

PRICE TAG/COST TAG

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

Tomato

Price Tag

Tomatoes sell for \$1.29—\$4.99 per pound fresh, with organic and heirloom tomatoes at the high end of this price range. What are you getting at these prices?



Cost Tag

Food Miles

Although tomatoes are grown across the country, California provides 96% of US processing tomatoes and one-third of the fresh crop; Florida is in second place for tomato production.¹ Mexico is also a major player in the tomato industry, especially in the western US during winter.²

Genetic Diversity

The oft-noted lack of flavor in modern, commercial tomatoes has a number of causes: growers are paid for yield, not flavor; tomatoes are picked before they are ripe so they are not damaged in shipping; and there is no commercial breeding program focused on the complex issue of flavor.³ While advances have been made in understanding tomato genetics and flavor,⁴ sources of additional genetic material—the wild tomato and its relatives—are threatened in their native habitat.⁵ For interesting tomato colors and flavors, grow your own or buy local, and freeze, can or dry them for year-round use. Or purchase tomatoes from a grower who uses season extending techniques, making fresh tomatoes available in colder months.

Social and Health Costs

While tomato harvest workers face poor working conditions and low pay, organizing these workers can bring about improvements.⁶ In one agreement, tomato growers are distributing to workers a penny per pound surcharge they receive from major fast food and food service buyers.⁷

In 1987, the National Resource Council identified tomatoes as the food that exposes consumers to the greatest risk of developing tumors due to pesticide residues, because of both a high consumption rate and the high level of pesticides used in production.⁸ In one study, a quarter of consumers were willing to pay at least 15% more for tomatoes free of pesticide residues.⁹ You can learn to grow tomatoes organically or with IPM methods and look for these tomatoes at the farmers' market, co-op or grocery store.

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?

Tomato

Price Tag

Tomatoes sell for \$1.29—\$4.99 per pound fresh, with organic and heirloom tomatoes at the high end of this price range. What are you getting at these prices?



Cost Tag

Food Miles

Although tomatoes are grown across the country, California provides 96% of US processing tomatoes and one-third of the fresh crop; Florida is in second place for tomato production.¹ Mexico is also a major player in the tomato industry, especially in the western US during winter.²

Genetic Diversity

The oft-noted lack of flavor in modern, commercial tomatoes has a number of causes: growers are paid for yield, not flavor; tomatoes are picked before they are ripe so they are not damaged in shipping; and there is no commercial breeding program focused on the complex issue of flavor.³ While advances have been made in understanding tomato genetics and flavor,⁴ sources of additional genetic material—the wild tomato and its relatives—are threatened in their native habitat.⁵ For interesting tomato colors and flavors, grow your own or buy local, and freeze, can or dry them for year-round use. Or purchase tomatoes from a grower who uses season extending techniques, making fresh tomatoes available in colder months.

Social and Health Costs

While tomato harvest workers face poor working conditions and low pay, organizing these workers can bring about improvements.⁶ In one agreement, tomato growers are distributing to workers a penny per pound surcharge they receive from major fast food and food service buyers.⁷

In 1987, the National Resource Council identified tomatoes as the food that exposes consumers to the greatest risk of developing tumors due to pesticide residues, because of both a high consumption rate and the high level of pesticides used in production.⁸ In one study, a quarter of consumers were willing to pay at least 15% more for tomatoes free of pesticide residues.⁹ You can learn to grow tomatoes organically or with IPM methods and look for these tomatoes at the farmers' market, co-op or grocery store.

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!

Tomato Cost Tag References

Food Miles

¹USDA ERS. (2009, October). *Vegetables and melons: Tomatoes*. Retrieved May 17, 2011 (www.ers.usda.gov/briefing/vegetables/tomatoes.htm).

²Ibid.

Genetic Diversity

³Klee, H.J. (2010). "Improving the flavor of fresh fruits: genomics, biochemistry, and biotechnology." *New Phytologist* 187: 44-56. Retrieved May 17, 2011 (onlinelibrary.wiley.com/doi/10.1111/j.1469-8137.2010.03281.x/full).

⁴Simkin, A.J., S.H. Schwartz, M. Auldrige, M.G. Taylor and H.J. Klee. (2004). "The tomato carotenoid cleavage dioxygenase 1 genes contribute to the formation of the flavor volatiles b-ionone, pseudoionone, and geranylacetone." *The Plant Journal* 40:882-892. Retrieved May 17, 2011 (onlinelibrary.wiley.com/doi/10.1111/j.1365-313X.2004.02263.x/pdf).

