

Wheat Market Outlook and Price Report: October 7, 2019

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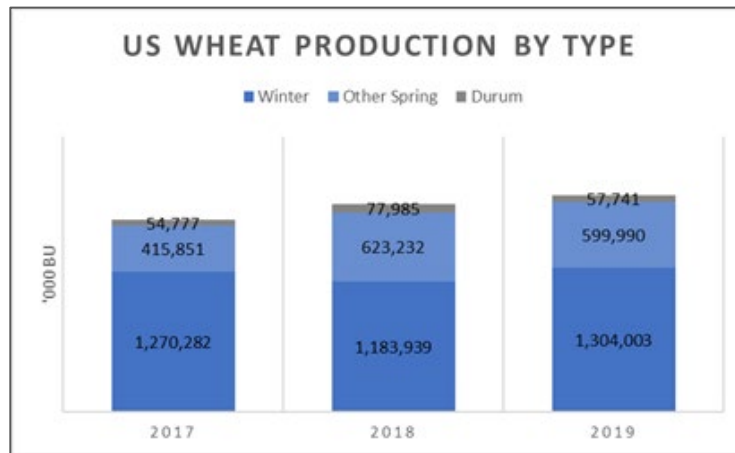
i) Background and Rationale for the Report

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 Sept 30th, 2019

US Wheat production as per the USDA's Sept 30th Small Grains Summary



- The USDA Small Grains Summary did not reduce the HRS or durum crop despite expectations of lost acres, nor did they raise the HRW crop! The total wheat crop was put at 1.961 bln bu, 6 mln bu lower than trade guesses, but 77 mln bu higher than last year.
- Total spring wheat production (other than durum) was seen at 600 mln bu (16.3 mln t), down 4% from the 2018 total of 623 mln bu (16.95 mln mt). Of this, 559 mln bu (15.2 mln mt) was Hard Red Spring wheat, down 5% from the 2018 total. *Given our analysis, and the adverse harvest weather, the HRS production estimate is almost certainly too high.*
- The US yield was estimated at 48.3 bu/ac, tied with the 2018 record high. A record high yield was estimated in North Dakota for 2019.
- The USDA ignoring the poor harvest conditions in the N Plains was negative for Minneapolis futures, however, NASS followed the report with a statement that they “may update acreage, yield, production and stocks estimates for barley, oats, durum and other spring wheat” in their November 8 Crop Production report as there was “significant unharvested acreage” of these crops when the small grains survey was carried out.

➤ **Global wheat production and trade:**

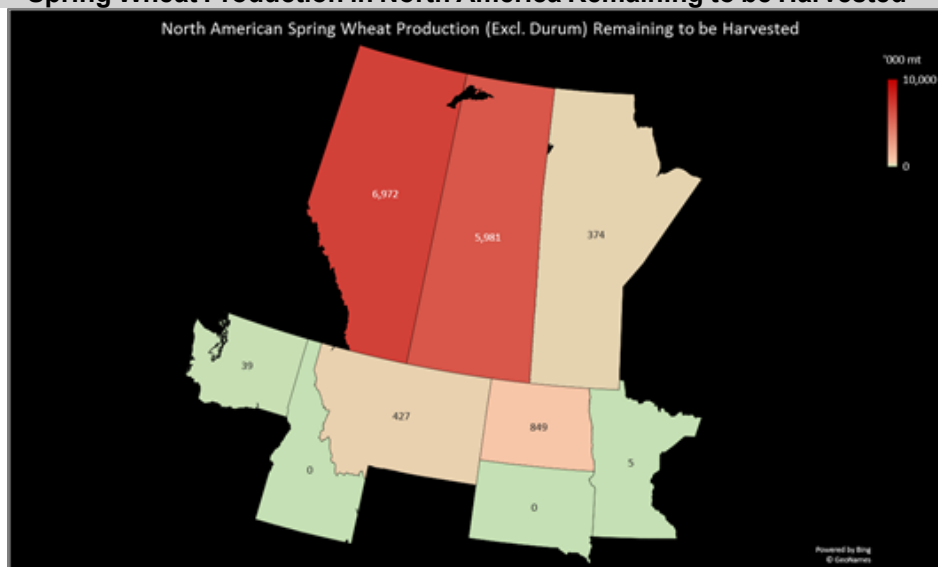
There is a lot of competition in the wheat markets as wheat is produced around the world. Below is a brief synopsis on last week's market events in the major wheat origins.

