

VACCINES PROVIDE HOPE FOR 2021

With the approval of vaccines in multiple countries and the beginning of mass vaccinations, there is renewed hope for a return to economic growth worldwide. As people become inoculated over the course of the next year, the recessionary effects on the world economy of the pandemic will diminish and something resembling normal will begin to emerge.

Until the cavalry arrives, the world is suffering a recession that reduced world GDP by approximately 4% this year. Although growth will return next year, the recovery may be halting at first and take longer than expected. A truly robust year of worldwide economic growth may have to wait until 2022.

The demand for animal protein is normally diminished during periods of economic recession since meat is a luxury for most of the world's population. In the case of this recession, the negative effects on protein demand have been mitigated by massive efforts by many governments to prop up consumer income. However, many of those assistance programs are either coming to an end or diminishing in effectiveness. Therefore, the weakest period of demand worldwide for meat may come in the next several months before the vaccines becomes widely available.

The poultry industry is well positioned to ride out this crisis, however long it lasts. In periods of economic recession there is a shift in demand from more expensive meats toward poultry. In addition, the current high price of grains works against competing meats.

Corn

Corn prices rose steadily in the last four months due primarily to increased feed use, higher exports, and substantial crop damage from storms last crop year. Ending inventory is dropping, always a bad sign for grain users. Last crop year, 2019-2020, ended with an inventory of 2.0 billion bushels. This crop year, 2020-2021, ending inventory is expected to drop to just 1.7 billion bushels given an accelerating rate of exports to China. World ending inventories are also falling.

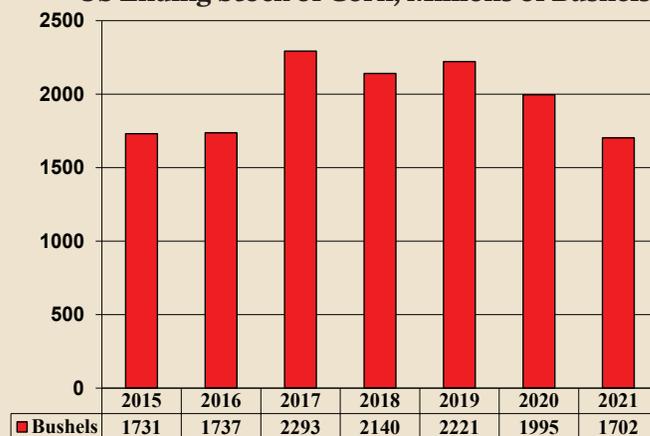
In Chicago, the price of the December corn futures rose from \$3.20 in August to \$4.20 in December. There was clearly a shortage of \$3.20 corn but probably not of \$4.20 corn. That price may mark the highest price for this crop year. Without any additional bullish news, the price could drift sideways over the rest of the current crop year.

Contrary to earlier expectations, the worst time to buy corn this year turned out to be during harvest. A better opportunity may come along if South America has a normal crop in the next few months.

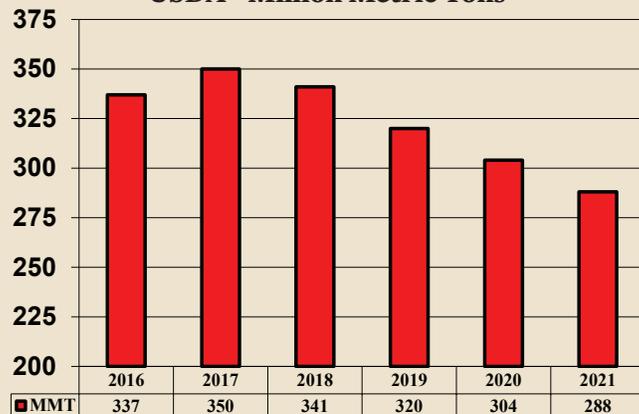
US Corn Supply and Demand – WASDE December 2020 USDA to 2019-2020 - Millions of Bushels

