## Land Value Trends

July, 2012
Second Quarter 2012

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We have now prepared the sale information to complete our general market analysis for the Second Quarter of 2012 (April - June). The following map illustrates the locations where data has been obtained. The Q2, 2012 sales are summarized individually in the tables on the following page. Our Regional Analysis and Cultivation Comparison are also included on the following pages. We have also included an article looking at additional considerations when making land purchase decisions.

In Q2, 2012 the average value for all regions was lower than in the previous quarter (Graphs 1 - 4). The provincial average and Central Alberta average value for cultivated land was also lower this quarter (Graphs 5 and 8). Although the provincial average difference between cultivated and non cultivated land was lower than previous quarters, Central Alberta maintained a difference of approximately $30 \%$ between cultivated and non cultivated land (Graph 6 and 8).

Despite lower average values, the sale : list price was higher this quarter than previous quarters, especially for Northern Alberta (Graph 9). Therefore, it is expected that the market for agriculture land remains strong. The lower average land values for this quarter is expected to be attributed to both the location of the sales and also a greater proportion of non cultivated (bush, pasture) sales.

O Indicates municipalities in which appraisal work was completed during Q2, 2012.

Indicates municipalities in which we have obtained information on at least one sale that occurred during Q2, 2012.

## Sale Summary

## Second Quarter (April - June) 2012

Bareland Sales

| Northern Alberta - Q2 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Municipality | Sale Price | Acres | \$/acre | Primary Land Use |
| Barrhead | \$310,000 | 156.00 | \$1,987 | Bush |
| Beaver County | \$132,000 | 157.96 | \$836 | Cultivated, Bush |
| Beaver County | \$158,000 | 158.48 | \$997 | Cultivated, Pasture |
| Beaver County | \$168,000 | 160.00 | \$1,050 | Hay |
| Beaver County | \$285,000 | 116.96 | \$2,437 | Cultivated, Hay, Bush |
| Big Lakes | \$500,000 | 530.00 | \$943 | Cultivated |
| Grande Prairie | \$160,000 | 159.00 | \$1,006 | Hay, Bush |
| Grande Prairie | \$250,000 | 160.00 | \$1,563 | Cultivated |
| Grande Prairie | \$257,000 | 150.00 | \$1,713 | Bush, Cultivated |
| Grande Prairie | \$500,000 | 320.00 | \$1,563 | Cultivated, Bush |
| Grande Prairie | \$150,000 | 80.00 | \$1,875 | Bush |
| Grande Prairie | \$615,000 | 437.79 | \$1,405 | Cultivated |
| Greenview | \$135,000 | 320.00 | \$422 | Pasture |
| Greenview | \$55,000 | 160.00 | \$344 | Pasture, Bush |
| Lac Ste. Anne | \$117,500 | 148.60 | \$791 | Cultivated, Pasture |
| Lac Ste. Anne | \$129,000 | 138.00 | \$935 | Cultivated |
| Lac Ste. Anne | \$140,000 | 167.00 | \$838 | Bush |
| Lac Ste. Anne | \$150,000 | 161.00 | \$932 | Cultivated, Bush |
| Lac Ste. Anne | \$295,000 | 160.00 | \$1,844 | Hay |
| Lac Ste. Anne | \$320,000 | 161.00 | \$1,988 | Pasture, Bush |
| Northern Lights | \$108,000 | 160.00 | \$675 | Hay |
| Northern Lights | \$400,000 | 640.00 | \$625 | Cultivated, Bush |
| Northern Lights | \$75,000 | 160.00 | \$469 | Cultivated, Bush |
| Northern Lights | \$55,500 | 160.00 | \$347 | Bush |
| Northern Lights | \$68,000 | 160.00 | \$425 | Cultivated, Bush |
| Northern Lights | \$79,000 | 138.98 | \$568 | Bush, Cultivated |
| Northern Lights | \$240,000 | 320.00 | \$750 | Cultivated |
| Northern Lights | \$142,500 | 160.00 | \$891 | Cultivated |
| Parkland | \$770,000 | 153.89 | \$5,004 | Cultivated, Bush |
| Smoky Lake | \$56,000 | 80.00 | \$700 | Bush |
| Smoky Lake | \$230,000 | 108.10 | \$2,128 | Cultivated |
| St. Paul | \$153,300 | 146.00 | \$1,050 | Pasture, Bush |
| Sturgeon | \$187,500 | 75.06 | \$2,498 | Pasture, Bush |
| Thorhild | \$160,000 | 159.00 | \$1,006 | Bush, Cultivated |
| Westlock | \$269,000 | 282.55 | \$952 | Bush, Pasture |


