VISTA on the Agri-food Industry and the Farm Community

Effects of the Crop Reporting Cycle on Field Crop Statistics

by Omar Youssouf

Release date: November 8, 2018





Statistics Canada Statistique Canada



How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website, www.statcan.gc.ca.

You can also contact us by

Email at STATCAN.infostats-infostats.STATCAN@canada.ca

Telephone, from Monday to Friday, 8:30 a.m. to 4:30 p.m., at the following numbers:

•	Statistical Information Service	1-800-263-1136
•	National telecommunications device for the hearing impaired	1-800-363-7629
•	Fax line	1-514-283-9350

Depository Services Program

Inquiries line
 Fax line
 1-800-635-7943
 1-800-565-7757

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed standards of service that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under "Contact us" > "Standards of service to the public."

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued co-operation and goodwill.

Published by authority of the Minister responsible for Statistics Canada

© Her Majesty the Queen in Right of Canada as represented by the Minister of Industry, 2018

All rights reserved. Use of this publication is governed by the Statistics Canada Open Licence Agreement.

An HTML version is also available.

Cette publication est aussi disponible en français.

Effects of the Crop Reporting Cycle on Field Crop Statistics

Introduction

The <u>Field Crop Reporting Series</u> produces national and provincial estimates on seeded and harvested areas, yields, production and on-farm stocks over the course of a crop cycle. The data provide an overview of field crops and insight into the farming industry in Canada. The timing of the survey collection period is crucial and ensures a timely and accurate picture of the crop situation, thereby meeting the industry need for these data.

The March farm survey provides preliminary area estimates for the type of crop area that, at the time of collection, farmers intend to seed. The acreage is often reported at a time when there is still snow on the ground. However, the data on seeding intentions are used by Agriculture and Agri-Food Canada (AAFC) to calculate its first grain estimates for the summer farm income forecast.

The June farm survey provides the final estimates of the area that farmers actually seeded. The preliminary data obtained in the July farm survey provide AAFC with an early indication of production for the upcoming crop year. These estimates are used as a basis for subsequent surveys throughout the year (harvested area, yield and production).

The model-based principal field crop estimates released in September provide yield and production data for select crops later in the season when crops are closer to maturity or in some cases when harvest has begun. Prior to 2016, traditional survey methodology was used to collect yield and production data for all crops at this time of year. In 2016, the September farm survey was replaced with model-based estimates derived using an innovative approach developed by Statistics Canada and AAFC.

Lastly, the November farm survey collects final yield and production data once harvest is finished, except for a few crops for which harvest may continue later into the fall.

In the field crop industry, several factors have a significant impact on farmers' seeding decisions, affecting the preliminary intention (March) and final seeded area (June) data that producers provide to Statistics Canada. Factors such as price variability, weather events and socioeconomic influences have important impacts on seeded area estimates. With regard to production estimates, weather variances that occur between all the surveys can explain differences between estimates.

Comparisons between March seeding intentions and June final seeded area

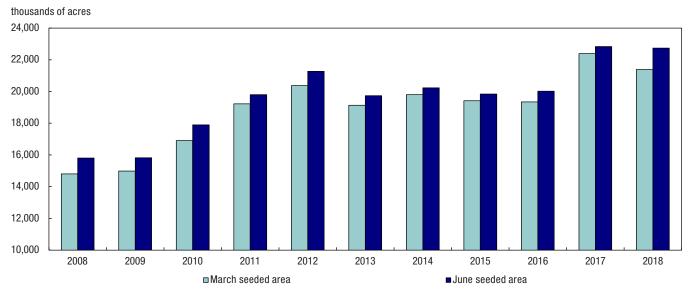
Canola and all wheat

Trends published regarding the seeding area of Canada's two top crops—canola and all wheat—were consistent when the March and June surveys were compared (charts 1 and 2) from 2008 to 2018.

From 2008 to 2014, the canola area estimates from the June surveys were an average of 4.4% higher than those from the March occasion. The difference between the two survey occasions decreased to an average of 3.5% from 2015 to 2018.

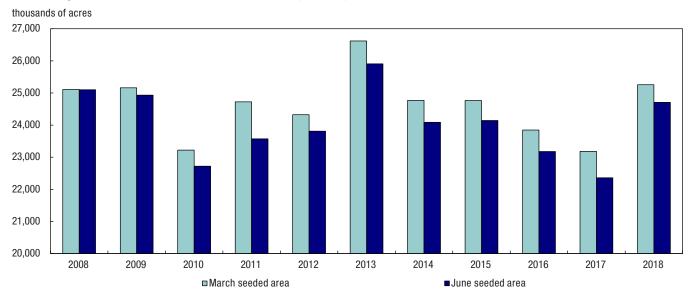
Trends in seeded area estimates for all wheat were similar in the two survey occasions. From 2008 to 2018, the difference between the March and June estimates of actual seeded area varied from almost 0.0% in 2008 to a maximum difference of 4.7% in 2011.

