

Ohio Farmers Union members:

What follows are several stories published recently by the Associated Press regarding ethanol, the renewable fuel's environmental impact and efficacy. Farm groups around the country have roundly criticized the investigative series by the AP. Here are the articles so you can read them for yourselves. Be advised if you print this, it's 20 pages.

THE SECRET ENVIRONMENTAL COST OF US ETHANOL POLICY

BY DINA CAPPIELLO AND MATT APUZZO
ASSOCIATED PRESS

CORYDON, Iowa (AP) -- The hills of southern Iowa bear the scars of America's push for green energy: The brown gashes where rain has washed away the soil. The polluted streams that dump fertilizer into the water supply.

Even the cemetery that disappeared like an apparition into a cornfield.

It wasn't supposed to be this way.

With the Iowa political caucuses on the horizon in 2007, presidential candidate Barack Obama made homegrown corn a centerpiece of his plan to slow global warming. And when President George W. Bush signed a law that year requiring oil companies to add billions of gallons of ethanol to their gasoline each year, Bush predicted it would make the country "stronger, cleaner and more secure."

But the ethanol era has proven far more damaging to the environment than politicians promised and much worse than the government admits today.

As farmers rushed to find new places to plant corn, they wiped out millions of acres of conservation land, destroyed habitat and polluted water supplies, an Associated Press investigation found.

Five million acres of land set aside for conservation - more than Yellowstone, Everglades and Yosemite National Parks combined - have vanished on Obama's watch.

Landowners filled in wetlands. They plowed into pristine prairies, releasing carbon dioxide that had been locked in the soil.

Sprayers pumped out billions of pounds of fertilizer, some of which seeped into drinking water, contaminated rivers and worsened the huge dead zone in the Gulf of Mexico where marine life can't survive.

The consequences are so severe that environmentalists and many scientists have now rejected corn-based ethanol as bad environmental policy. But the Obama administration stands by it, highlighting its benefits to the farming industry rather than any negative impact.

Farmers planted 15 million more acres of corn last year than before the ethanol boom, and the effects are visible in places like south central Iowa.

The hilly, once-grassy landscape is made up of fragile soil that, unlike the earth in the rest of the state, is poorly suited for corn. Nevertheless, it has yielded to America's demand for it.

"They're raping the land," said Bill Alley, a member of the board of supervisors in Wayne County, which now bears little resemblance to the rolling cow pastures shown in postcards sold at a Corydon pharmacy.

All energy comes at a cost. The environmental consequences of drilling for oil and natural gas are well documented and severe. But in the president's push to reduce greenhouse gases and curtail global warming, his administration has allowed so-called green energy to do not-so-green things.

In some cases, such as its decision to allow wind farms to kill eagles, the administration accepts environmental costs because they pale in comparison to the havoc it believes global warming could ultimately cause.

Ethanol is different.

The government's predictions of the benefits have proven so inaccurate that independent scientists question whether it will ever achieve its central environmental goal: reducing greenhouse gases. That makes the hidden costs even more significant.

"This is an ecological disaster," said Craig Cox with the Environmental Working Group, a natural ally of the president that, like others, now finds itself at odds with the White House.

But it's a cost the administration is willing to accept. It believes supporting corn ethanol is the best way to encourage the development of biofuels that will someday be cleaner and greener than today's. Pulling the plug on corn ethanol, officials fear, might mean killing any hope of these next-generation fuels.

"That is what you give up if you don't recognize that renewable fuels have some place here," EPA administrator Gina McCarthy said in a recent interview with AP.

"All renewable fuels are not corn ethanol."

Still, corn supplies the overwhelming majority of ethanol in the United States, and the administration is loath to discuss the environmental consequences.

"It just caught us completely off guard," said Doug Davenport, a Department of Agriculture official who encourages southern Iowa farmers to use conservation practices on their land. Despite those efforts, Davenport said he was surprised at how much fragile, erodible land was turned into corn fields.

Shortly after Davenport spoke to The Associated Press, he got an email ordering him to stop talking.

"We just want to have a consistent message on the topic," an Agriculture Department spokesman in Iowa said.

That consistent message was laid out by Agriculture Secretary Tom Vilsack, who spoke to ethanol lobbyists on Capitol Hill recently and said ethanol was good for business.

"We are committed to this industry because we understand its benefits," he said.

"We understand it's about farm income. It's about stabilizing and maintaining farm income which is at record levels."

The numbers behind the ethanol mandate have become so unworkable that, for the first time, the EPA is soon expected to reduce the amount of ethanol required to be added to the gasoline supply. An unusual coalition of big oil companies, environmental groups and food companies is pushing the government to go even further and reconsider the entire ethanol program.

The ethanol industry is fighting hard against that effort. Industry spokesman Brooke Coleman dismissed this story as "propaganda on a page." An industry blog in Minnesota said the AP had succumbed "to Big Oil's deep pockets and powerful influence."

To understand how America got to an environmental policy with such harmful environmental consequences, it's helpful to start in a field in Iowa.

Leroy Perkins, a white-haired, 66-year-old farmer in denim overalls, stands surrounded by waist-high grass and clover. He owns 91 acres like this, all hilly and erodible, that he set aside for conservation years ago.

Soon, he will have a decision to make: keep the land as it is or, like many of his neighbors, plow it down and plant corn or soybeans, the major sources of biofuel in the United States.

"I'd like to keep it in," he said. "This is what southern Iowa's for: raising grass."

For decades, the government's Conservation Reserve Program has paid farmers to stop farming environmentally sensitive land. Grassy fields naturally convert carbon dioxide into oxygen, which helps combat global warming. Plus, their deep root systems prevent topsoil from washing away.

For Perkins and his farmer neighbors in Wayne County, keeping farmland in conservation wasn't just good stewardship. It made financial sense.

A decade ago, Washington paid them about \$70 an acre each year to leave their farmland idle. With corn selling for about \$2 per bushel (56 pounds) back then, farming the hilly, inferior soil was bad business.

Many opted into the conservation program. Others kept their grasslands for cow pastures.

Lately, though, the math has changed.

"I'm coming to the point where financially, it's not feasible," Perkins said.

The change began in 2007, when Congress passed a law requiring oil companies to blend billions of gallons of ethanol into gasoline.

Oil prices were high. Oil imports were rising quickly. The legislation had the strong backing of the presidential candidate who was the junior senator from neighboring Illinois, the nation's second-largest corn producer.

