

2020 Cropping Alternatives

Crop Budget Planning



February 2020

Alberta 

Ministry of Agriculture and Forestry, Government of Alberta
February 2020
2020 Cropping Alternatives

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Any questions about the underlying assumptions or interpretation of this report can be addressed to Manglai.

Table of Contents

| | |
|--|----|
| Cropping Alternatives Methodology | 4 |
| Table 1. Seeding Rate by Alberta Soil Zones | 7 |
| Table 2. Chemical Application by Alberta Soil Zones (\$/acre) | 7 |
| Table 3. 2020 Estimated Production Costs and Returns (\$/acre) Black Soils | 8 |
| Table 4. 2020 Estimated Production Costs and Returns (\$/acre) Brown Soils | 9 |
| Table 5. 2020 Estimated Production Costs and Returns (\$/acre) Dark Brown Soils | 10 |
| Table 6. 2020 Estimated Production Costs and Returns (\$/acre) Grey-Wooded Soils | 11 |
| Table 7. 2020 Estimated Production Costs and Returns (\$/acre) Grey-Wooded (Peace Region) | 12 |
| Table 8. 2020 Estimated Production Costs and Returns (\$/acre) Irrigated Soils | 13 |

Cropping Alternatives Methodology

Disclaimer:

The following regional forecasts are based on the most current cost of production information from the AgriProfit\$ Business Analysis & Research Program and estimates of expected revenues and costs from various sources. Producers should use their own costs and revenue projections to make cropping decisions for farm operations. There is a risk of over or under-estimating costs and returns based on regional benchmarks and forecasts. Producers are advised not to base cropping decisions solely on information provided in the following budgets. The Alberta Agriculture and Forestry crop budgeting software program **CropChoice\$** and the **Crop Budget Calculator** are available to customize your own crop budgets. You can download both CropChoice\$ software and the Crop Budget Calculator free of charge.

Prices:

Expected market prices are estimates ONLY, based on forecasts for the 2020 crop year. Prices in these budgets are estimated by Agriculture and Forestry specialists using several price outlook sources including Informa Economics forecasts, and Agriculture and Agri-Food Canada's Market Outlook Reports. Estimated prices are adjusted to reflect location differences and grade factors. Using one's own price estimates from knowledge of area markets and market outlook information is recommended.

Yields:

There is a wide range of yields within each soil zone region. Yield estimates by crop represent average long-term trend yields developed by Alberta Financial Services Corporation adjusted upwards by 20 per cent for dryland soil zones and 15 per cent for irrigated zones. For red lentils, where long-term yields are not available, crop specialists' recommendations have been used.

Seed Costs: (See the following Seeding Rate Table.)

Seed costs are based on data collected by the Alberta Farm Input Prices Survey (AIMS) and seed suppliers as well as a seed cost multiplier for a blend of certified and common seed that is cleaned and treated. Seeding rates for each soil zone are based on 1,000 kernel weight for common varieties, 90-95 per cent germination, 3-5 per cent emergence mortality, and 9" spacing. Seeding rates for forages are based on 1,000 kernel weight for common varieties, pure live seed and a 50-50 split of broadcasted and row seeded plantings.

Fertilizer Costs:

Prices are based on a combination of the fall 2019 prices, “pre-purchase” prices and fertilizer cost indications for spring 2020. Nitrogen, Phosphorous, Potassium, and Sulphur blends are based on estimated crop requirements for nutrient deficient, stubble-seeded crops in each soil zone.

| | | |
|-------------|--------------------|-------------------------------|
| Nitrogen | \$0.51/lb actual N | (\$520/tonne for 46-0-0) |
| Phosphorous | \$0.46/lb actual P | (\$645/tonne for 11-52-0) |
| Potassium | \$0.39/lb actual K | (\$515/tonne for 0-0-60) |
| Sulphur | \$0.44/lb actual S | (\$465/tonne for 20.5-0-0-24) |

Soil testing is recommended to optimize the fertilizer budget to field production capacity and crop choice. The Alberta Farm Fertilizer Information and Recommendation Manager (AFFIRM) is an Alberta Agriculture and Forestry software tool that can help producers optimize fertilizer requirements for crop production. Variable rate technology is also an option being used by producers to maximize production to fertilizer and input expenses. In a mature commodity market, managing costs could mean the difference between farm profitability and farm losses.

Chemical: (See the following Chemical Application Table.)

The 2020 chemical costs on stubble-seeded crops include a non-selective, pre-seed burn-off, and one in-crop herbicide application for broadleaf weeds, grassy weeds or both. For red lentils, 2019 chemical costs were used. Feed barley acreage sprayed for broadleaf weed control and a portion sprayed for wild oat control. Fungicides, insecticides and/or pre-harvest/desiccation applications (F/I/PH/D) are indicated by an asterisk (*).

Hail/Crop Insurance:

Insurance is based on information from Agriculture Financial Services Corporation (AFSC), averaged for select areas in respective soil zones.

Trucking & Marketing:

For grains and oilseeds, trucking and marketing costs are averages for short-haul and long-haul rates from cost suppliers. For hay, trucking and marketing costs are estimates from suppliers, assuming bales shipped are 1500 lb and distance hauled is between 50 and 100 kms. For silage, trucking and marketing costs are last year's estimates indexed for the 2020 year.

Fuel, Oil & Lube, Machinery Repairs, Building Repairs, Pumping Costs (Irrigation only), Labour (Paid and Unpaid), Utilities & Miscellaneous, Operating Interest, and Storage and/or Levies:

These costs are based on information collected by the AgriProfit\$ program, the Alberta Farm Input Prices Survey and irrigation specialists. Many of these costs are influenced significantly by differences in regional farming practices.

Operating Interest:

Five per cent per annum for inputs financed (seed, fertilizer and chemical).

Contribution Margin:

Contribution margin represents the amount a particular crop contributes to fixed costs, and return to management and equity. Use the contribution margin to compare crop choices.