- **Futures:** Dec '19 contract **Chicago** winter wheat closed at 490-4, up 1-6 cents from yesterday and up 3-0 cents for the week.
Dec '19 contract **Kansas** hard red winter wheat closed at 404-0, down 1-6 cents for the day, down 3-0 cents for the week.
In **Minneapolis**, Dec '19 contract hard red spring wheat closed at 536-0, up 6-4 cents for the day, down 11-4 cents for the week while March '20 hard red spring wheat closed at 549-6, up 6-4 cents for the day, down 10-4 cents for the week.

Canadian Wheat:

- The Northern regions of the Canadian Prairies were able to avoid much of the precipitation over the week, while Sothern AB, SK and MB all received rain. The forecast shows a short harvest window this week before another early season snowstorm and rain returns later in the week.
- According to SAF and MB Ag, spring wheat harvest was able to progress 13% in SK to 44% complete (as of Sept 30th), and 5% in MB to 91% complete (as of Oct 1st). AB Ag was showing their spring wheat harvest 35% complete as of Oct. 1st (up 8% from the prev. wk). NASS in the US reported the US spring wheat crop 90% complete, *current harvest data and USDA/Stats Canada's projected production estimates suggest there is ~14 mln mt worth of spring wheat (excl. durum) in N America remaining to be harvested. This is ~35% of all expected production.*

Spring Wheat Production in North America Remaining to be Harvested



- Like HRS, durum harvest has been slow, and quality will be a major issue this year. In SK, 57% of the durum crop has been harvested as of Sept 30th. There was no update for the AB durum crop which was reportedly 85% harvested as of Sept 23rd.
- Using a similar calculation as above for spring wheat, *we estimate that there is still 2.276 mln mt worth of durum in North American remaining to be harvested.*

| ('000 mt) | Week 8 (to Sept 29/19) | | | |
|--------------------------|------------------------|-------------------|---------------|-------------------------|
| | Producer Deliveries | Terminal Receipts | Exports | Domestic Dissappearance |
| Current Week | 698.8 | 315.6 | 278.7 | 114.7 |
| Week Ago | 551.7 | 242.5 | 356 | 87.9 |
| YTD | 2917.7 | 2820.1 | 2455.5 | 684.8 |
| Last YTD | 3457.5 | 3885.3 | 2858.3 | 616 |
| YTD less Last YTD (k mt) | ↓ -539.8 | ↓ -1065.2 | ↓ -402.8 | ↑ 68.8 |
| YTD over Last YTD (%) | ↓ -16% | ↓ -27% | ↓ -14% | ↑ 11% |

Based on weekly CGC Handling Data

- Canadian producers delivered 698.8k mt of wheat (excl. durum) into the Canadian grain handling system during week 8 of the 2019/20 marketing year. Exports during the week were 278.7k mt, for a YTD total of 2.456 mln mt, 402.8k mt (14%) less than this time last year.

| (CGC) Grain Handling Summary Amber Durum | | | | |
|--|------------------------|-------------------|------------|-------------------------|
| ('000 mt) | Week 8 (to Sept 29/19) | | | |
| | Producer Deliveries | Terminal Receipts | Exports | Domestic Dissappearance |
| Current Week | 112.5 | 163.9 | 90 | 20 |
| Week Ago | 142.8 | 86 | 37.8 | 3 |
| YTD | 629.6 | 946.4 | 758 | 52.4 |
| Last YTD | 574.1 | 533.2 | 466.4 | 51.3 |
| YTD less Last YTD (k mt) | ↑ 55.5 | ↑ 413.2 | ↑ 291.6 | ↑ 1.1 |
| YTD over Last YTD (%) | ↑ 10% | ↑ 77% | ↑ 63% | ↑ 2% |

