

# BROILER ECONOMICS

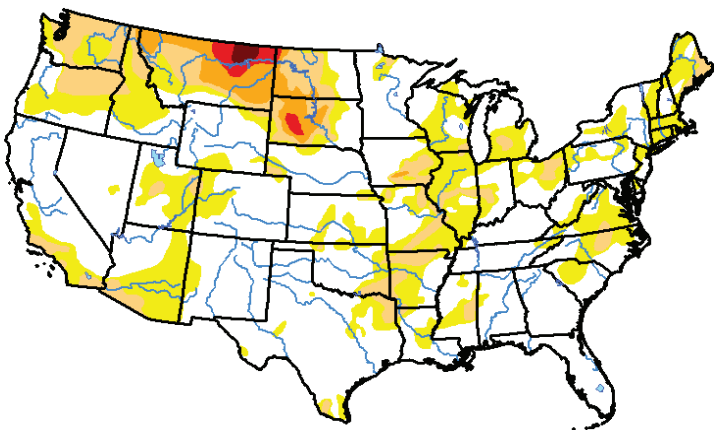
By Dr. Paul Aho

Vol. 25, Issue 5  
October 2017

## GRAIN PRICES WILL EVENTUALLY CYCLE HIGHER

Grain prices are relatively low and friendly to the poultry industry. However, this may be as good as it gets. Looking forward to the next few years, it can be expected that grain prices will begin to rise. After years of falling grain prices, a new phase of rising prices is likely to emerge. Low grain prices provide an incentive to consume and a disincentive to produce, leading inevitably to a period of rising prices. It is easy to predict that there will be cycles; much more difficult is the exact timing of those cycles.

One thing that would jump-start rising grain prices would be a drought. The current harvest was mostly not affected by drought, but, as can be seen on the latest drought monitor below, conditions are now dry. They could remain dry for planting next spring in the Corn Belt although it is far too early to make such a prediction.



### Corn

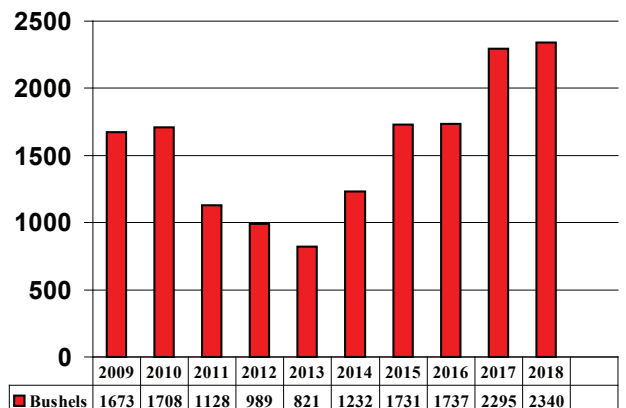
The October USDA World Agricultural Supply and Demand Estimates (WASDE report) projects slightly lower corn yields and acres this crop year. Nevertheless, the ending supply of US corn this crop year is expected to rise a bit compared to last year primarily due to lower exports. World-ending stock is going in the other direction, dropping to a still substantial 201 million metric tons. It is, of course, important to take note of the change in trend from increasing world stocks to falling world stocks. Corn prices appear to be at their low point for this cycle. It is worrisome to hear that China plans to produce large quantities of ethanol.

The US corn crop is now “made,” there is little that could affect the size of the current harvest. With ending stock in 2018 being similar to 2017, the price this crop year is also likely to be similar to the price of the last crop year that ended on August 31.

