



# Crop Marketing 101

**Prairie Oat Growers Association**

Annual meeting

Banff, Alberta

December 4, 2014



*Alberta*  
Government

# **Risk in Agriculture**

- **Production**
  - weather
  - insects
  - disease
  - weeds
- **Human**
  - injury, illness, death, divorce
  - labor

# Risk in Agriculture

- **Legal**
- **Price & Delivery**
  - product produced
  - costs of production
  - inability to deliver product \*\*

# RS - Canola - Monthly Continuation OHLC Chart

■ Op:436.50, Hi:445.60, Lo:420.30, Cl:425.30



Source: barchart.com

# Oat Futures – weekly



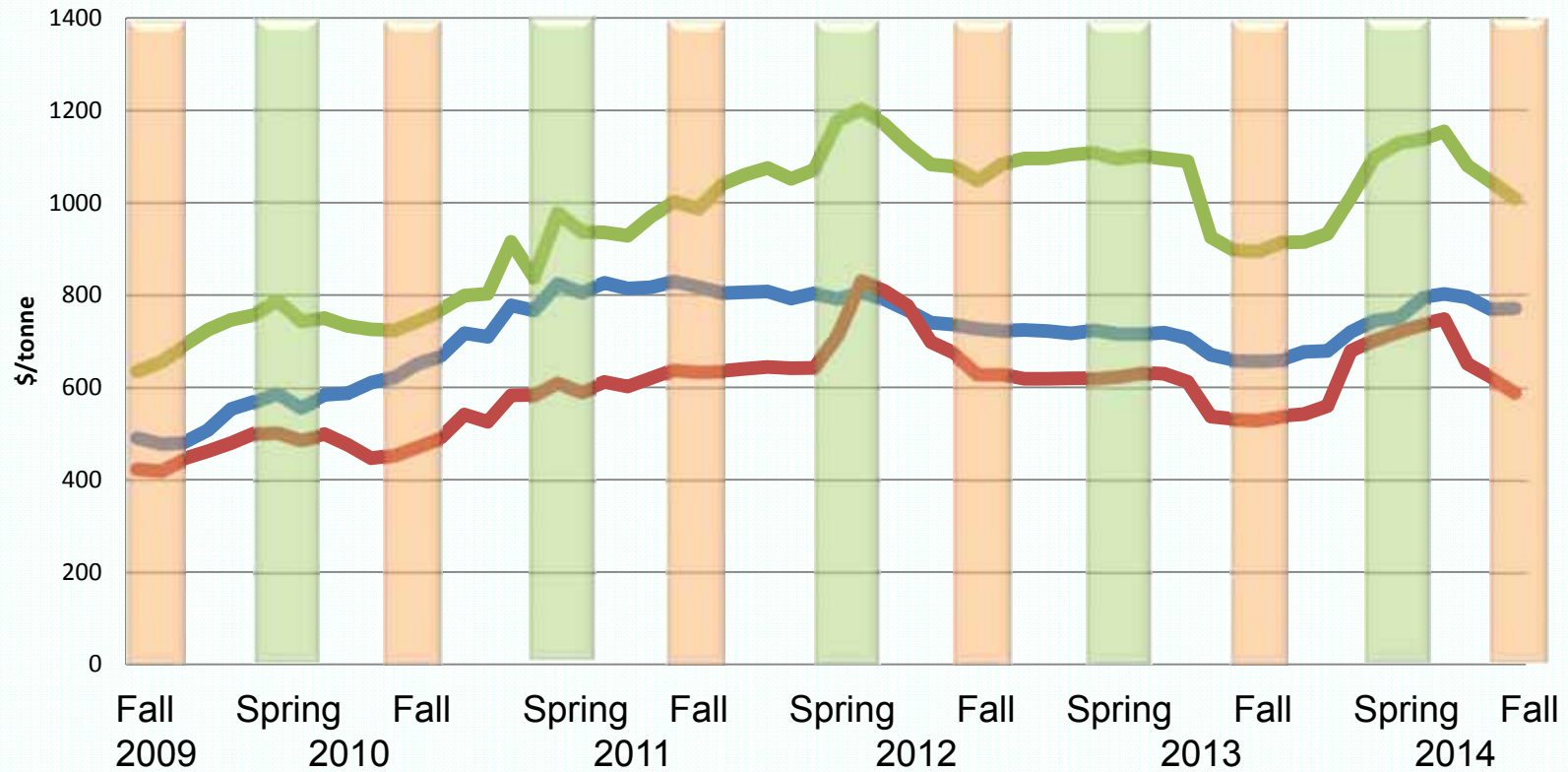
Source: barchart.com

# Oat futures – monthly



# Fertilizer Prices

## Alberta Retail Fertilizer Prices



— Phosphate, 11-51-0

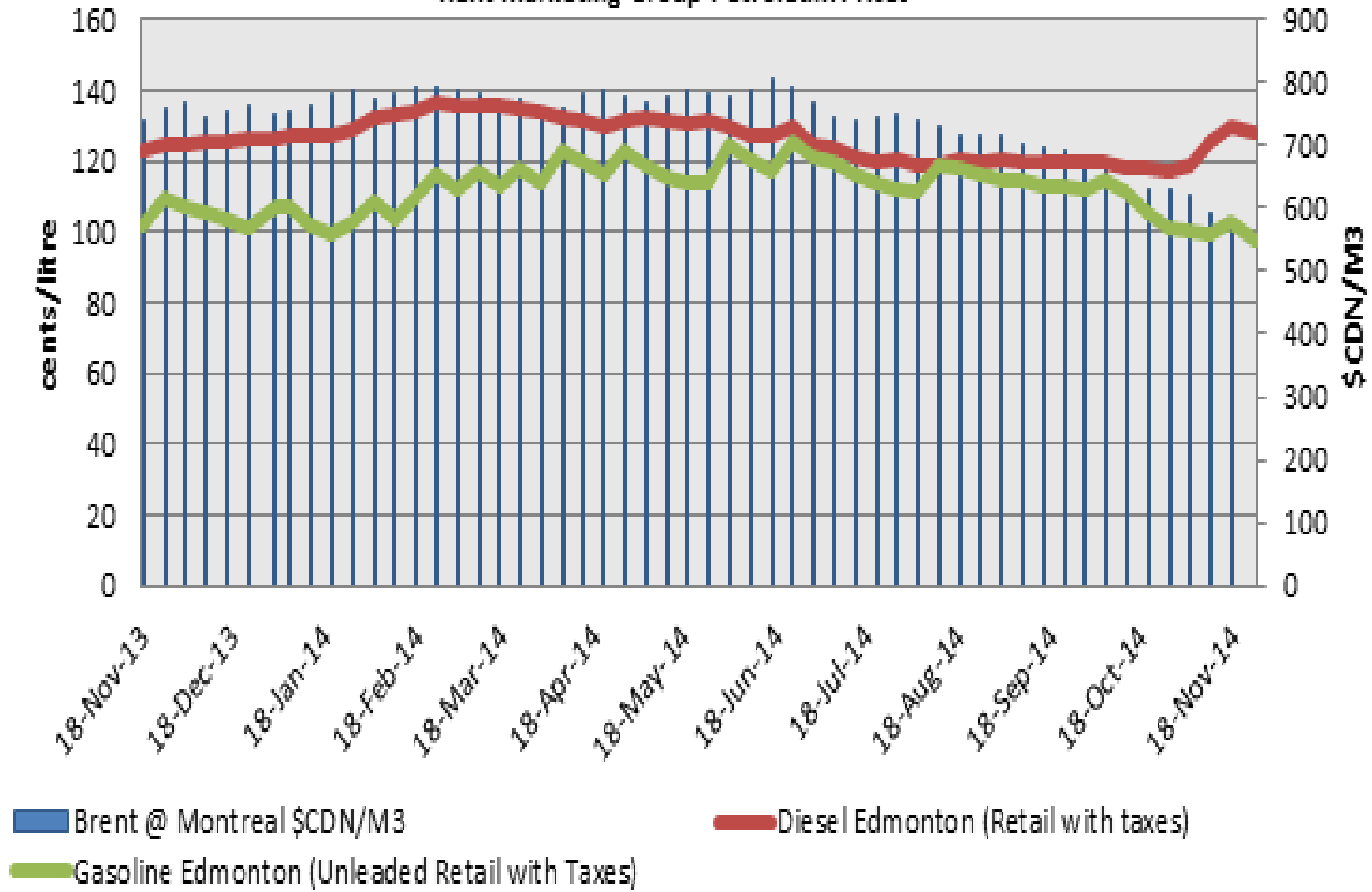
— Urea 46-0-0

— Anhydrous Ammonia, 82-0-0

Source: Statistics and Data Development Branch

# Weekly Crude, Diesel and Gasoline Prices

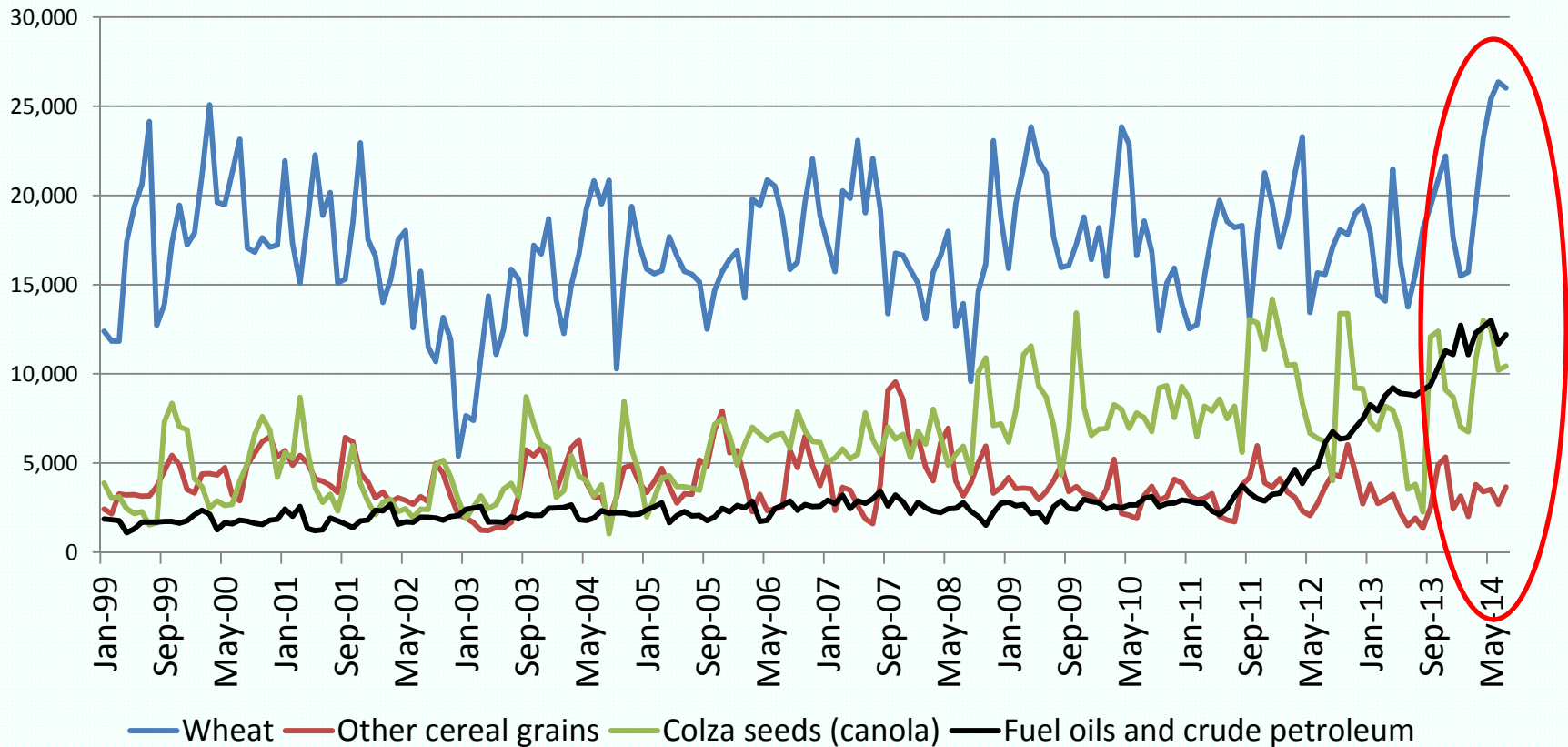
Kent Marketing Group Petroleum Prices





# Transportation System – Grains vs Goods

## Monthly Railway Carloadings by Selected Commodity - Western Canada



Source: Statistics Canada

# Risk Management Decision

- attitude towards risk
- financial position
- probability of loss or profit
  - your average yield vs. risk area average
  - variations from your average yield
  - price expectations
  - price setting alternatives & opportunities

# Attitude toward RISK

## Risk Averters

- avoid risk, sacrificing chance for higher income

## Risk Takers

- accept risk, for chance of increased income

## Risk Neutral

- manager who emphasizes maximizing net income

# Effective Risk Management

- **anticipating** possible difficulties

AND

**planning** ... to reduce their  
consequences,

NOT just reacting to unfavourable events

# Management Strategies to Reduce Risk

- Diversification
- Flexibility
- Insurance
- Marketing alternatives (price & delivery)

# **Crop Marketing Strategies**

- Know Your Costs of Production
- Follow Situation and Outlook
- Set Target Prices
- Understand & Assess Delivery Alternatives
- Understand & Assess Pricing Alternatives
- Act on your Plan !
- Learn from your experiences

### Individual Production Costs & Returns (\$/Acre)

<i>AgriProfit</i> \$	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Expected Yield per Acre					
Expected Market Price per Unit					
<b>Value of Production</b>					
<b>Direct Expenses:</b>					
Seed, cleaning and treatment					
Fertilizer					
Chemical					
Hail & Crop Insurance					
Trucking & Marketing					
Fuel, Oil & Lube					
Irrigation: Pumping Costs					
Machinery Repairs					
Building Repairs					
Utilities & Miscellaneous					
Custom Work					
Paid Labour					
Unpaid Labour					
Operating Interest					
Summerfallow Expense					
Other Expenses					
<b>Total Direct Expense</b>					
<b>Contribution Margin</b>					
Cash/Share Rent & Land Lease					
Taxes, Licenses & Insurance					
Water Rates (Irrigation only)					
Depreciation & Lease Payments					
Paid Capital Interest					
<b>Total Capital Costs</b>					
<b>Return to Mgmt &amp; Equity</b>					
<b>Break-Even Yield</b>					
<b>Break-Even Price</b>					

Source: ARD

## Individual Production Costs & Returns (\$/Acre)

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Trucking & Marketing					
Fuel, Oil & Lube					
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Machinery Repairs					
Building Repairs					
Utilities & Miscellaneous					
