

Broiler Economics

By Dr. Paul Aho

IMPACT OF CORONAVIRUS

World grain and poultry meat trade is currently unusually difficult to predict because of coronavirus. World trade with China is heavily impacted. Air travel is nearly halted and the supply chain for the import and export of goods is highly compromised. In particular, ports are clogged with refrigerated containers and there is no place to plug in any arriving containers. Grain shipments are disrupted due to the lack of returning containers to China. Even the mail has halted due to the lack of planes going to China.

The important question now is how long-lasting the damage will be to world trade. It is possible that the disease will fade away in a matter of weeks and the effect on the world economy in general and agriculture specifically will be minimal. However, the possibility of long-lasting and significant effects can not be completely discounted.

In addition to disrupting the supply networks that are the backbone of the global economy, the epidemic is shaking the commodity market. Prices for key raw materials such as copper, iron ore, nickel, aluminum and liquid natural gas have plummeted. Manufacturers, mining companies and commodity producers are all in the process of deciding how much to cut back. The problems in the commodity market reflect the reality that China's economy is the most important consumer of raw materials on the planet.

In the coming weeks, the world may see a 'V' shaped recovery from this decline in Chinese production or something a lot worse -- a continued decline in production and prices. Time will tell.

Corn

The corn market is not immune to the trade disruptions caused by coronavirus. In addition, the market is keeping one eye on a developing record crop in South America. There isn't a lot of good news for commodity bulls.

While the 2019 harvest was not great, it was not a disaster either. The USDA now estimates that the final yield of corn will be 168 bushels per acre, down from 176 last year. The ending inventory on August 31, 2020 will be lower than the ending inventory the year before. The price of corn will be slightly higher on average during the current crop year than it was last crop year.

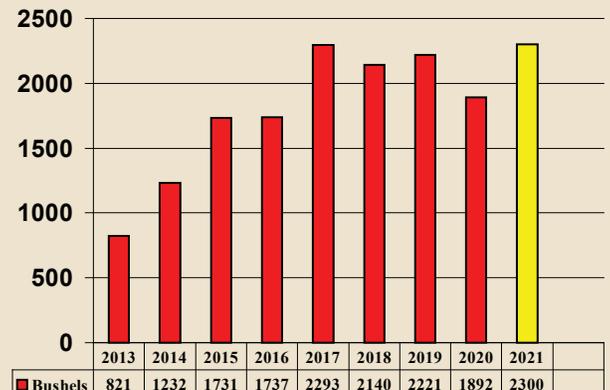
The reduction in corn ending inventory this crop year could well be replaced by a rebound next crop year. The \$3.90 per bushel for December on the futures market today could be too high. The odds are favorable that chicken producers can expect lower corn prices later in 2020.

US Corn Supply and Demand WASDE February 2020

USDA to 2019-2020 - Billions of Bushels

	2018-2019	2019-2020	2020-2021
Harvest	14,340	13,692	14,900
Supply Total	16,509	15,962	
Ethanol	5,605	5,425	
Exports	2,065	1,725	
Feed	5,432	5,525	
Total Use	14,288	14,070	14,500
Ending Inventory	2,221	1,892	2,300
Farm Price	\$3.61	\$3.85	\$3.50

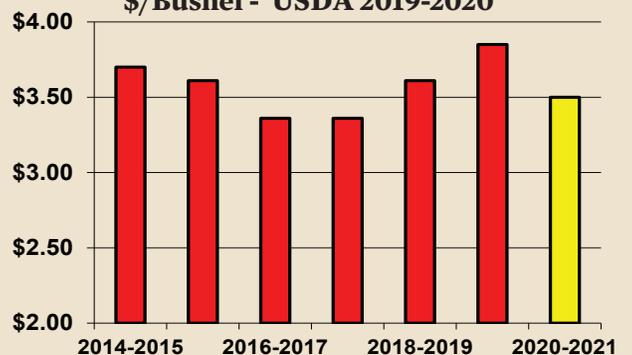
US Ending Stock of Corn
Millions of Bushels



