USDA Foreign Agricultural Service
GAIN Report
Global Agricultural Information Network

Required Report - public distribution

Date: 3/26/2018
GAIN Report Number: CI 18 08

Chile

Grain and Feed Annual

2018

Approved By:
Marcela Rondon, Agricultural Attaché

Prepared By:
Sergio Gonzalez, Agricultural Specialist

Report Highlights:
Chile's wheat planted area for the past ten years has stabilized showing small variations in response to prices and farmers' short-term expectations. Eighty five percent of the wheat in Chile is used to produce bread flour. In MY2016/17 Argentina was the top supplier of wheat to Chile followed by the United States, and Canada. In MY2017/18 Post expects wheat imports to decrease to 1.45 MMT (million metric tons).

Post Expects Chilean corn production to decrease by 5 percent to 1.0 MMT in MY2017/18, and imports are expected to increase by 6.3 percent over MY2016/17 totaling 1.7 MMT. Argentina remains Chile's top supplier with 90 percent market share. Post estimates that 92 percent of the corn consumption in Chile is intended for animal feed for the production of poultry, pork and salmon, which is not expected to experience major changes but a moderate 2 percent growth. The United States is the main supplier of corn gluten meal to Chile with a 92 percent market share valued at $76.7 million.

Commodities:
Wheat

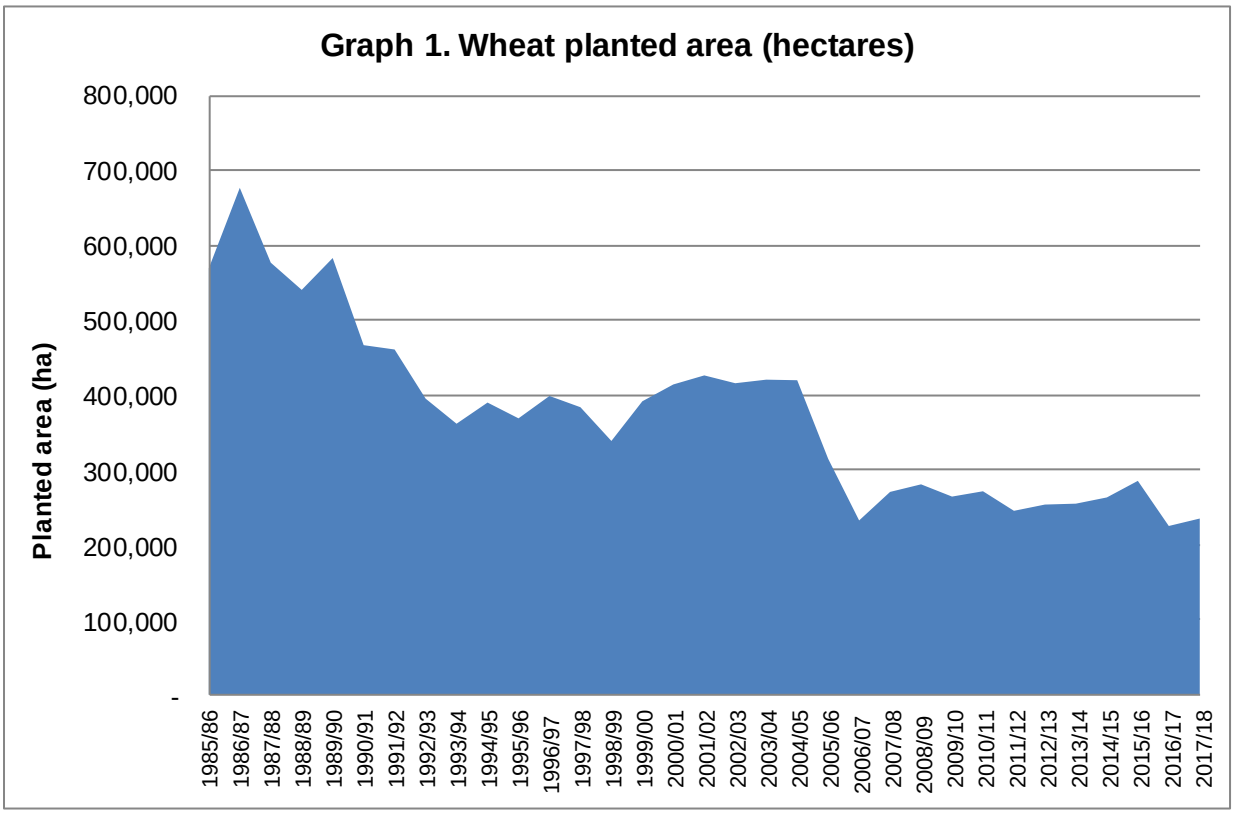
Production:

Chilean wheat planted area has decreased from 600,000 hectares (ha) in MY1985/86 to 235,000 ha in MY2017/18 as a result of increasing competition from wheat imports and farmers' shifting agricultural land towards more profitable annual crops such as oats or fruit producing orchards including hazelnuts, walnuts, and cherries (see graph 1).

