

# Broiler Economics

By Dr. Paul Aho

## GRAIN PRICES MAY HAVE PEAKED

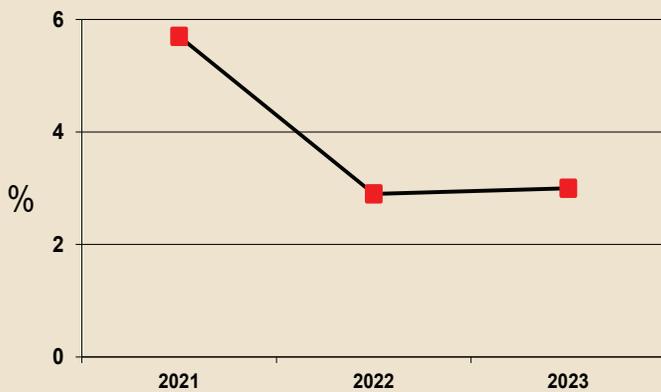
In crop year 2019-2020, the average farm price of corn in the US was \$3.50 per bushel (\$140 per ton). The subsequent bull market brought that price up to \$8.00 per bushel recently (\$320 per ton). Have prices peaked? Although picking the top of a market is notoriously difficult, the market may indeed be close to the top. It is hard to imagine a scenario (other than a drought) where prices go much higher. However, it is possible that the decline will be slow and could take many months to return to lower levels. In addition, “lower levels” may be higher than what was considered low just a few years ago. It may be a relief to get back to \$5 per bushel of corn (\$200 per ton) but that might be a low point in the next cycle.

In any case, bull markets do not last forever because high prices both stimulate additional production and discourage use. That potent combination eventually brings a bull market to its knees. In the late stages of a bull market, our current position in the cycle, prices can rise to ever higher levels only if provided a constant stream of new bullish news.

The most important recent new bullish news is, of course, the war inside breadbasket Ukraine. In February it was feared that an entire crop of wheat and corn might be lost in that country. Now it appears that quite a bit of corn was planted, quite a bit of wheat will be harvested and somehow a portion of those harvests will find their way to the world market.

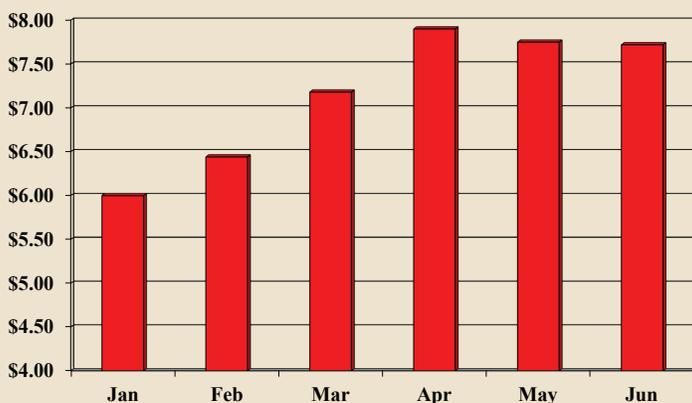
Unusually high prices may well persist for a while, but a long-lasting bear market could also be in the cards. That bear market would be born primarily from falling demand. There are signs that the world economy is slowing down. In 2021, world growth was a robust 5.7%. The World Bank prediction for this year is just 2.9%. The US Federal Reserve is in the process of raising interest rates to tame inflation. If they are successful, inflation will indeed be tamed but the US economy could tip into a recession. Higher interest rates in the US are likely to contribute to slower growth worldwide.

