended to help reduce disease pressure and suppress weed growth.

### Crop Protection

**Insect control:** Flea beetles, cutworms, lygus bugs, cabbage seedpod weevil, diamondback moth, bertha armyworm, cabbage looper and occasionally imported cabbageworm, grasshoppers and slugs might require control. Seed treatments are available for flea beetle and cutworm control.

**Disease control:** The cost of fungicide is not included in this estimate. Disease risk assessment is encouraged to guide fungicide application decisions.

**Weed control:** Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        |   | ✓    | ✓       |   |   | ✓           |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Oriental Mustard

## Economics

My Farm

Brown

### Revenue Per Acre

|  |  |          |
|--|--|----------|
| Target Yield (lbs./ac.) (A)                |  | 1,190.50 |
| Estimated Farm Gate Price (\$/lb.) (B)     |  | 0.60     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |  | 714.30   |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |
|---|--|---------------|
| Seed  |  | 26.70         |
| - Seed Treatments/Inoculants                  |  | 0.54          |
| Fertilizer - Nitrogen                         |  | 59.92         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 20.46         |
| - Sulphur and Other                           |  | 7.89          |
| Plant Protection - Herbicides                 |  | 46.95         |
| - Insecticides                                |  | 3.28          |
| - Fungicides                                  |  | 0.00          |
| Machinery Operating - Fuel                    |  | 18.92         |
| - Repair                                      |  | 8.85          |
| Custom Work and Hired Labour                  |  | 20.30         |
| Crop Insurance Premium                        |  | 7.57          |
| Hail Insurance Premium                        |  | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          |
| Interest on Variable Expenses                 |  | 4.75          |
| <b>Total Variable Expenses (D)</b>            |  | <b>241.61</b> |

### Other Expenses/Acre

|                                 |  |              |
|---------------------------------|--|--------------|
| Building Repair                 |  | 0.52         |
| Property Taxes                  |  | 4.24         |
| Business Overhead               |  | 2.09         |
| Machinery Depreciation          |  | 36.41        |
| Building Depreciation           |  | 1.10         |
| Machinery Investment            |  | 14.04        |
| Building Investment             |  | 0.36         |
| Land Investment                 |  | 34.16        |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> |

Labour and Management\* (F)

|                                   |  |               |
|-----------------------------------|--|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>334.53</b> |
|-----------------------------------|--|---------------|

### Return Per Acre

|                                     |  |        |
|-------------------------------------|--|--------|
| Return Over Variable Expenses (C-D) |  | 472.69 |
| Return Over Total Expenses (C-G)    |  | 379.77 |
| <b>Break Even Yield (lbs./ac.)</b>  |  |        |
| To Cover Variable Expenses          |  | 402.68 |
| To Cover Total Expenses             |  | 557.55 |

### Break Even Price (\$/lb.)

|                            |  |      |
|----------------------------|--|------|
| To Cover Variable Expenses |  | 0.20 |
| To Cover Total Expenses    |  | 0.28 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |
|------------------------------------|--|--------|
| Provincial Average Yield (lb./ac.) |  | 925.90 |
| Return Over Variable Expenses      |  | 313.93 |
| Return Over Total Expenses         |  | 221.01 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** A seed rate of six lb./ac. is used. The brown soil zone is recommended.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 45 lb./ac. N, 24 lb./ac. P<sub>2</sub>O<sub>5</sub> and 15 lb./ac. S. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure and pathogen levels in the field.

### Crop Protection

**Insect control:** Flea beetles, cutworms, lygus bugs, cabbage seedpod weevil, diamondback moth, bertha armyworm, cabbage looper and occasionally imported cabbageworm, grasshoppers and slugs might require control. Seed treatments are available for flea beetle and cutworm control.

**Disease control:** The cost of fungicide is not included in this estimate. Disease risk assessment is encouraged to guide fungicide application decisions.

**Weed control:** Mustards are relatively resilient to weed competition. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        |   | ✓    | ✓       |   |   | ✓           |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.



# 2022 Yellow Mustard

## Economics

My Farm Brown

### Revenue Per Acre

|  |  |        |
|--|--|--------|
| Target Yield (lbs./ac.) (A)                |  | 948.00 |
| Estimated Farm Gate Price (\$/lb.) (B)     |  | 0.70   |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |  | 663.60 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |
|---|--|---------------|
| Seed  |  | 44.50         |
| - Seed Treatments/Inoculants                  |  | 0.90          |
| Fertilizer - Nitrogen                         |  | 47.94         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 17.05         |
| - Sulphur and Other                           |  | 7.89          |
| Plant Protection - Herbicides                 |  | 46.86         |
| - Insecticides                                |  | 3.28          |
| - Fungicides                                  |  | 0.00          |
| Machinery Operating - Fuel                    |  | 18.92         |
| - Repair                                      |  | 8.85          |
| Custom Work and Hired Labour                  |  | 20.30         |
| Crop Insurance Premium                        |  | 11.36         |
| Hail Insurance Premium                        |  | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          |
| Interest on Variable Expenses                 |  | 4.88          |
| <b>Total Variable Expenses (D)</b>            |  | <b>248.20</b> |

### Other Expenses/Acre

|                                 |  |              |
|---------------------------------|--|--------------|
| Building Repair                 |  | 0.52         |
| Property Taxes                  |  | 4.24         |
| Business Overhead               |  | 2.09         |
| Machinery Depreciation          |  | 36.41        |
| Building Depreciation           |  | 1.10         |
| Machinery Investment            |  | 14.04        |
| Building Investment             |  | 0.36         |
| Land Investment                 |  | 34.16        |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> |

Labour and Management\* (F)

|                                   |  |               |
|-----------------------------------|--|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>341.13</b> |
|-----------------------------------|--|---------------|

### Return Per Acre

|                                     |  |        |
|-------------------------------------|--|--------|
| Return Over Variable Expenses (C-D) |  | 415.40 |
| Return Over Total Expenses (C-G)    |  | 322.47 |
| <b>Break Even Yield (lbs./ac.)</b>  |  |        |
| To Cover Variable Expenses          |  | 354.58 |
| To Cover Total Expenses             |  | 487.32 |

### Break Even Price (\$/lb.)

|                            |  |      |
|----------------------------|--|------|
| To Cover Variable Expenses |  | 0.26 |
| To Cover Total Expenses    |  | 0.36 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |
|------------------------------------|--|--------|
| Provincial Average Yield (lb./ac.) |  | 661.40 |
| Return Over Variable Expenses      |  | 214.78 |
| Return Over Total Expenses         |  | 121.85 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](https://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** A seed rate of 10 lb./ac. is used. The brown soil zone is recommended.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 36 lb./ac. N, 20 lb./ac. P<sub>2</sub>O<sub>5</sub> and 15 lb./ac. S. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure and pathogen levels in the field.

### Crop Protection

**Insect control:** Flea beetles, cutworms, lygus bugs, cabbage seedpod weevil, diamondback moth, bertha armyworm, cabbage looper and occasionally imported cabbageworm, grasshoppers and slugs might require control. Seed treatments are available for flea beetle and cutworm control.

**Disease control:** The cost of fungicide is not included in this estimate. Disease risk assessment is encouraged to guide fungicide application decisions.

**Weed control:** Yellow mustard has limited herbicide options. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
| ✓                              |              | ✓        |   | ✓    | ✓       |   | ✓ |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Sunflower Oilseed (EMSS)

## Economics

My Farm      Dark Brown

### Revenue Per Acre

|   |          |
|---|----------|
| Target Yield (lbs./ac.) (A)               | 2,050.30 |
| Estimated Farm Gate Price (\$/lb.) (B)    | 0.42     |
| Estimated Gross Revenue \$/ac.) (AxB)=(C) | 861.13   |

### Expenses Per Acre

| Variable Expenses/Acre                        |               |
|---|---------------|
| Seed  | 78.00         |
| - Seed Treatments/Inoculants                  | 0.00          |
| Fertilizer - Nitrogen                         | 99.87         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) | 25.58         |
| - Sulphur and Other                           | 66.24         |
| Plant Protection - Herbicides                 | 57.24         |
| - Insecticides                                | 5.73          |
| - Fungicides                                  | 0.00          |
| Machinery Operating - Fuel                    | 19.82         |
| - Repair                                      | 9.98          |
| Custom Work and Hired Labour                  | 20.80         |
| Crop Insurance Premium                        | 6.17          |
| Hail Insurance Premium                        | 12.25         |
| Utilities and Miscellaneous                   | 4.23          |
| Interest on Variable Expenses                 | 8.15          |
| <b>Total Variable Expenses (D)</b>            | <b>414.05</b> |

### Other Expenses/Acre

|                                 |               |
|---------------------------------|---------------|
| Building Repair                 | 0.69          |
| Property Taxes                  | 5.55          |
| Business Overhead               | 3.19          |
| Machinery Depreciation          | 41.06         |
| Building Depreciation           | 1.45          |
| Machinery Investment            | 15.83         |
| Building Investment             | 0.48          |
| Land Investment                 | 39.28         |
| <b>Total Other Expenses (E)</b> | <b>107.53</b> |

Labour and Management\* (F)

|                                   |               |
|-----------------------------------|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> | <b>521.58</b> |
|-----------------------------------|---------------|

### Return Per Acre

|                                     |        |
|-------------------------------------|--------|
| Return Over Variable Expenses (C-D) | 447.08 |
| Return Over Total Expenses (C-G)    | 339.55 |

### Break Even Yield (lbs./ac.)

|                            |          |
|----------------------------|----------|
| To Cover Variable Expenses | 985.84   |
| To Cover Total Expenses    | 1,241.86 |

### Break Even Price (\$/lb.).

|                            |      |
|----------------------------|------|
| To Cover Variable Expenses | 0.20 |
| To Cover Total Expenses    | 0.25 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |          |
|------------------------------------|----------|
| Provincial Average Yield (lb./ac.) | 1,807.80 |
| Return Over Variable Expenses      | 345.23   |
| Return Over Total Expenses         | 237.70   |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** This guide assumes a producer will seed to achieve a plant population of 26,000/ac. This estimation is for the moist long season area with both dark brown and black soil, located in the south-east of the province.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 75 lb./ac. N, 30 lb./ac. P<sub>2</sub>O<sub>5</sub>, 50 lb./ac. K and 26 lb./ac. S. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** If a sunflower midge infestation is anticipated, new fields should be established away from fields damaged the previous season. Crop rotation can be used to reduce insects and disease pressure and pathogen levels in the field.

