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Broiler Economics

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COVID-19 DEATHS REACH ONE MILLION

Deaths from Covid-19 reached one million worldwide at the end of September and show no sign of slowing down. In fact, with the onset of colder weather in the northern hemisphere, cases are rising in both Europe and North America. Until effective vaccines and/or cures are widely distributed, the world economy will continue to reel from this disease. If solutions are rolled out during 2021, as is expected, the recessionary effects on the world economy of the pandemic will diminish and a rapid return to growth will occur.

Until then, the world is suffering a recession that is likely to reduce the world GDP by approximately 4% this year. Although growth is likely to 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 an effective vaccine and/or cure 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, a hyper health conscious population will gravitate toward poultry protein which is widely considered to be a healthy choice.

Corn

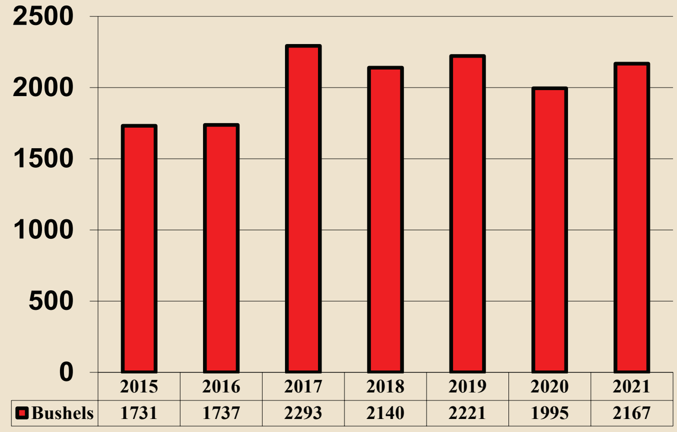
Corn prices spiked higher in the last two months due to a higher than expected usage of corn for livestock feed, increased exports and substantial crop damage from drought and storms. As a result, the last crop year, 2019-2020, ended with a surprisingly low inventory of under 2 billion bushels. Looking forward to this crop year, 2020-2021, it is expected that there will be little change in ending inventory given a lower than expected harvest and a continued high rate of exports to China. In Chicago, the price of the December corn futures rose from $3.20 to nearly $4.00 over the last two months but $4 per bushel may mark the highest price for this crop year. Without any additional bullish news, the price could drift down from that point over the rest of the current crop year. In the end, after all the drama, the average price during this crop year may turn out to be similar to last crop year.

Contrary to earlier expectations, the worst time to buy corn this year is right now during harvest. The best time to buy physical corn or futures is more likely to be further along in the crop year.

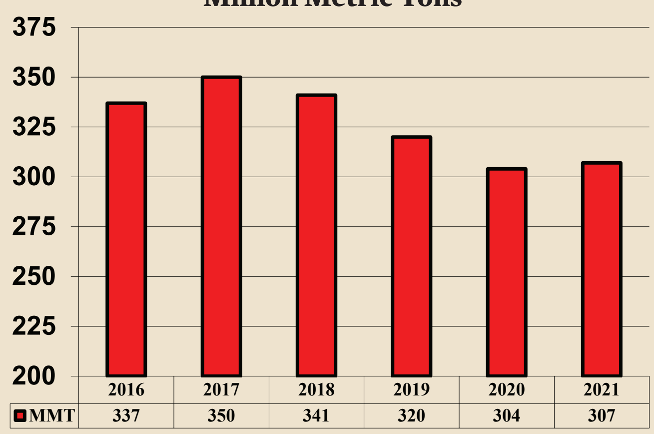
US Corn Supply and Demand – WASDE October 2020 USDA to 2019-2020 - Millions of Bushels

	2018-2019	2019-2020	2020-2021
Harvest	14,340	13,620	14,722
Supply Total	16,509	15,883	16,742
Ethanol	5,378	4,852	5,050
Exports	2,066	1,778	2,325
Feed	5,429	5,827	5,775
Total Use	14,288	13,887	14,575
Ending Inventory	2,221	1,995	2,167
Farm Price	$3.61	$3.56	$3.60