Capital Costs by Enterprise:

Fixed costs generally do not vary greatly from crop to crop, but can vary between enterprises and soil zone regions. Average fixed cost profiles by enterprise are included for your information. The capital costs are indexed to reflect costs for the 2020 year.

Summerfallow:

The summerfallow column included in the Brown soil zone budget is only provided to reference the expected costs incurred in a non-crop year. Fallow-seeded crops are not included in this analysis because the summerfallow practice has significantly declined. Producers wanting to evaluate fallow-seeded crops can use CropChoice\$ and the Crop Budget Calculator.

Contribution Margin Calculation: Value of Production - Total Direct Expenses

Total Cost per Unit Calculation:

(Total Direct Expenses + Adjusted Capital Costs) divided by Expected Yield per Acre

Break-Even Yield Calculation:

(Total Direct Expenses + Adjusted Capital Costs) divided by Expected Market Price

Table 1. Seeding Rate by Alberta Soil Zones


| | Black | | | Brown | | | Dark Brown | | | Grey-Wooded | | | Peace Region | | | Irrigation | | |
|------------------|--------|-------|-------|--------|-------|-------|------------|-------|-------|-------------|-------|-------|--------------|-------|-------|------------|-------|-------|
| | lbs/ac | bu/ac | \$/ac | lbs/ac | bu/ac | \$/ac | lbs/ac | bu/ac | \$/ac | lbs/ac | bu/ac | \$/ac | lbs/ac | bu/ac | \$/ac | lbs/ac | bu/ac | \$/ac |
| spring wheat | | 2.25 | 25.88 | | 2 | 23.00 | | 2 | 23.00 | | 2.25 | 25.88 | | 2 | 23.00 | | 2.5 | 28.75 |
| cps wheat | | 2.25 | 25.88 | | 2 | 23.00 | | 2 | 23.00 | | 2.25 | 25.88 | | 2 | 23.00 | | 2.5 | 28.75 |
| durum wheat | | | | | 2 | 33.00 | | 2 | 33.00 | | | | | | | | 2.25 | 37.13 |
| soft white wheat | | | | | | | | | | | | | | | | | 2.25 | 26.44 |
| winter wheat | | | | | | | | 2 | 25.00 | | | | | | | | | |
| malt barley | | 2.25 | 25.88 | | 2 | 23.00 | | 2 | 23.00 | | 2.25 | 25.88 | | 2 | 23.00 | | 2.5 | 28.75 |
| feed barley | | 2.25 | 23.18 | | 2 | 20.60 | | 2 | 20.60 | | 2.25 | 23.18 | | 2 | 20.60 | | 2.5 | 25.75 |
| milling oats | | 3 | 13.46 | | 3 | 13.46 | | 3 | 13.46 | | 3 | 13.46 | | 3 | 13.46 | | | |
| argentine canola | 6 | | 57.75 | 5 | | 51.45 | 6 | | 57.75 | 5 | | 51.45 | 5 | | 52.50 | 5 | | 57.75 |
| polish canola | | | | | | | | | | | | | 4 | | 23.00 | | | |
| field pea | | 3.25 | 43.06 | | 3 | 39.75 | | 2.95 | 39.09 | | 3 | 39.75 | | 2.75 | 36.44 | | | |
| yellow mustard | | | | 10 | | 23.00 | 11 | | 24.15 | | | | | | | | | |
| chickpeas | | | | 120 | | 72.00 | | | | | | | | | | | | |
| green lentils | | | | 90 | | 36.00 | 90 | | 36.00 | | | | | | | | | |
| red lentils | | | | 60 | | 18.00 | 60 | | 18.00 | | | | | | | | | |
| flax | | | | | | | 65 | | 28.60 | | | | | | | | | |
| dry beans | | | | | | | | | | | | | | | | 60 | | 49.51 |
| cereal silage | | 2.75 | 22.69 | | | | | 2.25 | 18.56 | | 2.25 | 18.56 | | 2 | 16.50 | | 2.5 | 20.63 |
| mixed hay | 11 | | 3.94 | 10 | | 3.73 | 10 | | 3.73 | 11 | | 3.94 | 11 | | 3.94 | | | |
| alfalfa hay | 10 | | 9.00 | | | | | | | 10 | | 11.00 | 10 | | 11.00 | 14 | | 15.40 |

Table 2. Chemical Application by Alberta Soil Zones (\$/acre)

