

# Ethanol and Food Prices

USDA says many factors besides corn-based ethanol production contribute to rising food prices, but industry groups have joined together to urge that food be prioritized over fuel.

by Meghan Richey

World food prices have seen a 40% increase this year. Here in the U.S., we're expecting to end with at least a 6% increase by the end of the year, which, by comparison, is easier to swallow than the global situation but still plenty tough on pocketbooks across the nation.

"There's no question we've seen a dramatic increase in ethanol production, and in particular the corn use for ethanol production, over the last couple of years," says Joe Glauber, U.S. Department of Agriculture (USDA) chief economist. "So, legitimately, there's a question: What's the effect on corn prices from all that, and what's the effect on food prices as a result?"

One theory that has been widely discussed recently is that the nation's

growing demand for biofuels and the crops needed to produce them is the real culprit behind higher food prices, both at home and abroad. But Secretary of Agriculture Ed Schafer says, "The evidence that we have seen does not support this."

Of course, not everyone agrees with USDA's assessment. Organizations representing hunger prevention, environmental protection, food processors and retailers maintain that biofuels are the culprit, so they have teamed up in a new campaign to urge Congress to revisit the nation's food-to-fuel policies. Called Food Before Fuel, the campaign has about 60 member organizations, including the American Meat Institute (AMI), Grocery Manufacturers Association, National

Cattlemen's Beef Association (NCBA), Earth Policy Institute and Food for All, among others.

On their web site, [www.foodbeforefuel.org](http://www.foodbeforefuel.org), the member organizations say, "there are a number of factors contributing to higher food prices, including higher energy costs, growing global food demand and changing weather patterns. However, policies for subsidizing and mandating the conversion of corn to fuel are the only part of the food inflation equation that Congress controls."

In 2007, food-to-fuel policies led to one-quarter of U.S. corn being turned into ethanol. That number will rise to more than 30% this year. By 2012, as much as 40% of our corn and 30% of our vegetable oils could be diverted to fuel production.

Food Before Fuel says this diversion of food crops is reducing the supply of food and feed, contributing to food price inflation.

## Corn and the CPI

USDA says there are two uses for corn that affect the consumer price index for food (CPI-Food, which accounts for 15% of the overall CPI): corn sweeteners in processed products and corn fed to livestock. Glauber says these both have minimal effects.

"When we look at the actual pass-through of corn prices on the CPI, we see retail food prices rise less than 1% when corn prices increase 50%," he says.

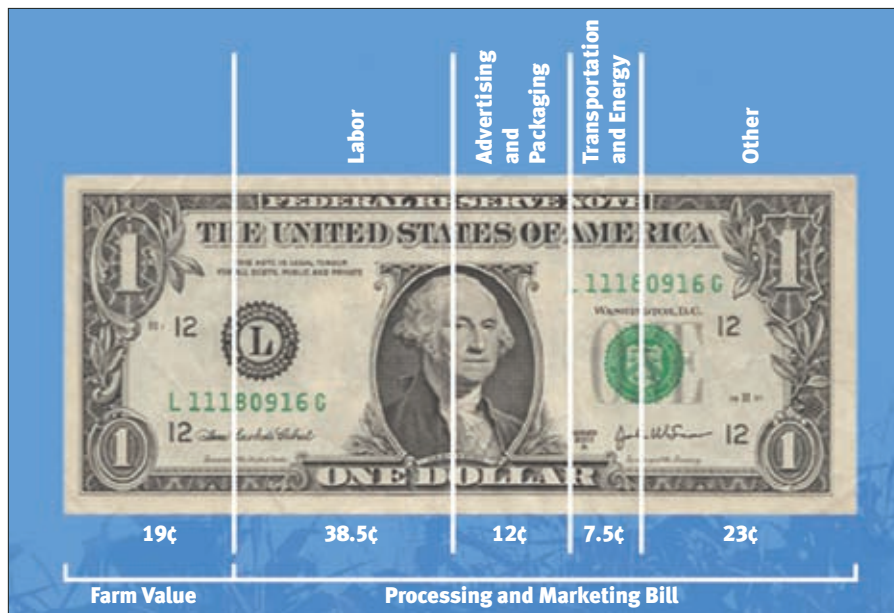
When the price of corn sweetener increases, so does the price of those products in which it is an ingredient. But the effect is rather small on the overall price, since it's just one of many ingredients. "Because processed foods are such a large part of our diet here in the U.S., higher costs for a particular ingredient typically have only a small impact on their retail food price," Schafer says.