### Crop Protection

**Insect control:** Wireworms, cutworms, sunflower beetle, grasshoppers, lygus bugs, sunflower seed weevil, banded sunflower moth and sunflower moth might require control. Seed treatments are available for wireworm and sunflower beetle control.

**Disease control:** The cost of fungicide is not included in this estimate. A disease risk assessment is encouraged to guide fungicide application decisions.

**Weed control:** Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        |   | ✓    | ✓       | ✓ |   | ✓           |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Soybean\*\*

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 22.8   | 28.3       | 32.0   |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 13.38  | 13.38      | 13.38  |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 304.80 | 378.52     | 427.76 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 86.21         | 86.21         | 86.21         |
| - Seed Treatments/Inoculants                  |  | 14.00         | 14.00         | 14.00         |
| Fertilizer - Nitrogen                         |  | 4.79          | 6.26          | 6.79          |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 14.49         | 18.76         | 20.46         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 65.33         | 65.33         | 65.02         |
| - Insecticides                                |  | 15.22         | 15.22         | 15.22         |
| - Fungicides                                  |  | 0.00          | 0.00          | 0.00          |
| Machinery Operating - Fuel                    |  | 13.69         | 17.12         | 21.39         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 22.30         | 22.05         | 23.05         |
| Crop Insurance Premium                        |  | 6.12          | 5.05          | 4.82          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 5.35          | 5.55          | 5.73          |
| <b>Total Variable Expenses (D)</b>            |  | <b>271.84</b> | <b>282.00</b> | <b>291.13</b> |
| Other Expenses/Acre                           |  |               |               |               |
| Building Repair                               |  | 0.52          | 0.69          | 0.95          |
| Property Taxes                                |  | 4.24          | 5.55          | 8.42          |
| Business Overhead                             |  | 2.09          | 3.19          | 3.74          |
| Machinery Depreciation                        |  | 36.41         | 41.06         | 46.47         |
| Building Depreciation                         |  | 1.10          | 1.45          | 2.00          |
| Machinery Investment                          |  | 14.04         | 15.83         | 17.92         |
| Building Investment                           |  | 0.36          | 0.48          | 0.66          |
| Land Investment                               |  | 34.16         | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b>               |  | <b>92.92</b>  | <b>107.53</b> | <b>116.87</b> |
| Labour and Management* (F)                    |  |               |               |               |
| <b>Total Expenses (D+E+F)=(G)</b>             |  | <b>364.76</b> | <b>389.53</b> | <b>408.00</b> |

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 32.96  | 96.52  | 136.63 |
| Return Over Total Expenses (C-G)    |  | -59.96 | -11.01 | 19.76  |
| <b>Break Even Yield (bu./ac.)</b>   |  |        |        |        |
| To Cover Variable Expenses          |  | 20.32  | 21.08  | 21.76  |
| To Cover Total Expenses             |  | 27.26  | 29.11  | 30.49  |

### Break Even Price (\$/bu.)

|                            |  |       |       |       |
|----------------------------|--|-------|-------|-------|
| To Cover Variable Expenses |  | 11.93 | 9.97  | 9.11  |
| To Cover Total Expenses    |  | 16.01 | 13.77 | 12.76 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |         |        |        |
|------------------------------------|--|---------|--------|--------|
| Provincial Average Yield (bu./ac.) |  | 18.37   | 22.05  | 26.46  |
| Return Over Variable Expenses      |  | -26.05  | 13.03  | 62.90  |
| Return Over Total Expenses         |  | -118.97 | -94.50 | -53.97 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** A plant population of four to five plants per square foot is recommended. This corresponds to 150,000 to 200,000 plants per acre. Seed survivability averages 75 per cent, which is usually achieved when using a drill. Solid seeded soybeans with narrow rows (eight to 10 in.) improve crop yields, raise the height of bottom pods and reduce the need for multiple in-crop herbicide applications for weed control.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: five lb./ac. N and 24 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, five lb./ac. N and 22 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and four lb./ac. N and 17 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests. Soybean requires a specific species of rhizobia not native to Saskatchewan soil. Double inoculation is recommended on new fields. Most varieties come pre-treated and pre-liquid inoculated. Adding of a second inoculant of granular or peat is recommended.

**Crop Rotation:** Crop rotation will help to reduce disease pressure by reducing or maintaining low pathogen levels in the field. Soybeans are not competitive with weeds.

### Crop Protection

**Insect control:** Wireworms, seedcorn maggot, cutworms, soybean aphid, leafhoppers, lygus bugs, spider mites, armyworms, corn earworm and grasshoppers might require control. Seed treatments are available for wireworm and seedcorn maggot control.

**Disease control:** The cost of fungicide is not included in this estimate. Disease risk assessment is encouraged to guide fungicide application decisions.

**Weed control:** Soybeans need to be kept free of weeds from the first trifoliate leaf to the third trifoliate leaf to minimize yield losses. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
|                                |              | ✓        | ✓ | ✓    | ✓       | ✓ |   | ✓           |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

\*\*These soybeans are glyphosate tolerant.

# 2022 Desi Chickpea

## Economics

My Farm

Brown

### Revenue Per Acre

|  |  |          |
|--|--|----------|
| Target Yield (lbs./ac.) (A)                |  | 1,631.40 |
| Estimated Farm Gate Price (\$/lb.) (B)     |  | 0.27     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |  | 440.48   |

### Expenses Per Acre

| Variable Expenses/Acre             |  |               |
|------------------------------------|--|---------------|
| Seed                               |  | 67.89         |
| - Seed Treatments/Inoculants       |  | 6.43          |
| Fertilizer - Nitrogen              |  | 6.66          |
| - Phosphorus (P2O5)                |  | 23.02         |
| - Sulphur and Other                |  | 0.00          |
| Plant Protection - Herbicides      |  | 82.87         |
| - Insecticides                     |  | 15.22         |
| - Fungicides                       |  | 31.92         |
| Machinery Operating - Fuel         |  | 19.82         |
| - Repair                           |  | 8.85          |
| Custom Work and Hired Labour       |  | 19.80         |
| Crop Insurance Premium             |  | 11.40         |
| Hail Insurance Premium             |  | 12.25         |
| Utilities and Miscellaneous        |  | 3.23          |
| Interest on Variable Expenses      |  | 6.21          |
| <b>Total Variable Expenses (D)</b> |  | <b>315.56</b> |

### Other Expenses/Acre

|                                 |  |              |
|---------------------------------|--|--------------|
| Building Repair                 |  | 0.52         |
| Property Taxes                  |  | 4.24         |
| Business Overhead               |  | 2.09         |
| Machinery Depreciation          |  | 36.41        |
| Building Depreciation           |  | 1.10         |
| Machinery Investment            |  | 14.04        |
| Building Investment             |  | 0.36         |
| Land Investment                 |  | 34.16        |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> |

Labour and Management\* (F)

|                                   |  |               |
|-----------------------------------|--|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>408.48</b> |
|-----------------------------------|--|---------------|

### Return Per Acre

|                                     |  |          |
|-------------------------------------|--|----------|
| Return Over Variable Expenses (C-D) |  | 124.92   |
| Return Over Total Expenses (C-G)    |  | 32.00    |
| <b>Break Even Yield (lbs./ac.)</b>  |  |          |
| To Cover Variable Expenses          |  | 1,168.75 |
| To Cover Total Expenses             |  | 1,512.91 |

### Break Even Price (\$/lb.)

|                            |  |      |
|----------------------------|--|------|
| To Cover Variable Expenses |  | 0.19 |
| To Cover Total Expenses    |  | 0.25 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |          |
|------------------------------------|--|----------|
| Provincial Average Yield (lb./ac.) |  | 1,278.10 |
| Return Over Variable Expenses      |  | 29.53    |
| Return Over Total Expenses         |  | -63.39   |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](https://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** Seed rates for the desi chickpea is 93 lb./ac. The brown soil zone is recommended.

**Fertilization:** Inoculant with the correct strains of rhizobium should be applied. Fertility cost is based on nutrient removal rates given the targeted crop yield. These are five lb./ac. N and 27 lb./ac. P2O5. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Diverse crop rotations are recommended to help reduce disease pressure and suppress weed growth.