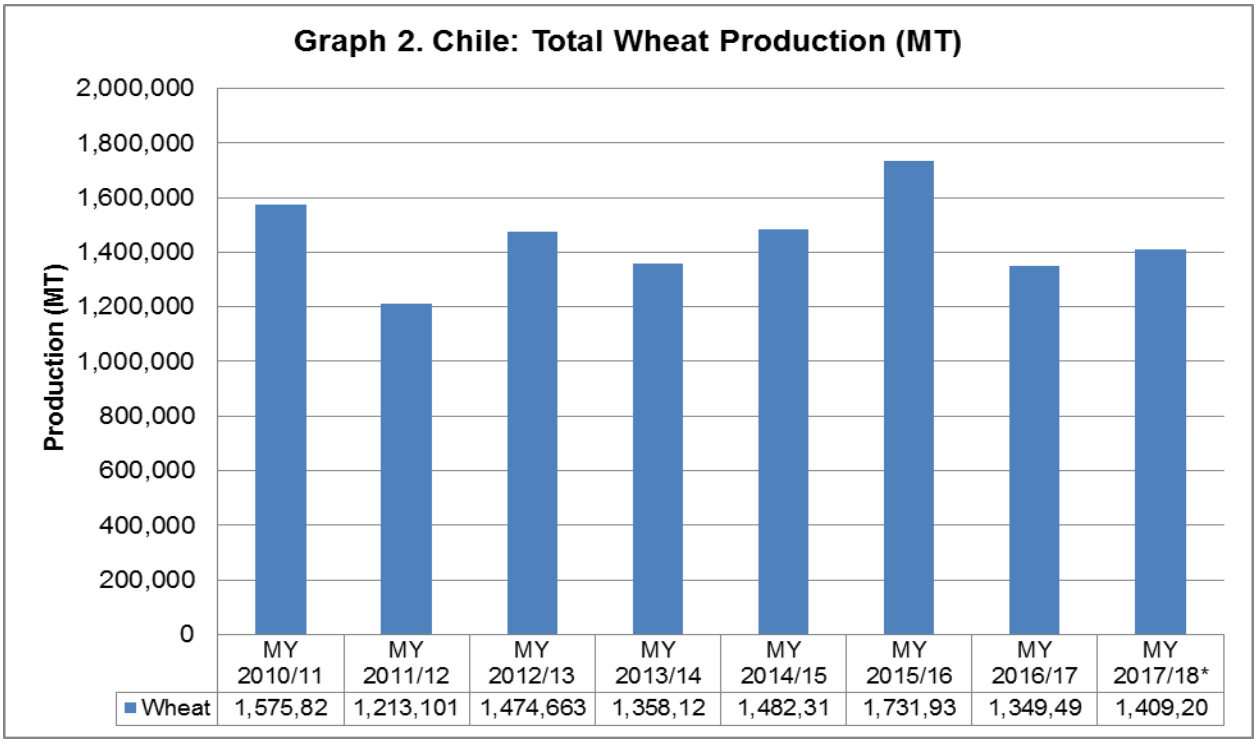
For the past ten years, wheat planted area has stabilized around 250,000 ha, showing small variations in response to international and domestic prices and farmers' short-term expectations.
Post sources indicate that wheat planted area has remained relatively steady because wheat growers , who have historically produced annual crops (wheat, corn, oats, and sugar beets) that have less elasticity upon price changes, will continue to produce annual crops even if there are no profits and can barely cover production costs. Furthermore, some wheat growers have partnered to reduce input costs and still make small profits.

In addition, wheat growers have few alternatives to planting wheat as opting for fruit cash crops that could present higher prices and better profits require capital investment in irrigation, conduction systems, genetics, and labor, thus profits are only achieved three to five years after initial investment.

In MY2017/18 there has been no major damage to wheat crops due to weather or pests, thus Post estimates planted area to be the same as harvested area. Post estimates wheat production in MY2017/18 to reach 1.4 MMT considering harvested area of 235,000 ha and an average yield of 6 MT per ha. For MY2018/19 wheat production is projected to decrease by 1.4% totaling 1.38 MMT.



Source: Based on Instituto Nacional de Estadísticas (INE) and ODEPA.
**: Estimation*

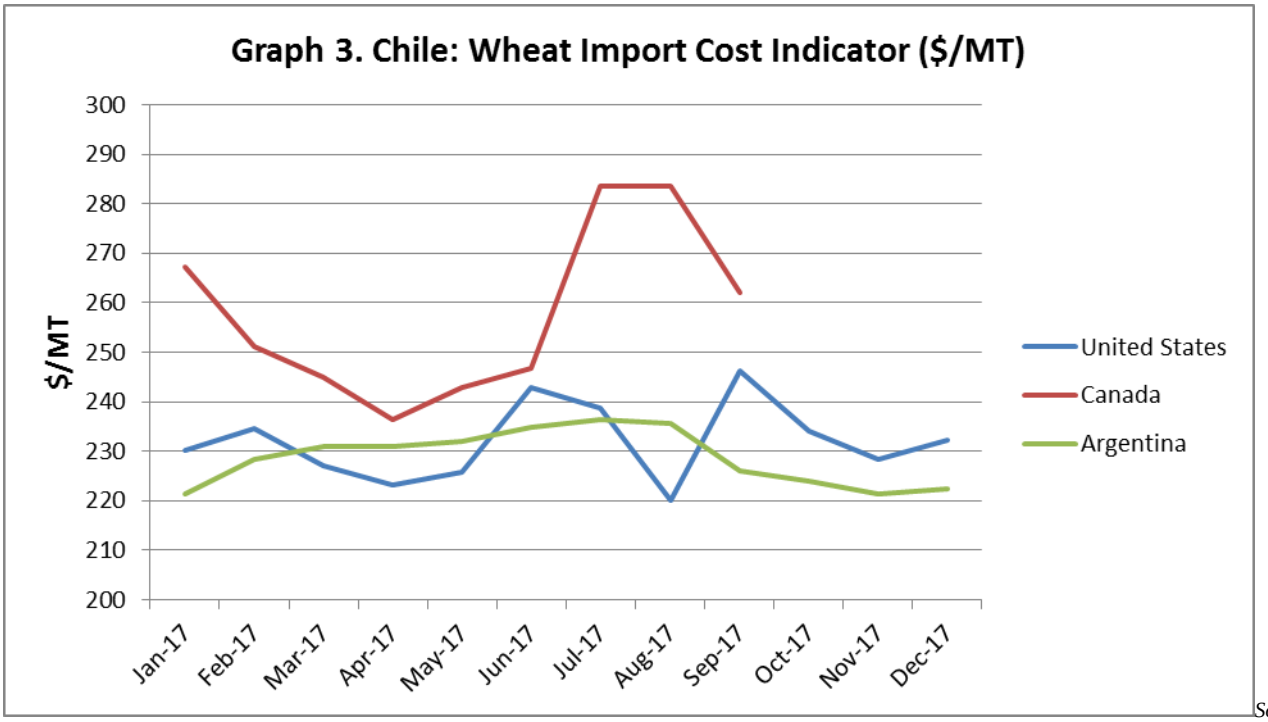


Source: Based on Instituto Nacional de Estadísticas (INE) and ODEPA.
**: Estimation*

Prices:

Chile is an open economy, thus domestic prices are determined by international prices. In order to maintain transparency on the domestic market, Ministry of Agriculture and Cotrisa (*Comercializadora de Trigo S.A.*) publish a weekly wheat import cost indicator that shows how much it would cost to import wheat from major supplier countries (United States, Argentina, and Canada) to Santiago-Chile. This indicator uses a formula that includes operational costs to import wheat such as price, transport costs, insurances, and credit.

