



Animal Welfare and Treatment Label Claims in U.S. Table Eggs: Trends in Retail Premiums and Policy Impacts, 2008–18

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What Is the Issue?

In the U.S. table egg industry, a range of production practices have been under scrutiny, from the housing where animals are kept, to the use of exogenous substances like antibiotics and hormones, to the types of feed the animals receive. A common assumption has been that consumer demand for animal welfare and treatment practices accompanies a willingness to pay market premiums for the resulting products. Market premiums are a common justification or incentive for producers shifting production away from conventional standards. However, increased costs of alternative production methods can mean the sustainability of a specialty operation depends on the size and consistency of premiums. In addition to classical market drivers, shocks like State policy passage and disease outbreaks may increase the uncertainty of premiums. In the 2008–18 period, the U.S. table egg industry experienced both types of shocks in the form of: (1) a highly pathogenic avian influenza (HPAI) outbreak in 2014–15; and (2) the passage of a series of State policies restricting the housing practices allowed in laying-hen production or restrictions on the sale of eggs from hens housed under certain conditions. This report provides a full accounting of common animal welfare and treatment claims in the U.S. retail table egg market from 2008 to 2018 and investigates dynamics of price premiums for those claims.

What Did the Study Find?

Clear trends have emerged in the proliferation of animal welfare and treatment claims in the retail U.S. table egg market. Since 2008, products bearing the claims evaluated in this report have captured substantial shares of U.S. consumer table egg expenditures. For example, although absent from the market in 2008, eggs bearing pasture-raised claims captured 5 percent of total U.S. consumer egg expenditures by the end of 2018. The trend has been corroborated by the general decline in the share, by value, of U.S. table eggs sold with no animal welfare, treatment, or production claims from 41 percent at the beginning of 2008 to 27 percent at the end of 2018.



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Most of the animal welfare and treatment claims evaluated commanded a premium, on average, at a national level, though discounts were also observed.

- Across 2008–18, the estimated average monthly premiums were:
 - 9.9 percent for no added antibiotics claims,
 - 13.8 percent for cage-free claims,
 - 18.7 percent for free-range claims,
 - 40.9 percent for organic claims
 - 8.8 percent for third-party, humane certified claims, and
 - 46.5 percent for pasture-raised claims.
- Over the same period, on average, the United Egg Producers Certified claim was associated with a 6.9 percent discount.

The study identified significant trends in premiums for several claims, but the direction of the trend depended on the claim, with most premiums increasing over time but some decreasing. Overall, price differentials for animal welfare and treatment claims compared with conventional U.S. table egg average prices exhibited significant change over the 2008–18 period.

The magnitude of premiums for some animal welfare and treatment claims was significantly affected by major market shocks, including widespread HPAI disease outbreaks and the passage of State policies addressing production of laying hens or retail sale of table eggs.

- The HPAI outbreak of 2014–15 had a mainly negative influence on premiums for several claims, reducing all but one evaluated premium by between 1 and 31 percentage points.
- Passage of a production policy reduced premiums for claims for cage-free (–7 percentage points), organic (–16 percentage points), vegetarian-fed (–7 percentage points), no added hormones (–2 percentage points), free-range (–10 percentage points), and United Egg Producers Certified (–1 percentage point).
- The passage of a sales policy had a net negative effect on all evaluated premiums except those of claims for organic (increased 7 percentage points), vegetarian-fed (4 percentage points), and no added hormones (3 percentage points).

How Was the Study Conducted?

For this study, the author compiled an inventory of common animal welfare and treatment claims for U.S. retail eggs, including official USDA, Agricultural Marketing Service definitions for common terms. Using retail food scanner data from Circana (previously Information Resources, Inc. (IRI)), merged with package label data from Label Insight, the study characterizes the market for U.S. table eggs bearing common animal welfare and treatment claims by calculating monthly market expenditure shares and average monthly prices from 2008–18. The author estimated a set of semi-log hedonic pricing models to assess the magnitude and dynamics of retail market premiums, or discounts, for the traits of interest over the sample period. Additionally, the author estimated a comprehensive hedonic pricing model across the full sample period to assess the impacts of the 2014–15 HPAI outbreak and the passage of State laying-hen welfare production and retail egg sales policies on specialty egg premiums.