"If we're going to get serious about investing in our energy future, we must give our family farmers and local ethanol producers a fair shot at success," Obama said then. The Democratic primary field was crowded, and if he didn't win the Iowa caucuses the road to the nomination would be difficult. His strong support for ethanol set him apart.

"Any time we could talk about support for ethanol, we did," said Mitch Stewart, the battleground states director for Obama's 2008 campaign. "It's how we would lead a lot of discussions."

President Bush signed the bill that December.

It would fall on the next president to figure out how to make it work.

President Obama's team at the EPA was sour on the ethanol mandate from the start. As a way to reduce global warming, they knew corn ethanol was a dubious proposition. Corn demands fertilizer, which is made using natural gas. What's

worse, ethanol factories typically burn coal or gas, both of which release carbon dioxide.

Then there was the land conversion, the most controversial and difficult-to-predict outcome.

Digging up grassland releases greenhouse gases, so environmentalists are skeptical of any program that encourages planting more corn.

"I don't remember anybody having great passion for this," said Bob Sussman, who served on Obama's transition team and recently retired as EPA's senior policy counsel. "I don't have a lot of personal enthusiasm for the program."

At the White House and the Department of Agriculture, though, there was plenty of enthusiasm.

One of Obama's senior advisers, Pete Rouse, had worked on ethanol issues as chief of staff to Sen. Tom Daschle of South Dakota, a major ethanol booster and now chair of the DuPont Advisory Committee on Agriculture Innovation and Productivity.

Another Obama adviser at the time, Heather Zichal, grew up in northeast Iowa - as a child, she was crowned "sweet corn princess" - and was one of the Obama campaign's leading voices on ethanol in her home state.

The administration had no greater corn ethanol advocate than Vilsack, the former Iowa governor.

"Tom understands that the solution to our energy crisis will be found not in oil fields abroad but in our farm fields here at home," Obama said in 2008. "That is the kind of leader I want in my Cabinet."

Writing the regulations to implement the ethanol mandate was among the administration's first major environmental undertakings. Industry and environmental groups watched closely.

The EPA's experts determined that the mandate would increase demand for corn and encourage farmers to plow more land. Considering those factors, they said, corn ethanol was only slightly better than gasoline when it came to carbon dioxide emissions.

Sixteen percent better, to be exact. And not in the short term. Only by 2022.

By law, though, biofuels were supposed to be at least 20 percent greener than gasoline.

From a legal standpoint, the results didn't matter. Congress exempted existing coal- and gas-burning ethanol plants from meeting this standard.

But as a policy and public relations issue, it was a real problem. The biofuel-friendly Obama administration was undermining the industry's major selling point: that it was much greener than gasoline.

So the ethanol industry was livid. Lobbyists flooded the EPA with criticism, challenging the government's methods and conclusions.

The EPA's conclusion was based on a model. Plug in some assumed figures - the price of corn, the number of acres planted, how much corn would grow per acre - and the model would spit out a number.

To get past 20 percent, the EPA needed to change its assumptions.

The most important of those assumptions was called the yield, a measure of how much corn could be produced on an acre of land. The higher the yield, the easier it

would be for farmers to meet the growing demand without plowing new farmland, which counted against ethanol in the greenhouse gas equation.

Corn yields have inched steadily upward over the years as farms have become more efficient. The government's first ethanol model assumed that trend would continue, rising from 150 bushels per acre to about 180 by the year 2022.

Agriculture companies like Monsanto Co. and DuPont Pioneer, which stood to make millions off an ethanol boom, told the government those numbers were too low.

They predicted that genetically modified seeds - which they produce - would send yields skyrocketing. With higher yields, farmers could produce more corn on less land, reducing the environmental effects.

Documents show the White House budget office also suggested the EPA raise its yield assumptions.

When the final rule came out, the EPA and Agriculture officials added a new "high yield case scenario" that assumed 230 bushels per acre.

The flaw in those assumptions, independent scientists knew, was that a big increase in corn prices would encourage people to farm in less hospitable areas like Wayne County, which could never produce such large yields.

But the EPA's model assumed only a tiny increase in corn prices.

"You adjust a few numbers to get it where you want it, and then you call it good," said Adam Liska, assistant professor of biological systems engineering at the University of Nebraska. He supports ethanol, even with its environmental trade-offs.

When the Obama administration finalized its first major green-energy policy, corn ethanol barely crossed the key threshold. The final score: 21 percent.

"If you corrected any of a number of things, it would be on the other side of 20 percent," said Richard Plevin of the Transportation Sustainability Research Center at the University of California, Berkeley. "Is it a coincidence this is what happened? It certainly makes me wonder."

It didn't take long for reality to prove the Obama administration's predictions wrong.

The regulations took effect in July 2010. The following month, corn prices already had surpassed the EPA's long-term estimate of \$3.22 a bushel. That September, corn passed \$4, on its way to about \$7, where it has been most of this year.

Yields, meanwhile, have held fairly steady.

But the ethanol boom was underway.

It's impossible to precisely calculate how much ethanol is responsible for the spike in corn prices and how much those prices led to the land changes in the Midwest. Supporters of corn ethanol say extreme weather - dry one year, very wet the next - hurt farmers and raised prices.

But diminishing supply wasn't the only factor. More corn than ever was being distilled into ethanol.

Historically, the overwhelmingly majority of corn in the United States has been turned into livestock feed. But in 2010, for the first time, fuel was the No. 1 use for corn in America. That was true in 2011 and 2012. Newly released Department of Agriculture data show that, this year, 43 percent of corn went to fuel and 45 percent went to livestock feed.

The more corn that goes to ethanol, the more that needs to be planted to meet other demands.

Scientists predicted that a major ethanol push would raise prices and, in turn, encourage farmers like Leroy Perkins to plow into conservation land. But the government insisted otherwise.

In 2008, the journal *Science* published a study with a dire conclusion: Plowing over conservation land releases so much greenhouse gas that it takes 48 years before new plants can break even and start reducing carbon dioxide.

For an ethanol policy to work, the study said, farmers could not plow into conservation land.

The EPA, in a report to Congress on the environmental effects of ethanol, said it was "uncertain" whether farmers would plant on farmland that had been set aside for conservation.

The Department of Energy was more certain. Most conservation land, the government said in its response to the study, "is unsuitable for use for annual row crop production."

America could meet its ethanol demand without losing a single acre of conservation land, Energy officials said.

They would soon be proven wrong.

