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# Broiler Economics

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## THE CURE FOR HIGH PRICES IS HIGH PRICES

From the fall of last year to the spring of this year commodity prices of all kinds, including grain, rose spectacularly. Corn, for example, doubled. Many other commodities doubled or tripled including notably the price of lumber. In May, the fever broke and prices, while still high, have moderated for a wide range of commodities.

The dynamics of rapidly rising prices such as those that were experienced between August and May include a catalyst to spark the rally and then a bull market that feeds on itself until one day the peak price is reached. Ultimately the cure for high prices is the high prices themselves.

In this case, the catalyst was the realization that the world economy was going to recover in 2021 from the worst effects of Covid-19. The recession was going to be a "V" shaped recession which drops fast and recovers fast. Specifically, in the case of grain, an additional catalyst was the increased demand for grain from China. Once the bull market gets started, sellers become reluctant to sell (waiting for a higher price) while buyers all too eager to buy (hoping to avoid the inevitably higher price). The bull market proceeds upward feeding on its own upward momentum.

The top of the market is reached when prices themselves begin to influence supply and demand. High prices reduce demand and increase supply putting a halt to the bull market; hence the old saying that high prices cure high prices.

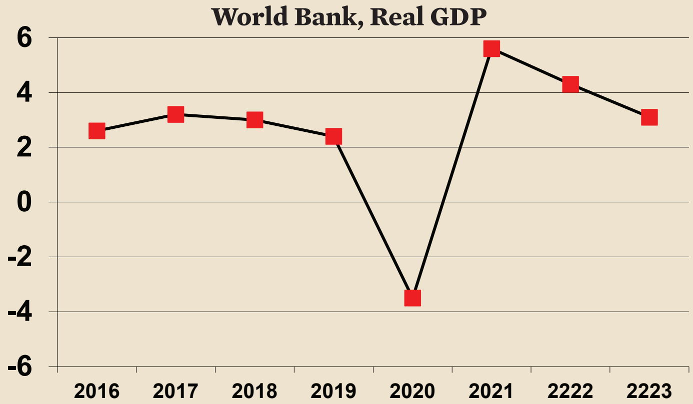
Once the top is in, buyers become less anxious about buying; they are waiting for a better price in the future. Sellers are anxious to sell before those high prices go away. That appears to be the situation in grain at this moment. Barring a drought, prices are headed down.

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 5.6% this year compared to estimates of just 4% a few months ago. Prospects are looking brighter for the world chicken industry as well.

There are still many things that 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. The world economic growth rate will moderate in 2022 and 2023 as the easy comparisons recede.

**World Economic Growth Rate %
World Bank, Real GDP**




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 a recession there is a shift in demand from more expensive meats toward poultry. In the current economic expansion, high prices of competing meats help to lift the price of chicken.

### Corn

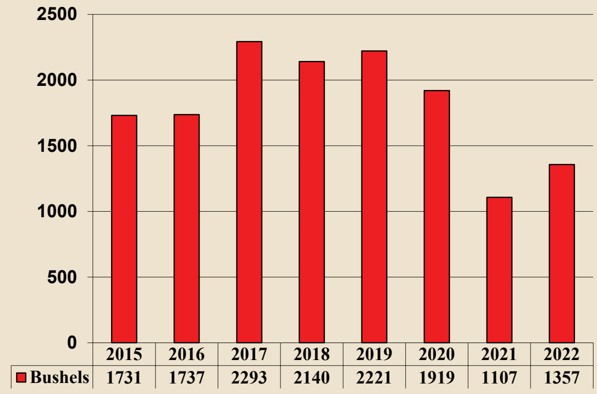
Corn prices rose spectacularly between August of last year and May of this year primarily due to higher exports to China and concerns about possible droughts in both North and South America. Estimated ending inventory fell with each new report, always a bad sign for grain users. Last crop year, 2019-2020, ended with an inventory in the US of 1.9 billion bushels. This crop year, 2020-2021, ending inventory is expected to drop to 1.1 billion bushels. World ending inventories were also falling.

In Chicago, the price of July corn futures rose from $3.50 in August to over $7.00 in May, a rise of 100%. To rise any higher, continued bullish news about droughts would be required. Unfortunately, Brazil looks dry, and the Midwest (west of the Mississippi) looks to be in danger of a drought. All in all, the price paid for corn will end up being at least a dollar a bushel more this crop year than last crop year on average. Even without a drought, prices will rise more than another dollar per bushel on average in the next crop year (September 2021 to August 2022).

