

Industry Update

# Food and Agribusiness

## Key Demand Developments



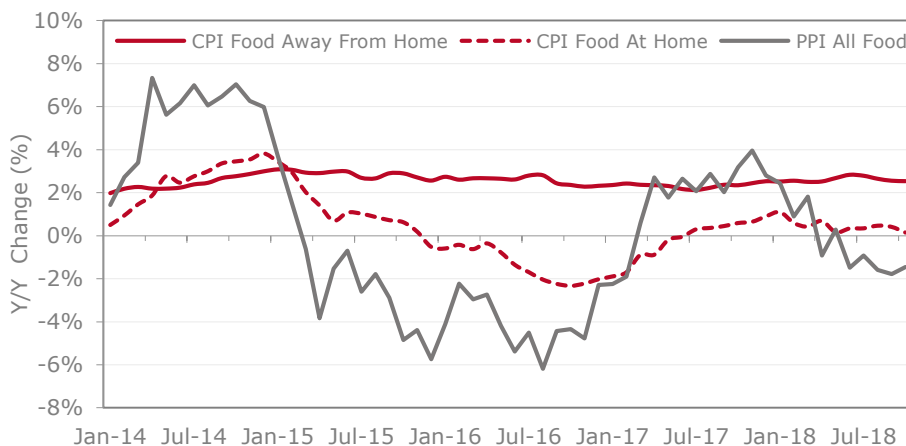
- Wells Fargo Securities inflation forecast is largely unchanged for 2019 and 2020. Rising labor and material costs will likely continue to generate additional inflation pressures throughout 2019. The bank expects inflation to soften slightly in 2020 as energy prices begin to moderate.
- Wells Fargo’s updated forecast for Q4-2018 U.S. real GDP growth is 2.5%. Government spending will continue to provide a boost to growth, and we expect a rebound in business fixed investment in Q4. The bank feels personal consumption growth will cool from the third quarter’s robust pace, but remain supportive of overall GDP growth. Residential construction is likely to remain a weak spot.
- Wells Fargo’s forecast for 2019 economic growth largely remains unchanged. We still expect stronger growth in the first half of 2019 to give way to a gradual softening starting in the second half of the year as government spending, corporate profits and disposable income begin to decelerate.

## Food Retail Sales

According to Nielsen, trends in U.S. Food Retail sales continue to post consistent growth increased in dollar volume by 1.5% Y/Y, while unit sales decreased 1.9% Y/Y. While this is considered low by food inflation standards, headwinds from aging population, low population growth, health care costs, low wage growth, and other spending challenges (including rising gas prices and higher interest rates) will continue to challenge retailers.

Nielsen also notes that private brands are experiencing a resurgence in growth. Retail channels that offer value or convenience continue to lead store expansion, but retail format is no guarantee of success. E-commerce is becoming more mainstream, and incorporated in merchandizing for traditional retailers, but having a greater impact in non-edible categories.

## Consumer and Producer Price Indices



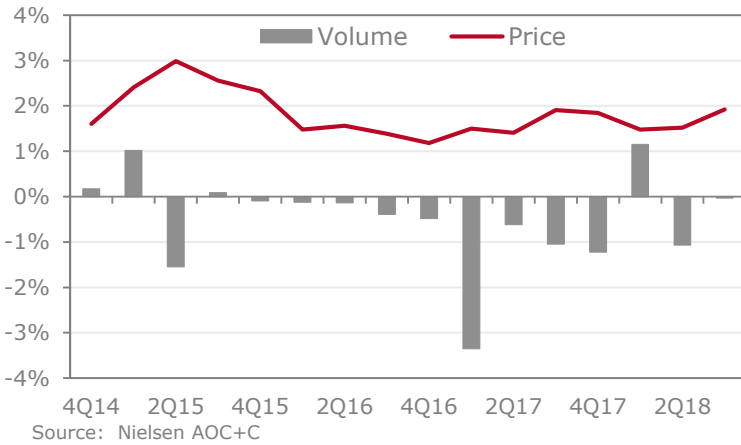
Source: U.S. Bureau of Labor Statistics (BLS)

## Price and Food Inflation Developments

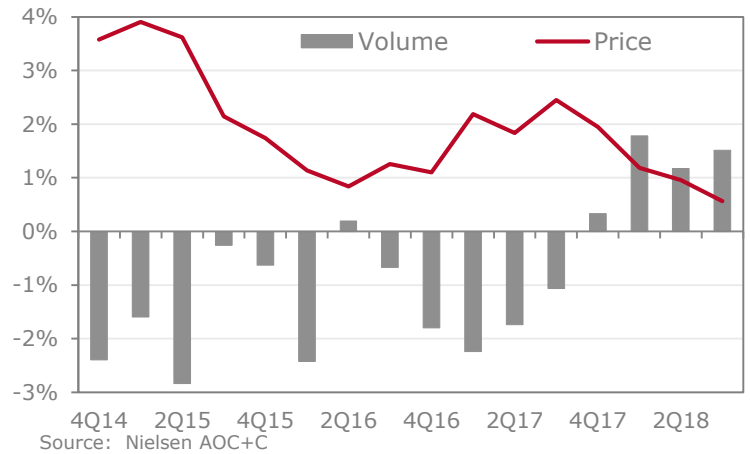
The overall CPI for U.S. Food and Beverage marked the lowest growth in 16 months, posting 0.7% Y/Y in November 2018, vs 1.0% monthly since July 2017. As CPI for Food Away from Home declined to 1.1% Y/Y, the lowest growth since 2013, Nielsen reports that out-of-home dining is increasing. CPI Food at Home remains steady with 0.4% Y/Y posted in November.

**Grocery Department Trends:** According to Nielsen, deli, seafood, and produce departments are the “bright spots” for steady dollar and unit growth. Produce lead all departments with 5.6% Y/Y growth in \$ sales along with 7.4% Y/Y growth in volume.

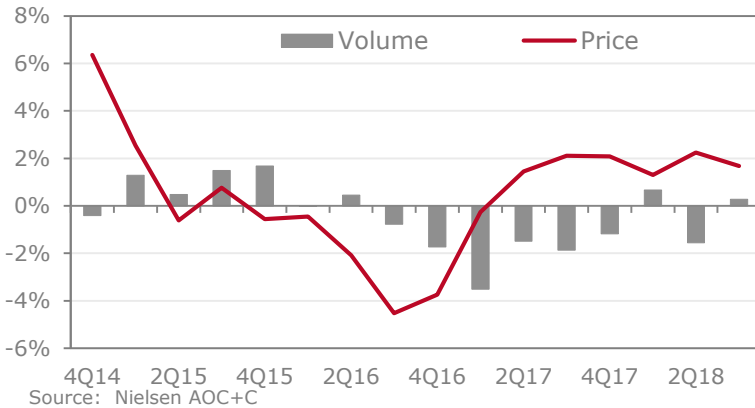
**Dry Grocery**



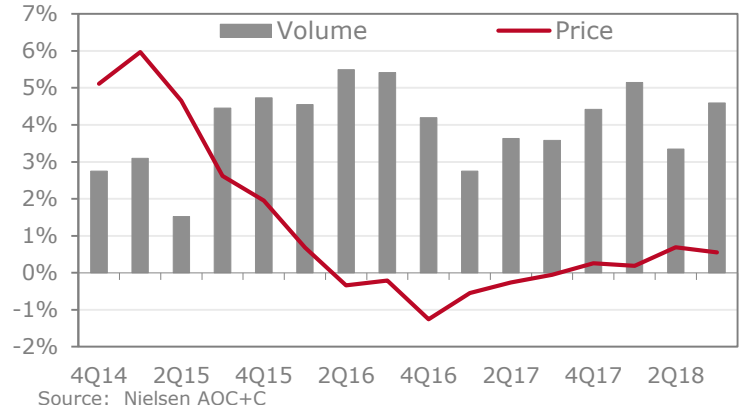
**Frozen Foods**



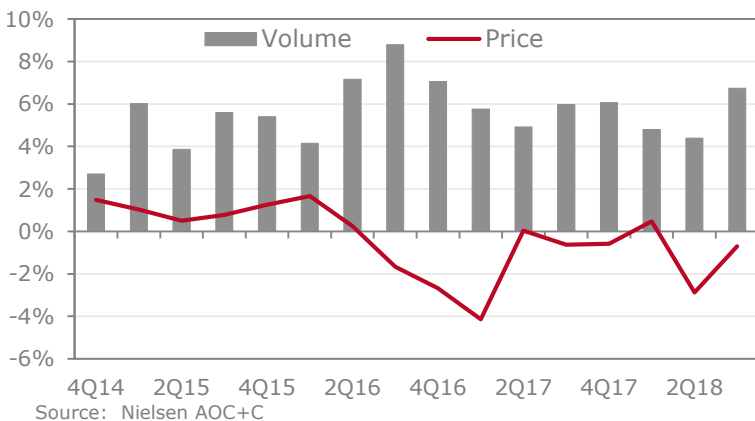
**Dairy**



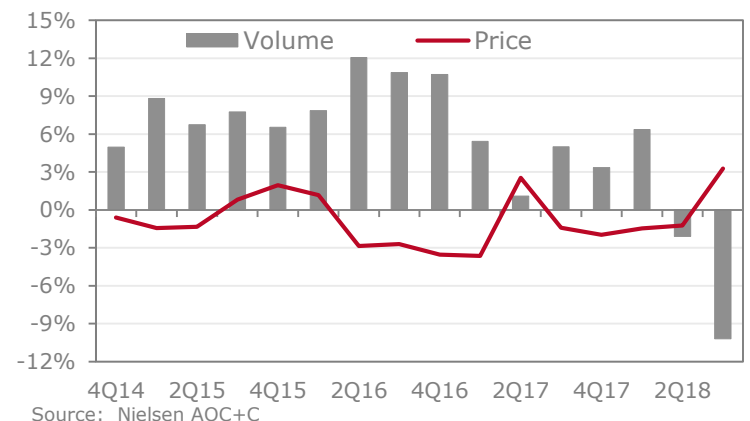
**Deli**



**Fresh Produce**



**Bakery**



- Dry Grocery 3Q'18 average unit price increased 1.9% Y/Y, while volume remained static at 0.0% Y/Y.
- Dairy 3Q'18 average unit price increases slowed slightly this quarter to 1.7% Y/Y, while volume picked up from the previous quarter declines to post nearly static at 0.3% Y/Y.
- Fresh Produce 3Q'18 average unit price decreased 0.7% Y/Y, while volume increases lead all categories at 6.7% Y/Y.

- Frozen Food 3Q'18 average unit price increased 0.6% Y/Y, while volume increased to 1.5%. Frozen food volumes have increased each quarter of 2018.
- Deli 3Q'18 average unit price increased 0.5% Y/Y, while 3Q'18 volume increased 4.6% Y/Y.
- Bakery 3Q'18 average unit price posted the first quarterly increase of 2018 with 3.3% Y/Y, while volume decline marked 10.2% Y/Y, a significant shift from the 2Q'16 high of 12.1% Y/Y.

Food Company Margin Heat Map Y/Y				
Price vs. Volume	Grain	Protein	Labor	Energy
Constructive	Mixed	Mixed	Inflationary	Mixed

**Food Company Input Cost Summary:** As we end 3Q'18, commodity prices have been volatile when compared to 3Q'17 levels as well as M/M.

- **Economic Backdrop:** Wells Fargo securities suggest that real GDP growth look poised to post another solid quarter to end the year, albeit at a slightly slower pace. The bank expects a solid holiday season for consumer spending, while government spending will continue to boost growth. After temporary weakness in Q3, the bank expects business fixed investment spending to rebound in Q4. Affordability issues, tax changes, and higher mortgage rates will continue to weigh on the housing sector, which has been a laggard of late.
- **Corn, Wheat & Soybeans:** Corn and wheat prices are solidly above the past two years with U.S. and world stocks forecast to decline in 2018/19. Soybean prices are low, but have seen support from U.S. trade talks with China that are rumored to have prompted China's state buyers to purchase several million tonnes of U.S. soybeans.
- **Chicken:** Breast prices moved lower for the fourth straight month. Competition from low priced pork and turkey is pressuring prices. Exports in October had strong Y/Y growth.
- **Beef:** Cutout values moved higher in November on continued strong demand. Dairy herd liquidation is expected to push non-fed beef production higher. Exports to Korea and Japan remain strong in October.
- **Pork:** Higher production pressured cutout and hog prices in November. Mexico tariffs impact pork exports. Uncertainty continues around African Swine Fever and demand implications.
- **Packer Margin Environment:** Chicken packer margins are weak due to low cutout prices. Increasing pork packer capacity squeezes margins in November. Limited competition and expansion keep beef margins strong.
- **Seafood:** Americans ate 16 pounds of fish and shellfish in 2017, an increase of 7.4% from the 14.9 pounds consumed in 2016. Per capita, seafood consumption was 16 lbs. or more for the first time in nearly 10 years.
- **Dairy:** Strong milk output per cow is offsetting lower herd numbers due to heavy culling. Milk supply is forecast to continue increasing into 2019. U.S. cheese markets slid sharply lower in early December despite strong export demand.
- **Specialty and Non-Grain Crops:** The new Farm Bill continues the prior market allotment provisions. Plus, the Bill increased the loan rate for raw cane sugar by 1 cent to 19.75 cent per lb. and by 1.19 cents to 25.28 cents per lb. for refined beet sugar. The increases will start in the 2019 crop year.
- **Nuts:** California tree nut harvest is complete with processing continuing through the end of the year. Initial reports suggest high-quality and high yield across the major nut crops. Almonds and Pistachios have stable pricing, while walnut pricing is softer.

