

Broiler Economics

By Dr. Paul Aho

GLOBAL TRADE TREMORS

Global trade tremors are affecting the chicken export prospects of both Brazil and the United States and could affect the entire world chicken industry. Brazil is battling trade problems with the EU and Saudi Arabia while the NAFTA renegotiation with Mexico and Canada puts US poultry exports in danger. Depending on how these disputes work themselves out, there could be either little change or a significant impact on three world benchmark prices, deboned breast, whole chicken and leg quarters.

Brazil will suffer a significant drop in exports of breast meat to the EU and to a lesser degree whole bird exports to the Middle East. That will tend to increase the world price of those products while decreasing their price in Brazil.

The US does not compete directly with Brazil in those two products but faces the worry of how NAFTA will be resolved. Mexico is the largest export market for US leg quarters and any disruption to that market would drop leg quarter prices significantly. So far there has been no effect on the price of leg quarters and they continue to flow into Mexico. However, some kind of decision regarding NAFTA is likely to take place this calendar year.

The US chicken market is indirectly affected by the ongoing trade dispute with China. As retaliation for the imposition of US tariffs on Chinese products, it appears almost certain that pork exports from the US to China will be affected. In anticipation of Chinese measures, pork and beef prices have fallen in the US. Although US chicken is not directly exported to China, the falling price of competing meats will limit the ability of chicken prices to rise seasonally this summer.

Another possible effect on the world chicken industry from trade disputes is the proposed Chinese tariff on US soybeans. A 25% tariff on US soybeans would increase the price of soybeans all around the world and lower the price in the United States. Grain farmers in most of the world would surely be happy but poultry producers would not be as pleased. Hopefully all the talk of a trade war will end up being mostly talk. Trade wars reduce the efficiency of the entire world economy and make everyone poorer. The extreme example of this was in the 1930's when trade wars helped send the world economy into a painful economic depression.

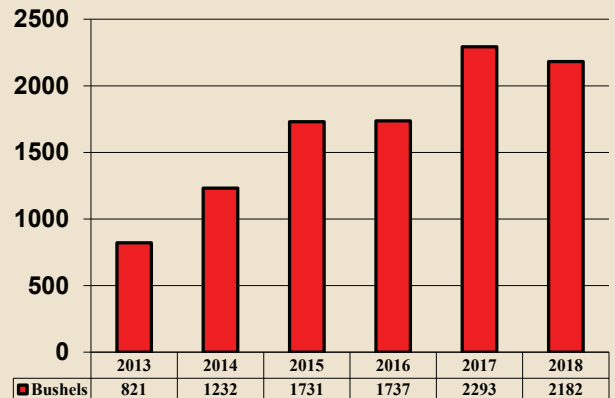
Corn

The April USDA World Agricultural Supply and Demand Estimates (WASDE) report now projects a slightly lower ending stock of US corn this crop year. In addition, world ending stock is also starting to go in the other direction, dropping 30 million metric tons this year. It is important to take note of the change in trend from increasing world stocks to falling world stocks which, in all likelihood, signals the end of relatively low prices for corn for this price cycle. It is particularly worrisome to hear that China plans to produce large quantities of ethanol.

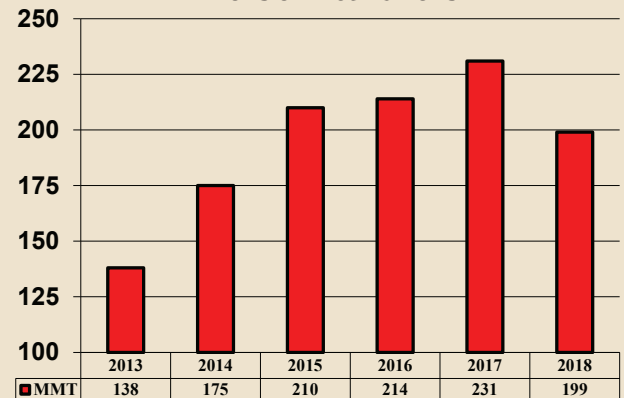
**US Corn Supply and Demand – April
USDA Billions of Bushels**

