



# Broiler Economics

By Dr. Paul Aho

## WORLD ECONOMIC GROWTH

The world economy is likely to continue growing in 2022 despite the headwinds of the pandemic, inflation, high energy costs, labor shortages and global political tensions. Eventually those problems will diminish in importance, but it will take years to fully emerge from the massive disruption caused by COVID. All industries, including the chicken industry, have been affected by this economic turmoil.

Supply Chain issues remain a Gordian Knot that will take time to untangle. For the poultry industry, an important issue that will take time to resolve is the bottleneck at ports and the lack of refrigerated containers. Shipping containers of all types are in short supply worldwide primarily because they are waiting for trucks to be moved and, therefore, are piling up uselessly.

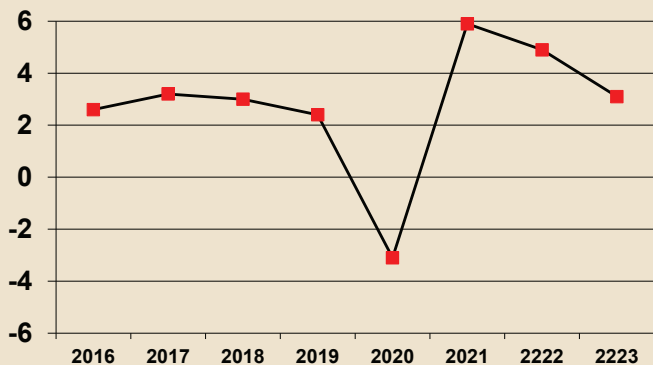
Commodities of all kinds increased in price in part due to those supply chain issues, as well as increased labor and energy costs. Few expected a worldwide commodities boom to emerge so soon after the beginning of the pandemic. Demand for everything soared and producers are only able to increase production slowly.

The chicken industry was, of course, not immune to the economic turmoil that occurred in the last two years. Higher grain, labor and energy costs resulted in higher production costs. Luckily, higher chicken prices have more than made up for higher production costs in most countries.

The story for corn and soybeans is promising for the users of grain. From the summer of 2020 to the spring of 2021, a vigorous bull market in grain resulted in the price of corn doubling and the price of soybean meal rising by 50%. The highest prices are now in the rear-view mirror and grain prices are likely to moderate.

Although COVID-19 still casts a dark shadow over economic activity, economic expansion is real. The International Monetary Fund (IMF) predicts world economic growth of 4.9% next year. Prospects are good for the world chicken industry as well.

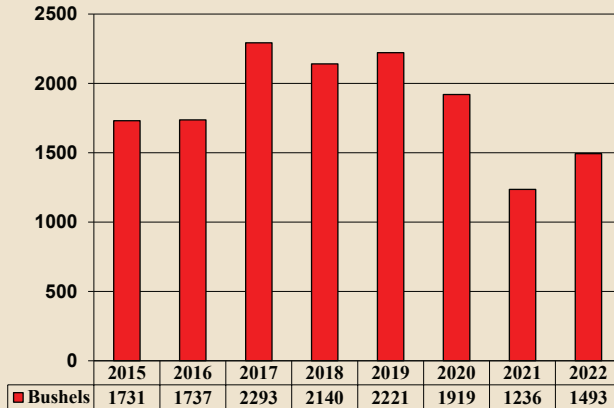
**World Economic Growth Rate in %  
IMF - October**



