



Global Development and Environment Institute
Tufts University

Industrial Livestock Companies' Gains from Low Feed Prices, 1997-2005

By Timothy A. Wise and Elanor Starmer*

With rising demand for corn-based ethanol, representatives of many of the nation's leading meat companies have expressed concern over the rising price of animal feed, which has increased significantly with the price increases for its two principal components, corn and soybeans. Feed prices have indeed increased significantly. As feed costs generally account for more than half of operating costs for industrial operations, higher prices can have an important impact on the bottom line for these companies. So too can low prices. Any discussion of today's high prices should take into account the extent to which these same firms have benefited from many years of feed that was priced well below what it cost to produce. In the nine years that followed the passage of the 1996 Farm Bill, 1997-2005, corn was priced 23% below average production costs, while soybean prices were 15% below farmers' costs. As a result, feed prices were an estimated 21% below production costs for poultry and 26% below costs for the hog industry. We estimate cumulative savings to the broiler chicken industry from below-cost feed in those years to be \$11.25 billion, while industrial hog operations saved an estimated \$8.5 billion. As we show below, the leading firms gained a great deal during those years from U.S. agricultural policies that helped lower the prices for many agricultural commodities.

Broiler Chicken Production

According to research from Tufts University, the broiler industry saved a substantial amount of money between 1997 and 2005 because it was able to purchase feed at market prices that were often significantly lower than feed's cost of production. During this 9-year period, the price of broiler feed on the open market was on average 21% lower than its cost of production. The portion of farmers' production costs that was not covered by the market was paid by taxpayers or by farm families themselves.

*Timothy A. Wise is Deputy Director of the Global Development and Environment Institute and a researcher with the Institute's Globalization and Sustainable Development Program. Elanor Starmer is a Masters candidate in Development Economics at the Fletcher School of Law and Diplomacy and in Agriculture, Food and Environment at the Friedman School of Nutrition Science and Policy, Tufts University. She is also a Research Assistant at the Global Development and Environment Institute.

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Table 1: Total Savings from Low Feed Prices, 1997-2005
Top Four Broiler-Producing Companies

Company	Market Share*	Total Savings 97-'05**	Annual Savings 97-'05***
Tyson	23%	\$2.59 billion	\$288 million
Gold Krist	10%	\$1.13 billion	\$125 million
Pilgrim's Price	9%	\$1.01 billion	\$113 million
ConAgra Poultry	8%	\$900 million	\$100 million

*Constant 2002 market share

**Savings is equal to the difference between the market price of broiler feed and feed priced at the full cost of production.

Production costs based on USDA/ERS estimates of total economic costs of production for corn and soybean meal, the main components of broiler feed. Between 1997 and 2005, broiler feed was sold on the open market at an average of 21% below cost of production.

***Average annual savings over the 9-year period. Actual savings varied from year to year

Source: Starmer and Wise (2006), based on data from USDA/ERS 1996-2005

Over the period, the broiler chicken industry as a whole saved an average of \$1.25 billion per year—a total of \$11.25 billion—over what it would have paid for feed if market prices had equaled production costs. The discount reduced total operating costs for the industry by an average of 13%.

According to Poultry USA Magazine and researchers at North Carolina State University, Tyson Foods held 23% of the market share for U.S. broiler production in 2002. Gold Kist ranked second, with 10% of the market, and Pilgrim's Pride

third, with 9% of the market. (Pilgrim's Pride made an offer to acquire Gold Kist in 2006.) Preliminary estimates, based on constant 2002 market share, suggest that over the 9-year period of 1997-2005, Tyson's broiler division alone saved a total of \$2.6 billion from low feed prices, or roughly \$288 million per year. Gold Kist saved \$1.13 billion over nine years, and Pilgrim's Pride saved \$1.01 billion.