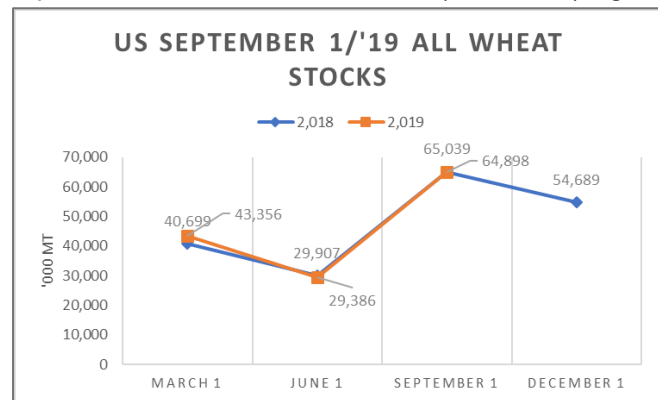
Based on weekly CGC Handling Data

- Meanwhile, 112.5k worth of durum was delivered into the grain handling system during week 8 of the marketing year. Exports during the week were 90k mt for a YTD total of 758 mt, 63% (291.6k mt) higher than this time last year. Facilitating the strong early-season exports is the larger 2018/19 durum carry-out.

- Wheat values - Important to those farmers who have harvested lesser qualities:** Korea was a good buyer of feed wheat as a substitute for corn last week. **The price paid was at a parity of C\$5.50 delivered elevator Saskatchewan**, which makes Canadian elevator bids for feed wheat far too low relative to international markets for feed wheat.
- Also re. spring wheat/ durum quality harvested, keep in mind: *“When the best is gone, the best is left”*.

US wheat:

- In the USDA quarterly Stocks Report, US Sept 1 wheat stocks were 67 mln bu (1.8 mln mt) higher than trade expected at 2.385 bln bu (64.9 mln bu), just 5 mln bu lower than last year.



- USDA's Small Grains Summary was seen as negative for Minneapolis wheat because it did not reflect the poor harvest conditions in the N Plains. NASS did come out with a statement that they “may update acreage, yield, production and stocks estimates for barley, oats, durum and other spring wheat” in their November 8 Crop Production report. In our opinion, especially given the adverse harvest weather, the USDA's HRS production estimate is almost certainly too high.
- NASS is reporting that US spring wheat harvest progressed 3% from last week to 90% complete. MT and ND the furthest behind at 84% and 89% complete respectively.
- According to samples analyzed by the US wheat associates, average spring wheat protein and test weight is consistent at 14.5% and 60.3 lb/bu respectively. The average falling number lost 4 points from last week to 379 seconds (vs last year's 414 seconds). Color and vitreous kernel counts have also fallen from the rain; down 1% from the week, at 62%, down 28% from last year.
- US, durum harvest was able to progress 5% in both MT and ND who are now at 55% and 78% harvested respectively. The ND Wheat Commission says it is likely that some of the crop will not be harvested.
- The average falling number of the US durum crop is now 362 seconds vs 374 last week and 418 last year. Protein remained consistent at 13.7% vs 14.2% last year. Average HVAC was reported 2% higher than last week at 62%, still well below last year's 88%.
- US winter wheat planting is 39% complete vs 41% last year and the 38% average.

Australian wheat:

- The drought in Australia continues to expand and intensify. Both ABARES and the USDA are estimating a 19 mln mt crop, while many private estimates are falling below 17 mln mt.
- Aussie futures made 12-month highs early in the week. Although falling sharply on Friday, they still managing to close higher for the week.

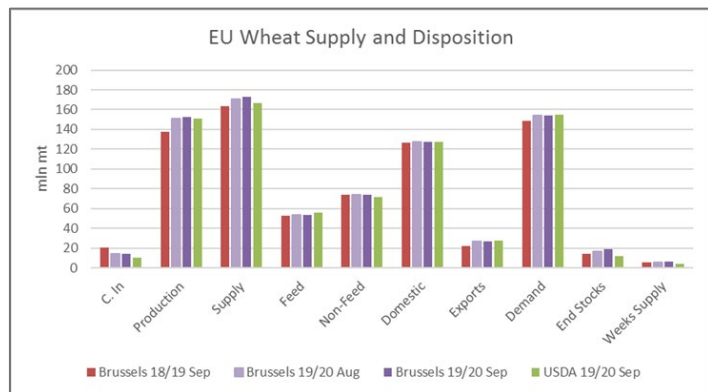
- Fob values were essentially unchanged for the week at \$240/mt, but will only sell to the most inelastic export markets and domestic feeding.

