Wheat Market Outlook and Price Report: December 5, 2016 By Marlene Boersch/ A.P. Temple Mercantile Consulting Venture Inc.

i) Background and Rationale for the Report

The following wheat market outlook and price report will be published on a weekly basis on the Sask Wheat Website. The report provides producers with an overview of world wheat markets, a market forecast, and benchmark prices at both the primary elevator and export positions (FOB Vancouver or elsewhere).

The report is made up of several sections. Following this section, a World Wheat overview is provided, which includes a summary of wheat market fundamentals, world production and trade, and a wheat market outlook. This is followed by several price tables, which include primary elevator bids at various Saskatchewan locations (Table 1), grain spreads (Table 2), and FOB port prices and basis (as measured by subtracting the primary elevator price (Rosetown) from the relevant port location price for individual crops) (Table 3). Table 3 is preceded by a description of the various assumptions, definitions and methodology used in arriving at the FOB port prices and in the export basis calculation.

ii) Wheat Market Outlook Nov. 21/'16

2016/'17 World Wheat Overview:

Production

- World wheat production estimates for 2016/17 remain unchanged at a 749 million mt, and ending stocks for 2016/17 wheat are projected at 235 million mt, up 13 million mt from last crop year.
- 2016/17 wheat ending stocks held by major exporters were pegged at 71 million mt, up 68 million mt last year. (Argentina, Australia, Canada, the EU, Kazakhstan, Russia, the Ukraine and the US are considered to be 'major exporters').
- The International Grains Council (ICG) forecast for the 2017/18 harvested wheat area is projected to be virtually unchanged, with reductions in the USA, Kazakhstan, and increases in Russia and North Africa.

Trade

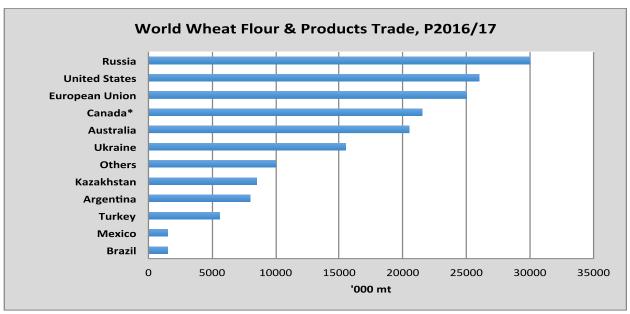
- The US Department of Agriculture (USDA) estimates that 174 million mt of wheat will be traded in the world during the 2016/17 crop year. This will be 1.4 million mt more than was traded last crop year.
- There are going to be significant shifts in market share and exported volumes this year:
 - The biggest *volume gains* in wheat exports over last crop year's are expected for Australia (+4.7 million mt, 30%), Russia, (+4.5 million mt, 17%), the United States (+4.1 million mt, 19%), and Kazakhstan (+900k mt, 11.8%).
 - Volume losses in exports over this ongoing crop year are forecast for the EU (-9.7 million mt, -28%), the Ukraine (-1.9 million mt, -11%), and for Canada (-614k mt, -2.3%).

> 10-year Baseline Estimates

- The USDA released their 10-year baseline estimates this past week. US wheat acreage is expected to be down next year by 4.4% from 2016 to 48.5 million acres with yields also down by more than 10% at 47.1 bu/acre. Most private estimates show significantly fewer wheat acres.
- Looking into the future by 10 years, the <u>USDA projects almost zero growth in US export</u> demand for wheat, and does not see this year's yield being repeated any time in the next



10 years. This actually is unlikely, but the bottom line is that the market needs a weather problem to draw down US and world wheat stocks.



* Wheat and durum exports combined Graph is based on USDA data

> Global wheat production and trade:

Below is a brief synopsis on this week's market events in the major wheat origins.

Canadian wheat:

- Statistics Canada will publish their official estimates of the 2016 crop on December 6th.
 Expectations are for a 30.7 million mt wheat crop, including 7.2 million mt of durum. This would be 11% bigger than last year's wheat crop.
- In contrast, year to date Canadian wheat exports are 19% behind last year's pace for wheat and 12% behind last year's pace for durum.