	2015-16	2016-17	2017-18
Harvest	13.602	15.148	14.604
Supply Total	15.401	16.942	16.947
Ethanol	5.206	5.467	5.575
Exports	1.898	2.293	2.225
Feed	5.131	5.439	5.500
Total Use	13.662	14.649	14.765
Ending Inventory	1.737	2.293	2.182
Farm Price	\$3.61	\$3.35	\$3.35

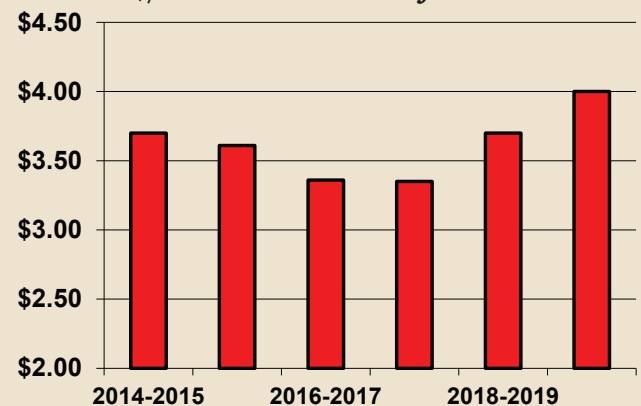
**US Ending Stock of Corn
Millions of Bushels**



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



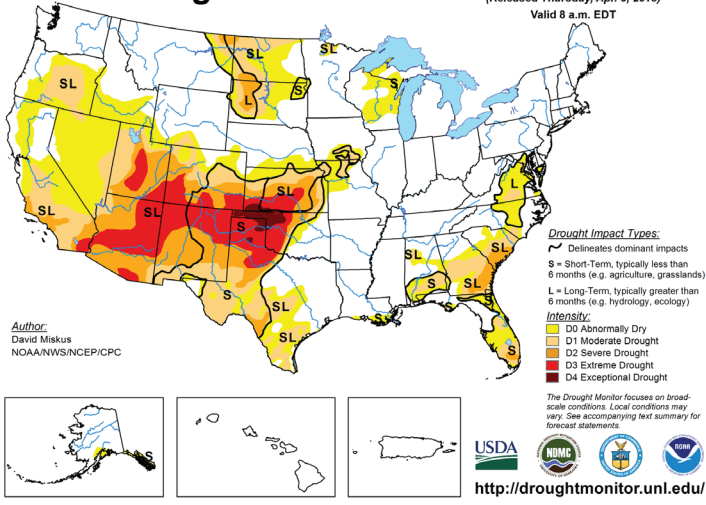
**Average Farm Price of Corn
\$/Bushel to 2019-20 Projected**



It is now clear that the grain harvest in Argentina will be far below last crop year due to drought. Soybean production will be down at least 10 million metric tons and corn production will be down 5 million tons. In the US, the spring planting season is getting off to a slow start with temperatures far below normal in the Corn Belt. Late planting will tend to shift more production to soybeans and less to corn. The drought map (next page) shows the Corn Belt to be mostly free of drought so far, with a nasty drought confined to a wheat growing area.