Between 1997 and 2005, the market price of corn—which makes up 60% of the broiler feed mixture—averaged \$2.00 per bushel. Meanwhile, the average cost of producing corn in the Midwest was \$2.62/bu over the nine-year period. The cost of production for corn has risen closer to \$3.00/bu in recent years due to rising input costs, and is projected to continue increasing. We can project, therefore, that the market price of corn will have to be at least \$3.00/bu in order for farmers to break even on corn production without relying on taxpayer subsidies to cover production costs. Anything below this level constitutes an implicit subsidy for broiler companies and other bulk commodity purchasers, since the difference between lower market prices and higher production costs will be shouldered either by taxpayers or by farmers themselves.

Table 2: Total Savings from Low Feed Prices, 1997-2005
Top Four Hog-Producing Companies

Company	Market Share*	Total Savings 97-'05**	Annual Savings 97-'05***
Smithfield	30%	\$2.54 billion	\$284 million
Premium Standard	8%	\$680 million	\$76 million
Seaboard Corp.	7.5%	\$638 million	\$71 million
Prestage	5%	\$426 million	\$47 million

*Constant 2003 market share

**Savings is equal to the difference between the market price of hog feed and feed priced at the full cost of production.

Production costs based on USDA/ERS estimates of total economic costs of production for corn and soybean meal, the main components of hog feed. Between 1997 and 2005, hog feed was sold on the open market at an average of 26% below cost of production.

***Average annual savings over the 9-year period. Actual savings varied from year to year

Source: Starmer and Wise (2006), based on data from USDA/ERS 1996-2005

Pork Production

Preliminary estimates from a forthcoming study by researchers at Tufts University suggest that the pork industry also received a substantial discount on feed due to policy shifts that led to lower market feed prices. Between 1997 and 2005, the price of hog feed on the market averaged 26% below the cost of production. The portion of farmers' production costs that was not covered by the market was paid by taxpayers or by farm families themselves. During this period, industrialized hog operations with inventories of over

5,000 head saved an average of \$652.1 million per year on feed, compared to what they would pay if the market price of feed were equal to production costs—a total of \$5.9

billion in nine years. Including all hog operations with over 2,000 head, the industry received a discount averaging \$945.3 million per year, for a total over the 9-year period of \$8.5 billion. The discount reduced total operating costs for industrialized hog companies by 15%.

Using data from Successful Farming's annual Pork Powerhouses report, University of Missouri researchers Mary Hendrickson and Bill Heffernan estimated that Smithfield held 30% of the market for pork production in 2003. Premium Standard Farms was second, with a much lower 8%. (In 2006, Smithfield initiated the process to acquire PSF.) Preliminary estimates, assuming a constant 2003 market share, suggest that Smithfield's hog production division saved a total of \$283.6 million per year between 1997 and 2005, or a total of \$2.6 billion over the 9-year period, from below-cost feed. PSF saved a smaller but still significant \$75.6 million per year, or \$680.6 million over nine years.

For Further Information:

Starmer, Elanor, Aimee Witteman, and Timothy A. Wise, "Feeding the Factory Farm: Implicit Subsidies to the Broiler Chicken Industry," *GDAE Working Paper No. 06-03*, June 2006. Available at:

<http://www.ase.tufts.edu/gdae/Pubs/wp/06-03BroilerGains.pdf>

Wise, Timothy A. "Identifying the Real Winners from U.S. Agricultural Policies," *GDAE Working Paper No. 05-07*, December 2005. Available at:

<http://www.ase.tufts.edu/gdae/Pubs/wp/05-07RealWinnersUSA.pdf>

Sources for Broiler Market Shares:

Thornton, G. (2003). "WATT Poultry USA's Rankings- Broilers: Turbulent 2002 Leads to Rationalizations." *Poultry USA*, January.

Vukina, T., and P. Leegomonchai (2006). *Amer. J. Agr. Econ.* 88 (Number 5): 1258–1265.

Source for Hog Production Market Shares:

Hendrickson, M., and W. Heffernan (2005). *Concentration in Agricultural Markets*. Columbia, MO: National Farmers Union.

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 Tufts University, 44 Teele Avenue, Medford, MA 02155 USA
 TEL: 617 627-3530 • FAX: 617 627-2409 • E-MAIL: GDAE@tufts.edu
 WEB SITE: <http://ase.tufts.edu/gdae>

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