Before the government ethanol mandate, the Conservation Reserve Program grew every year for nearly a decade. Almost overnight, farmers began leaving the program, which simultaneously fell victim to budget cuts that reduced the amount of farmland that could be set aside for conservation.

In the first year after the ethanol mandate, more than 2 million acres disappeared. Since Obama took office, 5 million more acres have vanished.

Agriculture officials acknowledge that conservation land has been lost, but they say the trend is reversing. When the 2013 data comes out, they say it will show that as corn prices stabilized, farmers once again began setting aside land for conservation.

Losing conservation land was bad. But something even worse was happening.

Farmers broke ground on virgin land, the untouched terrain that represents, from an environmental standpoint, the country's most important asset.

The farm industry assured the government that wouldn't happen. And it would have been an easy thing for Washington to check.

But rather than insisting that farmers report whenever they plow into virgin land, the government decided on a much murkier oversight method: Washington instead monitors the total number of acres of cropland nationwide. Local trends wash away when viewed at such a distance.

"They could not have designed a better approach to not detect land conversion," said Ben Larson, an agricultural expert for the National Wildlife Federation.

Look closely at the corn boom in the northern Great Plains, however, and it's clear. Farmers are converting untouched prairie into farmland.

The Department of Agriculture began keeping figures on virgin land only in 2012 and determined that about 38,000 acres vanished that year.

But using government satellite data - the best tool available - the AP identified a conservative estimate of 1.2 million acres of virgin land in Nebraska and the Dakotas

alone that have been converted to fields of corn and soybeans since 2006, the last year before the ethanol mandate was passed.

"The last five years, we've become financially solvent," said Robert Malsam, a farmer in Edmunds County, S.D., who like others in the central and eastern Dakotas has plowed into wild grassland to expand his corn crop.

The price of corn is reshaping the land across the Midwest. In Wayne County, Iowa, for example, only the dead can stop the corn.

A gravel road once cut through a grassy field leading to a hilltop cemetery. But about two years ago, the landowners plowed over the road. Now, visiting gravesites means walking a narrow path through the corn.

People have complained. It's too narrow for a hearse, too rutted for a wheelchair, too steep for the elderly. But it's legal, said Bill Alley from the board of supervisors. "This is what the price of corn does," he said. "This is what happens, right here."

When Congress passed the ethanol mandate, it required the EPA to thoroughly study the effects on water and air pollution. In his recent speech to ethanol lobbyists, Vilsack was unequivocal about those effects:

"There is no question air quality, water quality is benefiting from this industry," he said.

But the administration never actually conducted the required air and water studies to determine whether that's true.

In an interview with the AP after his speech, Vilsack said he didn't mean that ethanol production was good for the air and water. He simply meant that gasoline mixed with ethanol is cleaner than gasoline alone.

In the Midwest, meanwhile, scientists and conservationists are sounding alarms. Nitrogen fertilizer, when it seeps into the water, is toxic. Children are especially susceptible to nitrate poisoning, which causes "blue baby" syndrome and can be deadly.

Between 2005 and 2010, corn farmers increased their use of nitrogen fertilizer by more than one billion pounds. More recent data isn't available from the Agriculture Department, but because of the huge increase in corn planting, even conservative projections by the AP suggest another billion-pound fertilizer increase on corn farms since then.

Department of Agriculture officials note that the amount of fertilizer used for all crops has remained steady for a decade, suggesting the ethanol mandate hasn't caused a fertilizer boom across the board.

But in the Midwest, corn is the dominant crop, and officials say the increase in fertilizer use - driven by the increase in corn planting - is having an effect. The Des Moines Water Works, for instance, has faced high nitrate levels for many years in the Des Moines and Raccoon Rivers, which supply drinking water to 500,000 people. Typically, when pollution is too high in one river, workers draw from the other.

"This year, unfortunately the nitrate levels in both rivers were so high that it created an impossibility for us," said Bill Stowe, the water service's general manager.

For three months this summer, workers kept huge machines running around the clock to clean the water. Officials asked customers to use less water so the utility had a chance to keep up.

Part of the problem was that last year's dry weather meant fertilizer sat atop the soil. This spring's rains flushed that nitrogen into the water along with the remnants of the fertilizer from the most recent crop.

At the same time the ethanol mandate has encouraged farmers to plant more corn, Stowe said, the government hasn't done enough to limit fertilizer use or regulate the industrial drainage systems that flush nitrates and water into rivers and streams. With the Water Works on the brink of capacity, Stowe said he's considering suing the government to demand a solution.

In neighboring Minnesota, a government report this year found that significantly reducing the high levels of nitrates from the state's water would require huge changes in farming practices at a cost of roughly \$1 billion a year.

"We're doing more to address water quality, but we are being overwhelmed by the increase in production pressure to plant more crops," said Steve Morse, executive director of the Minnesota Environmental Partnership.

The nitrates travel down rivers and into the Gulf of Mexico, where they boost the growth of enormous algae fields. When the algae die, the decomposition consumes oxygen, leaving behind a zone where aquatic life cannot survive.

This year, the dead zone covered 5,800 square miles of sea floor, about the size of Connecticut.

Larry McKinney, the executive director of the Harte Institute at Texas A&M University-Corpus Christi, says the ethanol mandate worsened the dead zone.

"On the one hand, the government is mandating ethanol use," he said, "and it is unfortunately coming at the expense of the Gulf of Mexico."

The dead zone is one example among many of a peculiar ethanol side effect: As one government program encourages farmers to plant more corn, other programs pay millions to clean up the mess.

Obama administration officials know the ethanol mandate hasn't lived up to its billing.

The next-generation biofuels that were supposed to wean the country off corn haven't yet materialized. Every year, the EPA predicts millions of gallons of clean fuel will be made from agricultural waste. Every year, the government is wrong. Every day without those cleaner-burning fuels, the ethanol industry stays reliant on corn and the environmental effects mount.

The EPA could revisit its model and see whether ethanol is actually as good for the environment as officials predicted. But the agency says it doesn't have the money or the manpower.

Even under the government's optimistic projections, the ethanol mandate wasn't going to reduce greenhouse gas right away. And with the model so far off from reality, independent scientists say it's hard to make an argument for ethanol as a global warming policy.

"I'd have to think really hard to come up with a scenario where it's a net positive," said Silvia Secchi, a Southern Illinois University agriculture economist.

She paused a few moments, then added, "I'm stumped."

