

Broiler Economics

By Dr. Paul Aho

COVID-19 UNCERTAINTY

The outlook for the world economy is still highly uncertain and depends to a large degree on the success of Covid-19 vaccines. If effective vaccines are rolled out during 2021, as is expected, the recessionary effects on the world economy of the pandemic will diminish and a return to growth will be possible.

Until then, the world is suffering a recession that is likely to reduce the world GDP by at least 5% this year. Hopefully the recovery from the coronavirus recession will be a “V” shaped one where the world economy recovers nearly as fast as it slid into the recession. However, the recovery may take longer than expected. The negative effects from the pandemic could linger for years in a worst-case scenario.

The poultry industry is well positioned to ride out this crisis, however long it lasts, despite the supply and demand disruptions faced earlier this year. Processing plants by their very nature must congregate hundreds of people who then run the risk of contracting the disease. The entire meat processing industry struggled to mitigate this problem.

On the demand side, food service was severely affected by the virus. It is estimated that 50% of the demand from food service disappeared overnight in March. Some of that demand has now come back. Another demand problem is that of exports. A worldwide coronavirus recession creates a drag on the prospects for trade of all kinds including chicken meat.

In the competition with other meats, the chicken industry enjoys a significant advantage over other meats because chicken is less expensive. In times of crisis, when income falls, there is some substitution of poultry for other meats. Although the demand for chicken will fall in a severe recession, it will not fall as much as beef and pork.

Corn

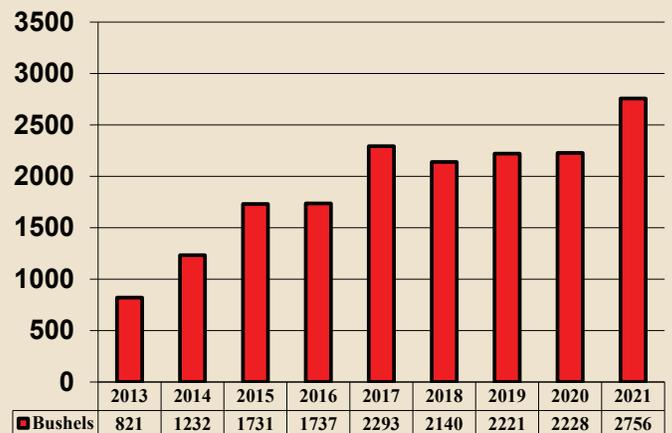
Crop year, 2019-2020 ends this month with an ending inventory the same as last year, 2.2 billion bushels. The price during this current crop year was also the same as last crop year, \$3.60 per bushel on the farm (\$144 per Metric ton). Looking forward to the next crop year, 2020-2021, it is expected that there will be a strong rebound in 2021 ending inventory given more acres and a relatively normal season. Recently, a weather event in Iowa (a Derecho) destroyed an estimated 250 million bushels of corn. Although upsetting to the farmers involved, the loss is small in comparison to the total projected US harvest of 15 billion bushels.

The price of corn is likely to fall at the start of the coming crop year not only due to increased supply but also due to tepid demand by livestock and ethanol plants. The odds are therefore favorable that chicken producers can expect lower corn prices in crop year 2020-2021 particularly at harvest. The next few months could turn out to be a good time to stock up on physical corn and virtual corn in the form of futures and options.

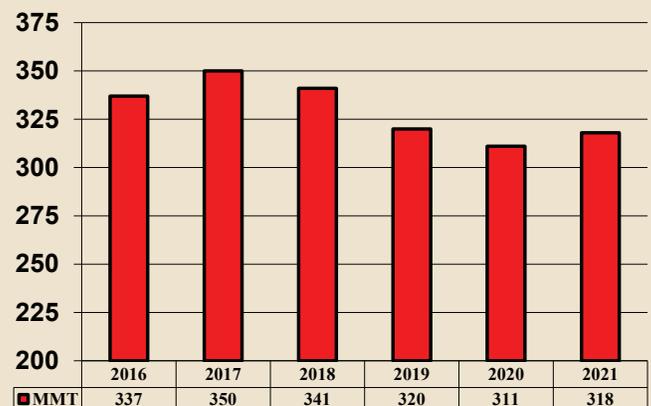
US Corn Supply and Demand – WASDE August 2020 USDA to 2019-2020 - Millions of Bushels