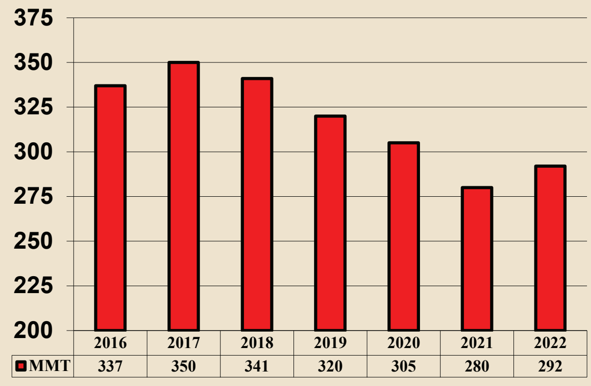
**US Corn Supply and Demand – WASDE June 2021
USDA to 2020-2021 - Millions of Bushels**

| | 2019-2020 | 2020-2021 | 2021-2022 |
|---|---|---|---|
| Harvest | 13,620 | 14,182 | 14,990 |
| Supply Total | 15,883 | 16,127 | 16,122 |
| Ethanol | 4,852 | 5,050 | 5,200 |
| Exports | 1,778 | 2,850 | 2,450 |
| Feed | 5,903 | 5,700 | 5,700 |
| Total Use | 13,963 | 15,020 | 14,765 |
| Ending Inventory | 1,919 | 1,107 | 1,357 |
| Farm Price | $3.56 | $4.35 | $5.70 |

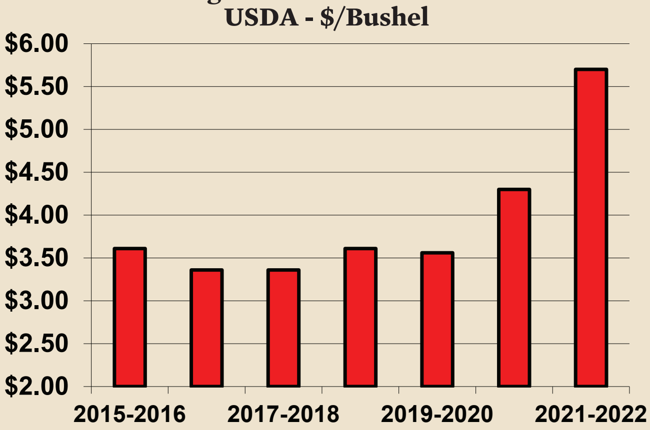
**US Ending Stock of Corn
Millions of Bushels**




**World Ending Stock of Corn
Million Metric Tons (MMT) - USDA**



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




## Soybeans

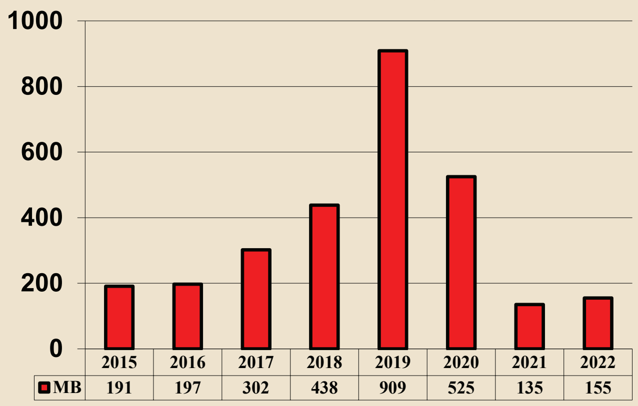
Soybean prices are even more vulnerable to a drought than corn. Inventories in the US are projected to fall to the bare minimum of pipeline levels. One poultry company began importing soybeans from Brazil for fear of a shortage later this year. The average price of soybean meal this crop year will be 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. The current strength in the price of soybean oil helps to moderate the rise in soybean meal.

It is important to remember that 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 June 2021 - Millions of Bushels**

| | 2019-2020 | 2020-2021 | 2021-2022 |
|---|---|---|---|
| Harvest | 3,552 | 4,135 | 4,405 |
| Total Supply | 4,476 | 4,695 | 4,575 |
| Export | 1,682 | 2,280 | 2,075 |
| Total Use | 3,952 | 4,560 | 4,420 |
| Ending Stock Inventory | 525 | 135 | 155 |
| Meal Price short ton | $299 | $405 | $400 |

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




## US Chicken Industry

Although 2021 was expected to be a more “normal” year after the bizarre 2020, it has been anything but normal. The year started with sandwich wars and then along came a devastating ice storm, labor shortages, an economy gathering steam, sky-high grain prices, incredibly pricey lumber and even a cyber-attack which all contributed to both a robust increase in demand and limited increase in supply.