In Calendar Year (CY) 2017, the average price of wheat imported from Argentina was $228/MT, $234/MT from the United States, and $258/MT from Canada (see graph 3).



Source: based in ODEPA, 2018

Wheat growers who have storage capacity secure higher prices by selling when the domestic supply is low. While storage capacity in Chile has increased with the use of plastic bags (polyethylene), which has reduced costs significantly, wheat growers who do not have storage capacity are obligated to sell as quickly as possible and sometimes this means receiving a lower than expected price. In addition, many wheat growers still favor quantity over quality, high yields per hectare, but with low percentages of protein, which is directly correlated with the price the wheat mills offer to pay.

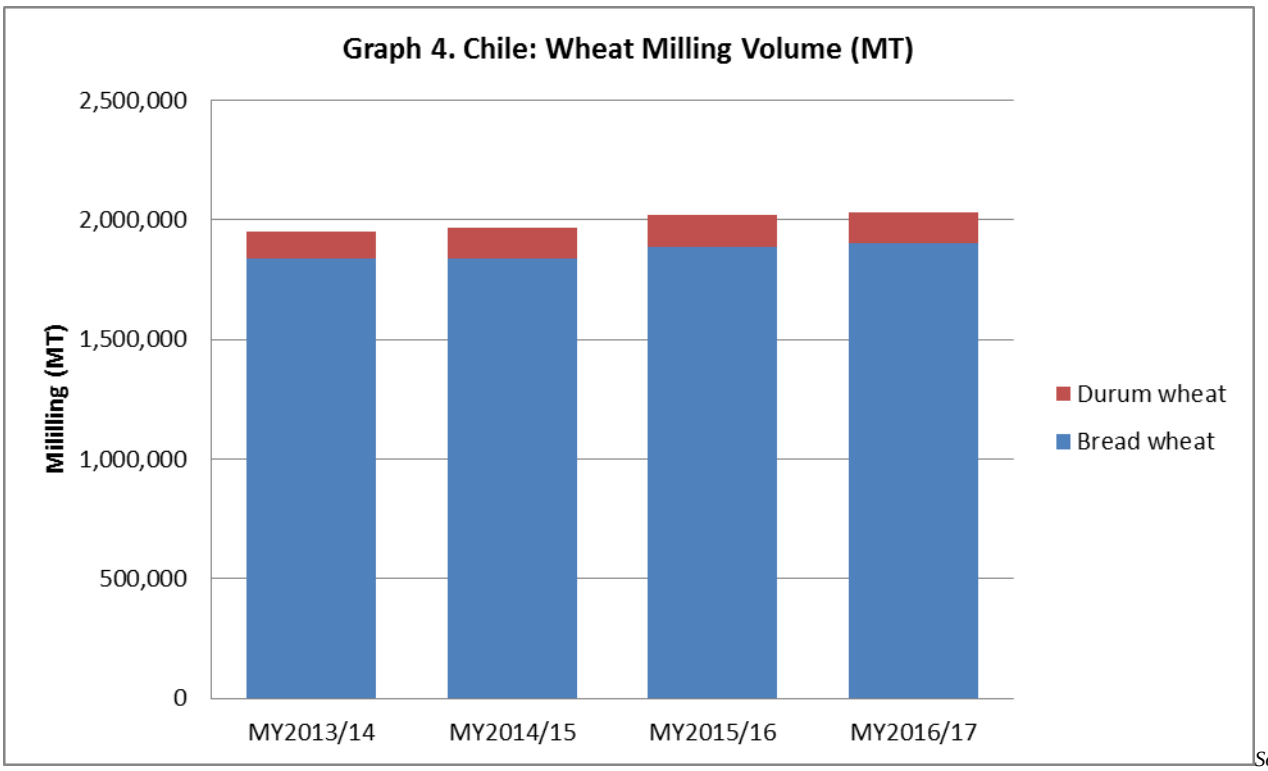
For Chilean wheat price data see Cotrisa website.

Consumption:

Wheat is used for both human consumption, mainly bread flour, and for animal feed (pork, poultry and salmon). Wheat mill operators look for high gluten percentage and quality consistency.

Chile has the second largest level of annual bread consumption in the world reaching 96 kilogram (kg) per capita (96 kg = 212 pounds). The majority of wheat mills are located in the central regions of Chile while most of the domestic wheat is grown in the southern regions of *Araucanía* and *Biobío*, so wheat growers have to add transportation costs to their operations. Post sources indicate that many times trucks loaded with wheat travel long distances looking for buyers (wheat mills) to sell at higher prices. Ninety six percent of the wheat is used to make bread flour and only four 4 percent (durum wheat) is used to make pasta.

Wheat milling reached 2.0 MMT in MY2106/17 and has increased at a 1.4 percent annual rate in the last four marketing years (see graph 4). Food, seed and industrial (FSI) consumption is estimated at 2.4 MMT in MY2016/17 and is projected to grow 1.4 percent per year.



Source: National Statistics Institute (INE)

Wheat is also used for manufacturing salmon feed. In the 1990s, salmon feed formulas had high inclusion of fish meal, but it has now been replaced with vegetable oils and feed products such as hard red winter (HRW) wheat from the United States. This shift resulted from the limited amount of fish meal in the world market, its lack of sustainability, and its increasing price compared to vegetable alternatives.

Salmon feed manufacturers import wheat directly or through a broker. Chile is the second largest producer of salmon after Norway, with around 800,000 MT of salmon a year. Salmon feed manufacturers produce 1.2 MMT of feed, with an estimated annual growth of 3 percent. The total amount of wheat used in salmon feed varies depending on the formula and price of other inputs. In MY2016/17 post estimates 40,000 MT of imported wheat was destined to formulation of salmon feed.