Chart 1
Preliminary and final canola seeded area estimates, Canada, 2008 to 2018



Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2018.

Chart 2
Preliminary and final all wheat seeded area estimates, Canada, 2008 to 2018



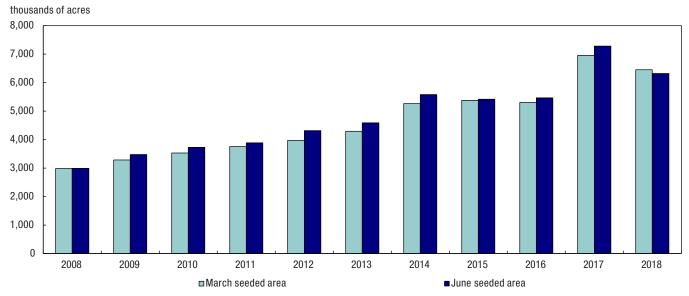
Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2018.

Soybeans and corn for grain

While soybeans and corn for grain have a later growing season, Statistics Canada's March survey results are in line with the final June survey results (charts 3 and 4). From 2008 to 2011, the average difference between the two survey occasions for corn for grain estimates was -2.2%. From 2008 to 2018, the difference between the March and June survey results was at its lowest in 2015 at -0.5%, while the highest difference was in 2014 at -7.4%.

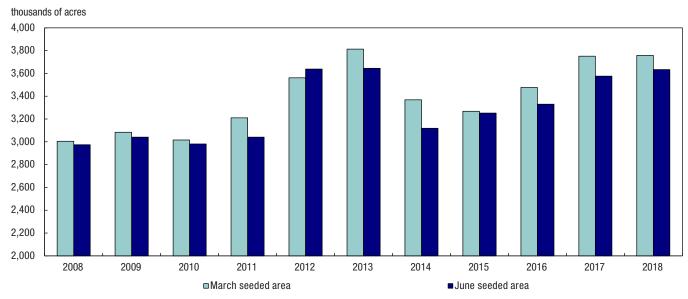
Canada's soybean area grew significantly from 3.0 million acres in 2008 to 6.3 million acres in June 2018. Statistics Canada was able to capture the expansion of soybean acreage in its March estimates, a trend confirmed in the June final estimates. From 2008 to 2018, the average percentage difference between the estimates from the two surveys was +3.9%. In 2008, the difference between the survey results was at its lowest at +0.3%. In contrast, the largest relative difference between the estimates from the two surveys was +8.7% in 2012.

Chart 3
Preliminary and final soybean seeded area estimates, Canada, 2008 to 2018



Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2018.

Chart 4
Preliminary and final corn for grain seeded area estimates, Canada, 2008 to 2018



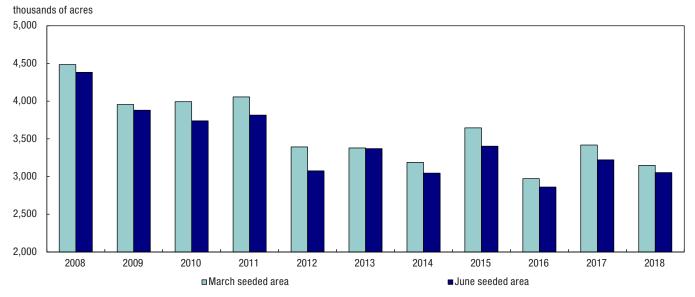
Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2018.

Barley and oats

As is the case for other principal field crops, Statistics Canada's area estimates for barley and oats consistently exhibit the same trends between the two survey occasions (charts 5 and 6). For oat estimates, the lowest percentage difference between the estimates from the two surveys was in 2013 at -0.2%, while the greatest percentage difference was in 2012 at -9.4%. Over the last five years, the difference between the March and June estimates was, on average, below 5.0%.

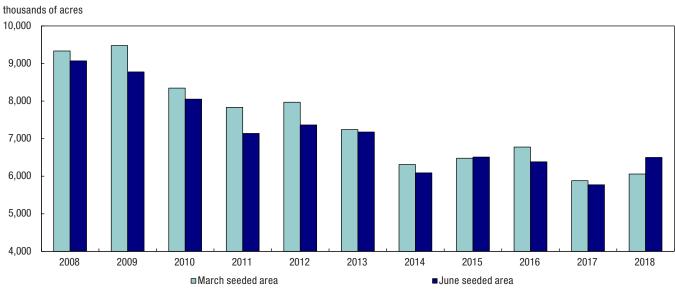
For barley, the lowest percentage difference between the two estimates was in 2015 at +0.5%. The highest percentage difference was -8.9% in 2011, a year when severe flooding occurred across the nation.

Chart 5
Preliminary and final oats seeded area estimates, Canada, 2008 to 2018



Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2018.