| Central Alberta - Q2 |  |  |  |  |
| :--- | ---: | ---: | ---: | :--- |
| Municipality | Sale Price | Acres | $\$ /$ acre | Primary Land Use |
| Brazeau | $\$ 145,000$ | 80.00 | $\$ 1,813$ | Pasture, Cultivated |
| Brazeau | $\$ 206,000$ | 160.00 | $\$ 1,288$ | Bush |
| Brazeau | $\$ 165,000$ | 136.12 | $\$ 1,212$ | Hay, Bush |
| Camrose | $\$ 121,000$ | 138.90 | $\$ 871$ | Pasture |
| Camrose | $\$ 501,000$ | 143.00 | $\$ 3,503$ | Cultivated |
| Camrose | $\$ 501,000$ | 143.49 | $\$ 3,492$ | Cultivated |
| Clearwater | $\$ 269,900$ | 153.00 | $\$ 1,764$ | Pasture |
| Clearwater | $\$ 250,000$ | 126.00 | $\$ 1,984$ | Pasture, Hay |
| Clearwater | $\$ 310,000$ | 158.00 | $\$ 1,962$ | Cultivated |
| Clearwater | $\$ 300,000$ | 153.00 | $\$ 1,961$ | Bush, Hay |
| Clearwater | $\$ 650,000$ | 324.00 | $\$ 2,006$ | Bush |
| Kneehill | $\$ 285,000$ | 158.25 | $\$ 1,801$ | Cultivated, Pasture |
| Lacombe | $\$ 295,000$ | 168.28 | $\$ 1,753$ | Hay |
| Lacombe | $\$ 269,000$ | 89.20 | $\$ 3,016$ | Hay, Bush |
| Lacombe | $\$ 504,750$ | 156.00 | $\$ 3,236$ | Cultivated |
| Lacombe | $\$ 410,000$ | 70.40 | $\$ 5,824$ | Cultivated |