World Economic Growth World Bank

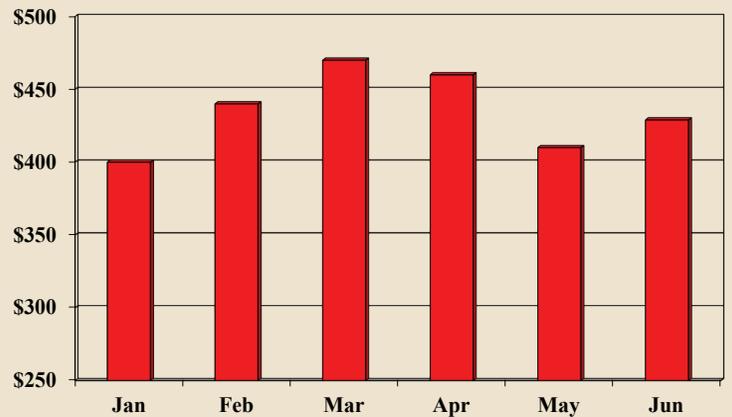


The effect of war in the Ukraine can be seen in futures prices. Chicago July 2022 corn futures rose from \$6.00 per bushel (\$240 per ton) in January to \$8.00 (\$320) in April. Soybean meal futures rose from \$400 per short ton back in January to \$460 in March. Those prices in March and April could possibly represent the top of the bull market.

Corn Futures July 2022  
US \$ / Bushels



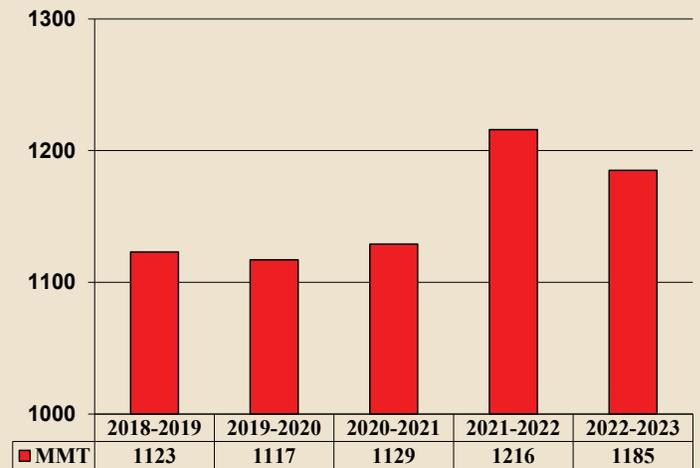
Soybean Meal July 2022 Futures  
US \$ / Short Ton



### Corn

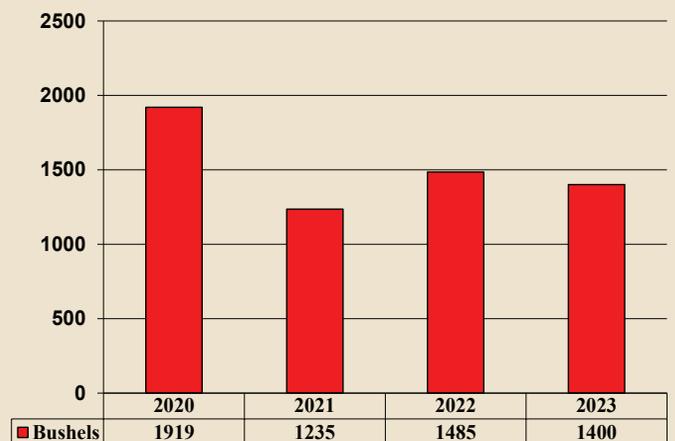
Corn prices have been rising for two years now. Before the war it was widely expected that prices would soon begin to moderate. Thanks to the war, corn prices rose even further. World production of corn was higher this crop year, but that is not enough to offset the effects of the war in the Ukraine.