Chart 6
Preliminary and final barley seeded area estimates, Canada, 2008 to 2018



 $\textbf{Source:} \ \textbf{Statistics Canada}, \textbf{Field Crop Reporting Series}, 2008 \ to \ 2018.$

Preliminary July and September production estimates compared to final November production

Canola and all wheat

For canola, the greatest percentage difference between the July and November survey estimates was in 2015 at 29.1%, while the lowest was in 2011 at +7.4%. From 2008 to 2017, the average difference between the July estimate and final production in November was 13.7%, compared with an average difference of 10.6% between September and November.

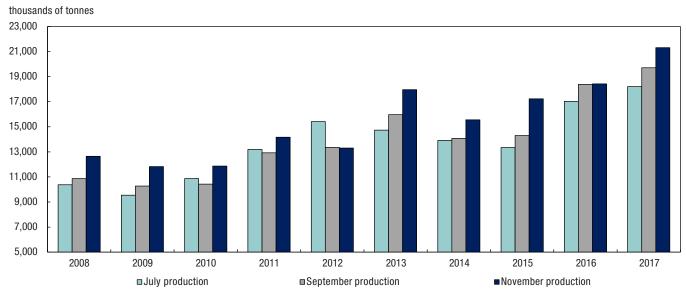
The difference between the July and November survey results for all wheat production estimates was at its lowest in 2012 at 0.7%, while the greatest difference was in 2013 at +22.8%. The average difference between the July estimate and November production was 9.5%, falling to 6.1% when the September estimate is compared with November final production.

Results show that the September occasion consistently provides estimates closer to the final November results. The crops are further advanced in the growing season, and farmers are able to provide better estimates about harvest and yield.

In 2016, Statistics Canada began using a yield-model approach, which incorporates remote sensing technology to produce estimates of yields. Results from this new approach have been consistent with September data produced using traditional survey techniques. Specifically, both the survey and the yield-model data for September align more closely with final production data from November than preliminary estimates from July.

In the last decade, relative differences between preliminary and final production estimates for canola and all wheat were on average greater than the differences for the other major field crops (charts 7 and 8).

Chart 7
Preliminary and final canola production estimates, Canada, 2008 to 2017



Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2017.

40.000 38,000 36,000 34,000 32,000 30,000 28,000 26,000 24,000 22,000 20,000 2008 2010 2011 2013 2014 2015 2016 2009 2012 2017 ■July production ■September production ■ November production

Chart 8
Preliminary and final all wheat production estimates, Canada, 2008 to 2017

Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2017.

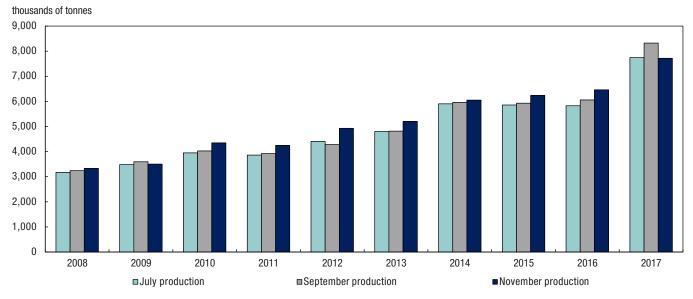
Soybeans and corn for grain

The difference between the July and November survey estimates for soybeans varied from -0.3% in 2017 to a maximum difference of +11.9% in 2012. From 2008 to 2017, final soybean production estimates were on average 6.6% greater than the preliminary production figures captured in July (Chart 9). The overall average difference fell to 4.6% when the September estimates were compared with final production from November.

The average difference between the July and November production estimates for corn for grain was virtually the same as the difference for soybeans—final production estimates were on average 6.5% greater than the July estimates (chart 10). The lowest relative difference between the estimates from the two surveys was +0.5% in 2014, and the greatest difference occurred in 2012 at +11.6%. The average difference between the September estimate and November final production for corn for grain was lower than the difference between the July estimate and November final production, falling to 5.3%.

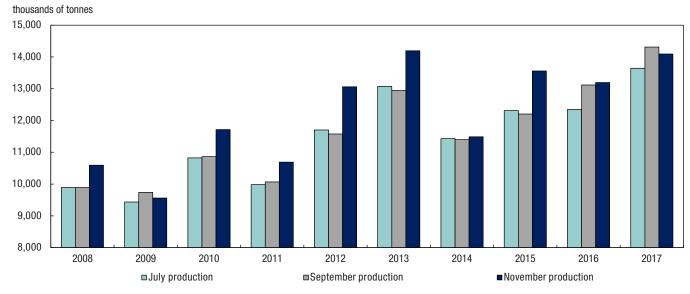
Soybeans and corn for grain start to mature in September. This causes uncertainty with regards to the reporting of production figures in July. Regardless, Statistics Canada July survey results have been in line with the final November estimates on numerous occasions.