### Crop Protection

**Insect control:** Wireworms, cutworms, pea aphid, potato leafhopper and grasshoppers might require control. Seed treatments are available for wireworm control.

**Disease control:** Ascochyta blight is a foliar disease that can result in yield losses when environmental conditions favour disease development. When disease pressure is high more than one fungicide application may be required. Two fungicide applications are included in this estimate. Fungicide application decisions should be based on disease risk during the growing season.

**Weed control:** Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       | ✓ |   | ✓           |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.



# 2022 Kabuli Chickpea, Large

## Economics

My Farm

Brown

### Revenue Per Acre

|  |  |          |
|--|--|----------|
| Target Yield (lbs./ac.) (A)                |  | 2,006.20 |
| Estimated Farm Gate Price (\$/lb.) (B)     |  | 0.45     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |  | 902.79   |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |
|---|--|---------------|
| Seed  |  | 105.85        |
| - Seed Treatments/Inoculants                  |  | 13.81         |
| Fertilizer - Nitrogen                         |  | 9.32          |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 27.28         |
| - Sulphur and Other                           |  | 0.00          |
| Plant Protection - Herbicides                 |  | 82.87         |
| - Insecticides                                |  | 15.22         |
| - Fungicides                                  |  | 31.92         |
| Machinery Operating - Fuel                    |  | 19.82         |
| - Repair                                      |  | 8.85          |
| Custom Work and Hired Labour                  |  | 19.80         |
| Crop Insurance Premium                        |  | 17.92         |
| Hail Insurance Premium                        |  | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          |
| Interest on Variable Expenses                 |  | 7.39          |
| <b>Total Variable Expenses (D)</b>            |  | <b>375.53</b> |

### Other Expenses/Acre

|                                   |  |               |
|-----------------------------------|--|---------------|
| Building Repair                   |  | 0.52          |
| Property Taxes                    |  | 4.24          |
| Business Overhead                 |  | 2.09          |
| Machinery Depreciation            |  | 36.41         |
| Building Depreciation             |  | 1.10          |
| Machinery Investment              |  | 14.04         |
| Building Investment               |  | 0.36          |
| Land Investment                   |  | 34.16         |
| <b>Total Other Expenses (E)</b>   |  | <b>92.92</b>  |
| Labour and Management* (F)        |  |               |
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>468.45</b> |

### Return Per Acre

|                                     |  |          |
|-------------------------------------|--|----------|
| Return Over Variable Expenses (C-D) |  | 527.26   |
| Return Over Total Expenses (C-G)    |  | 434.34   |
| <b>Break Even Yield (lbs./ac.)</b>  |  |          |
| To Cover Variable Expenses          |  | 834.50   |
| To Cover Total Expenses             |  | 1,041.00 |

### Break Even Price (\$/lb.)

|                            |  |      |
|----------------------------|--|------|
| To Cover Variable Expenses |  | 0.19 |
| To Cover Total Expenses    |  | 0.23 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |          |
|------------------------------------|--|----------|
| Provincial Average Yield (lb./ac.) |  | 1,455.10 |
| Return Over Variable Expenses      |  | 279.27   |
| Return Over Total Expenses         |  | 186.35   |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** A seed rate is 145 lb./ac. is used. The brown soil zone is recommended.

**Fertilization:** Inoculant with the correct strains of rhizobium should be applied. Fertility cost is based on nutrient removal rates given the targeted crop yield. These are seven lb./ac. N and 32 lb./ac. P<sub>2</sub>O<sub>5</sub>. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure.

### Crop Protection

**Insect control:** Wireworms, cutworms, pea aphid, potato leafhopper and grasshoppers might require control. Seed treatments are available for wireworm control.

**Disease control:** Ascochyta blight is a foliar disease that can result in yield losses when environmental conditions favor disease development. When disease pressure is high more than once fungicide application may be required. Two fungicide applications are included in this estimate. Fungicide application decisions should be based on disease risk during the growing season.

**Weed control:** Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       | ✓ |   | ✓           |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Kabuli Chickpea, Small

## Economics

My Farm Brown

### Revenue Per Acre

|  |  |          |
|--|--|----------|
| Target Yield (lbs./ac.) (A)                |  | 1,719.60 |
| Estimated Farm Gate Price (\$/lb.) (B)     |  | 0.25     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |  | 429.90   |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |
|---|--|---------------|
| Seed  |  | 79.57         |
| - Seed Treatments/Inoculants                  |  | 13.81         |
| Fertilizer - Nitrogen                         |  | 7.99          |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 22.17         |
| - Sulphur and Other                           |  | 0.00          |
| Plant Protection - Herbicides                 |  | 82.87         |
| - Insecticides                                |  | 15.22         |
| - Fungicides                                  |  | 31.92         |
| Machinery Operating - Fuel                    |  | 19.82         |
| - Repair                                      |  | 8.85          |
| Custom Work and Hired Labour                  |  | 19.80         |
| Crop Insurance Premium                        |  | 14.67         |
| Hail Insurance Premium                        |  | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          |
| Interest on Variable Expenses                 |  | 6.67          |
| <b>Total Variable Expenses (D)</b>            |  | <b>338.83</b> |

### Other Expenses/Acre

|                                 |  |              |
|---------------------------------|--|--------------|
| Building Repair                 |  | 0.52         |
| Property Taxes                  |  | 4.24         |
| Business Overhead               |  | 2.09         |
| Machinery Depreciation          |  | 36.41        |
| Building Depreciation           |  | 1.10         |
| Machinery Investment            |  | 14.04        |
| Building Investment             |  | 0.36         |
| Land Investment                 |  | 34.16        |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> |

Labour and Management\* (F)

|                                   |  |               |
|-----------------------------------|--|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>431.75</b> |
|-----------------------------------|--|---------------|

### Return Per Acre

|                                     |  |       |
|-------------------------------------|--|-------|
| Return Over Variable Expenses (C-D) |  | 91.07 |
| Return Over Total Expenses (C-G)    |  | -1.85 |

### Break Even Yield (lbs./ac.)

|                            |  |          |
|----------------------------|--|----------|
| To Cover Variable Expenses |  | 1,355.32 |
| To Cover Total Expenses    |  | 1,727.01 |

### Break Even Price (\$/lb.)

|                            |  |      |
|----------------------------|--|------|
| To Cover Variable Expenses |  | 0.20 |
| To Cover Total Expenses    |  | 0.25 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |          |
|------------------------------------|--|----------|
| Provincial Average Yield (lb./ac.) |  | 1,256.60 |
| Return Over Variable Expenses      |  | -24.68   |
| Return Over Total Expenses         |  | -117.60  |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** A seed rate is 109 lb./ac. is used. The brown soil zone is recommended.

**Fertilization:** Inoculant with the correct strains of rhizobium should be applied. Fertility cost is based on nutrient removal rates given the targeted crop yield. These are six lb./ac. N and 26 lb./ac. P<sub>2</sub>O<sub>5</sub>. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure.

### Crop Protection

**Insect control:** Wireworms, cutworms, pea aphid, potato leafhopper and grasshoppers might require control. Seed treatments are available for wireworm control.

**Disease control:** Ascochyta blight is a foliar disease that can result in yield losses when environmental conditions favour disease development. When disease pressure is high, more than one fungicide application may be required. Two fungicide applications are included in this estimate. Fungicide application decisions should be based on disease risk during the growing season.

**Weed control:** Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       | ✓ |   | ✓           |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Large Green Lentils

## Economics

### Revenue Per Acre

|  | My Farm | Brown    | Dark Brown | Black    |
|--|---------|----------|------------|----------|
| Target Yield (lb./ac.) (A)                 |         | 1,455.10 | 1,653.50   | 1,587.30 |
| Estimated Farm Gate Price (\$/lb.) (B)     |         | 0.35     | 0.35       | 0.35     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 509.29   | 578.73     | 555.56   |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 66.43         | 66.43         | 66.43         |
| - Seed Treatments/Inoculants                  |  | 6.29          | 6.29          | 6.29          |
| Fertilizer - Nitrogen                         |  | 4.53          | 5.06          | 5.06          |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 13.64         | 15.35         | 15.35         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 56.67         | 56.67         | 74.14         |
| - Insecticides                                |  | 15.22         | 15.22         | 15.22         |
| - Fungicides                                  |  | 20.00         | 20.00         | 20.00         |
| Machinery Operating - Fuel                    |  | 13.69         | 17.12         | 21.39         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 21.80         | 21.05         | 22.80         |
| Crop Insurance Premium                        |  | 12.14         | 14.34         | 12.42         |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 5.11          | 5.30          | 5.77          |
| <b>Total Variable Expenses (D)</b>            |  | <b>259.85</b> | <b>269.29</b> | <b>293.30</b> |

### Other Expenses/Acre

|                                   |  |               |               |               |
|-----------------------------------|--|---------------|---------------|---------------|
| Building Repair                   |  | 0.52          | 0.69          | 0.95          |
| Property Taxes                    |  | 4.24          | 5.55          | 8.42          |
| Business Overhead                 |  | 2.09          | 3.19          | 3.74          |
| Machinery Depreciation            |  | 36.41         | 41.06         | 46.47         |
| Building Depreciation             |  | 1.10          | 1.45          | 2.00          |
| Machinery Investment              |  | 14.04         | 15.83         | 17.92         |
| Building Investment               |  | 0.36          | 0.48          | 0.66          |
| Land Investment                   |  | 34.16         | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b>   |  | <b>92.92</b>  | <b>107.53</b> | <b>116.87</b> |
| Labour and Management* (F)        |  |               |               |               |
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>352.77</b> | <b>376.81</b> | <b>410.17</b> |

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 249.44 | 309.44 | 262.26 |
| Return Over Total Expenses (C-G)    |  | 156.52 | 201.92 | 145.39 |

### Break Even Yield (lbs./ac.)

|                            |  |         |         |         |
|----------------------------|--|---------|---------|---------|
| To Cover Variable Expenses |  | 742.42  | 769.39  | 838.00  |
| To Cover Total Expenses    |  | 1007.92 | 1076.61 | 1171.92 |

### Break Even Price (\$/lb.)

|                            |  |      |      |      |
|----------------------------|--|------|------|------|
| To Cover Variable Expenses |  | 0.18 | 0.16 | 0.18 |
| To Cover Total Expenses    |  | 0.24 | 0.23 | 0.26 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |         |         |         |
|------------------------------------|--|---------|---------|---------|
| Provincial Average Yield (lb./ac.) |  | 1080.30 | 1278.70 | 1212.50 |
| Return Over Variable Expenses      |  | 118.26  | 178.26  | 131.08  |
| Return Over Total Expenses         |  | 25.34   | 70.74   | 14.21   |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](https://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** A seed rate of 91 lb./ac. is used for all soil zones.

