2018 Western Canadian Wheat
Wheat & Durum Production
Presentation Overview

- Review of world wheat situation
- Review of the 2018 growing season in Western Canada
- Review of historical and 2018 production
World Wheat Situation
World wheat production has climbed steadily since the 1960s. The increase in supply has almost been matched step for step with the interest in consumption.

This growth in demand is expected to continue or even accelerate in the coming years driven by rising population and world incomes. However, major world wheat suppliers such as Canada will need to see a significant increase in yield if production growth is to match growing demand. This is because wheat production in major growing and exporting areas will continue to be under pressure from other crops, such as corn and oilseeds.

We will look more closely at the expectations for production, consumption and end stocks in the 2018-19 crop year in the next slides.
The world story today has been one of rising stocks. The chart above tracks ending stocks from 2008/09 through to the projected ending stock in 2018/19.

According to the IGC, carryover stocks of wheat have been steadily increasing from 198 million metric tonnes ten years ago to projected 2018/19 ending stocks of 262 million metric tonnes. But we can also see that this year is the first time in over 6 years that end stocks have declined.

It should be noted that China accounts for a significant portion of world end stocks (128 million tonnes). Given that very little Chinese wheat is exported, global end-stocks are actually much smaller. The next slides will look more closely at global and Chinese end-stocks over the past three years.

Also, while there is a strong supply of medium quality / medium protein wheat in the world today there is not a strong supply of high quality / high protein wheat. This is another factor that should be considered when thinking about wheat supply and disposition.
As mentioned, the world end stock numbers are skewed by China. In 2018-19, world end stocks are forecast at 262 million tonnes, of which 128 are accounted for by China.

This chart also illustrates the world stocks to use ratio, including Chinese end stocks. We are looking at a roughly 35% stock to use ratio for 2018-19. However, this picture changes significantly if we exclude China from the equation, given that their stocks are essentially inaccessible to world markets.
Excluding China, world end-stocks are forecast at roughly 134 million tonnes, while total consumption excluding China is roughly 613 million tonnes. These numbers highlight a tightening stock to use ratio for accessible wheat stocks at about 22%. The decreasing ratio will add firmness to the markets in the year ahead.
World wheat production in 2018/19 is forecast to be roughly 729 million tonnes, a 5 percent decrease in production from last year.

World wheat consumption continues to be strong, but is expected to be slightly lower than last year.

As mentioned on the previous slide, IGC forecasts predict world end use at 262 million metric tonnes this year.

World wheat trade, which is not shown in this table, is forecast to be 172MT. This represents a very slight decrease over 2017/18 trade volume (176MT).
World durum production in 2018-19 is forecast to be 37.9 million tonnes. This is a drop from the level of production from 2016/2017, but an increase from 2017/2018.

World durum utilization is expected to continue to remain robust. While ending stock numbers are projected to remain steady.
In 2018-19, Canada is forecast to account for roughly 14% of world wheat exports and about 50% of global durum exports. Canada’s wheat exports are differentiated from other countries by cleanliness, consistency and high quality of available supply. We could say that Canada accounts for a higher proportion of high-quality wheat exports.

The next presenters from the Canadian Grain Commission and the Canadian International Grains Institute will outline these attributes in more detail.
Canadian wheat is exported around the world. This graphic description from Chatham House shows just how far Canadian wheat reaches. There are not very many corners of the globe that do not import Canadian wheat. This is because the high protein and good functionality of Canadian wheat is desired by customers all over the world.

In 2017, Canada exported wheat to 66 countries (and the biggest 35 are illustrated on this slide). In 2017, exports to the world totalled 20.5 million tonnes of wheat (4.3 million tonnes of durum and 16.2 million tonnes of wheat excluding durum).
2018 Growing Season
for the Canadian Prairies
The 2018 growing season had mixed growing conditions overall. Although some areas continued the relatively dry and hot spell seen last year (e.g. Southern Alberta Durum region) most areas had timely rains and good summer temperatures throughout the season.

On the Canadian Prairies, the growing season enabled farmers in most areas to achieve relatively good quality, and trend yields for spring wheat, leading to good production from quantity perspective and protein profile. The durum growing region was impacted by dry conditions in some areas (south Alberta), driving some reduction in durum yields overall, but this was balanced by stronger growing conditions in parts of Saskatchewan, the primary durum growing province.