U.S. Drought Monitor

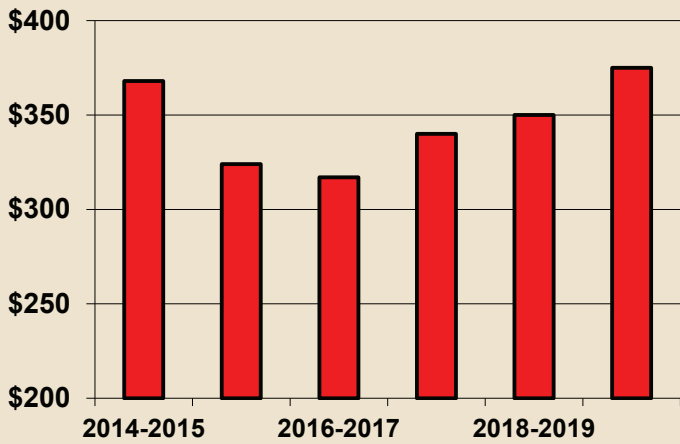
April 3, 2018
(Released Thursday, Apr. 5, 2018)
Valid 8 a.m. EDT



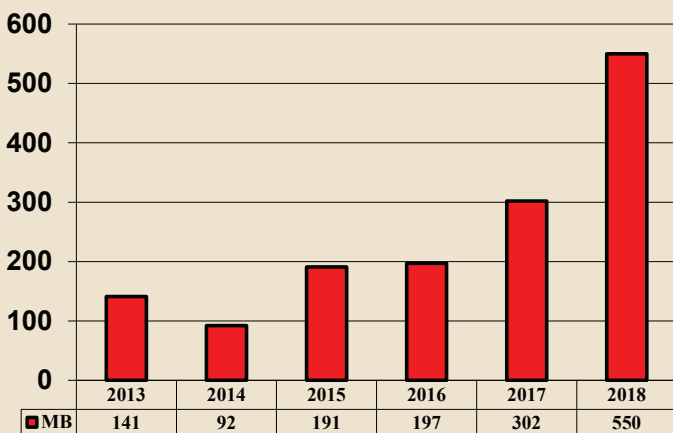
Soybeans

Compared to last crop year, the April USDA WASDE report shows that production is higher and ending stocks are significantly higher in the US. However, world soybean stocks are falling. Despite higher US ending inventories, soybean and soybean meal prices are on the rise driven by world supply and demand.

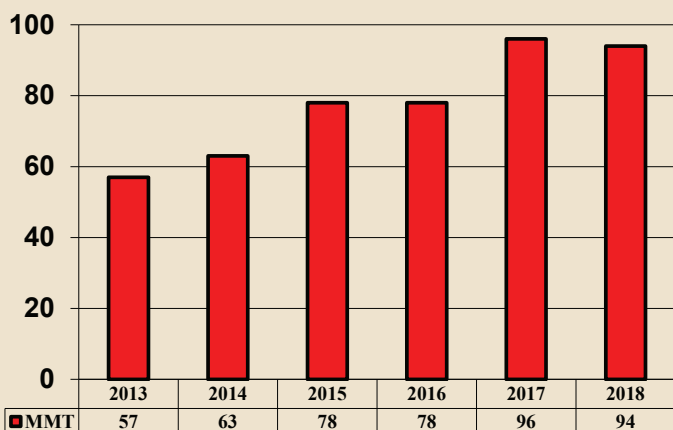
Average Crop Year Price of Soybean Meal
2018-19 Projected



US Ending Stock of Soybeans
Millions of Bushels



World Ending Stock of Soybeans
Millions of Metric Tons



US Soybeans – USDA – April – Billions of Bushels

	2015-16	2016-17	2017-18
Harvest	3.926	4.296	4.392
Export	1.886	2.174	2.065
Total Use	3.944	4.213	4.168
Ending Inventory	197	302	550
Meal Price short ton	\$325	\$317	\$350

