

# Broiler Economics

By Dr. Paul Aho

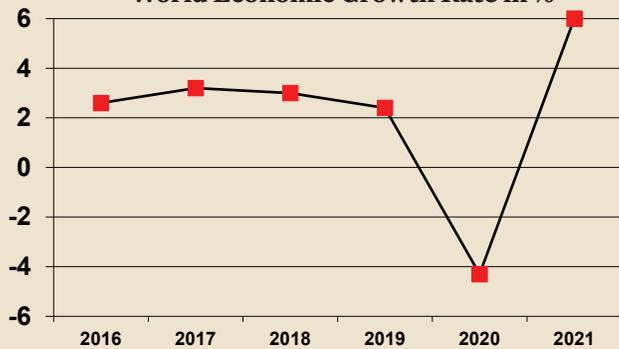
## WORLD ECONOMIC EXPANSION ACCELERATING

Although Covid-19 still casts a dark shadow over economic activity, it appears that economic expansion is gathering speed. World economic growth is now estimated to be 6% this year compared to estimates of just 4% two months ago. Prospects are looking brighter for the world chicken industry as well.

Unfortunately, there are many things that still could go wrong. New strains of Covid-19 could complicate the race to vaccinate most of the world's population; grain prices are high and could go higher, and the recent outbreak of avian influenza in Asia and Europe could return with greater impact next fall.

Despite those challenges, the recessionary effects on the world economy of the pandemic should diminish as more people become vaccinated. It now appears that the economic recession was a classic tight "V" shaped recession with the world coming out of the recession as fast as it entered.

World Economic Growth Rate in %



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 were mitigated by massive efforts by many governments to prop up consumer income. As a result, the meat recession was milder than would have been expected and demand is strengthening in most countries.

The poultry industry was well positioned to ride out this crisis. In periods of economic recession there is a shift in demand from more expensive meats toward poultry. In the economic expansion to come, the high price of grains will work against competing meats.

### Corn

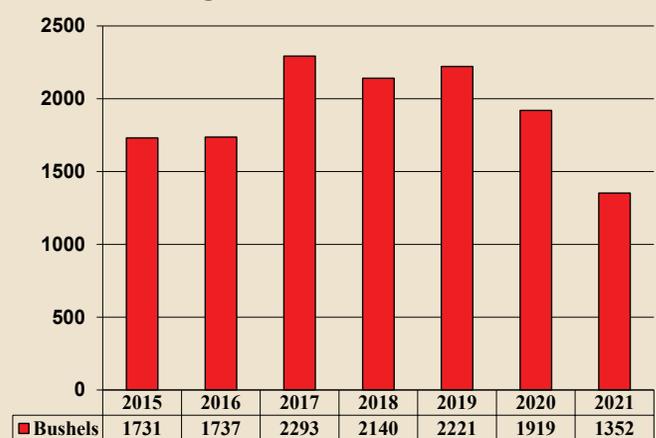
Corn prices rose spectacularly between August of last year and February of this year primarily due to higher exports to China and concerns about possible droughts in both North and South America. Estimated ending inventory fell with each new report, always a bad sign for grain users. Last crop year, 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 1.3 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, such as a drought in the US, the price of corn may well drift downward over the rest of the current crop year but remain relatively high. 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 lower prices in the next crop year (September 2021 to August 2022).

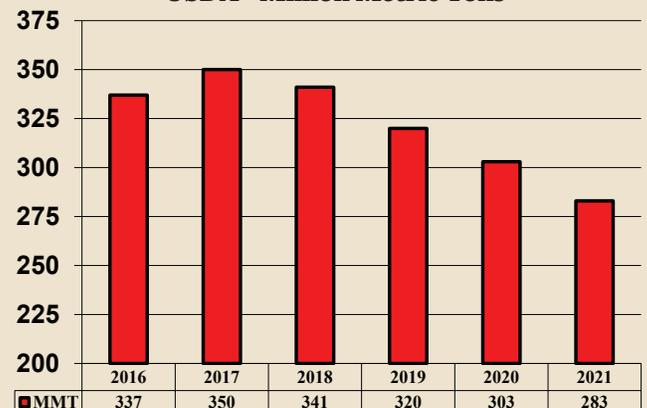
US Corn Supply and Demand – WASDE April 2021  
USDA to 2020-2021 - Millions of Bushels