| | Black | | | Brown | | | Dark Brown | | | Grey-Wooded | | | Peace Region (Grey-Wooded) | | | Irrigation | | |
|------------------|---------|---------|---------|---------|---------|---------|------------|---------|---------|-------------|---------|---------|----------------------------|---------|---------|------------|---------|---------|
| | PreSeed | In Crop | F//PH/D | PreSeed | In Crop | F//PH/D | PreSeed | In Crop | F//PH/D | PreSeed | In Crop | F//PH/D | PreSeed | In Crop | F//PH/D | PreSeed | In Crop | F//PH/D |
| spring wheat | 4.04 | 24.37 | 7.71 | 3.84 | 23.15 | 6.41 | 3.84 | 23.15 | 6.41 | 4.04 | 24.37 | 4.82 | 4.04 | 24.37 | 4.82 | 4.04 | 24.37 | 9.64 |
| cps wheat | 4.04 | 24.37 | | 3.84 | 23.15 | | 3.84 | 23.15 | | 4.04 | 24.37 | | 4.04 | 24.37 | | 4.04 | 24.37 | 9.64 |
| durum wheat | | | | 3.84 | 23.15 | 6.41 | 3.84 | 23.15 | 6.41 | | | | | | | 4.04 | 24.37 | 9.64 |
| soft white wheat | | | | | | | | | | | | | | | | 4.04 | 24.37 | 9.64 |
| winter wheat | | | | | | | 3.84 | 9.71 | | | | | | | | | | |
| malt barley | 4.04 | 24.37 | | 3.84 | 23.15 | | 3.84 | 23.15 | | 4.04 | 24.37 | | 4.04 | 24.37 | | 4.04 | 24.37 | 9.64 |
| feed barley | 4.04 | 12.18 | | 3.84 | 11.57 | | 3.84 | 11.57 | | 4.04 | 12.18 | | 4.04 | 12.18 | | 4.04 | 12.18 | 4.04 |
| milling oats | 4.04 | 10.22 | | 3.84 | 9.71 | | 4.04 | 10.22 | | 4.04 | 10.22 | | 4.04 | 10.22 | | | | |
| argentine canola | 4.04 | 11.11 | | 3.84 | 10.56 | | 4.04 | 11.11 | | 4.04 | 11.11 | | 4.04 | 11.11 | | 4.04 | 11.11 | 21.22 |
| polish canola | | | | | | | | | | | | | 4.04 | 11.11 | | | | |
| field pea | 4.04 | 12.63 | 20.21 | 4.04 | 12.63 | | 4.04 | 12.63 | 20.21 | 4.04 | 12.63 | 20.21 | 4.04 | 12.63 | | | | |
| yellow mustard | | | | 4.04 | 9.09 | | 4.04 | 9.09 | | | | | | | | | | |
| chickpeas | | | | 10.36 | 12.12 | 19.99 | | | | | | | | | | | | |
| green lentils | | | | 19.20 | 17.93 | 23.84 | 19.20 | 17.75 | 23.84 | | | | | | | | | |
| red lentils | | | | 19.00 | 17.75 | 23.60 | 19.00 | 17.93 | 23.60 | | | | | | | | | |
| flax | | | | | | | 4.04 | 10.61 | | | | | | | | | | |
| dry beans | | | | | | | | | | | | | | | | 4.04 | 14.65 | 10.00 |
| cereal silage | 4.04 | 10.22 | | | | | 4.04 | 10.22 | | 4.04 | 10.22 | | 4.04 | 10.22 | | 4.04 | 10.22 | |
| mixed hay | 0.81 | | | 0.81 | | | 0.81 | | | 0.81 | | | 0.81 | | | | | |
| alfalfa hay | 1.01 | | | | | | | | | 1.01 | | | 1.01 | | | 1.21 | | |

Table 3. 2020 Estimated Production Costs and Returns (\$/acre) Black Soils

2020 Production Costs and Returns (\$/acre) Black Soils

| Stubble Seeded Crops | | | | | | | | | | |
|---|---------------------|---------------------|---------------------|----------------------|--------------------|------------------------|--------------------|--------------------|-------------------|--------------------|
|  | Spring Wheat | CPS Wheat | Feed Barley | Malt Barley | Milling Oats | Argentine HT Canola | Field Peas | Mixed Hay | Alfalfa Hay | Cereal Silage |
| | 2 CWRS 11.5% | 1 CPSR | 1 CW | Select CW 2R | 2 CW | 1 CAN | 2 CAN | | | |
| Expected Yield per Acre | 65.00 bu | 72.00 bu | 85.00 bu | 83.00 bu | 98.00 bu | 46.00 bu | 56.00 bu | 2.25 t | 2.50 t | 7.50 t |
| Expected Market Price | 6.70 /bu | 5.50 /bu | 4.25 /bu | 5.25 /bu | 3.35 /bu | 10.50 /bu | 7.00 /bu | 85.00 /t | 110.00 /t | 58.56 /t |
| Crop Sales (\$/acre) | 435.50 | 396.00 | 361.25 | 435.75 | 328.30 | 483.00 | 392.00 | 191.25 | 275.00 | 439.20 |
| Direct Expenses: | | | | | | | | | | |
| Seed, Cleaning & Treatment | 25.88 | 25.88 | 23.18 | 25.88 | 13.46 | 57.75 | 43.06 | 3.94 | 9.00 | 22.69 |
| Fertilizer (NPKS blend) | 59.00 80-30-10-0 | 59.00 80-30-10-0 | 59.00 80-30-10-0 | 62.00 70-30-20-10 | 50.00 70-30-0-0 | 84.50 100-40-15-20 | 22.50 5-30-15-0 | 14.50 15-15-0-0 | 14.00 5-25-0-0 | 45.00 65-25-0-0 |
| Chemical | 36.12 | 36.12 | 18.66 | 36.12 | 14.27 | 32.13 | 36.88 | 0.81 | 1.01 | 14.27 |
| Hail/Crop Insurance | 16.16 | 18.71 | 14.35 | 17.43 | 16.68 | 19.62 | 23.69 | NA | NA | NA |
| Trucking & Marketing | 22.87 | 25.33 | 24.47 | 23.90 | 19.85 | 16.19 | 19.70 | 54.76 | 60.03 | 23.99 |
| Fuel, Oil & Lube | 19.74 | 17.87 | 18.67 | 20.54 | 20.80 | 20.27 | 25.60 | 8.53 | 5.33 | 33.61 |
| Machinery Repairs | 17.70 | 17.44 | 13.85 | 17.19 | 13.85 | 15.65 | 18.21 | 15.39 | 7.18 | 11.29 |
| Building Repairs | 2.14 | 5.36 | 2.14 | 5.89 | 2.95 | 2.41 | 4.82 | 5.36 | 3.21 | 3.75 |
| Custom Work | 1.71 | 1.71 | 1.92 | 2.56 | 12.37 | 2.13 | 7.04 | 1.71 | 3.84 | 4.27 |
| Labour (Paid and Unpaid) | 18.62 | 22.76 | 15.00 | 24.31 | 20.17 | 19.14 | 22.76 | 25.86 | 11.38 | 33.10 |
| Utilities & Miscellaneous | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 | 12.59 | 12.59 | 6.27 | 6.27 | 7.18 |
| Operating Interest | 6.05 | 6.05 | 5.04 | 6.20 | 3.89 | 8.72 | 5.12 | 0.96 | 1.20 | 4.10 |
| Total Direct Expense | 236.32 | 246.56 | 206.62 | 252.35 | 198.62 | 291.09 | 241.98 | 138.10 | 122.46 | 203.23 |
| Contribution Margin | 199.18 | 149.44 | 154.63 | 183.40 | 129.68 | 191.91 | 150.02 | 53.15 | 152.54 | 235.97 |
| Total Cost per Unit | 6.00 | 5.56 | 4.24 | 4.89 | 3.59 | 9.66 | 7.06 | 108.69 | 91.57 | 41.29 |
| Break-Even Yield | 59.00 bu | 73.00 bu | 85.00 bu | 78.00 bu | 106.00 bu | 43.00 bu | 57.00 bu | 2.88 t | 2.08 t | 5.29 t |