US wheat:

- The USDA weekly Export Sales Report showed weekly bookings of 490,500 mt, including 7,000 mt for 2017/18. This was 23.3% larger than for the same period a year ago. US export commitments year to date are 31% larger than last year.
- US winter wheat: In its final crop update until next April, USDA put crop ratings unchanged on the week at 58% good to excellent against 55% last year, with 92% of the crop emerged, equal to the 5-year average.

Australian and Argentine wheat

 While the wheat crop of the Southern Hemisphere is about to hit the markets, current demand for wheat is tepid. However, ocean freight advantages are making Australian and Argentine wheat more competitive into Asian markets than Black Sea grain.
 Australia:

Nidera (an international trading Co.) is still projecting a record 31-33 million mt wheat crop for Australia, while others have dropped their forecasts to ~28 million mt.

EU wheat:

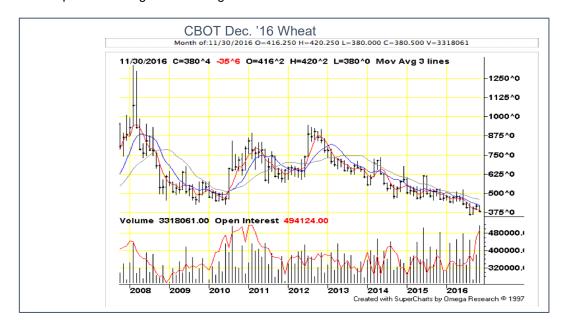
Strategie Grains in Europe maintains that EU wheat acres will not decline in 2017/18, and with weather unknown this far forward, are projecting a significantly bigger crop next year than the ruined crop this year. With their soft wheat production forecast at 152.9 million mt, production would increase by 7.9 million mt (+5%). If this happens, the EU will try to recover lost market share in the wheat markets next year.



Wheat Market Outlook:

Significant events:

- Algeria tendered for another 150,000 250,000 mt of durum wheat last week. The tonnage traded at US\$310-315/mt delivered Algeria for North American/Canadian product.
- Japan bought a total of 158,000 mt of wheat from Canada and unknown origins.
- Egypt (via buying agency GASC) bought 240kt Russian wheat at \$202.50 for January delivery. This equals about Cdn\$366/mt FOB Thunder Bay (~Cdn\$9.9/bu).
- Futures markets: Since the 1st of October the Minneapolis-Chicago futures premium has moved up by 32% to \$1.31 per bushel and by 30% to \$1.24 per bushel for hard red winter wheat. Minneapolis gained 13 cents and the others lost 12 cents. The Chicago December contract expired last week at a three-month low, while the same Minneapolis month posted the highest close against the March contract since June 2015.



- Last week's OPEC decision to curb production to increase crude oil prices and Sunday's Italian referendum will be supportive for some currencies (US\$, Cdn.\$ and the Ruble; bad for commodity values), whilst the Egyptian Pound and Turkish Lira continue to fall to new depths (bad for purchasing power).
- Following the OPEC decision crude oil values have been increasing and are forecast to move towards \$60/ barrel. Higher energy values will push up freight costs.

Outlook:

- Southern Hemisphere wheat is coming to the markets and is searching for demand. Quality may be slightly better than expected.
- Russia is still sitting on a lot of wheat that needs a market.
- Despite US wheat being competitive against other origins, and having a much faster sales pace than last crop year, the US has more than a billion bushels of wheat stocks.
- US HRW in the Gulf ports remains competitive on a FOB basis, but with Argentine and Australian Fob values falling and freight taking on increasing importance, there now is little to suggest any imminent or sustained move higher for US or world wheat values.

