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 March 18, 2019

Projection 2019/20 Global Wheat Production:

- 2019 wheat production outlook: Mercantile sees global wheat production in 2019/10 to recover from the drought reduced numbers by ~23 mln mt, an increase of 3.1%. FAO also foresees global wheat production to strongly recover from last year, rising by 4.0%, to 757.4 million mt in 2019. The bulk of the recovery is expected in the EU, where a larger planted area, combined with thus far favourable weather, is seen driving up wheat production by at least 8% from last year’s six-year low. In the Russian Federation, an expectation of increased overall
plantings and beneficial weather could similarly push up production by almost 10%, while this year's wheat output in the Ukraine is forecast to rise by nearly 8%.

- Weather will need to be watched keenly to see where conditions warrant adjustments to these early projections.

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:** May ‘19 contract Chicago winter wheat closed at 462-2, up 9-4 cents in Friday’s trade and up 22-6 cents for the week.
- May ‘19 contract Kansas hard red winter wheat closed up 6-4 cents at 443-0, up 12-2 cents for the week.
- In Minneapolis, May ‘19 contract hard red spring wheat closed at 554-6, up 2-2 cents in Friday’s trade, up 4-2 cents for the week, while Jul ‘19 hard red spring wheat closed at 557-4, up 1-6 cents for the day and up 5-6 cents for the week.
- **Matif:** Matif rose €5/mt.
- **Funds:** The recent selloff in Chicago-traded grain and oilseed futures has resulted in a record short speculative position across that market: Through Mch. 12, money managers expanded their net short in K.C. wheat futures and options to 49,286 contracts from 44,870 in the prior week, which was the previous record. Funds increased bearish views in Minneapolis wheat during the period to 8,893 futures and options contracts from 8,329 a week before. The selling streak in CBOT wheat finally halted last week, anchored by a nearly 6% rally in the May contract on Tuesday. During the full week ended March 12, however, the contract had fallen 2%, even with Tuesday’s jump. Money managers shaved their net short position in CBOT wheat futures and options to 72,148 contracts from 72,449 in the previous week. May futures rose another 1.6% over the last three sessions, and funds are pegged to have scooped up another 8,000 CBOT wheat contracts in that time frame.

Canadian wheat:
- Canadian wheat exports were 207.8k mt for the week, for a total of 10.93 mln mt YTD, up 17% (1.611 mln mt) y/y vs the AAFC’s predicted 7% increase. The Canadian export pace has slowed. Four of the past five weeks have fallen below the YTD weekly average and are well below the 388k mt needed to reach the AAFC’s projected 18.7 mln mt. At the current pace, just 17.767 mln mt will be exported this MY.
- **Durum:** Canadian producers delivered 125.3k mt of durum into the Canadian grain handling system during week 32. Total deliveries are up 5% from last year at 2.597 mln mt.
- Exports through the week were 86k mt for a season total of 2.10 mln mt, down 16% from last year vs the AAFC’s -4.3% estimate. We continue to believe that the AAFC’s estimate is ~800k mt too high.
• Tunisia bought 25k mt of durum for $279.50 plus 17k mt for $282, likely French origin.

US wheat:
• There were several large wheat tenders though the week, but the US received very little business.
• US wheat sales for the week ending March 7th were disappointing at 263k mt vs the expected 400-600k mt. The majority (168k mt) of these sales were HRW. Total all wheat commitments are now 22.845 mln mt, up 3% from last year vs the USDA’s projected 7% increase. Class wise, HRW commitments are down 8.8% vs the USDA’s -14% prediction, while HRS and SRW continue to lag at +10.3% and +27.9% over last year vs the USDA’s projected +21% and +43% respective increases. The USDA cut export expectations last week, but given the current pace and FOB values, we expect they may not have lowered it enough.
• Winter wheat G/E ratings were 51% in KS (up 2%), 56% in OK (up 3%) and 28% in TX (down 8%).
• Attention is turning to the size of the US 2019/20 wheat crop. Vantage released their 46.72 mln acre estimate, while Allendale’s producer survey results were for a 47.414 mln acre number. With winter wheat area down 1.76 mln acres (USDA) spring wheat will take a larger than usual share of total wheat planting, making spring weather conditions even more important.
• A severe late-winter blizzard bringing 12-24 inches of snow hit the US Central and Northern Plains last week. The storm also bought heavy rain to E Nebraska, Iowa, Wisconsin and Minnesota prompting overland flooding. Analysts continue to speculate that cold wet soils will delay spring seeding, which gives the March 29 seeding report heightened importance.
• US-China trade agreement: Reports came out indicating that the two presidents have no intentions of meeting in person again in March or April.

