



**EIC preliminary estimation of the impact of COVID-19  
on egg prices and producers' revenue**

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There is no easy way to estimate how the COVID-19 pandemic will impact egg prices from day to day because of the absence of futures markets in the egg industry and the high volatility of egg prices. Both of these often result in inaccurate egg price projections for those trying to develop a model. This report provides a current summary of what is occurring in the marketplace. Egg markets are very dynamic and are likely to continue to fluctuate in the future.

## **Current Industry Snapshot**

The egg industry can be separated into two sectors that are affected very differently:

1. The “shell eggs” sector is for eggs that are washed, weighed and packaged for retail sales. The demand for shell eggs increased abruptly during March and resulted in a three-fold increase in price and then returned to the original level during April.
2. The “egg products” sector that breaks eggs into either liquid or other products such as dried eggs to supply restaurants, hotels, food manufacturers, etc. Dried egg prices were relatively stable, but liquid egg prices dropped to nearly half of the historic low because of the loss in foodservice demand.

The impact of COVID-19 has been very different for shell eggs vs. egg products markets. While the shell egg market experienced an increased demand and higher prices from more people buying eggs at supermarkets, the liquid egg market experienced a decreased demand from foodservice operators such as restaurants and hotels.

In order to be able to supply shell eggs, a farm has to comply with the Food and Drug Administration (FDA) Shell Egg Safety rule. This is not necessary for the egg products since these products are pasteurized before reaching the consumers. Therefore, an egg produced for breaking is not usually sent into the shell egg market. However, there is a proportion of eggs produced for the shell egg market that end up as egg products under normal market circumstances. This occurs because these eggs are not the most desired size for consumers such as medium and small eggs (and sometimes jumbo). In these cases, these typically undesirable shell eggs can be packed and marketed as shell eggs if there is demand for them.

In the first week of April 2020, the FDA issued a temporary change to the policy regarding enforcement of 21 CFR Part 118 (the Egg Safety Rule) during the COVID-19 public health emergency. The objective of the temporary change is to allow producers who currently only sell eggs to facilities for further processing (e.g., into “egg products”) to sell to the table egg market, provided certain requirements are met to ensure food safety compliance. This policy is intended to remain in effect only for the duration of the public health emergency related to COVID-19. The FDA rule change could have also benefited consumers by an increasing the supply of packaged eggs at retail which are in high demand. However, the equipment installed in farms that produce egg products is very different from that in shell egg farms. One main difference on a farm that produces egg products is the lack equipment for packaging shell eggs in cartons. Some companies may have the capacity to put eggs in flats to send them to packaging facilities, but they might need new equipment or additional labor to do so. While the egg-product producing farms were working to overcome the challenge of labor and infrastructure, shell egg packagers were working at capacity to fill orders and their concerns about the availability of equipment



and packaging materials limits their ability to accept diverted supplies from farms that generally produce egg products.

[Urner Barry](#), which is a subscription-only market data collection and reporting company, stated on April 30 that unfortunately many eggs produced for egg products were not able to be diverted because even those with the capability to sell eggs in flats found that many retailers were unwilling to accept them.

