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 9, 2019

AMIS September 2019 Summary of World Wheat Production Estimates

- Last week, AMIS released its September estimate of global wheat supply and use. The report began by stating that 2019/20 will “be characterized by stiff competition among exporters” given a large exportable surplus in all major grains in most major exporting countries. Many traders are saying this is an understatement as global Fob values have, in many cases, fallen below their 12-month lows.
- World wheat production estimates were lowered another 3.9 mln mt from last month to 766.9 mln mt, due largely because of less production in Russia. AMIS’s production forecast is in the middle of the USDA’s 768.1 mln mt and ICG’s 764.1 mln mt estimates. Despite the reduction, global production is still set to be a record amount.
- Use was raised another 1.7 mln mt (up 1.8% y/y) on higher feed use.
- Trade was lowered 600k mt to 173.2 mln mt, which is still a 3% improvement on last year.
- Overall, expectations for ending stocks were lowered 4.9 mln mt from last month to 273.6 mln mt.
- The next USDA report will be out this Thursday (12th). We do not expect any significant wheat-specific changes, nor any surprises as far a corn production [see pg 4].
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 463-6, down 2-4 cents on Friday, down 9-0 cents for the week.
  - Dec '19 contract **Kansas** hard red winter wheat closed at 393-2, down 0-4 cents in Friday’s trade, down 8-0 cents for the week.
  - **Minneapolis**, Dec '19 contract hard red spring wheat closed at 494-2, down 7-6 cents for the day, down 6-2 cents for the week. March '20 hard red spring wheat closed at 509-0, down 6-0 cents for the day, down 6-0 cents for the week.

**Canadian Wheat:**
- Frequent rainfall and cool weather continues to delay harvest progress across the Prairies. In MB, spring wheat harvest is just 59% complete vs the avg. of 80%. SK spring wheat is 4% harvested vs 28% last year. According to the SK crop report, another 9% is ready to be combined once it is dry enough, 3% is sitting in swath, and 84% is still standing. Spring wheat harvest in AB is 5.8% complete vs 12.7% last year.
- Stats Canada’s Canadian wheat stocks at the end of July 2019 for both on and off farm were 6.184 mln mt. This is 1 mln mt higher than the 5.18 mln mt trade expected and 295k mt higher than last year.
- Of the 6.184 mln mt of all wheat stocks, 1.619 mln mt of this is said to be durum wheat. This is 193k mt higher than last year. The increase in durum stocks will be well off-set by a 23% decrease in 2019/20 Cdn. durum production.
- Wheat excluding durum stocks are 4.565 mln mt, down 488k mt from last year. Of this, 1.389 mln mt is being stored on-farm, while 3.176 mln mt are commercial stocks.

### Canadian Wheat Production Estimates, StatsCan & Trade Data

![Canadian Durum Stocks](chart1)

![Canadian Wheat (Excl. Durum) Stocks](chart2)

Canadian producers delivered 223.7k mt of wheat (excl. durum) into the Canadian grain handling system during week 4 of the 2019/20 marketing year. Exports during the week were 218.0k mt, for a YTD total of 1.237 mln mt, in-line with last year. Weekly exports need to average 310k mt to reach the AAFC's 19.2 mln mt projection.
Canadian producers delivered 55.3k mt of wheat **durum** into the grain handling system during week 4 of the marketing year. Exports during the week were 119.1k for a **YTD** total of 374.5k mt, up 60% (139.9k mt) from last year.