Custom Work					
Paid Labour					
Unpaid Labour					
Operating Interest					
Summerfallow Expense					
Other Expenses					
<b>Total Direct Expense</b>					



## Individual Production Costs & Returns (\$/Acre)

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<b>Total Direct Expense</b>					
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Cash/Share Rent & Land Lease					
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Water Rates (Irrigation only)					
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Paid Capital Interest					
<b>Total Capital Costs</b>					
<b>Return to Mgmt &amp; Equity</b>					
<b>Break-Even Yield</b>					
<b>Break-Even Price</b>					



# Ghost of Christmas Future

**Not what will be ... but what might be!!**

## 2013 Production Costs and Returns (\$/acre)

## Black Soils

### Stubble Seeded Crops

<i>AgriProfit</i> ®	Spring Wheat 2 CWR8 11.6%	CPS Wheat 1 CP8R	Feed Barley 1 CW	Malt Barley Select CW 2R	Milling Oats 3 CW	Argentine HT Canola 1 CAN	Field Peas 2 CAN	Mixed Hay	Alfalfa Hay	Cereal Silage
Expected Yield per Acre	65.00 bu	75.00 bu	90.00 bu	75.00 bu	115.00 bu	45.00 bu	50.00 bu	2.25 t	2.50 t	6.50 t
Expected Market Price	7.08 /bu	6.94 /bu	4.57 /bu	5.23 /bu	3.16 /bu	12.02 /bu	7.89 /bu	70.00 /t	80.00 /t	54.87 /t
<b>Crop Sales (\$/acre)</b>	<b>459.99</b>	<b>520.55</b>	<b>411.50</b>	<b>391.90</b>	<b>363.59</b>	<b>540.94</b>	<b>394.67</b>	<b>157.50</b>	<b>200.00</b>	<b>356.63</b>
<b>Direct Expenses:</b>										
Seed, Cleaning & Treatment	28.31	27.76	18.29	20.90	15.81	39.66	47.36	3.55	10.63	20.57
Fertilizer (NPKS blend)	75.50 80-30-10-0	75.50 80-30-10-0	75.50 80-30-10-0	77.00 70-30-20-10	64.00 70-30-0-0	104.50 100-40-15-20	26.50 5-30-15-0	18.50 15-15-0-0	17.00 5-25-0-0	58.00 65-25-0-0
Chemical	32.00 *	27.00	16.00	50.42 *	11.50	24.00	35.80 *	1.25	1.56	11.50
Hail/Crop Insurance	18.30	23.67	16.02	16.02	15.70	24.37	21.05	0.00	6.38	11.32
Trucking & Marketing	13.27	15.31	14.69	12.24	13.30	7.65	10.20	16.88	18.75	48.75
Fuel, Oil & Lube	18.50	16.75	17.50	19.25	12.25	19.00	24.00	8.00	5.00	31.50
Machinery Repairs	17.25	17.00	11.50	16.75	11.50	15.25	17.75	15.00	7.00	11.00
Building Repairs	2.00	5.00	2.00	5.50	2.75	2.25	4.50	5.00	3.00	3.50
Custom Work	2.00	2.00	2.25	3.00	14.50	2.50	8.25	2.00	4.50	5.00
Labour (Paid and Unpaid)	18.00	22.00	14.50	23.50	19.50	18.50	22.00	25.00	11.00	32.00
Utilities & Miscellaneous	11.50	13.50	8.50	17.75	12.00	10.50	15.25	6.00	5.00	7.50
Operating Interest	6.79	6.51	5.49	7.42	4.57	8.41	5.48	1.16	1.46	4.50
<b>Total Direct Expense</b>	<b>243.41</b>	<b>252.00</b>	<b>202.24</b>	<b>269.76</b>	<b>197.37</b>	<b>276.59</b>	<b>238.15</b>	<b>102.34</b>	<b>91.28</b>	<b>245.15</b>
<b>Contribution Margin</b>	<b>216.58</b>	<b>268.55</b>	<b>209.25</b>	<b>122.14</b>	<b>166.21</b>	<b>264.35</b>	<b>156.52</b>	<b>55.16</b>	<b>108.72</b>	<b>111.48</b>

Total Cost per Unit	5.05	4.49	3.19	4.73	2.45	8.03	6.46	78.04	65.81	48.98
Break-Even Yield	47.00 bu	49.00 bu	63.00 bu	68.00 bu	90.00 bu	31.00 bu	41.00 bu	2.51 t	2.06 t	5.80 t

Capital Costs by Enterprise	Crops	Forages
Crop Share/Cash Rent	52.00	41.50
Licenses and Insurance	11.00	5.50
Depreciation	40.00	42.50
Paid Capital Interest	6.75	4.50
<b>Total Capital Costs</b>	<b>109.75</b>	<b>94.00</b>
<b>Adjusted Capital Costs</b>	<b>84.75</b>	<b>73.25</b>

#### Questions?

Jason Wood 780-422-3122

Production Crops Economist, Economics Branch

Alberta Agriculture and Rural Development

Note: Please refer to 2013 Methodology on Ropin the Web.