Chart 9
Preliminary and final soybean production estimates, Canada, 2008 to 2017



Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2017.

Chart 10 Preliminary and final corn for grain production estimates, Canada, 2008 to 2017



Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2017.

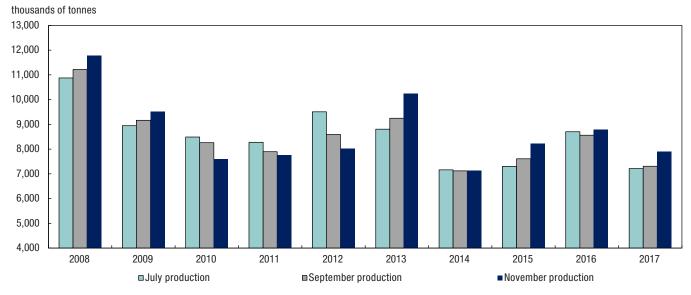
Barley and oats

In the last decade, barley final production estimates were on average relatively close to the July and September estimates when compared with those for other principal field crops (Chart 11). Barley estimates in November were on average 2.1% greater than the July estimate. The difference ranged from 15.7% in 2012 to a maximum of +16.2% in 2013. The average difference between the September estimate and the November estimate was slightly higher, at 2.2%.

Oat production figures were on average 4.2% greater in July than in November (Chart 12). The difference ranged from +33.7% in 2013 to -5.7% in 2009. When the September production estimates were compared to the final November estimates, the average difference fell to 2.9%.

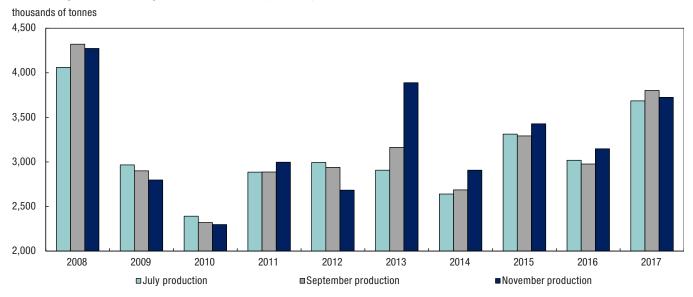
When reporting production figures in July, farmers rely on their best assessment given the growth stage of the crop at the time of the interview. Although predicting growing conditions and their impact on production figures remains a challenge for anyone in the agricultural industry, the preliminary July estimates have proven to be an important indicator of final production figures.

Chart 11
Preliminary and final barley production estimates, Canada, 2008 to 2017



Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2017.

Chart 12
Preliminary and final oats production estimates, Canada, 2008 to 2017



Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2017.

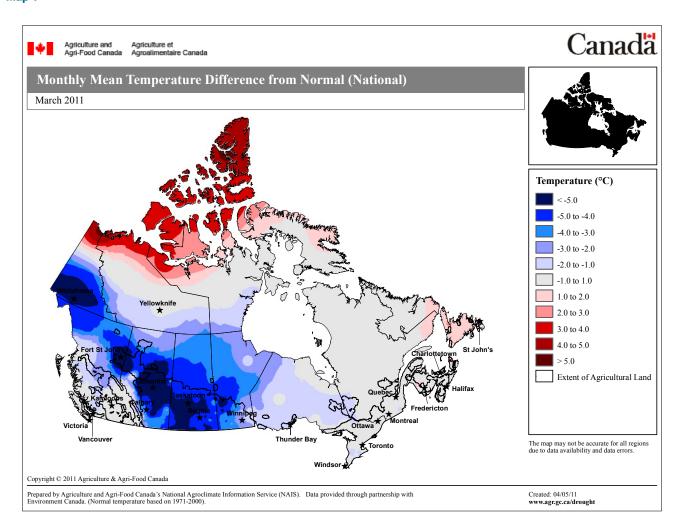
Impact of weather events on seeded area and production estimates

Preliminary and final seeded area

The field crop industry is heavily dependent on weather since the weather plays a major role in determining the success of a crop. Despite all other factors, weather events could result in late seeding or land left idle.

The year 2011 serves as a prime example of how weather variability and its effect on seeding can cause differences in area estimates published by the Field Crop Reporting Series between March and June. In 2011, temperatures across Canada, including the Prairies, where the majority of field crops are grown, were below average (Map 1).

Map 1



As the growing season progressed, planting conditions, such as heavy rains (Map 2), and later-than-normal snow melt resulted in severe flooding in some parts of the Prairies. This left several thousand acres of land unplanted. Although 2011 is an extreme example, more moderate variability in weather and even economic factors can result in farmers altering their seeding decisions between March and June.