	2018-2019	2019-2020	2020-2021
Harvest	14,340	13,620	14,507
Supply Total	16,509	15,883	16,527
Ethanol	5,378	4,852	5,050
Exports	2,066	1,778	2,650
Feed	5,429	5,827	5,700
Total Use	14,288	13,887	14,825
Ending Inventory	2,221	1,995	1,702
Farm Price	\$3.61	\$3.56	\$4.00

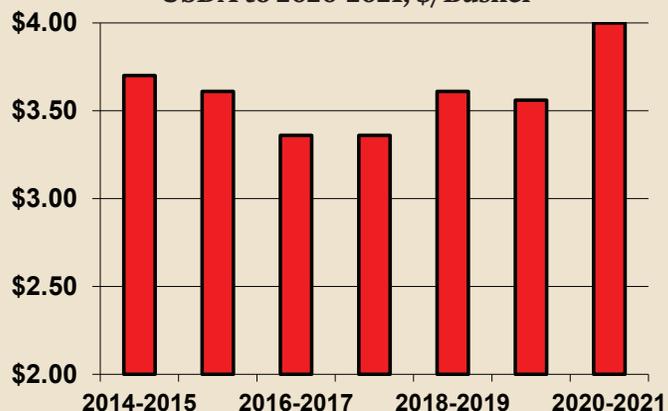
US Ending Stock of Corn, Millions of Bushels



World Ending Stock of Corn USDA - Million Metric Tons



Average US Farm Price of Corn USDA to 2020-2021, \$/Bushel



Soybeans

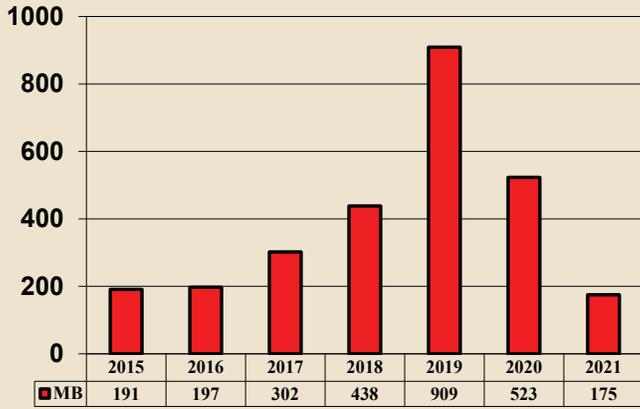
US Soybean ending inventory fell dramatically in the last crop year due to a lower harvest and is expected to fall even further this crop year due to rapidly rising exports. Inventories are projected to fall to pipeline levels, basically no inventory at all. It is, therefore, highly likely that the average price of soybean meal this crop year will be considerably higher than last crop year. China, as always, is a wild card because it is difficult to predict if exports will continue to rise to that country given political uncertainties.

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 have 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 development of a "La Nina" event in the eastern Pacific may bring soybean production down in Argentina and possibly Brazil. Also, political turmoil is affecting Argentine exports. None of the current news appears to be favorable for buyers of soybean meal.

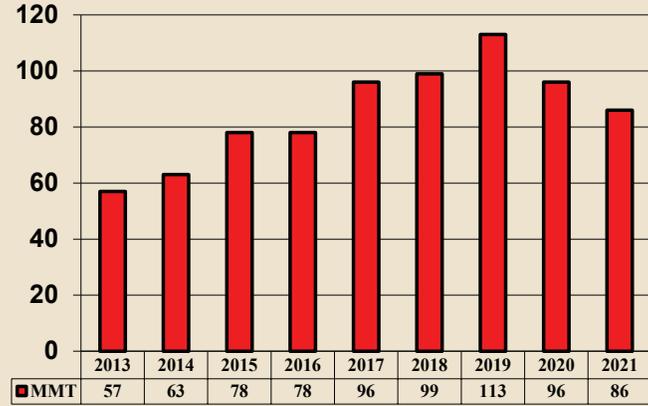
US Soybeans – USDA to 2019-2020 - WASDE December 2020, Millions of Bushels

