

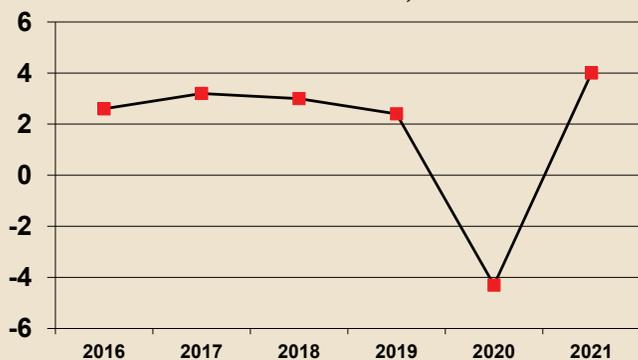
# Broiler Economics

By Dr. Paul Aho

## WORLD RECESSION SHOULD END THIS YEAR

After the Covid-19 recession of 2020, which lowered world economic growth to -4.3%, this year is projected to show a recovery according to the World Bank. As people become inoculated, the recessionary effects of the pandemic on the world economy should diminish and something resembling normal will begin to emerge, barring a virus mutation that renders the vaccines worthless.

**World Economic Growth Rate in %  
World Bank to 2021, Real GDP**



Although growth is likely to return this year, the recovery may be halting at first and take longer than expected. A truly robust year of worldwide economic growth and normalcy 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.

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

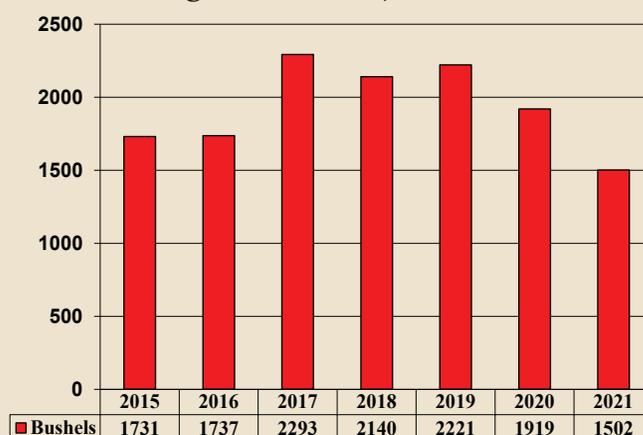
Corn prices rose spectacularly in the last six months due primarily to higher exports to China and concerns about possible droughts in both North and South America. Ending inventory is dropping with each report, always a bad sign for grain users. Last crop year, 2019-2020, ended with an inventory, in the US, of 1.9 billion bushels. This crop year, 2020-2021, ending inventory is expected to drop to 1.5 billion bushels. World ending inventories are also falling.

In Chicago, the price of March corn futures rose from \$3.30 in August to \$5.70 in January a rise of 75%. The scare about a drought in South America is now over. Without any additional bullish news, the price of corn could drift downward over the rest of the current crop year. All in all, this crop year is a punishing one for grain users. The price paid for corn will end up being nearly a dollar a bushel more than last crop year on average. Hopefully, a good planting season, summer and harvest will lead to much lower prices in the next crop year.

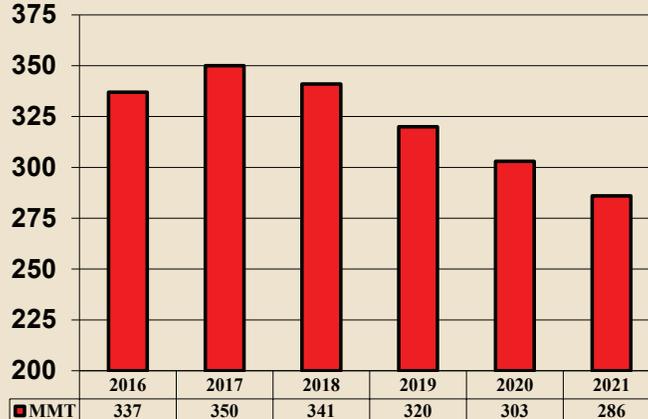
**US Corn Supply and Demand – WASDE February 2021  
USDA to 2020-2021 - Millions of Bushels**