Feed and residual consumption, including feed for pork, poultry and salmon, is estimated to reach 325,000 MT in MY 2016/17 and is expected to grow 3 percent annually along with the feed industry.

Trade:

Chile does not produce enough wheat to supply its domestic consumption, so around half of all the wheat consumed in Chile is imported. Wheat import volumes increased by 59 percent in MY2016/17 over MY2015/16 reaching 1.58 MMT. Argentina was the top supplier of wheat followed by the United States and Canada. Wheat imports from Argentina increased by 315 percent in MY2016/17 over MY2015/16, due to high production volumes and competitive prices reversing U.S. leadership in the market in 2015/16 (for more detail see previous Grain and Feed GAIN Report).

Post expects wheat imports to decrease to 1.45 MMT in MY2017/18 following the domestic production increase. In MY2018/19 imports are projected to bounce back to 1.50 MMT since production is expected to decrease to 1.38 MMT.

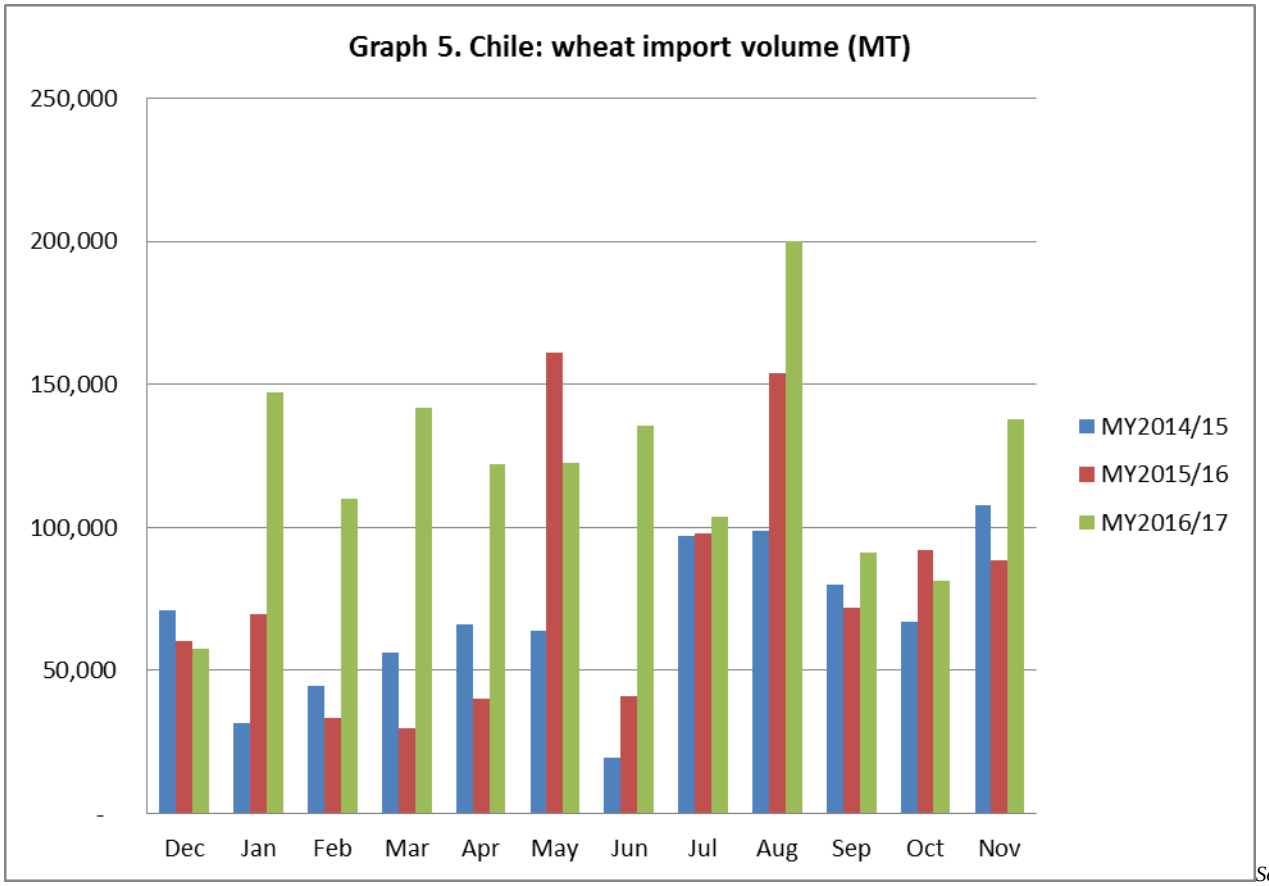
Wheat importers are mainly brokers, wheat mills, and salmon feed companies, which base their purchasing decisions on price and quality. Exchange rate also determines import decisions. For example, in January 2018, the U.S. dollar depreciated in relation to the Chilean peso (exchange $1= 595 CLP), thus, reducing import prices (see graph 8). The depreciation of the U.S. dollar in relation to Chilean peso is expected to remain throughout CY2018.

Table 1. Chile: Wheat Import Volume (MT) by Country of Origin

Chile Import Statistics						
Commodity: wheat grain equivalent*						
MY: December - November						
	Quantity (MT)			Value ($)		
Partner Country	**MY2015/16**	**MY2016/17**	**Variation (%)**	**MY2015/16**	**MY2016/17**	**Variation (%)**
World	990,672	1,578,556	59%	232,807,627	337,743,905	45%
Argentina	221,848	920,661	315%	31,882,436	169,609,429	432%
United States	427,357	328,978	-23%	79,825,011	80,513,896	1%
Canada	198,919	277,607	40%	71,008,395	58,920,174	-17%
Peru	36,640	31,103	-15%	20,118,514	15,805,683	-21%
Others	105,908	20,208	-81%	29,973,271	12,894,723	-57%

Source: Based in Global Trade Atlas - Servicio Nacional de Aduana
**For details of conversion factors see appendix*

Monthly imports of wheat in MY2016/17 were steady throughout the marketing year (see graph 5). Argentina exported to Chile an average of 67,000 MT per month.