| Capital Costs by Enterprise | Crops | Forages |
|-----------------------------|---------------|---------------|
| Crop Share/Cash Rent | 85.76 | 43.70 |
| Licenses and Insurance | 12.54 | 6.27 |
| Depreciation | 49.93 | 53.05 |
| Paid Capital Interest | 6.76 | 4.51 |
| Total Capital Costs | 154.98 | 107.53 |
| Adjusted Capital Costs | 153.43 | 106.45 |

Questions?
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Prepared Feb 21, 2020

Table 4. 2020 Estimated Production Costs and Returns (\$/acre) Brown Soils

2020 Production Costs and Returns (\$/acre) Brown Soils

| Stubble Seeded Crops | | | | | | | | | | | | | |
|-----------------------------|--------------------|--------------------|--------------------|--------------------|----------------------|--------------------|----------------------|--------------------|--------------------|--------------------|---------------------|--------------------|----------------|
| AgriProfit\$ | Spring | CPS | Durum | Feed | Malt | Milling | Argentine | Field | Red | Kabuli | Yellow | Mixed | Summer |
| | Wheat | Wheat | Wheat | Barley | Barley | Oats | HT Canola | Peas | Lentil | Chickpea | Mustard | Hay | Fallow |
| | 1 CWRS 13.5% | 1 CPSR | 1 CWAD 13% | 1 CW | Select CW 2R | 2 CW | 1 CAN | 2 CAN | 2 CAN | 2 CW 8mm | 1 CAN | | |
| Expected Yield per Acre | 38.00 bu | 40.00 bu | 40.00 bu | 53.00 bu | 53.00 bu | 58.00 bu | 30.00 bu | 45.00 bu | 1525.00 lbs | 1463.00 lbs | 661.00 lbs | 1.50 t | 0.00 |
| Expected Market Price | 6.70 /bu | 5.75 /bu | 6.75 /bu | 4.70 /bu | 5.25 /bu | 3.35 /bu | 10.50 /bu | 7.00 /bu | 0.19 /lb | 0.30 /lb | 0.35 /lb | 85.00 /t | 0.00 |
| Crop Sales (\$/acre) | 254.60 | 230.00 | 270.00 | 249.10 | 278.25 | 194.30 | 315.00 | 315.00 | 289.75 | 438.90 | 231.35 | 127.50 | 0.00 |
| Direct Expenses: | | | | | | | | | | | | | |
| Seed. Cleaning & Treatment | 23.00 | 23.00 | 33.00 | 20.60 | 23.00 | 13.46 | 51.45 | 39.75 | 36.00 | 72.00 | 23.00 | 3.73 | 0.00 |
| Fertilizer (NPKS blend) | 37.00 50-20-5-0 | 37.00 50-20-5-0 | 37.00 50-20-5-0 | 44.50 60-25-5-0 | 48.00 50-30-10-10 | 35.00 50-20-0-0 | 53.50 65-25-10-10 | 15.50 5-20-10-0 | 12.00 5-20-0-0 | 16.50 5-30-0-0 | 34.50 40-20-0-10 | 10.00 10-10-0-0 | 0.00 |
| Chemical | 35.37 | 35.37 | 35.37 | 18.77 | 35.37 | 14.35 | 30.19 | 37.10 | 65.35 | 42.73 | 13.21 | 0.81 | 12.07 |
| Hail/Crop Insurance | 14.67 | 18.04 | 15.21 | 13.45 | 15.08 | 11.92 | 21.71 | 20.75 | 26.94 | 35.91 | 16.15 | NA | NA |
| Trucking & Marketing | 13.37 | 14.07 | 14.07 | 15.26 | 15.26 | 11.75 | 8.96 | 15.83 | 9.11 | 8.74 | 3.95 | 36.40 | 0.00 |
| Fuel, Oil & Lube | 15.01 | 14.25 | 14.43 | 13.87 | 14.80 | 15.15 | 16.49 | 14.81 | 12.27 | 14.67 | 13.87 | 7.20 | 7.73 |
| Machinery Repairs | 15.36 | 11.72 | 12.50 | 8.85 | 8.33 | 10.42 | 8.33 | 11.20 | 8.33 | 9.38 | 8.85 | 10.42 | 9.38 |
| Building Repairs | 1.56 | 2.60 | 1.30 | 1.04 | 1.04 | 2.60 | 1.56 | 2.34 | 2.86 | 2.08 | 1.04 | 3.13 | 1.04 |
| Custom Work | 4.08 | 1.53 | 3.57 | 4.08 | 2.55 | 2.55 | 6.12 | 2.04 | 2.04 | 4.08 | 3.06 | 2.04 | 0.00 |
| Labour (Paid and Unpaid) | 21.45 | 17.88 | 17.88 | 16.35 | 16.35 | 14.30 | 18.90 | 13.54 | 13.28 | 15.32 | 13.79 | 16.35 | 10.22 |
| Utilities & Miscellaneous | 10.34 | 10.34 | 8.96 | 8.96 | 8.96 | 6.27 | 8.96 | 8.96 | 6.71 | 7.66 | 7.18 | 5.41 | 2.60 |
| Operating Interest | 4.77 | 4.77 | 5.27 | 4.19 | 5.32 | 3.14 | 6.76 | 4.62 | 5.67 | 6.56 | 3.54 | 0.73 | 0.60 |
| Total Direct Expense | 195.98 | 190.57 | 198.56 | 169.93 | 194.05 | 140.91 | 232.92 | 186.43 | 200.55 | 235.62 | 142.15 | 96.21 | 43.64 |
| Contribution Margin | 58.62 | 39.43 | 71.44 | 79.17 | 84.20 | 53.39 | 82.08 | 128.57 | 89.20 | 203.28 | 89.20 | 31.29 | (43.64) |
| Total Cost per Unit | 7.55 | 7.04 | 7.24 | 4.92 | 5.38 | 4.00 | 10.80 | 6.17 | 0.19 | 0.22 | 0.35 | 117.51 | N/A |
| Break-Even Yield | 43.00 bu | 49.00 bu | 43.00 bu | 56.00 bu | 55.00 bu | 70.00 bu | 31.00 bu | 40.00 bu | 1535.00 lbs | 1089.00 lbs | 667.00 lbs | 2.07 t | N/A |