World Production of Corn  
Million Metric Tons

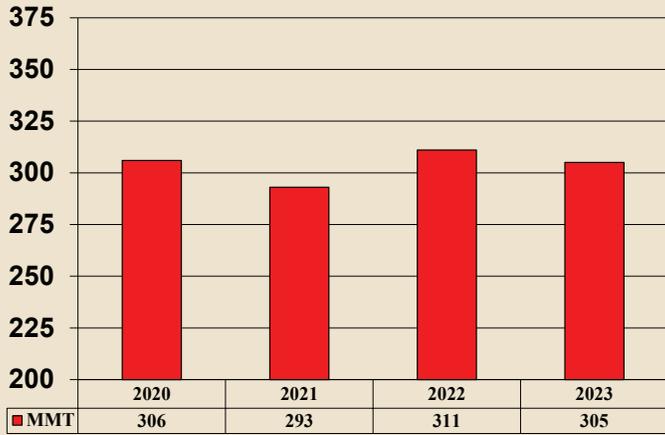


Next crop year is expected to show an increase in production in Argentina and Brazil and, of course, a decrease in Ukraine. Imports by China, which surged last crop year, are expected to be lower this crop year and next. US production is expected to be slightly lower. Overall world production will be slightly lower. However, projections of ending US and world corn inventory numbers for next year are steady, not extremely bullish.

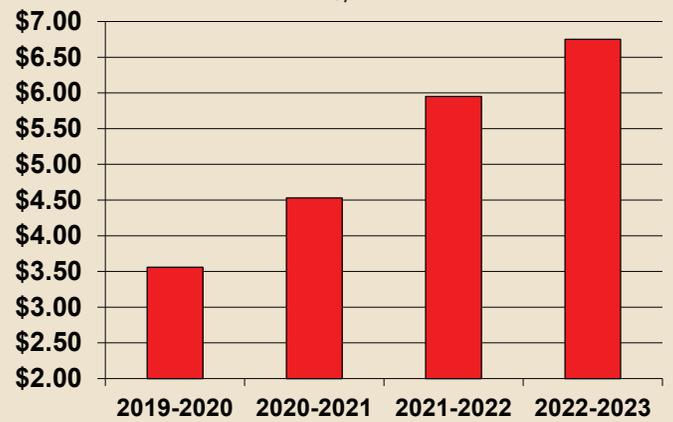
US Ending Stock of Corn  
Millions of Bushels



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



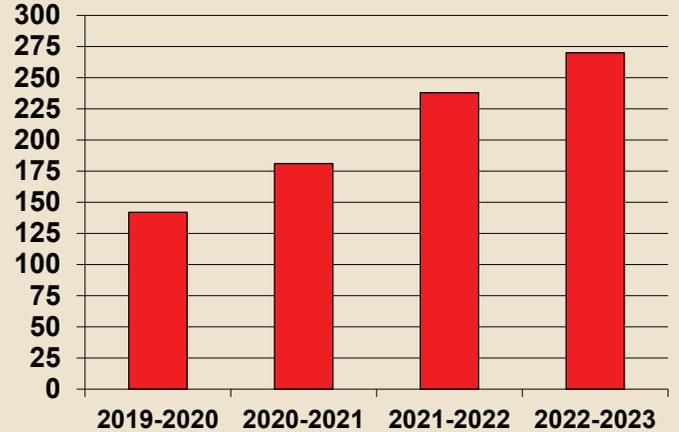
**Average US Farm Price of Corn  
USDA \$/Bushel**



**Argentina Corn Supply and Demand  
WASDE June 2022 Metric Tons**

	2020-2021	2021-2022	2022-2023
Harvest	52	53	55
Imports	0	0	0
Exports	41	39	41
Ending Inventory	1	1	1

**Average US Farm Price of Corn  
USDA \$/Metric Ton**



**Brazil Corn Supply and Demand  
WASDE June 2022 Metric Tons**

	2020-2021	2021-2022	2022-2023
Harvest	87	116	126
Imports	4	2	1
Exports	21	45	47
Ending Inventory	5	5	8

**Ukraine Corn Supply and Demand  
WASDE April 2022 Metric Tons**

	2020-2021	2021-2022	2022-2023
Harvest	30	42	25
Imports	0	0	0
Exports	24	23	9
Ending Inventory	1	6	12

