DEAD ZONE IN GULF LINKED TO ETHANOL PRODUCTION

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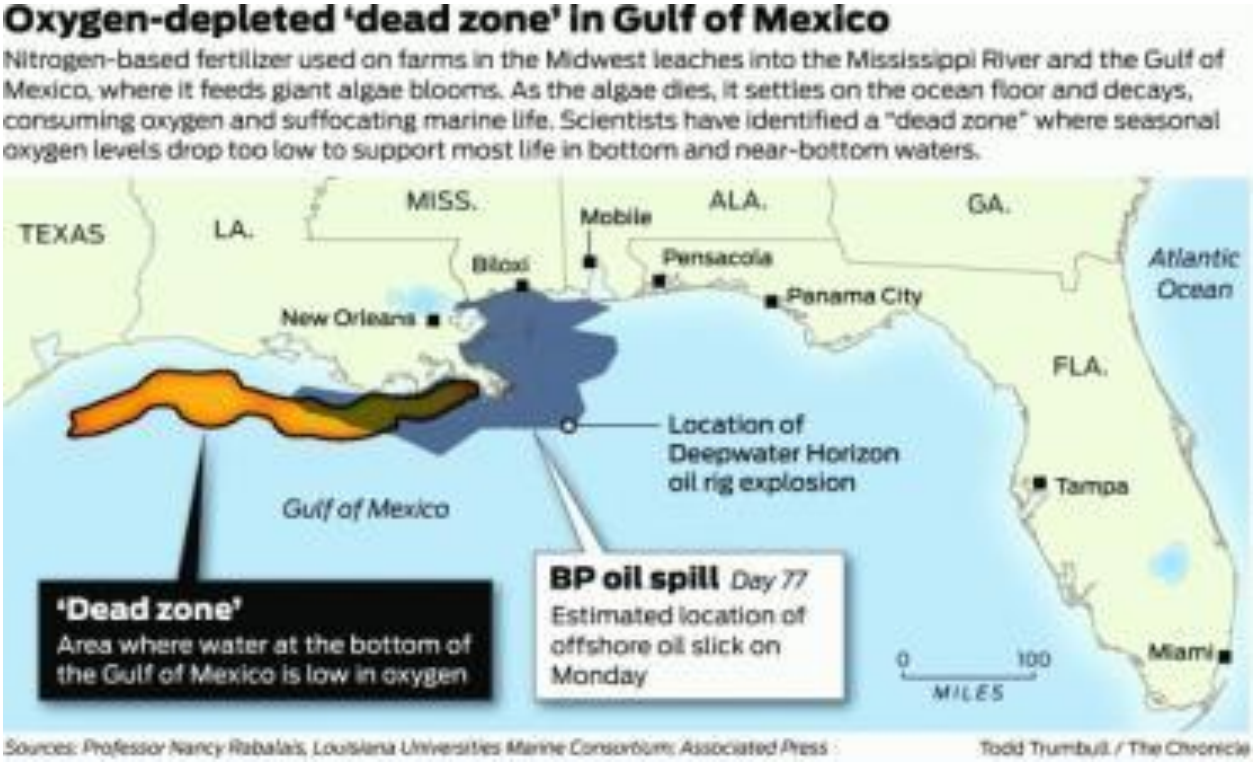
(07-06) 04:00 PDT Washington - -- While the BP oil spill has been labeled the worst environmental catastrophe in recent U.S. history, a biofuel is contributing to a Gulf of Mexico "dead zone" the size of New Jersey that scientists say could be every bit as harmful to the gulf. Each year, nitrogen used to fertilize corn, about a third of which is made into ethanol, leaches from Midwest croplands into the Mississippi River and out into the gulf, where the fertilizer feeds giant algae blooms. As the algae die, they settle to the ocean floor and decay, consuming oxygen and suffocating marine life. Known as hypoxia, the oxygen depletion kills shrimp, crabs, worms and anything else that cannot escape. The dead zone has doubled since the 1980s and is expected this year to grow as large as 8,500 square miles and hug the Gulf Coast from Alabama to Texas.