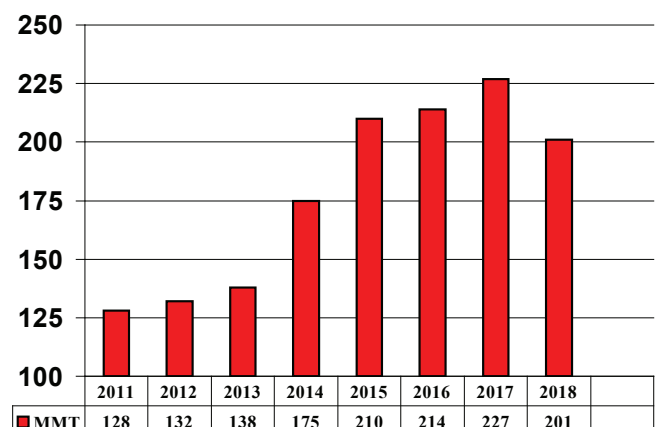
**US Corn Supply and Demand - October  
USDA Billions of Bushels**

	2015-16	2016-17	2017-18
<b>Harvest</b>	13.602	15.148	14.280
<b>Supply Total</b>	15.401	16.942	16.625
<b>Ethanol</b>	5.206	5.438	5.475
<b>Exports</b>	1.898	2.293	1.850
<b>Feed</b>	5.131	5.425	5.450
<b>Total Use</b>	13.662	14.647	14.285
<b>Ending Inventory</b>	1.737	2.295	2.340
<b>Farm Price</b>	\$3.61	\$3.36	\$3.20

**US Ending Stock of Corn  
Millions of Bushels**

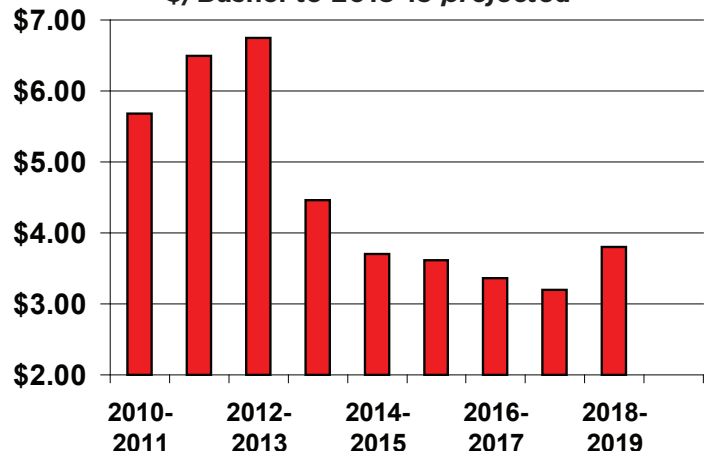


**World Ending Stock of Corn  
Millions Metric Tons**



Corn prices are likely to move sideways in the current crop year. However, in crop year 2018-19, prices may rise in part due to the continued shift of acres from corn to soybeans in the US and a recovery in US exports. In 2018-19, the average price could be closer to \$4.00 per bushel (\$160 per metric ton).

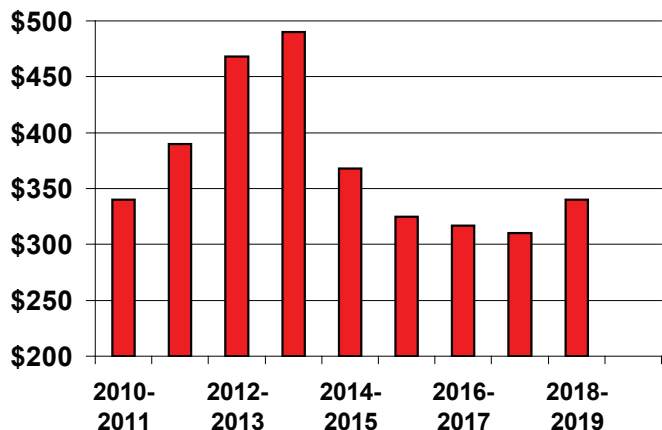
**Average Farm Price of Corn  
\$/Bushel to 2018-19 projected**