**Fertilization:** Inoculant with the correct strains of rhizobium should be applied. Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: four lb./ac. N and 18 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, four lb./ac. N and 18 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and three lb./ac. N and 16 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation will help to reduce disease pressure by reducing pathogen levels in the field. Extended rotations are essential in fields with risk of aphanomyces root rot. Lentils are not competitive with weeds.

### Crop Protection

**Insect control:** Wireworms, cutworms lygus bugs, potato leafhopper, pea aphid and grasshoppers might require control. Seed treatments are available for wireworm control.

**Disease control:** Fungicides will offer protection against foliar diseases such as anthracnose. Fungicide application should be based on disease risk. This estimation includes the cost of a single fungicide application. In years with high disease pressure and extended periods of favourable environmental conditions, more than one fungicide application may be required.

**Weed control:** Lentils need to be kept weed-free until the 10 node stage to minimize yield losses. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       | ✓ | ✓ |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

\*\*Lentils are grown in the thin black soil zone that is transitional with the dark brown soil zone. Here, the right amount of moisture coupled with good growing conditions are fitting to obtain higher yields.

# 2022 Red Lentils

## Economics

### Revenue Per Acre

|  | My Farm | Brown    | Dark Brown | Black    |
|--|---------|----------|------------|----------|
| Target Yield (lb./ac.) (A)                 |         | 1,675.50 | 1,896.00   | 2,204.60 |
| Estimated Farm Gate Price (\$/lb.) (B)     |         | 0.35     | 0.35       | 0.35     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 586.43   | 663.60     | 771.61   |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 36.00         | 36.00         | 36.00         |
| - Seed Treatments/Inoculants                  |  | 4.15          | 4.15          | 4.15          |
| Fertilizer - Nitrogen                         |  | 5.33          | 5.86          | 7.06          |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 16.20         | 17.91         | 21.32         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 56.67         | 56.67         | 76.99         |
| - Insecticides                                |  | 15.22         | 15.22         | 15.22         |
| - Fungicides                                  |  | 20.00         | 20.00         | 20.00         |
| Machinery Operating - Fuel                    |  | 13.69         | 17.12         | 21.39         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 21.80         | 21.05         | 22.80         |
| Crop Insurance Premium                        |  | 11.15         | 11.36         | 11.19         |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 4.51          | 4.65          | 5.31          |
| <b>Total Variable Expenses (D)</b>            |  | <b>229.04</b> | <b>236.44</b> | <b>269.85</b> |
| Other Expenses/Acre                           |  |               |               |               |
| Building Repair                               |  | 0.52          | 0.69          | 0.95          |
| Property Taxes                                |  | 4.24          | 5.55          | 8.42          |
| Business Overhead                             |  | 2.09          | 3.19          | 3.74          |
| Machinery Depreciation                        |  | 36.41         | 41.06         | 46.47         |
| Building Depreciation                         |  | 1.10          | 1.45          | 2.00          |
| Machinery Investment                          |  | 14.04         | 15.83         | 17.92         |
| Building Investment                           |  | 0.36          | 0.48          | 0.66          |
| Land Investment                               |  | 34.16         | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b>               |  | <b>92.92</b>  | <b>107.53</b> | <b>116.87</b> |
| Labour and Management* (F)                    |  |               |               |               |
| <b>Total Expenses (D+E+F)=(G)</b>             |  | <b>321.96</b> | <b>343.97</b> | <b>386.72</b> |

### Return Per Acre

| Return Over Variable Expenses (C-D) |  | 357.39 | 427.16 | 501.76   |
|-------------------------------------|--|--------|--------|----------|
| Return Over Total Expenses (C-G)    |  | 264.47 | 319.63 | 384.89   |
| Break Even Yield (lbs./ac.)         |  |        |        |          |
| To Cover Variable Expenses          |  | 654.40 | 675.54 | 771.01   |
| To Cover Total Expenses             |  | 919.90 | 982.76 | 1,104.93 |
| Break Even Price (\$/lb.).          |  |        |        |          |
| To Cover Variable Expenses          |  | 0.14   | 0.12   | 0.12     |
| To Cover Total Expenses             |  | 0.19   | 0.18   | 0.18     |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |          |          |          |
|------------------------------------|--|----------|----------|----------|
| Provincial Average Yield (lb./ac.) |  | 1,300.70 | 1,455.10 | 1,741.70 |
| Return Over Variable Expenses      |  | 226.21   | 272.85   | 339.75   |
| Return Over Total Expenses         |  | 133.29   | 165.32   | 222.88   |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](https://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** A seed rate of 60 lb./ac. is used for all soil zones.

**Fertilization:** Inoculant with the correct strains of rhizobium should be applied. Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: five lb./ac. N and 25 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, four lb./ac. N and 21 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and four lb./ac. N and 19 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation will help to reduce disease pressure by reducing pathogen levels in the field. Extended rotations are essential in fields with risk of aphanomyces root rot. Lentils are not competitive with weeds.

### Crop Protection

**Insect control:** Wireworms, cutworms, lygus bugs, potato leafhopper, pea aphid and grasshoppers might require control. Seed treatments are available for wireworm control.

**Disease control:** Fungicides will offer protection against foliar diseases such as anthracnose. Fungicide application should be based on disease risk. This estimation includes the cost of a single fungicide application. In years with high disease pressure and extended periods of favourable environmental conditions, more than one fungicide application may be required.

**Weed control:** Lentils need to be kept weed free until the 10 node stage to minimize yield losses. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       | ✓ |   | ✓           |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

\*\*Lentils are grown in the thin black soil zone that is transitional with the dark brown soil zone. Here, the right amount of moisture coupled with good growing conditions are fitting to obtain higher yields.



# 2022 Edible Green Peas

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 39.3   | 48.1       | 55.1   |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 14.00  | 14.00      | 14.00  |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 550.48 | 673.82     | 771.68 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 53.43         | 60.84         | 68.64         |
| - Seed Treatments/Inoculants                  |  | 9.47          | 10.79         | 12.17         |
| Fertilizer - Nitrogen                         |  | 8.39          | 10.39         | 11.85         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 25.58         | 31.55         | 35.81         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 69.34         | 66.08         | 72.41         |
| - Insecticides                                |  | 15.22         | 15.22         | 15.22         |
| - Fungicides                                  |  | 14.18         | 14.18         | 14.18         |
| Machinery Operating - Fuel                    |  | 13.69         | 17.12         | 21.39         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 20.30         | 20.30         | 20.30         |
| Crop Insurance Premium                        |  | 5.70          | 5.14          | 6.01          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 5.21          | 5.58          | 6.15          |
| <b>Total Variable Expenses (D)</b>            |  | <b>264.84</b> | <b>283.64</b> | <b>312.56</b> |

### Other Expenses/Acre

|                                 |  |              |               |               |
|---------------------------------|--|--------------|---------------|---------------|
| Building Repair                 |  | 0.52         | 0.69          | 0.95          |
| Property Taxes                  |  | 4.24         | 5.55          | 8.42          |
| Business Overhead               |  | 2.09         | 3.19          | 3.74          |
| Machinery Depreciation          |  | 36.41        | 41.06         | 46.47         |
| Building Depreciation           |  | 1.10         | 1.45          | 2.00          |
| Machinery Investment            |  | 14.04        | 15.83         | 17.92         |
| Building Investment             |  | 0.36         | 0.48          | 0.66          |
| Land Investment                 |  | 34.16        | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> | <b>107.53</b> | <b>116.87</b> |

Labour and Management\* (F)

|                                   |  |               |               |               |
|-----------------------------------|--|---------------|---------------|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>357.76</b> | <b>391.16</b> | <b>429.43</b> |
|-----------------------------------|--|---------------|---------------|---------------|

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 285.64 | 390.18 | 459.12 |
| Return Over Total Expenses (C-G)    |  | 192.72 | 282.66 | 342.25 |

### Break Even Yield (bu./ac.)

|                            |  |       |       |       |
|----------------------------|--|-------|-------|-------|
| To Cover Variable Expenses |  | 18.92 | 20.26 | 22.33 |
| To Cover Total Expenses    |  | 25.55 | 27.94 | 30.67 |

### Break Even Price (\$/bu.)

|                            |  |      |      |      |
|----------------------------|--|------|------|------|
| To Cover Variable Expenses |  | 6.74 | 5.89 | 5.67 |
| To Cover Total Expenses    |  | 9.10 | 8.13 | 7.79 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |        |        |
|------------------------------------|--|--------|--------|--------|
| Provincial Average Yield (bu./ac.) |  | 30.13  | 38.95  | 44.83  |
| Return Over Variable Expenses      |  | 156.98 | 261.66 | 315.06 |
| Return Over Total Expenses         |  | 64.06  | 154.14 | 198.19 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production. Note that the yield data used in this calculation combines both yellow and green peas. Producers are reminded to insert their own target yields.