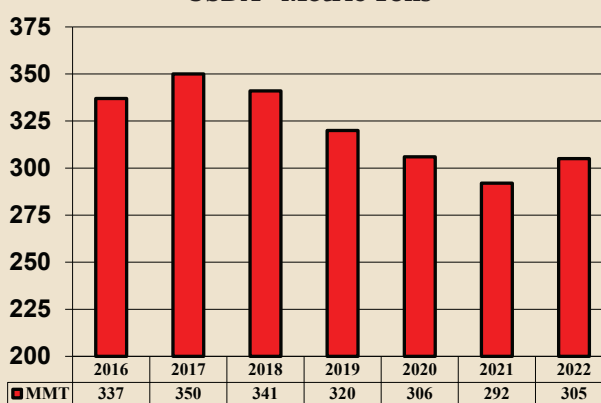
### Corn

Unfortunately for buyers of corn, the price remains relatively high and shows little sign of dropping. Tight holding by farmers and strong ethanol profits have kept the price relatively high. However, the harvest in the US was excellent and projections by the USDA are for higher ending stock. World ending stock numbers are ample and are expected to also rise this crop year. In addition, there are no grave issues in the rest of the world that would indicate a resurgent bull market. As can be seen in the next chart, there is a robust increase in production in all the major corn producing countries. As a result, the price is likely to eventually fall but it may come only after months of sideways movement.

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



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



**Argentina Corn Supply and Demand  
WASDE December 2021 - Metric Tons**

	2019-2020	2020-2021	2021-2022
Harvest	51	50	54
Imports	0	0	0
Exports	36	37	39
Ending Inventory	3	2	3

**Brazil Corn Supply and Demand  
WASDE December 2021 - Metric Tons**

	2019-2020	2020-2021	2021-2022
Harvest	102	86	118
Imports	2	4	2
Exports	35	20	43
Ending Inventory	5	5	9

**China Corn Supply and Demand  
WASDE December 2021 - Metric Tons**

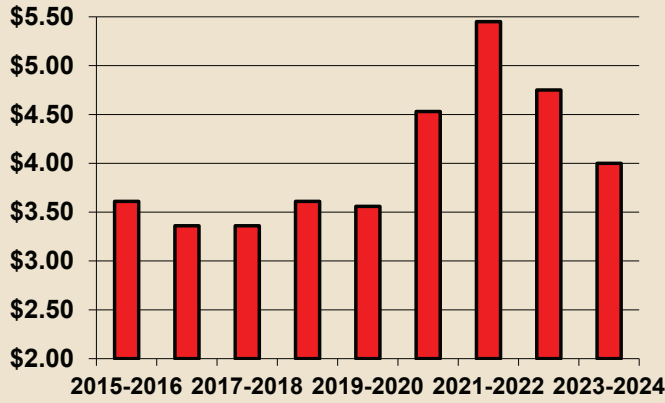
	2019-2020	2020-2021	2021-2022
Harvest	260	260	273
Imports	8	28	26
Exports	0	0	0
Ending Inventory	200	204	210

The average farm price of corn will be higher in the current crop year. That is, in part, because prices were so low at the beginning of last crop year and because prices are high at the beginning of this crop year. The USDA projects the corn price on the farm this crop year at \$5.45. That appears to be correct given the stubbornly high current price of corn. The average price next crop year is likely to be lower barring a drought.

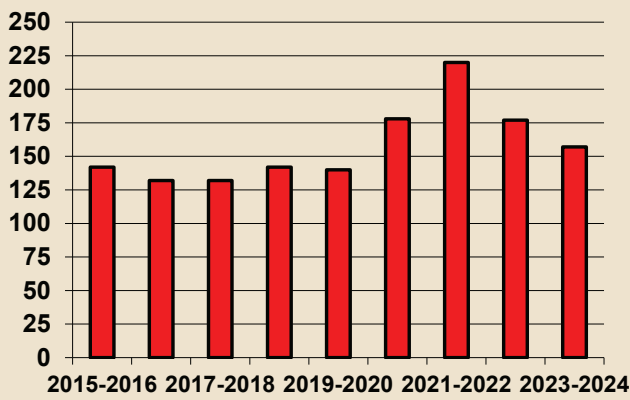
**US Corn Supply and Demand  
WASDE December 2021 -Millions of Bushels**

	2019-2020	2020-2021	2021-2022
Harvest	13,620	14,111	15,062
Supply Total	15,883	16,055	16,323
Ethanol	4,852	5,032	5,250
Exports	1,778	2,753	2,500
Feed	5,903	5,597	5,650
Total Use	13,963	14,819	14,830
Ending Inventory	1,919	1,236	1,493
Farm Price	\$3.56	\$4.53	\$5.45