In June, when Obama gave a major policy speech on reducing greenhouse gas, he didn't mention ethanol. Biofuels in general received a brief, passing reference. What was once billed as an environmental boon has morphed into a government program to help rural America survive.

"I don't know whether I can make the environmental argument, or the economic argument," Vilsack said in an interview with the AP. "To me, it's an opportunity argument."

Congress and the administration could change the ethanol mandate, tweak its goals or demand more safeguards. Going to Congress and rewriting the law would mean picking a fight with agricultural lobbyists, a fight that would put the administration on the side of big oil companies, which despise the ethanol requirement.

So the ethanol policy cruises on autopilot.

Bob Dinneen, president of the Renewable Fuels Association, the ethanol lobbying group, said there's no reason to change the standards. Ethanol still looks good compared to the oil industry, which increasingly relies on environmentally risky tactics like hydraulic fracturing or pulls from carbon-heavy tar sands.

Leroy Perkins, the farmer agonizing about what to do with his 91 acres, says he likes ethanol as a product and an industry. But he knows it fuels the corn prices that are transforming his county.

"If they do change the fuel standard, you'll see the price of corn come down overnight," he said. "I like to see a good price for corn. But when it's too high, it hurts everybody."

Investors from as far away as Maryland and Pennsylvania have bought thousands of acres in Wayne County, sending prices skyrocketing from \$350 per acre a decade ago to \$5,000 today.

One in every four acres of in the county is now owned by an out-of-towner.

Those who still own land often rent it to farming companies offering \$300 or more per acre. Perkins could make perhaps \$27,000 a year if he let somebody plant corn on his land. That's nothing to dismiss in a county where typical household income is \$36,000.

But he knows what that means. He sees the black streaks in his neighbor's cornfields, knowing the topsoil washes away with every rain. He doesn't want that for his family's land.

"You have to decide, do you want to be the one to..."

He doesn't finish his sentence.

"We all have to look at our pocketbooks."

Associated Press writers Jack Gillum in Washington and Chet Brokaw in Roscoe, S.D., contributed to this report.

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PRAIRIES VANISH IN THE US PUSH FOR GREEN ENERGY

ROSCOE, S.D. (AP) - Robert Malsam nearly went broke in the 1980s when corn was cheap. So now that prices are high and he can finally make a profit, he's not about to apologize for ripping up prairieland to plant corn.

Across the Dakotas and Nebraska, more than 1 million acres of the Great Plains are giving way to cornfields as farmers transform the wild expanse that once served as the backdrop for American pioneers.

This expansion of the Corn Belt is fueled in part by America's green energy policy, which requires oil companies to blend billions of gallons of corn ethanol into their gasoline. In 2010, fuel became the No. 1 use for corn in America, a title it held in 2011 and 2012 and narrowly lost this year. That helps keep prices high.

"It's not hard to do the math there as to what's profitable to have," Malsam said. "I think an ethanol plant is a farmer's friend."

What the green-energy program has made profitable, however, is far from green. A policy intended to reduce global warming is encouraging a farming practice that actually could worsen it.

That's because plowing into untouched grassland releases carbon dioxide that has been naturally locked in the soil. It also increases erosion and requires farmers to use fertilizers and other industrial chemicals. In turn, that destroys native plants and wipes out wildlife habitats.

It appeared so damaging that scientists warned that America's corn-for-ethanol policy would fail as an anti-global warming strategy if too many farmers plowed over virgin land.

The Obama administration argued that would not happen. But the administration didn't set up a way to monitor whether it actually happened.

It did.

More than 1.2 million acres of grassland have been lost since the federal government required that gasoline be blended with increasing amounts of ethanol, an Associated Press analysis of satellite data found. Plots that were wild grass or pastureland seven years ago are now corn and soybean fields.

That's in addition to the 5 million acres of farmland that had been aside for conservation - more than Yellowstone, Everglades and Yosemite National Parks combined - that have vanished since Obama took office.

In South Dakota, more than 370,000 acres of grassland have been uprooted and farmed from since 2006. In Edmunds County, a rural community about two hours north of the capital, Pierre, at least 42,000 acres of grassland have become cropland - one of the largest turnovers in the region.

Malsam runs a 13-square-mile family farm there. He grows corn, soybeans and wheat, then rents out his grassland for grazing. Each year, the family converts another 160 acres from grass to cropland.

Chemicals kill the grass. Machines remove the rocks. Then tractors plow it three times to break up the sod and prepare it for planting.

Scattered among fields of 7-foot tall corn and thigh-high soybeans, some stretches of grassland still exist. Cattle munch on some grass. And "prairie potholes" - natural

ponds ranging from small pools to larger lakes - support a smattering of ducks, geese, pelicans and herons.

Yet within a mile of Malsam's farm, federal satellite data show, more than 300 acres of grassland have been converted to soybeans and corn since 2006.

Nebraska has lost at least 830,000 acres of grassland, a total larger than New York City, Los Angeles and Dallas combined.

"It's great to see farmers making money. It hasn't always been that way," said Craig Cox of the Environmental Working Group. He advocates for clean energy but opposes the ethanol mandate. "If we're going to push the land this hard, we really need to intensify conservation in lockstep with production, and that's just not happening," he said.

Jeff Lutt, CEO of Poet, which operates ethanol refineries across the country, including in South Dakota, said it's up to farmers how to use their land.

"The last I checked, it is still an open market. And farmers that own land are free to farm their land to the extent they think they can make money on it or whatever purpose they need," he said.

Yet Chris Wright, a professor at South Dakota State University who has studied land conversion, said: "The conversation about land preservation should start now before it becomes a serious problem." Wright reviewed the AP's methodology for determining land conversion.

The AP's analysis used government satellite data to count how much grassland existed in 2006 in each county, then compare each plot of land to corresponding satellite data from 2012.

The data from the U.S. Geological Survey and the Department of Agriculture identify corn and soybean fields. That allowed the AP to see which plots of grassland became cropland.

To reach its conservative estimate of 1.2 million acres lost, the AP excluded grassland that had been set aside under the government's Conservation Reserve Program, in which old farmland is allowed to return to a near-natural state. The AP used half-acre sections of earth and excluded tiny tracts that became corn, which experts said were most likely outliers.

Corn prices more than doubled in the years after Congress passed the ethanol mandate in 2007. Now, Malsam said, farmers can make about \$500 an acre planting corn.

His farm has just become profitable in the past five years, allowing him and his wife, Theresa, to build a new house on the farmstead.