Prepared May 10, 2013

## 2013 Production Costs and Returns (\$/acre)

## Brown Soils

### Stubble Seeded Crops

<i>AgriProfit\$</i>	Spring Wheat <small>1 CWRS 13.8%</small>	CPS Wheat <small>1 CPSR</small>	Durum Wheat <small>1 CWAD 13%</small>	Feed Barley <small>1 CW</small>	Malt Barley <small>Select CW 2R</small>	Milling Oats <small>3 CW</small>	Argentine HT Canola <small>1 CAN</small>	Field Peas <small>2 CAN</small>	Lentils <small>2 CAN</small>	Kabuli Chickpea <small>2 CW Imm</small>	Yellow Mustard <small>1 CAN</small>	Mixed Hay	Summer Fallow
Expected Yield per Acre	40.00 bu	45.00 bu	40.00 bu	65.00 bu	50.00 bu	75.00 bu	25.00 bu	40.00 bu	900.00 lbs	1200.00 lbs	750.00 lbs	1.50 t	0.00
Expected Market Price	7.62 /bu	6.94 /bu	7.08 /bu	4.57 /bu	5.23 /bu	3.16 /bu	12.02 /bu	7.89 /lb	0.20 /lb	0.26 /lb	0.35 /lb	70.00 /t	0.00
<b>Crop Sales (\$/acre)</b>	<b>304.84</b>	<b>312.33</b>	<b>283.07</b>	<b>297.19</b>	<b>261.27</b>	<b>237.12</b>	<b>300.52</b>	<b>315.73</b>	<b>177.55</b>	<b>315.65</b>	<b>261.90</b>	<b>105.00</b>	<b>0.00</b>
<b>Direct Expenses:</b>													
Seed, Cleaning & Treatment	24.77	24.29	23.82	16.00	18.29	12.65	31.73	43.41	23.67	63.13	12.57	3.25	0.00
Fertilizer (NPKS blend)	47.50 50-20-5-0	47.50 50-20-5-0	47.50 50-20-5-0	57.00 60-25-5-0	59.00 50-30-10-10	45.00 50-20-0-0	66.50 65-25-10-10	19.00 5-20-10-0	14.00 5-20-0-0	19.50 5-30-0-0	42.00 40-20-0-10	12.50 10-10-0-0	0.00
Chemical	25.60 *	21.60	25.60	12.80	45.38 *	10.35	21.60	19.50	36.00 *	57.00 *	16.00	1.25	15.00
Hail/Crop Insurance	17.41	22.15	18.34	16.11	16.11	11.72	27.78	17.14	18.06	27.89	18.41	0.00	0.00
Trucking & Marketing	8.16	9.18	8.16	10.61	8.16	8.67	4.25	8.16	5.31	7.07	4.42	2.25	0.00
Fuel, Oil & Lube	13.25	12.40	12.50	13.00	13.75	13.50	13.75	13.03	11.50	13.75	13.00	6.75	7.25
Machinery Repairs	14.75	11.25	12.00	8.50	8.00	10.00	8.00	10.75	8.00	9.00	8.50	10.00	9.00
Building Repairs	1.50	2.50	1.25	1.00	1.00	2.50	1.50	2.25	2.75	2.00	1.00	3.00	1.00
Custom Work	4.00	1.50	3.50	4.00	2.50	2.50	8.00	2.00	2.00	4.00	3.00	2.00	0.00
Labour (Paid and Unpaid)	21.00	17.50	17.50	16.00	16.00	14.00	18.50	13.25	13.00	15.00	13.50	16.00	10.00
Utilities & Miscellaneous	12.00	12.50	12.50	8.50	8.50	10.00	10.00	11.00	12.50	12.50	9.50	11.25	3.00
Operating Interest	4.89	4.67	4.85	4.29	6.13	3.40	5.99	4.10	3.68	6.98	3.53	0.85	0.75
<b>Total Direct Expense</b>	<b>194.84</b>	<b>187.05</b>	<b>187.52</b>	<b>167.81</b>	<b>202.83</b>	<b>144.29</b>	<b>217.60</b>	<b>163.59</b>	<b>150.47</b>	<b>237.83</b>	<b>145.43</b>	<b>69.10</b>	<b>46.00</b>
<b>Contribution Margin</b>	<b>110.01</b>	<b>125.28</b>	<b>95.56</b>	<b>129.38</b>	<b>58.44</b>	<b>92.83</b>	<b>82.92</b>	<b>152.15</b>	<b>27.08</b>	<b>77.82</b>	<b>116.47</b>	<b>35.90</b>	<b>(46.00)</b>
<b>Total Cost per Unit</b>	<b>6.33</b>	<b>5.46</b>	<b>6.15</b>	<b>3.48</b>	<b>5.23</b>	<b>2.70</b>	<b>11.04</b>	<b>5.55</b>	<b>0.23</b>	<b>0.25</b>	<b>0.27</b>	<b>61.07</b>	<b>N/A</b>
<b>Break-Even Yield</b>	<b>34.00 bu</b>	<b>36.00 bu</b>	<b>35.00 bu</b>	<b>50.00 bu</b>	<b>51.00 bu</b>	<b>65.00 bu</b>	<b>23.00 bu</b>	<b>29.00 bu</b>	<b>1060.00 lbs</b>	<b>1127.00 lbs</b>	<b>584.00 lbs</b>	<b>1.74 t</b>	<b>N/A</b>

Capital Costs by Enterprise	Crops	Forages
Crop Share/Cash Rent	35.00	28.00
Licenses and Insurance	5.50	8.00
Depreciation	24.00	27.50
Paid Capital Interest	11.50	3.00
<b>Total Capital Costs</b>	<b>76.00</b>	<b>66.50</b>
<b>Adjusted Capital Costs</b>	<b>59.50</b>	<b>52.50</b>

Questions?  
 Jason Wood 780-422-3122  
 Production Crops Economist, Economics Branch  
 Alberta Agriculture and Rural Development  
 Note: Please refer to 2013 Methodology on Ropin the Web.

Prepared May 10, 2013

## Production Costs and Returns (\$/acre)

## Dark Brown Soils

### Stubble-Seeded Crops

<i>AgriProfit#</i>	Spring Wheat <small>1 CWRG 13.8%</small>	CP3 Wheat <small>1 CPSR</small>	Durum Wheat <small>1 CWAD 10%</small>	Winter Wheat <small>Select CWRW</small>	Feed Barley <small>1 CW</small>	Malt Barley <small>Select CWR</small>	Milling Oats <small>3 OW</small>	Argentine Canola <small>1 CAN</small>	Field Peas <small>3 CAN</small>	Flax <small>1 OW</small>	Yellow Mustard <small>1 CAN</small>	Mixed Hay <small>3 OW</small>	Cereal Silage <small>5.00 t</small>	Summer Fallow
Expected Yield per Acre	45.00 bu	50.00 bu	45.00 bu	50.00 bu	70.00 bu	55.00 bu	85.00 bu	30.00 bu	45.00 bu	20.00 bu	850.00 lbs	1.75 t	5.00 t	0.00
Expected Market Price	7.62 /bu	5.94 /bu	7.08 /bu	6.53 /bu	4.57 /bu	5.23 /bu	3.16 /bu	12.02 /bu	7.89 /bu	13.72 /bu	0.35 /lb	70.00 /t	54.87 /t	0.00
<b>Crop Sales (\$/acre)</b>	<b>342.86</b>	<b>347.03</b>	<b>318.46</b>	<b>328.82</b>	<b>320.06</b>	<b>287.38</b>	<b>268.74</b>	<b>360.83</b>	<b>356.20</b>	<b>274.32</b>	<b>288.83</b>	<b>122.60</b>	<b>274.33</b>	<b>0.00</b>
<b>Direct Expenses:</b>														
Seed, Cleaning & Treatment	24.77	24.29	23.82	25.13	18.29	20.90	14.23	39.66	43.41	27.55	13.97	3.25	18.29	0.00
Fertilizer (NPKS blend)	57.00 <small>60-25-5-0</small>	57.00 <small>60-25-5-0</small>	57.00 <small>60-25-5-0</small>	57.00 <small>60-25-5-0</small>	64.00 <small>70-25-5-0</small>	68.00 <small>60-30-15-10</small>	48.50 <small>55-20-0-0</small>	78.00 <small>7-30-10-15</small>	19.00 <small>5-20-10-0</small>	45.00 <small>50-20-0-0</small>	51.50 <small>50-25-0-10</small>	15.00 <small>10-15-0-0</small>	52.00 <small>60-20-0-0</small>	0.00
Chemical	28.80 *	24.30	28.80	10.35	12.80	45.38	11.50	24.00	35.80 *	21.50 *	16.00	1.25	11.50	15.00
Hail/Crop Insurance	19.04	24.00	19.11	20.51	16.09	16.09	13.38	29.43	17.14	22.22	19.84	0.00	0.00	0.00
Trucking & Marketing	9.18	10.20	9.18	10.20	11.43	9.98	9.83	5.10	9.18	3.81	5.01	2.63	7.50	0.00
Fuel, Oil & Lube	11.38	13.39	13.62	13.21	12.50	13.97	11.25	13.93	14.06	10.27	13.00	8.80	13.00	8.50
Machinery Repairs	12.25	12.50	11.00	12.00	12.00	12.50	11.00	15.00	13.50	11.00	11.00	9.50	7.00	8.00
Building Repairs	1.00	1.50	1.00	1.00	2.00	2.50	1.00	1.50	1.75	1.50	1.50	2.50	1.25	1.50
Custom Work	2.00	3.00	3.00	3.00	6.00	6.00	2.00	5.00	3.00	8.00	4.50	9.50	40.00	0.00
Labour (Paid and Unpaid)	12.50	13.00	11.50	12.50	12.25	13.00	13.00	14.00	12.25	14.50	13.50	10.00	10.00	10.00
Utilities & Miscellaneous	6.00	6.50	7.50	7.00	7.00	10.00	6.00	8.00	8.25	5.00	9.00	10.00	8.00	3.00
Operating Interest	5.53	5.28	5.48	4.67	4.75	6.71	3.71	7.08	4.91	4.70	4.07	0.98	4.09	0.75
<b>Total Direct Expense</b>	<b>189.46</b>	<b>184.87</b>	<b>181.01</b>	<b>177.68</b>	<b>178.11</b>	<b>224.84</b>	<b>146.40</b>	<b>240.70</b>	<b>182.28</b>	<b>176.06</b>	<b>181.89</b>	<b>73.40</b>	<b>172.83</b>	<b>48.76</b>
<b>Contribution Margin</b>	<b>153.60</b>	<b>162.08</b>	<b>127.45</b>	<b>148.04</b>	<b>140.84</b>	<b>89.35</b>	<b>123.34</b>	<b>118.82</b>	<b>172.84</b>	<b>98.27</b>	<b>134.83</b>	<b>48.10</b>	<b>101.70</b>	<b>(48.75)</b>
<b>Total Cost per Unit</b>	<b>6.70</b>	<b>5.24</b>	<b>6.74</b>	<b>4.90</b>	<b>3.62</b>	<b>6.30</b>	<b>2.60</b>	<b>10.27</b>	<b>6.64</b>	<b>12.12</b>	<b>0.27</b>	<b>88.80</b>	<b>43.83</b>	<b>N/A</b>
<b>Break-Even Yield</b>	<b>34.00 bu</b>	<b>38.00 bu</b>	<b>37.00 bu</b>	<b>38.00 bu</b>	<b>54.00 bu</b>	<b>68.00 bu</b>	<b>88.00 bu</b>	<b>28.00 bu</b>	<b>32.00 bu</b>	<b>18.00 bu</b>	<b>667.00 lbs</b>	<b>1.72 t</b>	<b>4.00 t</b>	<b>N/A</b>

Capital Costs by Enterprise	Crops	Forages
Crop Share/Cash Rent	63.00	26.00
Licenses and Insurance	4.75	5.00
Depreciation	25.00	15.50
Paid Capital Interest	6.00	13.50
<b>Total Capital Costs</b>	<b>98.75</b>	<b>60.00</b>
<b>Adjusted Capital Costs</b>	<b>67.25</b>	<b>47.00</b>

Questions?  
 Jason Wood 780-422-3122  
 Production Crops Economist, Economics Branch  
 Alberta Agriculture and Rural Development  
 Note: Please refer to 2013 Methodology on Replenish the Web.