World Ending Stock of Corn
MMT - USDA to 2020



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



Soybeans

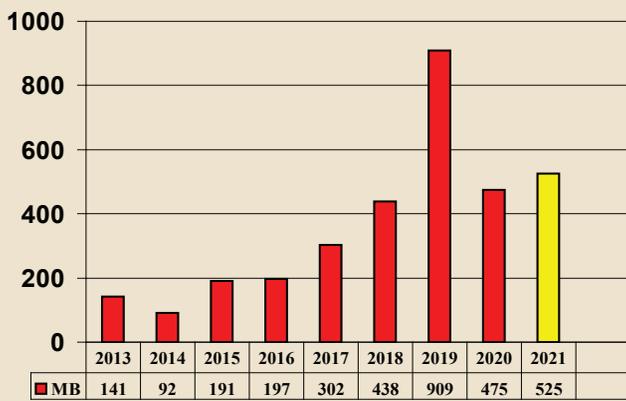
Like corn, soybean production was down last fall and ending stock will drop at the end of this crop year. However, unlike corn, soybeans are subject to greater trade uncertainty. With the first phase of the trade deal now in place, China should be purchasing a lot of soybeans. However, coronavirus has slowed trade temporarily. In addition, China does not need a lot of soybeans due to African Swine Fever. The most likely scenario appears to be increased exports to China this year but not nearly what was expected with the new treaty.

As can be seen on the graph and table on the next page, last crop year had a huge ending stock. This crop year had a smaller harvest and exports to China are a question mark. Putting it all together, the price of soybean meal (SBM) could be about the same next crop year as it is this crop year.

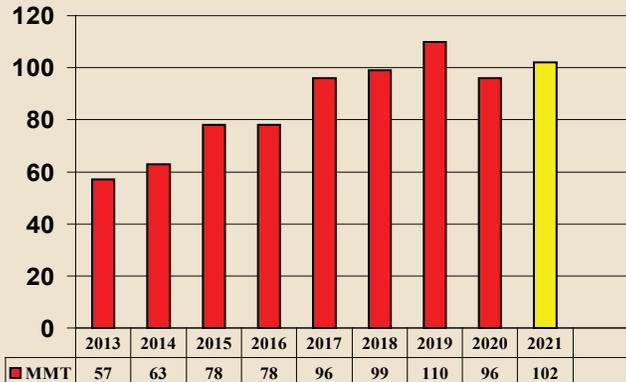
**US Soybeans – USDA to 2019-2020
WASDE February 2020 - Billions of Bushels**

	2018-2019	2019-2020	2020-2021
Harvest	4,428	3,558	4,100
Total Supply	4,880	4,482	4,575
Export	1,748	1,825	1,900
Total Use	3,971	4,058	4,050
Ending Stock Inventory	909	475	525
Meal Price short ton	\$308	\$305	\$305

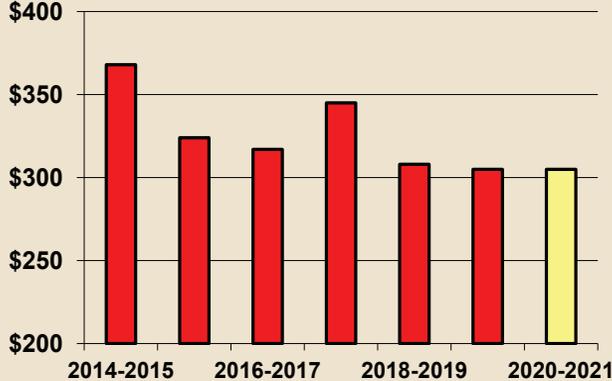
US Ending Stock of Soybeans in Millions of Bushels - USDA to 2020



