

PRICE TAG/COST TAG

What costs aren't included in the price of your food?

Egg

Price Tag

Eggs cost \$0.85 – \$6.99 per dozen, with organic and free-range eggs at the higher end of this price range. What additional costs are associated with these prices?



Cost Tag

Food Miles

Iowa, Indiana, Ohio, Pennsylvania and Texas are the five largest egg-producing states, and they represent over 44% of all US laying hens.¹ But you may be able to find local eggs at your grocery store or farmers' market. Ask how the eggs were produced. Research shows that eggs from pasture-raised chickens can be higher in vitamin E and long-chain omega-3 fatty acids than those from hens raised in confinement.²

Genetic Diversity

The Single Comb White Leghorn hen dominates commercial egg production. A few multinational corporations control most commercial laying hen genetics.³ Fifty percent or more of the genetic diversity in ancestral chicken breeds is absent in commercial pure breed lines of birds.⁴ White-, brown- and green-egg laying breeds are available for farmers to raise.

Social Costs

Intensive, confined egg production became standard in the 1950s.⁵ The cages protected the laying hens from the environment, predators, parasites and disease. However, modern standard cages provide 100 square inches of floor space per bird and have been shown to limit the natural activities of the laying hen.⁶ Growing consumer concern about this issue has led to high demand for cage-free, free-range and organic eggs,⁷ but consumers should educate themselves about these labels. US egg production has become more concentrated: the number of egg farms decreased 85 percent from 1969 to 1992 and the number of laying hens per farm increased from 632 to 2,985 in that time frame.⁸ This large-scale approach means that when there is a food safety problem, as in the 2010 recall of half a billion eggs, it can sicken large numbers of people across the country.

Environmental Impact

Wastewater and runoff from the confinement facilities where most eggs are produced can pollute ground and surface water.⁹ Buy eggs from farms that practice good stewardship.

The price you pay for your food may or may not include all of the costs associated with it, such as costs to the environment and to the health of those who produce and consume it. Learn all you can about the food you buy—your choices matter!

PRICE TAG/COST TAG

What costs aren't included in the price of your food?

Egg

Price Tag

Eggs cost \$0.85 – \$6.99 per dozen, with organic and free-range eggs at the higher end of this price range. What additional costs are associated with these prices?



Cost Tag

Food Miles

Iowa, Indiana, Ohio, Pennsylvania and Texas are the five largest egg-producing states, and they represent over 44% of all US laying hens.¹ But you may be able to find local eggs at your grocery store or farmers' market. Ask how the eggs were produced. Research shows that eggs from pasture-raised chickens can be higher in vitamin E and long-chain omega-3 fatty acids than those from hens raised in confinement.²

Genetic Diversity

The Single Comb White Leghorn hen dominates commercial egg production. A few multinational corporations control most commercial laying hen genetics.³ Fifty percent or more of the genetic diversity in ancestral chicken breeds is absent in commercial pure breed lines of birds.⁴ White-, brown- and green-egg laying breeds are available for farmers to raise.

Social Costs

Intensive, confined egg production became standard in the 1950s.⁵ The cages protected the laying hens from the environment, predators, parasites and disease. However, modern standard cages provide 100 square inches of floor space per bird and have been shown to limit the natural activities of the laying hen.⁶ Growing consumer concern about this issue has led to high demand for cage-free, free-range and organic eggs,⁷ but consumers should educate themselves about these labels. US egg production has become more concentrated: the number of egg farms decreased 85 percent from 1969 to 1992 and the number of laying hens per farm increased from 632 to 2,985 in that time frame.⁸ This large-scale approach means that when there is a food safety problem, as in the 2010 recall of half a billion eggs, it can sicken large numbers of people across the country.

Environmental Impact

Wastewater and runoff from the confinement facilities where most eggs are produced can pollute ground and surface water.⁹ Buy eggs from farms that practice good stewardship.

The price you pay for your food may or may not include all of the costs associated with it, such as costs to the environment and to the health of those who produce and consume it. Learn all you can about the food you buy—your choices matter!



Egg Cost Tag References

Food Miles

¹USDA NASS. (2018). *Chickens and Eggs 2017 Summary*, ISSN: 1948-9056, p 6. Washington DC: USDA NASS. Retrieved Apr 9, 2019 (https://www.nass.usda.gov/Publications/Todays_Reports/reports/ckegan18.pdf).



²Karsten, H.D., P.H. Patterson, R. Stout and G. Crews. (2010). "Vitamins A, E and fatty acid composition of the eggs of caged hens and pastured hens." *Renewable Agriculture and Food Systems* 25(1): 45-54. Retrieved Apr 9, 2019 (<https://doi.org/10.1017/S1742170509990214>).

Genetic Diversity

³Sheldon, B.L. (2000). "Research and Development in 2000: directions and priorities for the world's poultry science community." *Poultry Science*, 79:149. Retrieved Apr 9, 2019 (<https://pdfs.semanticscholar.org/150b/9b10c9d859488491fe7372db41b56e3d6e29.pdf>).