**Average US Farm Price of Corn  
USDA to 2021-2022 - \$/Bushel**



**Average US Farm Price of Corn  
USDA to 2021-2022 - \$/Metric Ton**



**Soybeans**

The outlook for the users of soybeans is similar to that of corn. Despite a recent rise in meal price, lower prices can eventually be expected. There is concern that corn is currently more profitable than soybeans so that could limit somewhat the planting of soybeans in the US. However, Brazil and Argentina produce far more soybeans than the US so a good crop in the southern hemisphere would ensure that prices drop. Last crop year, South America produced a combined 196 million metric tons (MMT). For this crop year South America is expected to produce 206 MMT. Exports from South America are expected to rise 14 MMT.

**Argentina Soybean Supply and Demand  
WASDE December 2021 - Metric Tons**

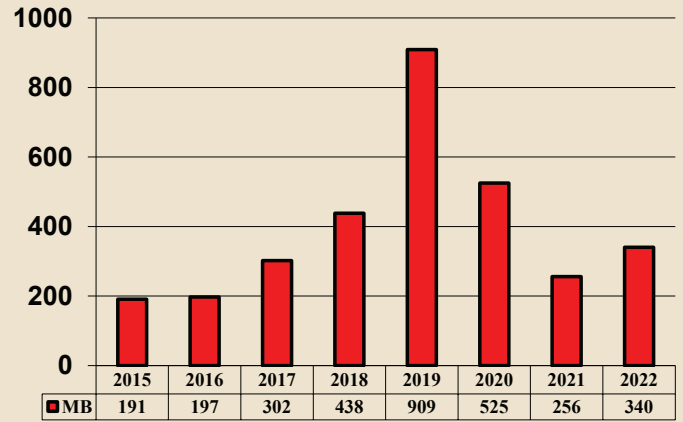
	2019-2020	2020-2021	2021-2022
Harvest	49	46	49
Imports	5	5	5
Exports Beans + Meal	37	33	35
Ending Inventory	27	26	25

**Brazil Soybean Supply and Demand  
WASDE December 2021 - Metric Tons**

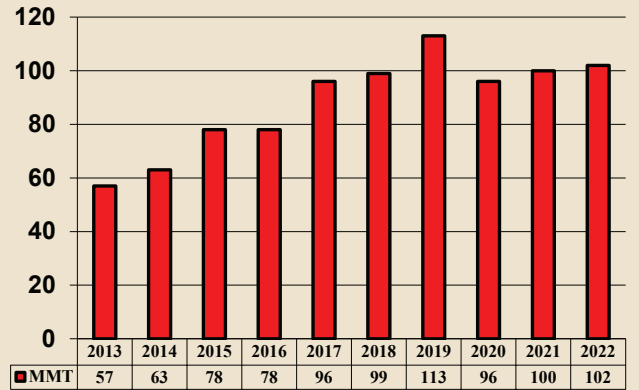
	2019-2020	2020-2021	2021-2022
Harvest	128	137	144
Imports	1	1	1
Exports Beans + Meal	109	97	111
Ending Inventory	20	27	28

Although the US does not dominate world soybean production, like it does corn, low ending stock numbers in the US raised concern earlier this year. Ending stock did fall to a low level at the end of last crop year but the number was higher than expected and is projected to increase next year. Unlike corn, the average price of soybean meal this crop year is expected to be lower than last crop year. However, the current WASDE estimate for this crop year appears to be too low given the recent rise in meal prices.