Key Commodity Heat Map			
Commodity	Price*	Y/Y	M/M
Corn	\$3.66	+6.5%	-0.7%
HRW Wheat	\$4.83	+14.5%	-6.0%
Soybeans	\$8.78	-10.8%	+2.2%
Broilers	\$0.87	+1.0%	+4.0%
Cattle	\$1.16	-4.2%	+2.4%
Hogs	\$0.58	-8.4%	-5.6%
Class III Milk	\$14.44	-14.5%	-7.0%
Shrimp	\$3.94	-14.4%	-2.7%
Salmon	\$5.49	+10.1%	-2.7%
Natural Gas	\$8.64	+1.4%	-1.0%
Electricity	\$10.68	-3.2%	-3.0%
Heating Oil	\$3.38	+34.2%	+3.1%
Restaurant Labor	\$14.00	+3.9%	+0.4%
Supermarket Labor	\$13.51	+3.8%	+0.4%
Food Labor	\$17.41	+3.3%	+0.2%

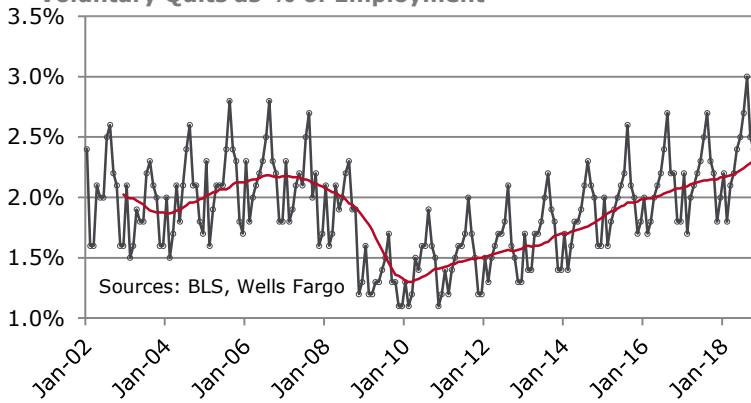
\*All prices for November except natural gas (September), electricity (September), heating oil (October) and supermarket labor (October)

Monthly avg. corn, wheat, soybeans in \$/bu; broilers, shrimp in \$/lb; cattle, hogs, milk in \$/cwt; salmon in \$/kg; gas in \$/Mct; oil in \$/gal; electricity in \$/kWh; labor in \$/h  
Sources: CME, USDA, Uner Barry, EIA, BLS

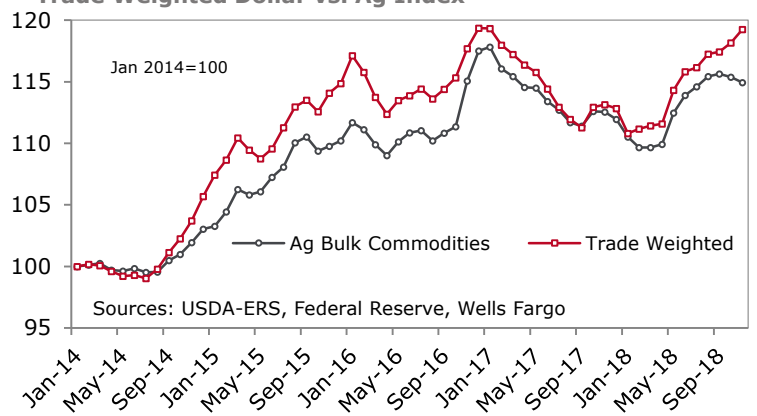
- **Wine:** Grape harvest is completed in California. Early reports suggest a large crop of good quality. Bulk wine market is soft, and deals are available as wineries need to make room for new juice. Growers with contracts have performed well. Growers looking to the spot market have experienced soft pricing due to an increase in availability of bulk wine.
- **Fruit Crops:** Majority of crops have fully transitioned to southern states or imports from South America. Apples and table grapes being shipped out of storage. Florida avocado harvest is in full swing, although majority of avocado volume is coming from Mexico now that the labor strike has been resolved. Navel orange harvest to begin in CA, and FL citrus harvest is in full swing.
- **Vegetable Crops:** Lettuce crops have fully transitioned to the Imperial Valley and Yuma, with strong pricing in both iceberg and romaine as the effects of the romaine recall have worked through the system. Many vegetable and berry crops have transitioned to Mexico and Florida, with strong volumes being reported due to only moderate weather disruption this season.
- **Forest Products:** Lumber prices declined in November and were the lowest in over 2 ½ years. Panel prices were the lowest in almost 2 years. November housing starts were down 4% Y/Y.
- **Crop Inputs:** Prices for all fertilizer types remain well above recent years. Diesel prices fell 3% in November, and gas prices were the lowest in 8 months amid a 12-month low in crude oil.
- **Energy and Labor:** Natural gas and electricity prices have been similar to year-ago levels for most of 2017, but heating oil has been up 30-45% Y/Y in recent months. Labor costs are 3-4% above last year.

**Economics:** Wells Fargo securities suggests real GDP growth looks poised to post another solid quarter to end the year, albeit at a slightly slower pace. The bank expects a solid holiday season for consumer spending, while government spending will continue to boost growth.

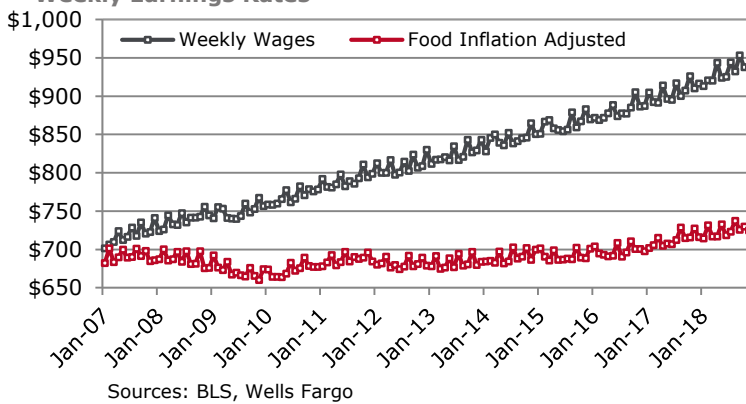
**Voluntary Quits as % of Employment**



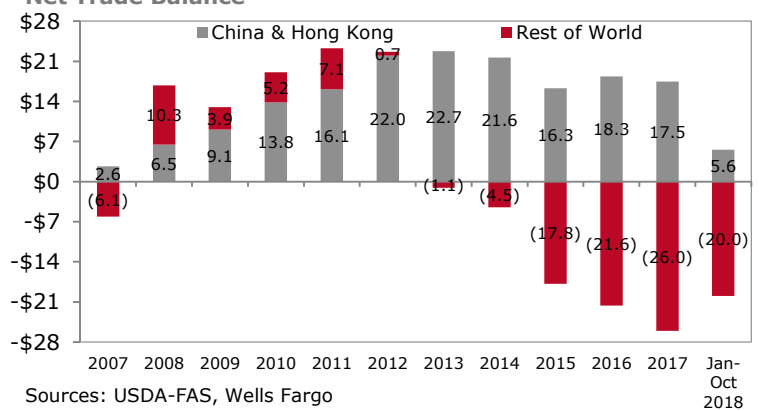
**Trade Weighted Dollar vs. Ag Index**



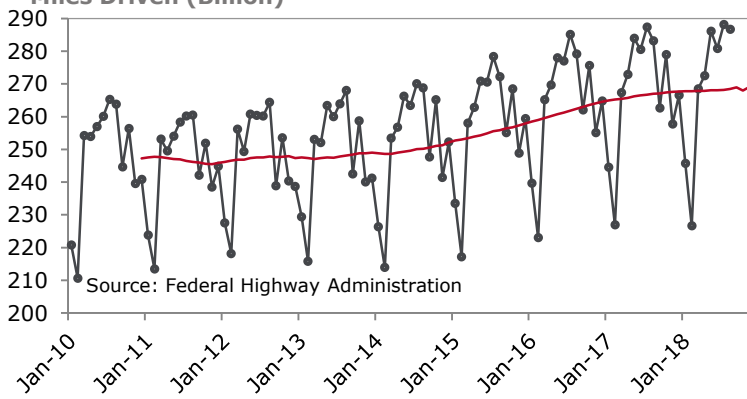
**Weekly Earnings Rates**



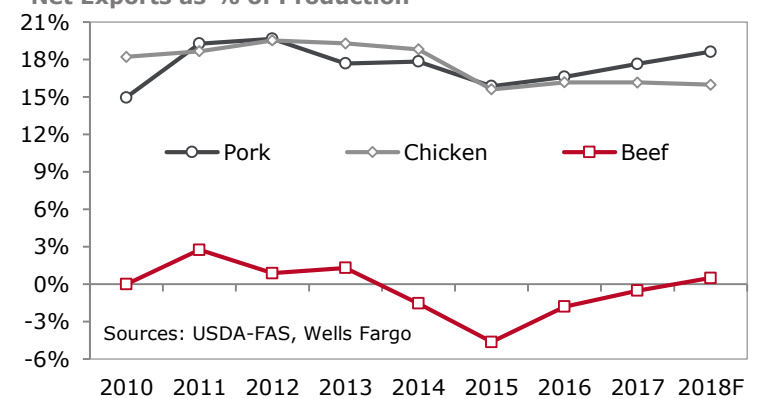
**Net Trade Balance**



**Miles Driven (Billion)**



**Net Exports as % of Production**

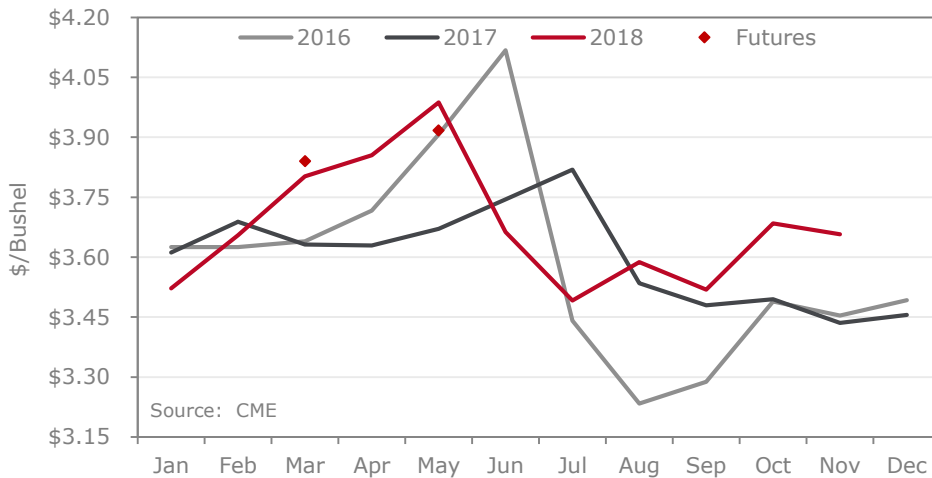


- November 2018 voluntary quits as a percentage of employment of 2.4% decreased from 2.5% M/M due to continued strong employment demand.
- November 2018 weekly average earnings are growing 3.1% Y/Y on a nominal basis; when deflated by food and beverage CPI the July 2018 average wage of \$751/week increased 3.9% Y/Y driven primarily by continued labor shortages.
- August 2018 miles driven of 287 billion were up 1.2% Y/Y as stronger employment offset higher gas prices.

- The November 2018 trade weighted dollar index value of 119.25 vs. bulk commodity dollar index value of 114.95 continues to widen when compared to the October 2018 values of 116.03 and 115.37, respectively.
- The net trade balance for YTD October 2018 of (\$14.4) billion widened by approximately \$5.8 billion compared to the (\$8.6) billion trade deficit for 2018.

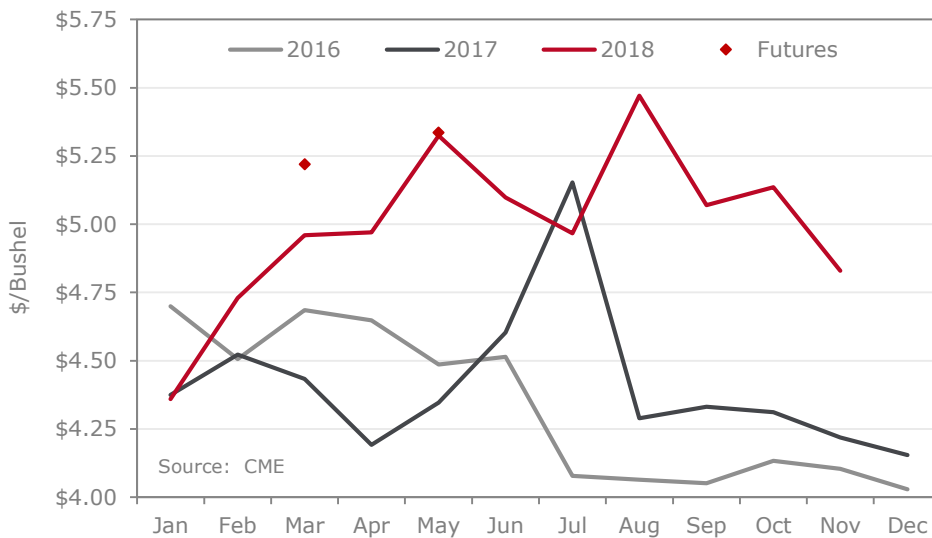
**Grain Prices:** Corn and wheat prices are solidly above the past two years with U.S. and world stocks forecast to decline in 2018/19. Soybean prices are low, but have seen support from trade talks with China.

**Corn**



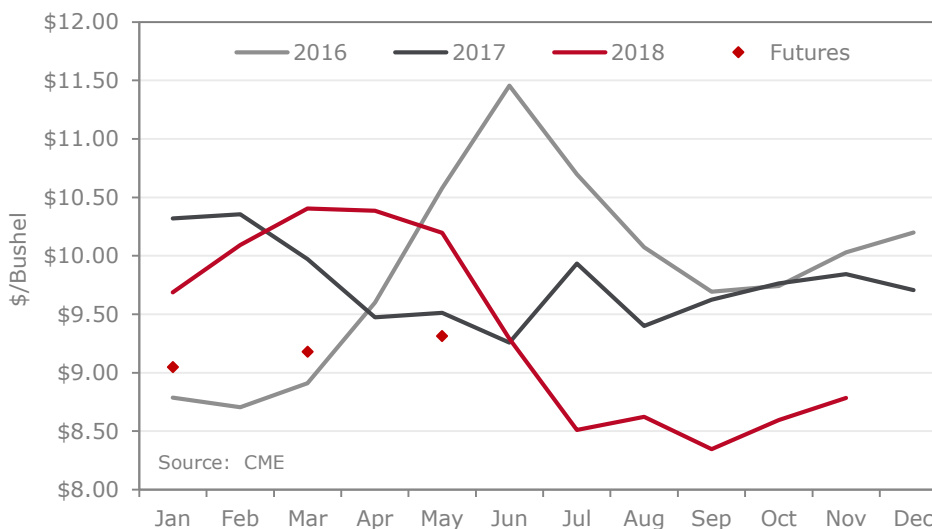
- Nearby corn futures averaged \$3.66 per bushel in November. This was down 3 cents from October, but up 22 cents from November 2017.
- Mild pressure came from a stronger dollar, along with lower crude oil and gasoline prices that could make it difficult for ethanol margins to improve from current low levels.
- USDA forecasts world corn production up 2% in 2018/19 on increases for Brazil, Argentina and Ukraine. World stocks are forecast to decline 9% to the lowest level in four years.