	2018-2019	2019-2020	2020-2021
Harvest	4,428	3,552	4,170
Total Supply	4,880	4,476	4,709
Export	1,752	1,676	2,200
Total Use	3,971	3,953	4,534
Ending Stock Inventory	909	523	175
Meal Price short ton	\$308	\$300	\$370

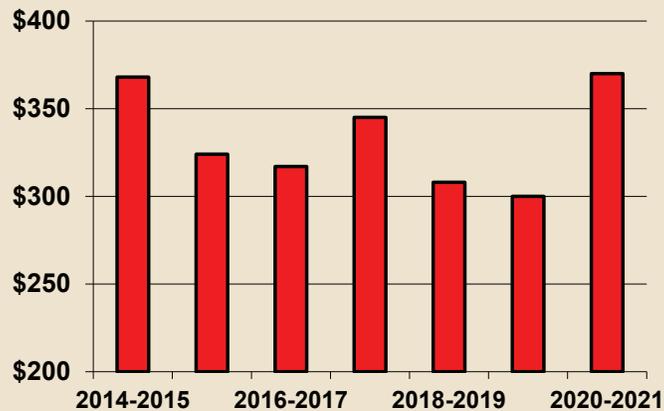
**US Ending Stock of Soybeans
USDA - Millions of Bushels**



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



**Average US Crop Year Price of Soybean Meal
USDA to 2020-2021**



US Chicken Industry

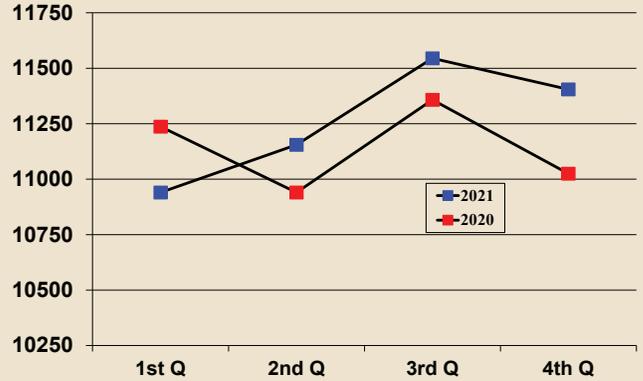
The year 2020 was a strange one for the chicken industry. Food service demand plummeted while supermarket demand increased. Production dropped and rose again. Prices have been volatile as unimaginable events changed the market.

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. After an adjustment in the supply of chickens, the chicken market moved back to something closer to equilibrium. However, falling consumer income as support payments are withdrawn once again threatens to upset the balance of supply and demand. The price of deboned breast is bearing the brunt of the lack of food service demand.

This year China opened their market to US poultry and became a major market. Assuming politics allow exports to continue, the US is on track to export a billion dollars of chicken each year to China. Sales to China this year helped overcome the decline in the demand elsewhere and consisted of both paws and a substantial amount of leg quarters. Paws were 40% of the volume and “other chicken” mostly leg quarters were 60% of volume. Although the world is in a recession, and that reduces the demand for meat in general, China remains a bright spot.

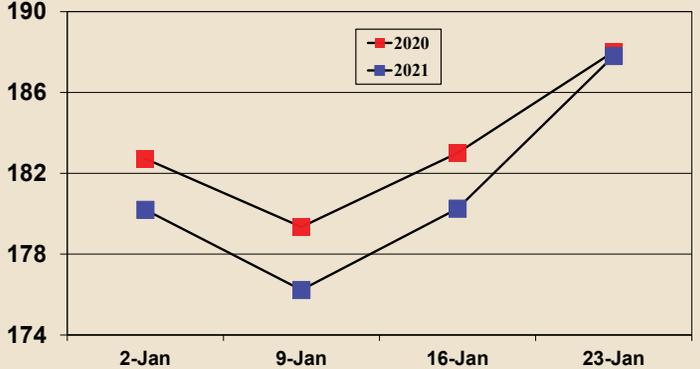
The USDA (December WASDE) expects chicken production to be 1% higher next year. As can be seen on the graph below, chicken production is expected to be lower in the first quarter and higher in every other quarter next year. Lower consumer revenue during this winter coming at the time of seasonally lower chicken prices and higher grain cost will mean that the industry is likely to go through several months of unprofitability. As Covid-19 recedes during the year and the economy begins to recover, consumer demand for meat should recover.