As to which is worse, the oil spill or the hypoxia, "it's a really tough call," said Nathaniel Ostrom, a zoologist at Michigan State University. "There's no real answer to that question." Some scientists fear the oil spill will worsen the dead zone, because when oil decomposes, it also consumes oxygen. New government estimates on Thursday indicated that the BP oil spill had gushed as much as 141 million gallons since an oil-rig explosion and well blowout on April 20 that killed 11 workers.

Corn is biggest culprit

The gulf dead zone is the second-largest in the world, after one in the Baltic Sea. Scientists say the biggest culprit is industrial-scale corn production. Corn growers are heavy users of both nitrogen and pesticides. Vast monocultures of corn and soybeans, both subsidized by the federal government, have displaced diversified farms and grasslands throughout the Mississippi Basin."The subsidies are driving farmers toward more corn," said Gene Turner, a zoologist at Louisiana State University. "More nitrate comes off corn fields than it does off of any other crop by far. And nitrogen is driving the formation of the dead zone." The dead zone, he said, is "a symptom of the homogenization of the landscape. We just have a few crops on what used to have all kinds of different vegetation."

In 2007, Congress passed a renewable fuels standard that requires ethanol production to triple in the next 12 years. The Department of Agriculture has just rolled out a plan to meet that goal, including building ethanol refineries in every state. The Environmental Protection Agency will decide soon whether to increase the amount of ethanol in gasoline blends from 10 percent to 15 percent. A 2008 National Research Council report warned of a "considerable" increase in damage to the gulf if ethanol production is increased.

Pet Cause of Congress

One of the authors of that report, agricultural economist Otto Doering at Purdue University, said that a 50 percent boost in the ethanol blend in gasoline will significantly raise corn prices, driving farmers to pull land out of conservation and pastureland and into corn production. They are also likely to add more nitrogen fertilizers to boost yields. Corn ethanol has been heavily subsidized since the Arab oil embargo in the 1970s. Viewed by the corn industry as a lucrative market, ethanol is a perennial favorite in Congress. Ethanol consumes two-thirds of all federal subsidies for renewable fuels, said Ken Cook, president of the Environmental Working Group, an advocacy group, leaving solar, wind and the rest to fight over the remaining third. Corn ethanol cost taxpayers $17 billion from 2005 to 2009, his group estimates. "This is another industry that's entirely a creature of the government, even more so than corn growing per se," Cook said. "The production of ethanol wouldn't happen at all without government subsidies and protection."

The National Corn Growers Association ran a media blitz in Washington last week to press for the renewal of the 51-cents-a-gallon tax credit for ethanol. With pictures of the BP oil spill looming in the background, the Corn Growers' video announces, "Ethanol: Now is the time."

Conservation Plan Hurt

The ethanol boom over the past decade has lured farmers to withdraw millions of acres from the Conservation Reserve Program, which pays farms not to plant fragile land. Much of this land has been returned to native prairie grasses, at taxpayer expense. Millions more acres are up for renewal over the next few years. "There's been a very large-scale conversion of these CRP lands to biofuel production," Ostrom said. Those soils have accumulated carbon from the atmosphere and stored it, becoming "a pretty significant sink for atmospheric CO2," he said. "If we suddenly start farming those soils, we basically release all of the carbon that's been sequestered for decades, and that may more than offset any carbon benefit of switching to biofuels."

To meet its goal of tripling ethanol production, Congress called for more cellulosic ethanol, which is made from wood, crop waste, perennial grasses, such as switchgrass, and even native prairie grasses. Perennial grasses are considered far less damaging to the environment than corn because they require less fertilizer and their roots remain in the ground, helping to stabilize the soil and reduce runoff. But commercial production of cellulosic ethanol remains a pipe dream. It would require large subsidies to dislodge corn ethanol. There is no experience with commercial production of switchgrass. Purdue's Doering said it will require fertilizer and is likely to be planted on conservation lands and pasture instead of displacing corn.

Joan Nassauer, a professor at the University of Michigan who has studied how alternative agricultural policies could alleviate the dead zone, said cellulosic ethanol could work. "It might be one of those win-wins, but it's not in production yet," she said. "What we've got now all over the Corn Belt is corn, and that's definitely not a win-win."

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