**China Corn Supply and Demand  
WASDE June 2022 Metric Tons**

	2020-2021	2021-2022	2022-2023
Harvest	260	273	271
Imports	28	23	18
Exports	0	0	0
Ending Inventory	204	210	204

**US Corn Supply and Demand  
WASDE June 2022 Millions of Bushels**

	2019-2020	2020-2021	2021-2022	2022-2023
Harvest	13,620	14,111	15,115	14,460
Supply Total	15,883	16,055	16,375	15,970
Ethanol	4,852	5,033	5,375	5,375
Exports	1,778	2,753	2,450	2,400
Feed	5,903	5,598	5,625	5,350
Total Use	13,963	14,821	14,935	14,570
Ending Inventory	1,919	1,235	1,485	1,400
Farm Price	\$3.56	\$4.53	\$5.95	\$6.74

Although the average price next crop year in the US is projected to be higher than this crop year, the next crop year may be the opposite of this crop year; prices may start high and end lower instead of starting lower and ending higher. The stage will be set for lower average prices in 2023-2024.

**Soybeans**

Soybean prices were less affected by the war and more affected by a moderate drought that recently took place in Argentina and Brazil. For this crop year, South America was once expected to produce 206 MMT. However, drought in some areas and floods in other areas reduced that number by 32 MMT. The rapid increase in the production of “renewable” diesel fuel made from soybean oil will begin to have an effect next crop year. The effect is likely to be favorable for soybean meal, the by-product of the now more highly desirable soybean oil.

**Argentina Soybean Supply and Demand  
WASDE June 2022 Metric Tons**

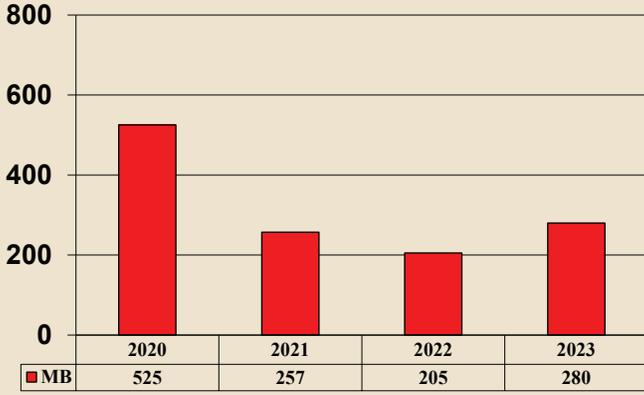
	2020-2021	2021-2022	2022-2023
Harvest	46	43	51
Imports	5	3	5
Exports Beans + Meal	33	31	33
Ending Inventory	26	21	22

**Brazil Soybean Supply and Demand  
WASDE June 2022 Metric Tons**

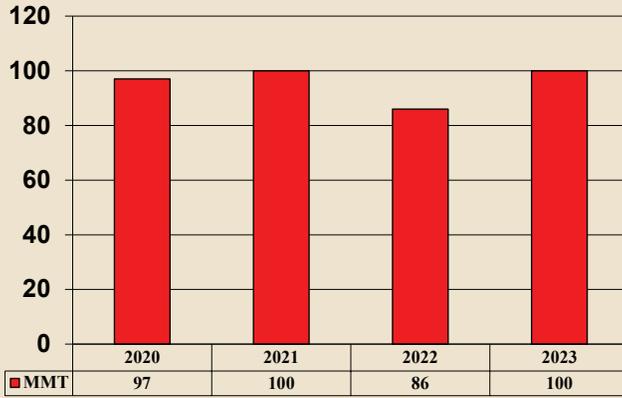
	2020-2021	2021-2022	2022-2023
Harvest	137	125	149
Imports	1	1	1
Exports Beans + Meal	97	100	106
Ending Inventory	27	21	30

World and US ending stocks of soybeans fell this year but are expected to rise next year. Like corn, the average price of soybean meal this crop year was higher than last year. However, unlike corn, the average price next year is expected to drop.