**Wheat**



- Nearby Kansas City wheat futures averaged \$4.83 per bushel in November. This was down 31 cents from October and the lowest in 9 months, but up 61 cents Y/Y.
- A stronger US dollar and sluggish export sales caused prices to decline steadily for most of November. Export sales improved late in the month, but remain behind the pace needed to reach USDA's 2018/19 forecast even though it was lowered in December.
- USDA projects global wheat production down 4% in 2018/19 on large declines in Russia, the EU and Australia. Global stocks are forecast to fall 4% after rising five straight years to a record.

**Soybeans**



- Nearby soybean futures averaged \$8.78 in November, up 19 cents from October but down \$1.06 Y/Y.
- Prices rallied 30 cents the first day of the month after President Trump indicated trade discussions with China were progressing. Improvement in total sales helped the market retain much of those gains though minimal sales to China had been reported.
- USDA is forecasting world soybean production up 9% in 2018/19 due to the larger U.S. crop in 2018 and an assumed rebound in Argentina's crop in 2019. World stocks are projected to jump 14% to a record level.



**Grain Fundamentals:** U.S. corn and wheat stocks are forecast to decline in 2018/19 from large levels. Soybean stocks are forecast to rise sharply. China's state buyers are rumored to be buying U.S. soybeans.

### Corn

	2016/17	2017/18	2018/19F	2018/19F	M/M Change	Y/Y Change
			November	December 18/19	Forecast 18/19	Forecast
Acres Planted (mm)	94.0	90.2	89.1	89.1	0.0	-1.1
Acres Harvested	86.7	82.7	81.8	81.8	0.0	-0.9
Yield per Harvested Acre (bu)	174.6	176.6	178.9	178.9	0.0	2.3
Beginning Stocks (mm bu)	1,737	2,293	2,140	2,140	0	-153
Production	15,148	14,604	14,626	14,626	0	22
Imports	57	36	50	45	-5	9
Total Supply	16,942	16,934	16,816	16,811	-5	-123
Feed and Residual	5,470	5,302	5,500	5,500	0	198
Food, Seed & Industrial	6,885	7,054	7,130	7,080	-50	26
Ethanol	5,432	5,601	5,650	5,600	-50	-1
Total Domestic	12,355	12,355	12,630	12,580	-50	225
Exports	2,294	2,438	2,450	2,450	0	12
Total Use	14,649	14,793	15,080	15,030	-50	237
Ending Stocks	2,293	2,140	1,736	1,781	45	-359
Stocks to Use (%)	15.7%	14.5%	11.5%	11.8%	0.3%	-2.6%
Average Farm Price (\$/bu)	\$3.36	\$3.36	\$3.60	\$3.60	\$0.00	\$0.24

Source: USDA WASDE

### Wheat

	2016/17	2017/18	2018/19F	2018/19F	M/M Change	Y/Y Change
			November	December 18/19	Forecast 18/19	Forecast
Acres Planted (mm)	50.1	46.0	47.8	47.8	0.0	1.8
Acres Harvested	43.9	37.5	39.6	39.6	0.0	2.1
Yield per Harvested Acre (bu)	52.7	46.3	47.6	47.6	0.0	1.3
Beginning Stocks (mm bu)	976	1,181	1,099	1,099	0	-82
Production	2,309	1,740	1,884	1,884	0	144
Imports	118	157	140	140	0	-17
Total Supply	3,402	3,078	3,123	3,123	0	45
Food	949	964	970	970	0	6
Seed	61	63	69	69	0	6
Feed and Residual	161	50	110	110	0	60
Total Domestic	1,171	1,078	1,149	1,149	0	71
Exports	1,051	901	1,025	1,000	-25	99
Total Use	2,222	1,979	2,174	2,149	-25	170
Ending Stocks	1,181	1,099	949	974	25	-125
Stocks to Use (%)	53.2%	55.5%	43.7%	45.3%	1.7%	-10.2%
Average Farm Price (\$/bu)	\$3.89	\$4.72	\$5.10	\$5.15	\$0.05	\$0.43

Source: USDA WASDE

### Soybeans

	2016/17	2017/18	2018/19F	2018/19F	M/M Change	Y/Y Change
			November	December 18/19	Forecast 18/19	Forecast
Acres Planted (mm)	83.4	90.1	89.1	89.1	0.0	-1.0
Acres Harvested	82.7	89.5	88.3	88.3	0.0	-1.2
Yield per Harvested Acre (bu)	52.0	49.3	52.1	52.1	0.0	2.8
Beginning Stocks (mm bu)	197	302	438	438	0	136
Production	4,296	4,411	4,600	4,600	0	189
Imports	22	22	25	25	0	3
Total Supply	4,515	4,734	5,063	5,063	0	329
Crushings	1,899	2,055	2,080	2,080	0	25
Exports	2,174	2,129	1,900	1,900	0	-229
Seed	105	104	96	96	0	-8
Residual	35	8	32	32	0	24
Total Use	4,213	4,296	4,107	4,107	0	-189
Ending Stocks	302	438	955	955	0	517
Stocks to Use (%)	7.2%	10.2%	23.3%	23.3%	0.0%	13.1%
Average Farm Price (\$/bu)	\$9.47	\$9.33	\$8.60	\$8.60	\$0.00	-\$0.73

Source: USDA WASDE

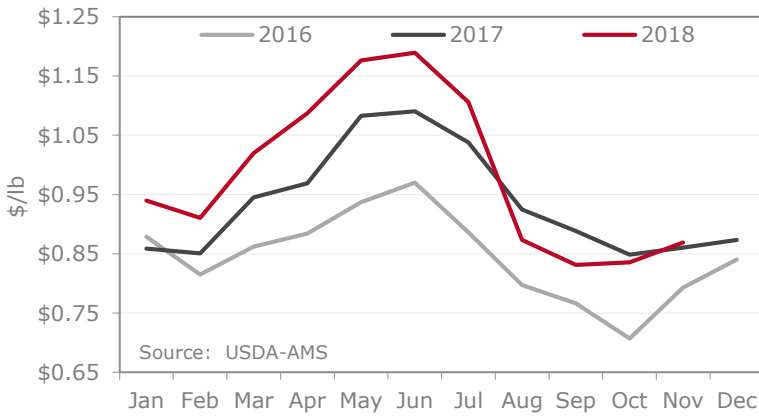
- USDA cut its 2018/19 forecast of corn usage in ethanol production 50 million bushels in December as production for the first quarter of the marketing year was below last year due to low margins.
- USDA's ending stocks projection increased 45 million bushels as the reduction in usage was partly offset by a smaller import forecast. The implied stocks-to-use ratio of 11.8% still would be below the past four years.
- USDA's long-term projections released in November included 2019 corn planted acres of 92 million, up 3% Y/Y. However, higher fertilizer prices could prevent acres from rising that much.

- USDA lowered its forecast of 2018/19 U.S. wheat exports by 25 million bushels to 1,000 million in December. Although competitor exports are forecast lower this year, U.S. sales and shipments generally have been slow.
- The cut in exports raised projected U.S. ending stocks to 974 million bushels.
- USDA raised its farm price forecast 5 cents to \$5.15 per bushel.
- USDA's long-term projections included a 7% increase in wheat acres in 2019/20 to 51.0 million acres, but wet conditions hindered planting this fall and may cause the increase to be smaller.

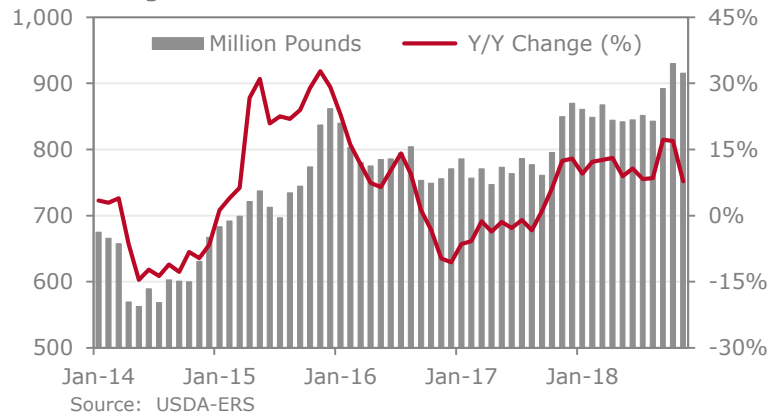
- USDA's U.S. soybean balance sheet was unchanged in December with ending stocks forecast to more than double in 2018/19 to 955 million bushels.
- The U.S. recently agreed not to raise tariffs on China for 90 days, and China pledged to buy more U.S. ag products. Although China's tariff on U.S. soybeans remains at 28%, its state buyers (which are exempt from the tariff) are rumored to be buying several million tonnes.
- USDA's long-term projections included a 7% drop in soybean acres in 2019, but wet weather during wheat planting and higher fertilizer prices could cause the decline to be smaller than projected.

**Chicken:** Breast prices moved lower for the fourth straight month. Competition from low priced pork and turkey is pressuring prices. Exports in October had strong Y/Y growth.

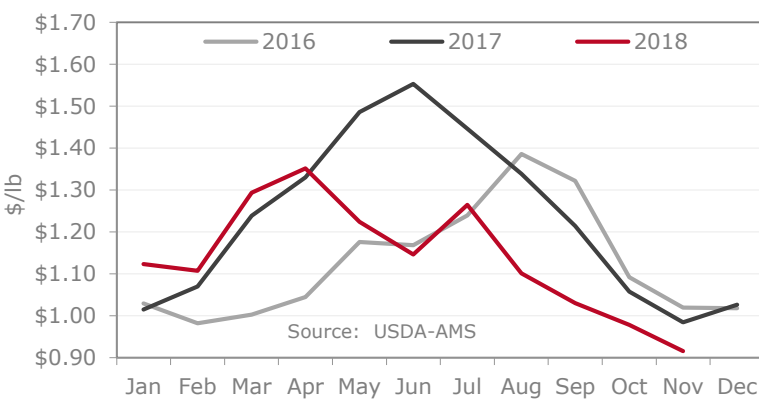
**Whole Broiler Prices**



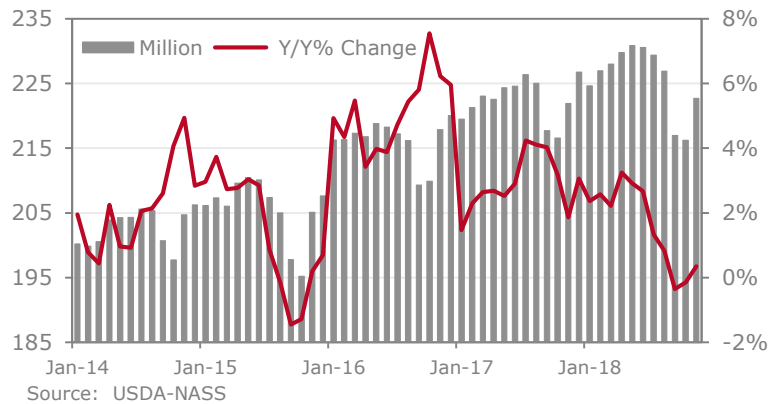
**Cold Storage Inventories**



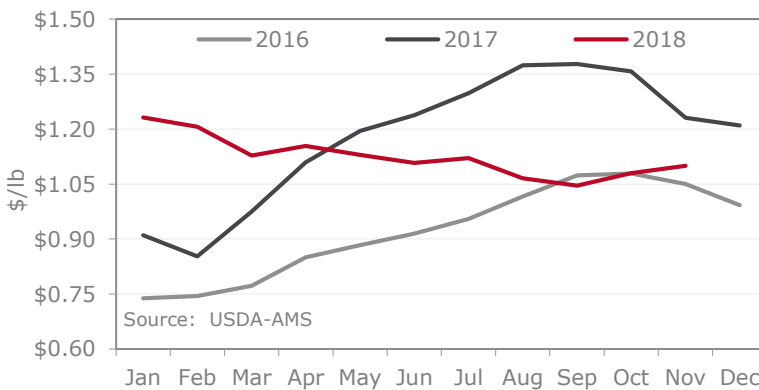
**Boneless Skinless Breast Prices**



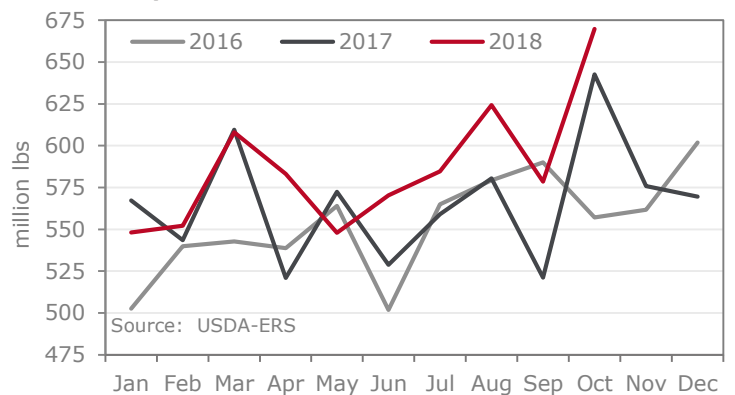
**Egg Sets**



**Boneless Skinless Thigh Prices**



**Broiler Exports**

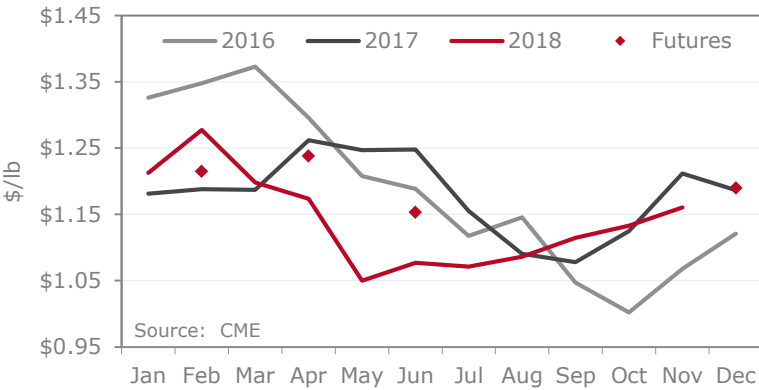


- The November USDA broiler price of \$0.86/lb. is up 4% vs. the prior month and up 1% vs. November 2017
- The November average breast price of \$0.91/lb. decreased 6% vs. the prior month and decreased 7% vs. November 2017.
- The November average thigh price of \$1.10/lb. increased 2% vs. the prior month and decreased 11% vs. November 2017.