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



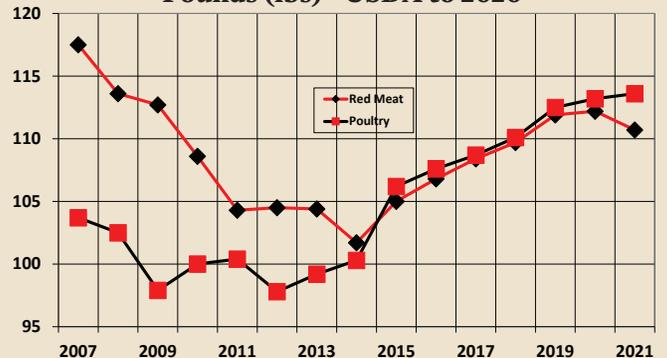
Taking the chick placement numbers forward by 7 weeks, the graph below shows how production is slowly falling at the beginning of next year; running slightly below January of 2020.

**Weekly Chick Placement - Millions
7 Weeks Forward - 2021 versus 2020**



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 leveled out while chicken consumption continued to increase albeit at a slower pace. There is undoubtedly some substitution of chicken for beef and pork going on during the Covid-19 recession. Meat demand overall was supported somewhat by stimulus payments and extra unemployment insurance. As those programs were reduced, demand dropped for all meats. Next year, pork and beef consumption are both likely to fall while chicken consumption continues to rise.

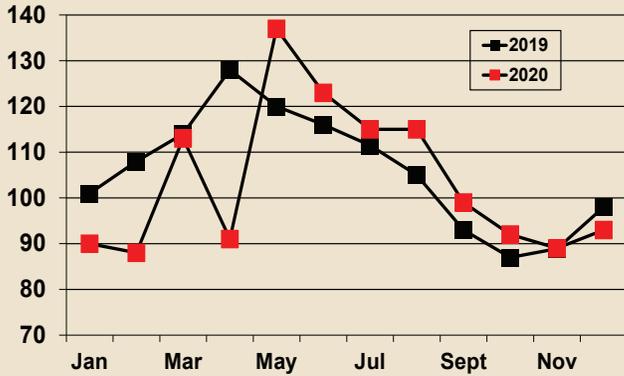
**US Per Capita Consumption of Red Meat and Poultry
Pounds (lbs) - USDA to 2020**



Deboned Breast

The price of deboned breast was 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 have now fallen even below last year's disappointing prices at the end of the year. The lack of food service demand and falling consumer income are weighing heavily on deboned breast meat prices.

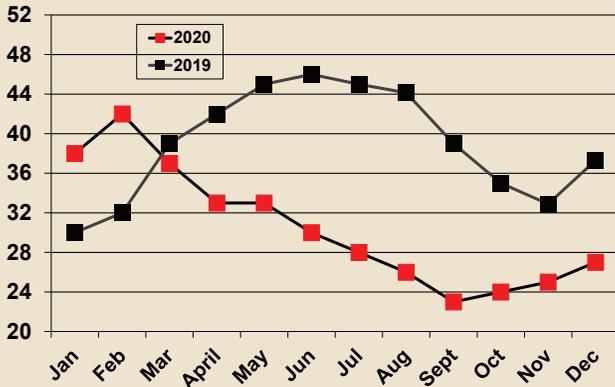
**Deboned Breast - 2019-2020
USDA Northeast Price - Cents/lb**



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. Countries in recession tend to import less meat and the entire world is in a recession at this moment.