Source: Global Trade Atlas - Servicio Nacional de Aduana

Table 2. Production, Supply and Demand Data Statistics

Wheat	2016/2017		2017/2018		2018/2019	
Market Begin Year	Dec 2016		Dec 2017		Dec 2018	
Chile	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	225	225	216	235	0	230
Beginning Stocks	431	431	560	627	0	708
Production	1,191	1,349	1,160	1,409	0	1,380
MY Imports	1,573	1,579	1,400	1,450	0	1,500
TY Imports	1,376	1,376	1,450	1,400	0	1,450
TY Imp. from U.S.	521	521	0	550	0	550
Total Supply	3,195	3,359	3,120	3,486	0	3,588
MY Exports	10	7	10	10	0	10
TY Exports	8	6	10	10	0	0
Feed and Residual	325	325	325	335	0	350
FSI Consumption	2,300	2,400	2,300	2,433	0	2,468
Total Consumption	2,625	2,725	2,625	2,768	0	2,818
Ending Stocks	560	627	485	708	0	760
Total Distribution	3,195	3,359	3,120	3,486	0	3,588
Yield	5.3	6.0	5.4	6.0	0.0	6.0
(1000 HA) ,(1000 MT) ,(MT/HA)						

Source: based on ODEPA, INE, and Servicio Nacional de Aduana-Chile Customs.
Note: import values in wheat grain equivalent

Commodities:

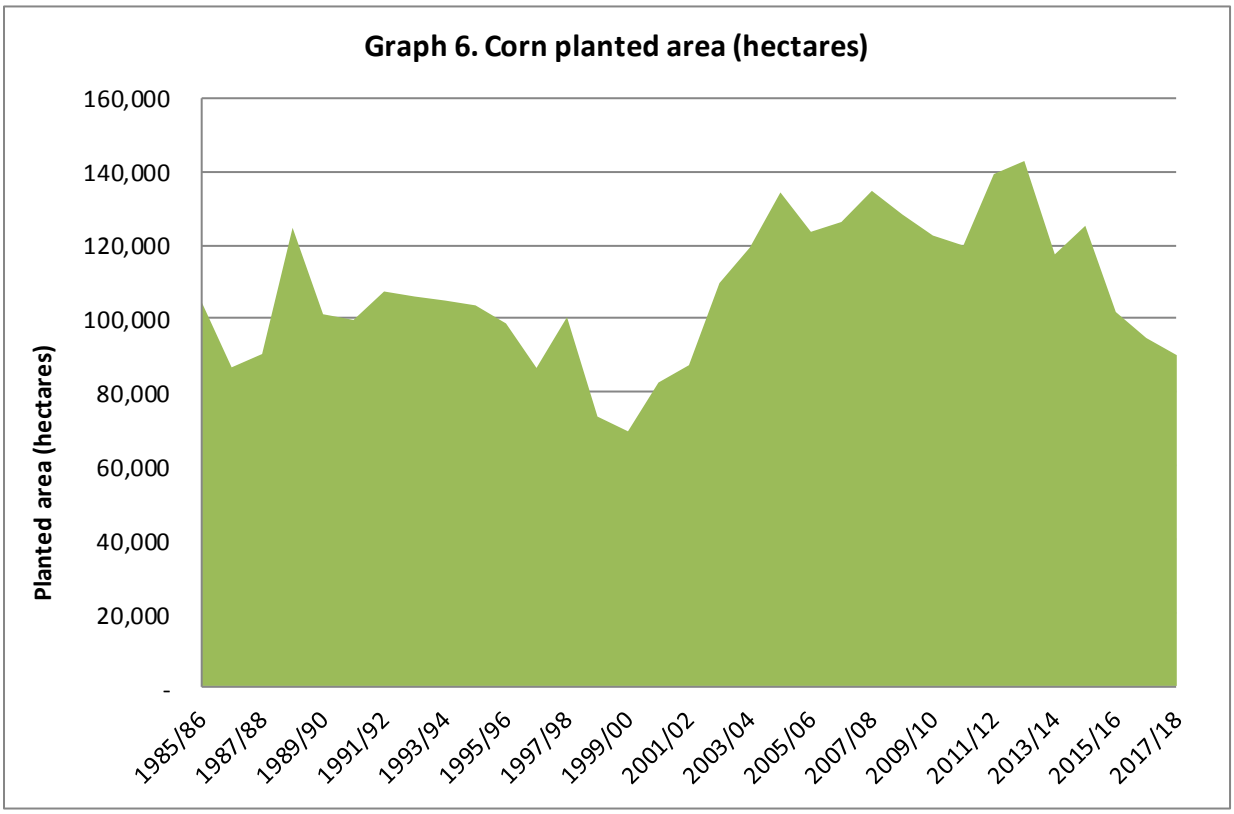
Corn

Production:

Corn planted area decreased from 142,826 ha in MY2012/13 to 90,000 ha in MY2017/18 (March 2017 through February 2018) as a result of low corn prices (see graph 6). Of the total corn planted area, 91 percent is destined for human and animal consumption and 9 percent is destined for seed production.