Durum:



- 150,000 -250,000 mt of mostly Canadian durum were sold to Algeria at US\$310-315/mt CIF Algeria for roughly a #3 quality. However, elevator companies seem to have stepped back from #1/2 bids at \$9.00/bu (+) to put values back in the \$8/bu range. This is probably because exports to the US are sluggish; the US harvested their biggest durum crop in years with good quality results to boot.
- Forward cash markets will be driven by:
 - A lot of of new wheat that is entering the market from Australia and Argetina
 - Quality, which remains an issue in the markets
 - Energy values, which have been pushed well above \$50/ barrel.
 - This is having an effect on currencies
 - It will also have an effect on freight and production costs
 - Funds, which remain heavily short
 - Volatile currencies, which are influencing both the seller's valuations (Ruble, US\$, Canadian \$, Argentine peso) and the buyer's ability to pay (e.g., Egyptian pound).
 - USDA will publish it's December report this week.
- ➤ EU shipments appear to be slowing, US export sales were disappointing, Argentine wheat has become very competitive, and a very big Aussie harvest is about to take aim at Asia and the Middle East. Not a bullish picture as we enter the holiday period when trade is generally slow.
- > The market needs some new information to change course, so until that happens we expect them to trade in a narrow range. Good quality wheat, i.e. trades against Minneapolis, appears to us to be a decent sale.
- Wheat prices may be at or near their highs, but product in the top three hard red spring grades will remain tight. Feed wheat valued at ~US\$180/mt West Coast (~\$4.90/bu elevator) should provide a floor for lower grade product. Canadian elevator bids are still about \$35/mt below world wheat values.



iii) Primary Elevator Price Tables and Grade Spreads

Table 1: Canadian Primary Elevator Bids, in Canadian Dollars per Bu and per MT

Date: Dec. 5, 22016

| ? | | | | | | |
|--------------------------|--------|----------|---------------------------|---------------|-----------------------|--|
| NW ® ask m | Spot | | NW3Sask7777 | Deferred | | |
| | (bu.) | (mt) | IN VV Daskiiiii | Jan.团17团(bu.) | Jan.'17 ⊞ (mt) | |
| 1©CWRS@13.5 | \$6.56 | \$241.04 | 1©CWRS@13.5 | \$6.59 | \$242.14 | |
| 1©CWAD@13.0 | \$8.12 | \$298.36 | 1©CWAD@13.0 | \$8.19 | \$300.93 | |
| 1©CPSR@11.5 | \$4.32 | \$158.73 | 1@CPSR@11.5 | \$4.35 | \$159.84 | |
| SWISaskIIII | ? | ? | SWISaskIIII | | ? | |
| 11CWRS[13.5 | \$6.48 | \$238.10 | 1©CWRS@13.5 | \$6.58 | \$241.78 | |
| 1©CWAD@13.0 | \$8.15 | \$299.46 | 13CWAD213.0 | \$8.25 | \$303.14 | |
| 13CPSR211.5 | \$4.26 | \$156.53 | 1©CPSR©11.5 \$4.28 | | \$157.26 | |
| NE ® ask m | | ? | NE ® ask | ? | ? | |
| 11CWRS[13.5 | \$6.39 | \$234.79 | 1©CWRS@13.5 | \$6.41 | \$235.53 | |
| 11CWAD 213.0 | \$7.93 | \$291.38 | 1©CWAD@13.0 | \$8.06 | \$296.16 | |
| 1©CPSR@11.5 | \$4.08 | \$149.92 | 1@CPSR@11.5 | \$4.11 | \$151.02 | |
| SE S ask m | ? | ? | SE S ask im | ? | ? | |
| 11CWRS[13.5 | \$6.35 | \$233.32 | 1©CWRS@13.5 | \$6.39 | \$234.79 | |
| 13CWAD213.0 | \$7.96 | \$292.48 | 13CWAD213.0 | \$8.08 | \$296.89 | |
| 13CPSR211.5 | \$4.06 | \$149.18 | 1©CPSR@11.5 | \$4.09 | \$150.28 | |

Table 2: Grade Spreads, in Canadian Dollars per Bu and per MT

| Avg. Grade Spread/ Pro Discounts | Cdn\$/bu. | Cdn.\$/mt |
|----------------------------------|-----------------------------|-----------------------------|
| 1@CWRS@13.5 | Base Grade 2 | Base@rade? |
| 2@CWRS@13.5 | (0.20) | (7.35) |
| 1@CWRS@12.5 | (0.37) | (13.60) |
| 1©CWAD@13.0 | Base © rade ® | Base © rade ® |
| 1@CWAD@13.5 | 0.03 | 1.10 |
| 2@CWAD@13.0 | (0.79) | (29.03) |
| 20CWAD@12.5 | (0.97) | (35.64) |

iv) FOB Wheat Prices and Export Basis Calculation

Background and Rationale:

Reporting FOB prices at port position and primary elevator prices allows the reader to gain an understanding of both local and international wheat prices and to understand the relationship between the two, as measured by the export basis. Export basis can be defined as FOB port position prices minus the primary elevator prices at any given prairie delivery location, and is therefore reflective of transportation costs plus any premiums being captured by terminal grain elevator companies or the railway companies, at any given time.



In general, a widening basis is indicative of decreasing system performance in terms of either reduced port capacity or rail service, or both. A narrowing basis is indicative of increased available port capacity and/or better ability of the railways to provide ample service to grain shippers. In this regard, tracking these prices over time has value both in terms of producers being able to time the selling of their grain but also in terms of evaluating and setting policy related to various transportation and capacity issues.

Gray (2015) has calculated a normal basis to be in the range of C\$72/tonne. During the 2013/14 crop year the export basis for wheat widened to approximately C\$250/tonne, which indicated an inability of the grain handling and transportation system to adequately handle the record crop produced that year. This occurrence has highlighted the need to improve the level of rail service and take measures to expand port capacity where possible. It has also underscored the need for better price transparency and market information within the grain sector.

Assumptions, Definitions, and Methodology

The following background information should assist in understanding and interpreting international market signals and to relate them to the 'local' Saskatchewan wheat market:

- ➤ The price information generated for the weekly report is designed to show farmers at what price levels several wheat classes are trading at local primary elevators (Table 1) and in nearby international markets (Table 3). To express the Export Basis¹ (see Export Basis in Table 3) defined as Cdn. FOB Prices minus primary elevator bids, the FOB prices are translated into Cdn. dollars from US dollars and compared to current actual primary elevator Street prices at Rosetown, Saskatchewan (see Street Prices in Table 3). Rosetown is used as a proxy for all primary elevators in the basis calculation. The actual handling and transportation costs from the West Coast to delivered elevator (Rosetown area) range from ~C\$58.00-C\$74.72/mt, depending on number of cars moved and elevator used.
- Approximate relationship between U.S. wheat classes and Canadian wheat classes:
 - o DNS 14% in the Pacific North West (PNW) ≈ 1 CWRS 13.5% in Vancouver
 - o HRS in the Pacific North West (PNW) ≈ 2 CWRS 13.0% in Vancouver
 - HRW in the Pacific North West (PNW) ≈ 3 CWRS in Vancouver
 - SW (lowest price wheat) ≈ CPS red (mostly fed domestically)
 - HAD (Lakes) ≈ CWAD (Thunder Bay/ Lawrence)
 - Abbreviations: DNS (Dark Northern Spring Wheat); HRS (Hard Red Spring Wheat); HRW (Hard Red Winter Wheat); SW (Soft Wheat); HAD (Hard Amber Durum Wheat); CWRS (Canadian Western Red Spring Wheat); CPS (Canada Prairie Spring Wheat); CWAD (Canadian Western Amber Durum Wheat)

[&]quot;The difference between FOB Vancouver prices and the Saskatchewan elevator cash bids to producers is referred to as export basis: Basis can refer to the difference between any two prices. As the largest volume port, Vancouver FOB, minus the elevator bid prices representative measure of the "export" basis for grains in Western Canada."



¹ Gray, R.S. (2015). The Economic Impacts of Elevated Export Basis Levels on Western Canadian Grain Producers 2012/13, 2013/14 and 2014/15.

➤ Hard wheat price calculations:

Exporters in Western Canada generally derive their primary elevator wheat prices from HRS values at the West Coast (Pacific Northwest - PNW).

Similarly, HRW values are used for lower grade (3) CWRS.