**US wheat:**
- US winter wheat harvest is essentially complete and overall quality is strong.
- Drier weather allowed US spring wheat harvest to progress 17% from last week to 55% complete, still well behind the 78% 5-year avg. The average protein of the crop is currently 14.6% (equal to last year), and test weight dropped slightly from last week to 60.4 lb/bu (last year’s average was 61.7 lb/bu). So-far, the average falling number is 383 seconds.
- Spring wheat conditions fell 2% last week to 67% Gd/Ex, vs 74% Gd/Ex last year.
- US drum harvest continues to lag behind last year. In ND, 34% of the crop has been harvested, up 10% from last week. Harvest in MO progressed 6% over the week to 26% complete.
- Durum ratings in ND were stable at 64% Gd/Ex while ratings in MO deteriorated 14% over the week to 57% Gd/Ex. Durum conditions in MO have fallen 22 points over the last two weeks.
- According to the latest USDA production report, 2019/20 US durum production is set to fall by 20 mln mt (26%) from last year. The largest decrease will be in ND where, despite higher yields y/y, they will see a 32% decrease in production.

**Australian wheat:**
- Aussie futures were AU$10 higher on the week (up AU$21 over the past two weeks) from on-going dryness. There were showers in the West over the weekend, but the outlook remains dry.
- Acc. to ABARES, wheat production in Australia could fall below 19 mln mt due to a third year of drought. ABARES had expected wheat production to reach 21.2 mln mt earlier, and USDA is still using 21 mln mt for Australia. A smaller Australian production could give Black Sea exporters additional openings to the growing Asian markets.

**Argentine wheat:**
- Fob values in Argentina were difficult to define as the market quietly waits for the outcome of the political upheaval and the extent of damage from recent frosts that occurred while the wheat crop enters the flowering stage.
- Gd/Ex ratings fell 3% over the week to 39% (vs last year’s 47%).
- Farmer’s will not sell beyond immediate cash needs and while there is increasing confirmation that higher export taxes will be implemented, there were murmurings that Macri would eliminate them.

**EU wheat:**
- Matif hit contracts lows last week as there were a huge number of offers at the TMO tender at prices that reflect $188 Fob parity for a 13.5 pro (Novo), pushing the cash market to new lows.
Black Sea wheat:
- The Black Sea market is down $2-3 on the week at fresh season lows. Farmers have stopped selling at these prices, indicating that a bottom may have been found, but there is nothing to support a rally.
- As harvest continues, yields remain similar to last year. There remains 6 mln ha worth of spring wheat to harvest.
- Saudi tendered over the weekend and for the first time Russian wheat was eligible thanks to Saudi’s recently relaxed quality standards. We have not heard confirmation yet if Russian wheat traded. Canadian wheat continues to be barred from Saudi tenders because of political tensions between our country’s leaders.

**Significant purchases/trades:**
- The weekly Japanese wheat tender called for 138k mt of US, Canadian, and Australian wheat, with 69k mt from the US. Saudi Arabia tendered Friday for 595k mt of wheat for arrival Nov. ’19- Jan. ’20, with Russian wheat potentially eligible. Turkey (TMO) bought 250k mt of mostly 13.5 pro wheat for Sept. 10-27 shipment, and they return Sept. 18 for another 250k mt wheat. Morocco got no offers at either the soft wheat or durum tender under the US quota. Brazil again talked of a 750k mt duty free import quota for 2020. Pakistan is still discussing up to 1 mln mt of imports; Kazakhstan cut its 2019/20 export estimate from 9 mln mt to 7 mln mt due to smaller crops and reduced demand in their major markets.
- US what inspections were 526k mt (season total 241 mln bu up 25%), sales were 312k mt for a season total of 419 mln bu, up 22% up on last year.

**Wheat Market Outlook:**

**Significant events:**
- Both US wheat sales and Canadian all wheat stock numbers were bearish vs trade’s expectation. US sales reported were 312,000 mt vs the 400-800k mt expected. Stats Canada’s all wheat stock numbers were 1 mln mt higher than what trade was expecting at 6.184. Expectations are that the “giant package” promised by president Trump would include a 1 bln gal boost to biofuel requirements, but traders and analysts do not believe that the announcement will move the needle much on the glut of grain in the US. They also think the EPA will continue to grant SRE’s in 2019 and 2020 - well offsetting the 1 bln gal 2020 mandate.
- The USDA’s next crop production report is out this Thursday (12th). Corn numbers will be the most closely watched. We do not expect the USDA to change their numbers significantly especially since analysts such as FC Stone have been releasing production forecasts that are only slightly below the USDA’s Aug projection of 13,901 mln bu.