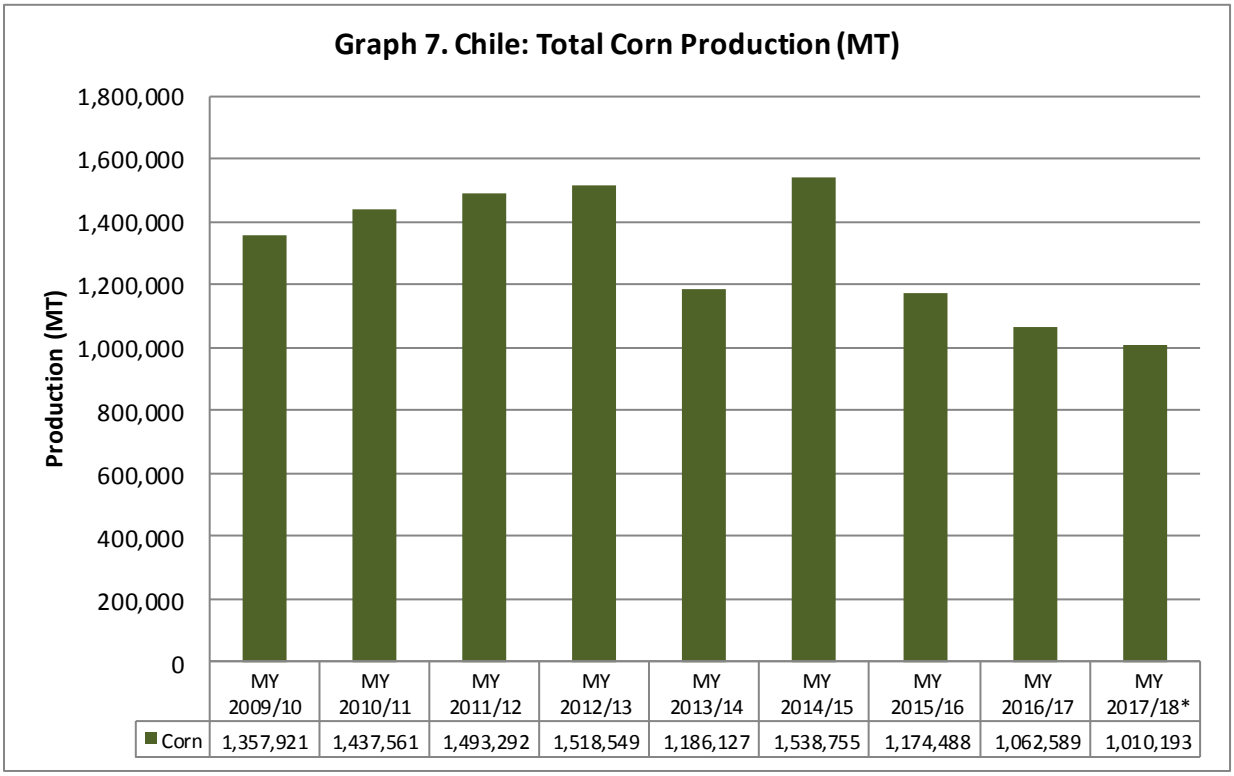
Ninety seven percent of corn planted area in Chile is irrigated and 80 percent is in the *O'Higgins* and *Maule* regions, located to the south of the Chilean capital, Santiago. Corn growers have faced droughts in the last 10 years, especially in the *Maule* region, causing financial losses and reduction in corn yields, all which impacted farmer's planting decisions. However, in MY2017/18, there were no problems related to drought in the *Maule* region, but planted area in this region decreased because corn growers expect lower prices due to increasing competition from Argentina and planted area is estimated to equal harvested area.

Post estimates corn production to reach 1.0 MMT in MY2017/18 considering an average yield of 11.2 MT per ha (see graph 7).



Source:

Based on Instituto Nacional de Estadísticas (INE) and ODEPA.
**: Estimation*



Source:

Based on Instituto Nacional de Estadísticas (INE) and ODEPA.
**: Estimation*

Consumption:

Post estimates that 95 percent of Chilean corn is destined to the animal feed industry for the production of poultry, pork, and salmon. The remainder 5 percent corresponds to food and seed production.

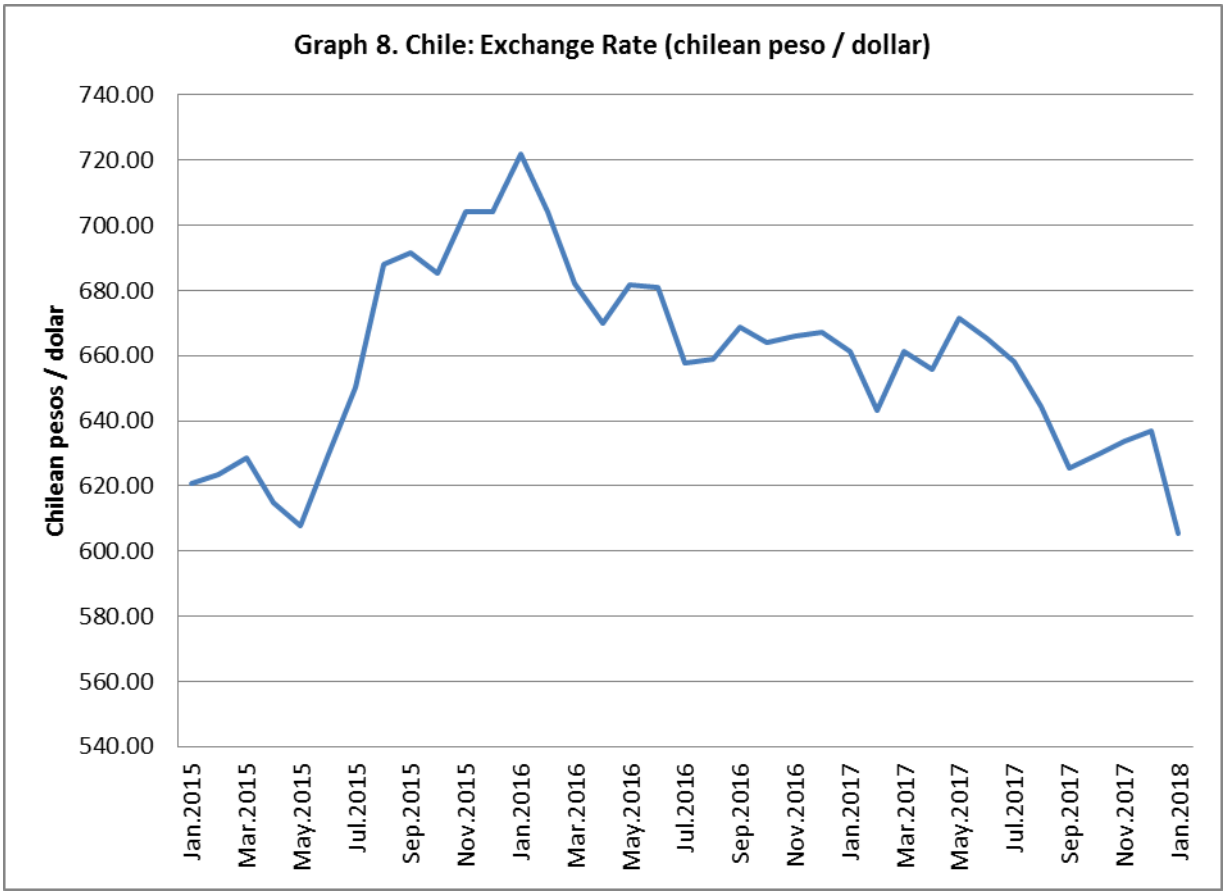
The current trend in animal feed formulation is to increase the amount of vegetable protein obtained from corn, canola, wheat and soybeans. Thus, the salmon and poultry sectors in Chile use corn byproducts including corn gluten meal or corn protein concentrates for feed preparations. The United States is the main supplier of corn gluten meal to Chile. Although imports of corn from the United States decreased in MY2016/17 over MY2015/16 (see table 3), imports of U.S. corn gluten meal increased by 13.5 percent and reached 108,782 MT valued at $76.6 million.