"It's true that higher demand for corn for ethanol and soybeans for biodiesel has led to higher prices for those crops over the past couple of years. But we do not have a one-on-one relationship between higher prices for those commodities and what consumers are paying for foods at the retail level," he continues.

The members of Food Before Fuel maintain that the rise in commodity prices, led by corn, does have a direct effect on consumer food inflation. A June 2008 report by Advanced Economic Solutions (AES) explains, "since the early 1980s, increases in commodity prices have typically been short-term and absorbed by food manufacturers to avoid loss of market share, thus shielding American consumers from most short-term increases in prices. With the expectation

**Fig. 1: Breakdown of consumer food dollar**

While commodities' farm values do influence price, other factors account for more than 80% of the final retail price consumers pay.



Source: USDA (2006 data).

that commodity prices would retreat from any historically high levels, the increases in costs have not, until recently, translated into higher consumer food prices.”

Next, USDA acknowledges that higher input costs do get translated into higher livestock prices, but again Glauber says it's not a direct relationship. Food Before Fuel disagrees, citing the AES report, which concludes, “for milk and proteins, corn is the primary feed used and, thus, has a direct impact on the cost of production of those items.”

Glauber explains that when margins are squeezed producers tend to reduce herd sizes, which means less meat is being produced. He says it is actually the lower supply that increases meat prices, not a direct cause-and-effect relationship with corn feed prices.

When talking about the CPI, Glauber recommends taking a historical perspective. While the price of food consumed away from home is expected to stay stable compared to last year at about 3.5% inflation, the price of food purchased at retail and consumed at home is expected to increase about 6% this year. Historically, the U.S. has experienced annual food price inflation of about 2.5% since 1990. But even with this current uptick in food price inflation, it is still lower than the 10%-15% food price inflation seen in the 1970s and early 1980s (see Fig. 2).

### Factors influencing food prices

Glauber says there are five major factors influencing retail food prices.

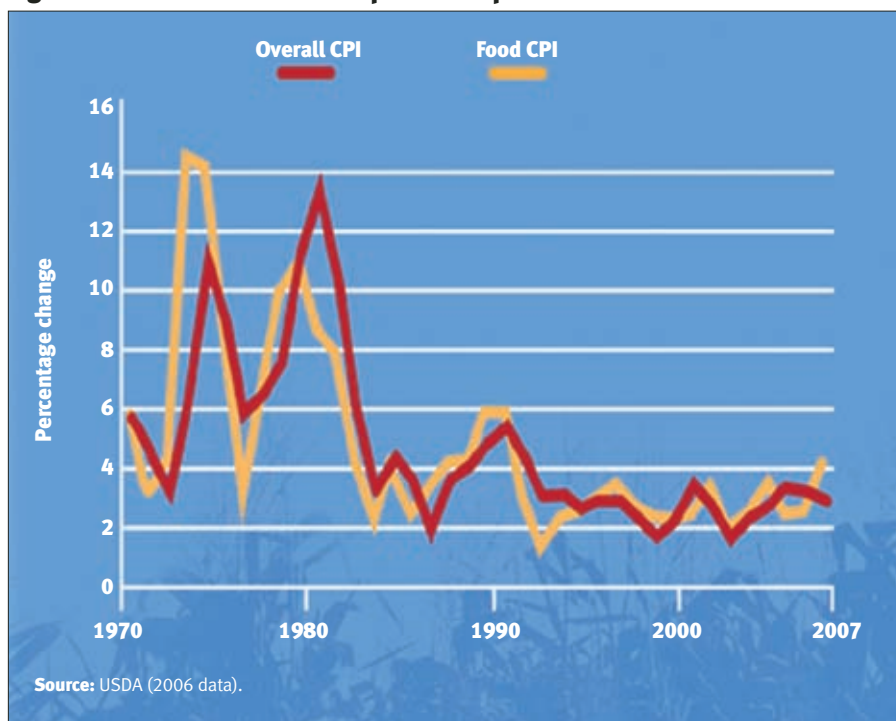
**1. Global economic growth.** Real foreign economic growth is expected to be 3.9% this year, well above historical trends. Countries with a growing middle class, like India and China, are now experiencing increases in gross domestic product (GDP) around 5%-10% annually.

“This has expanded demand, especially for our meat products, which has contributed to both a growth in our livestock exports and also their demand for protein meals,” says Glauber, noting the trend is projected to continue.