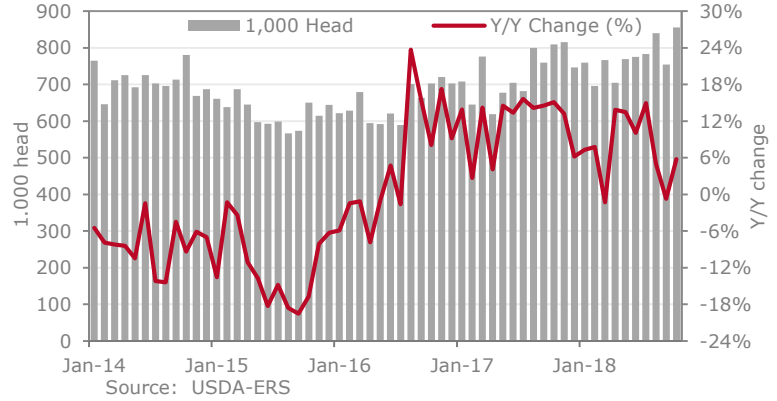
- The recent WASDE report slightly increased production estimates for 2018 on higher slaughter and hatchery data. Broiler production is reduced in 2019 on hatchery data. Production in 2018 estimated up 2.4% Y/Y and 2019 production is estimated up 1.4% Y/Y.
- Broiler exports in October were 16% higher than September and 4% higher Y/Y. The recent strength in exports is positive news for the industry, but still lags behind the export growth of pork and beef.

**Beef:** Cutout values moved higher in November on continued strong demand. Dairy herd liquidation is expected to push non-fed beef production higher. Exports to Korea and Japan remain strong in October.

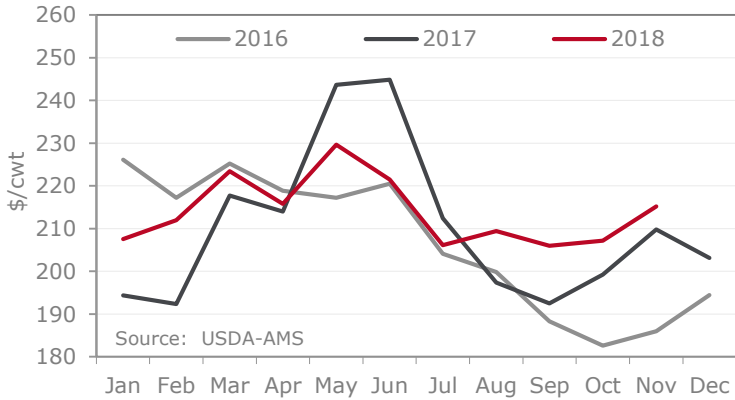
**Live Cattle Prices**



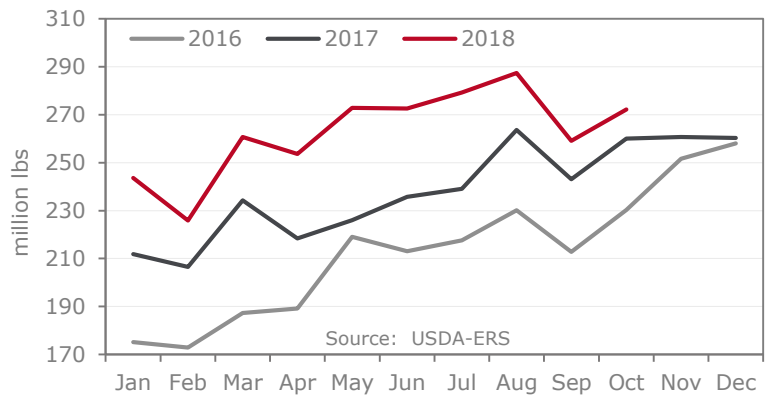
**Heifer Slaughter**



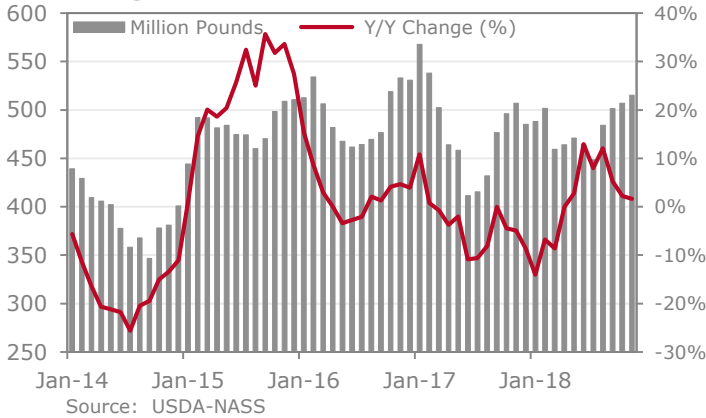
**Cut Out Values**



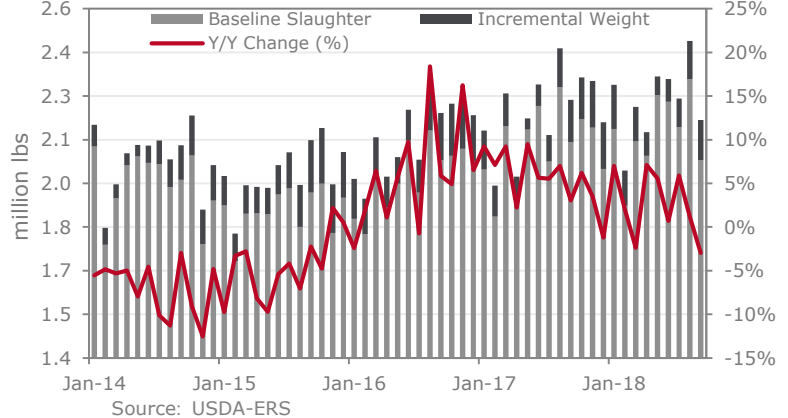
**Beef and Veal Exports**



**Cold Storage Inventories**



**Monthly Cattle Processing**

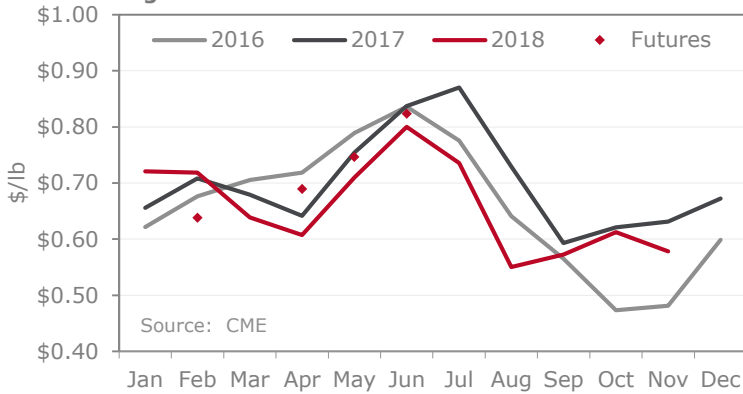


- The November average beef cutout value increased 4% vs. the prior month and increased 3% from October 2018. Strong export demand helped support higher prices.
- The recent WASDE report increased production estimates in 2018 on a faster slaughter pace. Production in 2019 was reduced on lighter carcass weights. 2018 production is estimated up 2.9% Y/Y and 2019 production is estimated up 2.9% Y/Y.
- October beef export volume increased 5% vs. the prior month and increased 5% from October 2017. Robust demand from South Korea and Japan continue to support export volumes.
- Dairy cow slaughter increased 10% Y/Y in October. Higher dairy cow slaughter is likely to continue into early 2019 due to low milk prices and deteriorating producer margins.
- Cattle on Feed November report showed inventory up 3.2% Y/Y, which was lower than expected. Marketing was 4.2% higher Y/Y due to one extra marketing day. Placements were less than analyst expectations at 6.1% lower Y/Y.

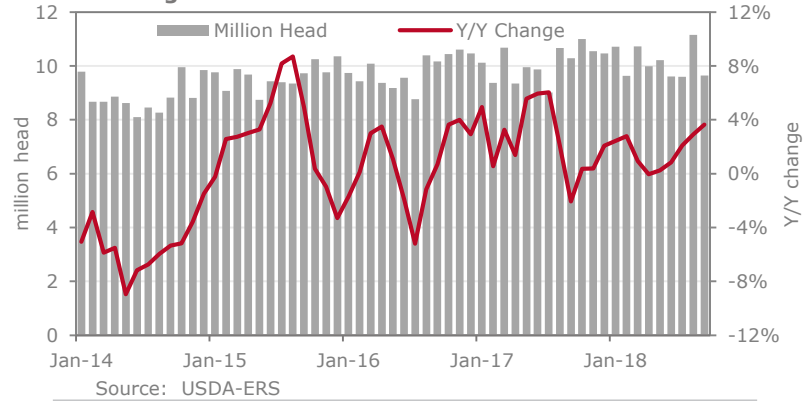


**Pork:** Higher production pressured cutout and hog prices in November. Mexico tariffs impacted pork exports. Uncertainty continues around African Swine Fever and demand implications.