**Seeding:** A seed rate of 176 lb./ac. is used in the black soil zone, 156 lb./ac. in the dark brown soil zone and 137 lb./ac. in the brown soil zone.

**Fertilization:** Inoculant with the correct strains of rhizobium should be applied. Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 10 lb./ac. N and 47 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, nine lb./ac. N and 40 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and seven lb./ac. N and 33 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation will help to reduce pea leaf weevil and disease pressure by reducing pathogen levels in the field. Extended rotations are essential in fields with risk of aphanomyces root rot.

### Crop Protection

**Insect control:** Wireworms, cutworms, lygus bugs, leafhoppers, pea aphid, grasshoppers, alfalfa looper and pea leaf weevil might require control. Seed treatments are available for wireworm and pea leaf weevil control. Refer to the ministry's forecasts of local pea leaf weevil pressures at [saskatchewan.ca/crops](http://saskatchewan.ca/crops).

**Disease control:** Fungicides will offer protection against foliar diseases such as mycosphaerella blight. This estimation includes the cost of a single fungicide application. Fungicide application should be based on disease risk.

**Weed control:** Weeds in peas need to be controlled until 10 to 14 days after emergence to minimize yield losses. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       |   | ✓ |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Edible Yellow Peas

## Economics

### Revenue Per Acre

|  | My Farm | Brown  | Dark Brown | Black  |
|--|---------|--------|------------|--------|
| Target Yield (bu./ac.) (A)                 |         | 39.3   | 48.1       | 55.1   |
| Estimated Farm Gate Price (\$/bu.) (B)     |         | 12.00  | 12.00      | 12.00  |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |         | 471.84 | 577.56     | 661.44 |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |               |               |
|---|--|---------------|---------------|---------------|
| Seed  |  | 55.20         | 63.20         | 71.20         |
| - Seed Treatments/Inoculants                  |  | 9.54          | 10.93         | 12.31         |
| Fertilizer - Nitrogen                         |  | 8.39          | 10.39         | 11.85         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 25.58         | 31.55         | 35.81         |
| - Sulphur and Other                           |  | 0.00          | 0.00          | 0.00          |
| Plant Protection - Herbicides                 |  | 69.34         | 66.08         | 72.41         |
| - Insecticides                                |  | 15.22         | 15.22         | 15.22         |
| - Fungicides                                  |  | 14.18         | 14.18         | 14.18         |
| Machinery Operating - Fuel                    |  | 13.69         | 17.12         | 21.39         |
| - Repair                                      |  | 8.85          | 9.98          | 11.29         |
| Custom Work and Hired Labour                  |  | 20.30         | 20.30         | 20.30         |
| Crop Insurance Premium                        |  | 5.70          | 5.14          | 6.01          |
| Hail Insurance Premium                        |  | 12.25         | 12.25         | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          | 4.23          | 4.88          |
| Interest on Variable Expenses                 |  | 5.25          | 5.63          | 6.20          |
| <b>Total Variable Expenses (D)</b>            |  | <b>266.72</b> | <b>286.19</b> | <b>315.31</b> |

### Other Expenses/Acre

|                                   |  |               |               |               |
|-----------------------------------|--|---------------|---------------|---------------|
| Building Repair                   |  | 0.52          | 0.69          | 0.95          |
| Property Taxes                    |  | 4.24          | 5.55          | 8.42          |
| Business Overhead                 |  | 2.09          | 3.19          | 3.74          |
| Machinery Depreciation            |  | 36.41         | 41.06         | 46.47         |
| Building Depreciation             |  | 1.10          | 1.45          | 2.00          |
| Machinery Investment              |  | 14.04         | 15.83         | 17.92         |
| Building Investment               |  | 0.36          | 0.48          | 0.66          |
| Land Investment                   |  | 34.16         | 39.28         | 36.72         |
| <b>Total Other Expenses (E)</b>   |  | <b>92.92</b>  | <b>107.53</b> | <b>116.87</b> |
| Labour and Management* (F)        |  |               |               |               |
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>359.64</b> | <b>393.71</b> | <b>432.18</b> |

### Return Per Acre

|                                     |  |        |        |        |
|-------------------------------------|--|--------|--------|--------|
| Return Over Variable Expenses (C-D) |  | 205.12 | 291.37 | 346.13 |
| Return Over Total Expenses (C-G)    |  | 112.20 | 183.85 | 229.26 |
| <b>Break Even Yield (bu./ac.)</b>   |  |        |        |        |
| To Cover Variable Expenses          |  | 22.23  | 23.85  | 26.28  |
| To Cover Total Expenses             |  | 29.97  | 32.81  | 36.02  |

### Break Even Price (\$/bu.)

|                            |  |      |      |      |
|----------------------------|--|------|------|------|
| To Cover Variable Expenses |  | 6.78 | 5.95 | 5.72 |
| To Cover Total Expenses    |  | 9.15 | 8.18 | 7.84 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |        |        |
|------------------------------------|--|--------|--------|--------|
| Provincial Average Yield (bu./ac.) |  | 30.13  | 38.95  | 44.83  |
| Return Over Variable Expenses      |  | 107.09 | 193.46 | 234.90 |
| Return Over Total Expenses         |  | 14.17  | 85.94  | 118.03 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production. Note that the yield data used in this calculation combines both yellow and green peas. Producers are reminded to insert their own target yields.

**Seeding:** A seed rate of 178 lb./ac. is used in the black soil zone, 158 lb./ac. in the dark brown soil zone and 138 lb./ac. in the brown soil zone.

**Fertilization:** Inoculant with the correct strains of rhizobium should be applied. Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: nine lb./ac. N and 42 lb./ac. P<sub>2</sub>O<sub>5</sub> for the black soil zone, eight lb./ac. N and 37 lb./ac. P<sub>2</sub>O<sub>5</sub> for the dark brown soil zone and six lb./ac. N and 30 lb./ac. P<sub>2</sub>O<sub>5</sub> for the brown soil zone. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation will help to reduce pea leaf weevil and disease pressure by reducing pathogen levels in the field. Extended rotations are essential in fields with risk of aphanomyces root rot.

### Crop Protection

**Insect control:** Wireworms, cutworms, lygus bugs, leafhoppers, pea aphid, grasshoppers, alfalfa looper and pea leaf weevil might require control. Seed treatments are available for wireworm and pea leaf weevil control. Refer to the ministry's forecasts of local pea leaf weevil pressures at [saskatchewan.ca/crops](http://saskatchewan.ca/crops).

**Disease control:** Fungicides will offer protection against foliar diseases, such as mycosphaerella blight. This estimation includes the cost of a single fungicide application. Fungicide application should be based on disease risk.

**Weed control:** Weeds in peas need to be controlled until 10 to 14 days after emergence to minimize yield losses. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       |   | ✓ |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Black Bean

## Economics

| My Farm | Dark Brown |
|---------|------------|
|---------|------------|

### Revenue Per Acre

|                                    |  |          |
|------------------------------------|--|----------|
| Target Yield (lb./ac.) (A)         |  | 1,200.00 |
| Est. Farm Gate Price \$/lb. (B)    |  | 0.33     |
| Estimated Gross Revenue/ac (AxB)=C |  | 396.00   |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |
|---|--|---------------|
| Seed  |  | 75.02         |
| - Seed Treatments/Inoculants                  |  | 3.80          |
| Fertilizer - Nitrogen                         |  | 26.63         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 5.97          |
| - Sulphur and Other                           |  | 0.00          |
| Plant Protection - Herbicides                 |  | 60.02         |
| - Insecticides                                |  | 5.73          |
| - Fungicides                                  |  | 6.67          |
| Machinery Operating - Fuel                    |  | 17.12         |
| - Repair                                      |  | 9.98          |
| Custom Work and Hired Labour                  |  | 19.80         |
| Crop Insurance Premium                        |  | 15.38         |
| Hail Insurance Premium                        |  | 12.25         |
| Utilities and Miscellaneous                   |  | 4.23          |
| Interest on Variable Expenses                 |  | 5.27          |
| <b>Total Variable Expenses (D)</b>            |  | <b>267.87</b> |

### Other Expenses/Acre

|                                   |  |               |
|-----------------------------------|--|---------------|
| Building Repair                   |  | 0.69          |
| Property Taxes                    |  | 5.55          |
| Business Overhead                 |  | 3.19          |
| Machinery Depreciation            |  | 41.06         |
| Building Depreciation             |  | 1.45          |
| Machinery Investment              |  | 15.83         |
| Building Investment               |  | 0.48          |
| Land Investment                   |  | 39.28         |
| <b>Total Other Expenses (E)</b>   |  | <b>107.53</b> |
| Labour and Management* (F)        |  |               |
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>375.40</b> |

### Return Per Acre

|                                     |  |          |
|-------------------------------------|--|----------|
| Return Over Variable Expenses (C-D) |  | 128.13   |
| Return Over Total Expenses (C-G)    |  | 20.60    |
| <b>Break Even Yield (lbs./ac.)</b>  |  |          |
| To Cover Variable Expenses          |  | 811.73   |
| To Cover Total Expenses             |  | 1,137.56 |

### Break Even Price (\$/lb.)

|                            |  |      |
|----------------------------|--|------|
| To Cover Variable Expenses |  | 0.22 |
| To Cover Total Expenses    |  | 0.31 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |
|------------------------------------|--|--------|
| Provincial Average Yield (lb./ac.) |  | 870.00 |
| Return Over Variable Expenses      |  | 19.23  |
| Return Over Total Expenses         |  | -88.30 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** A seed rate of 55 lb./ac. is used. The dark brown soil zone is recommended.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 20 lb./ac. N and seven lb./ac. P<sub>2</sub>O<sub>5</sub>. Producers are encouraged to use their own rates based on soil tests. Black beans do not respond well to inoculant.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure and pathogen levels in the field.