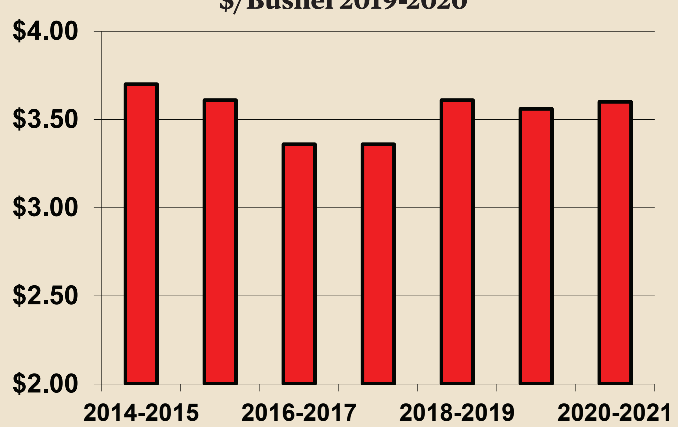
US Ending Stock of Corn - Millions of Bushels



World Ending Stock of Corn - USDA Million Metric Tons



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



Soybeans

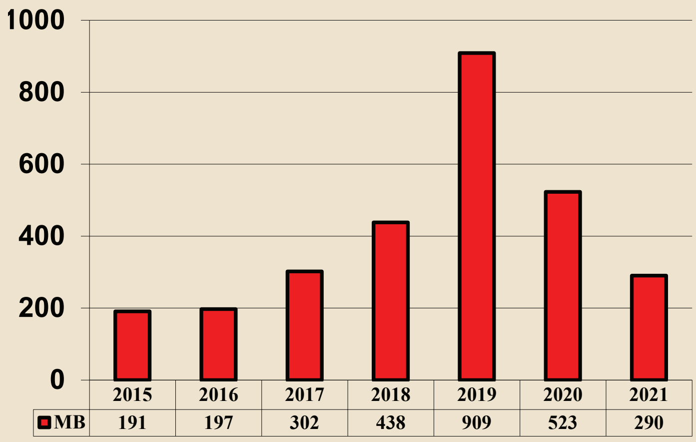
Soybean ending inventory fell in the last crop year and is expected to fall even further in this crop year. It is, therefore, likely that the average price of soybean meal prices this year will be higher than last crop year. China, as always, is a wild card because it is difficult to predict if exports will rise or fall to that country given the 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.

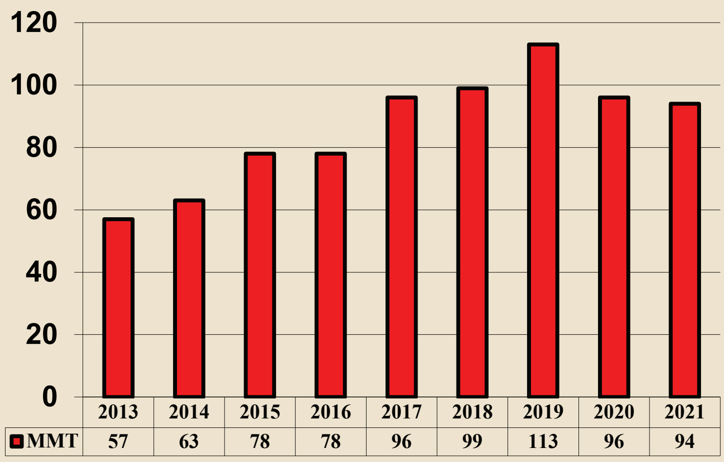
US Soybeans – USDA to 2019-2020
WASDE October 2020 - Millions of Bushels

	2018-2019	2019-2020	2020-2021
Harvest	4,428	3,552	4,268
Total Supply	4,880	4,476	4,806
Export	1,752	2.165	2,200
Total Use	3,971	3,953	4,516
Ending Stock Inventory	909	523	290
Meal Price short ton	$308	$300	$335

