Vol. 27, Issue 5
October 2019

Broiler Economics

By Dr. Paul Aho

SOGGY UNCERTAINTY

Earlier this year the ground was too wet to plant corn in many areas. As a result, a yet to be determined amount of corn was never planted. At the end of the season the rains came again. Now it is too wet in many areas to get out the crop that was hard to get in. To make matters worse, snow and frost nipped at the crop in the Upper Midwest, reducing yields again by a yet unknown amount.

Normally at this time of year there is some confidence about whether there is a good crop or a bad crop. This year is different. The USDA estimates that the final yield of corn will be 168.4 bushels per acre. However, scattered and incomplete evidence from the ongoing harvest peg the number lower. It may be another month or longer before the dimensions of the crop can be clearly seen.

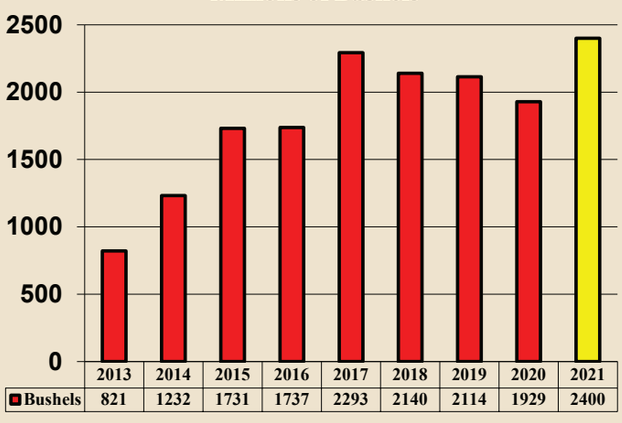
What is known is that this year's crop will be lower than last year and that the ending inventory on August 31, 2020 will be lower than the ending inventory on August 31, 2019. The price of corn will be higher during the current crop year than it was last crop year. The collective wisdom represented by the market in Chicago indicates that corn prices will be around $4 per bushel for most of next 12 months.

Regardless of how badly the 2019 crop turns out, corn buyers can take hope from the very real possibility of a rebound in acres and yield next year. The reduction in corn-ending inventory this crop year could well be replaced by a rebound in ending inventory next crop year. Therefore, while the $4 per bushel now trading in Chicago for March could turn out to be a low while the $4 per bushel for December may well be too high. The odds are favorable that chicken producers can expect lower corn prices later in 2020.

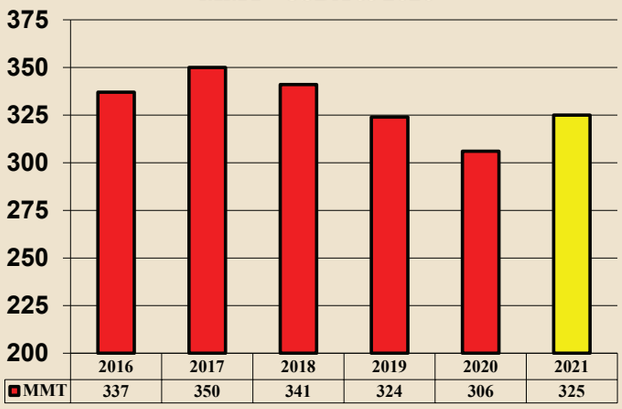
US Corn Supply and Demand – October 2019
USDA to 2019-2020 - Billions of Bushels

	2018-2019	2019-2020	2020-2021
Harvest	14,420	13,779	14,750
Supply Total	16,588	15,944	16,400
Ethanol	5,376	5,400	
Exports	2,065	1,900	
Feed	5,618	5,300	
Total Use	14,474	14,015	14,000
Ending Inventory	2,114	1,929	2,400
Farm Price	$3.61	$3.80	$3.50

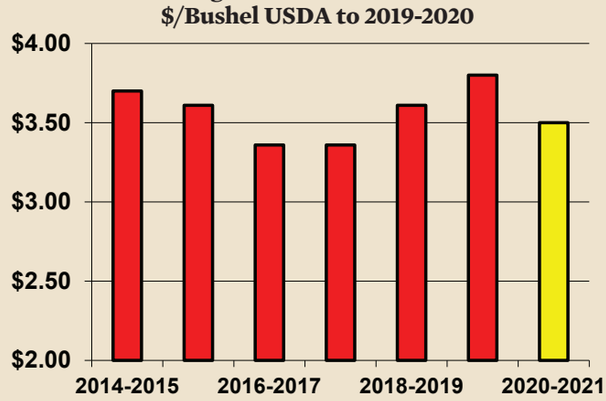
US Ending Stock of Corn
Millions of Bushels