Prepared May 10, 2013



<i>AgriProfit</i> ®	
Expected Yield per Acre	85 bu/ac
Expected Market Price	3.16/bu.
<b>Crop Sales (\$/acre)</b>	<b>268.60</b>
<b>Direct Expenses:</b>	
Seed, Cleaning & Treatment	14.23
Fertilizer (NPKS blend)	48.50
	55-20-0-0
Chemical	11.50
Harvest Insurance	13.38
Trucking & Marketing	9.83
Fuel, Oil & Lube	11.25
Machinery Repairs	11.00
Building Repairs	1.00
Custom Work	2.00
Labour (Paid and Unpaid)	13.00
	6.00
Utilities & Miscellaneous	3.71
Operating Interest	3.71
<b>Total Direct Expense</b>	<b>145.40</b>
<b>Contribution Margin</b>	<b>123.34</b>
<b>Total Cost per Unit</b>	<b>1.71</b>
<b>Break-Even Yield</b>	<b>46</b>

## Milling Oats

3CW

85 bu/ac

3.16/bu.

268.60

14.23

48.50

55-20-0-0

11.50

13.38

9.83

11.25

11.00

1.00

2.00

13.00

6.00

3.71

145.40

123.34

1.71

46



at this cost level

# Contribution Margins (Dark Brown Soil Zone) Return Above Direct Expenses (excludes capital costs, dep'n, rent, cap interest)

Hay	49.10
Malt Barley	63.35
Flax	99.27
HT Canola	119.92
<b>Oats</b>	<b>123.34</b>
Durum	127.45
Feed Barley	140.94
W. Wheat	149.04
RS Wheat	153.50
Field Peas	172.94

## Gain Perspective With Breakeven Approach

Given costs and average yields, what is your BE price?

Example: Oats @ \_\_\_\_\_ bu/ac. yield

Direct expenses of \$ \_\_\_\_\_ /acre

“Breakeven” price = \$ \_\_\_\_\_ / \_\_\_\_\_ = \$ \_\_\_\_\_ /bu.

+ Other Costs (fixed cash, dep’n, interest) @ \$ \_\_\_\_\_ /acre

...Breakeven price = \$ \_\_\_\_\_ / \_\_\_\_\_ = \$ \_\_\_\_\_ /bu.

### **PROFIT???**

Breakeven Yield @ \$ \_\_\_\_\_ bu. =

Total Costs \$ \_\_\_\_\_ /ac ÷ \$ \_\_\_\_\_ /bu. = \_\_\_\_\_ bu./acre



# Gain Perspective With Breakeven Approach

Given costs and average yields, what is your BE price?

Example: Milling Oats @ 85 bu./ac. yield

Direct expenses of \$145/acre (excl. rent, insur., dep'n, cap interest)

“Breakeven” price =  $\$145/85 = \$1.71/\text{bu.}$

+ Capital Costs of \$99/acre (rent, insurance, dep'n, cap int.)

“Breakeven” price (incl. Capital costs) =

$$\$244/85 = \$2.87/\text{bushel}$$

Example “Breakeven” Yield @  $\$3.00/\text{bu.} = \$244/\$3 = 81 \text{ bu./ac.}$

# **What is a GOOD Price ???**

- **Recent History**
- **Past History**
- **Better than your Neighbor**
- **Profitable for your farm !!**

# MARKET INFORMATION SOURCES

- Radio
- Phone
- Papers
- Newsletters – fax, internet, e-mail
- Grain Companies
- Brokerage Firms
- Marketing Meetings
- Internet

**Marketing Plan For** \_\_\_\_\_

Date \_\_\_\_\_, 20\_\_\_\_\_

Crop & Grade \_\_\_\_\_

Location \_\_\_\_\_

Dockage \_\_\_\_\_

Moisture \_\_\_\_\_

**Market Notes**

3 month \_\_\_\_\_

\_\_\_\_\_

6 month \_\_\_\_\_

\_\_\_\_\_

1 year \_\_\_\_\_

\_\_\_\_\_

**Know Your Product !**

**Marketing Plan For** \_\_\_\_\_

**PRICING PLAN**

Estimated Costs/Acre \_\_\_\_\_

Breakeven Price \_\_\_\_\_

Target Price

Probability of Reaching  
Target Price

# of tonnes

% of crop

\_\_\_\_\_

\_\_\_\_\_

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Profit per acre \$ \_\_\_\_\_

What would change my plan? \_\_\_\_\_

\_\_\_\_\_

# Delivery Alternatives - Grains

- Line Elevator
- Rail Car or Truck (local or export)
  - reference: Exporting Grains to the US
- Processor (crusher, mill)
- Feedlot/Feedmill
- Other Farmers (seed, feed)
- Specialty market (e.g., organic)

# Pricing Alternatives

## Before Delivery

- deferred delivery contract
- minimum or floor price contract
- hedging via futures market
- using options on futures

## At Delivery

- deliver when able or price is acceptable
- price on delivery

## After Delivery

- storage ticket (e.g. 30 day pricing)
- deliver when basis acceptable  
& replace with Buy futures or Buy call option

# Considerations of your Marketing Plan

- Breakeven price levels
- Cash flow needs: amounts and timing
- Seasonality of price and basis
- Your risk-taking ability
  - Financial
  - Personality
- Storage Considerations
  - Volume
  - Conditioning required



# What is “The Basis”?

- Cash Price - Futures Price = Basis
- Basis includes:
  - Freight
  - Elevation, Handling & Administration
  - Cleaning
  - Storage
  - Interest
  - Exchange rate?
  - Company profit

**Basis = Cash Price MINUS Futures Price**

Example:

Nov. 20 #2 Oats (Manitoba elevator) oat **cash** price 2.87/bu. Cdn.

MINUS

Nov. 20 CBT Dec Oat **futures** 3.26/bu. US

= \$2.87 MINUS 3.26 = (0.39/bu.)

= spot **basis** level for that buyer at that location

What about the currency difference?

# Basis = Cash Price MINUS Futures Price (same currency)

## Example:

Nov. 20 #2 Oats (Manitoba elevator oat <b>cash</b> price)	2.87/bu. Cdn
MINUS	
Nov. 20 CBT Dec Oat <b>futures</b>	3.26/bu. US
Adjustment for US/Cdn currency	1.131
CBT Dec Oat futures	3.69/bu. Cdn
= \$2.87 MINUS \$3.69 =	(0.82/bu)
= spot <b>basis</b> level in Cdn \$ for that buyer at that location	



START ONLINE  
TPA NOW

Viterra Grain Prices My Locations Units of Measure Delivery Method

### Select a Crop - Camrose Specialty Oats

★ Oats (2 CW)

Delivery Month	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Futures Month	Mar	Mar	Mar	Mar	May	May	Jul	Jul	Dec	
Futures	\$3.25	\$3.25	\$3.25	\$3.25	\$3.26	\$3.26	\$3.27	\$3.27	\$3.22	\$
Basis	\$-0.98	\$-0.87	\$-0.32	\$-0.32	\$-0.32	\$-0.32	\$-0.21	\$-0.21	\$-0.21	\$-
<b>Net Price</b>	<b>\$2.27</b>	<b>\$2.38</b>	<b>\$2.93</b>	<b>\$2.93</b>	<b>\$2.94</b>	<b>\$2.94</b>	<b>\$3.06</b>	<b>\$3.06</b>	<b>\$3.00</b>	<b>\$</b>

These prices are to be used as a guideline only. For current prices, please contact your Viterra representative.

# Advantages of Following Basis Levels

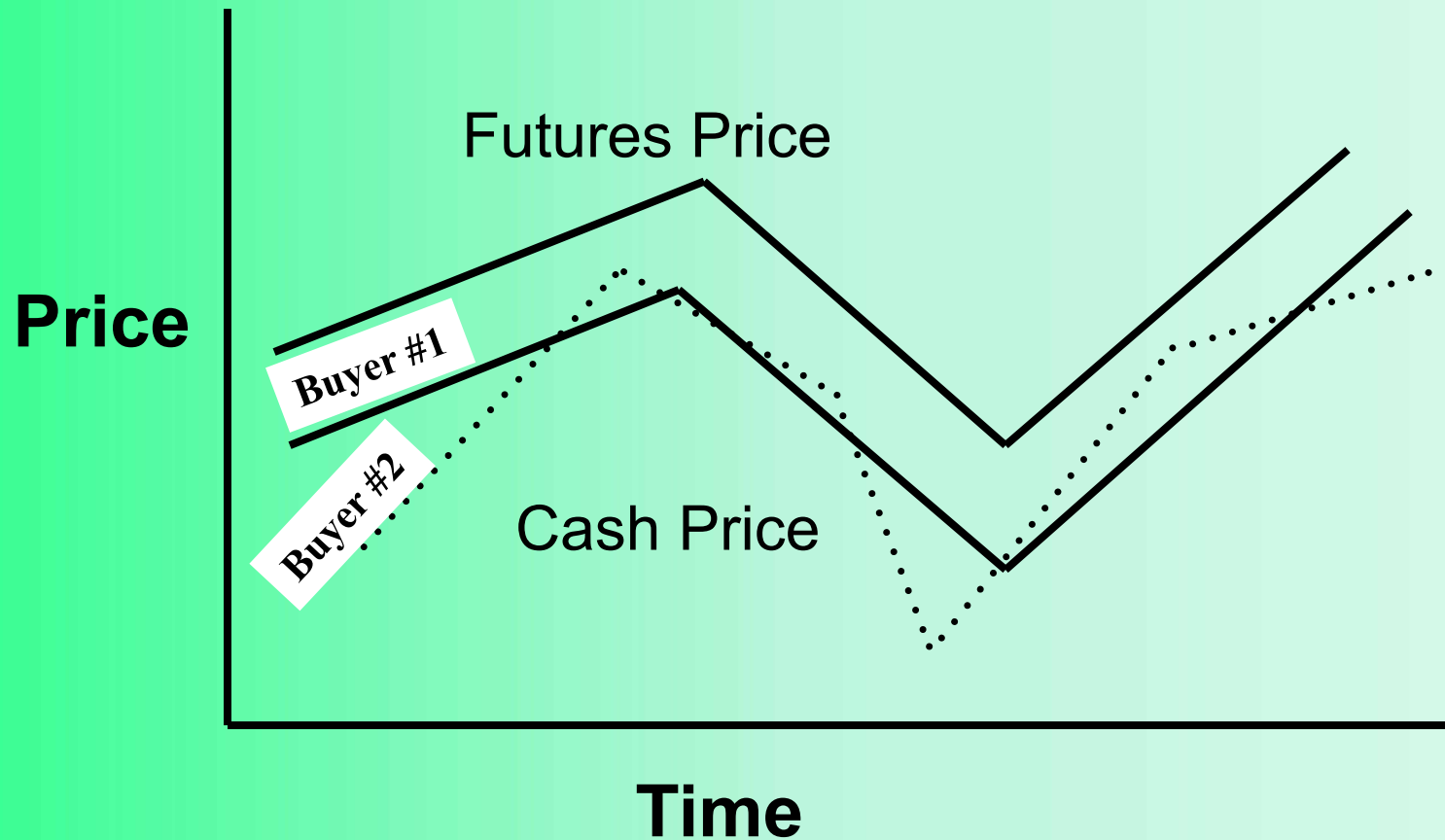
Basis:

- provides market information
- reflects local supply and demand
- change gives commercial demand indication
- can move independently from futures
- can be locked in separately from futures

# Futures Hedge

- price insurance to reduce risk of adverse price change
- hedger either has or expects to have “cash” position to offset futures position
- speculator has only cash OR futures position
- hedge is an opposite position on the cash and futures markets

# Why Hedging Works

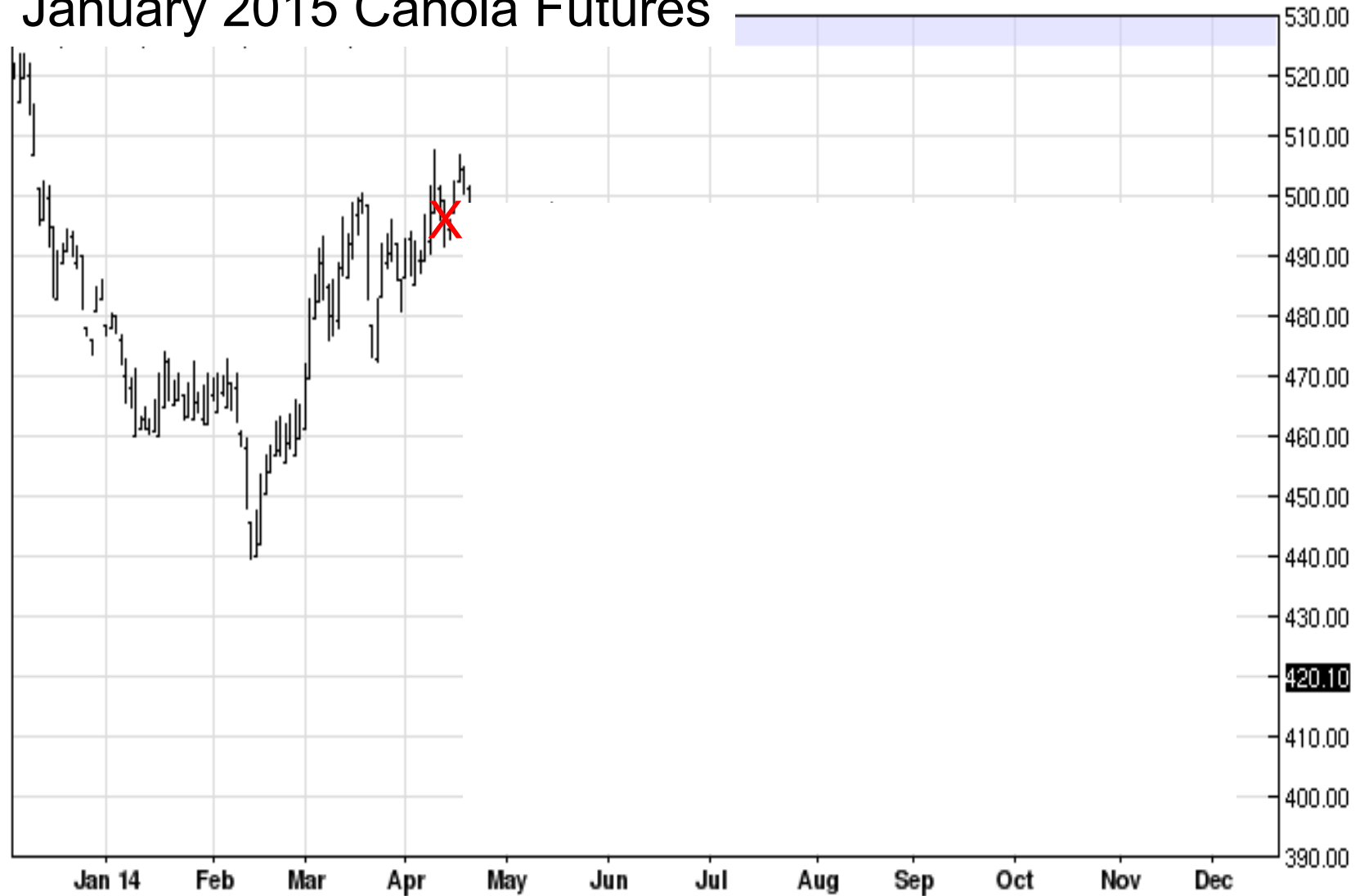


# Steps of Futures Hedging (producer)

- set up hedge account with brokerage firm
- arrange to handle margin calls
- costs of production and yield estimates
- follow market information
- set target prices
- open hedge by selling futures contract(s) in month close to expected delivery month
- meet margin calls
- roll hedge if necessary (avoid open position in delivery month)
- deliver and price physical grain ... close futures hedge by buying same quantity for same month



# January 2015 Canola Futures



Source: [barchart.com](http://barchart.com)

# Hedging Worksheet (producer)

(ID risk as: a canola futures price drop)

Commodity Canola

FUTURES

CASH

3. Target Futures

2. Estimate  
Basis

1. Target  
Cash Price

April 21, 2014

Sell Jan 2015 Canola @ 494/tonne

= 494 Cdn.

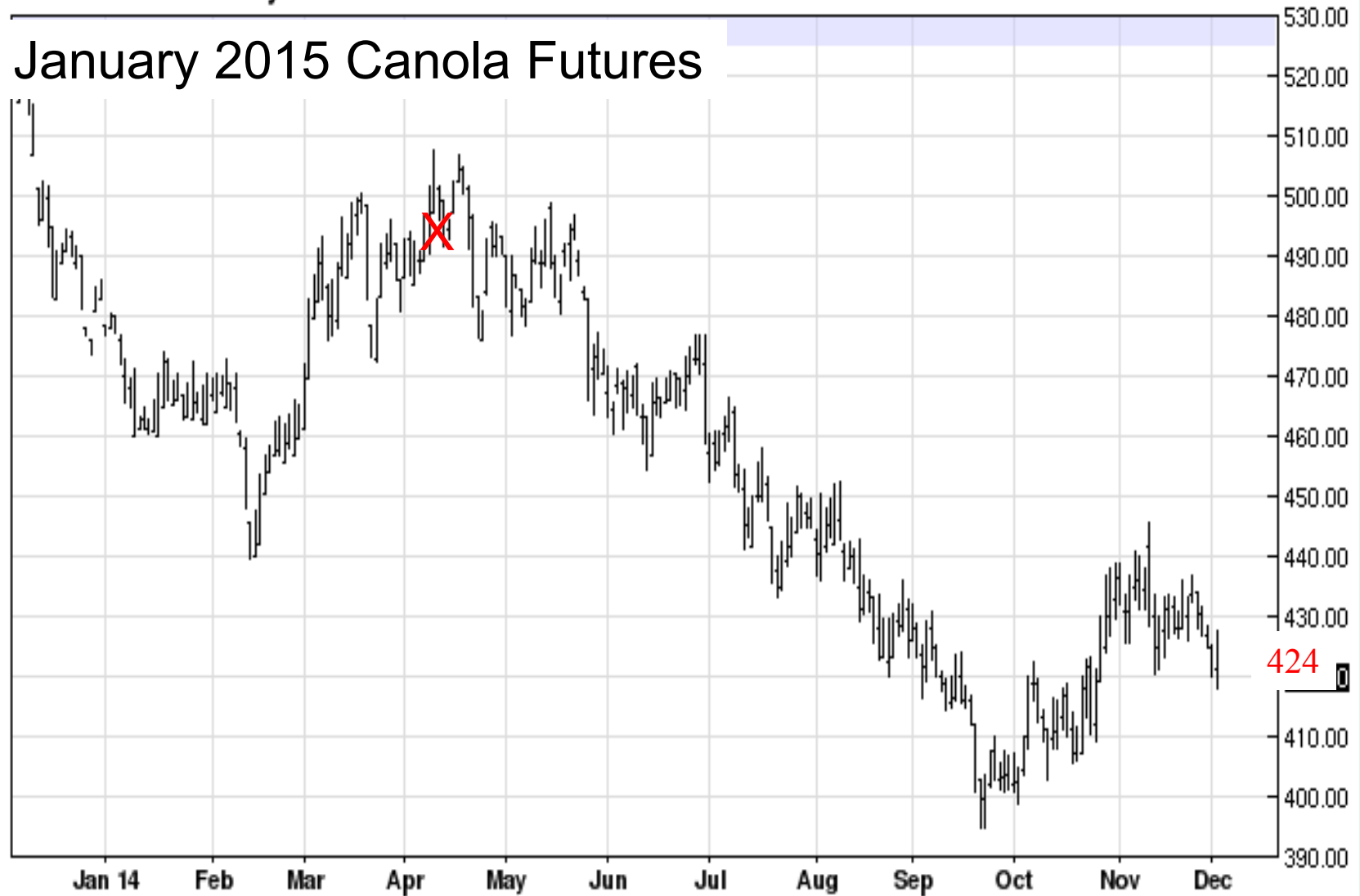
(20.00)

474

\$10.75/bu.

