

The Popcorn Theories

**Fact or Fabrication:
What is really driving today's food prices?**



The Popcorn Theories

**Fact or Fabrication:
What is really driving today's food prices?**



July 2008

TABLE OF CONTENTS

Introduction

The Popcorn Theories: Looking for a Kernel of Truth1

Is Ethanol Driving up the Cost of Food?

U.S. Corn Production3

The Farmer's Share.....5

The Impact of Energy Costs on Food Prices

Fuel & Transportation8

U.S. Household Savings from Ethanol Production9

The Weak Dollar

Export Demand.....11

Market Speculators.....11

Summary

Facts & Fabrications13

Sources14

INTRODUCTION

THE POPCORN THEORIES: LOOKING FOR A KERNEL OF TRUTH

The rise in U.S. food costs over the past 18 months continues to impact every American. Many theories have been put forth to explain why the retail food price inflation rate rose from 2.4 percent in 2006 to 4 percent in 2007 with the same increase expected for 2008. The most popular theory is that increasing biofuel production, specifically corn-based ethanol, is responsible for the increase in food prices.

The theory's premise suggests farmers are planting more acres to corn to take advantage of high commodity prices which subsequently takes acres out of production for other crops, thereby resulting in "shortages" that cause increased retail food prices. This thought permeates all sectors of the media and American economy, even the movie theater industry.

Earlier this year, Kansas City-based AMC Entertainment Inc. announced it was increasing the price of popcorn at its movie theaters by 25 cents due



to a jump in corn prices. The fact is to warrant a 25-cent increase in a one-gallon bag of popcorn, the price per bushel for unpopped corn would have to be nearly \$50. The current market price for a bushel of popcorn is about \$7.28.

Stated another way, if the price paid to farmers were to double from roughly 2 to 4 cents for every tub of popcorn sold at \$5 at the movies, the true financial impact would be miniscule given the

fact that \$5 worth of popcorn kernels already generates \$1,250 in movie theater sales.

While movie theaters and other businesses have every right to absorb wholesale cost increases through retail pricing, their justifications should not pass off a fabrication as fact.

The fact is corn and other commodity prices have little to do with today's rising cost of food. Many of the explanations for why food prices are rising are as fluffy and fabricated as some of the most memorable characters to have ever graced the silver screen.

For example, ethanol production was blamed for the Mexican tortilla shortage last year despite the fact that tortillas are made from white corn, not yellow corn. The rising price of beer was also blamed on corn ethanol even though rice and barley make beer, not corn. And a recent rationing of bulk rice sales at Costco and Sam's Club stores was blamed on ethanol, despite an ample amount of rice in the supply chain.

The fact is U.S. production of corn, barley, wheat and rice has been, and continues to be, in excess of actual food consumption and demand.

Consumers, who have been conditioned to always expect higher prices, need to ask themselves if the theory being advanced by an industry is based on truth or profit margin using a convenient scapegoat; in this case, ethanol.

North Dakota Farmers Union's goal in this publication is to differentiate the facts from the fabrications – fabrications being “The Popcorn Theories” – in the discussion on what is driving today's high food prices. By accurately portraying the facts, we hope to educate the media and public on food price increases.

ETHANOL & FOOD PRICES

U.S. CORN PRODUCTION

Today's most popular Popcorn Theory suggests high food prices are the result of ethanol production "stealing" acres from domestic production. The fact is there is enough corn available in the U.S. to meet food and ethanol production needs. Both demand and production are increasing.

Yellow corn is the single largest crop grown in the United States and is primarily used for animal feed and ethanol production, not human consumption. It can be argued that current supply and demand statistics show the U.S. is using excess corn production to meet ethanol production demands without cutting into domestic use supplies.



In 2007, corn production in the United States increased by 2.6 billion bushels (from 10.7 billion in 2006 to 13.3 billion in 2007), according to statistics from the United States Department of Agriculture (USDA). The 13.3 billion mark set an all time record for corn production in the U.S. Of the 2.6 billion bushel increase, new ethanol demand only accounted for 600 million bushels or

about 4 percent of the total production. The remaining 2 billion bushels of new corn grown was used for feed, food and exports above and beyond 2006 levels. There also were record high corn exports of 2.9 billion bushels.