World Ending Stock of Soybeans MMT - USDA to 2020



Average US Crop Year Price of SBM USDA to 2019-2020



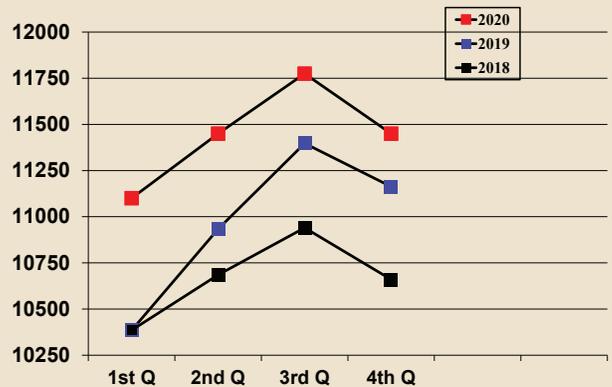
US Chicken Industry

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. There is a shortage of meat protein in China and meat prices there are higher. However, the coronavirus is reducing demand by an unknown amount as fewer people eat out.

China recently opened their market to US chicken with a 30% tariff (down from a 35% tariff). Sales of chicken, especially paws, got off to a great start until coronavirus halted trade because the ports are virtually closed to new containers. The China market could eventually become an important one for the US. Exports to China are sure to consist of a lot of paws and potentially a lot of leg quarters as well. The potential is huge. It could be \$600 million worth of paws and \$400 million worth of legs.

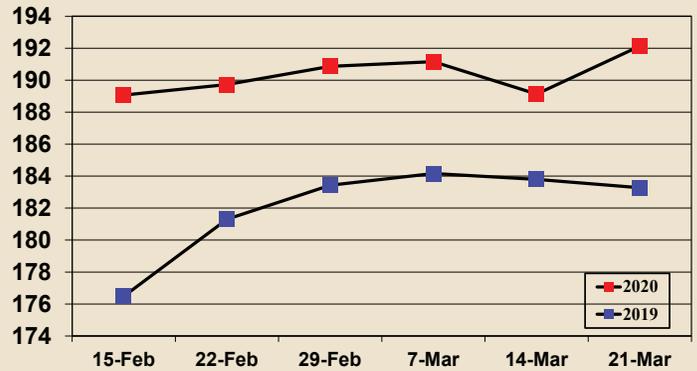
The USDA expects chicken production to rise 4.3% this year. That is a lot of additional production even with strong domestic demand. As can be seen on the graph below, chicken production growth is expected to accelerate to 7% the 1st quarter this year and is expected to expand by 5% in the 2nd quarter. These are big, worrisome numbers but are likely to be temporary. After the opening of several new plants last year and this year, the pace of chicken production increases are likely to slow down in 2021.

US Quarterly Broiler Production Million Pounds - USDA



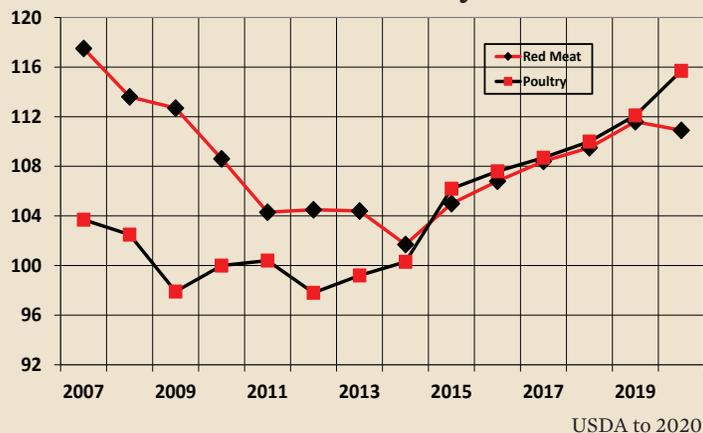
Recent chick placement numbers show how rapidly chicken production is rising. Taking the chicken placement numbers forward by 7 weeks, an increase of 4% is baked in the cake for February and March of this year. If increased weight is added on to increased numbers, the total production increase may be 5% or 6% at least for the next several weeks.

