## An Economic Evaluation of the American Egg Board's Marketing and Research Activities

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## **Executive Summary**

Since 1976, U.S. egg producers have paid a mandatory assessment to finance the national egg promotion program operated by the American Egg Board (AEB). In 1994, producers voted to increase this assessment from 5 to 10 cents per 30-dozen case of shell eggs marketed, and to raise the producer exemption level from 30,000 to 75,000 laying hens. In 2021, annual checkoff revenues were approximately \$20 million.

Under the 1996 Federal Agricultural Improvement and Reform Act, all federal marketing orders operating promotion programs are required to have an independent economic evaluation conducted to ascertain the extent of their impact on the market. To carry out this requirement, the AEB contracted with Dr. Harry M. Kaiser from Cornell University to conduct an economic analysis of the market impacts of their domestic and international marketing/research activities. The primary objective of this project is to measure the economic impact of the AEB's activities on sales volume and egg prices, and to determine the net economic benefits for egg producers funding the program.

To determine the market impacts of AEB activities, an econometric model of the U.S. egg industry is developed based on quarterly national market data from 2012 through 2021. For the first-time ever, AEB included all of its marketing activities. Previously, AEB only used consumer marketing data.

In addition, a market-level simulation model of the retail and farm markets of the egg sector is developed to compute an overall return-on-investment (ROI) for the AEB, as well as for the following six activities: (1) advertising, (2) non-advertising promotion, (3) channel marketing, (4) nutritional research, (5) nutritional education, and (6) foreign market development.

Finally, an input-output model of the U.S. macroeconomy is used to compute the indirect and induced effects of AEB marketing and research activities on GDP, tax revenue, employment creation, and labor income.

The main conclusions of the analysis are:

- The average ROI from all AEB marketing/research activities combined is 10.11. In other words, each dollar invested in AEB marketing/research activities returned \$10.11 in industry-wide net revenue to egg farmers. This is up from the previous report of 9.04.
- The direct effect of the AEB on the U.S. egg sector was to create an additional \$914 million per year in total revenue to egg producers. Put differently, had there been no AEB, annual total egg revenue would have been \$914 million per year lower than it actually was.

- The direct effect of the AEB adding an incremental \$914 million to the egg-industry had positive spillover effects to the general economy in 2021, including:
  - Increasing U.S. employment by 12,396 people.
  - Increasing U.S. employment income by \$735 million.
  - Increasing total value added by \$1.2 billion in the U.S.
  - Increasing U.S. GDP by almost \$3.5 billion.
- The existence of the AEB increased tax revenue at the federal, state, and local levels by \$267 million in 2021.
- All six AEB marketing and research activities had a positive and statistically significant impact on egg demand.
- Had there been no AEB domestic marketing/research over the last five years, domestic and export egg demand would have been 422.5 million dozen eggs per year, or 5.4% lower than it actually was.
- While AEB marketing/research had a positive and significant impact on both shell egg and processed egg demand, the impact on shell egg demand was about twice as large as on processed egg demand.
  - This result is somewhat expected since shell eggs are a much more visible product than eggs used in processing.
  - Consequently, shell eggs are likely more responsive to AEB promotions than eggs used in processing.