Map 2

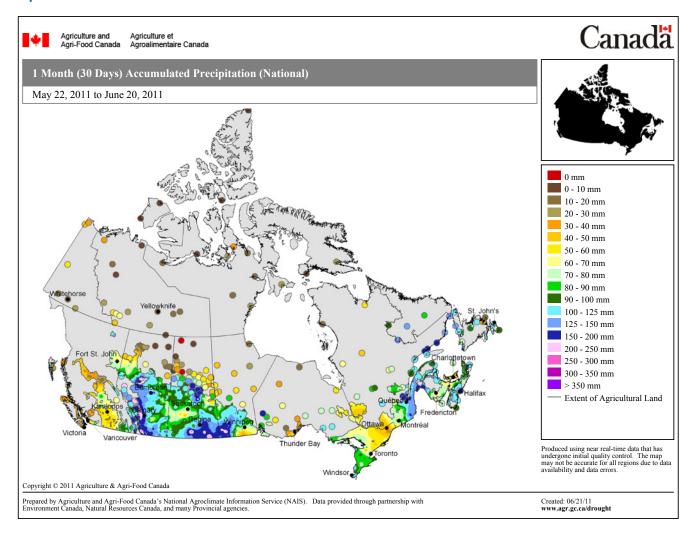
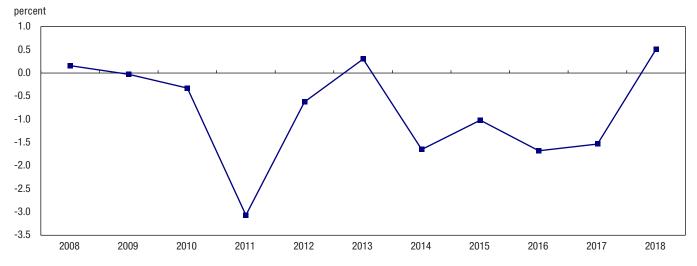


Chart 13 indicates the percentage differences between the March and June survey results for all six major field crops in Canada from 2008 to 2018. The largest difference between seeding intentions and final seeding estimates occurred in 2011, when the average percentage difference between the two occasions for the six major field crops was -3.1%. This further confirms that the variability of weather events between survey collection periods can influence survey results.

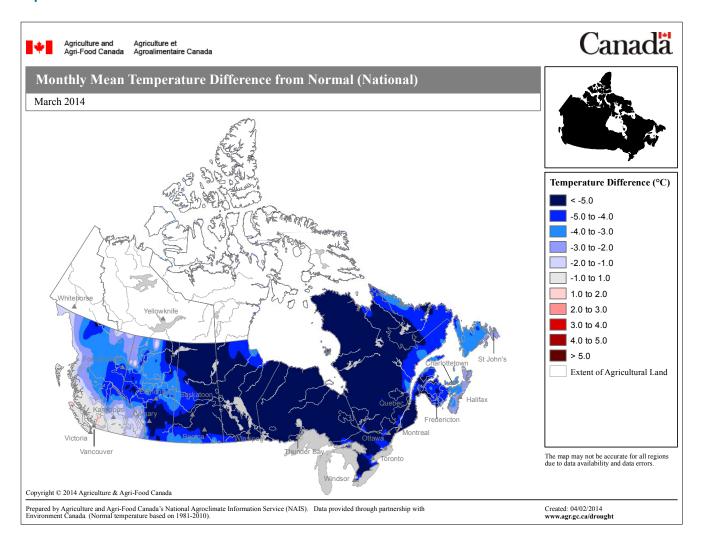
Chart 13
Average difference between preliminary and final seeding estimates for the six major field crops, Canada, 2008 to 2018



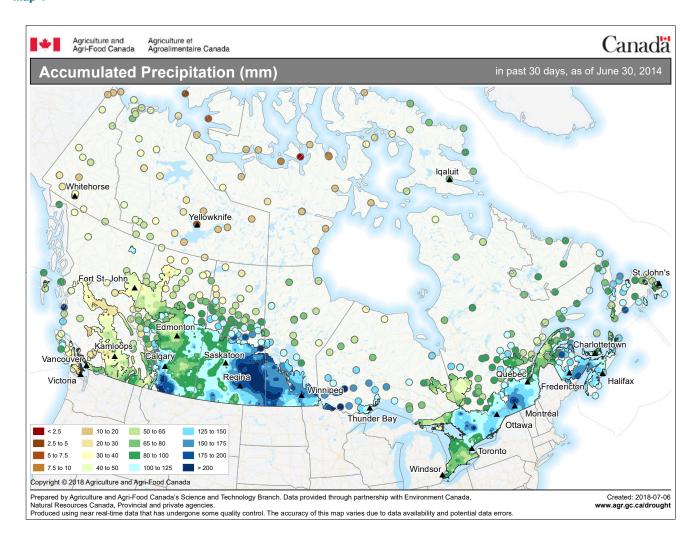
Note: The average change represents the sum of the acreage of the six major field crops when comparing March and June seeded area estimates. Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2018.