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



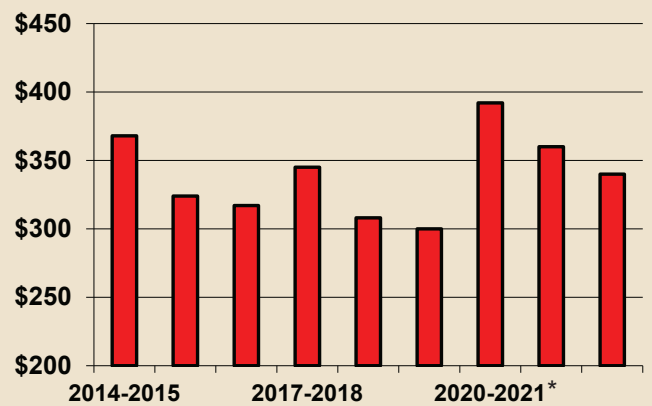
**US World Ending Stock of Soybeans  
USDA - Million Metric Tons**



**US Soybeans - USDA  
WASDE December 2021 - Millions of Bushels**

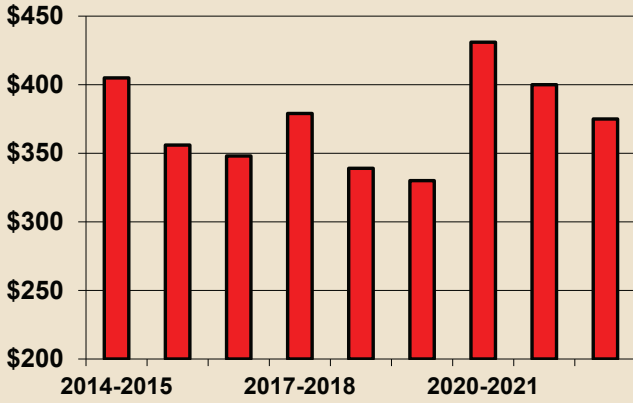
	2019-2020	2020-2021	2021-2022
Harvest	3,552	4,216	4,425
Total Supply	4,476	4,761	4,696
Export	1,679	2,265	2,050
Total Use	3,952	4,505	4,356
Ending Stock Inventory	525	256	340
Meal Price Short Ton	\$299	\$392	\$330

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

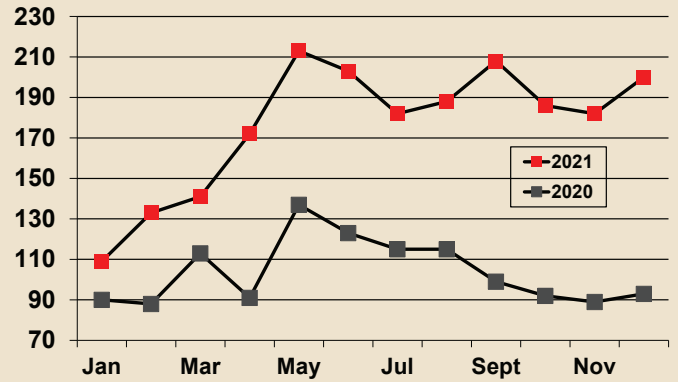


\*author estimate for 2021-2022

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



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

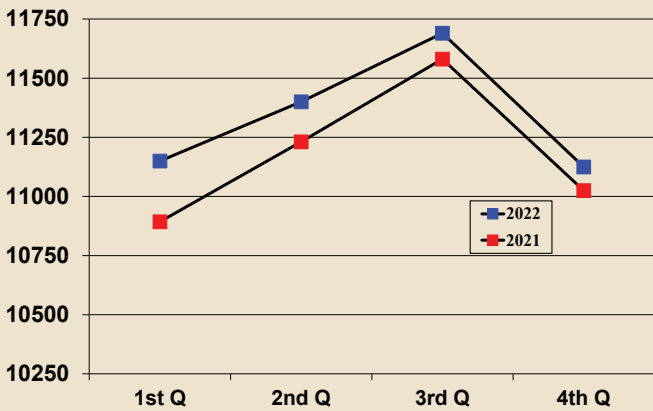


**US Chicken Industry**

In the teeth of the COVID-19 recession and the accompanying problems with labor and raw materials, the US chicken industry did not expand production. As a result, when the economy, and meat demand recovered faster than imagined, the supply of chicken turned out to be surprisingly short. All chicken prices rose, especially wings and deboned breast. Chicken prices can be expected to continue to be relatively high in 2022 even with increases in production due to a continued decline in the availability of red meat.