Argentine wheat:

- Crop ratings in Argentina fell another 5%, to 30% Gd/Ex, vs 42% last year. Twenty-six percent of Argentina’s crop is heading (50% last year and 38% avg.). Strangely, optimum moisture ratings of 66% is well ahead of last year’s 54% while their “dry” area is up to 9% vs 5% last week. Wheat harvest in Argentina has just begun and current yields are 1.5-1.8 tph. There is no data for this time period from last year to compare with.
- One-fifth of the Argentina’s growing area, accounting for 30% of their wheat production, is under drought conditions. As the crop is now at its highest level in terms of moisture requirements. Buenos Aires Grain Exchange has lowered wheat production forecasts another 3 mln mt to 17 mln mt (USDA’s 20.5 mln mt).
- The wheat market in Argentina seems to finally be reacting to the prolonged dryness. Offers for 12.5 pro are up \$2-3 from last week at \$187.

EU wheat:

- In their latest update of EU all wheat supply and disposition, Brussels raised 2019/20 production 2.2 mln mt to 152.8 mln mt (vs the USDA’s 151 mln mt). *This is a 15.3 mln mt increase over the drought-stricken crop of last year.* Carry-in and imports were unchanged from last month for a 2.2 mln increase in total supply to 172.7 mln mt, 9.6 mln mt higher than last year. Demand was seen slightly higher at 154 mln mt (vs the the USDA’s 155 mln mt) because of a 100k mt increase in domestic use. *Overall, ending stocks were revised 2.1 mln mt higher from last month to 18.7 mln mt (vs the USDA’s 11.6 mln mt), up 4.2 mln mt from last year.*
- The main difference between Brussels’ numbers and the USDA is the ending stocks with the USDA’s number representing just 3.9 weeks supply which we think is unreasonable. Brussels sees stocks being 29% higher than last year (7 mln mt above the USDA’s number) which represents a more realistic 6.3 weeks supply.
- Wet weather is hindering winter wheat planting in France. French farmers have only been able to plant 1% of the total expected area as of Oct 4th.
- At the end of last week French Fob, who took most of the tender business last week, was bid at \$192.7 for 11.5 pro, Baltic 12.5 pro was \$191, while German 12.5 pro was bid at 192.7.



Black Sea wheat:

- Total Ukrainian wheat exports as of Oct 1st are 61% higher than last year at 8.62 mln mt. The USDA is currently estimating that the country will export 19 mln mt of wheat this MY, up 21% from last year. Additionally, Ukraine’s Gov’t is eliminating its formal cap on wheat exports and is instead “monitoring market conditions on a monthly basis to ensure adequate domestic supply.”
- Russia’s wheat harvest now totals 75.6 mln mt as of Oct 4th vs 69.7 mln mt this time last year. Russia’s Ag Min is still estimating their crop will be 78 mln mt.
- The volume of Black Sea wheat offered at last week’s GASC tender was significantly smaller than previous tenders with Fob values reflecting a \$5 rise in futures/cash prices since GASC’s last purchase.
- Russian Fob ended the week at \$195 and \$192 for 12.5 pro and 11.5 pro respectively. *Feed wheat from Korea’s Dec deliv. purchase at \$226 C&F which reflects \$200 Fob Vancouver parity.*

➤ **Significant purchases/ trades:**

- Egypt (GASC) bought just 60,000 mt of French for 5-15 Nov at \$219.35, some \$5 above the previous tender.
- Under the respective tariff quotas, Morocco awarded 576,000 mt of EU milling wheat, but just 30,000 mt for the USA.
- Korea bought 60,000 mt of Dec feed wheat at around \$226 C&F.
- USA inspections were 467,000 mt (season total 312 mln bu up 23%), sales were 329,000 mt. The season total is now 474 mln bushels up 14% on last year, but the gap continues to narrow.