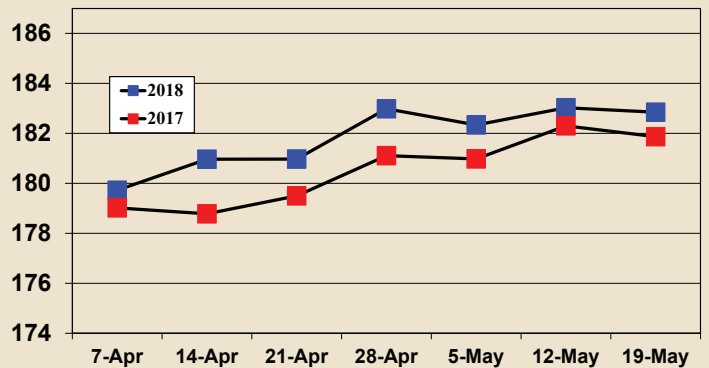
Chicken Industry Production

The USDA expects US production of chicken meat to increase 1.7% this year. In sharp contrast, red meat producers are increasing production by 5% in 2018 after increasing 3.3% in 2017. These increases are unsustainable and could be the cause of a major headache in the meat industry, particularly if China imposes tariffs on US pork and/or beef.

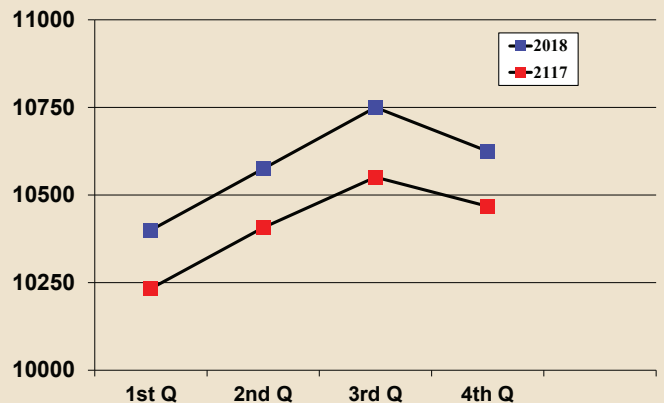
The graph below shows weekly chick placement in millions moved forward 7 weeks to estimate chickens processed. Using this method of estimation, processing numbers are running at about 1% over last year. With a small increase in average weight, the total projected production increase of 1.7% this year by the USDA appears correct.

It is interesting to note that the industry has announced plans to increase bird capacity by over 5% over the next two years. Although six new plants is an unusually high number for a short period of time, the impact on industry expansion will be minimal. The impact is muted because of the recent slowdown in the increase in average weights in the industry and an increase in death losses as the use of antibiotics is withdrawn from increasing number of birds. New plants need to be built just to maintain a relatively low rate of increase of production each year in contrast to earlier years when increasing average weight accounted for most of the increase in production.

Weekly Chick Placement - Millions
7 Weeks Forward - 2018 versus 2017



US Quarterly Broiler Production
Millions Pounds - USDA



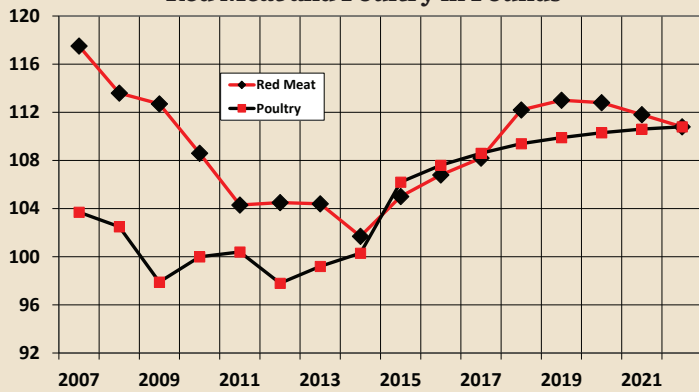
The combination of low grain prices, modest supply growth and moderate competition from red meats brought high profitability to chicken production last year. This year, increased competition from red meats could begin to erode profitability. Last year there was one billion additional pounds of red meat available for domestic use. This year two billion pounds are expected. Until the trade dispute with China began, demand appeared to be keeping up with the supply of both poultry and red meat. However, the prices of both pork and beef have dropped as the trade dispute heated up. Trade problems could quickly make the supply of meat outpace demand.

As mentioned before, a possible “black swan” event would be the disruption of trade 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.