	2018-2019	2019-2020	2020-2021
Harvest	14,340	13,620	14,182
Supply Total	16,509	15,883	16,127
Ethanol	5,378	4,852	4,950
Exports	2,066	1,778	2,600
Feed	5,429	5,903	5,650
Total Use	14,288	13,963	14,625
Ending Inventory	2,221	1,919	1,502
Farm Price	\$3.61	\$3.56	\$4.30

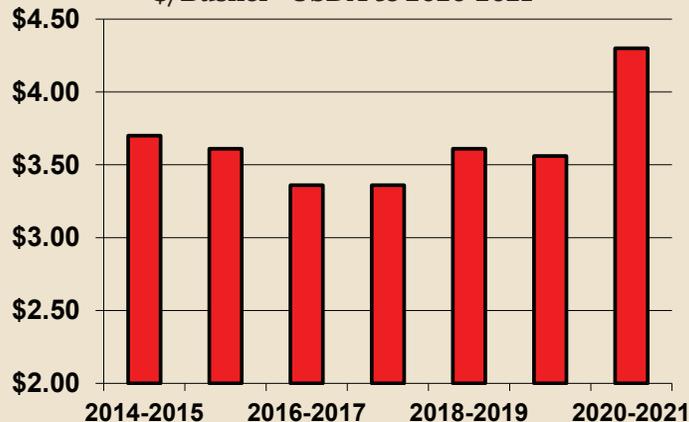
**US Ending Stock of Corn, Millions of Bushels**



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



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



### Soybeans

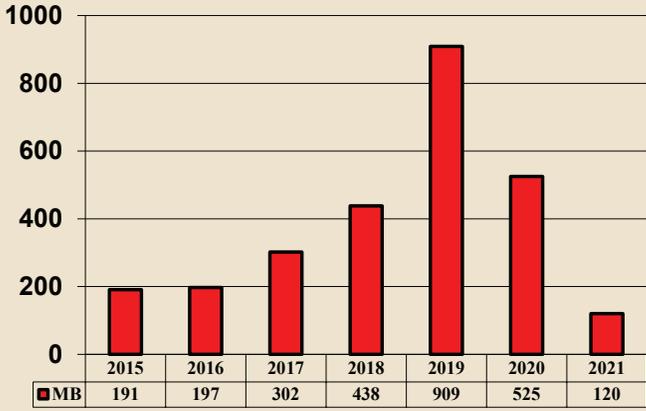
The situation for soybeans is even worse than that of corn for grain buyers. US Soybean ending inventory is falling dramatically with each new report. Inventories are projected to fall to the bare minimum of pipeline levels, basically no inventory at all. The average price of soybean meal this crop year will be at least \$100 higher than last crop year. A big part of the reason is much higher exports to China.

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. The current South American harvest starting now looks to be good. However, too much rain is hampering harvest in Brazil and political turmoil is affecting Argentina. Exports from South America are therefore likely to be less than expected in this crop year.

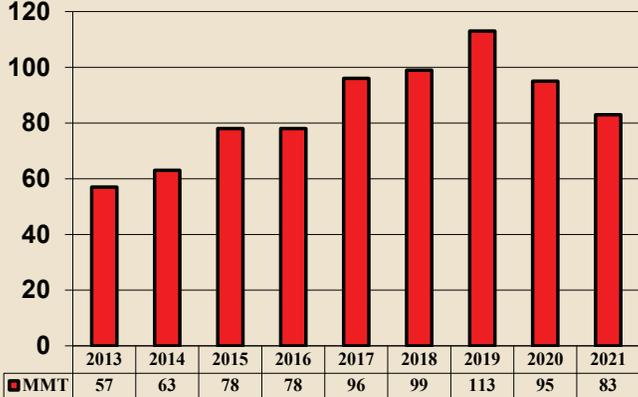
**US Soybeans – Millions of Bushels  
USDA to 2020-2021 - WASDE February 2021**