	2018-2019	2019-2020	2020-2021
Harvest	14,340	13,617	15,278
Supply Total	16,509	15,883	17,531
Ethanol	5,378	4,850	5,200
Exports	2,066	1,795	2,225
Feed	5,429	5,600	5,925
Total Use	14,288	13,655	14,775
Ending Inventory	2,221	2,228	2,756
Farm Price	\$3.61	\$3.60	\$3.10

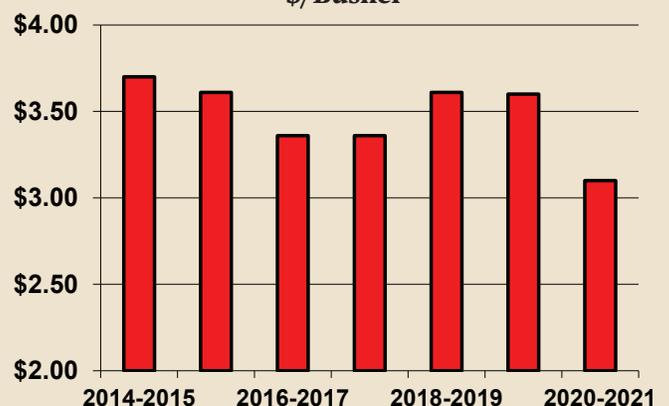
US Ending Stock of Corn - Millions of Bushels



World Ending Stock of Corn - USDA Million Metric Tons



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



Soybeans

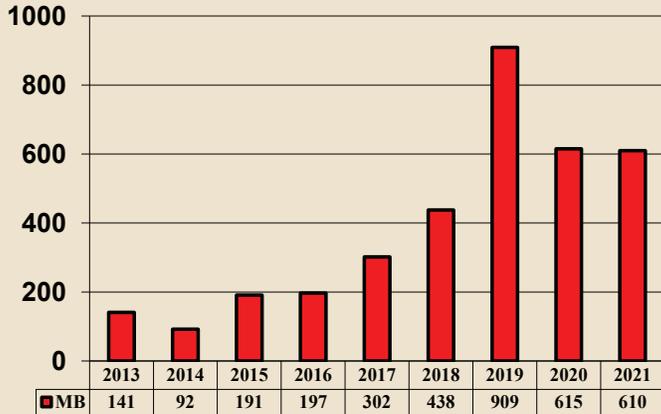
Unlike corn, soybean ending inventory in the next crop year will be falling not rising. It is, therefore, possible that soybean meal prices will rise rather than fall. China is a wild card because it is difficult to predict if exports will rise or fall to that country given the political uncertainties. The August USDA projection shows a slight decline in price for next crop year. However, it would not be surprising if prices rose slightly in the next crop year.

Much will depend on production in South America. The US does not dominate world soybean production as it does corn. Each year, Brazil and Argentina are having a greater and greater effect on the world supply of soybeans. It is too early to predict the next South American harvest at the beginning of 2021 but the discussion will soon be turning to weather in that part of the world.

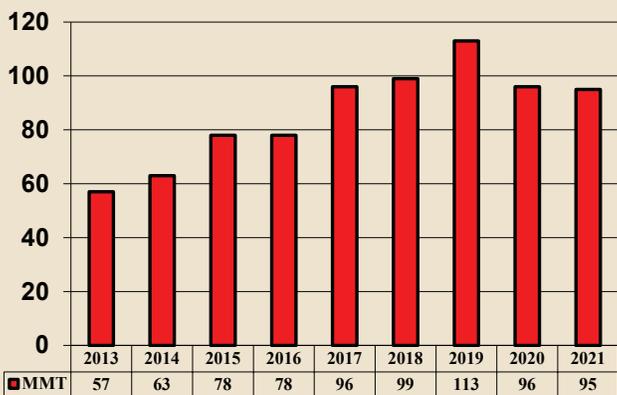
**US Soybeans – USDA to 2019-2020
WASDE August 2020 - Millions of Bushels**

	2018-19	2019-20	2020-21
Harvest	4,428	3,552	4,425
Total Supply	4,880	4,476	5,055
Export	1,752	2,050	2,125
Total Use	3,971	3,862	4,445
Ending Stock Inventory	909	615	610
Meal Price short ton	\$308	\$300	\$290