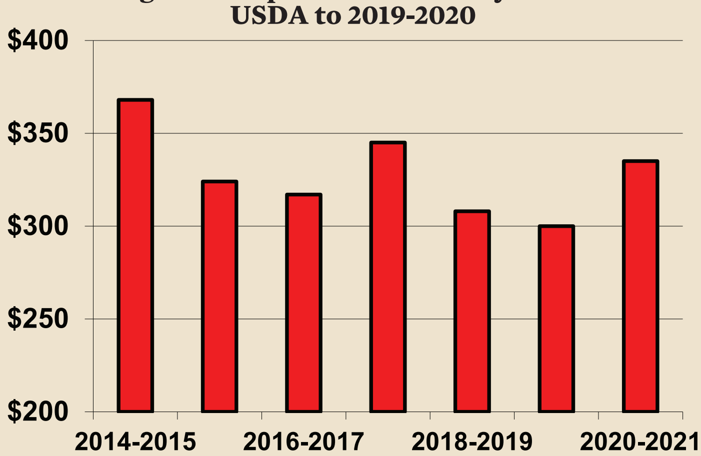
US Ending Stock of Soybeans - USDA
Millions of Bushels



US World Ending Stock of Soybeans - USDA
Million Metric Tons



Average US Crop Year Price of Soybean Meal
USDA to 2019-2020



US Chicken Industry

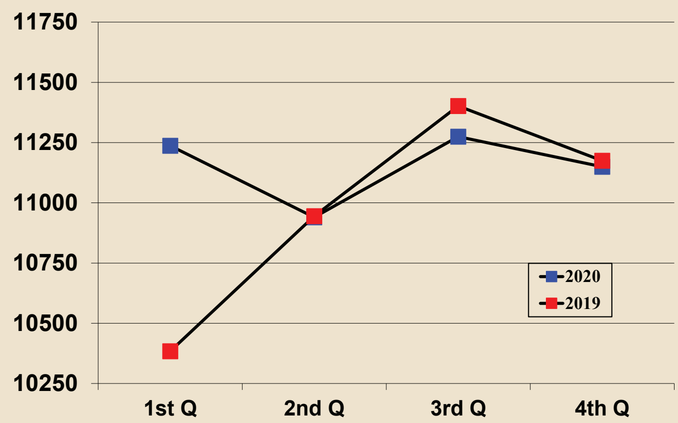
This year witnessed a major upheaval in the US chicken industry. Food service demand plummeted while supermarket demand increased. Production dropped and rose again. Prices have been volatile as unimaginable events changed the market overnight.

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. 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. It appears that the price of deboned breast is bearing the brunt of the troubles.

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.

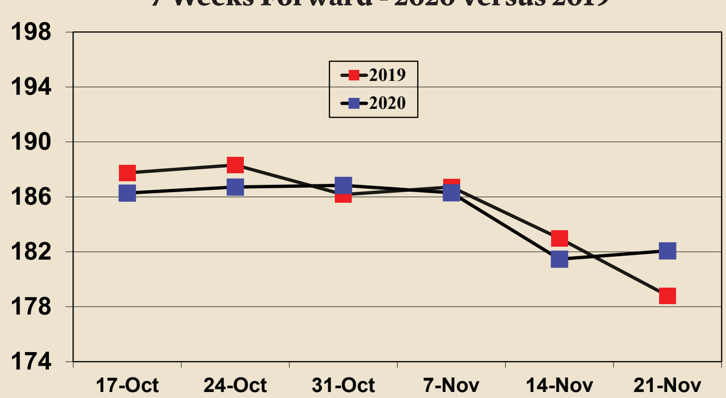
The USDA (October WASDE) now expects chicken production to be 1.6% higher in this calendar year and just 1% next year. As can be seen on the graph below, chicken production growth accelerated to 7% year over year during the 1st quarter of this year and then mirrored the amount produced last year in the final three quarters of the year. Lower consumer revenue coming at the time of seasonally lower chicken prices and higher grain cost may mean that the industry will go through several months of unprofitability.