	2018-2019	2019-2020	2020-2021
Harvest	4,428	3,552	4,135
Total Supply	4,880	4,476	4,695
Export	1,752	1,682	2,250
Total Use	3,971	3,952	4,575
Ending Stock Inventory	909	525	120
Meal Price short ton	\$308	\$300	\$400

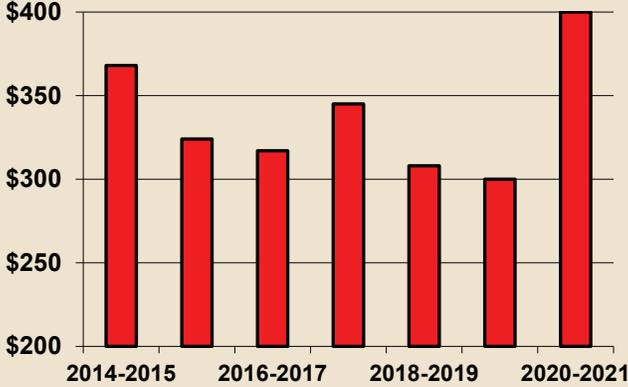
**US Ending Stock of Soybeans  
Millions of Bushels - USDA**



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



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



**US Chicken Industry**

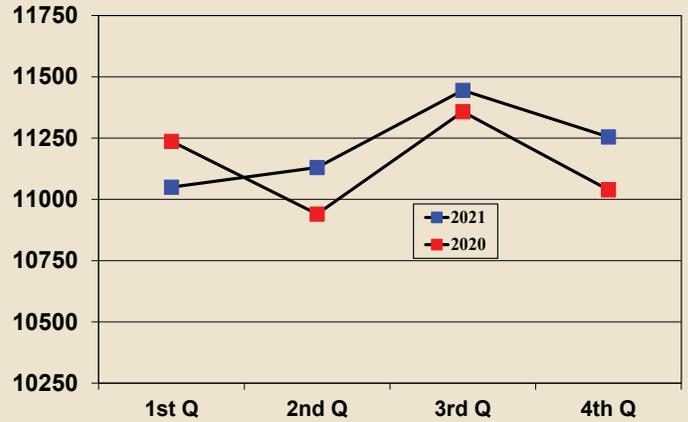
The year 2020 was a strange one for the chicken industry. Food service demand plummeted while supermarket demand increased. Production dropped and rose again. Prices were volatile as unimaginable events changed the market. This year should begin the process of returning a more normal market.

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 came back. In particular, the price of deboned breast moved surprisingly higher in recent weeks as the sandwich wars resumed. Consumer income held up thanks to support payments. If the economy gets moving strongly again, chicken prices may remain strong throughout the year. Higher prices will be needed to pay the cost of increasingly expensive grain.

Last year China opened their market to US chicken and China became the second largest market for US chicken after Mexico. Assuming politics allow exports to continue, the US is likely to export nearly a billion dollars of chicken each year to China. The market is not just for paws as was originally feared. The Chinese are purchasing large amounts of leg quarters as well.

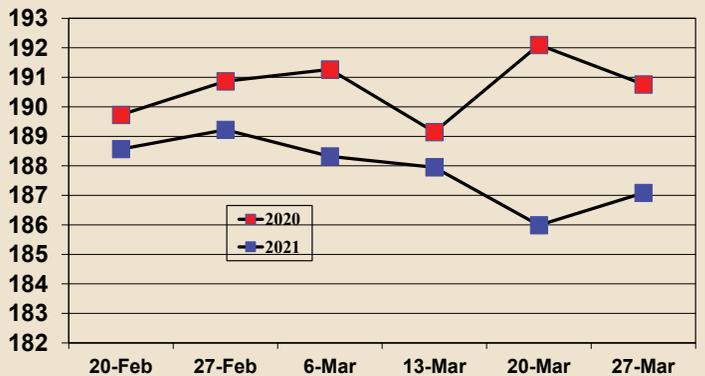
The USDA (February WASDE) expects chicken production to be only 0.7% higher this year. As can be seen on the graph below, chicken production is expected to be slightly lower in the first quarter and then slightly higher in every other quarter this year. Lower production combined with prices which are not seasonally lower this winter mean that the industry is profitable despite high grain costs. As Covid-19 recedes during the year and the economy begins to recover, consumer demand for chicken should remain strong.