### Crop Protection

**Insect control:** Aphids, leafhoppers, cutworms, corn borer and lygus bugs might require control.

**Disease control:** White mould and common bacterial blight are the most common diseases of black bean. This estimate includes a single fungicide application for white mould management.

**Weed control:** Black beans need to be maintained weed-free between the second trifoliate stage and the onset of flowering (three weeks to five or six weeks after emergence) to minimize yield loss. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        |   | ✓    | ✓       |   |   | ✓           |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Faba bean

## Economics

My Farm Black

### Revenue Per Acre

|  |          |
|--|----------|
| Target Yield (lb./ac.) (A)                 | 3,527.40 |
| Estimated Farm Gate Price (\$/lb.) (B)     | 0.23     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) | 811.30   |

### Expenses Per Acre

| Variable Expenses/Acre                        |               |
|---|---------------|
| Seed  | 72.40         |
| - Seed Treatments/Inoculants                  | 12.52         |
| Fertilizer - Nitrogen                         | 22.24         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) | 67.36         |
| - Sulphur and Other                           | 0.00          |
| Plant Protection - Herbicides                 | 56.45         |
| - Insecticides                                | 5.73          |
| - Fungicides                                  | 14.18         |
| Machinery Operating - Fuel                    | 19.82         |
| - Repair                                      | 11.29         |
| Custom Work and Hired Labour                  | 19.80         |
| Crop Insurance Premium                        | 8.39          |
| Hail Insurance Premium                        | 12.25         |
| Utilities and Miscellaneous                   | 4.88          |
| Interest on Variable Expenses                 | 6.57          |
| <b>Total Variable Expenses (D)</b>            | <b>333.88</b> |

### Other Expenses/Acre

|                                      |               |
|--------------------------------------|---------------|
| Building Repair                      | 0.95          |
| Property Taxes                       | 8.42          |
| Business Overhead                    | 3.74          |
| Machinery Depreciation <sup>28</sup> | 46.47         |
| Building Depreciation                | 2.00          |
| Machinery Investment                 | 17.92         |
| Building Investment                  | 0.66          |
| Land Investment                      | 36.72         |
| <b>Total Other Expenses (E)</b>      | <b>116.87</b> |

Labour and Management\* (F)

|                                   |               |
|-----------------------------------|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> | <b>450.75</b> |
|-----------------------------------|---------------|

### Return Per Acre

|                                     |        |
|-------------------------------------|--------|
| Return Over Variable Expenses (C-D) | 477.42 |
| Return Over Total Expenses (C-G)    | 360.55 |

### Break Even Yield (lbs./ac.)

|                            |          |
|----------------------------|----------|
| To Cover Variable Expenses | 1,451.64 |
| To Cover Total Expenses    | 1,959.78 |

### Break Even Price (\$/lb.)

|                            |      |
|----------------------------|------|
| To Cover Variable Expenses | 0.09 |
| To Cover Total Expenses    | 0.13 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |          |
|------------------------------------|----------|
| Provincial Average Yield (lb./ac.) | 2,667.60 |
| Return Over Variable Expenses      | 279.67   |
| Return Over Total Expenses         | 162.80   |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** A seed rate of 181 lb./ac. is used. Faba beans are recommended for the black soil zone.

**Fertilization:** Inoculant with correct strain of rhizobium should be applied. Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 17 lb./ac. N and 79 lb./ac. P<sub>2</sub>O<sub>5</sub>. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure by allowing infected crop residue to decompose between susceptible crops.

### Crop Protection

**Insect control:** Wireworms, cutworms, lygus bugs, potato leafhopper, pea aphid, grasshoppers and pea leaf weevil might require control. Seed treatments are available for wireworm and pea leaf weevil control. Refer to ministry forecasts of local pea leaf weevil pressures at [saskatchewan.ca/crops](http://saskatchewan.ca/crops).

**Disease control:** Chocolate spot is a foliar disease that can result in poor seed set and flower abortion. A single application of fungicides for the management of chocolate spot has been included in this estimate. Fungicide application should be based on disease risk within the growing season.

**Weed control:** Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       |   |   | ✓           |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.



# 2022 Camelina

## Economics

My Farm

Brown

### Revenue Per Acre

|  |          |
|--|----------|
| Target Yield (lbs./ac.) (A)                | 1,388.90 |
| Estimated Farm Gate Price (\$/lb.) (B)     | 0.30     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) | 416.67   |

### Expenses Per Acre

| Variable Expenses/Acre                        |               |
|---|---------------|
| Seed  | 33.00         |
| - Seed Treatments/Inoculants                  | 0.00          |
| Fertilizer - Nitrogen                         | 85.22         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) | 17.05         |
| - Sulphur and Other                           | 7.89          |
| Plant Protection - Herbicides                 | 53.07         |
| - Insecticides                                | 0.00          |
| - Fungicides                                  | 0.00          |
| Machinery Operating - Fuel                    | 18.92         |
| - Repair                                      | 8.85          |
| Custom Work and Hired Labour                  | 20.30         |
| Crop Insurance Premium                        | 4.19          |
| Hail Insurance Premium                        | 12.25         |
| Utilities and Miscellaneous                   | 3.23          |
| Interest on Variable Expenses                 | 5.30          |
| <b>Total Variable Expenses (D)</b>            | <b>269.27</b> |

### Other Expenses/Acre

|                                 |              |
|---------------------------------|--------------|
| Building Repair                 | 0.52         |
| Property Taxes                  | 4.24         |
| Business Overhead               | 2.09         |
| Machinery Depreciation          | 36.41        |
| Building Depreciation           | 1.10         |
| Machinery Investment            | 14.04        |
| Building Investment             | 0.36         |
| Land Investment                 | 34.16        |
| <b>Total Other Expenses (E)</b> | <b>92.92</b> |

Labour and Management\* (F)

**Total Expenses (D+E+F)=(G)** **362.19**

### Return Per Acre

|                                     |         |
|-------------------------------------|---------|
| Return Over Variable Expenses (C-D) | 147.40  |
| Return Over Total Expenses (C-G)    | 54.48   |
| <b>Break Even Yield (lbs./ac.)</b>  |         |
| To Cover Variable Expenses          | 898.00  |
| To Cover Total Expenses             | 1207.30 |

### Break Even Price (\$/lb.)

|                            |      |
|----------------------------|------|
| To Cover Variable Expenses | 0.19 |
| To Cover Total Expenses    | 0.26 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |         |
|------------------------------------|---------|
| Provincial Average Yield (lb./ac.) | 1124.40 |
| Return Over Variable Expenses      | 68.05   |
| Return Over Total Expenses         | -24.87  |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** A seed rate of 6 lb./ac. is used. Camelina is commonly grown in the brown soil zone.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 85 lb./ac. N, 20 lb./ac. P<sub>2</sub>O<sub>5</sub> and 15 lb./ac. S. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure by allowing infected crop residue to decompose between susceptible crops.

### Crop Protection

**Insect control:** Only one biological insecticide, with efficacy against bertha armyworm and diamondback moth, is registered for this crop.

**Disease control:** The cost of fungicide is not included in this estimate. A disease risk assessment is encouraged to guide fungicide application decisions.