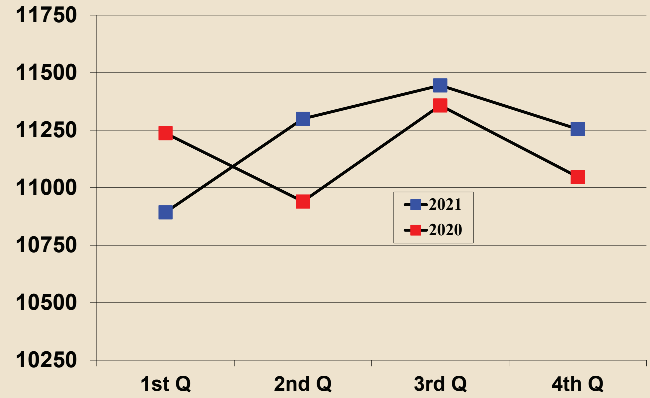
The year started out with a heating-up of the sandwich wars. Many the fast-food players including most notably, McDonalds, got into the act of competitively offering a white meat chicken sandwich. In the face of this sudden increase in demand came a devastating ice storm in February the effects of which lasted for months. Labor shortages caused by numerous factors including generous unemployment benefits meant that plants could not operate at full capacity. Also slowing supply were punishingly high grain prices and record high prices for lumber and other construction materials. The high prices for lumber, steel and concrete make the decision of building a new processing plant that much more difficult.

As a result of the events at the beginning of this abnormal year, prices of every part of the chicken are high and can be expected to remain high for many months to come.

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, which can be worth as much as $2 per pound, but also large amounts of leg quarters. Although exports of leg quarters to China slowed in the last few months as prices rose, exports for the entire year can be expected to at least equal that of last year.

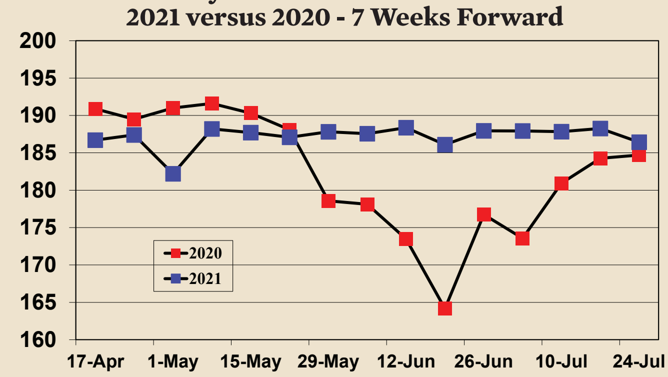
The USDA (June WASDE) expects chicken production to be only 0.7% higher this year. As can be seen on the graph below, chicken production was lower in the first quarter, higher in the second quarter and then projected to be only slightly higher in every other quarter this year.

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



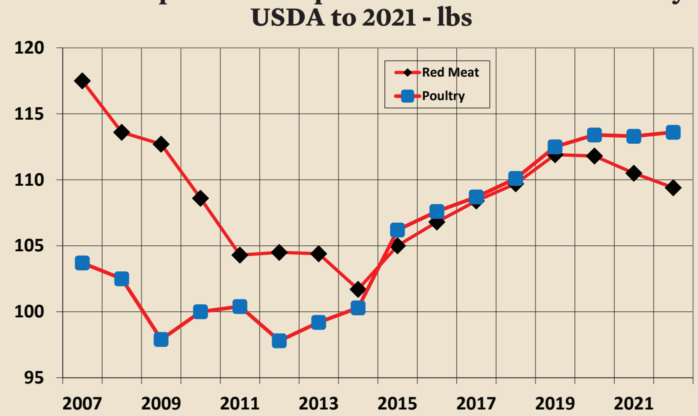

Recently the comparison between chick placements this year and last were magnified by a temporary drop in placements last year. Those numbers should be ignored. The graph below of chick placements, moved 7 weeks forward to show the processing date, indicates that production at this moment is temporarily much higher than the pandemic-affected numbers from the year before. In July, production in the two years will come back together and the lack of significant increase from the year before will become evident.

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




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 started to fall while chicken consumption leveled out, a trend that will continue this year. As a result, total meat consumption per capita is falling. With consumption falling and demand rising, it is no wonder that prices are high for all meats. High prices for beef and pork guarantees that chicken prices will remain high.

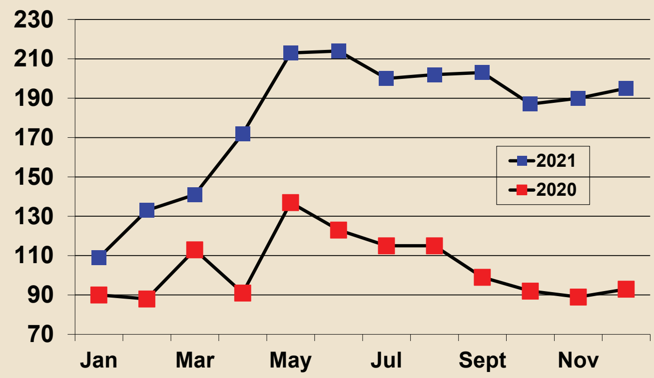
**US Per Capita Consumption of Red Meat and Poultry**
**USDA to 2021 - lbs**



**Deboned Breast**

The price of deboned breast was on a roller coaster last year. 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. 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 and the opening of more food service outlets. Prices may have peaked in May but are likely to remain high for the rest of the year.