In CY2017 broiler chicken production reached 632,513 MT and increased by 1.7 percent over 2016 while pork production reached 489,003 MT and decreased by 3.7 percent over 2016.

Post expects production of broiler chicken and pork to grow by 2 percent in CY2018 following a reduction of the costs of corn feed and there are no major investments or projects in either sector coming to operation in the near future.

However, Post expects a slight increase of corn imports of as a result of the appreciation of the Chilean peso over the U.S. dollar.

Post estimates a 2 percent increase in feed and residual consumption for MY2017/18, reaching 2,450 MT. Food, seed and industrial consumption is projected to remain flat at 300 MT.



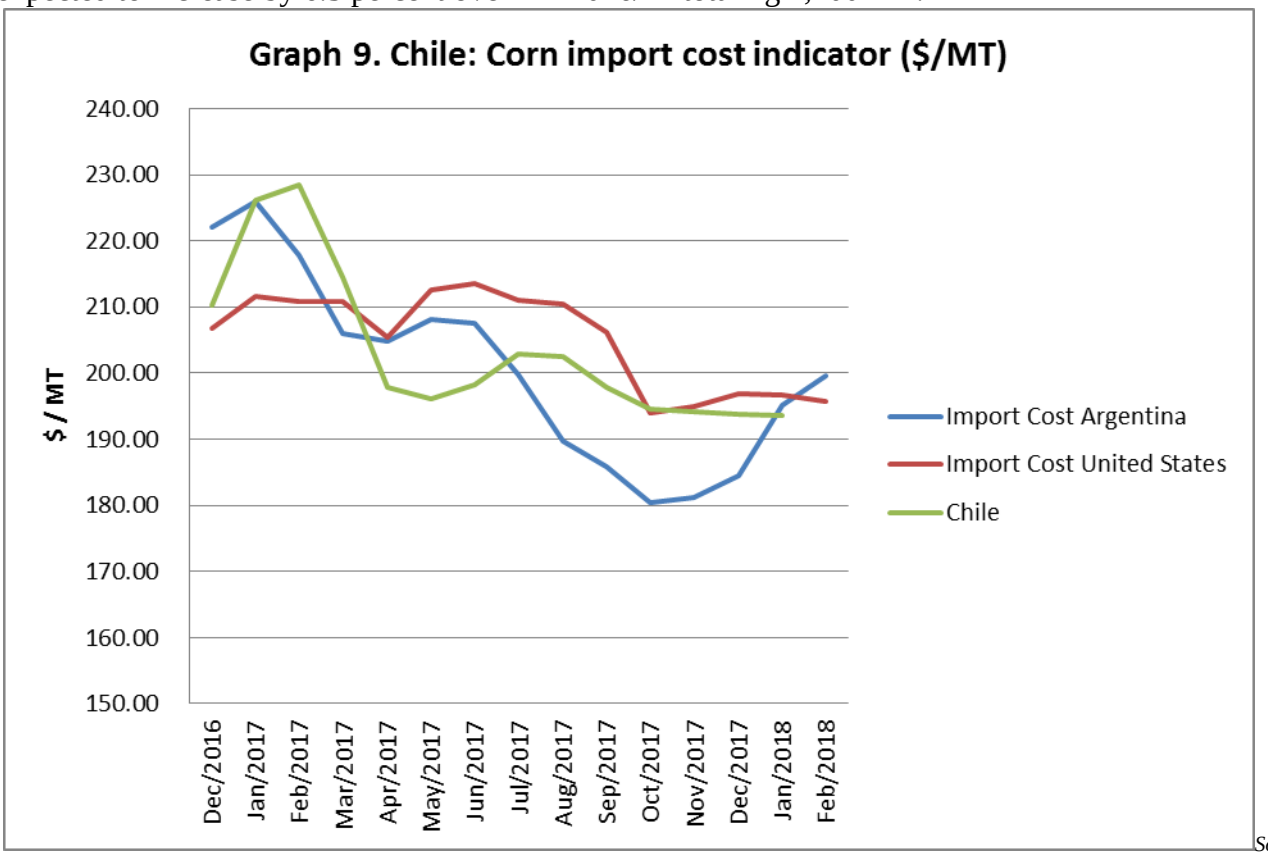
Source: Chilean Central Bank

Trade:

In MY2016/17 corn imports increased by 18 percent over MY2015/16 totaling 1.31 MMT (data available from March 2017 through December 2017). Corn price decreased throughout CY2017 (see graph 9).

Argentina was the main supplier of corn in MY2016/17 with 92 percent market share (see table 3). Chilean imports from Argentina increased by 216 percent in MY2016/17 over MY2015/16 as a result of the highly competitive price throughout calendar year 2017 (see graph 9). By the same token, imports from the United States decreased by 100 percent in the same period because Argentine corn was cheaper. The average import cost for Argentine corn was $199/MT in CY 2017 while U.S. corn was $207/MT. However, this trend has reversed in January and February 2018, and import cost of Argentinian corn was higher than the import cost of U.S. corn. Post sources indicate that if the import cost of Argentinian corn rises high enough, Chilean feed importers of corn will seek cheaper alternatives in other countries such as the United States or Paraguay or could even seek substitute inputs like sorghum, soybean meal, DDGS or barley.

Despite the decrease in corn imports, the United States remains the main supplier of corn gluten meal. In MY2017/18, considering the decrease in production and the appreciation of Chilean peso, imports are expected to increase by 6.3 percent over MY2016/17 totaling 1,700 MT.