➤ **Wheat Market Outlook:**

Significant events:

- **Winter wheat futures were supported following the surprisingly low stock report for corn.** The low number suggests that the USDA had either overestimated production or underestimated demand for 2018/9.
- **The USDA's Small Grains Summary was seen as negative for Spring Wheat** as the association did not reflect the impact of the late/poor harvest. We think the USDA's numbers are too high and will need to be lowered. With more snow in the forecast the question is turning from "what will the quality be?" to "how much will be unharvested?"
- **YTD wheat consumption has been very strong.** EU exports are already 600,000 tonnes more than last year and are being underestimated by the USDA. The Korean feed wheat purchases, were at a small discount to milling wheat. Feed wheat keyed off of Korea's Dec purchase at \$226, equates to around US\$200.00/mt Fob Vancouver parity.
- We need to pay attention to **Korean feed wheat purchases**, which are at a small discount to milling wheat. Feed wheat based on Korea's Dec purchase was valued at US\$226/mt, which equates to around US\$200.00/mt Fob Vancouver parity (~\$5.50/bu dlvd elevator SK). This makes current Canadian elevator bids for feed wheat far too low.
- **Weather around the world:**
 - The **USA** is turning cooler and looks considerably drier this week except in the northcentral regions where heavy snow is expected. **Canada** has also turned colder and here too significant snow is expected. **South America** again looks mostly dry this week with the exception of North East Argentina and Southern Brazil. **South Africa** remains warm and mostly dry. The drought in **Australia** is expected to expand and intensify with only the eastern seaboard seeing any rain.

➤ **Outlook:**

The attention of the market will be focused on the new WASDE report due to be released on the 10th of October. In our view, the report should reduce the ending stocks in for the 2018/19 corn crop and reduce the USDA's estimate of 2019/20 production. This in turn should support wheat futures due to higher feed wheat usage. We do not expect any significant revisions in wheat, other than perhaps spring wheat & durum. The USDA may again be conservative in this report, but their numbers have been wrong recently, and their errors have been noticed by the markets.

The Southern Hemisphere is taking on increasing importance as dryness cuts crop potential. The concern by millers over quality and how much of the Canadian crop might not even get harvested is growing with the return of snow forecast later this week.

Feed wheat seems to be undervalued at Cdn. elevators right now relative to recent trades of feed wheat into Korea.

We see no reasons to sell the markets at this time in front of the WASDE report.

iii) Primary Elevator Price Tables and Grade Spreads

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

| NW Sask | Spot | | NW Sask | Deferred | |
|-------------|--------|----------|-------------|----------------|----------------|
| | (bu.) | (mt) | | Dec. '19 (bu.) | Dec. '19 (mt.) |
| 1 CWRS 13.5 | \$6.26 | \$230.02 | 1 CWRS 13.5 | \$6.36 | \$233.69 |
| 1 CWAD 13.0 | \$7.28 | \$267.50 | 1 CWAD 13.0 | \$7.33 | \$269.33 |
| 1 CPSR 11.5 | \$4.97 | \$182.62 | 1 CPSR 11.5 | \$5.07 | \$186.29 |
| SW Sask | | | SW Sask | | |
| 1 CWRS 13.5 | \$6.15 | \$225.98 | 1 CWRS 13.5 | \$6.22 | \$228.55 |
| 1 CWAD 13.0 | \$7.28 | \$267.50 | 1 CWAD 13.0 | \$7.33 | \$269.33 |
| 1 CPSR 11.5 | \$4.70 | \$172.70 | 1 CPSR 11.5 | \$5.01 | \$184.09 |
| NE Sask | | | NE Sask | | |
| 1 CWRS 13.5 | \$5.98 | \$219.73 | 1 CWRS 13.5 | \$6.07 | \$223.04 |
| 1 CWAD 13.0 | \$7.70 | \$282.93 | 1 CWAD 13.0 | \$7.78 | \$285.87 |
| 1 CPSR 11.5 | \$4.74 | \$174.17 | 1 CPSR 11.5 | \$4.84 | \$177.84 |
| SE Sask | | | SE Sask | | |
| 1 CWRS 13.5 | \$6.04 | \$221.93 | 1 CWRS 13.5 | \$6.09 | \$223.77 |
| 1 CWAD 13.0 | \$7.66 | \$281.46 | 1 CWAD 13.0 | \$7.74 | \$284.40 |
| 1 CPSR 11.5 | \$4.75 | \$174.53 | 1 CPSR 11.5 | \$4.91 | \$180.41 |