| Capital Costs by Enterprise | Crops | Forages |
|-----------------------------|--------------|--------------|
| Crop Share/Cash Rent | 44.25 | 34.42 |
| Licenses and Insurance | 6.27 | 9.12 |
| Depreciation | 29.96 | 34.33 |
| Paid Capital Interest | 11.51 | 3.00 |
| Total Capital Costs | 91.99 | 80.87 |
| Adjusted Capital Costs | 91.07 | 80.06 |

Questions?
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Prepared Feb 21, 2020

Table 5. 2020 Estimated Production Costs and Returns (\$/acre) Dark Brown Soils

2020 Production Costs and Returns (\$/acre) Dark Brown Soils

| Stubble Seeded Crops | | | | | | | | | | | | | | |
|-----------------------------|-------------------------|--------------------|-----------------------|--------------------|--------------------|----------------------|--------------------|----------------------|--------------------|--------------------|---------------------|--------------------|--------------------|--------------------|
| AgriProfit\$ | Spring | CPS | Durum | Winter | Feed | Malt | Milling | Argentine | Field | Flax | Yellow | Red | Mixed | Cereal |
| | Wheat | Wheat | Wheat | Wheat | Barley | Barley | Oats | HT Canola | Peas | Mustard | Lentil | Hay | Silage | |
| | ¹ CWRS 13.5% | ¹ CPSR | ¹ CWAD 13% | Select CWRW | ¹ CW | Select CW 2R | ² CW | ¹ CAN | ² CAN | ¹ CW | ¹ CAN | | | |
| Expected Yield per Acre | 44.00 bu | 49.00 bu | 41.00 bu | 46.00 bu | 63.00 bu | 63.00 bu | 75.00 bu | 35.00 bu | 48.00 bu | 21.00 bu | 706.00 lbs | 1500.00 lbs | 1.75 t | 5.73 t |
| Expected Market Price | 6.70 /bu | 5.75 /bu | 6.70 /bu | 5.50 /bu | 4.00 /bu | 5.25 /bu | 3.35 /bu | 10.50 /bu | 7.00 /bu | 11.75 /bu | 0.35 /lb | 0.19 /lb | 85.00 /t | 58.56 /t |
| Crop Sales (\$/acre) | 294.80 | 281.75 | 274.70 | 253.00 | 252.00 | 330.75 | 251.25 | 367.50 | 336.00 | 246.75 | 247.10 | 285.00 | 148.75 | 335.55 |
| Direct Expenses: | | | | | | | | | | | | | | |
| Seed, Cleaning & Treatment | 23.00 | 23.00 | 33.00 | 25.00 | 20.60 | 23.00 | 13.46 | 57.75 | 39.09 | 28.60 | 24.15 | 36.00 | 3.73 | 18.56 |
| Fertilizer (NPKS blend) | 44.50 60-25-5-0 | 44.50 60-25-5-0 | 44.50 60-25-5-0 | 44.50 60-25-5-0 | 49.50 70-25-5-0 | 55.00 60-30-15-10 | 37.50 55-20-0-0 | 63.00 75-30-10-15 | 15.50 5-20-10-0 | 35.00 50-20-0-0 | 41.50 50-25-0-10 | 14.00 5-25-0-0 | 12.00 10-15-0-0 | 40.00 60-20-0-0 |
| Chemical | 35.37 | 35.37 | 35.37 | 19.44 | 18.77 | 35.37 | 14.35 | 30.19 | 37.10 | 20.02 | 13.21 | 60.35 * | 0.81 | 14.35 |
| Hail/Crop Insurance | 15.78 | 18.80 | 16.35 | 12.35 | 11.51 | 16.90 | 13.06 | 23.25 | 20.75 | 17.80 | 14.61 | 26.94 | NA | NA |
| Trucking & Marketing | 15.48 | 17.24 | 14.43 | 16.19 | 18.14 | 18.14 | 15.19 | 10.45 | 16.89 | 6.94 | 4.22 | 8.96 | 42.51 | 18.33 |
| Fuel, Oil & Lube | 13.15 | 15.02 | 15.47 | 15.00 | 13.34 | 14.23 | 12.80 | 15.49 | 15.41 | 11.86 | 13.87 | 12.27 | 9.39 | 13.87 |
| Machinery Repairs | 12.76 | 13.02 | 11.46 | 12.50 | 12.50 | 13.02 | 11.46 | 15.63 | 14.06 | 11.46 | 11.46 | 8.33 | 9.90 | 7.29 |
| Building Repairs | 1.04 | 1.56 | 1.04 | 1.04 | 2.08 | 2.60 | 1.04 | 1.56 | 1.82 | 1.56 | 1.56 | 2.86 | 2.60 | 1.30 |
| Custom Work | 2.04 | 3.06 | 3.06 | 3.06 | 6.12 | 6.12 | 2.04 | 5.10 | 3.06 | 8.17 | 4.59 | 2.04 | 9.70 | 40.83 |
| Labour (Paid and Unpaid) | 12.77 | 13.28 | 11.75 | 12.77 | 12.51 | 13.28 | 13.28 | 14.30 | 12.51 | 14.81 | 13.79 | 13.28 | 10.22 | 10.22 |
| Utilities & Miscellaneous | 10.34 | 10.34 | 8.96 | 8.96 | 8.96 | 8.96 | 6.27 | 8.96 | 8.96 | 8.96 | 8.96 | 6.71 | 6.27 | 7.18 |
| Operating Interest | 5.14 | 5.14 | 5.64 | 4.45 | 4.44 | 5.67 | 3.27 | 7.55 | 4.58 | 4.18 | 3.94 | 5.52 | 0.83 | 3.65 |
| Total Direct Expense | 191.38 | 200.34 | 201.02 | 175.25 | 178.48 | 212.28 | 143.73 | 253.23 | 189.73 | 169.35 | 155.86 | 197.26 | 107.96 | 175.58 |
| Contribution Margin | 103.42 | 81.41 | 73.68 | 77.75 | 73.52 | 118.47 | 107.52 | 114.27 | 146.27 | 77.40 | 91.24 | 87.74 | 40.79 | 159.97 |
| Total Cost per Unit | 6.56 | 6.07 | 7.27 | 5.92 | 4.38 | 4.91 | 3.21 | 10.01 | 5.98 | 12.69 | 0.36 | 0.18 | 103.03 | 43.27 |
| Break-Even Yield | 44.00 bu | 52.00 bu | 45.00 bu | 50.00 bu | 69.00 bu | 59.00 bu | 72.00 bu | 34.00 bu | 41.00 bu | 23.00 bu | 723.00 lbs | 1418.89 lbs | 2.12 t | 4.23 t |