|                  | 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     | 4,975     |
| Exports          | 2,066     | 1,778     | 2,675     |
| Feed             | 5,429     | 5,903     | 5,700     |
| Total Use        | 14,288    | 13,963    | 14,775    |
| Ending Inventory | 2,221     | 1,919     | 1,352     |
| Farm Price       | \$3.61    | \$3.56    | \$4.30    |

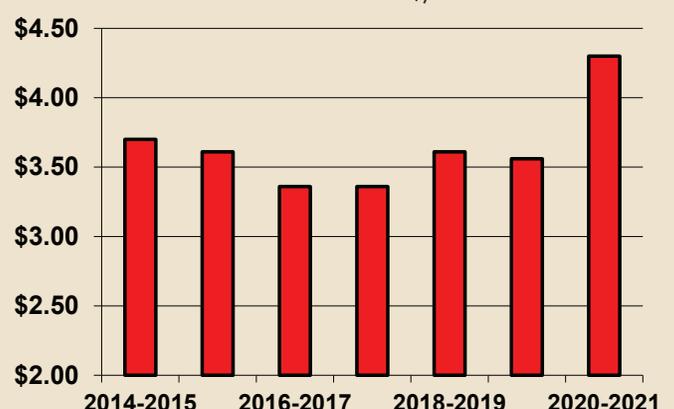
US Ending Stock of Corn - Millions of Bushels



World Ending Stock of Corn  
USDA - Million Metric Tons



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



## Soybeans

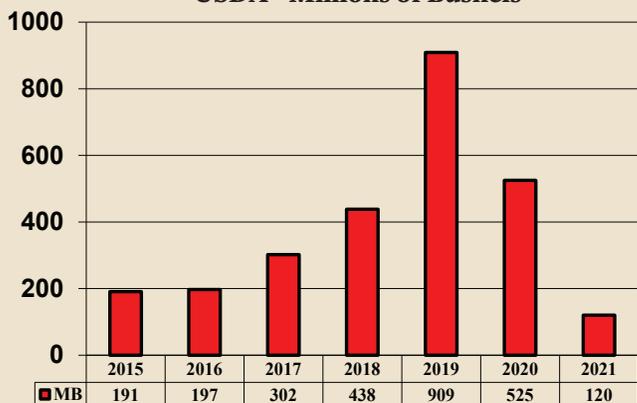
The situation for soybeans is worse than that of corn for grain buyers. Inventories are projected to fall to the bare minimum of pipeline levels. When inventory is low, prices are likely to be both high and more volatile. The average price of soybean meal this crop year will be at least \$100 higher than last crop year. As with corn, a big part of the reason is much higher exports to China to feed a growing hog population returning after African Swine Fever.

Much will depend on final production numbers in South America for the harvest ending now. The US does not dominate world soybean production as much 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 looks to be good but not great. Exports from South America are likely to be somewhat less than expected in this crop year.