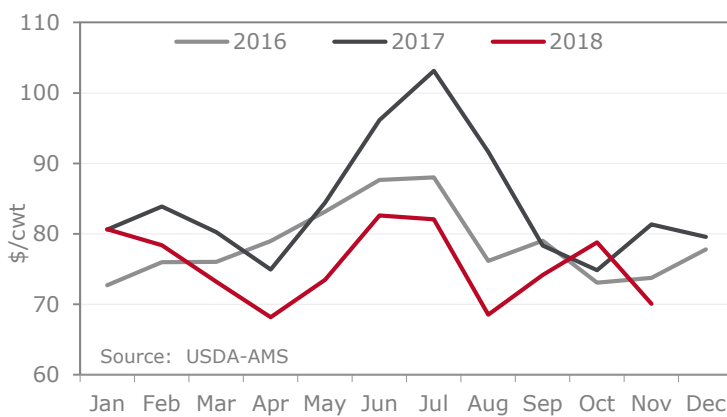
**Lean Hog Prices**



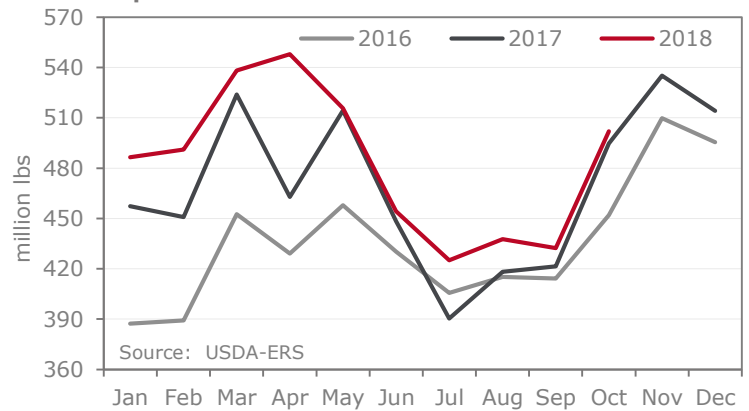
**Sow Slaughter**



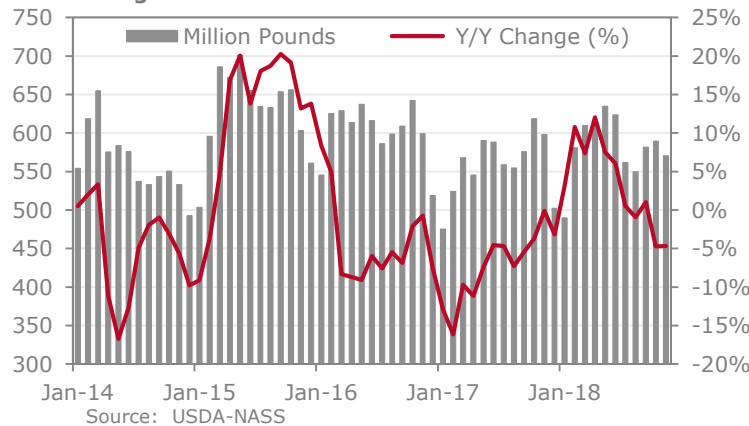
**Cut Out Values**



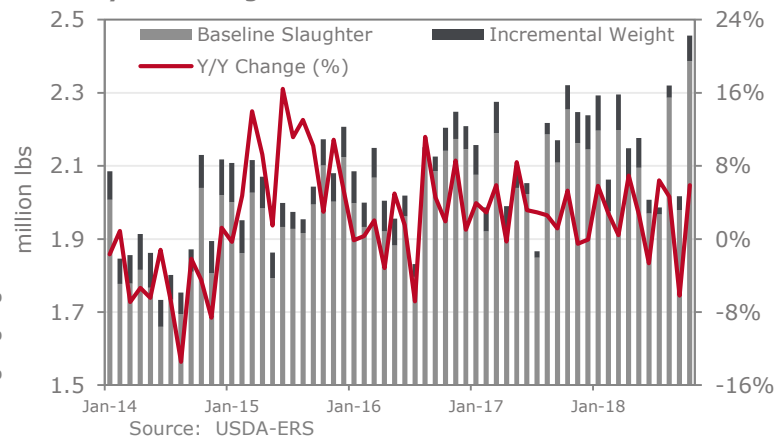
**Pork Exports**



**Cold Storage Inventories**



**Monthly Processing**

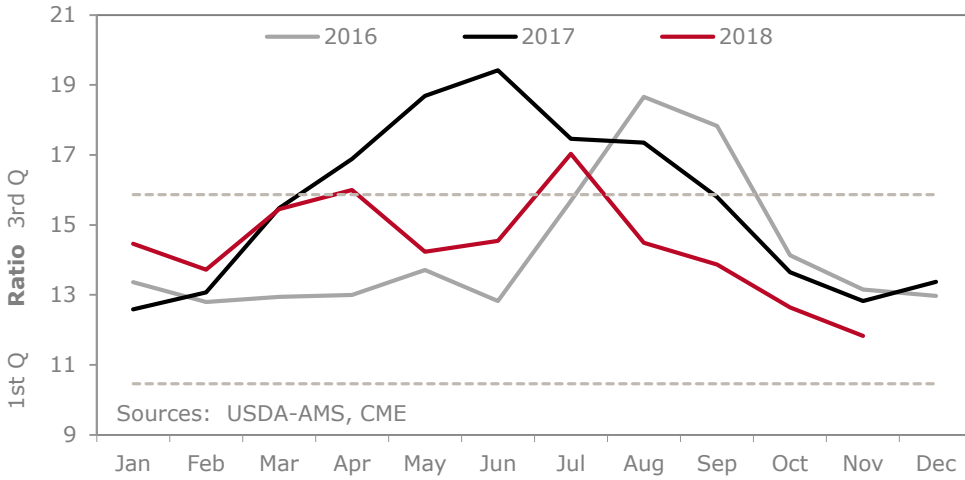


- Nearby lean hog futures averaged \$0.58/lb. in November. This decreased 6% from October, and decreased 8% Y/Y.
- The average cutout value decreased 11% in November, and was down 14% Y/Y. Higher supply in Q4 has pressured cutout prices lower.
- The recent WASDE report slightly lowered production estimates in 2018 on smaller than expected Q4 slaughter. 2018 production is estimated up 2.8% Y/Y and 2019 production is estimated up 5.3% Y/Y.

- Pork exports in October were 16% higher than September and 1% higher Y/Y. Exports to Mexico have slowed due to tariffs. Higher Korean exports helped to partially offset the decline to Mexico in October.
- Deferred hog futures contracts continued to be supported on concerns of African Swine Fever in China.
- Retail featurings of pork have been disappointing this Fall, despite ample supplies and competitive pricing falling below previous year levels.

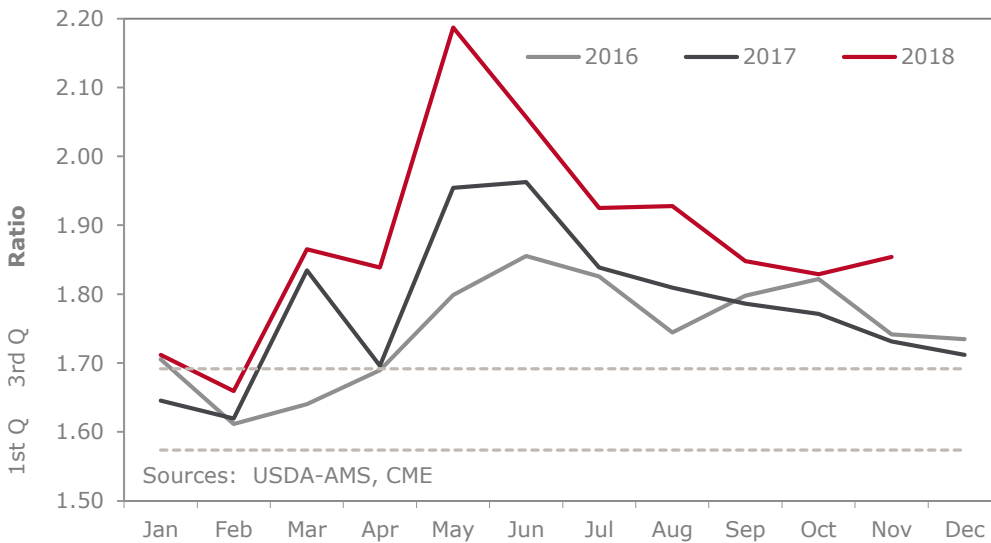
**Packer Margin Environment:** Chicken packer margins are weak due to low cutout prices. Increasing pork packer capacity squeezes margins in November. Limited competition and expansion keep beef margins strong.

**Chicken**



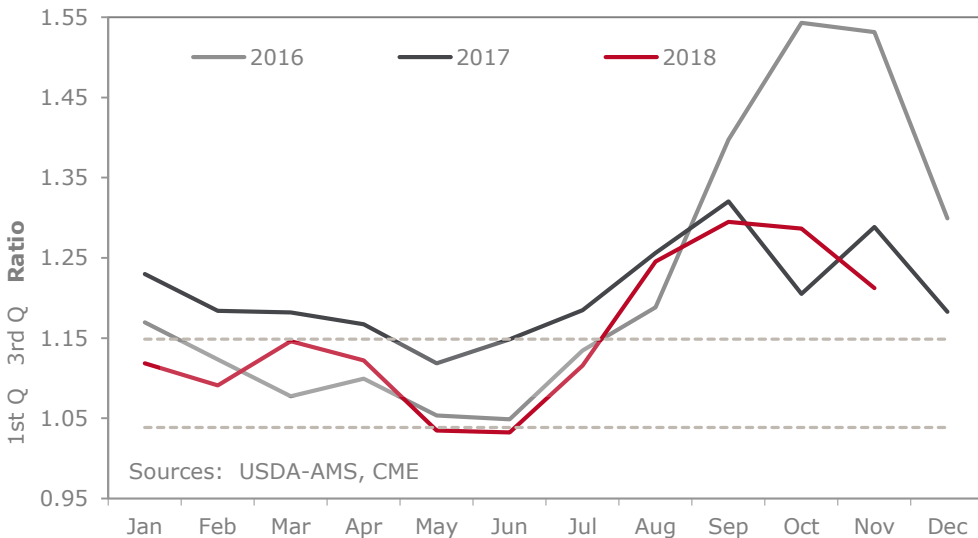
- November margins followed seasonality and moved 6% lower from October. Margins remained weak in November at 8% lower than last year. Cheap grain and meal prices are not fully offsetting lower product prices.
- Pricing remains low on turkey and pork, which is adding price pressure on chicken.
- The chicken industry will likely see lower margins the next several years due to expanding slaughter space in the industry.

**Beef**



- November margins moved 1% higher from October and counter-seasonally higher. Beef packer margins remain strong compared to previous years and were 7% Y/Y.
- Limited expansion in the fed-beef slaughter industry is expected to keep competition low and packer margins high.
- Though it is building slower than the last several years, the cattle herd is still increasing in numbers and providing ample supplies for beef packers.

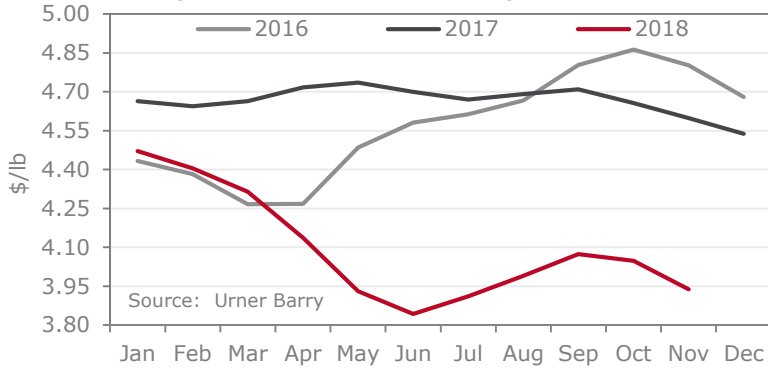
**Pork**



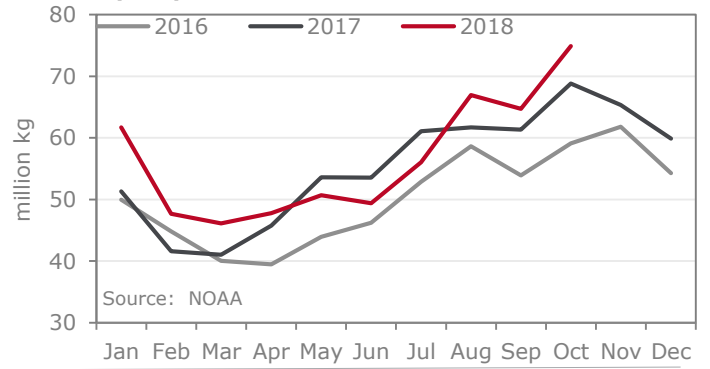
- Pork packer margins in November drop 6% lower from October levels. Margins were 6% lower Y/Y.
- Increasing packer capacity and more competition for hogs is squeezing margins.
- The expansion within the hog industry expected in 2019 will give ample supplies to expanding packers.

**Seafood:** Americans ate 16 pounds of fish and shellfish in 2017, an increase of 7.4% from the 14.9 pounds consumed in 2016. Per capita, seafood consumption was 16 lbs. or more for the first time in nearly 10 years.

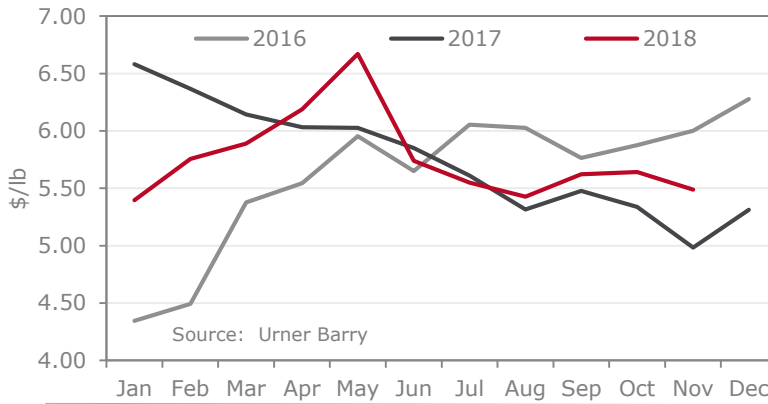
**Urner Barry Farm-Raised White Shrimp Index**



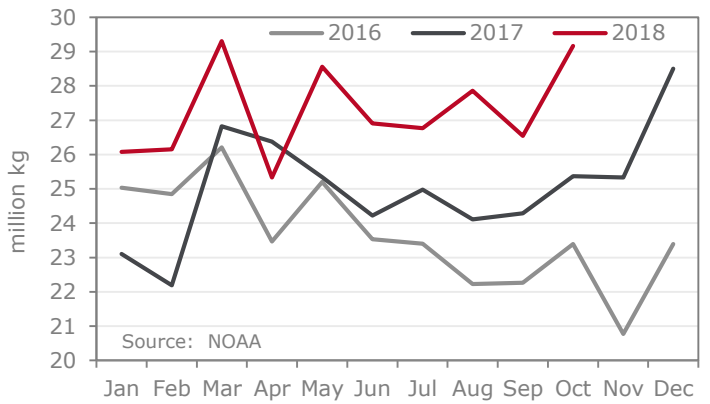
**Shrimp Import Volume**



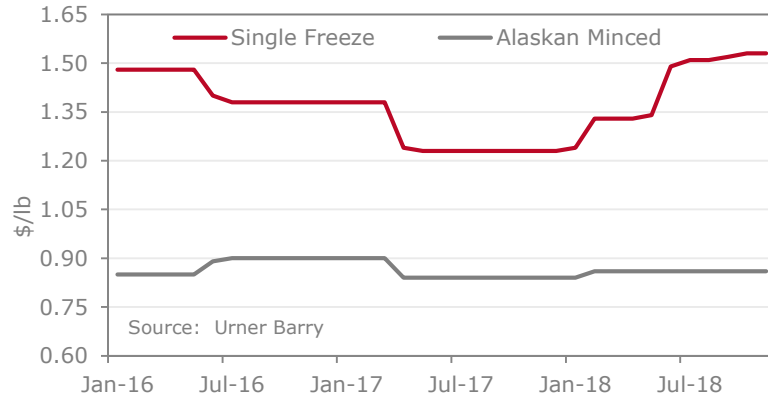
**Urner Barry Fresh Farmed Salmon Index**



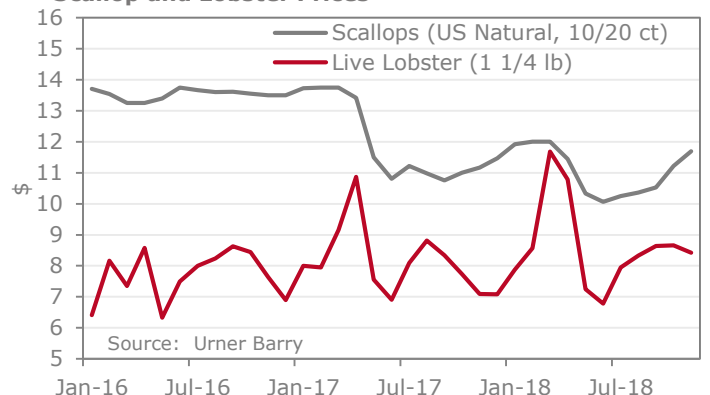
**Atlantic Salmon Import Volume**



**Alaskan Pollock Prices**



**Scallop and Lobster Prices**

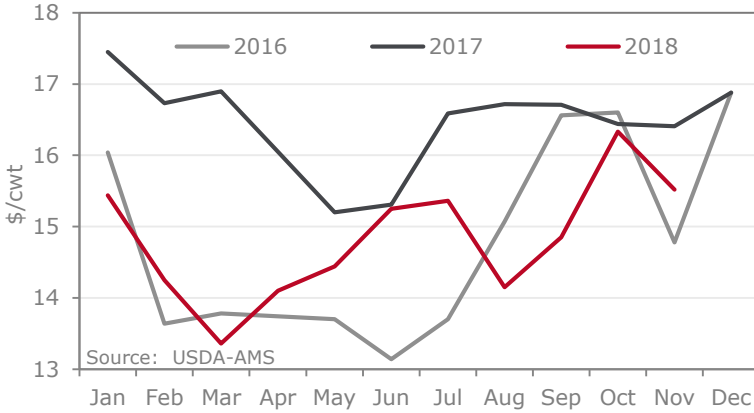


- The UB farm-raised white shrimp index in November was \$3.94/lb., down 14% Y/Y. YTD '18 shrimp imports are 1,083MM lbs., up 5% Y/Y. Low prices continue to generate an increase in demand for shrimp imports.
- The UB fresh-farmed salmon index declined in November to \$5.49/lb., although this is a 10% increase Y/Y. YTD Atlantic salmon imports through September totaled 537MM lbs., up 10% Y/Y.
- The U.S. Trade Representative excluded pollock, cod and pacific wild salmon from incurring the 10% import tariff levied in Sept. '18 on goods exported to the U.S.