| Capital Costs by Enterprise | Crops | Forages |
|-----------------------------|--------------|--------------|
| Crop Share/Cash Rent | 55.50 | 34.50 |
| Licenses and Insurance | 5.42 | 5.70 |
| Depreciation | 31.21 | 19.35 |
| Paid Capital Interest | 6.01 | 13.52 |
| Total Capital Costs | 98.13 | 73.06 |
| Adjusted Capital Costs | 97.15 | 72.33 |


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Prepared Feb 21, 2020

Table 6. 2020 Estimated Production Costs and Returns (\$/acre) Grey-Wooded Soils

2020 Production Costs and Returns (\$/acre)

Grey-Wooded Soils

| Stubble Seeded Crops | | | | | | | | | | |
|---|---------------------|---------------------|---------------------|---------------------|--------------------|-----------------------|--------------------|-------------------|--------------------|--------------------|
|  | Spring | CPS | Feed | Malt | Milling | Argentine | Field | Alfalfa | Mixed | Cereal |
| | Wheat | Wheat | Barley | Barley | Oats | HT Canola | Peas | Hay | Hay | Silage |
| | 2 CWRS 11.5% | 1 CPSR | 1 CW | Select CW 2R | 2 CW | 1 CAN | 2 CAN | | | |
| Expected Yield per Acre | 58.00 bu | 70.00 bu | 78.00 bu | 78.00 bu | 94.00 bu | 44.00 bu | 50.00 bu | 2.25 t | 2.50 t | 7.08 t |
| Expected Market Price | 6.50 /bu | 5.75 /bu | 4.15 /bu | 5.25 /bu | 3.35 /bu | 10.50 /bu | 7.00 /bu | 110.00 /t | 85.00 /t | 58.56 /t |
| Crop Sales (\$/acre) | 377.00 | 402.50 | 323.70 | 409.50 | 314.90 | 462.00 | 350.00 | 247.50 | 212.50 | 414.60 |
| Direct Expenses: | | | | | | | | | | |
| Seed, Cleaning & Treatment | 25.88 | 25.88 | 23.18 | 25.88 | 13.46 | 51.45 | 39.75 | 11.00 | 3.94 | 18.56 |
| Fertilizer (NPKS blend) | 56.50 80-25-10-0 | 56.50 80-25-10-0 | 59.00 80-30-10-0 | 59.50 70-25-25-5 | 50.00 75-25-0-0 | 88.50 100-40-25-20 | 20.00 5-25-15-0 | 14.00 5-25-0-0 | 17.00 20-15-0-0 | 47.50 70-25-0-0 |
| Chemical | 33.43 | 33.43 | 18.77 | 33.43 | 14.35 | 25.92 | 37.10 | 1.02 | 0.81 | 14.35 |
| Hail/Crop Insurance | 21.47 | 22.34 | 17.72 | 21.08 | 16.32 | 22.18 | 22.88 | NA | NA | NA |
| Trucking & Marketing | 20.41 | 24.63 | 22.46 | 22.46 | 19.04 | 13.14 | 17.59 | 54.76 | 60.03 | 22.65 |
| Fuel, Oil & Lube | 26.80 | 24.54 | 21.59 | 25.19 | 24.50 | 24.80 | 25.67 | 11.67 | 14.00 | 24.50 |
| Machinery Repairs | 17.71 | 15.36 | 14.58 | 17.71 | 13.54 | 23.44 | 21.09 | 7.81 | 11.98 | 15.89 |
| Building Repairs | 1.04 | 2.60 | 2.60 | 2.08 | 3.65 | 2.08 | 3.65 | 1.56 | 1.04 | 1.04 |
| Custom Work | 5.10 | 5.36 | 5.61 | 5.61 | 7.15 | 5.61 | 5.10 | 17.35 | 5.61 | 35.73 |
| Labour (Paid and Unpaid) | 21.96 | 20.94 | 21.45 | 20.18 | 21.45 | 24.52 | 23.24 | 17.88 | 18.90 | 21.45 |
| Utilities & Miscellaneous | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 | 12.59 | 12.59 | 6.27 | 5.84 | 7.18 |
| Operating Interest | 5.79 | 5.79 | 5.05 | 5.94 | 3.89 | 8.29 | 4.84 | 1.30 | 1.09 | 4.02 |
| Total Direct Expense | 246.44 | 247.72 | 222.35 | 249.39 | 197.69 | 302.51 | 233.50 | 144.63 | 140.25 | 212.87 |
| Contribution Margin | 130.56 | 154.78 | 101.35 | 160.11 | 117.21 | 159.49 | 116.50 | 102.87 | 72.25 | 201.73 |
| Total Cost per Unit | 6.91 | 5.74 | 4.83 | 5.18 | 3.75 | 10.38 | 7.76 | 95.94 | 84.60 | 40.13 |
| Break-Even Yield | 62.00 bu | 70.00 bu | 91.00 bu | 77.00 bu | 106.00 bu | 44.00 bu | 56.00 bu | 1.96 t | 2.49 t | 4.85 t |