Schafer agrees, saying, “As we see the emerging economies come on board and as we see people have opportunities to spend higher incomes on food and foodstuffs, it is important to know that this isn't going away, that the consumption side of the equation is going to continue to be big, and it's going to continue to grow.”

**2. Adverse weather.** Drought in Canada, Ukraine, the European Union (EU) and the U.S. has adversely affected global grain production. Multiyear drought in Australia has also affected wheat and milk production.

**Fig. 2: Domestic consumer food prices compared to the overall CPI**



Just as increased global demand leads to higher prices, so does this lower world supply, Glauber says.

**3. Export restrictions.** Exporting countries have placed added taxes or restrictions on exports of grain, rice, oilseeds and other products. Glauber says that if countries would relax restrictions and move toward more free-flowing world trade, it would have a mitigating effect on food prices.

**4. Food marketing and transportation costs.** Higher energy prices amplify the major factors that determine food prices, namely marketing and transportation.

“For food products, higher oil prices

mean higher costs of transportation, processing, packaging and distribution, and all the other intermediary steps that bring commodities from the farm gate to the retail store. Those steps account for approximately 80¢ of every retail dollar that is spent on food here in the United States,” explains Schafer, noting that the actual farm value of the commodity makes up the remaining 20¢ of each retail food dollar. So even when commodity prices increase sharply, they're still responsible for only 20% of the retail price of food (see Fig. 1).

**5. Biofuels.** “Lastly, no question, biofuel also has been a very, very important part of

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### Growing our way to a solution

Stemming from the belief that an either/or approach to the food-vs.-fuel debate ignores the capabilities of agriculture, The Alliance for Abundant Food and Energy formed to give agriculture industry representatives a unified voice in promoting agriculture's ability to meet global demands for food and renewable energy.

“The Alliance realizes both food and fuel are possible and can be accomplished using less land and fewer resources than generally understood,” says Mark Kornblau, executive director of the new organization. “With growing global demand for grain, it's critically important that policy leaders start thinking about how we can grow our way to a solution.

“Innovation is part of the American DNA. Through greater support for agricultural innovation, we can produce enough crops to supply both our food and energy needs worldwide,” he continues. For example, he says implementing new and basic irrigation technologies can increase the yields of most crops two- to fourfold and reduce water use 30%-60% compared to surface irrigation, and switching from open pollinated varieties of corn to hybrid seed can quadruple yields on the same land.

Members of The Alliance for Abundant Food and Energy include Archer Daniels Midland (ADM) Co., DuPont, John Deere, Monsanto and the Renewable Fuels Association. For more information visit [www.foodandenergy.org](http://www.foodandenergy.org).

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this picture," Glauber admits. "But I'd consider it a relatively small effect and, in looking at it, it's important to take into account a lot of other things that are going on outside of the biofuel sector."

The amount of corn converted into ethanol and soybean oil converted into biodiesel nearly doubled from 2005-2006 to 2007-2008. But he says this growth trend "should start to taper off as the corn-based ethanol production starts

approaching the renewable fuels standard called for in the 2007 Energy Act."

Additionally, he points to the Council of Economic Advisers' estimate that total global increase in corn-based ethanol production accounts for only about 3% of the recent increase in global food prices.

### **The big picture**

Ethanol is part of the picture, Schafer

and Glauber say, but other factors that affect supply and demand must be considered when explaining rising food prices. It's the combination of changes in supply and demand that contribute to higher food prices, not just biofuels production, they say.

In the long run, many see increased demand as a positive development. Schafer says it creates new economic opportunities for farmers in the United

States and for those in developing nations in Africa and Asia. In the short run, however, these changes have created market disruptions that have called for humanitarian response and food aid.

With the population growing by more than 50 million people every year, the need for food and fuel grows, too. "For agriculture to meet that need," Schafer says, "we must work with other nations to get more productivity out of the land that we have

through wider use of biotechnology and better farming and irrigation and pest control methods.

"We need to focus dollars into research, we need to focus dollars into development in other countries, and we need to make sure this happens, or people are going to go hungry," he says. "If other countries do not increase yields comparable to those that we see here in the United States, people are going to go hungry. It's that simple."

And it is that point that members say motivates Food Before Fuel. The organization advocates that "Congress and the Administration need to reduce our dependence on food as an energy source and to accelerate the development of alternative fuels that do not pit out energy needs against the needs of the hungry."