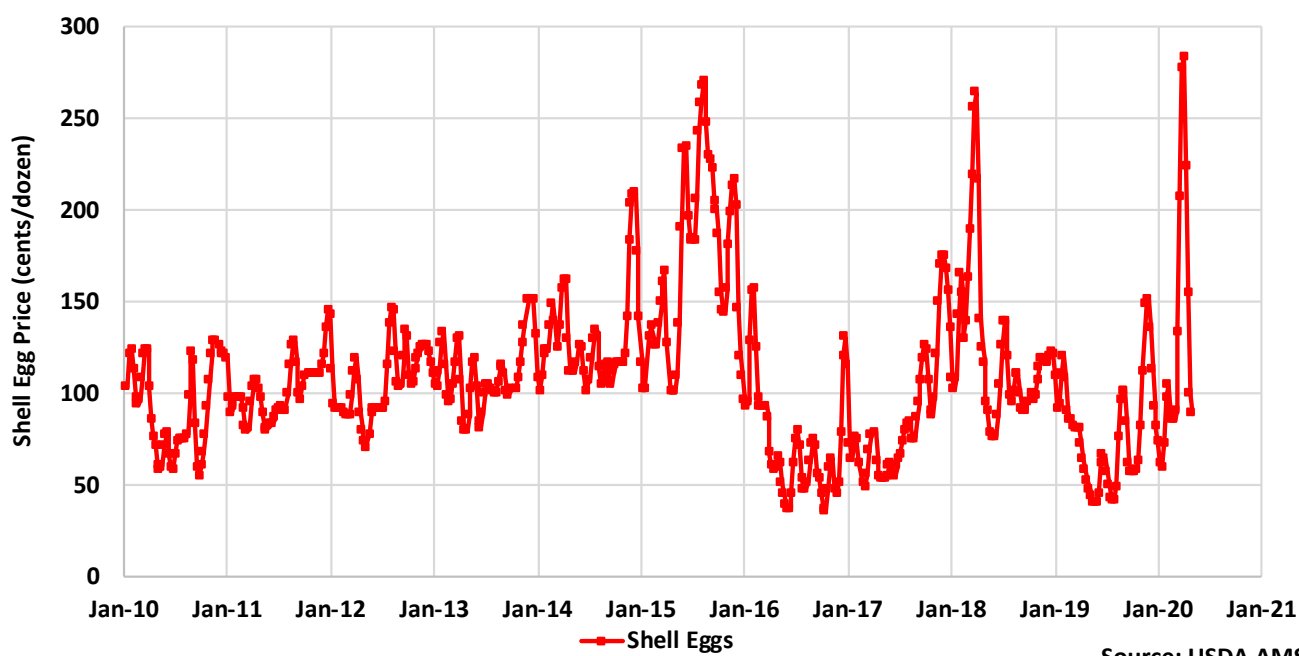
## MARKET DETAILS

### Shell egg market

Shell egg demand is strong because people staying at home are buying more food ingredients to cook at home. In fact, at the beginning of the crisis, people stocked up on essential items creating a huge demand for shell eggs that resulted in record high prices at the end of March (Figure 1). As the demand moderated, prices went down at almost the same rate that they rose. During the last week of April, they reached a price level similar to the one before the crisis. There is no information about the volume of sales in April yet, but it is likely that the FDA temporary rule change had some effect on the number of eggs being sold at retail.

The 2015 peak in figure 1 was the result of the highly pathogenic avian influenza outbreak that resulted in a dramatic decrease of the number egg laying hens, which created a large drop in egg supply. The peak in early 2018 is the result of what was called the “retailers war” in which eggs, among other products, were used as loss leaders to attract consumers to their brick and mortar stores, which created a large increase in demand for shell eggs. Both periods were followed by a period of record low prices in the following year.

Figure 1. Weekly warehouse prices of Midwest large white eggs reported by USDA-AMS