Production in 2021 rose only 0.3%. The USDA (December WASDE) expects chicken production to accelerate to 1.7% next year, still a relatively small increase.

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

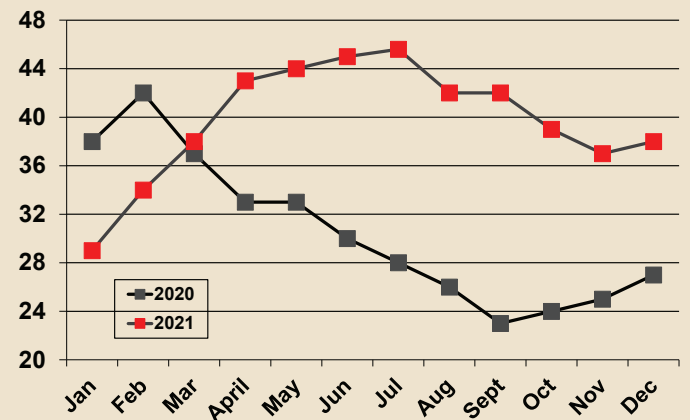


Total supply of red meat and poultry fell two pounds from 2020 to 2021. With supply falling and demand rising, it is no wonder that prices were high for all meats. Next year, red meat per capita consumption is expected to continue to fall while poultry consumption begins to rise. Total meat supply per capita is expected to fall another pound which, if true, would indicate continued high prices for all meat including poultry.

**Leg Quarters**

Total US exports of leg quarters increased 7% in 2021 while the value was 25% higher. The prices of all meat, domestic and foreign, rose this year helping to lift the value of leg quarters. In addition to strong exports, there is increasing domestic demand for leg quarters to produce deboned thigh. Last December the Northeast price of leg quarters was 27 cents per pound (60 cents per kilo). This year in December the price is 38 cents per pound (84 cents per kilo). Given the strength of the export and domestic market, the price in 2022 can be expected to remain relatively high.

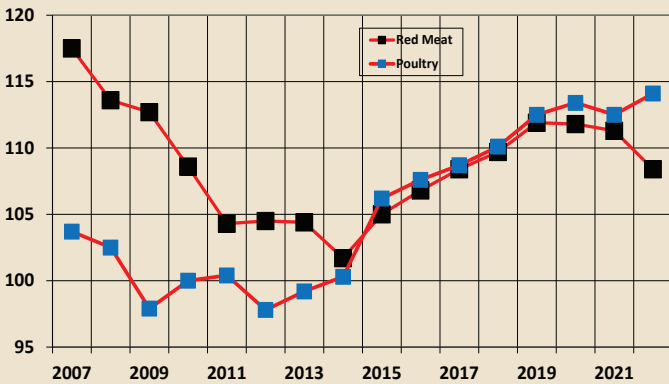
**Leg Quarter Price - 202-2021  
USDA Northeast Price - Cents/lb**



**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 major but temporary blow to wing prices. Wing prices bounced right back and continued higher the rest of last year and through this entire year. Part of the reason for rising prices was lower supply as large bird deboning production dropped. With food service reopening, wings soared to above \$3 per pound (\$6.60 per kilo) wholesale (Northeast Price). Wing prices are likely to remain relatively high throughout 2022.

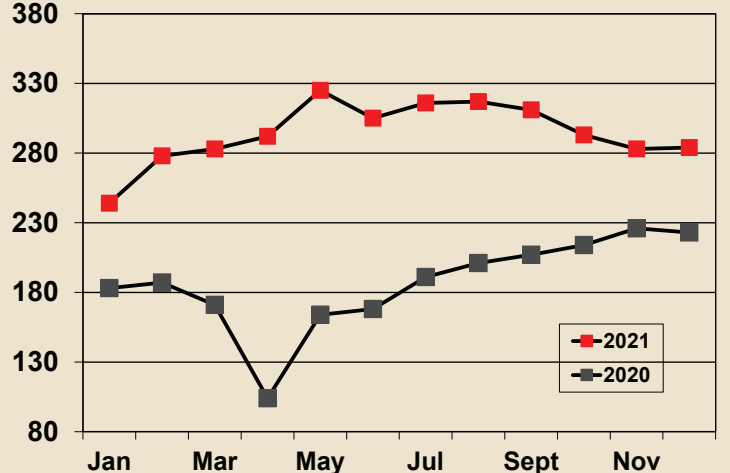
**US Per Capita Consumption of Red Meat and Poultry  
USDA to 2021 - lbs**