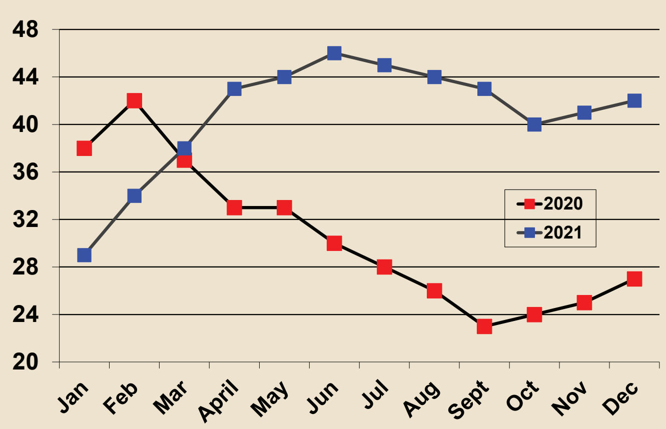
**Deboned Breast - 202-2021**
**USDA - Northeast Price - Cents/lb**




**Leg Quarters**

Leg quarter prices are highly dependent on the export market. Exports to China fell in the last few months but other countries have taken up the slack. Total exports are likely to be higher this year than last year. If the world shakes off Covid-19, 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 new floor for leg quarter prices. It is possible that the Northeast prices will continue to linger above 40 cents for the rest of the year.

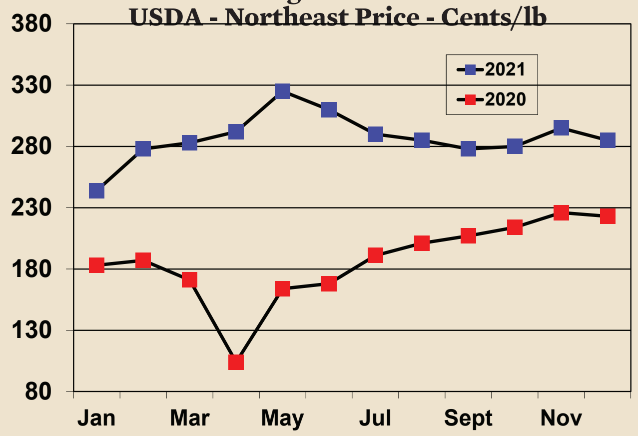
**Leg Quarter Price - 202-2021**
**USDA - Northeast Price - Cents/lb**




**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 all this year so far. 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 wholesale (Northeast Price). Although wing prices may have peaked, they are likely to remain high for the rest of the year.

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




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

**June 2021**

| | |
|---|---|
| Leg Quarters | $0.44 per pound |
| Deboned Breast | $2.14 per pound |
| Wings | $3.10 |
| Chicago Corn | $7.00 per bushel |
| Soybean Meal | $382/Ton |
| Total Cost of Wholesale Chicken | $0.87 |
| Revenue | $1.07 |
| Gain (Loss) per pound | **$0.20** |

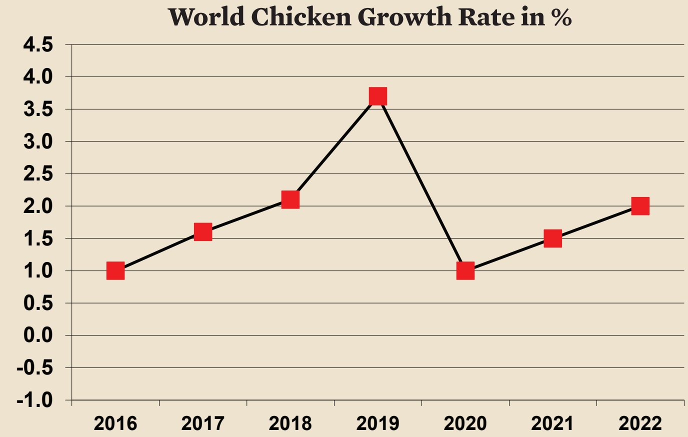
**October 2021**

| | |
|---|---|
| Leg Quarters | $0.40 per pound |
| Deboned Breast | $1.90 per pound |
| Wings | $2.80 |
| Chicago Corn | $6.00 per bushel |
| Soybean Meal | $375/Ton |
| Total Cost of Wholesale Chicken | $0.84 |
| Revenue | $0.98 |
| Gain (Loss) per pound | **$0.14** |

**World Chicken Growth Rate**

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

**World Chicken Growth Rate in %**

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