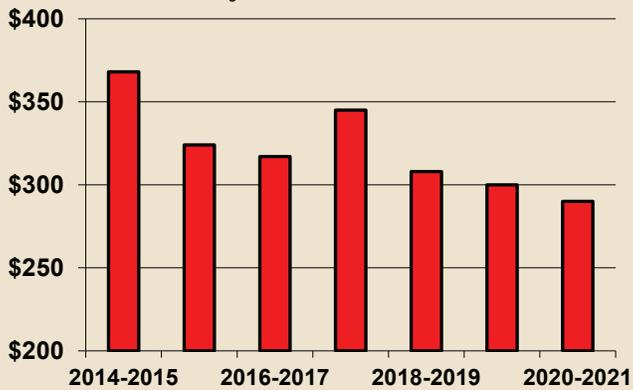
**US Ending Stock of Soybeans - USDA
Millions of Bushels**



**World Ending Stock of Soybeans - USDA
Million Metric Tons**



**Average US Crop Year Price
Soybean Meal - USDA**



US Chicken Industry

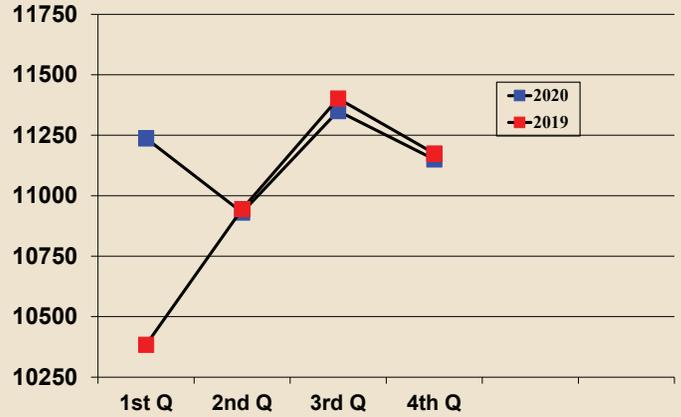
This year has witnessed a major upheaval in the US chicken industry. Food service demand plummeted while supermarket demand increased. Production dropped and rose again. Prices have been volatile as unimaginable events changed the market overnight.

Although chicken is wildly popular in supermarkets, the loss of so much food service demand meant that there was too much chicken supply chasing a smaller total market. Now the chicken market is moving back to something closer to “normal”. However, the new normal may look different from the old normal. Food service sales may rebound to a level below that of before coronavirus for a considerable length of time.

This year China opened their market to US chicken and China became a major market. Assuming politics allow exports to continue, the US is likely to export nearly a billion dollars of chicken each year to China. For the short term, sales to China do not completely overcome the decline in the demand elsewhere. The world is in a recession and the demand for meat is lower.

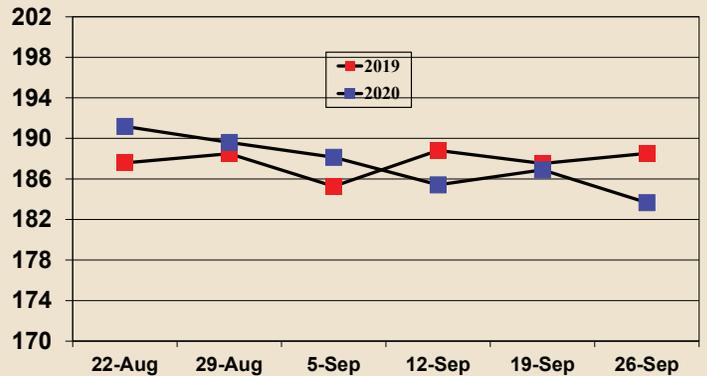
The USDA (August WASDE) now expects chicken production to be 1.5% higher in this calendar year. As can be seen on the graph below, chicken production growth accelerated to 7% year over year during the 1st quarter of this year and then is projected, by the USDA, to mirror the amount produced last year in the final three quarters of the year. When all is said and done, production may well be just slightly higher than last year.