**Weather around the world:**
- The US was wetter in the Lakes states but mostly dry elsewhere. Temperatures were warm with no frost event expected through late September. Canada was also warm with near normal precipitation.
- EUROPE: Despite some showers, mostly dry and very warm weather accelerated summer crop maturation and dry-down but maintained localized drought concerns in northern Europe. WESTERN FSU: Increasingly dry, warm weather accelerated summer crop maturation but trimmed yield prospects for later-developing corn and soybeans in parts of Ukraine. EASTERN FSU: Cool, rainy weather was generally too late to benefit filling to maturing spring wheat, while seasonally sunny, hot weather accelerated cotton development in the south. MIDDLE EAST: Sunny skies aided summer crop dry down and early harvesting in Turkey. SOUTH ASIA: Widespread monsoon showers benefited kharif crops in India. EAST ASIA: Ample rainfall continued in northeastern China, maintaining high yield potential for corn and other crops. SOUTHEAST ASIA: Heavy rainfall from Tropical Cyclone Podul provided moisture for rice in the Philippines as well as Thailand
and environs. AUSTRALIA: Rain benefited wheat, barley, and canola in the west, while isolated showers in the east offered little drought relief. ARGENTINA: Warm weather supported overwintering grains, but moisture will be needed soon as vegetative growth advances. BRAZIL: Mostly dry weather favoured harvesting of corn and cotton, as showers returned to southernmost wheat areas. MEXICO: Seasonal rainfall remained lighter than normal over many agricultural regions. CANADIAN PRAIRIES: Showers hampered spring crop harvesting in eastern farming areas.

**Outlook:**

So far, US, EU and Ukrainian shipments are running ahead of last year’s pace, and Russia is also pretty close, but the overall wheat market context remains negative. At the same time, while the financial press progressively talks about the economic slowdown around the world, freight rates are at 9-year highs with the Baltic dry index 4 times higher than its level at the start of 2019. This seems to indicate brisk trade rather than a slowdown. Canadian wheat exports are off to a fair start, and we hope that potential problems with canola have grain Co’s pay more attention to wheat volumes. We don’t expect any significant rally in the short term. Consumers are well supplied with offers as they cover nearby needs and avoid taking any long-term coverage. The market needs to understand what the real corn crop is and whether we need to use more wheat for feed. The markets still don’t have firm views on the yields, so we don’t expect any strong rallies in the short term.

**iii) Primary Elevator Price Tables and Grade Spreads**

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

<table>
<thead>
<tr>
<th>NW Sask</th>
<th>Spot (bu.)</th>
<th>Spot (mt)</th>
<th>NW Sask</th>
<th>Deferred Nov. '19 (bu.)</th>
<th>Deferred Nov. '19 (mt.)</th>
</tr>
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<tbody>
<tr>
<td>1 CWRS 13.5</td>
<td>$5.57</td>
<td>$204.66</td>
<td>1 CWRS 13.5</td>
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<tr>
<td>1 CWAD 13.0</td>
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<td>$238.47</td>
<td>1 CWAD 13.0</td>
<td>$6.51</td>
<td>$239.20</td>
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<tr>
<td>1 CPSR 11.5</td>
<td>$4.69</td>
<td>$172.33</td>
<td>1 CPSR 11.5</td>
<td>$4.75</td>
<td>$174.53</td>
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<td>SW Sask</td>
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<td></td>
<td>SW Sask</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 CWRS 13.5</td>
<td>$5.49</td>
<td>$201.72</td>
<td>1 CWRS 13.5</td>
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<td>$202.83</td>
</tr>
<tr>
<td>1 CWAD 13.0</td>
<td>$6.51</td>
<td>$239.20</td>
<td>1 CWAD 13.0</td>
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<td>$239.94</td>
</tr>
<tr>
<td>1 CPSR 11.5</td>
<td>$4.42</td>
<td>$162.41</td>
<td>1 CPSR 11.5</td>
<td>$4.70</td>
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</tr>
<tr>
<td>NE Sask</td>
<td></td>
<td></td>
<td>NE Sask</td>
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<td></td>
</tr>
<tr>
<td>1 CWRS 13.5</td>
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<td>$244.35</td>
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<td>1 CPSR 11.5</td>
<td>$4.51</td>
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<td>SE Sask</td>
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<td>SE Sask</td>
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<td></td>
</tr>
<tr>
<td>1 CWRS 13.5</td>
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<td>$196.21</td>
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<td>$246.92</td>
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<tr>
<td>1 CPSR 11.5</td>
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<td>$162.41</td>
<td>1 CPSR 11.5</td>
<td>$4.52</td>
<td>$166.08</td>
</tr>
</tbody>
</table>
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 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:**
  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