Similar weather events occurred in 2014, when a late snow melt coupled with heavy precipitation near planting season caused farmers to change their seeding intentions (Maps 3 and 4). During this year, the relative difference between the estimates for the six major field crops from the two surveys ranged from -7.4% to 6.1%. In the same year, canola estimates accounted for the largest increase in acreage between the two occasions at +427,000 acres, while areas for all wheat varieties accounted for the largest difference at -680,000 acres.

Map 3



Map 4



Preliminary and final production estimates

The weather variations captured between the July and September preliminary production estimates and the November final productions contributed to the variability between the survey results. However, Statistics Canada was able to capture the direction of the final estimates of Canada's top six major field crops with the July preliminary survey (charts 7 to 12).

For instance, at the time of both the July and September 2013 surveys, Prairies farmers reported that recent weather events, such as hail and heavy rain episodes, may have had adverse effects on some areas to be harvested. However, during the November 2013 survey, producers reported that, despite a late start to the spring seeding, weather conditions that prevailed up to the end of the summer led to higher yields. This was especially true in Western Canada, and it paved the way for what was referred to as the "bumper crop year". July 2013 results pegged national canola production at 14.7 million tonnes; however, results from September occasion placed estimates at 16.0 million tonnes, closer to the November 2013 final production at 18.0 million tonnes (up 21.9% compared with July 2013). Similarly, all wheat production increased 22.8% from the 30.6 million tonnes estimated in July 2013 to 33.0 million tonnes in September and finally 37.5 million tonnes estimated in November 2013.

The year 2015 serves as another important example of how weather variances can influence estimates in the two survey occasions. At the time of the July 2015 survey, Alberta and Saskatchewan farmers reported concerns of lower yields and decreased harvestable areas because of excessively dry growing conditions. Leading up to harvest,

soil conditions in Alberta and Saskatchewan improved. The early dry weather gave way to mid- to late-summer rains. As a result, expected yield improved through the latter parts of the growing season. Canola production was estimated at 13.3 million tonnes in July 2015 but increased to 14.3 million tonnes by September and was updated to 17.2 million tonnes in November 2015 (up 29.1% from the July 2015 estimate). Likewise, national barley production increased from the 7.3 million tonnes estimated in July 2015, to 7.6 million tonnes in September, to 8.2 million tonnes in November 2015.

Although weather can negatively affect the production estimates between July and November, Statistics Canada has captured instances when the opposite was true. For example, in 2012, producers in Western Canada reported weather conditions to be close to normal. However, during the November 2012 survey, the producers reported that disease coupled with hail had an impact on their canola yields. National canola production was 13.3 million tonnes in November, down 13.6% from the 15.4 million tonnes anticipated in July 2012, but in line with the September estimate, which projected 13.4 million tonnes. Similarly, national barley production was 8.0 million tonnes in November, down 15.7% from the 9.5 million tonnes expected in July 2012 and down 6.7% from the September estimate of 8.6 million tonnes. Eastern regions experienced favourable growing conditions, which contributed to higher yields of corn for grain and soybeans, which are predominantly grown in Eastern Canada. Corn for grain production increased 11.6% between the July and November survey occasions, while soybean production increased 11.9%.

Market conditions

Crop farming can also be affected by market conditions on a national or global scale. One such factor is the exchange rate and the role that it can play in crop planting decisions. Competitive pricing of Canadian agricultural goods in the global market can be affected by currency fluctuations. A weak currency can increase global demand for more competitively priced crops, thereby strengthening crop returns and encouraging farmers to seed specific crops. In contrast, high exchange rates can introduce a decrease in returns for the producer, causing a change in planting decisions.

Another market condition that can affect crop seeding intentions is a change in production with a stagnant demand. If demand for a specific crop remains low for a prolonged period of time, farmers who traditionally grew this crop may decide to diversify. As a result, farmers may turn to crops that are in high demand and more likely to result in higher returns. This could influence the crop planting intentions of farmers with low risk tolerance to change. A variety of factors, ranging from political to socioeconomic, can explain why some producers change their crop selection. In addition to those previously mentioned, other factors can result in changes to crop selection, including transportation issues, recent pest and disease issues, and tariffs imposed by foreign governments on Canadian agricultural goods.

Conclusion

By analyzing data obtained through Statistics Canada's Field Crop Reporting Series, this article evaluates the differences between preliminary and final data related to the area and production of Canada's six major field crops.

The accuracy of the March seeding intentions is strong, especially when general trends in crop area are compared. The relative changes between both datasets at the national level are minor. From 2008 to 2018, the average percentage difference at the national level in the preliminary acreage reports collected through the March farm survey ranged between +/-5.0% for Canada's major field crops (i.e., wheat, canola, soybeans, barley, oats and corn for grain). On occasions when estimates for a particular crop exceeded +/-5.0%, factors such as weather usually played an important role. Weather events or market conditions can cause unexpected differences between the preliminary and final seeded area and production estimates. Regardless of these differences, Statistics Canada is accurately projecting the direction of the field crop estimates with data obtained through its preliminary surveys (March and July). Therefore, both the March and the July surveys serve as important indicators of final field crop statistics.