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



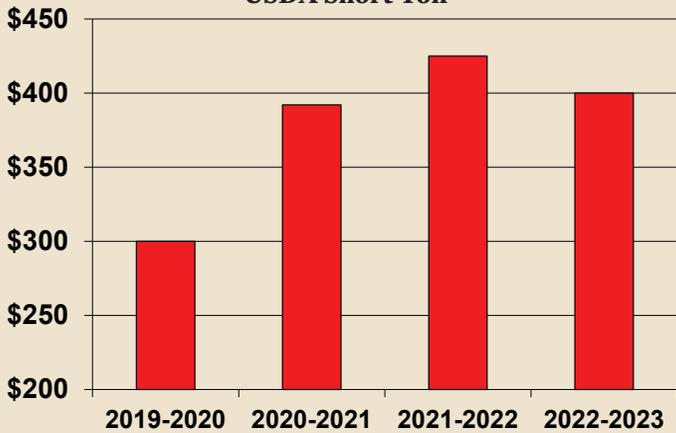
**World Ending Stock of Soybeans  
USDA - Millions of Bushels**



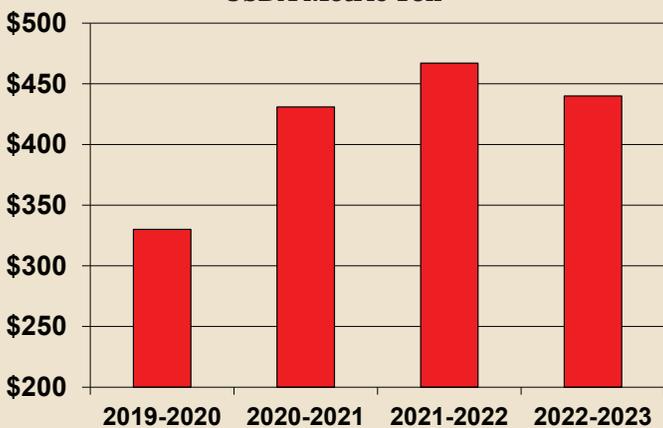
**US Soybeans – USDA  
WASDE June 2022 Millions of Bushels**

	2020-2021	2021-2022	2022-2023
Harvest	4,216	4,435	4,640
Total Supply	4,761	4,707	4,860
Export	2,265	2,170	2,200
Total Use	4,505	4,502	4,580
Ending Stock Inventory	257	205	280
Meal Price short ton	\$392	\$425	\$400

**Average US Crop Year Price of Soybean Meal  
USDA Short Ton**



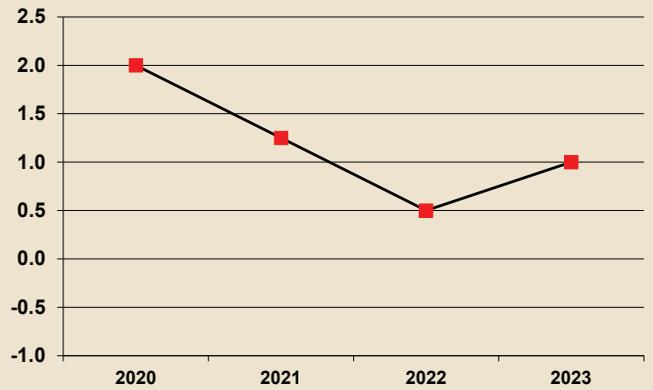
**Average US Crop Year Price of Soybean Meal  
USDA Metric Ton**