Four miles south, signs at each end of the town of Roscoe announce a population of only 324. But the town, which relies in part on incomes like Malsam's, supports a school, a restaurant, a bank, a grocery store and a large farm machinery store.

The manager of the equipment dealership, Kaleb Rodgers, said the booming farm economy has helped the town and the dealership prosper. The business with 28 employees last year sold a dozen combines at about \$300,000 apiece, plus more than 60 tractors worth between \$100,000 and \$300,000, he said.

"If we didn't have any farmers we wouldn't have a community here. We wouldn't have a business. I wouldn't be sitting here. I wouldn't be able to feed my family," Rodgers said. "I think ethanol is a very good thing."

Jim Faulstich, president of the South Dakota Grasslands Coalition, said the nation's ethanol and crop insurance policies have encouraged the transformation of the land. Faulstich, who farms and ranches in central South Dakota near Highmore, said much of the land being converted is not suited to crop production, and South Dakota's strong winds and rains will erode the topsoil.

"I guess a good motto would be to farm the best and leave the rest," he said.

Gillum reported from Washington. Associated Press writers Dina Cappiello and Matt Apuzzo contributed to this report from Washington.

NEXT GENERATION OF BIOFUELS IS STILL YEARS AWAY

NEW YORK (AP) -- The first trickle of fuels made from agricultural waste is finally winding its way into the nation's energy supply, after years of broken promises and hype promoting a next-generation fuel source cleaner than oil.

But as refineries churn out this so-called cellulosic fuel, it has become clear, even to the industry's allies, that the benefits remain, as ever, years away.

The failure so far of cellulosic fuel is central to the debate over corn-based ethanol, a centerpiece of America's green-energy strategy. Ethanol from corn has proven far more damaging to the environment than the government predicted, and cellulosic fuel hasn't emerged as a replacement.

"A lot of people were willing to go with corn ethanol because it's a bridge product," said Silvia Secchi, an agricultural economist at Southern Illinois University.

But until significant cellulosic fuel materializes, she said, "It's a bridge to nowhere."

Cellulosics were the linchpin of part of a landmark 2007 energy law that required oil companies to blend billions of gallons of biofuel into America's gasoline supply. The quota was to be met first by corn ethanol and then, in later years, by more fuels made with non-food sources.

It hasn't worked out.

"Cellulosic has been five years away for 20 years now," said Nathanael Greene, a biofuels expert at the Natural Resources Defense Council. "Now the first projects are up and running, but actually it's still five years away."

Cellulosic makers are expected to turn out at most 6 million gallons of fuel this year, the government says. That's enough fuel to meet U.S. demand for 11 minutes. It's less than 1 percent of what Congress initially required to be on the market this year. Corn ethanol is essentially as simple to make as moonshine but requires fossil fuels to plant, grow and distill. For that reason, it has limited environmental benefits and some drastic side effects.

Cellulosic biofuels, meanwhile, are made from grass, municipal waste or the woody, non-edible parts of plants - all of which take less land and energy to produce.

Cellulosics offer a huge reduction in greenhouse gases compared with petroleum-based fuels and they don't use food sources.

In Vero Beach, Fla., for example, agricultural waste and trash are being turned into ethanol. In Columbus, Miss., yellow pine wood chips are being turned into gasoline

and diesel. In Emmetsburg, Iowa, and Hugoton, Kan., construction is nearly complete on large refineries that will turn corncobs, leaves and stalks into ethanol. But despite the mandate and government subsidies, cellulosic fuels haven't performed. This year will be the fourth in a row the biofuels industry failed by large margins to meet required targets for cellulosic biofuels.

"Has it taken longer than we expected? Yes," acknowledges Agriculture Secretary Tom Vilsack.

The Obama administration's annual estimates of cellulosic fuel production have proven wildly inaccurate. In 2010, the administration projected 5 million gallons would be available. In 2011, it raised the projection to 6.6 million.

Both years, the total was zero.

The administration defended its projections, saying it was trying to use the biofuel law as a way to promote development of cellulosic fuel. But the projections were so far off that, in January, a federal appeals court said the administration improperly let its "aspirations" for cellulosic fuel influence its analysis.

Even with the first few plants running, supporters acknowledge there is almost no chance to meet the law's original yearly targets that top out at 16 billion gallons by 2022.

"It's simply not plausible," said Jeremy Martin, a biofuels expert at the Union of Concerned Scientists. "2030 is the soonest you can anticipate it to be at that level." The EPA is weighing how deeply to reduce targets for cellulosic fuels for next year and beyond. Biofuel supporters want higher targets to spur investment in new facilities. Opponents want low targets to reflect what's available in the market and the chronic underperformance of cellulosic makers.

Cellulosic's great promise will likely be enough to keep it in the Obama administration's favor.

"There seems to be recognition among the administration that cellulosic fuels haven't met the targets, but there's still support for them," said Timothy Cheung, an analyst at ClearView Energy Partners, a Washington research and consulting firm. Cellulosic fuels have lagged expectations for several reasons. For one, expectations were simply set too high. To attract support from Washington and money from investors, the industry underestimated and understated the difficulty of turning cellulose into fuel.

Cellulose is the stuff that makes plants strong, and it has evolved over several hundred million years to resist being broken down by heat, chemicals or microbes. That makes it difficult to produce these fuels fast enough, cheap enough or on a large enough scale to make economic sense.

The industry was also dealt a setback by the global financial crisis, which all but stopped commercial lending soon after the biofuel mandates were established in 2007.

Hundreds of companies failed that had attracted hundreds of millions of dollars from venture capitalists and government financing.

Sometimes the microbes or chemical treatments used to break down the plant matter were too expensive or didn't work fast enough.

Other times, the problems were more prosaic. Range Fuels, based in Colorado, failed because money dried up before it could fine-tune the machine that fed wood chips

into a gassifier. KiOR, a Texas company making cellulosic gasoline and diesel in Mississippi, was delayed recently by a power failure, sending its stock price plummeting. The company has since fixed the problem, and is shipping fuel. To supporters, these setbacks are neither surprising nor evidence of failure. Companies are trying to deliver enormous amounts of fuel using a complex, expensive process that has never been tried before.

"We may be three years late, but it doesn't make any difference globally over the long term," says Manuel Sanchez Ortega, chief executive of Abengoa, a Spanish engineering firm building a cellulosic ethanol plant in Kansas. "The first deep-water oil platform was not profitable. The first airplane was not profitable. The important thing is that it is working."