US Quarterly Broiler Production - USDA
Million Pounds



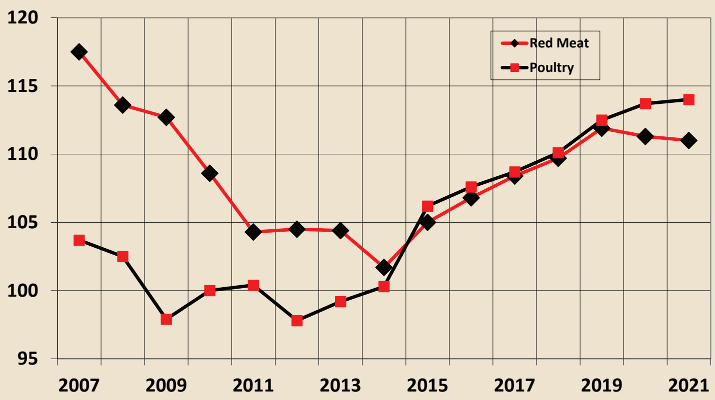
Taking the chick placement numbers forward by 7 weeks, the graph below shows how stable production is; it is running almost the same as last year with no evident trend.

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. Meat demand overall was supported somewhat by stimulus payments and extra unemployment insurance. As those programs are reduced going forward, demand will drop for all meats. Next year pork and beef consumption will continue to fall while chicken consumption continues to reap the benefits of offering a lower priced product.

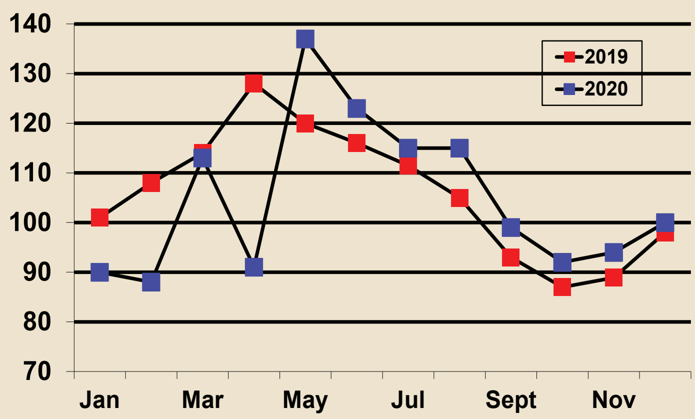
US Per Capita Consumption of Red Meat and Poultry
USDA to 2020 - Pounds



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 are now on a similar track as 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.

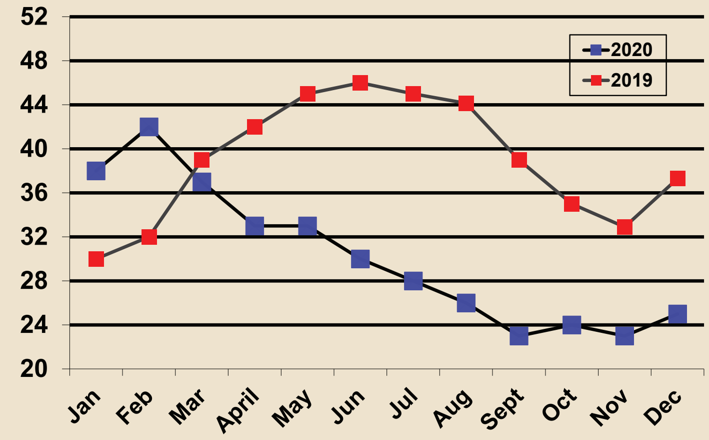
Deboned Breast - USDA Northeast Price
2019 to 2020 - Cents/Pound