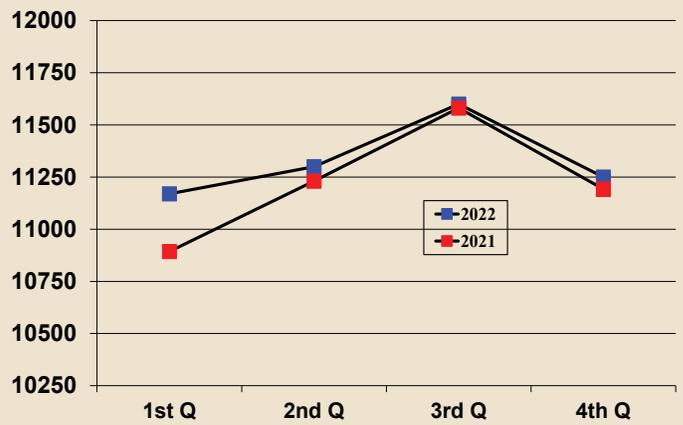
**Chicken Industry**

The world and US chicken industry have not been expanding recently because of COVID-19 and the accompanying problems with labor, the supply chain and raw materials. Other factors include high prices of lumber to build complexes and, of course, the sky-high price of grain. World chicken production will increase only 0.5% this year according to the USDA. US production will increase just 1%. By 2023 production should begin to accelerate.

**Increase in World Broiler Chicken Production %**

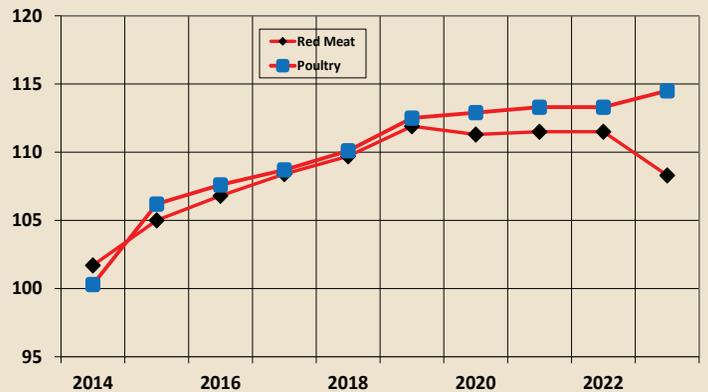


**US Quarterly Broiler Production  
USDA Million Pounds**



The total US per capita domestic supply of red meat and poultry will be lower in 2023 than it is this year. Next year, red meat per capita consumption is expected to fall significantly while poultry consumption rises only slightly. Total meat supply per capita will fall which would indicate continued relatively high prices for all meat, including poultry, through this year and next.

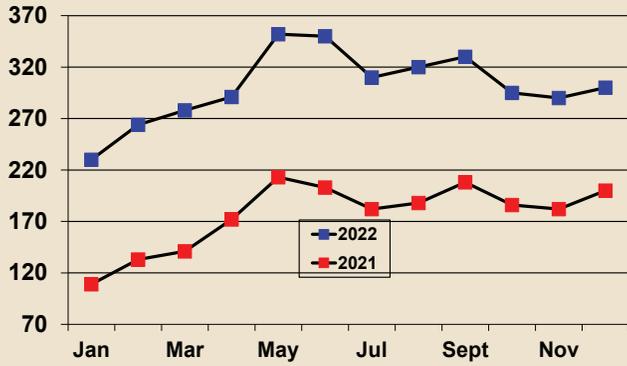
**US Per Capita Consumption of Red Meat and Poultry  
USDA to 2023 - Pounds**