Contributing to this production increase has been higher yield output. Yields have risen dramatically in the past 10 years, thanks to seed and fertilizer improvements accounting for an average 3-4 percent increase per year.

Other factors affecting corn production include weather, market



prices and input costs. Even with last year's record-breaking production, it is projected that 8 percent fewer corn acres will be planted by U.S. farmers this year due to high input costs, such as fuel and fertilizer,

crop rotation considerations, and better prices for other crops that have a lower cost of production.

Last year was a good illustration of how weather can create production shortfalls that at first glance seem to be tied to a shift in acreage to corn production.

Most major wheat growing regions in 2007 experienced weather-related production problems including the U.S., Canada, Australia and Europe. In response, wheat prices reached record levels and U.S. export demand skyrocketed as world wheat stocks reached new lows.

While some have blamed U.S. farmers for shifting wheat

acreage to corn, very little U.S. wheat acreage is suitable for corn production. It takes more water to grow corn than wheat and most of the wheat acreage that could be converted to higher value commodities, such as corn or soybeans, was converted long ago.

However, that didn't negate the Popcorn Theorists from suggesting that high food prices were the result of a shift in wheat acres to corn acres, rather than a poor production year globally for wheat.

THE FARMER'S SHARE

Obviously, planting decisions are based on multiple factors – production costs, distance to market, crop rotation for soil health, etc. – not just commodity prices. Farmers, however, do respond to the marketplace as evidenced by increased corn production and have deservedly enjoyed the benefit of higher commodity prices. But farmers are not getting rich at the expense of the American public as another Popcorn Theory suggests.

It would seem logical that if farmers are being paid more for what they produce, then food products that contain those commodities should increase as well. That is certainly the case but food cost increases have never been proportionate to what farmers and ranchers receive. In fact, high commodity prices are the long-standing scapegoat for retailers and the food processing industry in justifying outrageous price hikes, such as the 25-cent-a-bag increase in movie theater popcorn cited earlier.

Unlike other industries, farmers and ranchers do not set the price for the things they grow or raise. Food is not an optional commodity like TVs or perfume. There will always be a demand for farmers and ranchers to provide food, feed, fiber, and now fuel for America. Unfortunately, farmers are “price takers.” Cargill and other large corporations are “price makers.”

The fact is farmers will remain at the mercy of the marketplace

due to the perishable nature of the things they grow and the multitude of uncontrollable variables that impact their operations – everything from weather and world stocks to input costs, trade agreements and currency fluctuations.

It is also clear that producers have not been compensated adequately from the marketplace.



According to USDA, American farmers and ranchers receive only 20 cents of every food dollar that consumers spend on food at home or away from home. Non-farm costs – marketing, processing, wholesaling, distribution and retailing – account for 80 cents of every food dollar spent in the United States.

The fact is the farmer's share of the consumer food dollar has been shrinking for decades. In 1952, farmers earned 47 cents of every dollar spent on food compared to today's 20 cents. In an 18 oz. box of corn flakes selling for \$4.95, the Farmer's Share is just 14 cents. Even if the price of corn doubled, the retail cost per box should only increase an additional 14 cents.

Huge increases to the cost of inputs and fuel are having a profound impact on food production, including planting and harvesting, processing and transportation. Farmers are paying 65 percent more

for fertilizer today than they did a year ago. Fuel has also increased 43 percent from last year's already high prices. Seed has increased 30 percent and crop chemicals, such as herbicides and insecticides, have increased 4 percent.

It should also be noted that today's corn prices would be considerably higher if parity were implemented. (Parity is the price farmers would receive if farm prices had increased at the same rate as expenses, using 1910-14 as a base period.) The current price for a bushel of corn is averaging \$5.13. The parity price is \$8.15. In real dollars, food is still cheaper now than if farmers were paid their full cost of production in relation to other economic sectors.