Weekly Chick Placement - Millions 7 Weeks Forward - USDA 2020 versus 2019

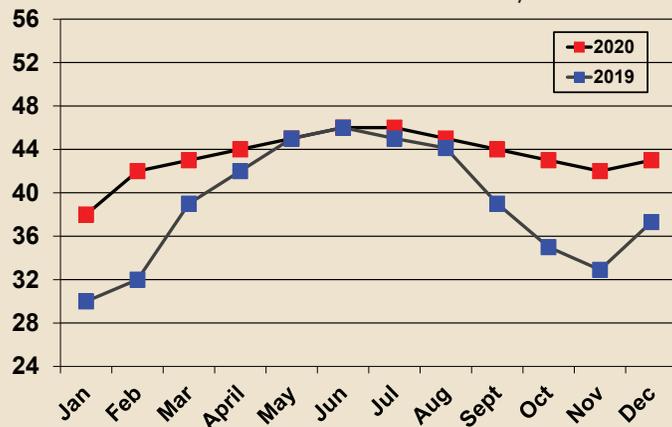


From 2014 to 2020, US consumption of both red meat and poultry rose steadily year after year. However, per capita consumption may be near the top of a cycle. At the top of the last cycle, consumption reached 220 pounds in 2006, then fell to 201 pounds during the great recession. Now, at what may well be the top of the current cycle, consumption is expected to reach 226 pounds in 2020. It is interesting to note that since 2015 poultry just barely surpassed red meat. That gap will widen in 2020 as beef and pork per capita consumption drops while chicken continues to expand.

US Per Capita Consumption of Red Meat and Poultry lbs



Leg Quarter Price - 2019-2020 USDA Northeast Price - Cents/lb



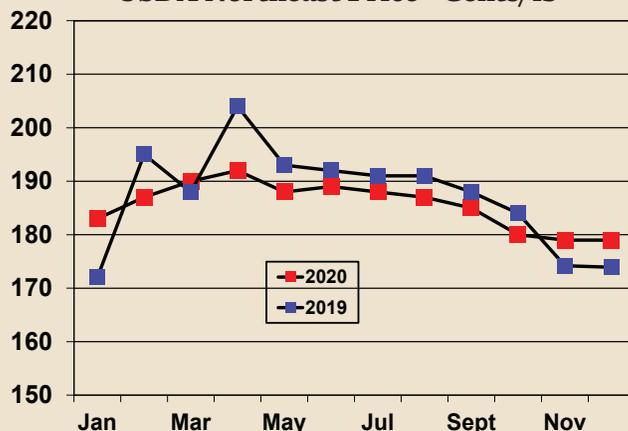
Per Capita Consumption in Pounds - US

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	57	99	16	226
Bottom of the Cycle?					
2027?	50	52	99	16	217

Wings

Wings continue to be a bright spot for chicken producers. Prices can be expected to remain high. Low unemployment and rising wages create the perfect conditions for wing prices.

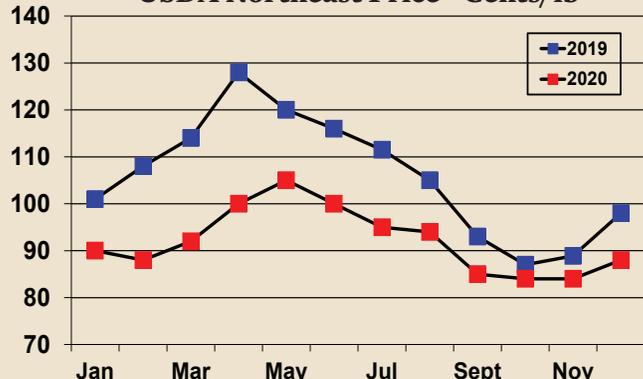
Whole Wing Prices - 2019 to 2020 USDA Northeast Price - Cents/lb



Deboned Breast

For decades the price of US skinless boneless breast (SBB) was much higher than the rest of the world. In 2018, the price of US SBB fell, astonishingly, to below the world price. Last year prices once again fell to surprising low levels late in the year. However, after the China market opened up, SBB increased in price temporarily even though it is unlikely that any SBB will be exported to China. It appears that SBB will continue through the year at a level below that of last year given abundant new supply.