Australian wheat:
• Australian wheat futures fell back early in the week to the lows of last July, but ended the week $3/mt higher. The Fob market also rose as ongoing dryness became a greater concern.
• Unchanged new crop acreage and trend yield would push the 2019/20 wheat crop back to around 21 mln mt, but both may be unachievable given current long-term forecasts for hot temperatures and dryness.
• Fob values ended up around $6/mt at $258/mt for APW.

Argentine wheat:
• Argentine Fob values for wheat fell sharply following trade projections for their 2019 wheat acreage to expand by up to 10%. This is assuming favourable weather for seeding which should start in ~6 weeks.
• Argentine March Fob wheat for 12.5% protein wheat dropped to US$225/mt (-$7/mt). The discount per ½% protein was at US$2-3/mt.

EU wheat:
• EU shipments were big last week. The Algeria sale will be filled with French wheat, and the French vessel line-up was easily the biggest of the season at just under 700kt.
• German Co-operatives put the 2019 crop at 24.2 mln mt, up 19% on last year.
Black Sea wheat:
- The Turkish tender looked like it would still be mostly filled by Russian wheat at ~$220/mt FOB.
- IKAR last week raised their 2019 Russian wheat estimate by 900,000 mt to 78.5 mln mt.

- Significant purchases/trades:
  There was a good amount of business done last week:
  - Turkey bought 290,000 mt mostly Russian 13.5 pro wheat for Mar-Apr shipment at US$238.50-$245.50/mt.
  - Algeria bought 450,000 mt soft wheat at $231.50-234/mt.
  - Tunisia bought 75,000 mt soft wheat at $235 and 25,000 mt durum wheat at $279.50/mt.
  - US inspections were 592,000 mt (season total 647 mln bushels down 6%), export sales were just 263,000 mt for a season total 839 mln bushels up 3% on last year.

- Wheat Market Outlook:
  Significant events:
  - Russia was still able to supply Turkey with 2290k mt of wheat for March-April shipment.
  - There was nothing fresh coming out of USA-China talks.
  - Funds: The recent selloff in Chicago-traded grain and oilseed futures has resulted in a record short speculative position across that market: Through Mch. 12, money managers expanded their net short in K.C. wheat futures and options to 49,286; funds increased bearish views in Minneapolis wheat during the period to 8,893.
  - FAO foresees global wheat production to strongly recover from last year, rising by 4.0% (+23 mln mt), to 757.4 million mt in 2019. The bulk of the recovery is expected in the EU, in the Russian Federation, and in the Ukraine. – Weather will have to be monitored carefully.

- Outlook:
  As the trade increasingly turns its attention to new crop wheat, while continuing to hope for a US-China trade deal, the focus as will be:
  - The Spec Fund shorts and whether last week’s actions prompt some short covering;
  - US March plantings and the potential problem of late planting in North America;
  - The dryness in N Africa and Australia and possibly the Black Sea (-a very warm dry forecast).

  Our suggestions remain the same: liquidate old crop stocks hold new crop for the present.

iii) Primary Elevator Price Tables and Grade Spreads

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

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

<table>
<thead>
<tr>
<th>Avg. Grade Spread/Pro Discounts</th>
<th>Cdn$/bu.</th>
<th>Cdn.$/mt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 CWRS 13.5</td>
<td>Base Grade</td>
<td>Base Grade</td>
</tr>
<tr>
<td>2 CWRS 13.5</td>
<td>(0.01)</td>
<td>(0.37)</td>
</tr>
<tr>
<td>1 CWAD 13.5</td>
<td>(0.15)</td>
<td>(5.51)</td>
</tr>
<tr>
<td>1 CPSR 11.5</td>
<td>Base Grade</td>
<td>Base Grade</td>
</tr>
<tr>
<td>1 CWAD 13.5</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>2 CWAD 13.5</td>
<td>(0.10)</td>
<td>(3.67)</td>
</tr>
<tr>
<td>2 CWAD 12.5</td>
<td>(0.20)</td>
<td>(7.35)</td>
</tr>
</tbody>
</table>
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 Basis\(^1\) (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)
  - 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:

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“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.”
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.