Crops in many regions benefited from ground moisture and the widespread adoption of minimum and zero-till farming practices. These practices play an important role in ensuring strong production despite variability in growing conditions from year-to-year.

The crop quality was very high, until unusually early snow-fall in some Western Prairie regions created challenging harvest conditions for farmers in those areas. This snow and moisture meant that we had two harvest periods this year: Crops harvested before the snow events is the highest of quality – 95% #1 and #2 with high protein.
This is a temperature map of the prairie region of Canada, showing the growing season.

Overall, temperature was near average in most growing areas. However, the dark red coloured regions are areas that saw extended periods of high heat in the summer of 2018. It is important to note that these areas were relatively concentrated, and that the overall prairie region had good conditions.

I want to draw your attention to the very dark red region in the south west corner of the province of Saskatchewan and the south-east corner of the province of Alberta. This heat affected parts of the growing region for durum. In this area there were more than 27 days this past summer with temperatures above 30 degrees Celsius. This is why you will see slight declines in Canadian durum yields. Other neighboring durum areas (across southern Saskatchewan) and spring wheat areas had less intense heat pressure and good performance overall.
This is a map of the prairie region showing rainfall. The areas that are highlighted in yellow saw below normal precipitation levels during the growing season. The regions outlined in brown received low rainfall while the green and blue areas received normal or above normal rainfall.

Again, the top durum producing area around the southern Alberta and Saskatchewan border faced moisture pressure, and other important wheat growing areas in central Alberta, Saskatchewan and Manitoba as well. This was balanced by good growing conditions in other areas (such as the strong conditions seen in Eastern Saskatchewan). In the areas that did face limited rain and high temperatures, Canadian farmers did not see a crop failure. This is because of modern agricultural practices like conservation tillage. These modern agricultural practices are possible because of advances in plant breeding as well as modern crop input products.
Whether patterns shifted quickly from hot and dry conditions throughout summer, to relatively cold, wet (and even snowy) conditions in some areas at harvest. These conditions led to some delays in harvest, especially in parts of Alberta that had unusually early snowfall. Other areas have been able to proceed with timely harvest, supporting good quality expectations overall.

Depending on their location, farmers faced two distinct harvest seasons this year. Before the snow-fall events, high quality and good protein profile was achieved, with 95% of the crop rated #1 or #2. In some regions, harvest delays due to snow-fall and extended moisture has led to some degrading (mildew, frost) for crops harvested later in the season.

The Canadian Grain Commission will outline quality expectations shortly.
2018 Canadian Wheat and Durum Production
Most spring wheat in Canada is produced in the three prairie provinces – Manitoba, Saskatchewan and Alberta.

Saskatchewan produces roughly 41% of the spring wheat grown in Canada. This is followed by Alberta which produces about 39% and Manitoba which produces about 18%. The next largest producer is the province of Ontario, at about 2%.

All of the durum grown in Canada is from the provinces of Saskatchewan and Alberta with the former contributing over 82% of Canadian durum and the latter just under 18%.
Canadian Western Red Spring wheat or CWRS is still king of wheat in the Canadian prairies. Over 80% of spring wheat outside of durum is CWRS.

Soft white spring and Canadian Prairie Spring account for 8% of production while the remaining 5% is comprised of the minor classes and feed.
Almost all of the barley grown in Canada is produced in the prairie provinces of Alberta and Saskatchewan – 88%. Barley is used both for animal feed as well as for malt production. Weather conditions, including snow in Alberta have delayed harvest for barley and may lead to tight supplies of malt quality.
The province of Saskatchewan produces over $\frac{1}{2}$ of the oats grown in Canada. The other prairie provinces of Manitoba and Alberta comprise the majority of the rest of oats production in Canada.
Since 2000 there has been a significant increase in canola hectares. Recently this increase has coincided with growth in pulse crops like peas and lentils. The growth in canola and pulse crops has impacted cereal production, with wheat showing a slight downward trend since 2000 and oats and barley hectares off significantly.

In the last three years hectares seeded for Western Canada’s two major crops – canola and wheat – have seen a continuation of the longer term trends with slight declines in wheat hectares and increased in canola.