| Capital Costs by Enterprise | Crops | Forages |
|-----------------------------|---------------|--------------|
| Crop Share/Cash Rent | 65.50 | 30.50 |
| Licenses and Insurance | 11.97 | 5.13 |
| Depreciation | 57.42 | 31.83 |
| Paid Capital Interest | 21.03 | 4.51 |
| Total Capital Costs | 155.91 | 71.97 |
| Adjusted Capital Costs | 154.36 | 71.25 |

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Prepared Feb 21, 2020

Table 7. 2020 Estimated Production Costs and Returns (\$/acre) Grey-Wooded (Peace Region)

2020 Production Costs and Returns (\$/acre) Grey-Wooded (Peace Region)

| Stubble Seeded Crops | | | | | | | | | | | | |
|---|--------------------|--------------------|--------------------|---------------------|--------------------|------------------------|---------------------|--------------------|--------------------|-------------------|--------------------|--|
|  | Spring Wheat | CPS Wheat | Feed Barley | Malt Barley | Milling Oats | Argentine HT Canola | Polish Canola | Field Peas | Mixed Hay | Alfalfa Hay | Cereal Silage | |
| | 2 CWRS 11.5% | 1 CPSR | 1 CW | Select CW 2R | 2 CW | 1 CAN | 1 CAN | 2 CAN | | | | |
| Expected Yield per Acre | 56.00 bu | 65.00 bu | 76.00 bu | 76.00 bu | 99.00 bu | 39.00 bu | 26.00 bu | 50.00 bu | 1.75 t | 2.00 t | 6.87 t | |
| Expected Market Price | 6.00 /bu | 5.50 /bu | 3.70 /bu | 4.75 /bu | 3.15 /bu | 10.20 /bu | 10.20 /bu | 6.80 /bu | 85.00 /t | 110.00 /t | 58.56 /t | |
| Crop Sales (\$/acre) | 336.00 | 357.50 | 281.20 | 361.00 | 311.85 | 397.80 | 265.20 | 340.00 | 148.75 | 220.00 | 402.31 | |
| Direct Expenses | | | | | | | | | | | | |
| Seed, Cleaning & Treatment | 23.00 | 23.00 | 20.60 | 23.00 | 13.46 | 52.50 | 23.00 | 36.44 | 3.94 | 11.00 | 16.50 | |
| Fertilizer (NPKS blend) | 49.50 70-25-5-0 | 49.50 70-25-5-0 | 49.50 70-25-5-0 | 50.50 60-25-15-5 | 42.50 65-20-0-0 | 72.00 85-30-20-15 | 51.50 70-20-5-10 | 17.50 5-20-15-0 | 14.50 20-15-0-0 | 12.00 5-20-0-0 | 47.50 70-25-0-0 | |
| Chemical | 33.43 * | 33.43 * | 18.77 | 33.43 * | 14.35 | 25.92 * | 15.25 | 37.10 * | 0.81 | 1.02 | 14.35 | |
| Hail/Crop Insurance | 17.78 | 19.56 | 15.37 | 18.39 | 17.60 | 21.23 | 13.97 | 22.88 | NA | 19.58 | 11.25 | |
| Trucking & Marketing | 19.70 | 22.87 | 21.88 | 21.88 | 20.06 | 11.64 | 7.76 | 17.59 | 42.51 | 48.64 | 21.98 | |
| Fuel, Oil & Lube | 28.61 | 29.34 | 30.23 | 34.71 | 25.34 | 35.99 | 42.56 | 36.07 | 23.32 | 19.00 | 27.87 | |
| Machinery Repairs | 12.50 | 12.50 | 11.46 | 12.50 | 13.02 | 13.02 | 12.50 | 13.54 | 10.42 | 8.33 | 10.42 | |
| Building Repairs | 3.91 | 3.13 | 2.08 | 2.08 | 2.60 | 4.43 | 2.08 | 3.13 | 1.56 | 1.04 | 1.56 | |
| Custom Work | 3.06 | 3.06 | 6.12 | 6.38 | 4.59 | 3.57 | 2.81 | 5.10 | 0.00 | 0.00 | 39.30 | |
| Labour (Paid and Unpaid) | 18.39 | 18.39 | 17.37 | 18.90 | 17.37 | 19.41 | 16.86 | 15.32 | 10.73 | 10.22 | 11.24 | |
| Utilities & Miscellaneous | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 | 12.59 | 8.96 | 8.96 | 5.84 | 5.84 | 5.84 | |
| Operating Interest | 5.30 | 5.30 | 4.44 | 5.35 | 3.52 | 7.52 | 4.49 | 4.55 | 0.96 | 1.20 | 3.92 | |
| Total Direct Expense | 225.52 | 230.41 | 208.18 | 237.46 | 184.74 | 279.82 | 201.72 | 218.18 | 114.60 | 137.88 | 211.72 | |
| Contribution Margin | 110.48 | 127.09 | 73.02 | 123.54 | 127.11 | 117.98 | 63.48 | 121.82 | 34.15 | 82.12 | 190.58 | |
| Total Cost per Unit | 6.21 | 5.42 | 4.34 | 4.73 | 3.10 | 10.30 | 12.45 | 6.80 | 96.48 | 96.06 | 38.71 | |
| Break-Even Yield | 58.00 bu | 65.00 bu | 90.00 bu | 76.00 bu | 98.00 bu | 40.00 bu | 32.00 bu | 51.00 bu | 1.99 t | 1.75 t | 4.54 t | |


| Capital Costs by Enterprise | Crops | Forages |
|-----------------------------|---------------|--------------|
| Crop Share/Cash Rent | 49.32 | 23.37 |
| Licenses and Insurance | 10.26 | 4.56 |
| Depreciation | 51.18 | 21.84 |
| Paid Capital Interest | 12.52 | 5.01 |
| Total Capital Costs | 123.27 | 54.78 |
| Adjusted Capital Costs | 122.04 | 54.24 |