World Ending Stock of Corn
MMT - USDA to 2020



Average US Farm Price of Corn
$/Bushel USDA to 2019-2020



Soybeans

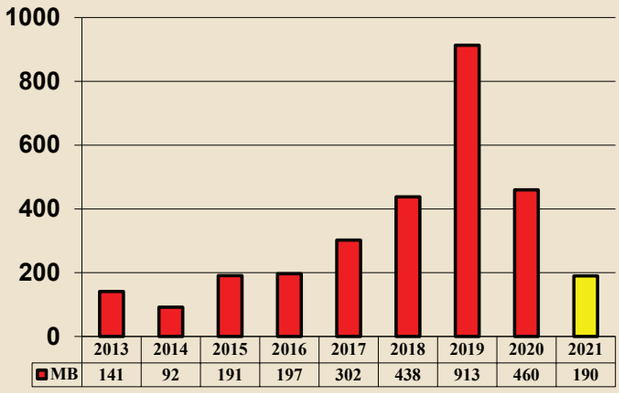
Uncertainty is even greater for soybeans. Like corn, production will be down this year and like corn, ending stock will drop significantly at the end of this crop year. Like corn, wet fields have reduced yields and early frost affected the Upper Midwest. However, unlike corn, soybeans are subject to the huge uncertainty of trade policy. The price of soybeans would be radically different with China as a large dependable customer compared to a few token sales as has been the experience recently. The mini deal with China this month does appears to increase soybean exports to China.

As can be seen on the graph below of US ending stock, the crop year that just ended had a huge ending stock. Yet to be determined is the exact level of production this year and, of course, future trade with China. The better the agriculture deal with China, the higher the price of soybeans. It would be possible for soybean meal (SBM) to reach $400 per short ton during this crop year and average that price in the next crop year given favorable trade conditions. In the graph below, the black numbers are the USDA predictions while the red numbers are what *could* happen in the case of a trade deal with China.

US Soybeans – USDA in Black / Deal with China in Red
October - Billions of Bushels

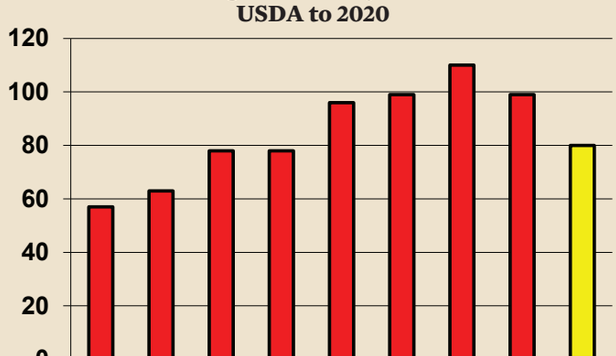
	2018-2019	2019-2020	2020-2021
Harvest	4,428	3,550	4,200
Total Supply	4,880	4,483	4,360
Export	1,748	2,075	2,075
Total Use	3,967	4,323	4,330
Ending Inventory	913	160	190
Meal Price short ton	$308	$375	$400

US Ending Stock of Soybeans
Millions of Bushels - USDA to 2020



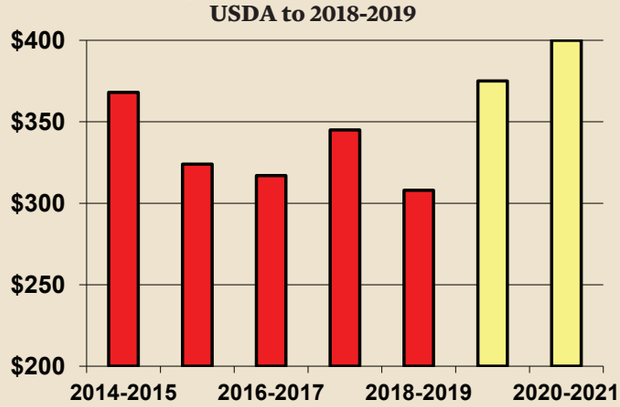
	2013	2014	2015	2016	2017	2018	2019	2020	2021
MB	141	92	191	197	302	438	913	460	190