For the first time last year canola hectares exceeded wheat. Wheat is estimated to be back on top for 2018. Wheat plays an important role in farmers’ crop rotations and is expected to continue this role over the long-term.
This table shows the seeded hectares for the last two years. The estimates for 2018 were carried out by Statistics Canada and published on December 6.
### Canadian Estimated Seeded Area, Wheat

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>%Δ Y/Y</th>
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<tbody>
<tr>
<td>Total Wheat</td>
<td>9.6</td>
<td>9.1</td>
<td>10.0</td>
<td>+9.9%</td>
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<tr>
<td>Spring Wheat</td>
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<td>6.4</td>
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<tr>
<td>Durum</td>
<td>2.5</td>
<td>2.1</td>
<td>2.5</td>
<td>+19.0%</td>
</tr>
<tr>
<td>Winter Wheat</td>
<td>0.7</td>
<td>0.6</td>
<td>0.5</td>
<td>-16.6%</td>
</tr>
</tbody>
</table>

Source: Statistics Canada, Table 32-10-0359-01, December 2018
Total wheat production in 2018-19 reached over 31.7 million tonnes, just below the near record levels seen in 2016. This is due to the drier and hotter conditions that we have previously discussed.

Non-durum wheat production is up about 4% from 2017-18.

With large increases in seeded area for durum, production has increased by almost 16% y/y.

As previously discussed, modern agricultural practices like conservation tillage are allowing Canadian farmers to produce a crop in drought conditions that would previously have resulted in crop failure.

The latest update from Statistics Canada was published on December 6th.

You will also notice reductions in pulse production. Pulse crops, like lentils, were also significantly impacted by hot dry conditions in their production areas. Returns on pulse crops have also been highly volatile due to market access challenges, encouraging farmers to shift towards wheat and other crops.
In large part because of increases in yield, there is a slight upward trend in spring wheat production in Canada. Durum production is close to the longer-term average.
This chart shows average yields from 1999 up to 2018 (current year).

Growing conditions have been generally warm and dry on the Canadian Prairies, causing a reduction in yields from 2017-18.

Conditions in the spring of 2018 started with the dry trend continuing. Since then conditions did improve significantly, with timely rains in many parts of the prairie growing region. However, other regions, including some durum producing regions experienced important drought pressure. Forecasts suggest 2018-19 yields to be to be around 3.4 tonnes/hectare (49.5 bushels/acre) for spring wheat; and, 2.3 t/ha for durum (34.6 bushels per acres).

For spring wheat this is above the long term average of 2.7 tonnes per hectare (since 2000) (i.e. about 40.5 bushels per acres). For Durum, this year’s yields actually match the long-term average of 2.3 tonnes per hectare.

Given the low levels of moisture experienced in durum producing regions, we are expecting relatively low fusarium pressure and good quality overall.
This is the supply and disposition for wheat in Canada, excluding durum for the past three years.

Stocks going into the 2018/19 crop year are estimated to be declining slightly over the previous year. Stocks can be expected to tighten again during the current crop year, given reasonable world export demand for high quality wheat.
Ending stocks for Canadian durum have been at record lows for a number of years.

The exception to this was the 2015/16 crop year which saw record production of durum in Canada. However, the incidence of fusarium in that year was high and a significant portion of the 15/16 stock was not salable in international markets.

Stocks coming out of the 2017-18 crop year decreased from 2016-17. Into 2018-19 we are seeing a modest increase in production and modest increase in end stocks due to relatively low world price and weak import demand for durum among traditional importers (e.g. Algeria, Italy).
Canadian companies continue to invest heavily in capacity. This will help ensure that Canada is able to deliver our increasingly large crops to customers.

The Government of Canada has recently amended Canada’s transportation legislation. The changes made will bring greater competition and accountability to the rail system and help ensure that past transportation problems do not recur.

The Canadian value chain is committed to ensuring that we remain a reliable and consistent supplier of high quality to every region of the world.
Grains and oilseed exports are forecast at almost 47 million metric tonnes in 2018-19, compared to roughly 33 million tonnes in 2009-10. This demonstrates strong growth in production and export capacity. With continued investments in innovation, grain handling and export capacity, we expect this positive trend to continue in the years ahead. This will help ensure Canada’s continued position as a consistent global supplier of clean and high quality wheat over the long-term.