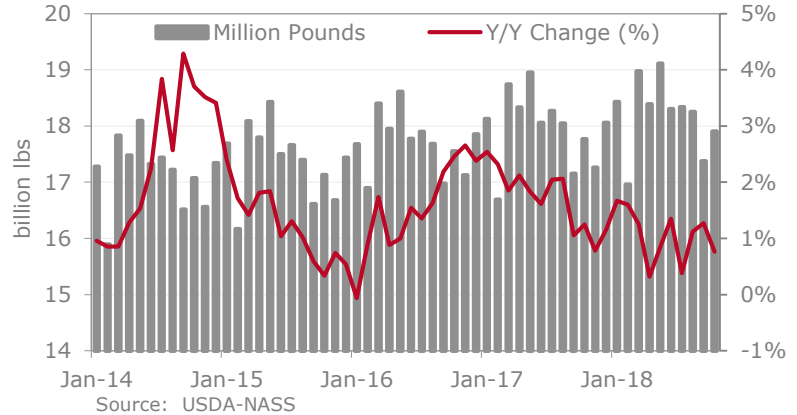
- The 2019 Bering Sea Pollock TAC has been set at 1.397 million mt, up 2.4% from 2018's 1.364 million mt. The biomass peak was in 2017 at 13 million mt, but at harvest rates of less than 20% per year the TAC is likely to remain extremely strong with little variability.
- The 2019 Bering Sea P-cod TAC dropped 11.5% to 166,475 mt, from this year's 188,136 mt. Concerns over distribution of Sea P-cod declined in the Eastern Bering sea shelf survey index, due to poor environmental conditions and lack of incoming recruitment.

**Dairy:** Strong milk output per cow is offsetting lower herd numbers due to heavy culling. Milk supply is forecast to continue increasing into 2019. U.S. cheese markets slid sharply lower in early December despite strong export demand.

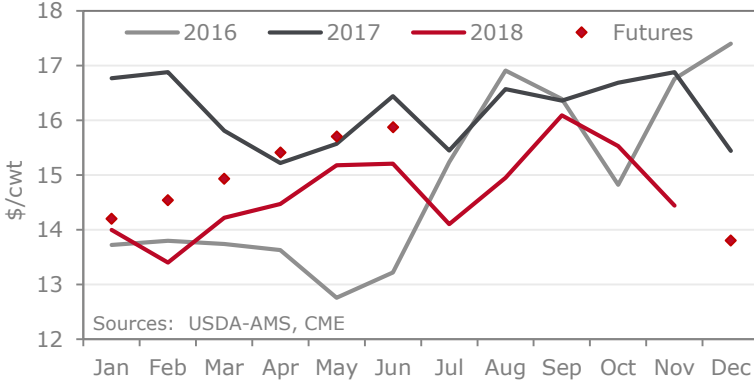
**Class I Milk**



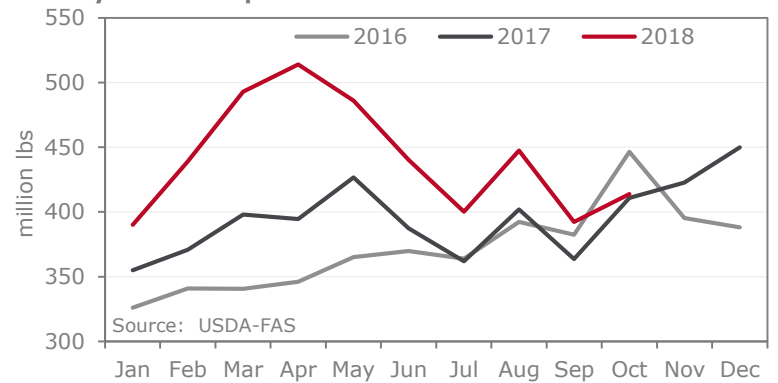
**Milk Production**



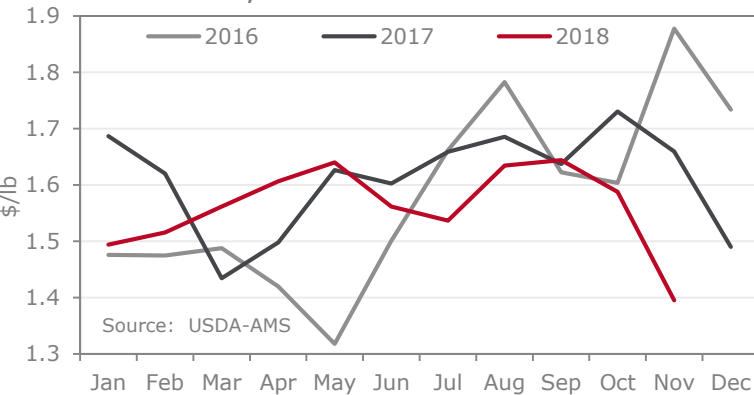
**Class III Milk**



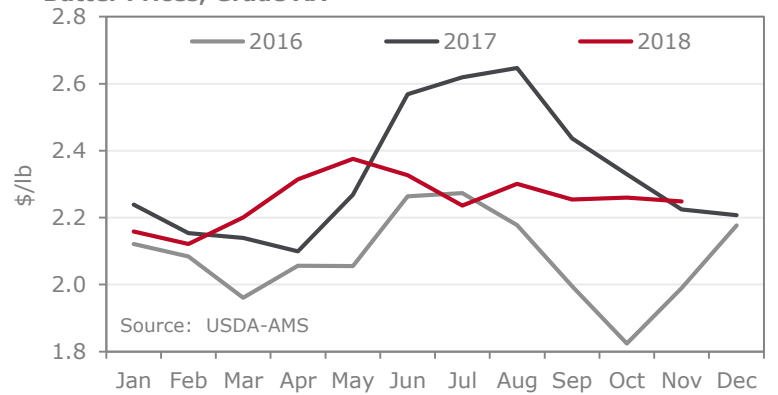
**Dairy Product Exports**



**Cheddar Cheese, 40-lb. block**



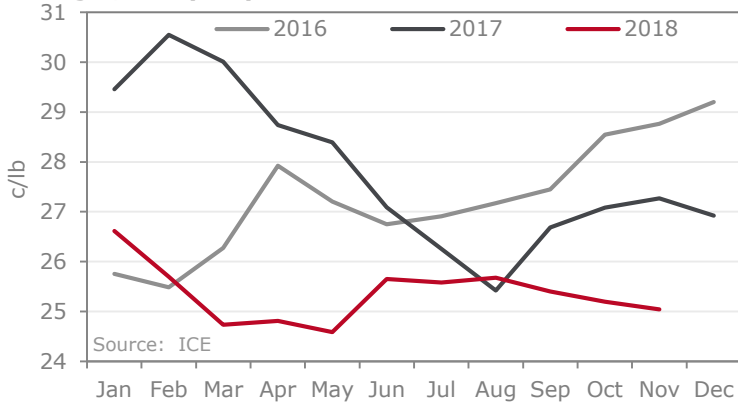
**Butter Prices, Grade AA**



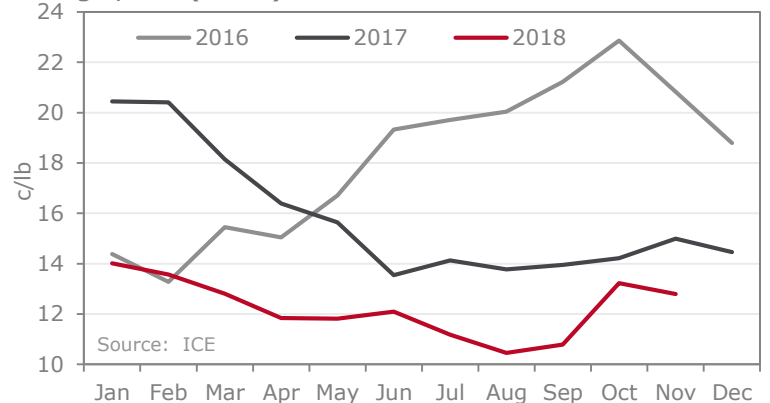
- The November USDA Class I milk price of \$15.52/cwt decreased 5% vs. the prior month and decreased 5% vs. November 2017.
- The November average Class III milk price of \$14.44/cwt. decreased 7% vs. the prior month and decreased 14% vs. November 2017.
- The recent WASDE report slightly lowered production estimates based on lower cow herd numbers. Stronger growth in milk per cow is expected to partially offset lower herd numbers. 2018 production is estimated up 1.1% Y/Y and 2019 production is estimated up 1.4% Y/Y.
- U.S. milk production in October was up at 0.8% Y/Y on stronger milk per cow growth. The milk cow herd size was down slightly vs. the prior year.
- Stronger growth in milk per cow is expected to partially offset lower herd numbers. 2018 production is estimated up 1.1% Y/Y and 2019 production is estimated up 1.4% Y/Y.
- Through October 2018, total cheese production was up 2.5% Y/Y; cheese cold storage inventories at end of Q3'18 were roughly 5% above Q3'17.
- The USDA average block cheddar cheese price of \$1.39/lb. for November decreased 12% vs. the prior month, down 16% Y/Y.

**Specialty and Non-Grain Crops:** The new Farm Bill continue the prior market allotment provisions. Plus, the Bill increased the loan rate for raw cane sugar by 1 cent to 19.75 cents per lb. and by 1.19 cents to 25.28 cents per lb. for refined beet sugar. The increases will start in the 2019 crop year.