RSF15 - Canola - Daily OHLC Chart

# January 2015 Canola Futures



Source: barchart.com

# Hedging Worksheet (close hedge) Ex #1

Commodity Canola

FUTURES

Date - April 21, 2014 Sold @ \$494/t

CASH

Target = 474/t

2. Offset futures

3. Calculate Basis 1. Sell canola

December 2, 2014

Buy Jan 2015 Canola @ 424/t

(20)

404

Futures Gain/loss = 494 (April 21) – 424 (now) = +70/tonne

Total Canola Returns = 404 cash price + futures gain 70 = 474/tonne

Note: excludes commission

# Hedging Worksheet (producer) Ex #2

Same setup as Example #1

Commodity Canola

FUTURES

CASH

3. Target Futures

2. Estimated  
Basis

1. Target  
Cash Price

April 21, 2014

Sell Jan 2015 Canola @ 494/tonne

= 494 Cdn.

(20.00)

474

\$10.75/bu.

# Hedging Worksheet (close hedge) Ex #2

Commodity Canola

FUTURES

Date - April 21, 2014 Sold @ \$494/t

CASH

Target = 474/t

2. Offset futures

3. Calculate Basis 1. Sell canola

December 2, 2014 **If**

Buy Jan 2015 Canola @ 500/t

(20)

480

Futures Gain/loss = 494 (April 21) – 500 (now) = (6)/tonne

Total Canola Returns = 480 cash price + futures loss (6) = 474/tonne

Note: excludes commission

# Hedging Worksheet (producer) Ex #3

Same setup as Examples #1 & 2

Commodity Canola

FUTURES

CASH

3. Target Futures

2. Estimated  
Basis

1. Target  
Cash Price

April 21, 2014

Sell Jan 2015 Canola @ 494/tonne

= 494 Cdn.

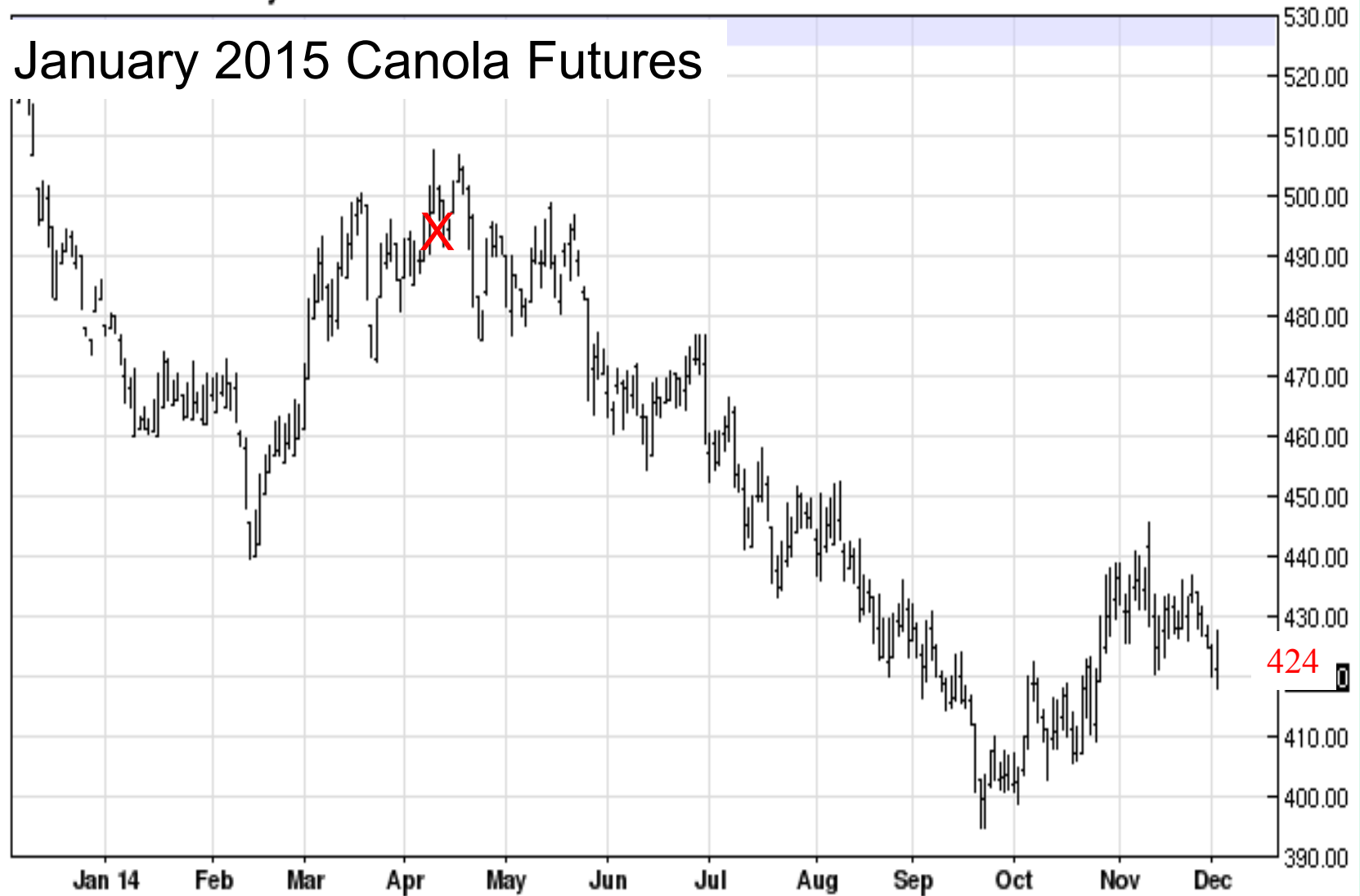
(20.00)

474

\$10.75/bu.

RSF15 - Canola - Daily OHLC Chart

# January 2015 Canola Futures



Source: barchart.com



# Hedging Worksheet (close hedge) Ex #3

Commodity Canola

FUTURES

Date - April 21, 2014 Sold @ \$494/t

CASH

Target = 474/t

2. Offset futures

3. Calculate Basis

1. Sell canola

December 2, 2014

Buy Jan 2015 Canola @ 424/t

(12)

412

Futures Gain/loss = 494 (April 21) – 424 (now) = +70/tonne

Total Canola Returns = 412 cash price + futures gain 70 = 482/tonne  
\$10.93/bu.

Note: excludes commission of ~ \$1/T.

# Futures Hedge

- Locks in futures price
- Could “lift” hedge position at any time
- No obligation to a specific buyer
- Basis risk remains unless also basis contract
- More complex than DDC contract  
(margin, brokerage costs)

A futures hedge is effective at locking in a cash price **IF** basis at date of sale of physical product is the same or better than the basis estimate when the hedge was entered

# Put and Call Options

- Option to buy/sell futures at a certain price  
-**but not the obligation to do so**
- **Call options** provide the **right to buy futures** at a specified price (sets ceiling price)
- **Put options** provide the **right to sell futures** at a specified price (sets floor price)
- Option purchase does not require margin, just a premium & commission

# Alternatives For an Option Buyer

- Sell it as an option
- Exercise it (create a futures position)
- Let it expire worthless

# Definitions

- Underlying – instrument to which the option relates
- Premium – total value of the option
- Strike Price – predetermined price at which the option buyer can enter the market of the underlying instrument
- Expiration Date – the day that the option will cease trading

# Definitions

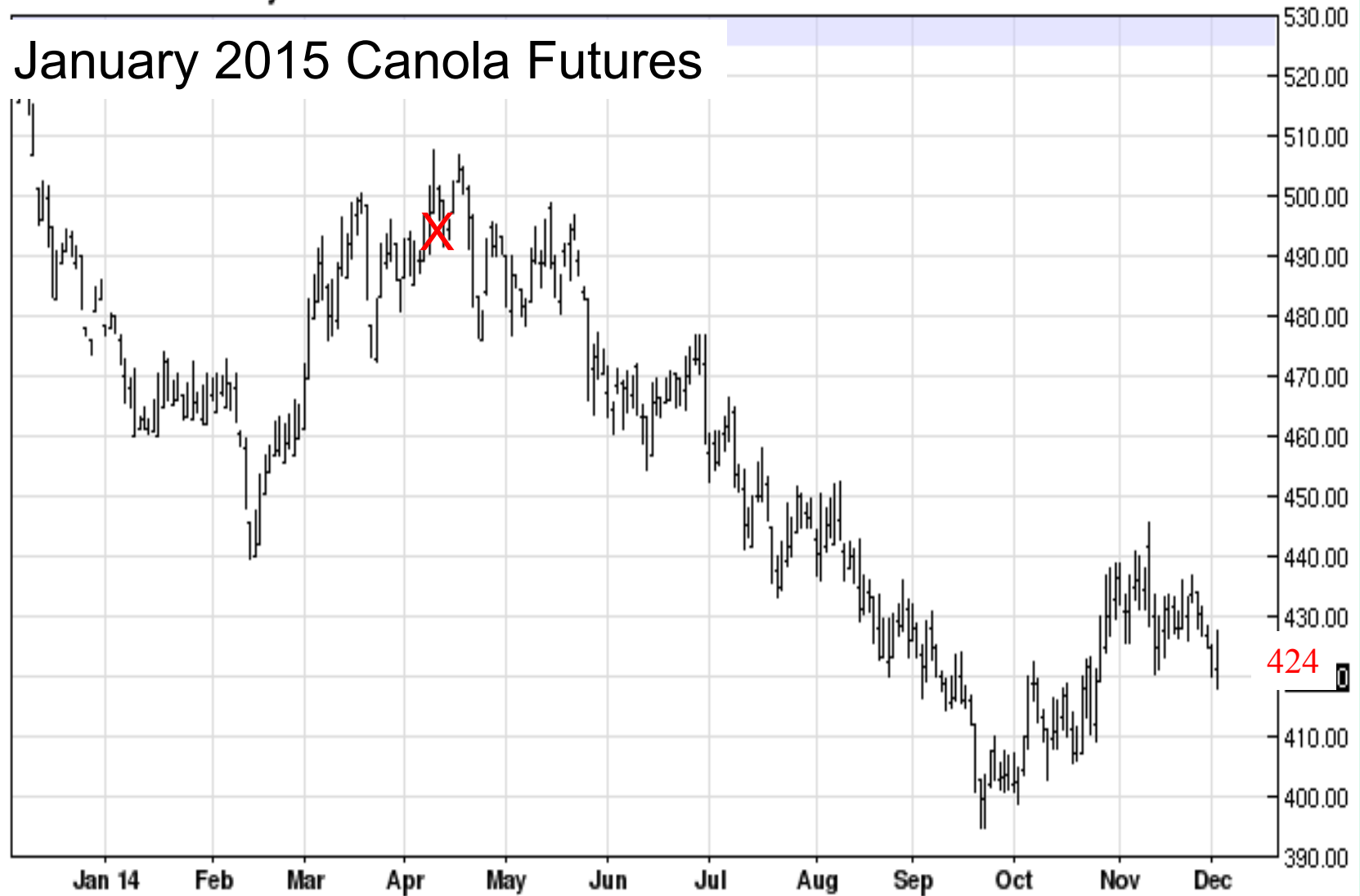
- Intrinsic Value – the amount the option would be worth if exercised (cannot be  $< 0$ )
- Time Value – portion of the option premium not due to intrinsic value