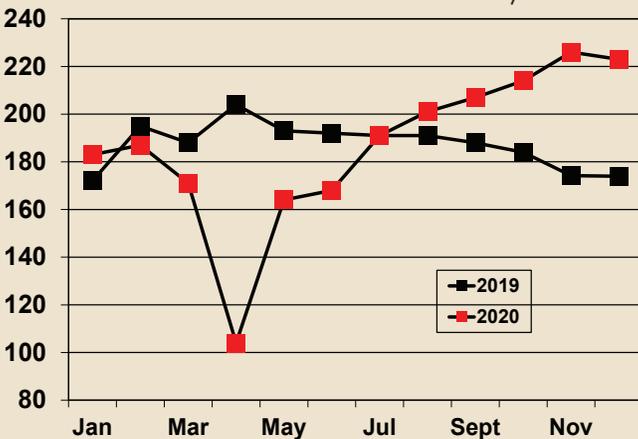
**Leg Quarter Price - 2019-2020
USDA Northeast Price - Cents/lb**



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 were a blow to wing prices, but only temporarily. Wing prices bounced right back in May and continued higher the rest of the year. Part of the reason for the bounce back was lower supply as large bird deboning production dropped. More importantly, even economic and pandemic 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 followed by slight profitability and now losses again. The industry is likely to struggle through the period of seasonal low prices this year and the beginning of next year.

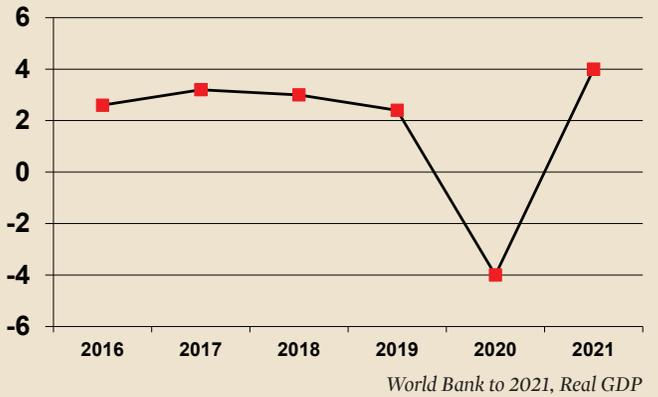
Winter 2020/2021

Leg Quarters	\$0.27 per pound
Deboned Breast	\$0.93 per pound
Wings	\$2.23
Chicago Corn	\$4.20 per bushel
Soybean Meal	\$387/Ton
Total Cost of Wholesale Chicken	\$0.79
Revenue	\$0.71
Gain (Loss) per pound	\$- 0.08

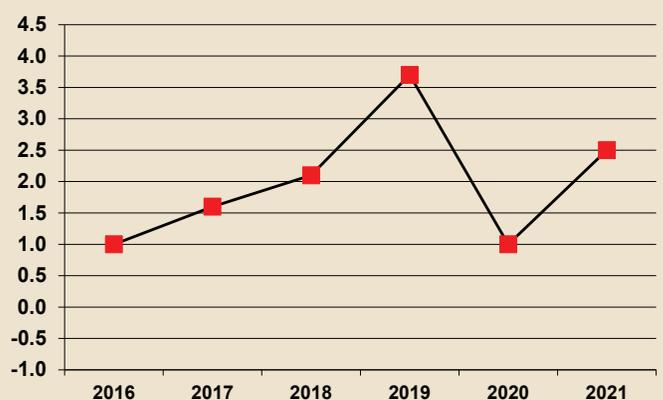
World and Chicken Growth Rate

World economic growth took a dive in 2020. The World Bank projects a negative 4% growth rate for 2020. It will take at least until 2022 for the world economy to get back to where it was in 2019. The weak economy affects the demand for all meat including chicken although chicken is less affected than pork and beef. Chicken production can be expected to grow by only 1% this year accelerating to 2.5% next year.

World Economic Growth Rate in %



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.