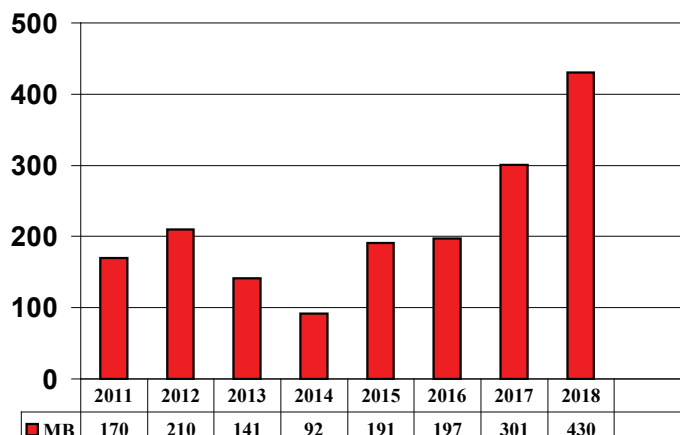
### Soybeans

The October USDA WASDE report held a surprise for soybeans. Both yield and production were estimated to be lower than had been expected. As a result, although ending stock is rising, it is rising slower than expected and may reach a high point this crop year. Like the corn market, soybean prices could rise by crop year 2018-19.

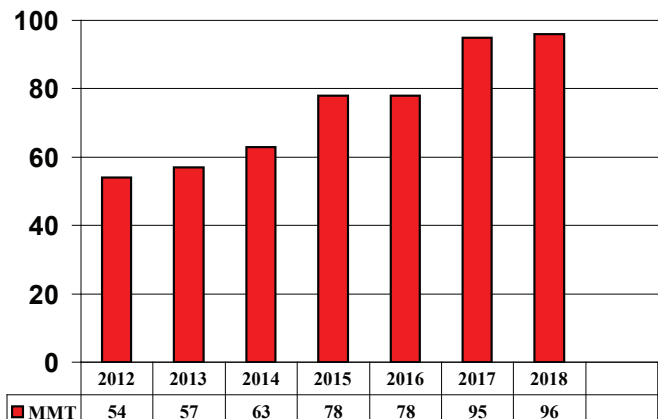
**Average Crop Year Price of Soybean Meal to 2018-19 projected**



**US Ending Stock of Soybeans Millions of Bushels**



**World Ending Stock of Soybeans Millions of Metric Tons**



**US Soybeans - USDA - October - Billions of Bushels**

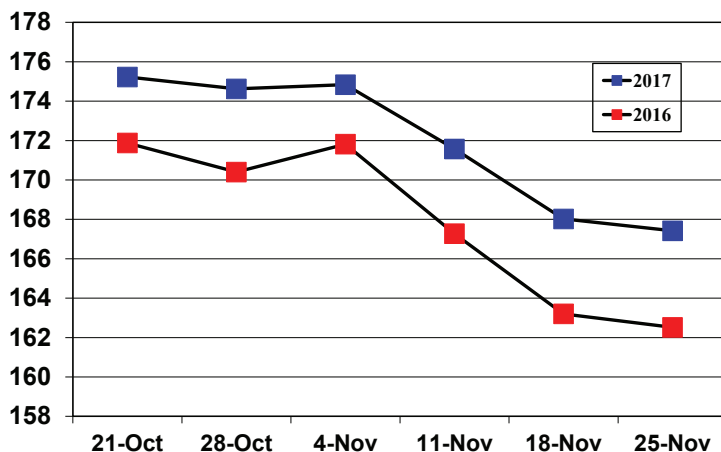
	2015-16	2016-17	2017-18
Harvest	3.926	4.296	4.431
Export	1.886	2.174	2.250
Total Use	3.944	4.214	4.326
Ending Inventory	197	301	430
Meal Price short ton	\$325	\$317	\$315