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



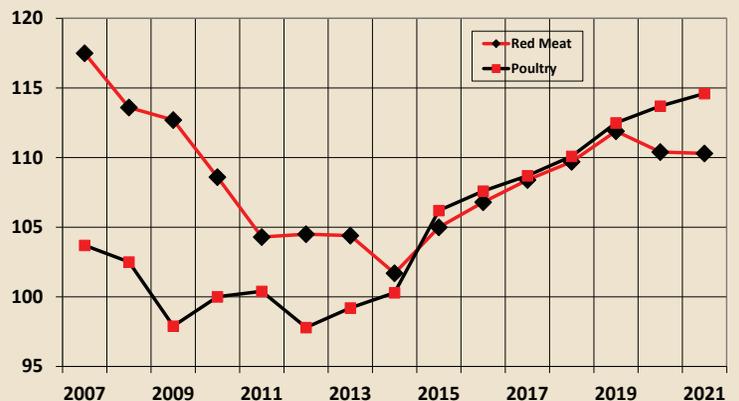
Taking the chick placement numbers forward by 7 weeks, the graph below shows how stable production is; it is running almost the same as last year with no evident trend.

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



After a decline from 2007 to 2013 (the great recession) US consumption of both red meat and poultry rose steadily year after year until 2019. This year, beef and pork started to decline while chicken consumption continued to increase. There is undoubtedly some substitution of chicken for beef and pork during the covid-19 recession. Next year is exceedingly difficult to forecast but it is likely that pork and beef consumption will continue to fall while chicken consumption continues to reap the benefits of offering a lower priced product. However, if the recession persists, even chicken consumption per capita will fall.

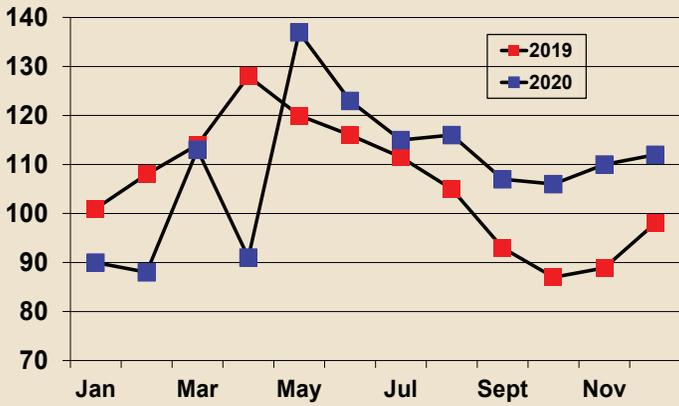
**US Per Capita Consumption of Red Meat and Poultry
USDA - lbs**



Deboned Breast

The price of deboned breast has been on a roller coaster this year. Prices rose during the supermarket hoarding phase, fell due to the fall off in food service, rose when some plants closed and then fell when the plants reopened. Breast meat prices appear to be on track to surpass year earlier numbers (which were extremely low) for the remainder of this year.

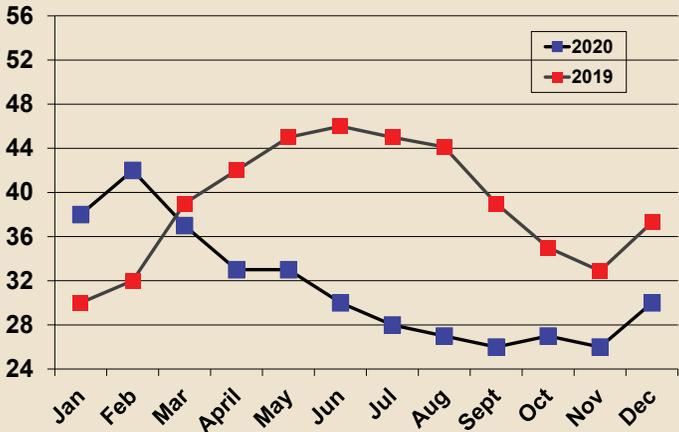
Deboned Breast - 2019-2020
USDA Northeast Price - Cents/lb



Leg Quarters

Leg quarter prices are highly dependent on the export market. The good news from China is being offset by the bad news from the rest of the world. For example, oil exporting countries are an important part of the chicken export market. With lower oil prices those countries are importing less meat.