⁴Muir, W.M., G.K. Wong, Y. Zhang, et al. (2008). "Genome-wide assessment of worldwide chicken SNP genetic diversity indicates significant absence of rare alleles in commercial breeds." *Proceedings of the National Academy of Sciences of the United States of America*, 105 (45) 17312-17317. Retrieved Aug 31, 2010 (www.pnas.org/content/105/45/17312.full.pdf+html).

Social Costs

⁵Anderson, K.E. (2009). "Overview of natural and organic egg production: Looking back to the future." *Journal of Applied Poultry Research* 18: 349. Retrieved Apr 12, 2019 (<https://academic.oup.com/japr/article/18/2/348/705671>).

⁶Pohle, K. and H.-W. Cheng. (2009). "Furnished cage system and hen well-being: Comparative effects of furnished cages and battery cages on behavioral exhibitions in White Leghorn chickens." *Poultry Science* 88: 1559-1564. Retrieved Apr 12, 2019 (<https://www.ncbi.nlm.nih.gov/pubmed/19590069>).

⁷Oberholtzer, L., C. Greene and E. Lopez. (2006). *Organic Poultry and Eggs Capture High Price Premiums and Growing Share of Specialty Markets*, USDA ERS Outlook Report No. LDP-M-150-1. Washington, DC: USDA ERS. Retrieved Apr 12, 2019 (<https://naldc.nal.usda.gov/download/41260/PDF>).

⁸McBride, W.D. (1997). *Changes in U.S. Livestock Production, 1969-92*, AER754, Summary and Table 2. Washington, DC: USDA ERS. Retrieved Apr 12, 2019 (https://www.ers.usda.gov/webdocs/publications/40794/32769_aer754b1.pdf?v=0).

Environmental Impact

⁹US EPA. (2003). *Poultry Production and Environmental Stewardship*. Washington, DC: US EPA Office of Enforcement and Compliance Assurance. Retrieved Nov 30, 2015 (<http://nepis.epa.gov/Adobe/PDF/50000CGA.PDF>).



Egg Cost Tag References

Food Miles

¹USDA NASS. (2018). *Chickens and Eggs 2017 Summary*, ISSN: 1948-9056, p 6. Washington DC: USDA NASS. Retrieved Apr 9, 2019 (https://www.nass.usda.gov/Publications/Todays_Reports/reports/ckegan18.pdf).



²Karsten, H.D., P.H. Patterson, R. Stout and G. Crews. (2010). "Vitamins A, E and fatty acid composition of the eggs of caged hens and pastured hens." *Renewable Agriculture and Food Systems* 25(1): 45-54. Retrieved Apr 9, 2019 (<https://doi.org/10.1017/S1742170509990214>).

Genetic Diversity

³Sheldon, B.L. (2000). "Research and Development in 2000: directions and priorities for the world's poultry science community." *Poultry Science*, 79:149. Retrieved Apr 9, 2019 (<https://pdfs.semanticscholar.org/150b/9b10c9d859488491fe7372db41b56e3d6e29.pdf>).

⁴Muir, W.M., G.K. Wong, Y. Zhang, et al. (2008). "Genome-wide assessment of worldwide chicken SNP genetic diversity indicates significant absence of rare alleles in commercial breeds." *Proceedings of the National Academy of Sciences of the United States of America*, 105 (45) 17312-17317. Retrieved Aug 31, 2010 (www.pnas.org/content/105/45/17312.full.pdf+html).

Social Costs

⁵Anderson, K.E. (2009). "Overview of natural and organic egg production: Looking back to the future." *Journal of Applied Poultry Research* 18: 349. Retrieved Apr 12, 2019 (<https://academic.oup.com/japr/article/18/2/348/705671>).

⁶Pohle, K. and H.-W. Cheng. (2009). "Furnished cage system and hen well-being: Comparative effects of furnished cages and battery cages on behavioral exhibitions in White Leghorn chickens." *Poultry Science* 88: 1559-1564. Retrieved Apr 12, 2019 (<https://www.ncbi.nlm.nih.gov/pubmed/19590069>).

⁷Oberholtzer, L., C. Greene and E. Lopez. (2006). *Organic Poultry and Eggs Capture High Price Premiums and Growing Share of Specialty Markets*, USDA ERS Outlook Report No. LDP-M-150-1. Washington, DC: USDA ERS. Retrieved Apr 12, 2019 (<https://naldc.nal.usda.gov/download/41260/PDF>).

⁸McBride, W.D. (1997). *Changes in U.S. Livestock Production, 1969-92*, AER754, Summary and Table 2. Washington, DC: USDA ERS. Retrieved Apr 12, 2019 (https://www.ers.usda.gov/webdocs/publications/40794/32769_aer754b1.pdf?v=0).

Environmental Impact

⁹US EPA. (2003). *Poultry Production and Environmental Stewardship*. Washington, DC: US EPA Office of Enforcement and Compliance Assurance. Retrieved Nov 30, 2015 (<http://nepis.epa.gov/Adobe/PDF/50000CGA.PDF>).