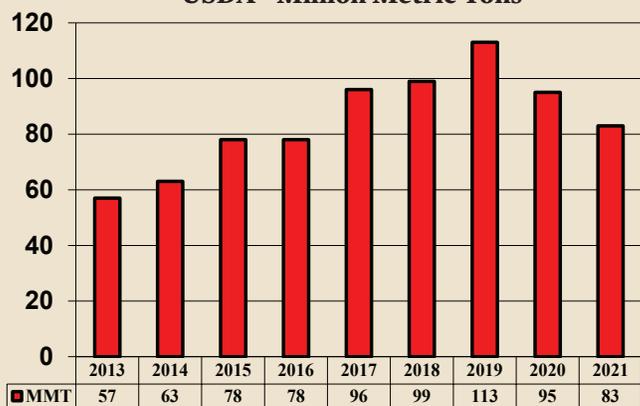
**US Soybeans - USDA to 2020-2021 - WASDE April 2021 - Millions of Bushels**

|                        | 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     | 2,280     |
| Total Use              | 3,971     | 3,952     | 4,575     |
| Ending Stock Inventory | 909       | 525       | 120       |
| Meal Price short ton   | \$308     | \$300     | \$400     |

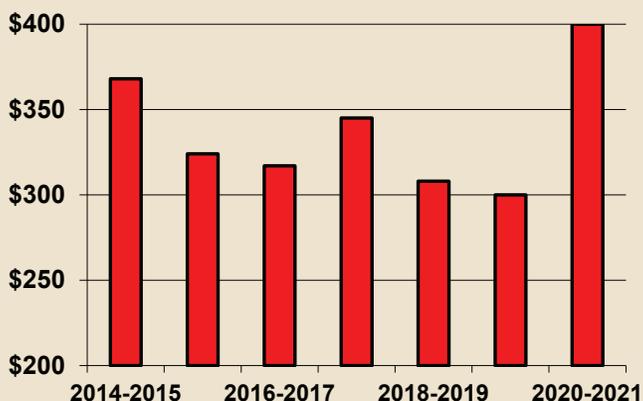
**US Ending Stock of Soybeans  
USDA - Millions of Bushels**



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



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



## US Chicken Industry

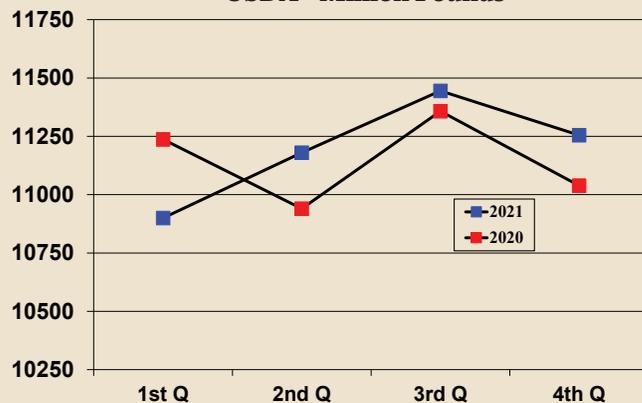
The year 2021 should mark the return to a more normal chicken market after a tumultuous 2020. Food service demand can be expected to rise while supermarket demand falls, the opposite of last year. Robust overall demand combined with limited production increases are likely to result in relatively high prices.

Although chicken was wildly popular in supermarkets last year, the loss of so much food service demand meant that there was too much chicken supply chasing a smaller total market at times in 2020. The chicken market came back at the beginning of this year. The price of deboned breast in particular moved surprisingly higher as the sandwich wars resumed. If the economy gets moving strongly again, as is expected, chicken prices will 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. The market is not just for paws as was originally feared, the Chinese are purchasing large amounts of leg quarters as well. Although exports to China slowed in the last few months due to strict inspections for Covid-19, exports for the entire year can be expected to at least equal that of last year.

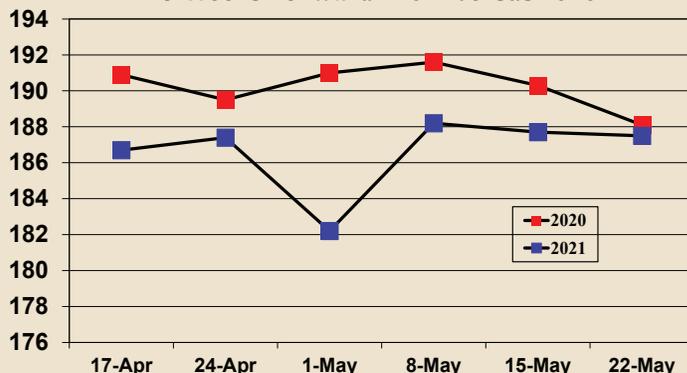
The USDA (April WASDE) expects chicken production to be only 0.4% higher this year. As can be seen on the graph below, chicken production was lower in the first quarter and is expected to be only slightly higher in every other quarter this year.