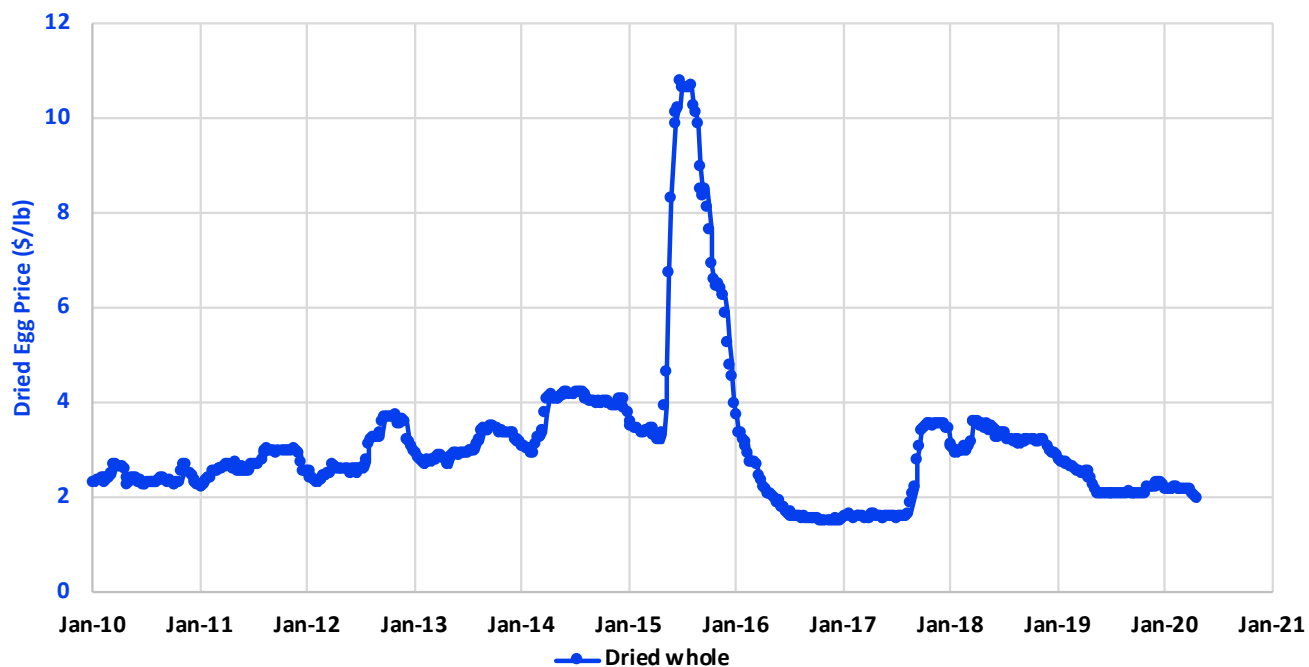
Source: USDA AMS



## Dried egg market

During the last two months, the dried egg market didn't experience much of a price fluctuation. This may be because of the ability to store this product for a long period of time. The price at the beginning of March was rather low compared with the historical trend and continued being low (figure 2). The dried egg market has experienced only one exceptional price peak during 2015 when the high path avian influenza outbreak created a large drop in egg supply. That peak in price was also followed by a period of record low prices in the following year.

Figure 2. Weekly prices of dried whole egg as reported by USDA-AMS



Source: USDA AMS

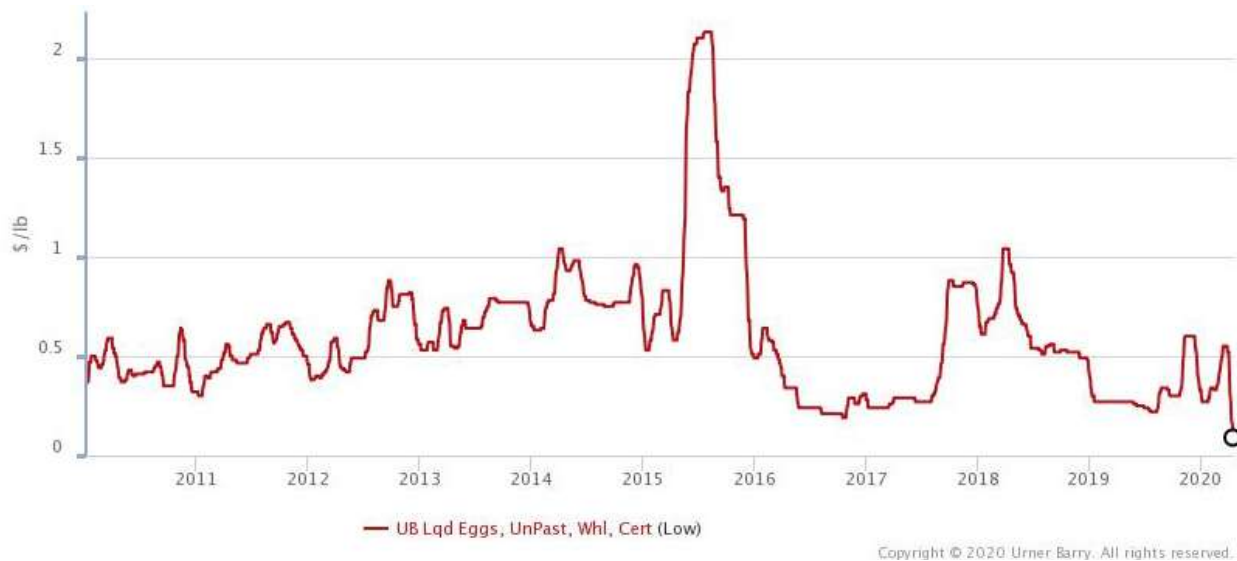
## Liquid egg market

USDA Agricultural Marketing Service (AMS) doesn't report prices for liquid egg products, but [Urner Barry](#) does. Therefore, this section is written based on Urner Barry prices. The liquid egg market was clearly negatively affected by the COVID-19 outbreak as a result of the huge reduction in the demand from foodservice operators. The March market experienced an increase that is typical around Easter time, but it then fell sharply to the point that the price of the last week of April (8 cents/lb.) was almost half of the historic low price (14.4 cents/lb.) reached in February 2017 (figure 3). For comparison purposes, a new gallon of retail purified water was \$0.80 during this time, an equivalent of 9.6 cents/lb.

At this price level, egg farmers producing liquid egg cannot cover their feed cost, which we estimate at 22 cents/lb. of edible liquid egg. While many liquid egg contracts are based on the prices of corn and soybean meal, which provide the producers some protection from these market lows at the expense of

not capitalizing on the market highs, there is no current way to determine how many farmers have which kind of contract.