⁵Chetelat, R.T., R.A. Pertuze, L. Faundez, E.B. Graham and C.M. Jones. (2009). "Distribution, ecology and reproductive biology of wild tomatoes and related nightshades from the Atacama Desert region of northern Chile."

Euphytica 167:78.

Retrieved May 17, 2011 (www.springerlink.com/content/92072848g7547w41).



Social and Health Costs

⁶Griffith, D. (2009). "Unions Without Borders: Organizing and Enlightening Immigrant Farm Workers." *Anthropology of Work Review* XXX: 2. Retrieved May 19, 2011 (onlinelibrary.wiley.com/doi/10.1111/j.1548-1417.2009.01021.x/full).

⁷Perez, E. (2010, October 13). "Major Grower to Join Wage Plan." *Wall Street Journal*. Retrieved May 19, 2011 (online.wsj.com/article/SB10001424052748704763904575550550086511426.html).

⁸National Academy of Sciences. (1987). *Regulating Pesticides in Food: The Delaney Paradox*, p 78. Washington DC: National Academy Press.

⁹Weaver, R.D., D.J. Evans, A.E. Luloff. (1992). "Pesticide Use in Tomato Production: Consumer Concerns and Willingness-to-Pay." *Agribusiness* 8:2, 131-142. Retrieved May 19, 2011 ([onlinelibrary.wiley.com/doi/10.1002/1520-6297\(199203\)8:2<131::AID-AGR2720080205>3.0.CO;2-W/abstract](http://onlinelibrary.wiley.com/doi/10.1002/1520-6297(199203)8:2<131::AID-AGR2720080205>3.0.CO;2-W/abstract)).

Tomato Cost Tag References

Food Miles

¹USDA ERS. (2009, October). *Vegetables and melons: Tomatoes*. Retrieved May 17, 2011 (www.ers.usda.gov/briefing/vegetables/tomatoes.htm).

²Ibid.

Genetic Diversity

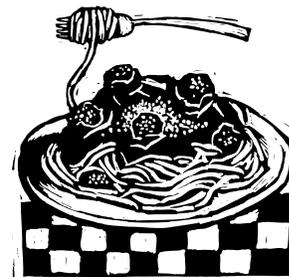
³Klee, H.J. (2010). "Improving the flavor of fresh fruits: genomics, biochemistry, and biotechnology." *New Phytologist* 187: 44-56. Retrieved May 17, 2011 (onlinelibrary.wiley.com/doi/10.1111/j.1469-8137.2010.03281.x/full).

⁴Simkin, A.J., S.H. Schwartz, M. Auldrige, M.G. Taylor and H.J. Klee. (2004). "The tomato carotenoid cleavage dioxygenase 1 genes contribute to the formation of the flavor volatiles b-ionone, pseudoionone, and geranylacetone." *The Plant Journal* 40:882-892. Retrieved May 17, 2011 (onlinelibrary.wiley.com/doi/10.1111/j.1365-313X.2004.02263.x/pdf).

⁵Chetelat, R.T., R.A. Pertuze, L. Faundez, E.B. Graham and C.M. Jones. (2009). "Distribution, ecology and reproductive biology of wild tomatoes and related nightshades from the Atacama Desert region of northern Chile."

Euphytica 167:78.

Retrieved May 17, 2011 (www.springerlink.com/content/92072848g7547w41).



Social and Health Costs

⁶Griffith, D. (2009). "Unions Without Borders: Organizing and Enlightening Immigrant Farm Workers." *Anthropology of Work Review* XXX: 2. Retrieved May 19, 2011 (onlinelibrary.wiley.com/doi/10.1111/j.1548-1417.2009.01021.x/full).

⁷Perez, E. (2010, October 13). "Major Grower to Join Wage Plan." *Wall Street Journal*. Retrieved May 19, 2011 (online.wsj.com/article/SB10001424052748704763904575550550086511426.html).

⁸National Academy of Sciences. (1987). *Regulating Pesticides in Food: The Delaney Paradox*, p 78. Washington DC: National Academy Press.

⁹Weaver, R.D., D.J. Evans, A.E. Luloff. (1992). "Pesticide Use in Tomato Production: Consumer Concerns and Willingness-to-Pay." *Agribusiness* 8:2, 131-142. Retrieved May 19, 2011 ([onlinelibrary.wiley.com/doi/10.1002/1520-6297\(199203\)8:2<131::AID-AGR2720080205>3.0.CO;2-W/abstract](http://onlinelibrary.wiley.com/doi/10.1002/1520-6297(199203)8:2<131::AID-AGR2720080205>3.0.CO;2-W/abstract)).