World Ending Stock of Soybeans in MMT
USDA to 2020



	2013	2014	2015	2016	2017	2018	2019	2020	2021
MMT	57	63	78	78	96	99	110	99	80

Average US Crop Year Price of SBM
USDA to 2018-2019



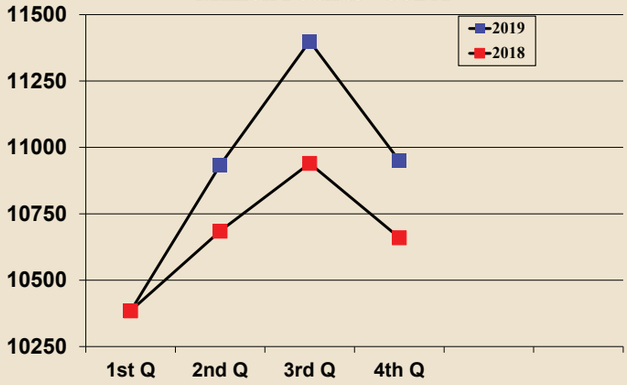
US Chicken Industry

China as well as other Asian countries are suffering a major decline in pork production due to African Swine Fever (ASF). Pork production is expected to fall 20 million metric tons in China alone between 2018 and 2020. Most of the effects of the decline will occur in 2020. With the recent mini trade deal, there is the expectation that the US will participate to a greater degree in the export of pork to China. Could there also be an opening for US chicken?

Even if the opening is only for pork and not chicken, that will not only support pork prices but also indirectly, chicken prices. So far in 2019 scant meat sales to China have helped depress the US market for all meats. It appears that some relief is on the way in the form of a trade deal of some sort.

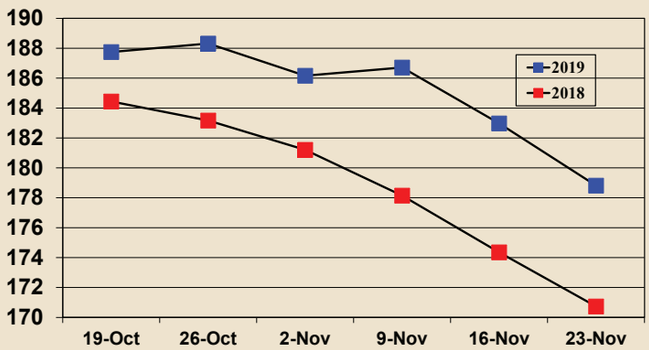
The USDA expects chicken production to rise 2.5% this year. However, as can be seen in the following graph, production increased by a particularly high percentage in the third quarter, 4.2% mostly due to the opening of three new plants. That would help explain the recent weakness in chicken prices.

US Quarterly Broiler Production
Million Pounds - USDA



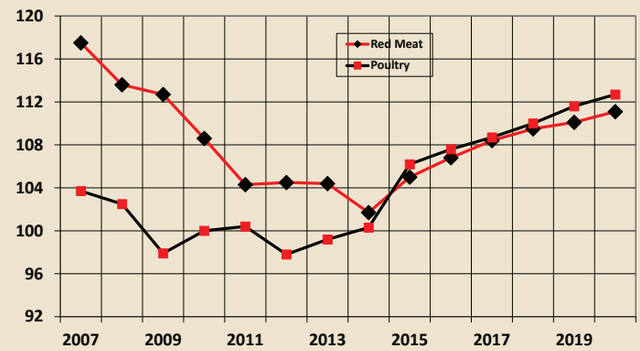
In the fourth quarter, the increase is expected to drop to 2.7% and rise by less then 2% next year. The increase in the fourth quarter may turn out to be higher than the USDA is now expecting given the opening of the three new plants and recent chick placement numbers. Taking the chicken placement numbers forward by 7 weeks gives an indication of production. It appears that an increase of at least 5% is baked in the cake for November of this year. Although the number of chickens processed drop each week in November, as they do each November due to seasonal reasons, the total number of chickens remains 5% above year-ago levels each week in November. If increased weight is added on to increased numbers, the total production increase may be more than 5%, at least for the month of November.

Weekly Chick Placement - Millions
7 Weeks Forward - 2019 versus 2018



From 2014 to 2020 US meat consumption of both red meat and poultry rose steadily year after year. However, per capita consumption may be near the top of the cycle. At the top of the last cycle, consumption reached 220 pounds in 2006, then fell to 201 pounds during the great recession. Now, at what may well be the top of the current cycle, consumption is 224 pounds divided almost exactly between red meat and poultry. It is interesting to note that since 2015 poultry has just barely surpassed red meat. That gap can be expected to widen in the next recession.