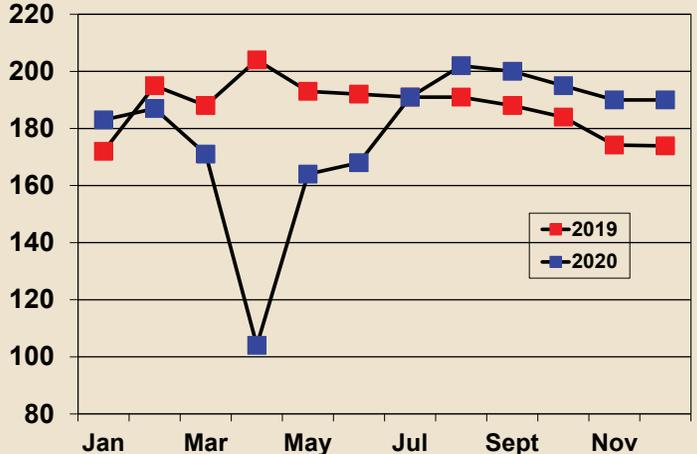
Leg Quarter Price - 2019-2020
USDA Northeast Price - Cents/lb



Wings

Nowhere was the collapse of food service demand more evident than in the wing market. High unemployment, falling wages, sports being cancelled, and restaurants and bars being closed created the perfect storm for wing prices. Surprisingly, wing prices bounced right back in May. Even economic calamity will not keep Americans from their beloved wings.

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



At the beginning of this calendar year, the production of chicken in the US was slightly profitable. Then the industry suffered a period of losses. The most likely scenario for the rest of the year is that the industry remains somewhat profitable.

August 2020

Leg Quarters	\$0.28 per pound
Deboned Breast	\$1.16 per pound
Wings	\$1.98
Chicago Corn	\$3.24 per bushel
Soybean Meal	\$291/Ton
Total Cost of Wholesale Chicken	\$0.72
Revenue	\$0.75
Gain (Loss) per pound	\$0.03

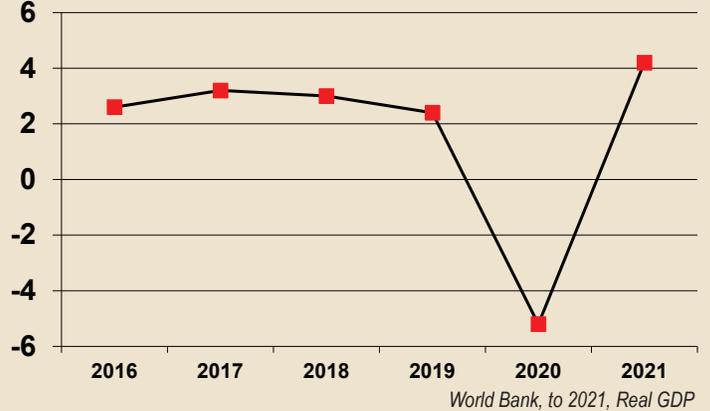
October 2020

Leg Quarters	\$0.28 per pound
Deboned Breast	\$1.00 per pound
Wings	\$1.98
Chicago Corn	\$3.00 per bushel
Soybean Meal	\$290/Ton
Total Cost of Wholesale Chicken	\$0.71
Revenue	\$0.74
Gain (Loss) per pound	\$0.03

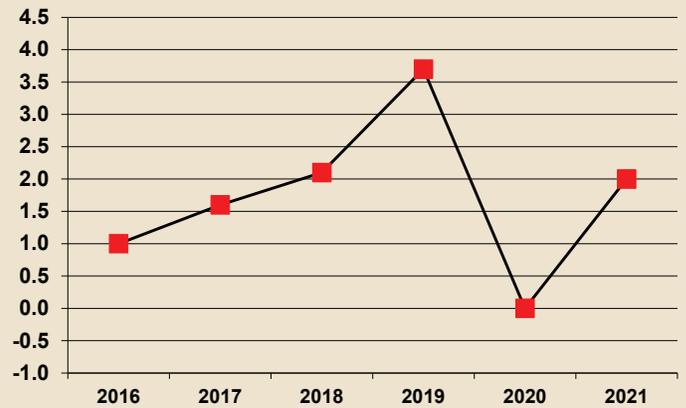
World and Chicken Growth Rate

World economic growth is taking a dive in 2020. The World Bank projects a negative 5.2% growth rate for 2020. The Bank expects growth to return to a positive 4% in 2021. That may be a little optimistic. If economic growth does not rebound so fast, the growth in the demand for all meats will be limited.

World 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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