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

<table>
<thead>
<tr>
<th>Type of Wheat</th>
<th>FOB Prices CDA(^1) (calculated)</th>
<th>Street Prices</th>
<th>Export Basis(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>West Coast</em> (Cdn./mt$)</td>
<td><em>Great Lakes</em> (Cdn./mt$)</td>
<td><em>Rosetown</em> (Cdn./mt$)</td>
</tr>
<tr>
<td>DNS 14.0</td>
<td>$283.41</td>
<td>$281.96</td>
<td></td>
</tr>
<tr>
<td>HRS</td>
<td>$277.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRW 11.5</td>
<td>$259.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWW 12.0</td>
<td>$284.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 CWRS 13.5(^3)</td>
<td>$283.41</td>
<td>$198.42</td>
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<tr>
<td>2 CWRS 13.0(^4)</td>
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<td>$191.07</td>
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<tr>
<td>3 CWRS(^5)</td>
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<td>CPS(^6)</td>
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</tr>
<tr>
<td>1 CWAD(^7)</td>
<td>$305.62</td>
<td>$0.00</td>
<td>$305.62</td>
</tr>
</tbody>
</table>

**Competing wheat:**

- Russia 12.5 (Black Sea, 25k mt) $185.00
- French 11.5 (Rouen) $185.40
- APW 10.5 (W Coast) $232.00
- Argentine 12.0 (Nov) $172.00

\(^1\) FOB Prices CDA = FOB US$/mt converted into Canadian Currency

\(^2\) Export Basis = FOB Prices CDA minus Cdn. Street Price

\(^3\) DNS 14% = 1 CWRS 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**

<table>
<thead>
<tr>
<th></th>
<th>1CWRS</th>
<th>2CWRS</th>
<th>3CWRS</th>
<th>Winter wht.</th>
<th>CPS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PNW value/Vancouver</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>May/June delivery</td>
<td>$7.53</td>
<td>$7.38</td>
<td>$6.87</td>
<td>$7.56</td>
<td>$7.56</td>
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<tr>
<td>Parity Track Rosetown</td>
<td>$6.03</td>
<td>$5.88</td>
<td>$5.38</td>
<td>$6.06</td>
<td>$6.06</td>
</tr>
<tr>
<td>Track Bid Rosetown Area</td>
<td>$5.40</td>
<td>$5.20</td>
<td>$4.40</td>
<td>$4.62</td>
<td>$4.62</td>
</tr>
<tr>
<td><strong>Gross Margin at Elevator ($bu)</strong>(^*)</td>
<td>$0.63</td>
<td>$0.68</td>
<td>$0.98</td>
<td>$1.54</td>
<td>$1.54</td>
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<tr>
<td><strong>Gross Margin at Elevator ($mt)</strong>(^*)</td>
<td>$23.25</td>
<td>$25.08</td>
<td>$35.86</td>
<td>$56.55</td>
<td>$66.55</td>
</tr>
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</table>

* To cover elevator, elevator market risk, margin