### Chicken Industry Production

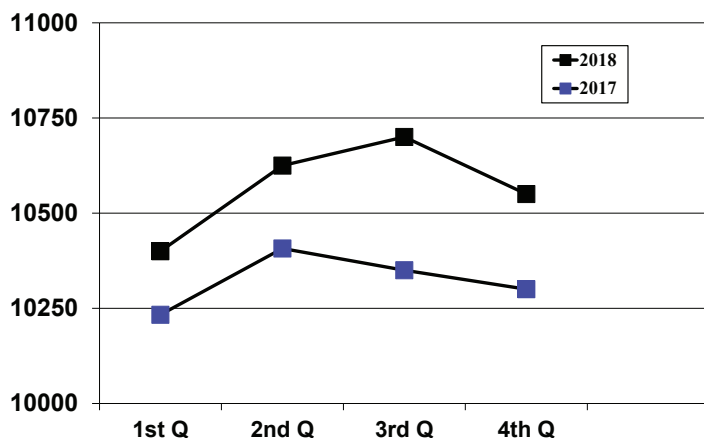
The USDA expects US production of chicken meat to increase 2% this year. A growth rate of 2% is probably the new long term average in this mature market. The days of 5% growth are far behind the US as consumption of chicken nears 100 pounds per person.

The graph below shows weekly chick placement in millions moved forward 7 weeks to estimate chickens processed. Using this method of estimation, processing numbers are running close to 2% over last year. With little increase in average weight, total production will also show a 2% increase this year. Another 2% is projected for next year. However, if current expansion plans are carried out and weights begin to increase, production could accelerate in 2019. Production growth exceeding 2% per year is likely to be temporary.

**Weekly Chick Placement - Millions 7 Weeks Forward - 2017 versus 2016**



**US Quarterly Broiler Production Million Pounds - USDA**



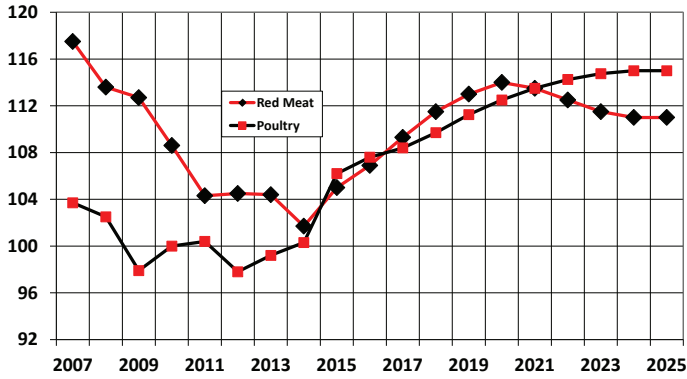
The combination of low grain prices and modest supply growth brought high profitability this year. That profitability is now showing a seasonal decline. It can be expected that the industry will remain profitable through the winter months.

A possible "black swan" event would be a trade dispute with Mexico. Mexico is the number one destination for US chicken exports, buying more than one billion pounds of leg quarter per year. Any disruption in trade with Mexico would have severe consequences for the US chicken industry.

Chicken prices are under some pressure from the increased production of red meats. There will be an additional 1.4 billion pounds of red meat available for domestic use this year and another 1.3 billion pounds next year. So far, demand appears to be keeping up with the supply of both poultry and red meat. This is due in part to rising median income. When grain prices start rising again and/or the growth in median income slows down or drops then supply will outpace demand.

It is interesting to note that total per capita red meat consumption is currently rising faster than poultry consumption. This is logical given three factors; 1) low grain prices, 2) rising median income and 3) the time lag for increased red meat production. When these factors change, poultry consumption will once again outperform red meat consumption. "Outperform" may mean rising slowly or not at all while red meat consumption falls.

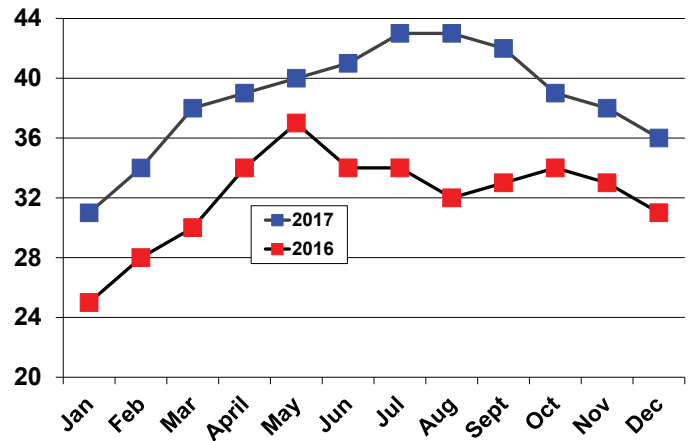
**US Per Capita Consumption of Red Meat and Poultry (lbs)**



Leg Quarters

The highest price for leg quarters last year was reached in May at 37 cents Northeast Price (There is a range in prices for leg quarters with many leg quarters sold at a price lower than the published Northeast price). This year, the peak was 43 cents but now the price is falling as would be expected seasonally.