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

| Avg. Grade Spread/ Pro Discounts | Cdn\$/bu. | Cdn.\$/mt |
|----------------------------------|------------|------------|
| 1 CWRS 14.0 | 0.05 | 1.89 |
| 1 CWRS 13.5 | Base Grade | Base Grade |
| 2 CWRS 13.5 | (0.10) | -3.67 |
| 1 CWRS 12.5 | (0.15) | -5.51 |
| 1 CWAD 13.0 | Base Grade | Base Grade |
| 1 CWAD 13.5 | 0.00 | 0.00 |
| 2 CWAD 13.0 | (0.10) | -3.67 |
| 2 CWAD 12.5 | (0.20) | -7.35 |

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:
 - DNS 14% in the Pacific North West (PNW) ≈ 1 CWRS 13.5% in Vancouver
 - 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)

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.

“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.”

- 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)

- 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

| Relevant FOB Prices and Export Basis | | | | October 7, 2019 |
|---|--|-------------------------|----------------------|--|
| Type of Wheat | FOB Prices CDA ¹ (calculated) | | Street Prices | Export Basis ² |
| | West Coast (Cdn./mt\$) | Great Lakes (Cdn.\$/mt) | Rosetown (Cdn.\$/mt) | Basis: West Coast-Centr. SK (Cdn\$/mt) |
| DNS 14.0 | \$333.84 | \$325.04 | | |
| HRS | \$328.95 | | | |
| HRW 11.5 | \$277.63 | | | |
| SWW 12.0 | \$300.11 | | | |
| 1 CWRS 13.5 ³ | \$333.84 | | \$223.77 | \$110.07 |
| 2 CWRS 13.0 ³ | \$328.95 | | \$203.56 | \$125.39 |
| 3 CWRS ³ | \$277.63 | | \$170.49 | \$107.13 |
| CPS ³ | \$293.27 | | \$174.17 | \$119.10 |
| 1 CWAD ⁴ | | \$309.40 | \$0.00 | \$309.40 |
| Competing wheat: | | | | |
| | US\$/mt | | | |
| Russia 12.5 (Black Sea, 25k mt) | \$195.00 | | | |
| French 11.5 (Rouen) | \$192.70 | | | |
| APW 10.5 (W Coast) | \$240.00 | | | |
| Argentine 12.0 (Dec) | \$186.00 | | | |
| ¹ FOB Prices CDA = FOB US\$ converted into Canadian Currency ² Export Basis = FOB Prices CDA minus Cdn. Street Price ³ DNS 14% ≈ 1 CRWS 13.5%; HRS ≈ 2 CWRS 13.0%; HRW ≈ 3CWRS; SWW ≈ CPS ⁴ Values derived to Lakehead FOB | | | | |

ADDENDUM

Futures Driven Basis Calculation, Canadian Dollars per MT

| Canadian Wheat - World Price Parities | | | | | October 7, 2018 |
|---------------------------------------|-----------|---------|---------|-------------|-----------------|
| Canadian Funds | | Grade | | | |
| PNW value/Vancouver | 1CWRS13.5 | 2CWRS | 3CWRS | Winter wht. | CPS |
| May/June delivery | \$8.90 | \$8.77 | \$7.37 | \$7.98 | \$7.98 |
| Parity Track Rosetown | \$7.40 | \$7.27 | \$5.87 | \$6.48 | \$6.48 |
| Track Bid Rosetown Area | \$6.09 | \$5.54 | \$4.64 | \$4.74 | \$4.74 |
| Gross Margin at Elevator (\$/bu)* | \$1.31 | \$1.73 | \$1.23 | \$1.74 | \$1.74 |
| Gross Margin at Elevator (\$/mt)* | \$48.24 | \$63.56 | \$45.31 | \$64.12 | \$64.12 |

* to cover elevation, elevator market risk, margin