| Central Alberta - Q2 (continued) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Municipality | Sale Price | Acres | \$/acre | Primary Land Use |
| Lamont | \$76,000 | 80.00 | \$950 | Bush |
| Lamont | \$88,000 | 80.00 | \$1,100 | Cultivated, Bush |
| Lamont | \$100,000 | 79.94 | \$1,251 | Pasture |
| Lamont | \$130,000 | 80.00 | \$1,625 | Bush, Hay |
| Lamont | \$150,000 | 75.00 | \$2,000 | Hay |
| Lamont | \$215,000 | 160.00 | \$1,344 | Bush, Pasture |
| Leduc | \$200,000 | 157.10 | \$1,273 | Bush |
| Leduc | \$325,000 | 78.08 | \$4,162 | Pasture |
| Leduc | \$310,000 | 70.29 | \$4,410 | Bush, Pasture |
| Leduc | \$335,000 | 110.00 | \$3,045 | Hay, Cultivated |
| Leduc | \$595,000 | 153.10 | \$3,886 | Cultivated |
| Mountain View | \$349,000 | 160.00 | \$2,181 | Bush, Cultivated |
| Mountain View | \$350,000 | 140.00 | \$2,500 | Hay, Cultivated |
| Mountain View | \$510,000 | 151.00 | \$3,377 | Cultivated |
| Mountain View | \$349,000 | 160.00 | \$2,181 | Bush, Cultivated |
| Mountain View | \$460,000 | 80.08 | \$5,744 | Hay, Bush |
| Ponoka | \$220,000 | 160.00 | \$1,375 | Pasture |
| Ponoka | \$220,000 | 160.00 | \$1,375 | Pasture, Bush |
| Ponoka | \$255,000 | 150.54 | \$1,694 | Cultivated, Pasture |
| Red Deer | \$345,000 | 160.00 | \$2,156 | Hay |
| Red Deer | \$550,000 | 160.00 | \$3,438 | Pasture |
| Red Deer | \$355,000 | 100.00 | \$3,550 | Hay, Pasture |
| Red Deer | \$575,000 | 160.00 | \$3,594 | Pasture, Bush |
| Red Deer | \$335,000 | 137.00 | \$2,445 | Cultivated |
| Red Deer | \$310,000 | 160.00 | \$1,938 | Hay |
| Red Deer | \$290,000 | 160.00 | \$1,813 | Pasture, Bush |
| Special Areas | \$41,000 | 160.00 | \$256 | Pasture |
| Special Areas | \$760,000 | 1183.00 | \$642 | Hay |
| Stettler | \$215,000 | 322.00 | \$668 | Pasture, Hay |
| Stettler | \$550,000 | 454.27 | \$1,211 | Hay, Pasture |
| Wetaskiwin | \$180,000 | 160.00 | \$1,125 | Hay, Pasture |
| Wetaskiwin | \$230,000 | 150.10 | \$1,532 | Pasture |
| Wetaskiwin | \$230,000 | 148.81 | \$1,546 | Pasture |
| Wetaskiwin | \$115,000 | 137.76 | \$835 | Pasture, Bush |
| Wetaskiwin | \$170,000 | 150.00 | \$1,133 | Hay, Pasture |
| Wetaskiwin | \$190,000 | 80.00 | \$2,375 | Cultivated |
| Wetaskiwin | \$230,000 | 148.81 | \$1,546 | Pasture |
| Wetaskiwin | \$230,000 | 150.10 | \$1,532 | Pasture, Hay |


| Southern Alberta $-\mathbf{Q 2}$ |  |  |  |  |
| :--- | ---: | ---: | ---: | :--- |
| Municipality | Sale Price | Acres | $\$ /$ acre | Primary Land Use |
| Cardston | $\$ 182,000$ | 160.00 | $\$ 1,138$ | Pasture, Cultivated |
| Cardston | $\$ 205,000$ | 160.00 | $\$ 1,281$ | Pasture |
| Foothills | $\$ 850,000$ | 73.19 | $\$ 11,614$ | Urban Influence |
| Foothills | $\$ 1,450,000$ | 123.90 | $\$ 11,703$ | Urban Influence |
| Foothills | $\$ 1,150,000$ | 160.00 | $\$ 7,188$ | River Frontage |
| Newell | $\$ 242,500$ | 76.64 | $\$ 3,164$ | Hay |
| Pincher Creek | $\$ 300,000$ | 102.00 | $\$ 2,941$ | Pasture |
| Rocky View | $\$ 4,400,000$ | 77.44 | $\$ 56,818$ | Industrial |
| Rocky View | $\$ 815,000$ | 158.97 | $\$ 5,127$ | Pasture |
| Rocky View | $\$ 2,200,000$ | 127.54 | $\$ 17,249$ | Urban Influence |
| Rocky View | $\$ 2,815,000$ | 360.00 | $\$ 7,819$ | Pasture |
| Taber | $\$ 717,000$ | 140.47 | $\$ 5,104$ | Irrigated |
| Vulcan | $\$ 305,000$ | 158.94 | $\$ 1,919$ | Cultivated |
| Vulcan | $\$ 405,000$ | 270.00 | $\$ 1,500$ | Hay, Pasture |
| Vulcan | $\$ 220,000$ | 160.00 | $\$ 1,375$ | Pasture |
| Vulcan | $\$ 305,000$ | 158.94 | $\$ 1,919$ | Cultivated |
| Vulcan | $\$ 295,000$ | 123.87 | $\$ 2,382$ | Hay |
| Vulcan | $\$ 144,000$ | 160.00 | $\$ 900$ | Hay |
| Vulcan | $\$ 160,000$ | 160.00 | $\$ 1,000$ | Hay |

## Regional Analysis

In the following graphs we have excluded sales that we believe are expected to have significant urban influence.