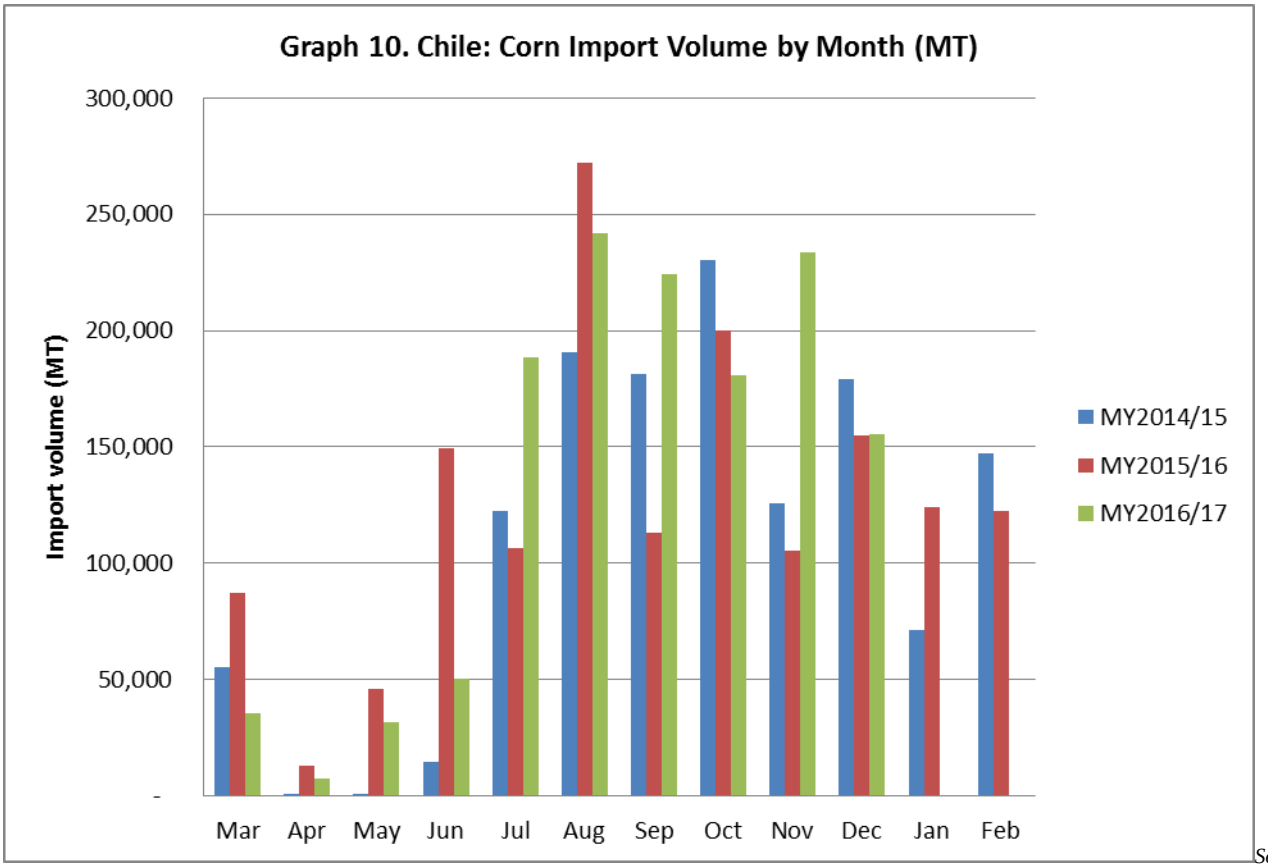


Source: Based on ODEPA, 2018
Note: Domestic price informed by industry and converted to USD (1USD = 647 Chilean pesos)

Table 3. Chile: Corn Import Volume by Country (Marketing year).

	MY2015/16	MY2016/17	Variation	Market share
	(March 2016 -Dec 2016)	(March 2017-Dec 2017)	Percentage (%)	Percentage (%)
World	**1,116,908**	**1,314,534**	**18%**	**100.0%**
Argentina	384,053	1,212,499	216%	92.2%
Paraguay	40,952	100,518	145%	7.6%
United States	690,812	541	-100%	0.0%
Uruguay	143	285	99%	0.0%
Others	948	691	-27%	0.1%

Source: Global Trade Atlas -Servicio Nacional de Aduana



Source: Global Trade Atlas - Servicio Nacional de Aduana

Table 4. Production, Supply and Demand Data Statistics

Corn	2016/2017		2017/2018		2018/2019	
Market Begin Year	Mar 2017		Mar 2018		Mar 2018	
Chile	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	95	95	94	90	0	90
Beginning Stocks	204	204	142	142	0	77
Production	1,063	1,063	1,097	1,010	0	1,050
MY Imports	1,600	1,600	2,000	1,700	0	1,800
TY Imports	1,484	1,484	2,000	1,800	0	1,800
TY Imp. from U.S.	389	389	0	0	0	0
Total Supply	2,867	2,867	3,239	2,852	0	2,927
MY Exports	25	25	25	25	0	25
TY Exports	22	22	25	25	0	25
Feed and Residual	2,400	2,400	2,700	2,450	0	2,550
FSI Consumption	300	300	325	300	0	300
Total Consumption	2,700	2,700	3,025	2,750	0	2,850
Ending Stocks	142	142	189	77	0	52
Total Distribution	2,867	2,867	3,239	2,852	0	2,927
Yield	11.2	11.2	11.7	11.2	0.0	11.7
(1000 HA) ,(1000 MT) ,(MT/HA)						

Source: Based on INE, Servicio Nacional de Aduana-Chile Customs and ODEPA

Appendix

Table 5: Conversion factors to wheat grain equivalent

HS code	Description	Conversion factor to wheat grain equivalent
1001	Wheat And Meslin	1.000
190219	Pasta, Uncooked, Not Stuffed Etc., Nesoi	1.368
1101	Wheat Or Meslin Flour	1.368
190230	Pasta, Prepared Nesoi	1.368
190240	Couscous	1.368

Source: FAS reporting instructions