**Weed control:** Camelina has no registered herbicide options other than a pre-harvest application of glyphosate in the previous crop to manage perennial weeds as well as a glyphosate burn off prior to seeding.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
| ✓                              |              | ✓        |   | ✓    | ✓       |   |   |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Canary Seed

## Economics

|         |            |
|---------|------------|
| My Farm | Dark Brown |
|---------|------------|

### Revenue Per Acre

|  |  |          |
|--|--|----------|
| Target Yield (lbs./ac.) (A)                |  | 1,719.60 |
| Estimated Farm Gate Price (\$/lb.) (B)     |  | 0.35     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |  | 601.86   |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |
|---|--|---------------|
| Seed  |  | 28.00         |
| - Seed Treatments/Inoculants                  |  | 0.00          |
| Fertilizer - Nitrogen                         |  | 75.90         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 40.93         |
| - Sulphur and Other                           |  | 38.38         |
| Plant Protection - Herbicides                 |  | 51.41         |
| - Insecticides                                |  | 9.49          |
| - Fungicides                                  |  | 7.15          |
| Machinery Operating - Fuel                    |  | 18.02         |
| - Repair                                      |  | 9.98          |
| Custom Work and Hired Labour                  |  | 22.05         |
| Crop Insurance Premium                        |  | 7.76          |
| Hail Insurance Premium                        |  | 12.25         |
| Utilities and Miscellaneous                   |  | 4.23          |
| Interest on Variable Expenses                 |  | 6.53          |
| <b>Total Variable Expenses (D)</b>            |  | <b>332.07</b> |

### Other Expenses/Acre

|                                 |  |               |
|---------------------------------|--|---------------|
| Building Repair                 |  | 0.69          |
| Property Taxes                  |  | 5.55          |
| Business Overhead               |  | 3.19          |
| Machinery Depreciation          |  | 41.06         |
| Building Depreciation           |  | 1.45          |
| Machinery Investment            |  | 15.83         |
| Building Investment             |  | 0.48          |
| Land Investment                 |  | 39.28         |
| <b>Total Other Expenses (E)</b> |  | <b>107.53</b> |

Labour and Management\* (F)

|                                   |  |               |
|-----------------------------------|--|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>439.60</b> |
|-----------------------------------|--|---------------|

### Return Per Acre

|                                     |  |         |
|-------------------------------------|--|---------|
| Return Over Variable Expenses (C-D) |  | 269.79  |
| Return Over Total Expenses (C-G)    |  | 162.26  |
| <b>Break Even Yield (lbs./ac.)</b>  |  |         |
| To Cover Variable Expenses          |  | 948.77  |
| To Cover Total Expenses             |  | 1255.99 |

### Break Even Price (\$/lb.)

|                            |  |      |
|----------------------------|--|------|
| To Cover Variable Expenses |  | 0.19 |
| To Cover Total Expenses    |  | 0.26 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |         |
|------------------------------------|--|---------|
| Provincial Average Yield (lb./ac.) |  | 1300.70 |
| Return Over Variable Expenses      |  | 123.18  |
| Return Over Total Expenses         |  | 15.65   |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column. Calculations provided are for the 80th percentile of production.

**Seeding:** A seeding rate of 35 lb./ac. is assumed. Canary seed is grown in all soil zones, but heavy clay soil is preferred.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 63 lb./ac. N, 54 lb./ac. P<sub>2</sub>O<sub>5</sub>, 33 lb./ac. K<sub>2</sub>O and 17 lb./ac. S. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure by allowing infected crop residue to decompose between susceptible crops.

### Crop Protection

**Insect control:** Canary seed is susceptible to aphids, so an insecticide application to manage for aphids is assumed.

**Disease control:** Septoria leaf mottle is a foliar disease of canary seed that can result in yield losses when environmental conditions favour disease development. A single fungicide application for septoria leaf mottle has been included in this estimate. Fungicide application decisions should be made based on disease risk during the growing season.

**Weed control:** Canary seed has limited herbicide options for grass control making application of a soil-active for wild oat control a necessity. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        | ✓ | ✓    | ✓       |   |   |             |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Caraway (Second Season)\*

## Economics

My Farm

Black

### Revenue Per Acre

|  |        |
|--|--------|
| Target Yield (lbs./ac.) (A)                | 850.00 |
| Estimated Farm Gate Price (\$/lb.) (B)     | 0.95   |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) | 807.50 |

### Expenses Per Acre

#### Variable Expenses/Acre

|   |               |
|---|---------------|
| Seed  | 10.20         |
| - Seed Treatments/Inoculants                  | 0.00          |
| Fertilizer - Nitrogen                         | 59.92         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) | 29.84         |
| - Sulphur and Other                           | 22.07         |
| Plant Protection - Herbicides                 | 62.56         |
| - Insecticides                                | 0.00          |
| - Fungicides                                  | 0.00          |
| Machinery Operating - Fuel                    | 36.03         |
| - Repair                                      | 22.58         |
| Custom Work and Hired Labour                  | 19.80         |
| Crop Insurance Premium                        | 19.68         |
| Hail Insurance Premium                        | 12.25         |
| Utilities and Miscellaneous                   | 4.88          |
| Interest on Variable Expenses                 | 6.02          |
| <b>Total Variable Expenses (D)</b>            | <b>305.85</b> |

#### Other Expenses/Acre (for two years since biennial)

|                                   |               |
|-----------------------------------|---------------|
| Building Repair                   | 1.89          |
| Property Taxes                    | 16.84         |
| Business Overhead                 | 7.48          |
| Machinery Depreciation            | 92.94         |
| Building Depreciation             | 4.00          |
| Machinery Investment              | 19.54         |
| Building Investment               | 1.32          |
| Land Investment                   | 73.43         |
| <b>Total Other Expenses (E)</b>   | <b>217.45</b> |
| Labour and Management*** (F)      |               |
| <b>Total Expenses (D+E+F)=(G)</b> | <b>523.30</b> |

### Return Per Acre (after two years)

|                                     |        |
|-------------------------------------|--------|
| Return Over Variable Expenses (C-D) | 501.65 |
| Return Over Total Expenses (C-G)    | 284.20 |
| <b>Break Even Yield (lbs./ac.)</b>  |        |
| To Cover Variable Expenses          | 321.95 |
| To Cover Total Expenses             | 550.84 |

#### Break Even Price (\$/lb.)

|                            |      |
|----------------------------|------|
| To Cover Variable Expenses | 0.36 |
| To Cover Total Expenses    | 0.62 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |        |
|------------------------------------|--------|
| Provincial Average Yield (lb./ac.) | 551.20 |
| Return Over Variable Expenses      | 217.79 |
| Return Over Total Expenses         | 0.34   |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** Seed rate of 12 lb./ac. is used. Caraway is primarily a biennial crop and typically seeded with a companion crop so that the field provides a return in both crop years. Caraway and coriander have the same management cost. Therefore, if no companion crop is sown, include production costs used for coriander, with the exception of seeding, harvest and handling, to account for management costs of caraway in the first year. Recommended soil is black.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 64 lb./ac. N, 50 lb./ac. P<sub>2</sub>O<sub>5</sub> and 29 lb./ac. K<sub>2</sub>O. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure by allowing infected crop residue to decompose between susceptible crops. Crops in the carrot family are very sensitive to Group 2 residues in the soil. Please refer to the ministry's Guide to Crop Protection available at [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for more information.

### Crop Protection

**Insect control:** A limited number of registered products are available for slugs in field crops.

**Disease control:** The cost of fungicide is not included in this estimate. Blossom blight can result in yield losses when conditions favor disease development.

**Weed control:** Herbicide costs below are only for the second year of production. If caraway is not companion cropped in the first year, it requires the same weed control as coriander. Refer to the coriander section for more information. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used (Second Year Only) |              |          |   |      |         |   |   |
|---|--------------|----------|---|------|---------|---|---|
| Pre-harvest                                       | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|   |              | 1        | 2 |      | 1       | 2 | 3 |
|   |              |          |   |      | ✓       | ✓ |   |

\* These expenses are for the second year of production only. The first year is identical to coriander.

\*\* These other costs are carried for two years because caraway is a biennial crop. If a cover crop is grown and harvested in the first year, these costs could be halved.

\*\*\* Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Coriander (and Caraway First Season)

## Economics

My Farm Dark Brown

### Revenue Per Acre

|  |          |
|--|----------|
| Target Yield (lbs./ac.) (A)                | 1,212.50 |
| Estimated Farm Gate Price (\$/lb.) (B)     | 0.60     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) | 727.50   |

### Expenses Per Acre

| Variable Expenses/Acre                        |               |
|---|---------------|
| Seed  | 15.00         |
| - Seed Treatments/Inoculants                  | 0.00          |
| Fertilizer - Nitrogen                         | 83.89         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) | 30.69         |
| - Sulphur and Other                           | 0.00          |
| Plant Protection - Herbicides                 | 65.41         |
| - Insecticides                                | 0.00          |
| - Fungicides                                  | 34.99         |
| Machinery Operating - Fuel                    | 18.02         |
| - Repair                                      | 9.98          |
| Custom Work and Hired Labour                  | 19.80         |
| Crop Insurance Premium                        | 10.75         |
| Hail Insurance Premium                        | 12.25         |
| Utilities and Miscellaneous                   | 4.23          |
| Interest on Variable Expenses                 | 6.12          |
| <b>Total Variable Expenses (D)</b>            | <b>311.13</b> |

### Other Expenses/Acre

|                                 |               |
|---------------------------------|---------------|
| Building Repair                 | 0.69          |
| Property Taxes                  | 5.55          |
| Business Overhead               | 3.19          |
| Machinery Depreciation          | 41.06         |
| Building Depreciation           | 1.45          |
| Machinery Investment            | 15.83         |
| Building Investment             | 0.48          |
| Land Investment                 | 39.28         |
| <b>Total Other Expenses (E)</b> | <b>107.53</b> |

Labour and Management\* (F)

|                                   |               |
|-----------------------------------|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> | <b>418.66</b> |
|-----------------------------------|---------------|

### Return Per Acre

|                                     |        |
|-------------------------------------|--------|
| Return Over Variable Expenses (C-D) | 416.37 |
| Return Over Total Expenses (C-G)    | 308.84 |
| <b>Break Even Yield (lbs./ac.)</b>  |        |
| To Cover Variable Expenses          | 518.55 |
| To Cover Total Expenses             | 697.76 |

### Break Even Price (\$/lb.)

|                            |      |
|----------------------------|------|
| To Cover Variable Expenses | 0.26 |
| To Cover Total Expenses    | 0.35 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |        |
|------------------------------------|--------|
| Provincial Average Yield (lb./ac.) | 925.90 |
| Return Over Variable Expenses      | 244.41 |
| Return Over Total Expenses         | 136.88 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** A seed rate of 25 lb./ac. is used. The dark brown soil zone is recommended.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 63 lb./ac. N and 36 lb./ac. P<sub>2</sub>O<sub>5</sub>. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure. Crops in the carrot family are very sensitive to Group 2 residues in the soil. Please refer to the ministry's Guide to Crop Protection available at [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for more information.