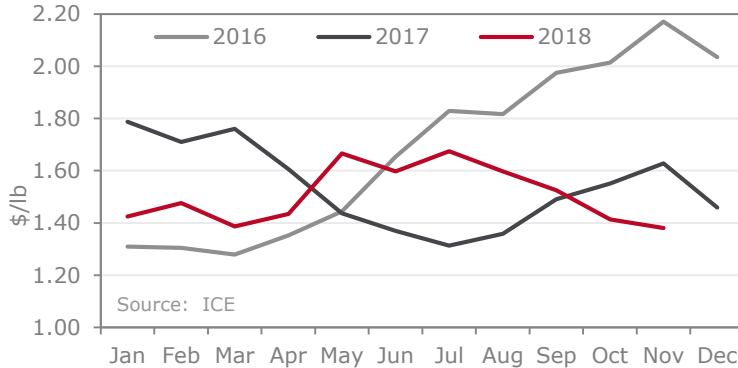
**Sugar, #16 (U.S.)**



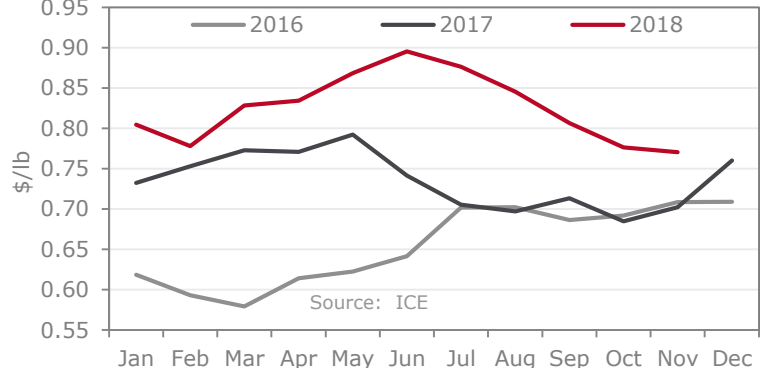
**Sugar, #11 (World)**



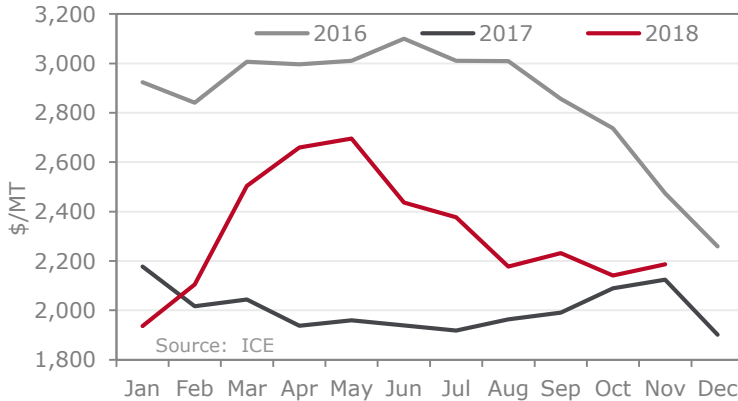
**Orange Juice**



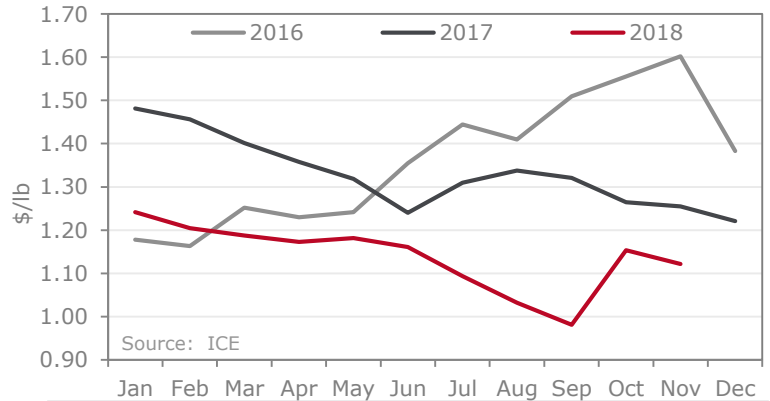
**Cotton**



**Cocoa**



**Coffee**

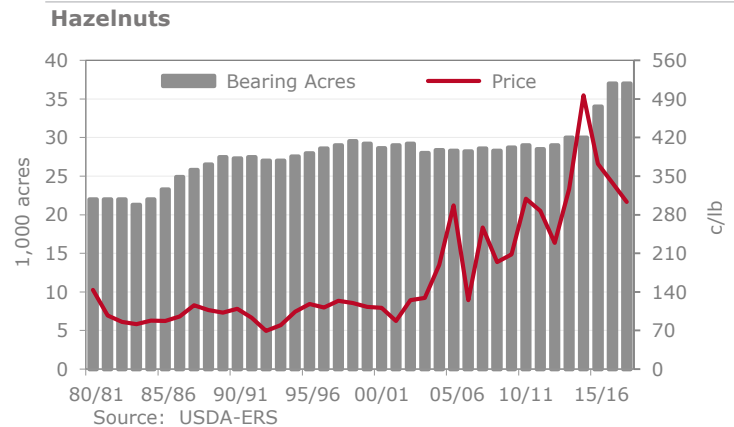
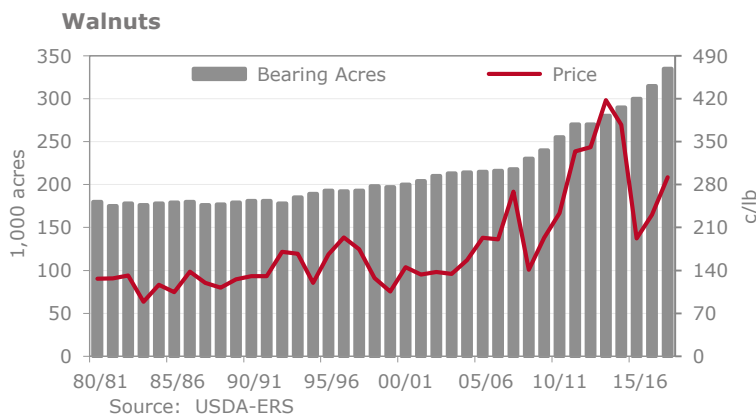
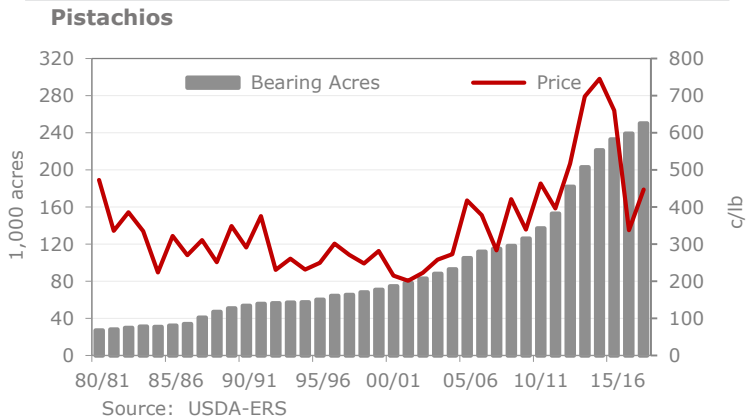
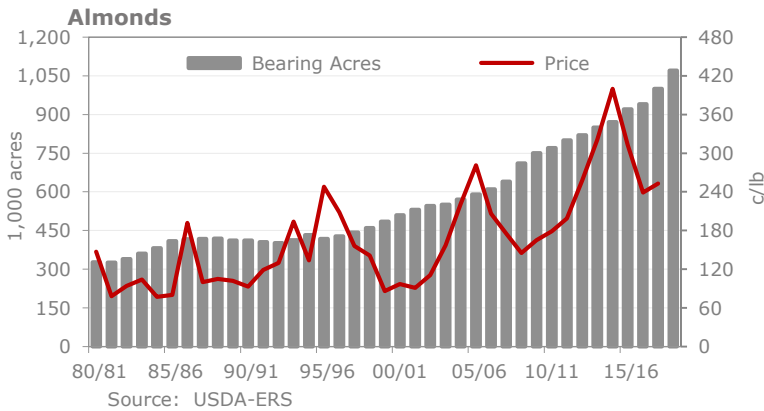


- The November ICE sugar #16 average price of \$0.25/lb. decreased 1% vs. the prior month and decreased 8% vs. the prior year period.
- The November average orange juice price of \$1.38/lb. decreased 2% vs. the prior month and decreased 15% vs. the prior year.
- The November average cocoa price of \$2,186/MT increased 2% vs. the prior month and increased 3% vs. the prior year.

- The November ICE sugar #11 average cocoa price of \$0.13/lb. decreased 3% vs. the prior month and decreased 15% vs. the prior year.
- The November average cotton price of \$0.77/lb. decreased 1% vs. the prior month and increased 10% vs. the prior year.
- The November average coffee price of \$1.12/lb. decreased 3% vs. the prior month and decreased 11% vs. the prior year.

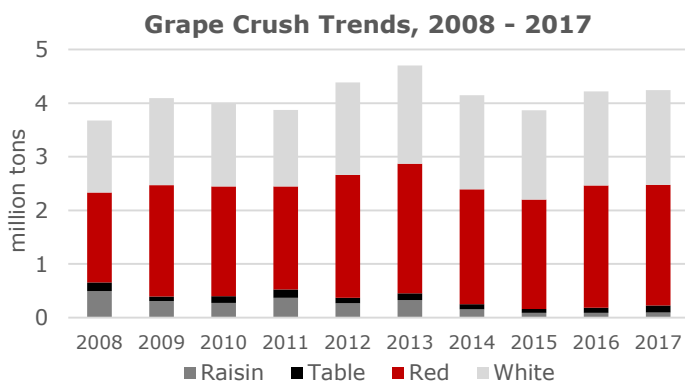


**Specialty and Non-Grain Crops:** California tree nut harvest is complete with processing through 2018. Pecan harvest has started in California and continues in Texas and the Southeast. Georgia harvest has been hampered by the effect of Hurricane Michael. The harvest has produced large crops of excellent quality, although smaller nut sizing is being reported.



- Early indications are the final almond yield will not reach the 2.45 billion pound NASS forecast. Nonpareil yields are down (smaller nut size) and pollinators have not made up the difference.
- The state almond crop will continue to grow as production comes online with over 200M non-bearing acres planted (16% of total planted almond acreage)
- Walnut harvest was completed with reports of a higher yield, but not likely to reach the USDA estimate. Quality is being reported as good. Chile also has a large crop so the market is softening with supply.

- Pistachio harvest is complete. When final numbers are released, a new record is expected at 990 million in-shell pounds. Similar to almonds, the crop will continue to increase with nearly 80M non-bearing acres reported in 2017 with more planted in 2018.
- Chinese pecan buyers have shown little interest in U.S. pecans this year, which has caused pecan prices to soften. Shellers are asking growers to hold their crop to stop downward pressure on the market.



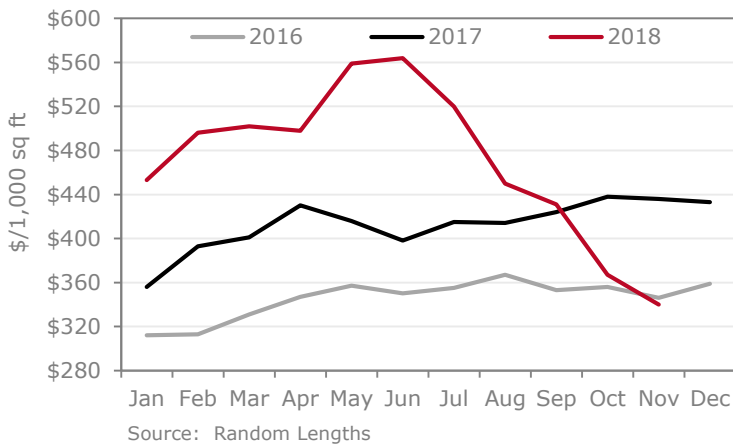
Source: Gomberg Fredrikson and Wine Institute

### 2018 Grape Crush Results

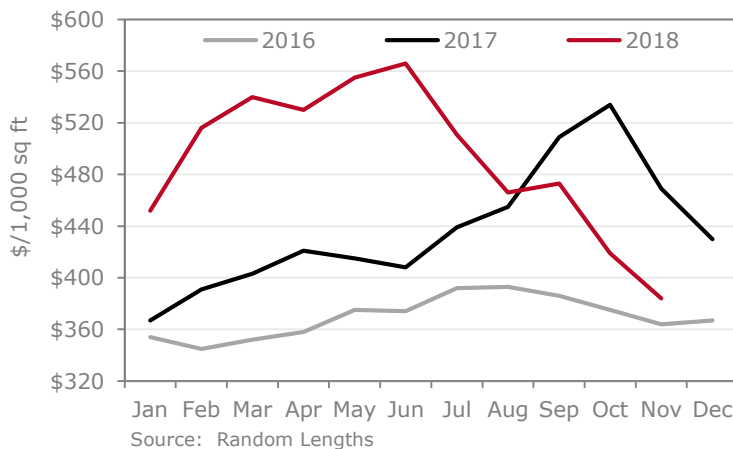
- Vintners reported abundant yields that may exceed the USDA forecast of 4.1 MM tons.
- Vintners report good quality despite large crop.
- Spot market prices are being reported as softer than last year; good pricing for high quality fruit for most varieties.

**Forest Products:** Lumber prices declined again in November and were the lowest in more than 2 ½ years. Panel prices were the lowest in almost 2 years. November housing starts were down 4% Y/Y.

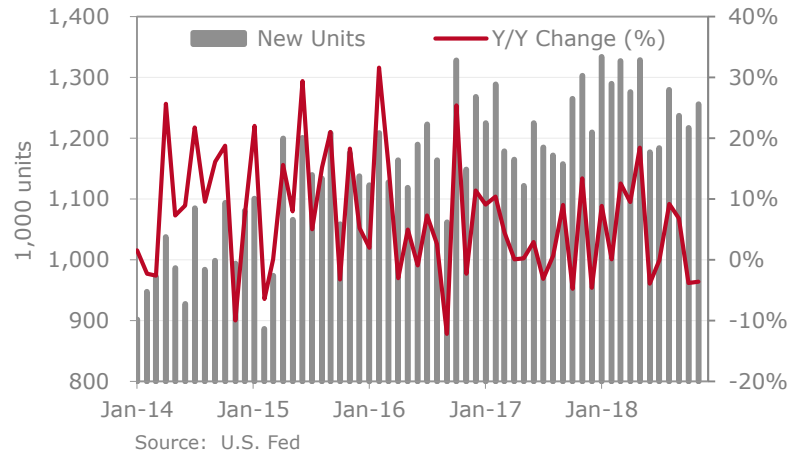
**Framing Lumber Index**



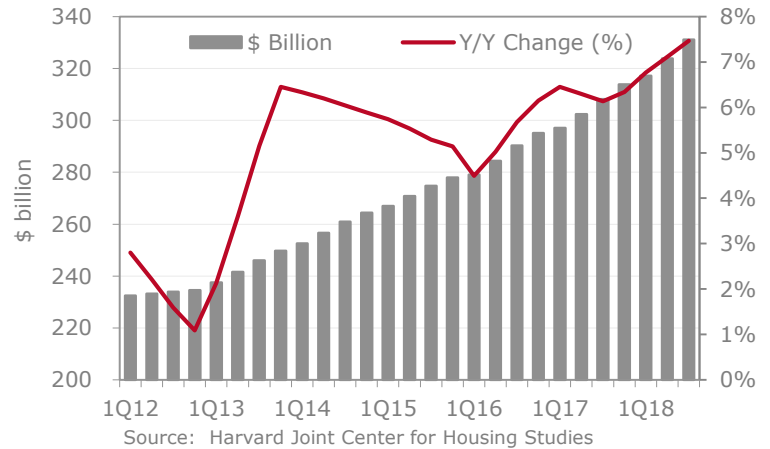
**Structural Panel Index**



**U.S. Housing Starts**



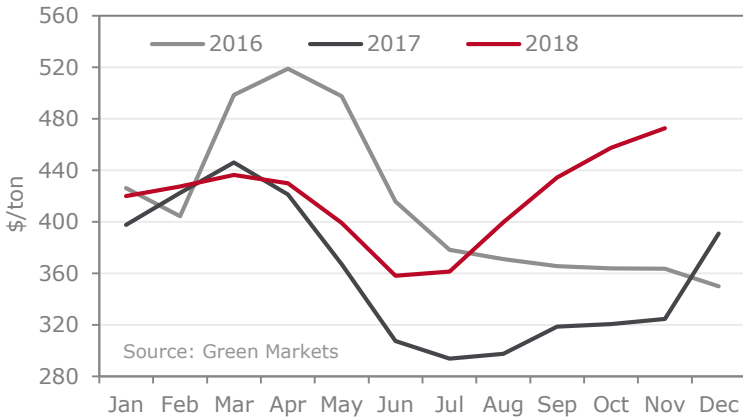
**Repair & Remodel Expenditures (LTM total)**



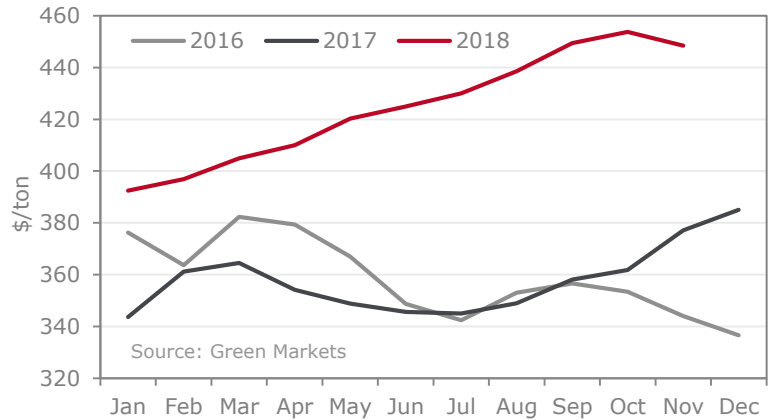
- The Framing Lumber Composite Index declined 7% in November to \$340/thousand sq. ft. This was down 22% Y/Y and the lowest since March 2016 as demand was not strong enough to sustain prices at the high levels seen during the first half of 2018. Although lumber prices are well below levels seen during 2017 and most of 2018, they are in line with the 2016 average of \$346.
- The Structural Panel Composite Index fell 8% in November to \$384/thousand sq. ft. as lumber prices continued to decline. This was down 18% Y/Y and the lowest since January 2017, but was above the 2016 average of \$370.
- U.S. housing starts of 1.26 million units in November were down 4% Y/Y as an increase in multi-family units was more than offset by a decline in single-family homes to the lowest level in 1½ years. Although lumber and structural panel prices are below year-ago levels after being strong the first half of the year, rising interest rates may be slowing demand for new single-family homes.
- LTM repair and remodel expenditures of \$331.1 billion during 3Q'18 were up 2% from the previous quarter and up 7% Y/Y, reflecting the largest Y/Y increase since 2007.