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



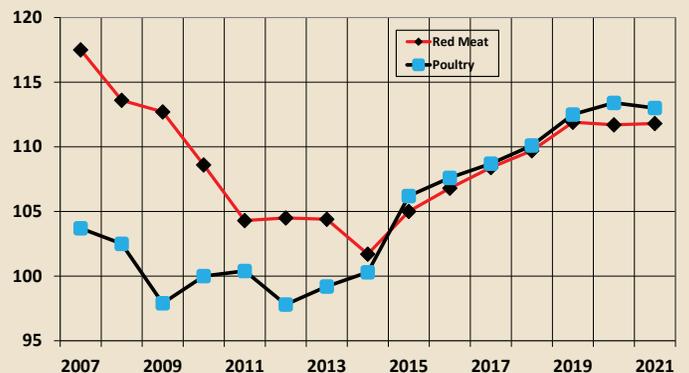
The graph below of chick placements, moved 7 weeks forward to show the processing date, indicates that production will be running below 2020 for the rest of the first quarter. Given strong demand at this moment and relatively constrained supply, chicken prices are likely to remain relatively high at least for the next few months.

**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 per capita rose steadily year after year until 2019. Last year, beef and pork leveled out while chicken consumption continued to increase albeit at a slower pace. This year, total meat consumption per capita is expected to decline slightly. Meat demand overall is supported by stimulus payments and extra unemployment insurance but a turnaround in total meat consumption is likely to be delayed until 2022.

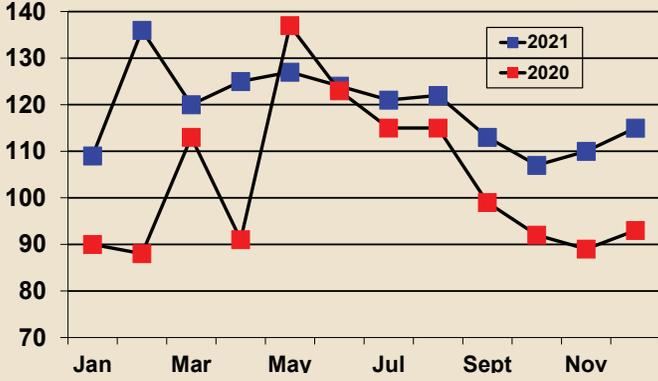
**US Per Capita Consumption of Red Meat and Poultry  
USDA to 2021 - lbs**



Deboned Breast

The price of deboned breast was on a roller coaster last year and continues to be highly volatile this year. Prices rose during the supermarket hoarding phase last year, fell due to the fall off in food service, rose when some plants closed and then fell when the plants reopened. At the end of the year breast meat prices fell to their lowest price only to bounce up at the beginning of this year thanks to new fast food chicken sandwiches. Food service demand is coming back thanks to take-out.

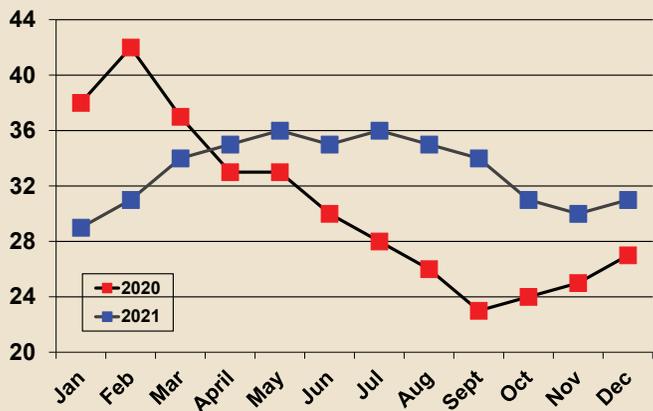
**Deboned Breast - 2020-2021  
USDA - Northeast Price - Cents/lb**



Leg Quarters

Leg quarter prices are highly dependent on the export market. With China becoming a large importer of both paws and leg quarters, the outlook is good for leg quarter prices this year. If the world shakes off the Covid-19 recession, which appears likely, the outlook for exports will be even better.