**Leg Quarter Price - 2016-17 Cents/lb -USDA Northeast Price**



**Per Capita Consumption Per Capita in Pounds - US**

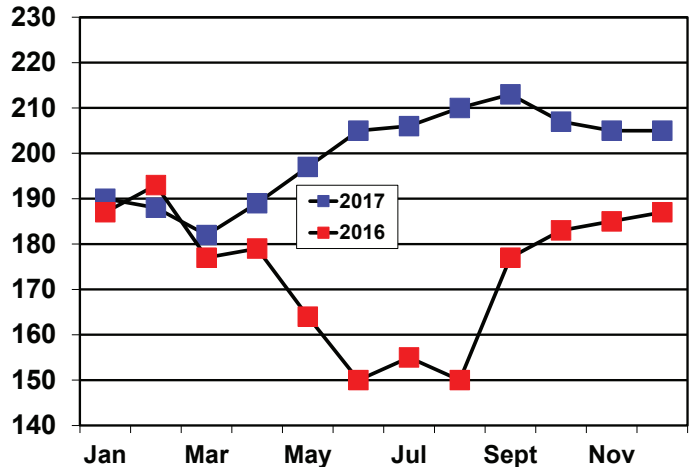
	Pork	Beef	Chicken	Turkey	Total
2006	49	66	87	18	220
2007	51	65	85	18	219
2008	49	63	83	18	213
2009	50	61	80	17	208
2010	48	60	82	16	206
2011	46	57	83	16	205
2012	46	57	80	16	202
2013	47	56	82	16	201
2014	46	54	83	16	202
2015	50	54	89	16	211
2016	50	56	90	17	215
2017	50	58	91	17	218
2018	51	59	92	17	221

Going forward, trade policy with Mexico will be a key factor. If a trade war with Mexico can be avoided, leg quarter prices should rise again into the 40's next year.

Wings

Demand for wings is growing rapidly while supply is relatively constrained. The price of wings rose in the summer when they should not be rising and are now falling slightly but are still maintaining a historically high price. Any price above \$2 per pound is likely to encourage more "boneless wings" (deboned breast meat) which moderates the wing price.

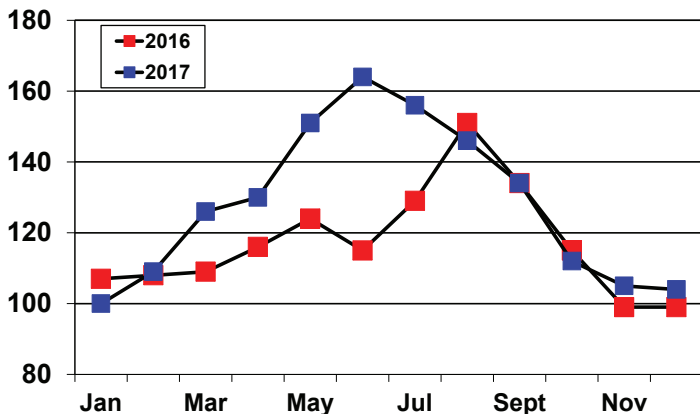
**Whole Wing Prices - 2016-17 USDA - Northeast Price - Cents/lb**



Deboned Breast

Prices for breast meat were much higher than last year in June but are now starting to fall seasonally in line with prices from last year. Due to an earlier reduction in the size of the largest chickens grown for deboning, there was a decreased supply of deboned breast being provided to the market. As a result, prices soared from \$1.00 to \$1.60 per pound. Prices are falling as the earlier size reduction moderates and competition from competing meats increases.