At 25 million gallons of annual output per plant, it would take the construction of 640 of these bio-refineries to meet the law's original goal.

Before investors trust the technology enough to finance construction of new facilities, several plants must work consistently at or near full capacity and show that they can make money for a year or more.

To Martin, cellulosic fuels are too important to stop trying to perfect them.

"The transition to looking beyond food for biofuels is as important today as it was in 2007," he said. "If we can't do it as fast as we thought we could, it doesn't mean we should give up."

INDUSTRY TAKES AIM AT AP ETHANOL INVESTIGATION

WASHINGTON (AP) -- A new Associated Press investigation, which found that ethanol hasn't lived up to some of the government's clean-energy promises, is drawing a fierce response from the ethanol industry.

In an unusual campaign, ethanol producers, corn growers and its lobbying and public relations firms have criticized and sought to alter the story, which was released to some outlets earlier and is being published online and in newspapers Tuesday. The Agriculture secretary, Tom Vilsack, told the Des Moines Register that the AP project included "a number of inaccuracies and errors." Vilsack said farmers were engaged in other conservation practices, including wetland reserve programs, wildlife habitat incentive programs and EQIP, a program that helps farmers adopt conservation practices.

The industry's efforts, which began one week before the AP project was being published and broadcast, included distributing fill-in-the-blank letters to newspapers editors that call the AP's report "rife with errors." Industry officials emailed newspapers and other media, referring to AP's report as a "smear," "hatchet job" and "more dumpster fire than journalism."

"We find it to be just flabbergasting. There is probably more truth in this week's National Enquirer than AP's story," said Geoff Cooper, vice president of research and analysis for the Renewable Fuels Association in a press call with reporters Monday criticizing the investigation.

The economic stakes for the industry are significant. Congress is working on legislation to do away with the corn-based portion of the mandate, which required oil companies to blend billions of gallons of ethanol into their gasoline. Big Oil is pumping big money into the effort. The Obama administration, a strong defender of biofuels, is soon expected to slightly ease the law's requirements. Overnight, such changes would eliminate a huge source of the demand for ethanol, reduce profits for farmers and ethanol producers and likely lower the price of corn.

The AP's investigation is based on government data, interviews and observations. It highlights what many researchers have published in peer-reviewed journals and is consistent with reports to Congress by the Environmental Protection Agency about ethanol's environment toll.

"The AP's reporting on this important topic is a result of months of work and review of documents, and interviews of experts and people on all sides of the public policy debate about this energy resource," said Mike Oreskes, AP's vice president and senior managing editor. "We stand behind our reporting and welcome further insights and discussion."

Specifically, the ethanol industry disputed AP's findings that as farmers rushed to find new places to plant corn, they wiped out millions of acres of conservation land and destroyed habitat. The industry said the primary driver for such losses was Congress lowering the number acres allowed in conservation, not ethanol. It also cited a Dutch study, which was not peer-reviewed and found that urban sprawl internationally was responsible for greater loss of grassland than biofuels.

In addition to citing the Agriculture Department's figures of more than 5 million acres of conservation land transformed under the Obama administration from grass field back into farmland, the AP analyzed U.S. government crop data collected by satellite. The AP identified tracts of land that were cornfields in 2012 and had been grassland in 2006. The AP then excluded land lost from the Conservation Reserve Program to prevent double counting. The AP vetted this methodology with an independent scientist at South Dakota State University, who has published peer-reviewed research on land conversion using the same satellite data.

The Dutch study that the industry cited, which AP did not mention, noted that in the United States "biofuel expansion is the dominant cause of agricultural land use loss." The ethanol industry said farmers were not converting native grasslands into cropland. The AP cited USDA's own data for 2012, the first year it collected data on so-called new breakings, showing that 38,000 acres of never-before-planted grassland was farmed.

The ethanol industry also complained that AP was misleading when it said since 2010 more corn went to fuel than livestock feed. It noted that the distillation process leaves behind a residual byproduct that can be used for feed. The AP used the government's official, long-established benchmark for domestic corn use: data from USDA's Economic Research Service, which do not factor distiller's grain into its official data. The figures show that, in 2010 for the first time on record, fuel was the top use of domestic corn - a trend that continued in 2011 and 2012.

Monday's press call criticizing the AP also included Leroy Perkins, an Iowa farmer interviewed for the AP project. Perkins said he was surprised by the article's focus.

He said he thought the AP was writing about the increase in farm ownership from people outside the area and about water quality impacts.

An AP spokesman, Paul Colford, said Perkins was clearly aware of the questions that AP had about the expansion of cornfields into conservation land and went out of his way to be helpful, even helping AP arrange a flight over Iowa farmland. Colford said that, like many other farmers contacted by AP, Perkins said he would prefer to keep land in the conservation program but was reconsidering, given the favorable price being offered for corn.

Growth Energy and the Renewable Fuels Association in the days leading up to the publication of the AP's ethanol report emailed newspapers and other media offering "balance" in emails with subject lines such as "Associated Press story plows under the facts about ethanol."

Those two organizations, along with the National Corn Growers Association, together spent more than \$834,000 on lobbying the U.S. government from July through September, according to federal lobbying records. Those funds paid for lobbying in both Congress and the Executive Branch - including the EPA - over issues like ethanol fuel standards and tax policy.

Fuels America, a coalition of pro-biofuel groups and companies, spent \$120,000 during that third-quarter period lobbying for renewable energy rules, records show. The group, which includes Monsanto, RFA and Growth Energy, also organized a tour for journalists in Iowa in August through the Glover Park Group, a leading Washington crisis-management and public relations firm. The AP traveled to Iowa independently in July.

A TIMELINE OF RECENT ETHANOL EVENTS

August 2005 (AP) -- President George W. Bush signs the Energy Policy Act of 2005, requiring oil companies to add ethanol to their gasoline. Called the Renewable Fuels Standard, this mandate begins with a 4-billion-gallon requirement in 2006 and doubles by 2012. Corn is selling for \$1.95 a bushel.

January 2007 - In his State of the Union speech, President Bush calls on Congress to require production of 35 billion gallons of renewable and alternative fuels in 2017. It would effectively be a huge increase in the ethanol mandate. Corn is selling for \$3.05 a bushel.

February 2007 - Barack Obama, the junior senator from Illinois, the nation's No. 2 corn-producing state, declares his candidacy for president. In his speech he hails "homegrown, alternative fuels like ethanol." Obama is a strong supporter of passing a new, higher Renewable Fuels Standard.