The fact is Americans still enjoy the most abundant source of low cost, high quality food in the world.

The percent of household spending on food and nonalcoholic beverages in the U.S. totaled 5.8 percent in 2006, according to the most recent statistics available from USDA's Economic Research Service. That compares to 9.3 percent spent on food in Canada, 24.5 percent in Mexico, 27.8 percent in China, and 51.6 percent in Azerbaijan (the highest of all nations polled).

ENERGY COSTS

FUEL & TRANSPORTATION

The most significant factor driving high food costs today is oil at \$140 per barrel (price as of early July 2008). Without question, the price of oil has forced the cost of food higher as the average food item travels more than 1,500 miles before reaching the final consumer.

The fact is studies have shown that energy costs have twice the impact on the Consumer Price Index (CPI) for food than the price of corn.



Over the past seven years, gasoline prices have increased 198 percent per gallon, diesel fuel prices have increased almost 250 percent per gallon and crude oil has increased

453 percent according to the Energy Information Agency of the Department of Energy.

A 33 percent increase in crude oil prices (about a \$1 per gallon increase in the price of regular gasoline) results in a 0.6 to 0.9 percent increase in the CPI for food while an equivalent increase in corn prices (\$1 a bushel) would cause the index to rise only 0.3

percent, according to a recent report by LECG, a global expert services company.

Petroleum and energy prices affect virtually all aspects of agricultural transportation, processing and distribution. Corn prices affect only a segment of consumer foods – primarily livestock, poultry and dairy – as corn is an important ingredient for animal feed.

Meat, poultry, fish, eggs and dairy products account for only a fifth of the CPI for food, which is only 15 percent of the overall CPI. So while it is tempting to blame food price increases on high corn prices, most of the increase in food prices occurred in foods not impacted by corn.

U.S. HOUSEHOLD SAVINGS FROM ETHANOL PRODUCTION

Crop-based fuels such as ethanol and biodiesel are becoming a crucial component of our global energy supply.

Global production of biofuels is rising annually by the equivalent of about 300,000 barrels of oil a day. That goes a long way toward offsetting the growing demand for oil, which last year rose by about 900,000 barrels a day.



The fact is without biofuels, oil prices would be even higher. According to Merrill Lynch commodity strategist Francisco Blanch, oil and gasoline prices would be about 15 percent higher if biofuel producers weren't increasing their output. That means the U.S. average price for regular unleaded gasoline would increase 50 cents a gallon without biofuels.

Specifically, the average U.S. household saved between \$100 and \$510 from March 2007 to March 2008 due to increased ethanol production, according to a study by the Renewable Fuels Association.

So at a time when oil companies are posting record profits, we can be grateful biofuel production is lowering the cost of gasoline, improving America's energy independence, and revitalizing rural economies.

According to an LECG study (www.lecg.com), more than 228 million barrels of oil were displaced by the 6.5 billion gallons of ethanol produced in 2007. While critics say our government is subsidizing and mandating the use of ethanol through a renewable fuels standard, the subsidies pale in comparison to the amount spent subsidizing oil companies through incentives and protecting shipping lanes to import oil from the most unstable region of the world.

According to a 2005 Government Accountability Office report, the U.S. has spent more than \$130 billion subsidizing the oil industry over the past 32 years. This does not account for the billions spent to protect our military interests in the Middle East. So the next time concern is voiced over the cost of groceries, hold the cost of Mideast oil accountable rather than American farmers.

THE WEAK DOLLAR

EXPORT DEMAND

Corn, like other commodities, is in demand worldwide. This is due to rapidly growing economies and a growing middle class in Asia, Latin America and Africa. Demand there is high for meat and dairy products as people now can afford an improved and balanced diet that includes protein.

At the same time, the value of the dollar, which has fallen to a 30-year low, has made the price of U.S. commodities very competitive abroad. The result has been record-breaking agricultural exports in terms of volume despite record high market prices. Total agriculture exports in 2007 amounted to nearly \$90 billion, an increase of \$20 billion over 2006.