**Deboned Breast - 2016-17 USDA - Northeast Price - Cents/lb**



The US Chicken industry was highly profitable this year and continues to be profitable, but profitability is likely to decline seasonally in the coming months before recovering in the spring.

**October 2017**

Leg Quarters	\$ 0.38 per pound
Deboned Breast	\$ 1.11 per pound
Wings	\$ 2.07
Chicago Corn	\$ 3.50 per bushel
Soybean Meal	\$ 322/Ton
Total Cost of Eviscerated Chicken	\$ 0.67
Revenue	\$ 0.75
Gain (Loss) per pound	\$ 0.08

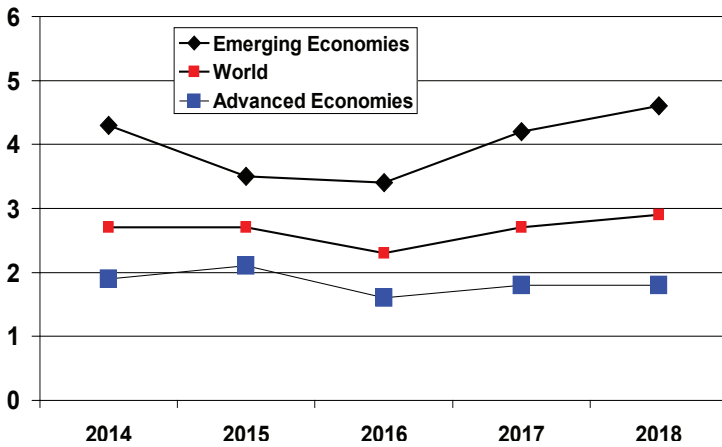
**December 2017**

Leg Quarters	\$ 0.36 per pound
Deboned Breast	\$ 1.05 per pound
Wings	\$ 2.00
Chicago Corn	\$ 3.50 per bushel
Soybean Meal	\$ 322/Ton
Total Cost of Eviscerated Chicken	\$ 0.67
Revenue	\$ 0.71
Gain (Loss) per pound	\$ 0.04

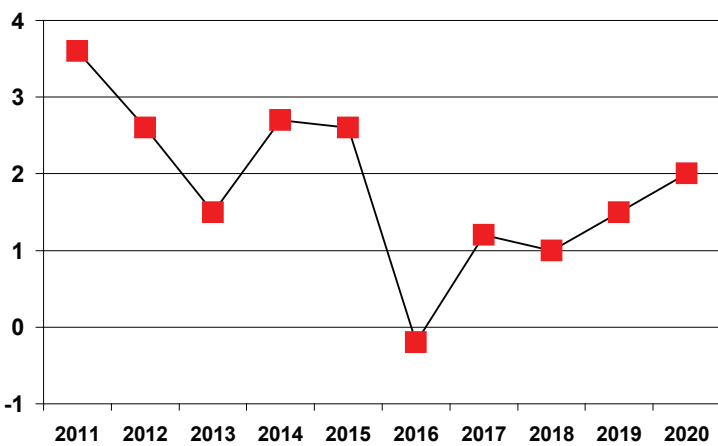
World Chicken Growth Rate

World economic growth and per capita income are both rising substantially. That would normally result in a rapid growth in world chicken production. However, chicken production fell last year and is now rising at only 1% per year. The reason is China. China's production is down over 2 million metric tons over the last three years due to avian influenza, limited availability of genetics, weak prices and soft demand (caused to a great extent by fears about avian influenza). Surely by 2019, conditions will finally improve in China and the world chicken growth rate will once again be more closely correlated to world economic growth.

**Economic Growth Rate**



**World Chicken Growth Rate**



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Dr. Paul Aho is an international agribusiness economist specializing in projects related to the poultry industry and has been a prolific writer in trade journals in both the United States and in Latin America. Dr. Aho now operates his own consulting company called "Poultry Perspective". In this role he works around the world with poultry managers and government policy makers.



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