While production data collected in July and September tended to differ from final production data to varying extents depending on crop type, trends in estimated production were generally characterized correctly. Differences between production estimates and final production data can largely be attributed to weather events including excess or inadequate precipitation and temperature. In addition, the differences between the July and September estimated

yields and November's final production point allude to the inherent difficulty of predicting one's crop production. Even in so-called "bumper crop years," general optimism regarding yield is often muted because projecting one's yield based on a visual inspection of standing crops is difficult.

Table 1
March and June seeded area estimates, principal field crops, Canada, 2008 to 2018

	Canola	All Wheat	Soybeans	Barley	0ats	Corn for grain	
Seeded area	thousand of acres						
2018							
March	21,383	25,259	6,452	6,059	3,148	3,758	
June	22,740	24,710	6,320	6,499	3,053	3,634	
% Difference	6.3%	-2.2%	-2.0%	7.3%	-3.0%	-3.3%	
2017							
March	22,387	23,182	6,956	5,880	3,419	3,751	
June	22,837	22,361	7,282	5,771	3,220	3,576	
% Difference	2.0%	-3.5%	4.7%	-1.9%	-5.8%	-4.7%	
2016							
March	19,345	23,846	5,306	6,777	2,972	3,477	
June	20,020	23,177	5,465	6,385	2,861	3,330	
% Difference	3.5%	-2.8%	3.0%	-5.8%	-3.7%	-4.2%	
	0.070	2.070	0.070	0.070	0.170	412/0	
2015 March	10.416	24.765	E 27E	C 170	2 645	2 260	
March	19,416	24,765	5,375	6,478	3,645	3,268	
June % Difference	19,840 2.2%	24,142 -2.5%	5,420 0.8%	6,511 0.5%	3,403 -6.6%	3,252 -0.5%	
	2.270	-2.3%	U.O70	0.376	-0.070	-0.0%	
2014	40.004				0.400		
March	19,801	24,766	5,264	6,311	3,188	3,369	
June	20,228	24,087	5,583	6,089	3,046	3,119	
% Difference	2.2%	-2.7%	6.1%	-3.5%	-4.4%	-7.4%	
2013							
March	19,133	26,618	4,294	7,240	3,379	3,813	
June	19,738	25,906	4,589	7,175	3,371	3,645	
% Difference	3.2%	-2.7%	6.9%	-0.9%	-0.2%	-4.4%	
2012							
March	20,372	24,325	3,969	7,968	3,393	3,562	
June	21,273	23,812	4,316	7,365	3,074	3,638	
% Difference	4.4%	-2.1%	8.7%	-7.6%	-9.4%	2.2%	
2011							
March	19,225	24,724	3,757	7,833	4,056	3,211	
June	19,800	23,568	3,885	7,139	3,814	3,041	
% Difference	3.0%	-4.7%	3.4%	-8.9%	-6.0%	-5.3%	
2010							
March	16,907	23,221	3,532	8,344	3,992	3,016	
June	17,895	22,720	3,724	8,052	3,738	2,981	
% Difference	5.8%	-2.2%	5.4%	-3.5%	-6.4%	-1.2%	
2009							
March	14,990	25,161	3,284	9,476	3,955	3,084	
June	15,825	24,932	3,476	8,778	3,879	3,041	
% Difference	5.6%	-0.9%	5.8%	- 7.4%	-1.9%	-1.4%	
2008	0.070	0.070	0.070	71170	11070	11170	
March	14,805	25,109	2,985	9,332	4,485	3,005	
June	14,603	25,109	2,993	9,332 9,072	4,465 4,382	2,975	
% Difference	6.8%	- 0.0%	2,993 0.3%	-2.8%	-2.3%	-1.0%	
Average % change by crop type	4.1%	-0.0% -2.4%	3.9%	-2.0% -3.1%	-2.5% -4.5%	-1.0% -2.8%	
Source: Statistics Connede Field Crop Banes			3.370	-J. I /U	- 	-2.0/0	

Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2018.

Table 2 July, September and November production estimates, principal field crops, Canada, 2008 to 2017