This market situation has lowered U.S. food stocks which, in turn, has helped drive domestic food prices higher. Once again, ethanol is absent from the equation.

Interestingly, the current market situation is demand-based in nature, not supply-based as Popcorn Theorists espouse. America is meeting its domestic supply needs. Globally, world demand for corn is on the rise and provides an economic opportunity for American producers.

MARKET SPECULATORS

Accentuating today's high commodity prices is the impact of speculative investment in commodity markets.

Commodities have long been viewed as a defensive asset class, earning favorable returns in times of inflation at a time when stocks and bonds generally decline, according to the Agricultural

and Food Policy Center at Texas A&M University. But the recent flood of speculative money out of the stock market and into commodity markets is increasing price volatility and pushing the prices of raw commodities and food products higher as investors chase paper profits.

It is also creating a perilous situation in rural America. With the billions of index fund dollars from pension and other investment houses pouring into hot commodity



markets, many bread-and-butter agriculture businesses are facing skyrocketing margin calls on hedge contracts. These contracts have long been a financial tool for farmers and grain elevators to manage the legitimate risk of marketing crops.

But as margin calls increase, local cooperatives and private grain elevators have hit their credit limits from their lenders and are being forced out of the market. If farmers can no longer afford to forward price their commodities to lock in better commodity prices, a real train wreck in the countryside seems imminent, especially in light of skyrocketing input costs such as fuel and fertilizer.

The Commodity Futures Trading Commission recently responded by announcing several initiatives to improve oversight of the futures markets and the types of traders in the marketplace, including “large index traders.”

SUMMARY

FACTS & FABRICATIONS

Rising food prices are affecting every American household; the primary culprit is high energy costs, not ethanol production. The price of oil has forced the cost of food higher as the average food item travels more than 1,500 miles before reaching the final consumer.

Many theories – Popcorn Theories – have been offered by the media and others to explain what is driving today’s high food prices. Their theories ring hollow. They include everything from ethanol production stealing acres from other crops, thereby creating commodity shortages and driving food prices higher, to farmers simply getting rich at the expense of the American public.

An independent analysis reveals a multitude of factors are driving food prices higher: the price of oil, weather-related production shortages, the weak dollar, growing export demand from developing world economies, and market speculation to name a few.

The fact is ethanol production is lowering the cost of gasoline. Each U.S. household saved between \$100 and \$510 from March 2007 to March 2008 due to increased ethanol production.

High fuel and transportation costs will continue to elevate food prices, even while today’s biofuel production is lowering gasoline prices by about 50 cents a gallon (regular unleaded gasoline).

In the end, consumers must ask themselves who profits from the production of imported oil and who profits from the production of renewable fuel? The answer is a choice between the Middle East and the Midwest.

SOURCES

The Effects of Ethanol on Texas Food and Feed
Agricultural and Food Policy Center,
Texas A&M University – College Station, Texas

Iowa Corn Promotion Board – Johnston, Iowa

How Are High Food Prices Impacting American Families?
National Farmers Union testimony of President Tom Buis
before the U.S. Congressional Joint Economic Committee,
May 1, 2008 – Washington, D.C.

United States Department of Agriculture – Washington, D.C.

The Relative Impact of Corn and Energy Prices in the Grocery Aisle
LECG, a global expert services company – Wayne, Pennsylvania

Estimating the Impact of Increased Ethanol Production on U.S. Household Spending
Renewable Fuels Association – Washington, D.C.



NDFU is the state's largest general farm organization with more than 40,000 family members. We work through the political process to develop economic and social policies, provide services to start and sustain cooperatives and initiatives, and offer educational programming to benefit farmers, ranchers and rural communities.

Throughout our organization's 80-year existence, our most valuable asset has been an active and engaged membership. To be part of the largest grassroots movement in the state, go to www.ndfu.org.

**North Dakota Farmers Union
1415 12th Ave. SE • PO Box 2136
Jamestown, ND 58401**

**800.366.8331 • 701.252.2341
www.ndfu.org
fax 701.252.6584**