### Crop Protection

**Insect control:** A limited number of insecticides are registered for aphid and slug control.

**Disease control:** Blossom blight can result in yield losses when conditions favour disease development. A single application of fungicide for blossom blight management is included in this estimate. Fungicide applications should be made based on disease risk during the growing season.

**Weed control:** Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        |   | ✓    | ✓       | ✓ |   |             |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.



# 2022 Fenugreek

## Economics

My Farm

Brown

### Revenue Per Acre

|  |  |          |
|--|--|----------|
| Target Yield (lbs./ac.) (A)                |  | 1,175.00 |
| Estimated Farm Gate Price (\$/lb.) (B)     |  | 0.28     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |  | 329.00   |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |
|---|--|---------------|
| Seed  |  | 15.00         |
| - Seed Treatments/Inoculants                  |  | 0.00          |
| Fertilizer - Nitrogen                         |  | 3.99          |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 11.94         |
| - Sulphur and Other                           |  | 0.00          |
| Plant Protection - Herbicides                 |  | 29.53         |
| - Insecticides                                |  | 0.00          |
| - Fungicides                                  |  | 0.00          |
| Machinery Operating - Fuel                    |  | 15.31         |
| - Repair                                      |  | 8.85          |
| Custom Work and Hired Labour                  |  | 19.80         |
| Crop Insurance Premium                        |  | 0.00          |
| Hail Insurance Premium                        |  | 12.25         |
| Utilities and Miscellaneous                   |  | 3.23          |
| Interest on Variable Expenses                 |  | 2.41          |
| <b>Total Variable Expenses (D)</b>            |  | <b>122.31</b> |

### Other Expenses/Acre

|                                 |  |              |
|---------------------------------|--|--------------|
| Building Repair                 |  | 0.52         |
| Property Taxes                  |  | 4.24         |
| Business Overhead               |  | 2.09         |
| Machinery Depreciation          |  | 36.41        |
| Building Depreciation           |  | 1.10         |
| Machinery Investment            |  | 14.04        |
| Building Investment             |  | 0.36         |
| Land Investment                 |  | 34.16        |
| <b>Total Other Expenses (E)</b> |  | <b>92.92</b> |

Labour and Management\* (F)

|                                   |  |               |
|-----------------------------------|--|---------------|
| <b>Total Expenses (D+E+F)=(G)</b> |  | <b>215.23</b> |
|-----------------------------------|--|---------------|

### Return Per Acre

|                                     |  |        |
|-------------------------------------|--|--------|
| Return Over Variable Expenses (C-D) |  | 206.69 |
| Return Over Total Expenses (C-G)    |  | 113.77 |
| <b>Break Even Yield (lbs./ac.)</b>  |  |        |
| To Cover Variable Expenses          |  | 436.83 |
| To Cover Total Expenses             |  | 768.70 |

### Break Even Price (\$/lb.)

|                            |  |      |
|----------------------------|--|------|
| To Cover Variable Expenses |  | 0.10 |
| To Cover Total Expenses    |  | 0.18 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |
|------------------------------------|--|--------|
| Provincial Average Yield (lb./ac.) |  | 740.30 |
| Return Over Variable Expenses      |  | 84.97  |
| Return Over Total Expenses         |  | -7.95  |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** A seed rate of 30 lb./ac. is used. The brown soil zone is recommended.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: three lb./ac. N and 14 lb./ac. P<sub>2</sub>O<sub>5</sub>. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure and pathogen levels in the field.

### Crop Protection

**Disease control:** The cost of fungicide is not included in this estimate. A disease risk assessment is encouraged to guide fungicide application decisions.

**Weed control:** Fenugreek has limited herbicide options. Herbicide costs are based on the following herbicide timings. Please refer to general assumptions for details.

| Application Timing Window Used |              |          |   |      |         |   |   |
|--------------------------------|--------------|----------|---|------|---------|---|---|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |
| ✓                              |              | ✓        |   |      | ✓       |   |   |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.

# 2022 Quinoa

## Economics

My Farm      Black

### Revenue Per Acre

|  |  |          |
|--|--|----------|
| Target Yield (lbs./ac.) (A)                |  | 1,000.00 |
| Estimated Farm Gate Price (\$/lb.) (B)     |  | 0.80     |
| Estimated Gross Revenue (\$/ac.) (AxB)=(C) |  | 800.00   |

### Expenses Per Acre

| Variable Expenses/Acre                        |  |               |
|---|--|---------------|
| Seed  |  | 63.00         |
| - Seed Treatments/Inoculants                  |  | 0.00          |
| Fertilizer - Nitrogen                         |  | 55.93         |
| - Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |  | 15.35         |
| - Sulphur and Other                           |  | 14.72         |
| Plant Protection - Herbicides                 |  | 11.40         |
| - Insecticides                                |  | 21.45         |
| - Fungicides                                  |  | 0.00          |
| Machinery Operating - Fuel                    |  | 15.31         |
| - Repair                                      |  | 11.29         |
| Custom Work and Hired Labour                  |  | 19.80         |
| Crop Insurance Premium                        |  | 0.00          |
| Hail Insurance Premium                        |  | 12.25         |
| Utilities and Miscellaneous                   |  | 4.88          |
| Interest on Variable Expenses                 |  | 4.92          |
| <b>Total Variable Expenses (D)</b>            |  | <b>250.30</b> |
| Other Expenses/Acre                           |  |               |
| Building Repair                               |  | 0.95          |
| Property Taxes                                |  | 8.42          |
| Business Overhead                             |  | 3.74          |
| Machinery Depreciation                        |  | 46.47         |
| Building Depreciation                         |  | 2.00          |
| Machinery Investment                          |  | 17.92         |
| Building Investment                           |  | 0.66          |
| Land Investment                               |  | 36.72         |
| <b>Total Other Expenses (E)</b>               |  | <b>116.87</b> |
| Labour and Management* (F)                    |  |               |
| <b>Total Expenses (D+E+F)=(G)</b>             |  | <b>367.18</b> |

### Return Per Acre

| Return Over Variable Expenses (C-D) |  | 549.70 |
|-------------------------------------|--|--------|
| Return Over Total Expenses (C-G)    |  | 432.82 |
| Break Even Yield (lbs./ac.)         |  |        |
| To Cover Variable Expenses          |  | 312.88 |
| To Cover Total Expenses             |  | 458.97 |

### Break Even Price (\$/lb.)

|                            |  |      |
|----------------------------|--|------|
| To Cover Variable Expenses |  | 0.25 |
| To Cover Total Expenses    |  | 0.37 |

### Yield Sensitivity (same expenses, but average yield)

|                                    |  |        |
|------------------------------------|--|--------|
| Provincial Average Yield (lb./ac.) |  | 630.00 |
| Return Over Variable Expenses      |  | 253.70 |
| Return Over Total Expenses         |  | 136.82 |

## Agronomics

Note: refer to the online calculator on [saskatchewan.ca/crops](http://saskatchewan.ca/crops) for the "My Farm" column.

**Seeding:** A seed rate of 10 lb./ac. is used. The black soil zone is recommended.

**Fertilization:** Fertility costs are based on nutrient removal rates given the targeted crop yield. These are: 42 lb./ac. N, 18 lb./ac. P<sub>2</sub>O<sub>5</sub>, 11 lb./ac. K<sub>2</sub>O and six lb./ac. S. Producers are encouraged to use their own rates based on soil tests.

**Crop Rotation:** Crop rotation can be used to reduce disease pressure and pathogen levels in the field.

### Crop Protection

**Insect control:** A limited number of insecticides are registered for European corn borer control.

**Disease control:** The cost of fungicide is not included in this estimate. A disease risk assessment is encouraged to guide fungicide application decisions.

**Weed control:** Quinoa has no registered herbicide options. However, producers can apply a pre-harvest application of glyphosate in the previous crop to manage perennial weeds, as well as a glyphosate burn off prior to seeding. Please see below chart and refer to general assumptions for details on pre-harvest glyphosate application.

| Application Timing Window Used |              |          |   |      |         |   |   |             |
|--------------------------------|--------------|----------|---|------|---------|---|---|-------------|
| Pre-harvest                    | Fall-applied | Pre-seed |   | Soil | In-crop |   |   | Desiccation |
|                                |              | 1        | 2 |      | 1       | 2 | 3 |             |
| ✓                              |              | ✓        |   |      |         |   |   |             |

\*Farm managers need to determine their own actual labour and management costs and add it to total expenses.



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