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

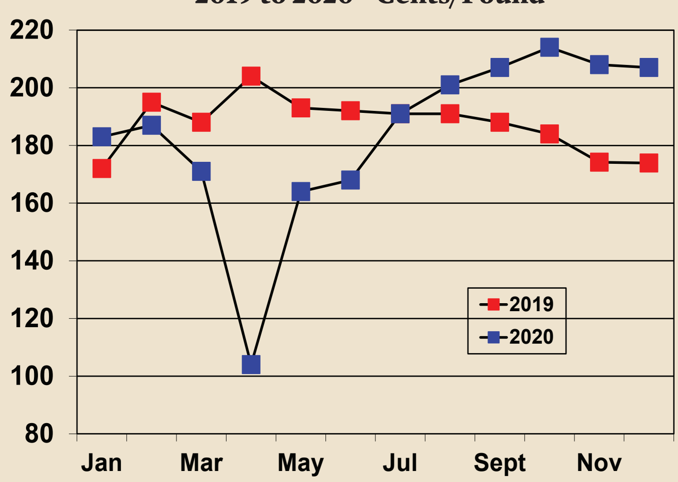
Leg Quarter Price - USDA Northeast Price
2019 to 2020 - Cents/Pound



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 - USDA Northeast Price
2019 to 2020 - Cents/Pound



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.

October 2020

Leg Quarters	$0.24 per pound
Deboned Breast	$0.90 per pound
Wings	$2.15
Chicago Corn	$4.00 per bushel
Soybean Meal	$360/Ton
Total Cost of Wholesale Chicken	$0.77
Revenue	$0.70
Gain (Loss) per pound	$- 0.07

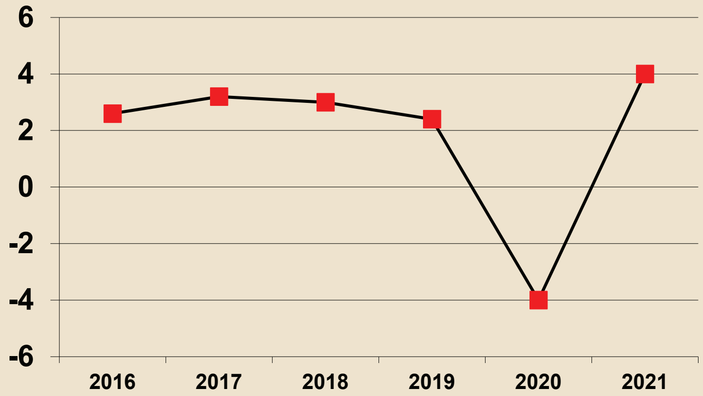
December 2020

Leg Quarters	$0.25 per pound
Deboned Breast	$1.00 per pound
Wings	$2.10
Chicago Corn	$3.75 per bushel
Soybean Meal	$360/Ton
Total Cost of Wholesale Chicken	$0.76
Revenue	$0.71
Gain (Loss) per pound	$- 0.05

World and Chicken Growth Rate

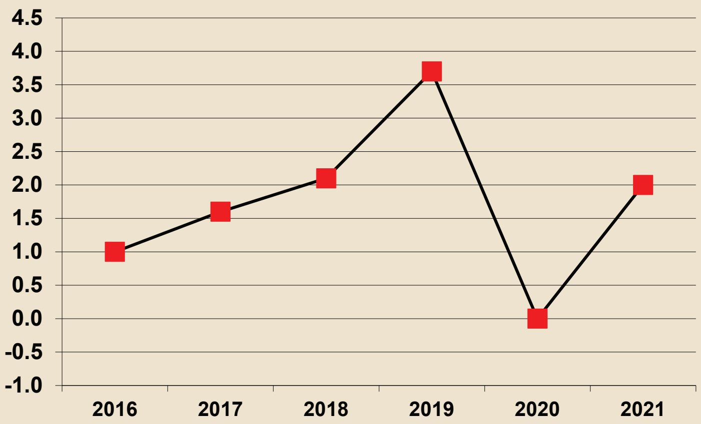
World economic growth took a dive in 2020. The World Bank projects a negative 4% growth rate for 2020 and a positive 4% in 2021. The weak economy affects the demand for all meat including chicken although chicken is less affected than pork and beef.

World Economic Growth Rate in %



World Bank to 2021, Real GDP

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.