December 2007 - Congress passes the Energy Independence and Security Act of 2007. Bush signs it into law. It expands the renewable fuels standard to require 36 billion gallons of ethanol and other fuels to be blended into gasoline, diesel and jet fuel by 2022. Corn ethanol production would max out at 15 billion gallons in 2015. Corn is selling for \$3.77.

January 2008 - A study in the Proceedings of the National Academy of Sciences predicts that the ethanol mandate will increase nitrogen pollution in rivers, worsening the Gulf of Mexico's dead zone, which cannot support sea life.

February 2008 - A study in the journal Science warns that if U.S. biofuel policy encourages farmers to plow into untouched grassland or farmland that has been set aside for conservation, it will undermine efforts to reduce greenhouse gases. That's because plowing into grassland releases carbon dioxide. The Department of Energy responds that the new fuel standard can be met without plowing into any conservation land.

2008 - The amount of farmland set aside for conservation suddenly decreases. About 34 million acres are enrolled in the government's voluntary Conservation Reserve Program, a drop of about 2 million from 2007.

May 2009 - President Obama's EPA takes the first steps toward implementing the new ethanol mandate. Government experts conclude that corn ethanol is, on average, 16 percent better than gasoline when it comes to greenhouse gas emissions. The law requires that new ethanol plants be 20 percent better.

2009 - Enrollment in the Conservation Reserve Program falls again, this time by nearly 1 million acres.

March 2010 - After lobbying from the agriculture industry, EPA publishes its final rule on the new ethanol mandate. The new analysis shows ethanol is 21 percent better than gasoline, slightly better than required by law. As part of the analysis, the government assumes corn prices will rise only slightly, to \$3.59 a bushel, by 2022.

August 2010 - Corn sells for \$3.65, already eclipsing the government's long-term price estimate.

2010 - For the first time on record, ethanol is the No. 1 use for American corn, eclipsing livestock feed. Some 2.4 million more acres disappear from the Conservation Reserve Program.

February 2011 - Corn sells for \$5.65 a bushel.

2011 - Farmland acreage set aside for conservation continues to fall, this time by 173,000 acres. About 4.8 million acres have been lost since 2006.

January 2012 - A 30-year-old federal subsidy for ethanol expires, along with a tariff on imported ethanol. Ethanol blenders were getting a tax credit of 45 cents per gallon. Corn sells for \$6.07.

2012 - Another 1.5 million acres of conservation land disappears, bringing the total to more than 6 million since 2006.

March 2013 - A new study in the Proceedings of the National Academy of Sciences uses satellite data to show that rising corn prices have encouraged farmers to convert grassland to cropland, which releases carbon dioxide into the air. The Renewable Fuel Association responds that "the extremely high rate of error associated with the satellite imagery" makes the study's results "highly questionable and irrelevant to the biofuels policy debate." Corn sells for \$7.13.

May 2013 - Des Moines Water Works in Iowa reports historic levels of nitrates in the drinking-water supply, blames agricultural fertilizer.

July 2013 - The National Oceanic and Atmospheric Administration announces the size of the Gulf of Mexico dead zone has increased. Larry McKinney, executive director of the Harte Research Institute for Gulf of Mexico Studies at Texas A&M University-Corpus Christi, blames ethanol production.

August 2013 - EPA finalizes renewable fuel standard for 2013, requiring 16.55 billion gallons of biofuels, mostly ethanol, to be consumed in U.S. this year. Corn sells for \$6.21.

AT A GLANCE: LOSS OF CONSERVATION LAND BY COUNTY

Since the federal government passed a law in 2007 requiring oil companies to add ethanol to their gasoline, demand for corn has increased, sending farmers looking to find new places to plant. Despite government predictions to the contrary, the rising price of corn encouraged farmers to plow into land that had been set aside under the Conservation Reserve Program. That program pays farmers to allow their land to return to a near-natural state, which helps fight global warming, prevent erosion and reduce fertilizer use. Here are the Corn Belt counties that have lost large amounts of conservation land (greater than 4,400 acres), ranked by the percentage of land lost in each county since 2006. This table reflects those places where land conversion has most significantly transformed the counties. All data come from the U.S. Department of Agriculture.

STATE	COUNTY	CHANGE	PERCENTS
SOUTH DAKOTA	DEWEY	-21,596	-81%
NEBRASKA	WAYNE	-8,678	-72%
NORTH DAKOTA	MERCER	-11,944	-72%
NEBRASKA	CHERRY	-5,323	-72%
SOUTH DAKOTA	ZIEBACH	-15,254	-71%
NEBRASKA	BROWN	-5,223	-71%
SOUTH DAKOTA	CORSON	-16,837	-69%
NEBRASKA	DAKOTA	-8,265	-69%
SOUTH DAKOTA	HARDING	-9,976	-68%
NORTH DAKOTA	SIOUX	-7,188	-67%
NORTH DAKOTA	BILLINGS	-11,631	-67%
NORTH DAKOTA	MORTON	-21,188	-67%
WISCONSIN	OUTAGAMIE	-5,501	-64%
SOUTH DAKOTA	MCPHERSON	-30,467	-64%
NORTH DAKOTA	MCINTOSH	-36,698	-61%
NEBRASKA	ROCK	-10,863	-59%
NORTH DAKOTA	STARK	-52,102	-57%
SOUTH DAKOTA	PENNINGTON	-6,263	-57%
WISCONSIN	VERNON	-6,897	-57%
NEBRASKA	DIXON	-20,135	-57%
WISCONSIN	ST CROIX	-16,624	-56%
WISCONSIN	PIERCE	-11,685	-56%
SOUTH DAKOTA	GRANT	-17,036	-56%
WISCONSIN	JEFFERSON	-4,802	-55%
WISCONSIN	DUNN	-12,683	-55%
IOWA	WOODBURY	-14,988	-54%
NORTH DAKOTA	DUNN	-11,095	-54%
KANSAS	COMANCHE	-22,842	-53%
SOUTH DAKOTA	EDMUNDS	-14,458	-52%
SOUTH DAKOTA	JACKSON	-8,051	-52%
NORTH DAKOTA	LOGAN	-32,426	-52%
SOUTH DAKOTA	JONES	-8,497	-51%
NORTH DAKOTA	EMMONS	-37,833	-51%
NORTH DAKOTA	MCKENZIE	-10,845	-51%
WISCONSIN	CRAWFORD	-9,179	-50%
NEBRASKA	WHEELER	-8,156	-50%
SOUTH DAKOTA	HAND	-17,822	-50%
KANSAS	GREELEY	-39,818	-49%
WISCONSIN	POLK	-6,186	-48%
NEBRASKA	CEDAR	-7,898	-48%
SOUTH DAKOTA	DAY	-43,790	-48%
SOUTH DAKOTA	FAULK	-5,732	-48%
SOUTH DAKOTA	BUTTE	-13,183	-47%
NORTH DAKOTA	GRANT	-26,396	-47%
KANSAS	BARBER	-9,766	-47%
NEBRASKA	BOONE	-8,438	-47%
KANSAS	WICHITA	-21,908	-46%
WISCONSIN	TREMPEALEAU	-15,415	-46%
SOUTH			