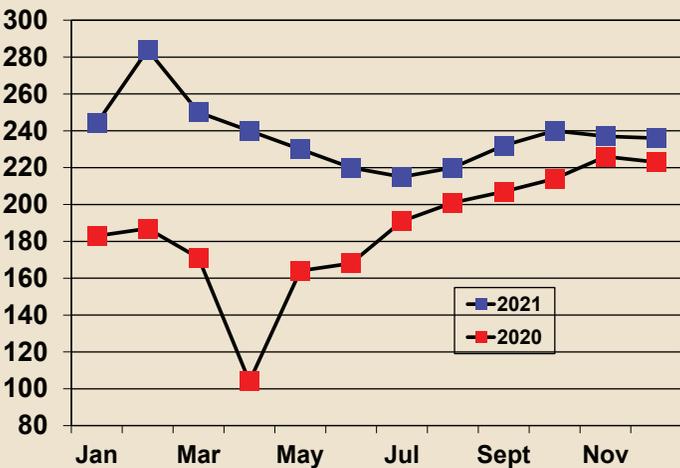
**Leg Quarter Price - 2020-2021  
USDA - Northeast Price - Cents/lb**



Wings

Nowhere was the collapse of food service demand last year more evident than in the wing market. Suddenly higher 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. As take-out increased the price of wings rose steadily. Now, in the month of the Super Bowl wings rose to nearly \$3 per pound wholesale. Such stratospheric numbers are not likely to last, nevertheless, wing prices will probably remain relatively high through the rest of the year.

**Whole Wing Prices - 2020-2021  
USDA - Northeast Price - Cents/lb**



At the beginning of 2021 the production of chicken in the US is profitable thanks to high wing and breast meat prices. After this early seasonal peak, prices are likely to decline while grain prices remain high. However, profitability should remain throughout the year.

**February 2021**

<b>Leg Quarters</b>	\$0.31 per pound
<b>Deboned Breast</b>	\$1.36 per pound
<b>Wings</b>	\$2.84
<b>Chicago Corn</b>	\$5.50 per bushel
<b>Soybean Meal</b>	\$440/Ton
<b>Total Cost of Wholesale Chicken</b>	\$0.85
<b>Revenue</b>	\$0.89
<b>Gain (Loss) per pound</b>	\$0.04

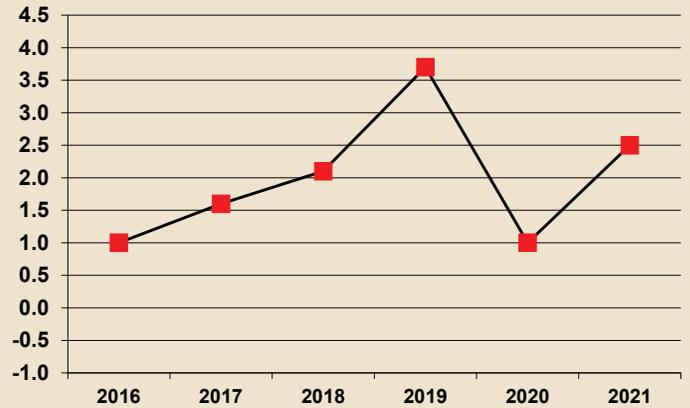
**April 2021**

<b>Leg Quarters</b>	\$0.35 per pound
<b>Deboned Breast</b>	\$1.25 per pound
<b>Wings</b>	\$2.40
<b>Chicago Corn</b>	\$5.00 per bushel
<b>Soybean Meal</b>	\$400/Ton
<b>Total Cost of Wholesale Chicken</b>	\$0.82
<b>Revenue</b>	\$0.84
<b>Gain (Loss) per pound</b>	\$0.02

**World and Chicken Growth Rate**

World economic growth took a dive in 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. Chicken production grew by only 1% last year. Growth is likely to accelerate to 2.5% this year.

**World Chicken Growth Rate in %**



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