The surge in corn prices ignited by the ethanol boom is rippling through the nation's economy -- from the Farm Belt to Wall Street to the office soda machine.

The price of corn, the nation's No. 1 crop in total production, and an ingredient in products ranging from sugary syrups to chicken feed to tortillas, has doubled since this time last year to $3.66 a bushel, despite an abundant harvest, and is inching toward the rarely breached $4-a-bushel mark.

Driving the run-up is an unprecedented demand for ethanol, a biofuel typically made from corn that many policy makers are counting on to help wean the nation away from foreign oil. President Bush is expected to intensify demand by calling for yet more production in his State of the Union address next week.

The new demand has much of the agricultural economy humming. As corn rallies, farmers, emboldened by the higher prices or planning to switch to corn or expand their acreage, are buying new farm equipment from makers like Deere & Co. and CNH Global NV's Case IH. They are spending more on seed from giants like Monsanto Co. and DuPont Co. and fertilizer from companies like Mosaic Co.

Meanwhile, big food companies like Tyson Foods Inc., the giant chicken processor, and ketchup maker H.J. Heinz Co. are feeling the pinch. Bottlers of Coca-Cola Co. and PepsiCo Inc. soft drinks are raising prices, partly to offset the rising price of high-fructose corn syrup, the dominant sweetener in sodas.

At the center of the tumult, ethanol manufacturers like Archer-Daniels-Midland Co. are caught between the combination of rising corn prices and falling oil prices, which make ethanol less attractive. Though ethanol benefits from tax breaks and other subsidies, those incentives generally go to the companies that blend it with gasoline to make motor fuel, rather than to ethanol producers.

As corn prices rise, farmers are racing to cash in. Leon Corzine in Assumption, Ill., is planting 95% corn on his 3,000-acre farm this year, up from 50% in 2002. The prices he now gets for corn are well above the $2 to $3 a bushel he has come to expect. Largely as a result, he has spent $300,000 on trucks, tractors and grain storage. Last year, Mr. Corzine built an additional grain-storage unit, an investment equivalent to about $1.50 per bushel of corn. With corn prices up, he has already recouped that investment.

"I paid for that grain storage in one year," says Mr. Corzine. "That's very unusual."

At H & R Agri Power Inc., a Case IH dealer with five locations in Kentucky, orders for combines -- the giant machines that help harvest the corn -- shot up 54% from a year earlier in the last three months of 2006, and tractor orders climbed 25%, says President Wayne Hunt. Just this week, two groups of farmers came to an H & R dealer to explore buying combines for the cotton fields they are switching to corn, he says.

The increased demand for corn is also driving up sales of nitrogen fertilizer, which corn requires in heavy doses. Mr. Hunt estimates nitrogen fertilizer sales at his eight Kentucky farm-supply stores this year will climb 10% to 12% from 2006.

"We think agriculture's future looks pretty bright right now," says Mr. Hunt.

Corn prices set their current record of $5.50 a bushel in 1996 as prices soared in response to a supply shortage caused by lower production and stronger export demand. The average price of corn from that year's crop was $3.24 a bushel -- also a record.
Today's high prices, by contrast, follow a 2006 corn harvest that the Agriculture Department last week estimated at 10.5 billion bushels. That is down slightly from the previous year's crop, but it is still the third-largest on record. Even so, the average price for the 2006 corn crop is expected to reach $3.20 a bushel.

With more ethanol plants under construction, demand for corn is expected to increase in the years ahead. Ethanol production totaled about 4.9 billion gallons last year, up from 3.9 billion the year before, according to the Renewable Fuels Association, the trade organization representing the ethanol industry. Next year, production is expected to reach more than six billion gallons.

Corn's rally has been a headache for the livestock industry, which consumes nearly 60% of the U.S. corn crop. Pork-production costs have increased 25% from last year, according to Ronald Plain, an agricultural economist at the University of Missouri-Columbia. At the end of last year, Tyson Foods Chief Executive Richard Bond warned that higher corn costs would eventually mean higher meat prices at the grocery store.

Last week, Tyson opened a cattle-feeding facility in Argentina. Analysts say this move might signal the beginning of a trend toward shifting meat production overseas. "Ethanol is going to drive incremental investments related to the meat industry elsewhere," says David Nelson, an agriculture analyst at Credit Suisse Group.

Food and beverage producers, too, are feeling cost pressures -- and in some cases higher corn prices are trickling down to consumers. Bottlers for Coke and Pepsi are being buffeted by increases in the price of high-fructose corn syrup.

Rising corn prices are one factor behind the increases in soft-drink prices that began last year and are expected to continue this year, totaling about 4% over 2006, says Bill Pecoriello, a beverage-industry analyst with Morgan Stanley. The sweetener accounts for about 10% of the cost of goods for Coca-Cola Enterprises Inc. and Pepsi Bottling Group Inc., Coke and Pepsi's largest bottlers, respectively.

Rising corn prices could also affect Coke and Pepsi themselves, though to a lesser extent, says Mr. Pecoriello. Corn syrup accounts for as much as 3.5% of Coke's global cost of goods sold. Corn used in PepsiCo's Frito-Lay snacks and in the syrup used in Gatorade and Pepsi's fountain-drink business makes up about 2% of such costs.

In an interview yesterday, Stephen W. Sanger, chief executive of food giant General Mills Inc., said increased demand for corn would likely cause a spike in the prices of other commodities as farmers devote more acreage to the crop. "Corn isn't a central item for us in the cereal world, but we use a lot of wheat in our cereals and dough, and oats are an important grain for us. We'll look to offset those price increases with productivity," Mr. Sanger said.

During a conference call with analysts in November, Heinz executives warned that commodity costs this year would be higher than initially expected, partly because of the rising cost of the corn sweetener it uses in ketchup. In an interview this week, Art Winkleblack, the Pittsburgh company's financial chief, said Heinz's overall sweetener costs would be up $10 million more than expected this year.

So far, Mr. Winkleblack said, Heinz hasn't raised the price of its ketchup. However, it has stopped offering 99-cent-per-bottle promotional pricing. And it has "upsized" from 24-ounce ketchup bottles to 46- and 64-ounce bottles, called "Fridge Door Fit," that sell for higher prices.

At supermarkets, analysts say, higher prices for beef and pork will likely cause price-sensitive consumers to buy less expensive cuts of meat, or even chicken.

With petroleum prices down to $52.24 a barrel, the lowest level since May of last year, rising corn prices are eating into ethanol makers' margins. Every $1 increase in a bushel of corn adds about 36 cents a gallon to the production cost of ethanol, according to Agriculture Department estimates.

This week, investment bank UBS AG lowered its earnings target for two boutique ethanol firms, VeraSun Energy Corp. and Aventine Renewable Energy Holdings Inc. in light of higher corn prices. Also this week Citigroup Inc. raised the risk profile of Archer-Daniels to high from medium.

ADM is counting on farmers to ramp up corn production, which could eventually bring prices back to lower levels. "Farmers have a strong incentive to plant corn given today's relative value of corn to soybeans," says Ed Harjehausen, senior vice president of ADM. "Based on current prices, many believe that farmers will substantially increase corn production this year."

The Renewable Fuels Association maintains the ethanol industry will be able to ride out this volatility relatively unscathed. Dan Basse, president of Chicago research firm AgResource Co., says that while the
"bloom is off the rose" for ethanol producers, they still have some room before commodity prices eat up their profits.

For ethanol producers to become unprofitable, Mr. Basse estimates corn would have to reach $4.80 a bushel while ethanol prices would have to drop to $1.60 a gallon. Ethanol now is about $1.93 a gallon.