**Deboned Breast**

The price of deboned breast sank to less than a dollar late last year. This year, breast meat rose during the first five months of the year as supply turned out to be surprisingly short for a suddenly increased demand, a familiar story for many industries. It is interesting to note that the price is not yet dropping seasonally as would be expected but rather remaining at \$2 per pound (\$4.40 per kilo). That would indicate a continued shortage of supply compared to demand and continued relatively high prices in 2022.

**Whole Wing Prices - 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 will drop seasonally this winter but to a lesser extent than in previous years. With grain prices eventually dropping and chicken prices relatively high, 2022 should be a very profitable year.

**December 2021 US Measure**

Leg Quarters	\$0.38 per pound
Deboned Breast	\$2.00 per pound
Wings	\$2.80
Chicago Corn	\$5.90 per bushel
Soybean Meal	\$366/Ton
Total Wholesale Cost	\$0.87
Revenue	\$0.99
Gain (Loss) per pound	\$0.12

**December 2021 Metric Measure**

Leg Quarters	\$0.84 per kilo
Deboned Breast	\$4.40 per kilo
Wings	\$6.16 per kilo
Chicago Corn	\$236 per ton
Soybean Meal	\$400 per ton
Total Wholesale Cost	\$1.91
Revenue	\$2.18
Gain (Loss) per kilo	\$0.27

**Projected June 2022 US Measure**

Leg Quarters	\$0.40 per pound
Deboned Breast	\$2.20 per pound
Wings	\$3.00
Chicago Corn	\$5.50 per bushel
Soybean Meal	\$350/Ton
Total Wholesale Cost	\$0.84
Revenue	\$1.07
Gain (Loss) per pound	\$0.22

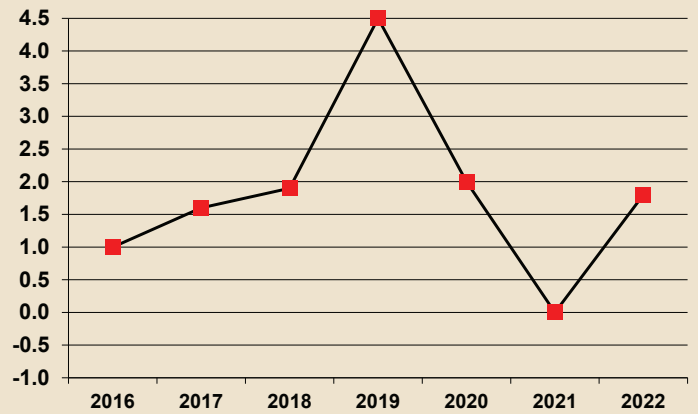
**Projected June 2022 Metric Measure**

Leg Quarters	\$0.88 per kilo
Deboned Breast	\$4.84 per kilo
Wings	\$6.60 per kilo
Chicago Corn	\$220 per ton
Soybean Meal	\$385 per ton
Total Wholesale Cost	\$1.85
Revenue	\$2.35
Gain (Loss) per kilo	\$0.50

**World Chicken Growth Rate**

World chicken production grew at an unusual rate of 4.5% in 2019 in large part due to surging production in China to make up for lack of pork in the wake of African Swine Flu. Since then, production increases have moderated in China while the problems associated with COVID reduced production increases everywhere. As a result, there was no increase at all in world production this year. Growth is expected to accelerate to 1.8% in 2022, a level that is probably close to the long-term rate of growth that can be expected. With world population increasing at 1% per year, a growth rate of 2% for chicken would mark a continued increase in world per capita consumption.

**World Chicken Growth Rate  
USDA - %**



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