US Per Capita Consumption of Red Meat and Poultry lbs
USDA to 2020



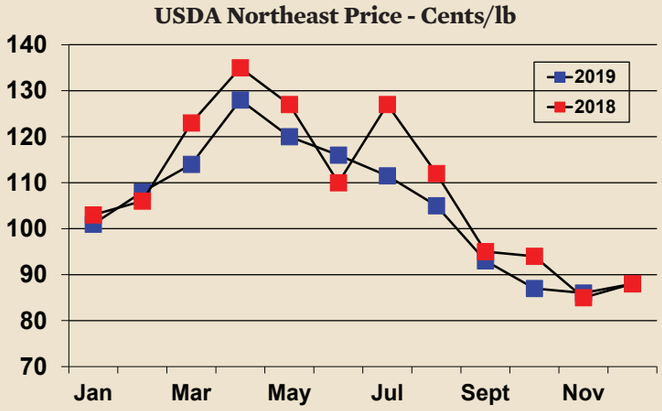
Per Capita Consumption in Pounds - US

Year	Pork	Beef	Chicken	Turkey	Total
Top of the Cycle					
2006	49	66	87	18	220
Bottom of the Cycle					
2013	47	56	82	16	201
Top of the Cycle?					
2020	52	58	95	16	224
Bottom of the Cycle?					
2027?	50	50	93	16	209

Deboned Breast

For decades the price of US skinless boneless breast (SBB) was much higher than the rest of the world. Last year the price of US SBB fell, astonishingly, to below the world price. This year prices once again fell to surprising low levels late in the year fueled by higher production and pressure from an abundance of other meats.

Deboned Breast - 2018-2019
USDA Northeast Price - Cents/lb



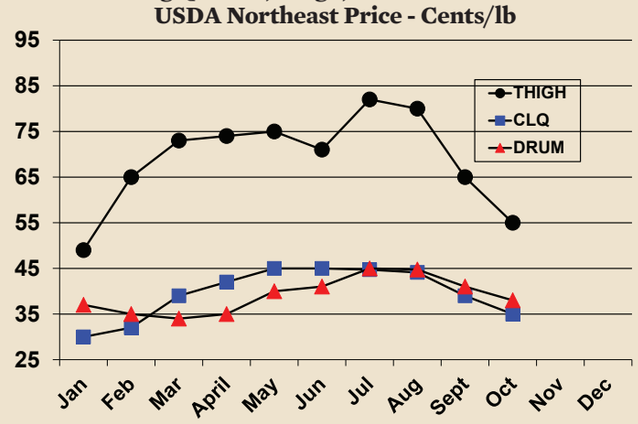
Leg Quarters

Trade and immigration issues loom large in the calculation of leg quarter prices this year. There is no firm trade deal with Mexico yet, only a preliminary agreement. Mexico is the number one destination for US chicken exports buying nearly one billion pounds of leg quarters per year. Cuba is also an important buyer and trade with that country might be disrupted. Should China open up to the US, that country would become a significant buyer of leg quarters (and paws).

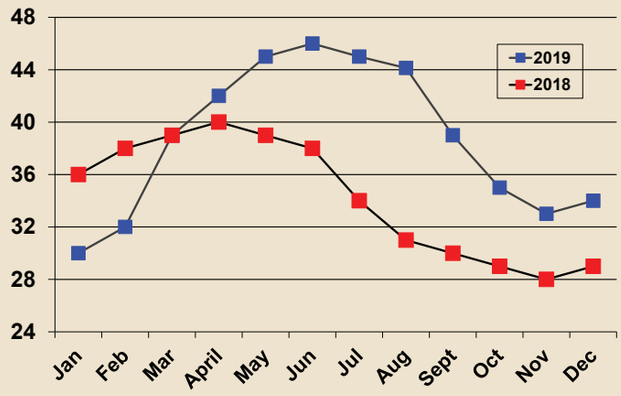
Immigration raids on US plants have had the effect of creating labor shortages and lowering the production of deboned thigh meat for the domestic market which brings down the value of thighs, drums and leg quarters. After a promising start this year, the value of bone-in thigh meat plummeted after the immigration raids.

An important positive factor going forward is the recent trade deal with Japan. This trade deal opens up a market for deboned thigh meat for which the US should have a competitive advantage. As labor issues are sorted out in the US, it can be expected that deboned thigh exports to Japan will expand.