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

<table>
<thead>
<tr>
<th>Type of Wheat</th>
<th>FOB Prices CDA1 (calculated)</th>
<th>Street Prices</th>
<th>Export Basis2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>West Coast (Cdn./mt$)</td>
<td>Great Lakes (Cdn./mt$)</td>
<td>Rosetown (Cdn./mt$)</td>
</tr>
<tr>
<td>DNS 14.0</td>
<td>$337.86</td>
<td>$308.00</td>
<td></td>
</tr>
<tr>
<td>HRS</td>
<td>$325.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRW 11.5</td>
<td>$301.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWW 12.0</td>
<td>$295.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 CWRS 13.53</td>
<td>$337.86</td>
<td>$257.21</td>
<td>$80.66</td>
</tr>
<tr>
<td>2 CWRS 13.03</td>
<td>$325.62</td>
<td>$251.70</td>
<td>$73.93</td>
</tr>
<tr>
<td>3 CWRS3</td>
<td>$301.14</td>
<td>$227.81</td>
<td>$73.33</td>
</tr>
<tr>
<td>CPS3</td>
<td>$288.90</td>
<td>$213.85</td>
<td>$75.05</td>
</tr>
<tr>
<td>1 CWAD4</td>
<td>$349.62</td>
<td>$221.93</td>
<td>$127.68</td>
</tr>
<tr>
<td><strong>Competing wheat:</strong></td>
<td><strong>US$/mt</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia 12.5 (Black Sea, 25k mt)</td>
<td></td>
<td></td>
<td><strong>$225.00</strong></td>
</tr>
<tr>
<td>French 11.5 (Rouen)</td>
<td></td>
<td></td>
<td><strong>$222.15</strong></td>
</tr>
<tr>
<td>APW 10.5 (W Coast)</td>
<td></td>
<td></td>
<td><strong>$258.00</strong></td>
</tr>
<tr>
<td>Argentine 12.0</td>
<td></td>
<td></td>
<td><strong>$223.00</strong></td>
</tr>
</tbody>
</table>

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 CRWS 13.0%; HRW = 3 CRWS; SWW = CPS
4 Values derived to Lakehead FOB

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**ADDENDUM**

Futures Driven Basis Calculation, Canadian Dollars per MT
<table>
<thead>
<tr>
<th>Canadian Funds</th>
<th>1CWRS13</th>
<th>2CWRS</th>
<th>3CWRS</th>
<th>Vinter wht.</th>
<th>CPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNW value/Vancouver May/June delivery</td>
<td>$9.01</td>
<td>$8.68</td>
<td>$8.01</td>
<td>$7.86</td>
<td>$7.86</td>
</tr>
<tr>
<td>Parity Track Rosetown</td>
<td>$7.51</td>
<td>$7.18</td>
<td>$6.51</td>
<td>$6.37</td>
<td>$6.37</td>
</tr>
<tr>
<td>Track Bid Rosetown Area</td>
<td>$7.00</td>
<td>$6.85</td>
<td>$6.20</td>
<td>$5.82</td>
<td>$5.82</td>
</tr>
</tbody>
</table>

### Gross Margin at Elevator ($/bu) *

- 1CWRS13: $0.51
- 2CWRS: $0.33
- 3CWRS: $0.31
- Vinter wht.: $0.55
- CPS: $0.55

### Gross Margin at Elevator ($/mt) *

- 1CWRS13: $18.82
- 2CWRS: $12.09
- 3CWRS: $11.49
- Vinter wht.: $20.06
- CPS: $20.06

* to cover elevation, elevator market risk, margin