Deboned Breast - 2019 to 2020 USDA Northeast Price - Cents/lb



At the beginning of this calendar year, the production of chicken in the US is slightly profitable. With grain prices relatively low, profitability should continue. In addition, seasonal increases in prices should bring profitability up later in the spring. However, with the expected heavy increase in production, profitability could suffer later in the year.

February 2020

Leg Quarters	\$0.42 per pound
Deboned Breast	\$0.88 per pound
Wings	\$1.89
Chicago Corn	\$3.82 per bushel
Soybean Meal	\$291/Ton
Total Cost of Wholesale Chicken	\$0.74
Revenue	\$0.75
Gain (Loss) per pound	\$0.01

June 2020

Leg Quarters	\$0.45 per pound
Deboned Breast	\$1.00 per pound
Wings	\$1.90
Chicago Corn	\$3.50 per bushel
Soybean Meal	\$291/Ton
Total Cost of Wholesale Chicken	\$0.73
Revenue	\$0.79
Gain (Loss) per pound	\$0.06

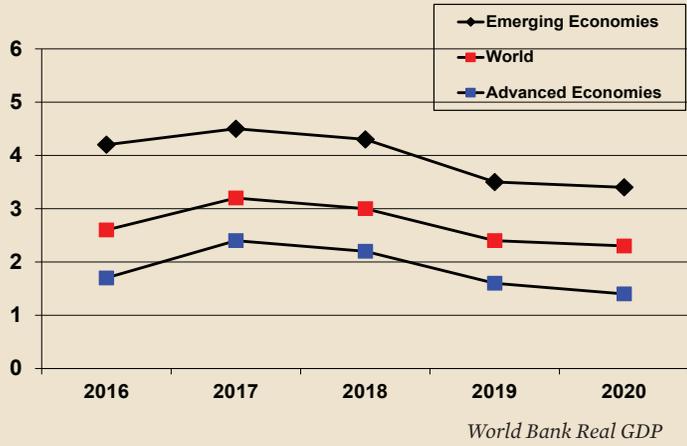
Leg Quarters

Leg quarter prices also responded positively to the trade deal with China so China could become a significant buyer of legs (and paws). Another important positive factor going forward is the recent trade deal with Japan. That trade deal opens a market for deboned thigh meat. In addition, deboned thigh is becoming more popular in the US adding strength to CLQ prices.

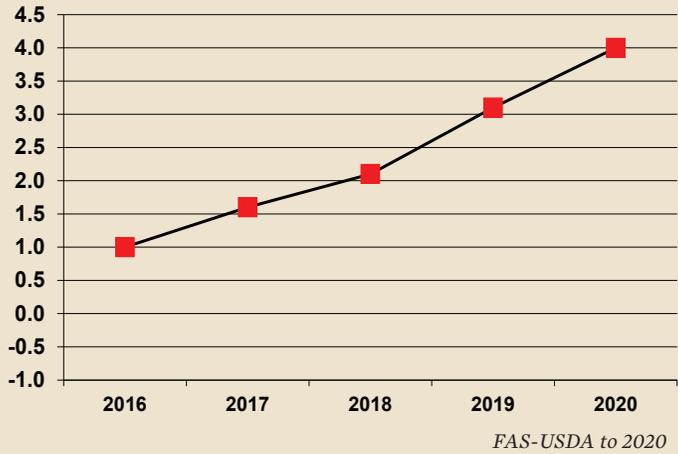
World Chicken Growth Rate

World economic growth was rising in 2017 but started to slow down in 2018. It is likely that world economic growth will continue to decline in 2020 due to coronavirus. 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.

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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