Leg Quarter, Thigh, Drum Price 2019
USDA Northeast Price - Cents/lb



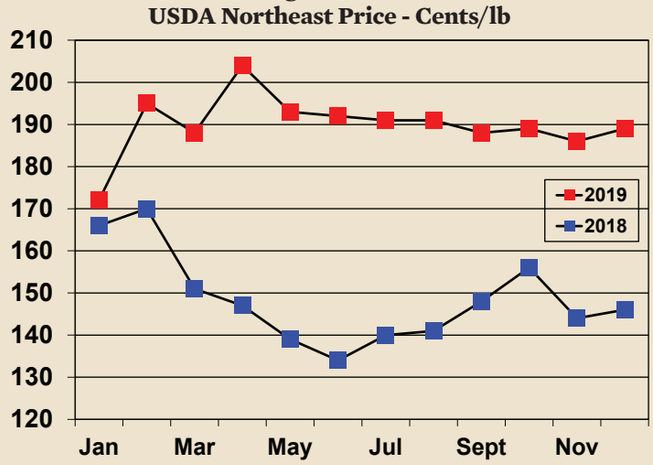
Leg Quarter Price - 2018-2019
USDA Northeast Price - Cents/lb



Wings

Wings are a bright spot for chicken producers and prices can be expected to remain higher than last year. Low unemployment and rising wages create the perfect conditions for high wing prices.

Whole Wing Prices - 2018-2019
USDA Northeast Price - Cents/lb



The production of chicken in the US became, for a short time, highly profitable earlier this year. Since then grain prices rose and chicken prices fell. The industry is no longer (on average) profitable. But profitability should return next year with the normal seasonal increase in prices.

October 2019

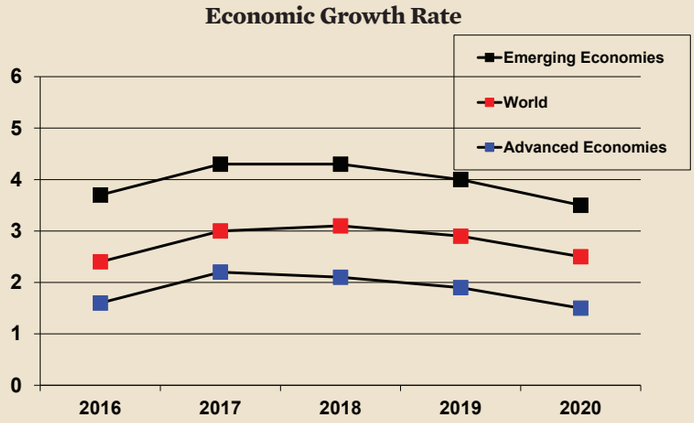
Leg Quarters	$ 0.35 per pound
Deboned Breast	$ 0.87 per pound
Wings	$ 1.89
Chicago Corn	$ 4.00 per bushel
Soybean Meal	$ 310/Ton
Total Cost of Wholesale Chicken	$ 0.75
Revenue	$ 0.71
Gain (Loss) per pound	$ (0.04)

April 2020

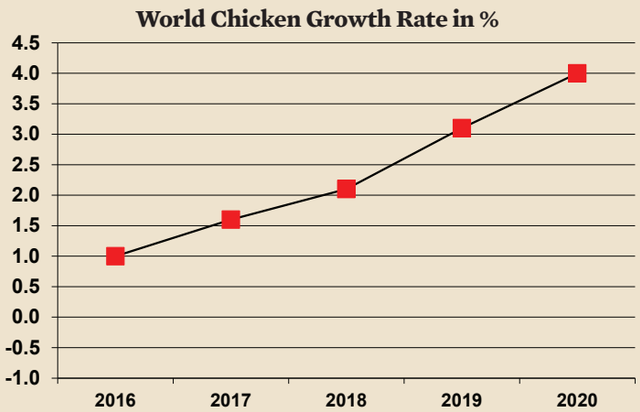
Leg Quarters	$ 0.40 per pound
Deboned Breast	$ 1.15 per pound
Wings	$ 1.89
Chicago Corn	$ 4.00 per bushel
Soybean Meal	$ 350/Ton
Total Cost of Wholesale Chicken	$ 0.77
Revenue	$ 0.79
Gain (Loss) per pound	$ 0.02

World Chicken Growth Rate

World economic growth was rising in 2017 but started to slow down in 2018. It is increasingly likely that world economic growth will decline in the next few years. Declining world economic growth usually restricts the ability of the world chicken industry to grow. However, given sharply declining world pork production, chicken production growth should rise against the economic trend to 4% in 2020 because of the shortage of pork.



World Bank Real GDP to 2019



FAS - USDA to 2020

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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.