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



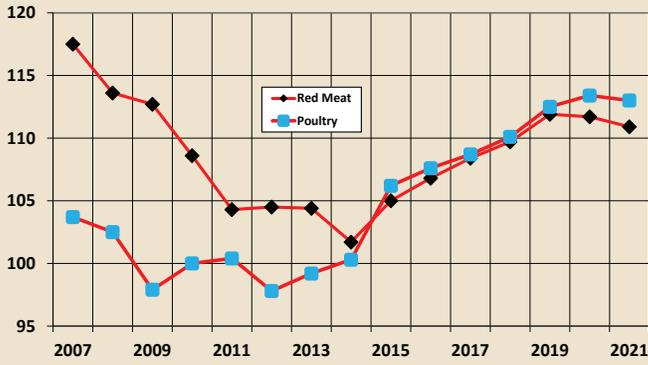
The graph below of chick placements, moved 7 weeks forward to show the processing date, indicates that production will be running below 2020 at least until June with a big dip at the beginning of May caused by the delayed effect of a winter storm. Given strong demand and relatively constrained supply, chicken prices are likely to remain relatively high.

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

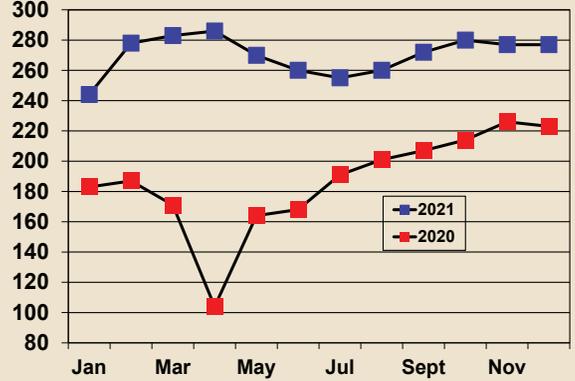


After a decline from 2007 to 2013 (the great recession), US consumption of both red meat and poultry per capita rose steadily year after year until 2019. Last year, beef and pork leveled out while chicken consumption continued to increase, albeit at a slower pace. This year, total meat consumption per capita is expected to decline slightly. Meat demand overall was kept from falling further by stimulus payments and extra unemployment insurance. A turnaround in total meat consumption is likely to begin in 2022.

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



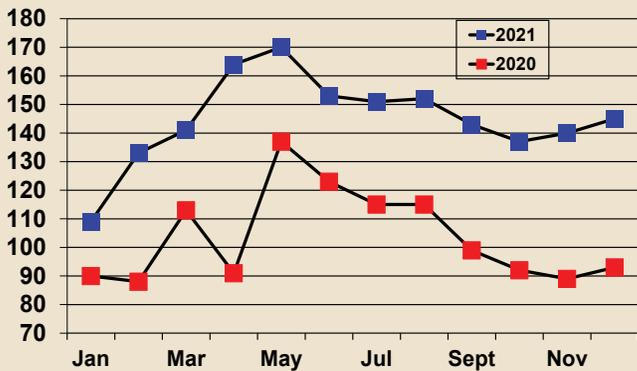
**Whole Wing Prices 2020-2021 USDA - Northeast Price - Cents/lb**



**Deboned Breast**

The price of deboned breast was on a roller coaster last year. Prices rose during the supermarket hoarding phase, fell due to the drop 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. This year, breast meat rose steadily month after month thanks in part to new fast food chicken sandwiches. All food service demand is expected to come back strong this year.