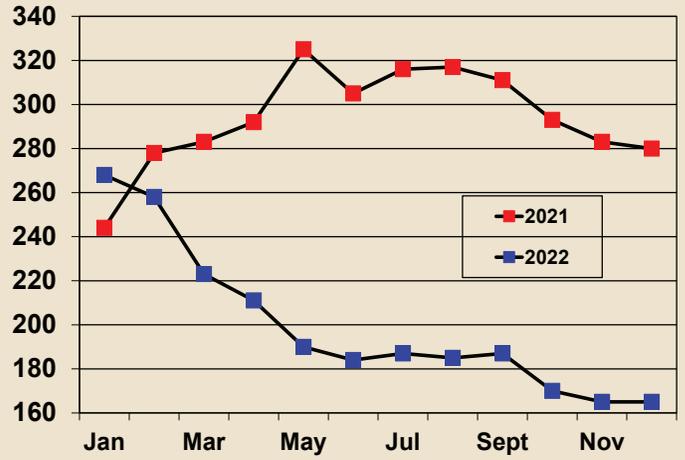
Deboned Breast

Deboned breast meat prices are sharply higher this year compared to last. Prices are now at \$3.50 per pound (\$7.70 per kilo). The shortage of supply combined with high prices for competing meats would suggest continued relatively high prices during the rest of the year.

**Deboned Breast - 2021-2022**  
USDA - Northeast Price - Cents/lb



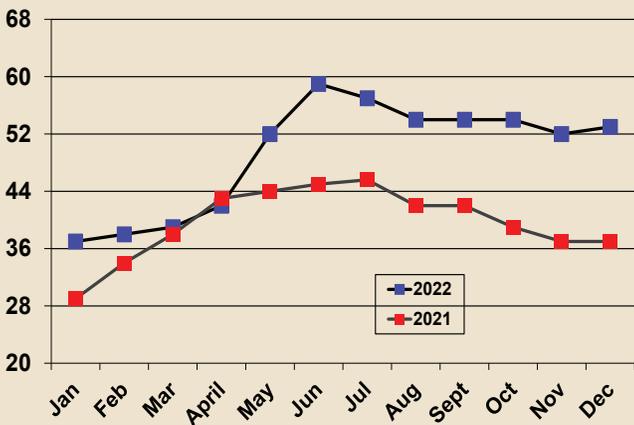
**Whole Wing Prices - 2021-2022**  
USDA - Northeast Price - Cents/lb



Leg Quarters

Leg quarter prices have also increased substantially this year. From just 36 cents per pound in January (80 cents per kilo) the price rose to 60 cents recently (\$1.30 per kilo). Although normally the export market dictates the price of leg quarters, it appears that domestic demand is the prime driver this year. As other meats and deboned chicken breast moved out of reach for many consumers, the demand for deboned thigh meat and bone-in drums and thighs soared. So far, international customers are also willing to pay up but the high price calls into question the continued willingness of international buyers to pay the price. The Northeast price appears likely to average 50 cents per pound (1.10 cents per kilo) this year.

**Leg Quarter Price - 2021-2022**  
USDA - Northeast Price - Cents/lb



Wings

Wings are the sole exception to the upward movement of prices. The high price of wings last year created demand destruction this year. Wings came down substantially because consumers could no longer afford to buy as much. It now appears that wings will average just \$2.20 per pound (\$4.80 per kilo) wholesale (Northeast Price), throughout 2022, down significantly from 2021. Even at the current relatively lower prices, the wholesale price of wings is 300% higher than leg quarters.

Chicken production in the US is currently highly profitable despite labor shortages and rising input costs. The entire year 2022 should be a profitable one in the US, especially if grain prices begin to drop and labor shortages begin to ease. If the economy retreats as expected, margins will shrink in 2023.

**June 2022 US Measure**

Leg Quarters	\$0.59 per pound
Deboned Breast	\$3.50 per pound
Wings	\$1.82 per pound
Chicago Corn	\$7.68 per bushel
Soybean Meal	\$468/Short Ton
Total Wholesale Cost per pound	\$1.09
Revenue per pound	\$1.32
Gain (Loss) per pound	\$0.23

**June 2022 Metric Measure**

Leg Quarters	\$ 1.30 per kilo
Deboned Breast	\$ 7.70 per kilo
Wings	\$ 4.00 per kilo
Chicago Corn	\$ 304 per ton
Soybean Meal	\$473 per ton
Total Wholesale Cost per kilo	\$2.41
Revenue per kilo	\$2.91
Gain (Loss) per kilo	\$0.50

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