## Graph 1: Northern Alberta



Graph 2: Central Alberta


Graph 3: Southern Alberta


Graph 4: Average Value of Each Region


Within each of the above regions, there are areas with different agricultural productivity. There is also variation with respect to regional population, urban development, or demand for country residential properties. Therefore, there is frequently a wide difference between the range of high and low values per acre.

## Cultivated vs Uncultivated Comparison

Graph 5: Provincial Cultivated vs Uncultivated


## Graph 6: Percent Difference Cultivated vs Uncultivated Land



Graph 7: Proportion of Sales by Region


Graph 8: Central Alberta - Cultivated vs
Uncultivated


## Graph 9: Sale Price : List Price



Given the limited arm's-length sales data and variable information available in the rural real estate market, it is often difficult to determine trends and quantify time adjustments in the market for agricultural properties. Therefore, the information contained in this newsletter should not be relied upon solely for purchasing or financing decisions. It is prepared with the intent of providing a general indication of the activity in the rural real estate market. If an estimate of value is required for specific properties, it is recommended that an appraisal be obtained. Benchmark studies can also be completed if approximate land values are required for a specific area.

## Does Less Expensive Land COST MORE? (PART 2)

In a previous newsletter article we compared two potential investments in agriculture land and the expected returns from farming the land. The following is a summary of some of the values estimated for the previous newsletter.

|  | Farmer Green | Farmer Brown |
| :--- | :---: | :---: |
| Land Purchase Price | $\$ 2,000$ | $\$ 1,000$ |
| Expected Yield | 60 bushels per acre | 35 bushels per acre |
| Average Gross Income | $\$ 502$ | $\$ 295$ |
| Total Operating <br> Expenses |  |  |
| Net Operating Income <br> (Gross Margin) | $\$ 187$ | $\$ 137$ |
| Fixed Equipment Costs | $\$ 315$ | $\$ 158$ |
| Net Margin | $\$ 70$ | $\$ 60$ |

${ }^{1}$ In this table, interest has not been included as an expense

The above values show that the net margin favours Farmer Green's land investment. However, the financial analysis above does not consider that Farmer Green would have more capital invested in the same acreage. Therefore, we have considered alternative analyses for the land investment, including a Ratio Analysis and Cost per Bushel Analysis.

For the purpose of this analysis, land payments are based on:

- $20 \%$ Down Payment
= 6\% Interest Rate
- 20 Year Mortgage Term


## Ratio Analysis

The following analysis compares the two land investments based on financial ratios that focus only on the aspect of land investment.

|  | Farmer <br> Green | Farmer <br> Brown | Favoured <br> Investment |
| :--- | :---: | :---: | :---: |
| Asset Turnover <br> (Gross Revenue/Purchase <br> Price) | 0.25 | 0.30 | Farmer Brown |
| Gross Margin <br> (as \% Gross Revenue) | $63 \%$ | $54 \%$ | Farmer Green |
| Payment Coverage <br> (Gross Margin/Mortgage <br> Payment) | 2.26 | 2.26 | Similar |
| Net Margin <br> (as \% Gross Revenue) | $49 \%$ | $33 \%$ | Farmer Green |
| Payment Coverage <br> (Net Margin/Mortgage <br> Payment) | 1.76 | 1.41 | Farmer Green |
| Return on Investment | $14.8 \%$ | $11.8 \%$ | Farmer Green |
| (Net Margin/Purchase Price) |  |  |  |

Except for Asset Turnover, most of the financial ratios favour Farmer Green.

## Cost per Bushel Analysis

Crop prices are considered to be reasonably consistent between different areas and the preceding analyses have been based on the same commodity prices for each investment. Therefore, the profitability in the analysis is primarily dependent on the level of output (i.e. bushels per acre). Therefore, we have also compared the costs based on different yields.