	Canola	All Wheat	Soybeans	Barley	0ats	Corn for grain	
Production	thousand of metric tonnes						
2017							
July	18,203	25,541	7,743	7,212	3,685	13,645	
September	19,708	27,130	8,321	7,306	3,802	14,313	
November	21,313	29,984	7,717	7,891	3,724	14,095	
% Difference (July-Nov)	17.1%	17.4%	-0.3%	9.4%	1.1%	3.3%	
% Difference (Sept-Nov)	8.1%	10.5%	-7.3%	8.0%	-2.1%	-1.5%	
` ' '	0.170	10.570	-7.5/0	0.070	-2.170	-1.5/0	
2016	17.004	00.407	F 007	0.704	0.010	10.040	
July	17,024	30,487	5,827	8,704	3,018	12,349	
September	18,384	31,530	6,058	8,563	2,976	13,118	
November	18,424	31,729	6,463	8,784	3,147	13,193	
% Difference (July-Nov)	8.2%	4.1%	10.9%	0.9%	4.3%	6.8%	
% Difference (Sept-Nov)	0.2%	0.6%	6.7%	2.6%	5.7%	0.6%	
2015							
July	13,343	24,625	5,857	7,305	3,312	12,312	
September	14,297	26,061	5,928	7,610	3,292	12,204	
November	17,231	27,594	6,235	8,226	3,428	13,559	
% Difference (July-Nov)	29.1%	12.1%	6.5%	12.6%	3.5%	10.1%	
% Difference (Sept-Nov)	20.5%	5.9%	5.2%	8.1%	4.1%	11.1%	
2014							
July	13,908	27,705	5,901	7,164	2,639	11,431	
September	14,080	27,481	5,961	7,120	2,686	11,397	
November	15,555	29,281	6,049	7,119	2,908	11,487	
% Difference (July-Nov)	11.8%	5.7%	2.5%	-0.6%	10.2%	0.5%	
% Difference (Sept-Nov)	10.5%	6.5%	1.5%	0.0%	8.3%	0.8%	
` ' '	10.370	0.570	1.5/0	0.070	0.370	0.070	
2013	14.705	00 500	4 700	0.007	0.007	10.075	
July	14,735	30,562	4,798	8,807	2,907	13,075	
September	15,963	33,026	4,817	9,247	3,163	12,943	
November	17,960	37,530	5,198	10,237	3,888	14,194	
% Difference (July-Nov)	21.9%	22.8%	8.3%	16.2%	33.7%	8.6%	
% Difference (Sept-Nov)	12.5%	13.6%	7.9%	10.7%	22.9%	9.7%	
2012							
July	15,410	27,013	4,405	9,508	2,994	11,703	
September	13,359	26,733	4,280	8,591	2,939	11,576	
November	13,310	27,205	4,930	8,012	2,684	13,060	
% Difference (July-Nov)	-13.6%	0.7%	11.9%	-15.7%	-10.4%	11.6%	
% Difference (Sept-Nov)	-0.4%	1.8%	15.2%	-6.7%	-8.7%	12.8%	
2011							
July	13,193	24,076	3,862	8,274	2,886	9,983	
September	12,928	24,160	3,921	7,898	2,887	10,067	
November	14,165	25,261	4,246	7,756	2,997	10,689	
% Difference (July-Nov)	7.4%	4.9%	9.9%	-6.3%	3.8%	7.1%	
% Difference (Sept-Nov)	9.6%	4.6%	8.3%	-1.8%	3.8%	6.2%	
2010							
July	10,867	22,659	3,951	8,488	2,392	10,823	
September	10,430	22,205	4,028	8,259	2,332	10,865	
November	11,866	23,167	4,345	7,605	2,298	11,715	
% Difference (July-Nov)	9.2%	2.2%	10.0%	-10.4%	-3.9%	8.2%	
% Difference (Sept-Nov)	13.8%	4.3%	7.9%	-7.9%	-3.9 <i>%</i> -1.0%	7.8%	
` ' '	13.0/0	4.3 /0	7.5/0	-7.5/0	-1.0/0	7.0/0	
2009	0.544	00.014	0.400	0.040	2 227	0.40=	
July	9,541	23,614	3,483	8,948	2,967	9,437	
September	10,270	24,581	3,597	9,165	2,900	9,739	
November	11,825	26,515	3,504	9,517	2,798	9,561	
% Difference (July-Nov)	23.9%	12.3%	0.6%	6.4%	-5.7%	1.3%	
% Difference (Sept-Nov)	15.1%	7.9%	-2.6%	3.8%	-3.5%	-1.8%	

Table 2 July, September and November production estimates, principal field crops, Canada, 2008 to 2017

	Canola	All Wheat	Soybeans	Barley	0ats	Corn for grain
Production	thousand of metric tonnes					
2008						
July	10,375	25,426	3,167	10,876	4,061	9,892
September	10,870	27,266	3,240	11,219	4,321	9,893
November	12,643	28,611	3,336	11,781	4,273	10,592
% Difference (July-Nov)	21.9%	12.5%	5.3%	8.3%	5.2%	7.1%
% Difference (Sept-Nov)	16.3%	4.9%	3.0%	5.0%	-1.1%	7.1%
Average % change by crop type (July-Nov)	13.7%	9.5%	6.6%	2.1%	4.2%	6.5%
Average % change by crop type (July-Nov)	10.6%	6.1%	4.6%	2.2%	2.9%	5.3%

Source: Statistics Canada, Field Crop Reporting Series, 2008 to 2017.