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Prepared Feb 21, 2020

Table 8. 2020 Estimated Production Costs and Returns (\$/acre) Irrigated Soils

2020 Production Costs and Returns (\$/acre) Irrigated Soils

| Stubble Seeded Crops | | | | | | | | | | |
|---|-------------------------------------|----------------------------|----------------------------------|------------------------------|----------------------------|------------------------------------|-------------------------------------|---------------------------|--------------------|----------------------|
|  | Spring Wheat 1 CWRS 13.5% | CPS Wheat 1 CPSR | Durum Wheat 1 CWAD 13% | Soft Wheat 1 CWSWS | Feed Barley 1 CW | Malt Barley Select CW 2R | Argentine HT Canola 1 CAN | Dry Beans 1 CAN | Alfalfa Hay | Cereal Silage |
| Expected Yield per Acre | 96.00 bu | 105.00 bu | 103.00 bu | 111.00 bu | 125.00 bu | 125.00 bu | 58.00 bu | 2459.00 lbs | 4.00 t | 11.38 t |
| Expected Market Price | 6.70 /bu | 5.75 /bu | 6.70 /bu | 5.25 /bu | 4.70 /bu | 5.25 /bu | 10.50 /bu | 0.35 /lb | 110.00 /t | 50.00 /t |
| Crop Sales (\$/acre) | 643.20 | 603.75 | 690.10 | 582.75 | 587.50 | 656.25 | 609.00 | 860.65 | 440.00 | 569.00 |
| Direct Expenses | | | | | | | | | | |
| Seed, Cleaning & Treatment | 28.75 | 28.75 | 37.13 | 26.44 | 25.75 | 28.75 | 57.75 | 49.51 | 15.40 | 20.63 |
| Fertilizer (NPKS blend) | 72.00 100-40-5-0 | 72.00 100-40-5-0 | 72.00 100-40-5-0 | 77.00 110-40-5-0 | 72.00 100-40-5-0 | 62.00 90-30-5-0 | 90.50 110-50-5-20 | 68.50 80-50-0-10 | 21.00 5-40-0-0 | 70.00 100-40-0-0 |
| Chemical | 38.28 | 38.28 | 38.28 | 38.28 | 22.84 | 38.28 | 36.59 | 28.86 | 1.22 | 14.35 |
| Hail/Crop Insurance | 13.43 | 17.71 | 16.64 | 11.35 | 13.22 | 13.22 | 20.61 | 43.43 | NA | NA |
| Trucking & Marketing | 33.78 | 36.95 | 36.24 | 39.06 | 35.99 | 35.99 | 17.32 | 26.17 | 97.29 | 36.40 |
| Fuel, Oil & Lube | 24.77 | 26.79 | 26.89 | 28.01 | 29.34 | 31.30 | 30.46 | 45.88 | 45.34 | 33.61 |
| Machinery Repairs | 29.69 | 27.34 | 30.21 | 27.60 | 28.91 | 30.11 | 30.21 | 65.10 | 35.42 | 19.27 |
| Building Repairs | 2.08 | 2.08 | 2.08 | 2.08 | 2.08 | 2.08 | 2.08 | 4.43 | 1.04 | 1.04 |
| Irrigation: Pumping Costs | 22.63 | 23.13 | 22.88 | 23.13 | 18.82 | 18.82 | 19.48 | 18.59 | 32.40 | 19.83 |
| Custom Work | 8.17 | 8.17 | 9.19 | 9.19 | 12.25 | 12.76 | 7.15 | 30.11 | 8.17 | 33.68 |
| Labour (Paid and Unpaid) | 30.65 | 31.67 | 31.92 | 31.67 | 34.73 | 34.73 | 31.67 | 69.98 | 34.73 | 35.75 |
| Utilities & Miscellaneous | 13.46 | 13.46 | 13.46 | 13.46 | 13.46 | 13.46 | 13.46 | 17.91 | 28.73 | 17.91 |
| Operating Interest | 6.95 | 6.95 | 7.37 | 7.09 | 6.03 | 6.45 | 9.24 | 7.34 | 1.88 | 5.25 |
| Storage and/or Levies | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total Direct Expense | 324.62 | 333.27 | 344.29 | 334.34 | 315.41 | 327.95 | 366.51 | 475.82 | 322.62 | 307.73 |
| Contribution Margin | 318.58 | 270.48 | 345.81 | 248.41 | 272.09 | 328.30 | 242.49 | 384.83 | 117.38 | 261.27 |
| Total Cost per Unit | 6.50 | 6.03 | 6.25 | 5.71 | 4.92 | 5.02 | 11.49 | 0.32 | 149.65 | 51.29 |
| Break-Even Yield | 94.00 bu | 111.00 bu | 97.00 bu | 121.00 bu | 131.00 bu | 120.00 bu | 64.00 bu | 2283.00 lbs | 5.44 t | 11.67 t |

| Capital Costs by Enterprise | Crops | Forages | Specialty |
|------------------------------------|---------------|---------------|---------------|
| Crop Share/Cash Rent | 131.12 | 125.42 | 138.32 |
| Licenses and Insurance | 45.61 | 28.50 | 48.11 |
| Depreciation | 107.97 | 112.34 | 115.46 |
| Paid Capital Interest | 18.02 | 12.52 | 24.48 |
| Total Capital Costs | 302.71 | 278.77 | 326.37 |
| Adjusted Capital Costs | 299.69 | 275.99 | 323.11 |

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