For this analysis three costs have been considered:

1. Land Payment - principal and interest on mortgage
2. Operating Costs - seed, fertilizer, chemical, etc, but excludes interest
3. Fixed Equipment Costs - depreciation

The following graph shows how the costs for Farmer Brown and Farmer Green relate to the level of output (yield).

The vertical lines on the graphs below show the average expected yield for both land investments.

Cost per Bushel Relative to Yield (Land Payment only)


## Cost per Bushel Relative to Yield (Land Payment + Operating Expenses)



Cost per Bushel Relative to Yield (Land Payment + Operating Expenses + Fixed Equipment Costs)


## Cost per Bushel Summary

|  | Cost per Bushel (At Average Expected Yield) |  |
| :--- | :---: | :---: |
|  | Farmer Green <br> (60 bu per ac) | Farmer Brown <br> (35 bu per ac) |
| Land Payment | $\$ 2.32$ | $\$ 1.99$ |
| Land Payment + <br> Operating Expenses | $\$ 5.44$ | $\$ 5.91$ |
| Land Payment + <br> Operating Expenses + <br> Fixed Equipment Costs | $\$ 6.61$ | $\$ 7.62$ |

The graphs and table above show that Farmer Brown's land payments erode a smaller portion of the commodity price. However, when operating costs and fixed equipment costs are considered the cost per bushel are lower for Farmer Green.

The following table shows how the cost per bushel would change if production dropped below the expected yield.

|  | Cost per Bushel (10\% Yield Reduction) |  | Cost per Bushel (20\% Yield Reduction) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Farmer Green (54 bu/ac) | Farmer <br> Brown (31.5 bu/ac) | Farmer Green (48 bu/ac) | Farmer <br> Brown (28 bu/ac) |
| Land Payment | \$2.58 | \$2.22 | \$2.91 | \$2.49 |
| Land Payment + Operating Expenses | \$6.05 | \$6.57 | \$6.80 | \$7.38 |
| Land Payment + Operating Expenses + Fixed Equipment Costs | \$7.34 | \$8.47 | \$8.26 | \$9.53 |


|  | Cost Increase from <br> Expected Yield <br> (10\% Yield Reduction) |  | Cost Increase from <br> Expected Yield <br> (20\% Yield Reduction) |  |
| :--- | :--- | :---: | :---: | :---: |
|  | Farmer <br> Green | Farmer <br> Brown | Farmer <br> Green | Farmer <br> Brown |
| Land Payment | $\$ 0.26$ | $\$ 0.23$ | $\$ 0.59$ | $\$ 0.50$ |
| Land Payment + <br> Operating <br> Expenses | $\$ 0.61$ | $\$ 0.66$ | $\$ 1.36$ | $\$ 1.47$ |
| Land Payment + <br> Operating <br> Expenses + Fixed <br> Equipment Costs | $\$ 0.73$ | $\$ 0.85$ | $\$ 1.65$ | $\$ 1.91$ |

Because Farmer Brown is operating at a steeper position on the Cost Curves, the tables above show that Farmer Brown is more sensitive to higher operating and fixed costs if yields drop below the expected average. As a result, the following table shows that Farmer Green is able to absorb a proportionately greater loss in yield.

|  | Farmer <br> Green | Farmer <br> Brown |
| :--- | :---: | :---: |
| Break Even Yield <br> (Land Payment and Operating Costs only) | 39 | 24 |
| Safety Margin <br> (Land Payment and Operating Costs only) <br> Expected Yield - Break Even Yield | $35 \%$ | $31 \%$ |
| Expected Yield | 45 | 30 |
| Break Even Yield <br> (including Fixed Equipment Costs) | $25 \%$ | $14 \%$ |
| Safety Margin <br> (including Fixed Equipment Costs) |  |  |

## Summary

Based on the analyses above, Farmer Brown has a higher Asset Turnover and the land payment has a lower cost per bushel. However, these analyses do not consider operating costs or fixed equipment costs. When these costs are considered, the financial ratios and cost per bushel favour Farmer Green. Therefore, it is considered that operating efficiencies favour Farmer Green, and due to the position on the cost curve, a change in yield is expected to have a relatively lower impact on profitability for Farmer Green.