# Definitions

- In the Money - an option that has intrinsic value
- Out of the Money – an option that has no intrinsic value
- At the Money – the option with a strike price closest to the current underlying price

RSF15 - Canola - Daily OHLC Chart

# January 2015 Canola Futures



Source: barchart.com



# Canola PUT Option

Example: April 21, 2014

Month January 2015    Strike Price 490    Premium 27/t

Provides minimum futures price of 463/t. net of premium

MINUS brokerage cost                      ~ .50/tonne

Equals                                              462.50/tonne

462.50/tonne – estimated Basis of 20/tonne

= estimated minimum cash price of 442.50/tonne

- Note: 1. can still benefit from higher prices if available**  
**2. No margin calls!**

## Option Premium Analysis

**Futures Market Price:** On April 21, 2014 January 2015 Canola Futures = 494.00

**PUT Option  
Strike Price**

**Premium =**

**Intrinsic**

**+**

**Time**

<u>510</u>	<u>37.00</u>	<u>16.00</u>		<u>21.00</u>
<u>500</u>	<u>31.50</u>	<u>6.00</u>		<u>25.50</u>
<u>490</u>	<u>27.00</u>	<u>0</u>		<u>27.00</u>
<u>480</u>	<u>22.50</u>	<u>0</u>		<u>22.50</u>
<u>470</u>	<u>18.60</u>	<u>0</u>		<u>18.60</u>
<u> </u>	<u> </u>	<u> </u>		<u> </u>
<u> </u>	<u> </u>	<u> </u>		<u> </u>

PUTS: Strike Price - Futures Price = Intrinsic Value (not less than 0)

# Option Premium Analysis

Futures Market Price: \_\_\_\_\_

**CALL Option  
Strike Price**

**Premium**

**=**

**Intrinsic**

**+ Time**

\_\_\_\_\_

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# Example Canola Put Option (sale)

Date: December 2, 2014      January futures = 424.00

Sale of January 490 January Put Option: \$ 66.00/t.

MINUS Option Cost      \$ 27.00 /t.

MINUS Commission      \$ 1.00 /t.

Equals Option **Profit**      \$ 38.00 /bu.

Dec. 2 canola cash price	=	\$ 412.00	Basis (12)
+ net value of 390 PUT option		<u>\$ 38.00</u>	
Total Canola Price		\$ 451.00	\$10.23/bu.

# PUT Options Use

- Locks in minimum futures price
  - Can still benefit from a price rise
  - No margin calls
  - No obligation to a specific buyer
  - Could exit and recover some premium before expiry
- 
- Basis risk remains unless also basis contract
  - Need to use a broker (complication; premium cost)

# CALL Options

## Buying CALLS:

- Replace priced grain to capture futures upside
- Product user protects from price increase
- Speculate on increasing futures price

# Call Option Example: Oats

Date: Dec. 2, 2014                      May 2015 oat futures = \$3.10/bu.  
Month May   Strike Price 3.20   Premium \$ 0.13/bu.

PLUS Brokerage                                      \$ .015 /bu.  
Equals Cost of Call Option                                      \$ 0.145/bu.

**IF:**

Date: January 30, 2015                      May 2015 oat futures = \$3.40/bu.  
Sale Premium of Option:                                      \$ 0.275 /bu. (estimated)  
MINUS Brokerage (paid up front)    \$            /bu.  
MINUS Option Cost                                      \$ 0.145 /bu.  
Equals Option Profit (Loss)                                      \$ 0.13 /bu.

# Call Option Example: Oats

Date: Dec. 2, 2014                      May oat futures = \$3.10/bu.  
Month May    Strike Price 3.20    Premium \$ 0.13/bu.

PLUS Brokerage                                      \$ .015 /bu.  
Equals Cost of Call Option                                      \$ 0.145 /bu.

Date: \_\_\_\_\_  
Sale Premium of Option:                                      \$ \_\_\_\_\_ /bu.  
MINUS Brokerage                                      \$ \_\_\_\_\_ /bu.  
MINUS Option Cost                                      \$ \_\_\_\_\_ /bu.  
Equals Option Profit (Loss)                                      \$ \_\_\_\_\_ /bu.



# Advantages of Options

- Options provide some protection against price risk while allowing the hedger to benefit if prices move in a favorable direction (right but not an obligation)
- There is no MARGIN required to buy options ... premium paid is the maximum risk
- The cost to buy an option is known by the buyer before the purchase (i.e., cash flow is predictable)

# Disadvantages of options

- Options strategies do not normally provide 100 % price risk protection because of Delta

$$\text{Delta} = \frac{\text{change in option premium}}{\text{change in futures price}}$$

- Options have an eroding time value (part of premium)
- Like futures, option trading has broker commission and exchange fees

# Grain Marketing Strategy Organizer

Strong Futures

Weak Basis

Avoid Delivery commitment

Sell Futures

Buy Put Option

Strong Futures

Strong Basis

Deliver and Price

DDC – locks both

Basis contract & Sell Futures  
or Buy PUTS

Minimum price contract

Weak Futures

Weak Basis

Store if able, set Targets

If need to sell, consider:  
replacement strategy:

buy Futures

buy Call option

Weak Futures

Strong Basis

Basis contract/Target Futures

Basis contract/Buy Put options

Deliver, price and consider

replacement strategy:

buy futures

buy Call option

# Futures, Options or Contracts - What's Best?

It depends!

## Contracts

### Advantages:

- lock only basis or both basis & futures
- removes price risk, locking basis and futures
- provides delivery opportunity (when?)

### Disadvantages:

- obligation to deliver quantity and quality
- commitment to one buyer
- cannot take advantage of higher prices

# Futures Hedge

## Advantages:

- locks in a futures price
- easily entered
- could offset and remove hedged position
- no delivery commitment

## Disadvantages:

- basis risk remains unless basis contract also
- may be only available in US dollars (exchange rate risk)
- involves complication of brokerage account
- margin calls & commissions

# PUT Option Hedge

## Advantages:

- locks in a minimum futures price
- can still take advantage of higher price available
- easily entered into
- could exit and recover current premium
- no margin calls

## Disadvantages:

- basis risk remains unless basis contract also
- may be only available in US dollars (exchange rate risk)
- involves complication of brokerage account
- cost of premium and commissions

# OPTION WRITER

- sells the option to the buyer
- collects premium from buyer
- must be prepared to enter opposite futures position to option buyer
- margin required with short option
- option buyer has the exercise rights

# SHORT OPTION POSITION

## THREE POSSIBILITIES:

1. Offset with buy order at any time  
(same month and strike price)  
Profit (loss) = Premium difference - commission
2. Option expires worthless  
(Writer keeps premium - commission)
3. Option holder exercises right, creates futures position AND opposite futures position is assigned to option writer



# WRITING OPTIONS

- CALL writer must be prepared to enter a SELL futures position if and when the CALL holder decides to exercise
- PUT writer must be prepared to enter a BUY futures position if and when the PUT holder exercises
- Option could be exercised at any time, however, any remaining time value is then lost

# Covered CALL Option

- Call writer has a long (buy) futures position (or is long the physical product)
- If Call is exercised, Call writer is assigned a Short (sell) futures position, which is offset by the long futures position (or creates a sell hedge position against physical)
- Upside price benefit capped at option strike price

# Storing Canola?

## Not satisfied with the current futures price?

Consider **Selling** a Call Option

Date: \_\_\_\_\_ Futures Month & Price \_\_\_\_\_

Month \_\_\_\_\_ Strike Price \_\_\_\_\_ Premium \_\_\_\_\_

Sale Premium of Option: \$ \_\_\_\_\_/T.

MINUS Brokerage \$ \_\_\_\_\_/T.

= Option Credit \$ \_\_\_\_\_/T.

# Storing Canola?

## Not satisfied with the current futures price?

Consider **Selling** a Call Option

Date: Mar. Futures Month & Price July \$/T.

Month July Strike Price 500 Premium 8.10/T.

Sale Premium of Option: \$ 8.10 /T.

MINUS Brokerage \$ 0.50 /T.

= Option Credit \$ 7.60 /T.

# Oat Hedging Comments



# Futures & Options Volume: Oats

Daily Exchange Volume Chart

Oct 23	1,349	242
Oct 24	1,127	280
Oct 27	396	27
Oct 28	879	226
Oct 29	901	61
Oct 30	2,009	156
Oct 31	1,491	81
Nov 03	1,651	70
Nov 04	425	29
Nov 05	916	130
Nov 06	1,420	227

Trading volume concentrated in nearby two months

Source: CME Group

# Futures & Options Volume: Oats

DATE	Futures	Options
Nov 07	1,296	17
Nov 10	1,419	50
Nov 11	966	168
Nov 12	830	191
Nov 13	1,373	97
Nov 14	400	251
Nov 17	437	14
Nov 18	1,149	142
Nov 19	1,293	311
Nov 20	622	142
Nov 21	729	37
Nov 24	2,473	261
Nov 25	2,828	424
Nov 26	1,173	39
Nov 27	0	0
Nov 28	503	73

Trading volume concentrated in nearby two months

Source: CME Group

## December 1, 2014 Oat Options Trade Report

MAY 15 Puts

Strike	Volume						Exercises	Open Interest	
	Venue Detail			Trade Type Detail				At Close	Change
	Globex	Open Outcry	PNT / Clearport	Total Volume	Block Trades	EOOv			
290	0	0	0	0	0	0	0	20	0
300	30	0	0	30	0	0	0	130	0
310	0	0	0	0	0	0	0	200	0
320	0	0	0	0	0	0	0	50	0
350	0	0	0	0	0	0	0	25	0
TOTALS	30	0	0	30	0	0	0	425	0

Source: CME Group



## December 1, 2014 Oat Options Trade Report

JUL 15 Puts

Strike	Volume						Exercises	Open Interest	
	Venue Detail			Trade Type Detail				At Close	Change
	Globex	Open Outcry	PNT / Clearport	Total Volume	Block Trades	EOOv			
300	0	0	0	0	0	0	0	10	0
TOTALS	0	0	0	0	0	0	0	10	0