**Crop Inputs:** Fertilizer prices were mixed in November, with ammonia and potash up and urea and DAP down. Prices for all types remain well above recent years. Diesel prices were down 3% in November, and gas prices were the lowest in 8 months amid a 12-month low in crude oil futures.

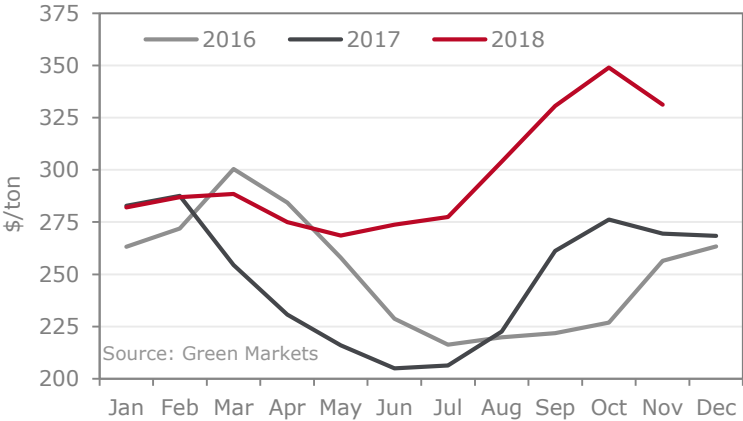
**Ammonia**



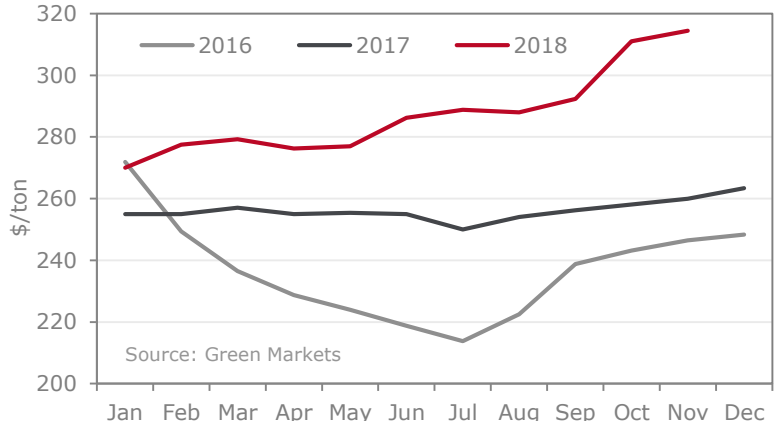
**DAP**



**Urea**



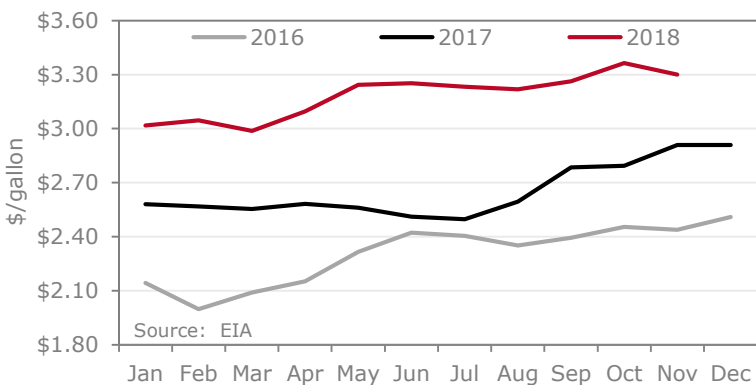
**Potash**



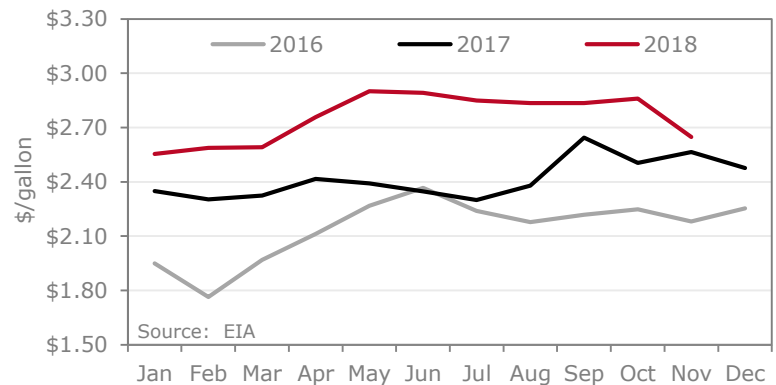
- Ammonia prices in the Corn Belt increased 3% to an average of \$473/ton in November as fall application improved after wet conditions caused a slow start. This was up 46% Y/Y.
- Urea prices in the Corn Belt fell 5% in November from a 3-year high in October, but were up 23% Y/Y. Lower prices in India's latest import tender caused U.S. prices to moderate.

- DAP prices in the Corn Belt declined 1% to an average of \$448/ton in November after rising 15 straight months. Slow demand around the Thanksgiving holiday caused the decline.
- Potash prices in the Corn Belt increased 1% in November to a 3-year high of \$314/ton, which was up 21% Y/Y. Solid late fall demand allowed producers to raise prices early in the month.

**Diesel Fuel Prices**



**Gasoline Prices**

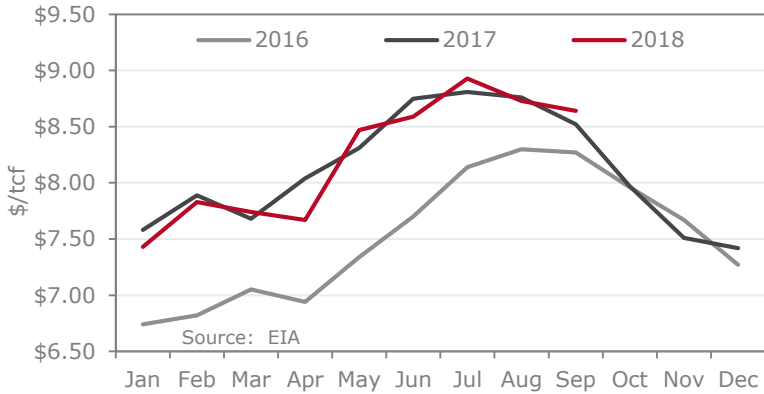


- The U.S. average on-highway diesel price averaged \$3.30/gallon in November. This was down 7 cents (3%) from October, but was up 13% Y/Y.

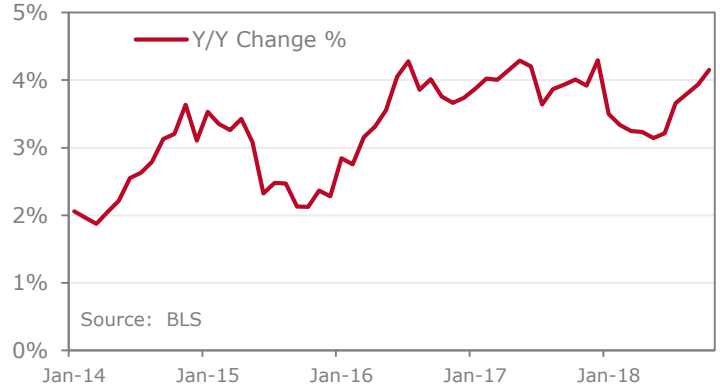
- Retail U.S. gasoline prices averaged \$2.65 in November. This was down 19 cents from October and the lowest in 8 months as the monthly average crude oil futures price fell to a 1-year low.

**Energy and Labor:** Natural gas and electricity prices have been similar to year-ago levels for most of 2017, but heating oil has been up 30-45% Y/Y in recent months. Labor costs are 3-4% above last year.

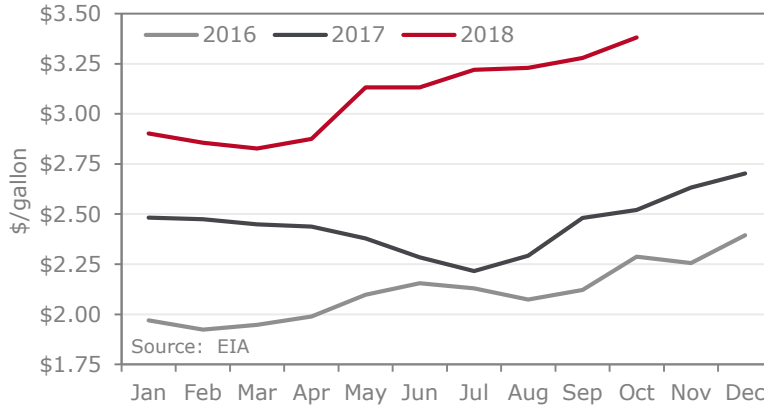
**Natural Gas Retail Prices**



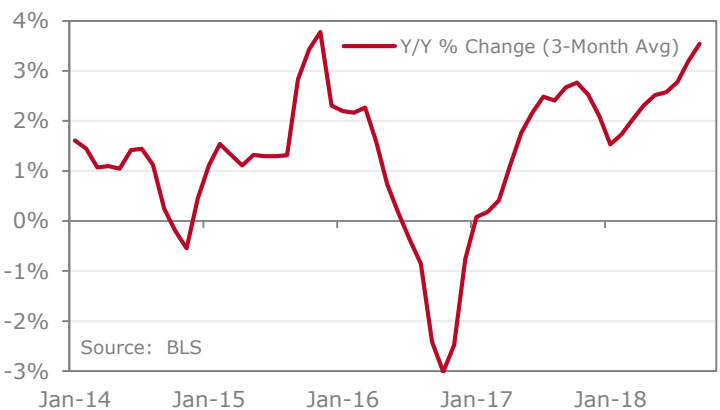
**Restaurant Hourly Earnings**



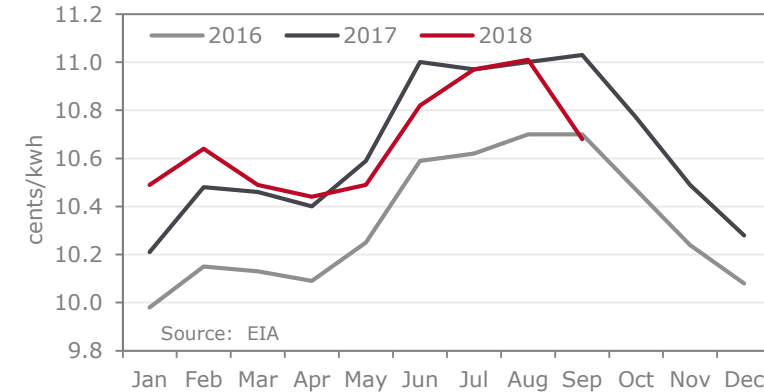
**Heating Oil Retail Prices**



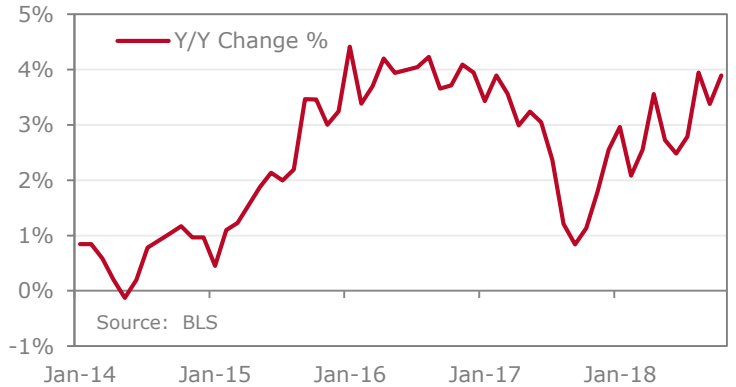
**Supermarket Hourly Earnings (3-Month Moving Avg.)**



**Commercial Electricity Prices**



**Food Manufacturing Hourly Earnings**



- The U.S. average retail price for natural gas decreased 1% in September, but was up 1% from the prior year.
- The U.S. average heating oil retail price of \$3.38/gallon in October was 3% up from September, and up 34% Y/Y.
- The U.S. average retail electricity price of \$10.68/kWh during September was down 3% from August, and was down 3% from the prior year.

- The restaurant labor index was up 4.4% Y/Y in November, and increased 0.4% from the prior month.
- The 3-month average of the supermarket labor index was up 4% Y/Y in October, and up 0.7% from September.
- The food manufacturing labor index in November was up 4.6% Y/Y, and increased 1.2% from October.

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### General disclosures

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