- West Coast HRS and HRW values essentially dominate the international hard wheat trade and determine its basic value.
- If premiums are paid for 1 CWRS 13.5, elevator companies are often able to retain the premium

Durum wheat price calculations:

The primary export route for Canadian durum wheat is still through Thunder Bay, not the West Coast of Canada.

- Nevertheless, the Pacific Coast has increased in importance for durum over time with 38% of total export volume crop year to date.
- Italy is the single biggest buyer of Canadian durum wheat with 27% of total Canadian durum exports YTD (East Coast shipments).

Optional origin grain sales:

Most major international grain companies sell 'optional origin' wheat to their customers and often cover their sales 'at best' closer to the shipment position. The Canadian grain system is not conducive to servicing optional origin sales because the volume of wheat kept in storage in port today is much smaller than prior to deregulation of the Canadian wheat market.



Table 3: Relevant FOB Prices and calculated Basis, US & Canadian Dollars per MT

| Releveant FOB Prices and Carculated Basis, 90 & Carladian Bollars per in a second sec | | | | | | |
|---|----------------------------|-------------------------------|-------------------------|---|--|--|
| | FOB Prices CD | A¹ ∄calculated) | Street⊕rices | Export [®] Basis ² | | |
| Type亟f⊡Wheat | West©Coast② (Cdn./mt\$) | Greatilakesill (Cdn.\$/mt) | Rosetown (Cdn.\$/mt) | Basis: IV est I Coast-Centr. ISK (Cdn\$/mt) | | |
| DNS214.0 | \$324.56 | \$301.14 | ? | ? | | |
| HRS | \$321.64 | ? | ? | ? | | |
| HRW211.5 | \$247.45 | ? | ? | ? | | |
| SWW12.0 | \$238.66 | ? | ? | ? | | |
| 1@CWRS@13.53 | \$324.56 | ? | \$225.24 | \$99.32 | | |
| 2ECWRSE13.03 | \$321.64 | ? | \$206.87 | \$114.77 | | |
| 3ECWRS ³ | \$247.45 | ? | \$200.62 | \$46.83 | | |
| CPS ³ | \$231.83 | ? | \$151.02 | \$80.81 | | |
| 1ĒCWAD⁴ | ? | \$414.86 | \$302.04 | \$112.82 | | |
| | ? ? | | ? | ? | | |
| ™ Competing wheat: | US\$/mt | | ? | ? | | |
| Russia 2.5 Black 3ea, 2 | | | | | | |
| 25k⊞mt) | \$183.00 | | ? | ? | | |
| French 1.01 Rouen) | \$181.09 | | ? | ? | | |
| ASW210.5@W2Coast)@an. | \$194.00 | | ? | ? | | |
| Argentine 12.0 | \$165.00 | | ? | ? | | |

₫ IFOBIPrices ICDA I IFOBIUS \$ I tonverted Into I Canadian I Currency

₫Œxport®asis@=GOBPricesCDA@minusCdn.@treetPrice

₫®DNS@14%®@1®CRWS@13.5%;®HRS®®®CWRS@13.0%;®HRW®®CWRS;®SWW®®CPS



ADDENDUM

Futures Driven Basis Calculation, Canadian Dollars per MT

| Canadian Wheat - World | Price Parities | | | | |
|---|----------------|---------|----------|-------------|---------|
| Canadian Funds | | | Grade | | |
| PNW value/Vancouver | 1CWRS13.5 | 2CWRS | 3CWRS | Winter wht. | CPS |
| Sept/Oct delivery | \$8.65 | \$8.57 | \$6.55 | \$6.31 | \$6.31 |
| Parity Track Rosetown | \$7.15 | \$7.07 | \$5.05 | \$4.81 | \$4.81 |
| Track Bid Rosetown Area | \$6.13 | \$5.63 | \$5.46 | \$4.11 | \$4.11 |
| Gross Margin at Elevator (\$/bu)* | \$1.02 | \$1.44 | -\$0.41 | \$0.70 | \$0.70 |
| Gross Margin at Elevator (\$/mt)* | \$37.50 | \$52.95 | -\$14.99 | \$25.83 | \$25.83 |
| * to cover elevation, elevator market risk, mar | rgin | | | | |
| mmmmmmm | | | | | |