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



Chicken production in the US is profitable thanks to high wing, leg quarter and breast meat prices. Prices are likely to remain high this year instead of dropping as they normally do after a seasonal peak in the late spring. It appears that the industry will remain profitable throughout the year.

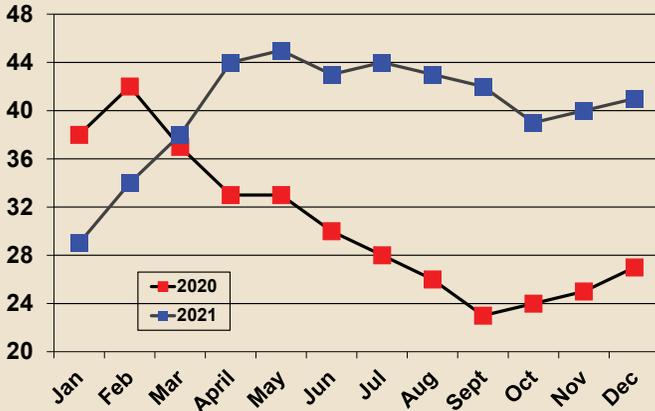
**April 2021**

|                                 |                   |
|---------------------------------|-------------------|
| Leg Quarters                    | \$0.44 per pound  |
| Deboned Breast                  | \$1.64 per pound  |
| Wings                           | \$2.86            |
| Chicago Corn                    | \$5.76 per bushel |
| Soybean Meal                    | \$401/Ton         |
| Total Cost of Wholesale Chicken | \$0.84            |
| Revenue                         | \$0.94            |
| Gain (Loss) per pound           | <b>\$0.10</b>     |

**Leg Quarters**

Leg quarter prices are highly dependent on the export market. Exports to China fell in the last few months but total exports should at least be steady this year compared to last year. If the world shakes off the Covid-19 recession, which appears likely, the outlook for exports will be even better. In addition to strong exports, increasing domestic demand for leg quarters, and in particular deboned thigh, is providing a floor for leg quarter prices.

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



**October 2021**

|                                 |                   |
|---------------------------------|-------------------|
| Leg Quarters                    | \$0.40 per pound  |
| Deboned Breast                  | \$1.40 per pound  |
| Wings                           | \$2.80            |
| Chicago Corn                    | \$5.00 per bushel |
| Soybean Meal                    | \$390/Ton         |
| Total Cost of Wholesale Chicken | \$0.82            |
| Revenue                         | \$0.87            |
| Gain (Loss) per pound           | <b>\$0.05</b>     |

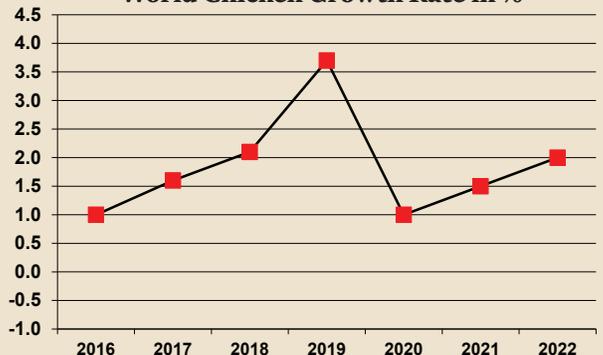
**Wings**

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. With food service reopening, wings rose nearly \$3 per pound wholesale and are likely to remain relatively high through the rest of the year.

**World and Chicken Growth Rate**

Chicken production grew only 1% last year because of Covid-19. This year growth will be 1.5% according to the USDA as the recovery of growth lags behind the recovery in demand. Growth is expected to accelerate to at least 2% in 2022.

**World Chicken Growth Rate in %**



**About the Author - Paul W. Aho, Ph.D.**  
email: [PaulAho@PaulAho.com](mailto:PaulAho@PaulAho.com)

*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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