It is interesting to note that total per capita red meat consumption has recently been 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 staying the same while red meat consumption falls.

When will the US meat industry as a whole reach market saturation? Consumption reached 220 pounds in 2006 and then took 12 years to return to 220. It took a long time in part due to a severe recession; nevertheless the difficulty of returning to 220 pounds is an indication that the industry may be close to the end as far as per capita consumption is concerned.

US Per Capita Consumption of Red Meat and Poultry in Pounds



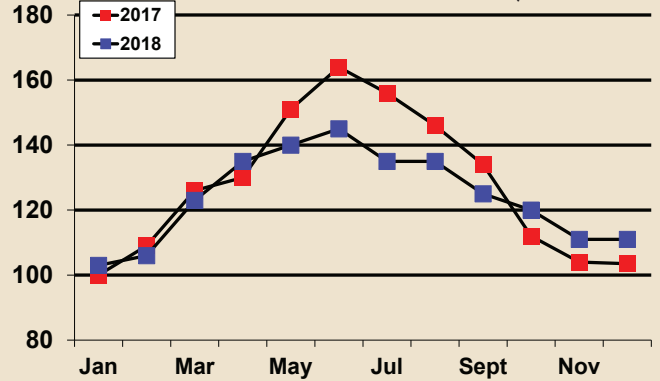
Per Capita Consumption in Pounds - US

	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	57	91	16	217
2018	52	59	92	16	221

Deboned Breast

Prices for deboned breast meat can be expected to be lower this year compared to last primarily This is due to competition from competing meats particularly if red meat that would have been exported ends up on the domestic market. Despite the somewhat lower price for deboned breast, the US industry should once again be profitable this year.

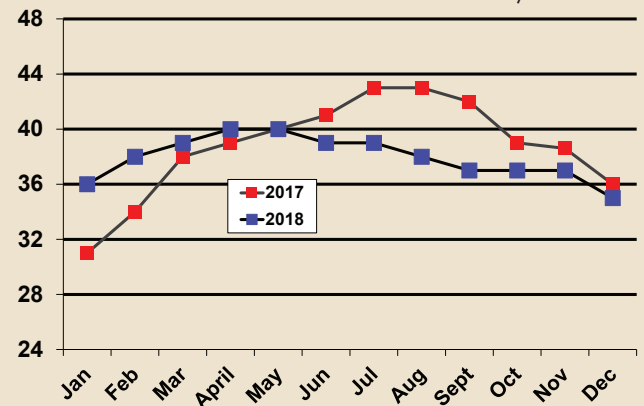
**Deboned Breast - 2018-18
USDA - Northeast Price - Cents/lb**



Leg Quarters

The highest price for leg quarters in 2017 was 43 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 price could be expected to reach a similar level if a trade war with Mexico were to be avoided. However, if the US exits NAFTA, leg quarter prices would tumble.

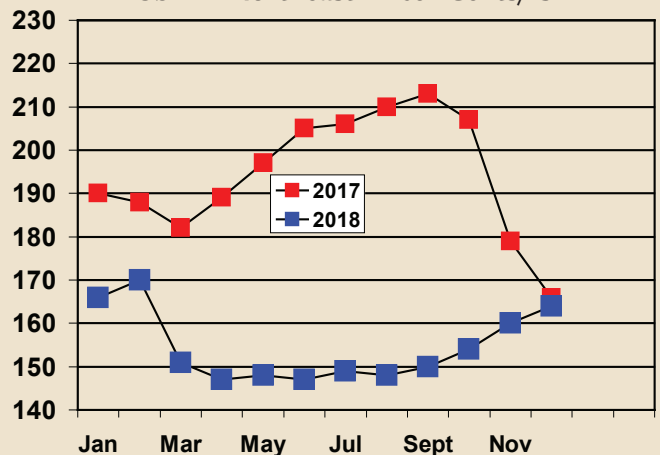
**Leg Quarter Price - 2017-18
USDA - Northeast Price - Cents/lb**



Wings

The price of wings defied gravity when they rose counter-seasonally last summer. As the price difference between deboned breast and wings became ever wider, there was the inevitable substitution of “boneless wings” (deboned breast meat) for bone-in wings. As that trend gathered speed, wing prices fell back down to earth in a surprisingly short period of time. This year prices will remain well below the highest levels of last year.