Figure 3. Price of liquid whole egg certified as published by Urner Barry

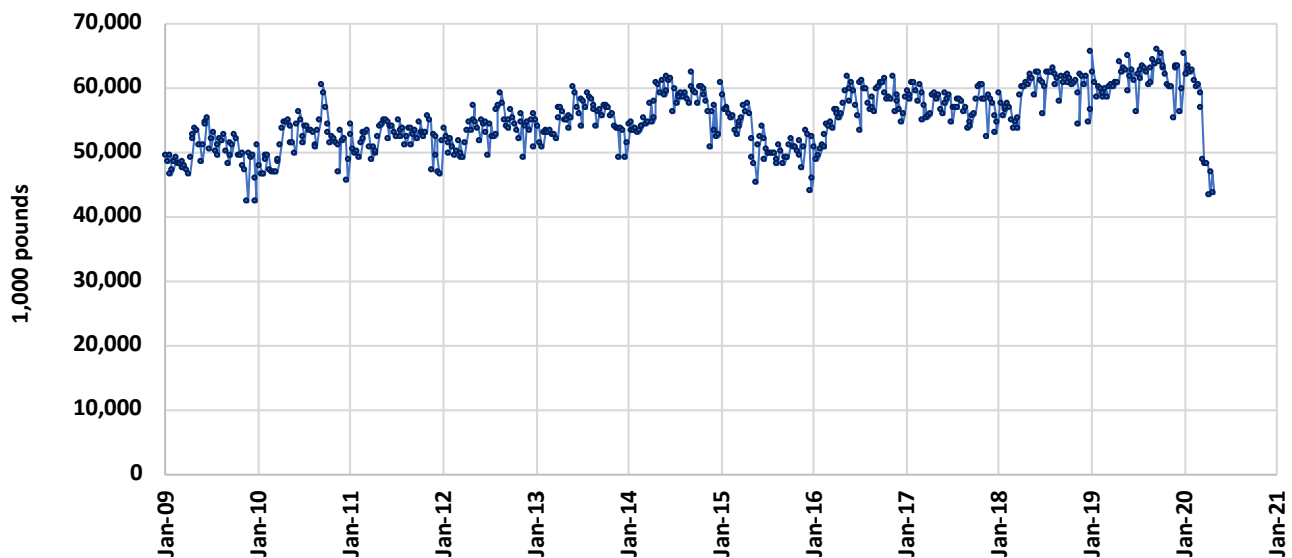


Independent of the low liquid egg prices, farmers are struggling to find a market for their liquid egg even at these historically low prices. As a consequence of this low demand for liquid egg products, some farmers are sending birds through a reduced production period called a “molt” and hoping for a quick recovery in the market. Other farmers are culling flocks earlier than planned which will result in a decreased number of laying hens in the U.S. As the country saw in 2015, it would take some months to rebuild the laying hen flock, depending on the number of hens culled, the age of the flocks culled and the schedule of pullet replacement. This decreased production will have a ripple effect on the demand for labor, other inputs of production, and services such as trucking.

While liquid egg is a necessity for the foodservice, hospitality and baking industry, it presents challenges to those who are not used to working with it on a regular basis. Although pasteurized to ensure food safety, the majority is packaged in large containers that are not easily used by individual consumers. Some farmers have donated to their local food banks, but the food bank system is not well equipped to handle refrigerated food or larger quantities of items that can't be sub-divided. Egg farmers are also utilizing opportunities such as investigating export markets and contacting other livestock farmers to see if the product can be used in their feed rations. Dried egg inventory was already high before the COVID-19 outbreak, limiting egg farmers' capacity to utilize liquid egg for dried egg stocks. While it is possible that large buys of liquid egg could be made by USDA, or that the product could be used to offset food costs at older adult patient facilities who would also be struggling with the costs of COVID-19, currently the pathway for the industry to get the product to these individuals is not clear. Unfortunately, if the problem persists some farmers may have to resort to what the dairy industry has had to do and destroy perfectly edible product simply because there is no market for it.

An indication of the lower supply of liquid egg is the reduction in the production of edible liquid egg (figure 4). April 2020 marked the largest drop in the production of liquid egg, the average weekly production of liquid egg being 19% lower than the previous month and 25% lower than April 2019 (both figures represent the largest drop in history). After adjusting for inflation, the market value of the liquid egg produced in the U.S. is more than \$110 million below the 10-year historical April average. The total economic effect will depend on the speed and the level of the demand recovery, as well as the time to rebound to previous levels of liquid egg production.

Figure 4. Weekly edible liquid eggs production expressed in thousand pounds as reported by USDA-AMS



Source: USDA AMS

## Summary

Unfortunately, egg farmers are facing the COVID-19 pandemic after a year of low prices resulting in economic losses. Therefore, the situation is occurring at a time with limited financial reserves for the industry. While some egg farms are large and diversified in their type of operations and contracts with customers, others are not. Further, there are key differences in egg farming operations' capacity to meet market demand. In addition to the key differences in operations, there is also a marked difference in consumer demand for shell eggs versus egg products. Farmers producing liquid egg for the general marketplace, without contracts that cover their basic production costs or in cases where customers are no longer taking delivery, will most likely be devastated by this pandemic if restaurant and hospitality industries continue to persist in their present state.