DAKOTA CODINGTON -13,639 -46%NEBRASKA STANTON -12,527 -45%The AP focused on counties that lost more than 4,400 acres of because they represent the top 25 percent of counties based on loss of conservation land.© 2013 THE ASSOCIATED PRESS. ALL RIGHTS RESERVED. THIS MATERIAL MAY NOT BE PUBLISHED, BROADCAST, REWRITTEN OR REDISTRIBUTED. Learn more about our PRIVACY POLICY and TERMS OF USE.

AT A GLANCE: CHANGE IN CORN ACREAGE BY COUNTY

Since the federal government passed a law in 2007 requiring oil companies to add ethanol to their gasoline, demand for corn has increased, sending farmers looking for new places to plant. Here are Corn Belt counties that have seen large increases in corn planting (greater than 21,000 acres), ranked by the percentage increase since 2006. This table reflects those places where farmers have planted significantly more corn, both in terms of raw acres and as a percentage. All data come from the U.S. Department of Agriculture.

STATE	COUNTY	CHANGE	PERCENT
NORTH DAKOTA	BOTTINEAU	25,300	843%
MINNESOTA	MARSHALL	27,500	519%
SOUTH DAKOTA	HAakon	24,000	436%
MINNESOTA	POLK	86,500	326%
NORTH DAKOTA	MCLEAN	48,800	321%
NORTH DAKOTA	WALSH	44,300	286%
NORTH DAKOTA	MERCER	21,800	279%
NORTH DAKOTA	GRAND FORKS	101,500	251%
KANSAS	SUMNER	29,200	247%
NORTH DAKOTA	EMMONS	102,000	224%
NORTH DAKOTA	LOGAN	44,900	219%
MINNESOTA	CLAY	96,700	204%
KANSAS	JEWELL	25,400	194%
NORTH DAKOTA	WELLS	64,700	185%
NORTH DAKOTA	MCHENRY	40,500	184%
NORTH DAKOTA	STUTSMAN	138,000	184%
NORTH DAKOTA	PIERCE	22,900	176%
NEBRASKA	CHEYENNE	37,800	172%
NORTH DAKOTA	MCINTOSH	38,100	169%
MINNESOTA	NORMAN	67,800	165%
NORTH DAKOTA	CASS	221,500	158%
KANSAS	SMITH	29,400	146%
MINNESOTA	BECKER	37,300	143%
NORTH DAKOTA	FOSTER	36,200	139%
NEBRASKA	DEUEL	22,100	138%
SOUTH DAKOTA	HYDE	41,300	131%
NORTH DAKOTA	MORTON	44,200	126%
NORTH DAKOTA	BURLEIGH	35,300	122%
KANSAS	RAWLINS	55,200	121%
NORTH DAKOTA	BENSON	40,800	120%
NORTH DAKOTA	BARNES	106,500	118%
NORTH DAKOTA	GRIGGS	23,000	115%
SOUTH DAKOTA	LYMAN	32,700	113%
NORTH DAKOTA	KIDDER	22,900	109%
NORTH DAKOTA	STEELE	57,500	106%
KANSAS	MARION	22,000	102%
KANSAS	CHEYENNE	37,800	102%
SOUTH DAKOTA	FAULK	71,000	100%
NORTH DAKOTA	RANSOM	56,000	93%
KANSAS	GOVE	40,900	91%
KANSAS	SHERMAN	78,700	89%
MINNESOTA	WILKIN	49,800	89%
INDIANA	VERMILLION	23,200	87%
NEBRASKA	SHERIDAN	24,000	86%
SOUTH DAKOTA	SULLY	56,500	85%
SOUTH DAKOTA	MCPHERSON	40,100	84%
KANSAS	MARSHALL	49,500	80%
KANSAS	WALLACE	35,000	80%
SOUTH DAKOTA	DAY	55,000	79%
SOUTH DAKOTA	MARSHALL	51,500	79%

The AP focused on counties that increased corn planting by more than 21,000 acres because they represent the top 25 percent of counties based on increased corn acreage.

7 THINGS TO KNOW ABOUT ETHANOL

President Barack Obama has called corn-based ethanol "the most successful alternative fuel we have ever developed." Billed as a green replacement for billions of gallons of gasoline, ethanol has enjoyed widespread political support. But the results of America's ethanol policy have not been as green as advertised.

Here's what you need to know:

1. Ethanol is an alcohol that is fermented and distilled from corn. Since 2007, when Congress required oil companies to blend billions of gallons of ethanol into their gasoline, it has become one of America's most widely produced renewable fuels.
2. When it burns, ethanol emits less carbon dioxide than gasoline. That's why it is a centerpiece of the government's plan to reduce greenhouse gases.
3. But getting ethanol from corn has a hidden environmental price that the government rarely acknowledges. America's ethanol policy has encouraged farmers to plant millions of new acres of corn.
4. More than 5 million conservation acres - environmentally sensitive farmland that had been set aside and allowed to grow as grassland - have disappeared on Obama's watch.
5. Every time a farmer plows into grassland, it releases carbon dioxide that had been naturally locked in the soil. In the name of reducing greenhouse gas emissions, the policy encourages a practice that emits greenhouse gas.
6. The corn boom has increased fertilizer pollution in Midwest waterways and beyond. Scientists say that's worsened a huge "dead zone" in the Gulf of Mexico.
7. Environmentalists and many scientists now say, when all the environmental factors are considered, corn ethanol is not a viable strategy for combating global warming. But it has been a boon to Midwest farmers. The Obama administration no longer pitches ethanol as a greenhouse gas strategy. Rather, it's frequently presented as a program that helps rural America.