**Whole Wing Prices - 2017-18
USDA - Northeast Price - Cents/lb**



The production of chicken in the US was highly profitable last year but profitability will erode in 2018 as competing meats begin to have an effect on prices.

April 2018

Leg Quarters	\$ 0.39 per pound
Deboned Breast	\$ 1.35 per pound
Wings	\$ 1.47
Chicago Corn	\$ 3.90 per bushel
Soybean Meal	\$ 383/Ton
Total Cost of Eviscerated Chicken	\$ 0.71
Revenue	\$ 0.75
Gain (Loss) per pound	\$ 0.04

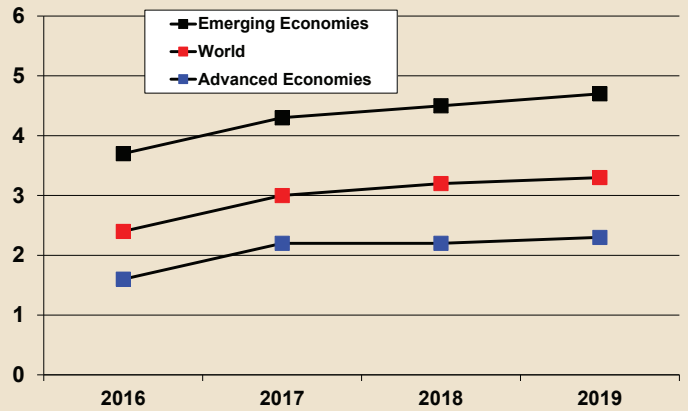
July 2018

Leg Quarters	\$ 0.38 per pound
Deboned Breast	\$ 1.35 per pound
Wings	\$ 1.47
Chicago Corn	\$ 4.00 per bushel
Soybean Meal	\$ 390/Ton
Total Cost of Eviscerated Chicken	\$ 0.72
Revenue	\$ 0.75
Gain (Loss) per pound	\$ 0.03

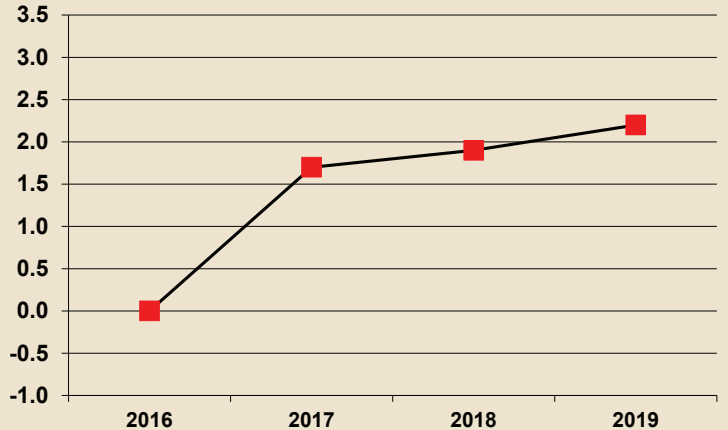
World Chicken Growth Rate

World economic growth and per capita income were both rising recently. If the world can avoid a trade war, income growth should continue. Normally economic growth results in a rapid growth in world chicken production. However, chicken production did not grow at all in 2016 and rose only 1.7% in 2017. 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). Production in China is recovering and world growth this year is expected to be 2%. Growth could rise above 2% next year if trade issues do not escalate.

Economic Growth Rate



World Chicken Growth Rate in %



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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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