Source: CME Group

# December 1, 2014 Oat Options Trade Report

DEC 15 Calls

Strike	Volume						Exercises	Open Interest	
	Venue Detail			Trade Type Detail				At Close	Change
	Globex	Open Outcry	PNT / Clearport	Total Volume	Block Trades	EOOv			
310	0	0	0	0	0	0	0	30	0
320	0	0	0	0	0	0	0	230	0
330	0	0	0	0	0	0	0	50	0
340	0	0	0	0	0	0	0	30	0
350	0	0	0	0	0	0	0	30	0
TOTALS	0	0	0	0	0	0	0	370	0

Source: CME Group

## December 1, 2014 Oat Options Trade Report

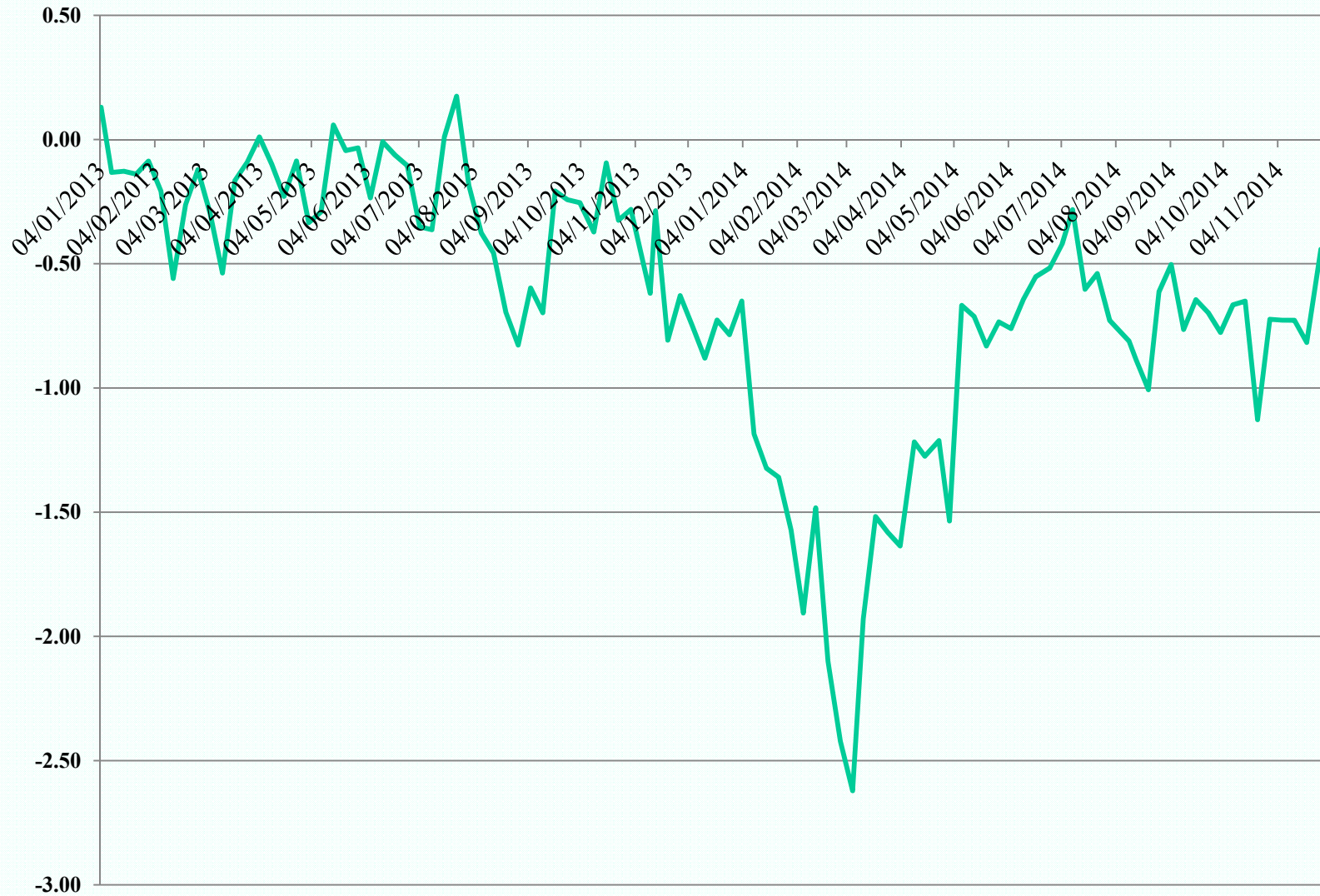
DEC 15 Puts

Strike	Volume						Exercises	Open Interest	
	Venue Detail			Trade Type Detail				At Close	Change
	Globex	Open Outcry	PNT / Clearport	Total Volume	Block Trades	EOOv			
TOTALS	0	0	0	0	0	0	0	0	

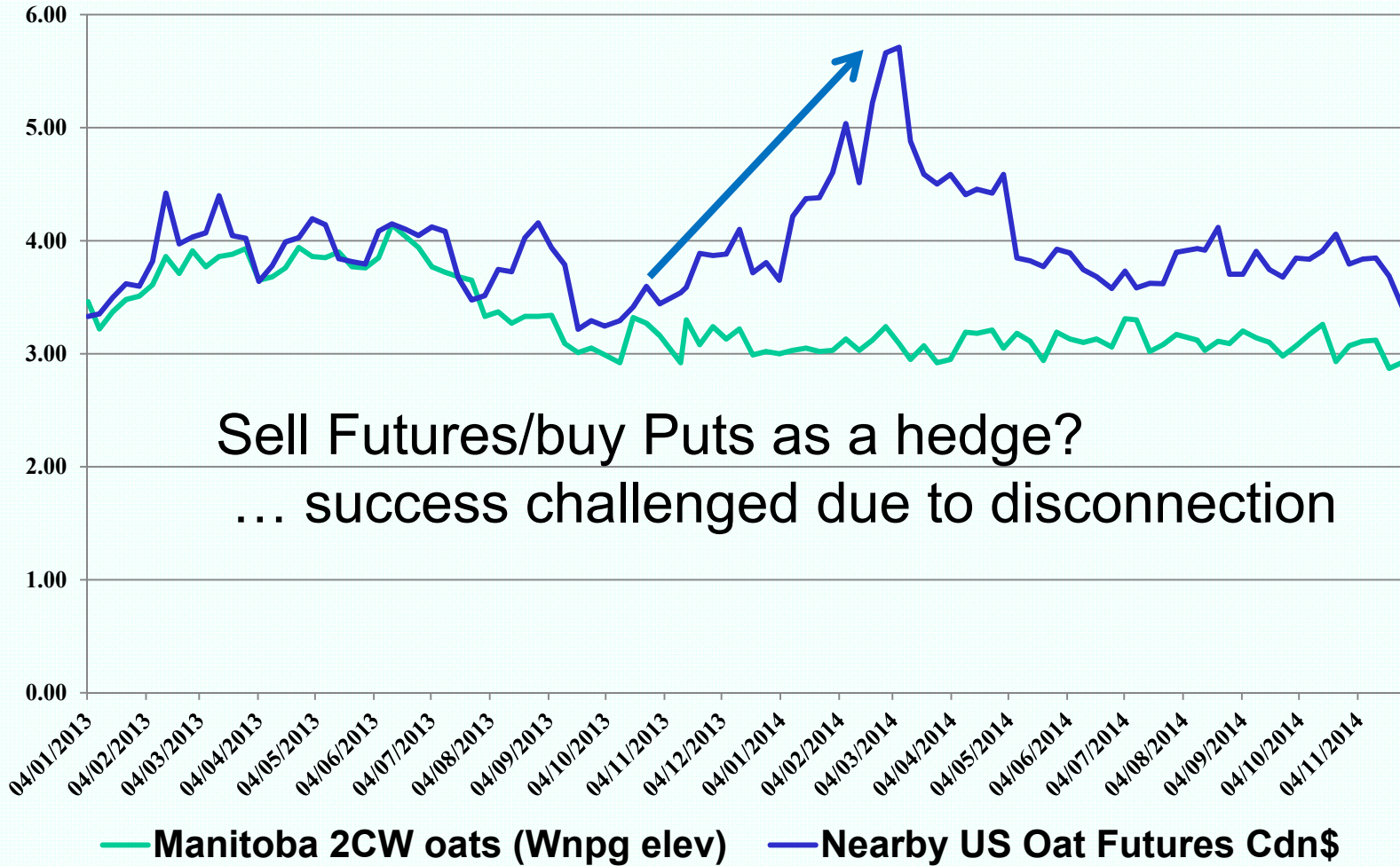
370 open CALL contracts ... No open PUTS in Dec 2015

Source: CME Group

## #2 Oat Basis Winnipeg area elevator Cdn \$



## #2 Oats: Cash vs. Futures Winnipeg area elevator Cdn \$



# Currency Risk Protection Alternatives

1. Cash contract the crop sale in Canadian dollars
2. Currency contract purchased through a bank (pay premium)
3. Buy hedge on currency futures market
4. Purchase “call” option on currency futures (pay premium)  
“call” provides protection from rising dollar after a certain level
5. Do nothing to protect currency risk

# Portfolio Approach

- Evaluate your price outlook for each crop produced
- Compare likelihood of price movements and set targets accordingly
- Consider seasonality of price for your different crops

Example: If you have three crop types in storage and one is offering you profitable prices, this is valuable management information

# Grain Marketing Resources

- Grain Marketing Manual → ARD
- CWB, Other Grain company representatives
- Brokers
- Marketing courses
- Subscription Services
- “Learn to do by doing”



# Summary

- Price and basis risk remains
- There are ways to reduce risk
  - Different levels of risk tolerance
- Starting point to manage risk is developing a marketing plan.



# Questions ?

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**[neil.blue@gov.ab.ca](mailto:neil.blue@gov.ab.ca)**  
**780-853-8104**



Oat commentary in notes below: Nov 27, 2014

## Reference quotes for canola

March 14<sup>th</sup>:

Nov14 \$500 Canola put = \$33.00

Nov14 \$510 Canola put = \$39.30

Nov14 \$520 Canola put = \$46.40

Jan15 \$470 Canola put = \$16.90

Jan15 \$480 Canola put = \$20.80

Jan15 \$490 Canola put = \$25.50

April 21<sup>st</sup>: Jan Futures fill@ 494.00

Nov14 \$500 Canola put = \$33.00

Nov14 \$510 Canola put = \$39.30

Nov14 \$520 Canola put = \$46.20

Jan15 \$470 Canola put = \$18.60

Jan15 \$480 Canola put = \$22.50

Jan15 \$490 Canola put = \$27.20