Biofuel production could undercut efforts to shrink Gulf 'Dead Zone'

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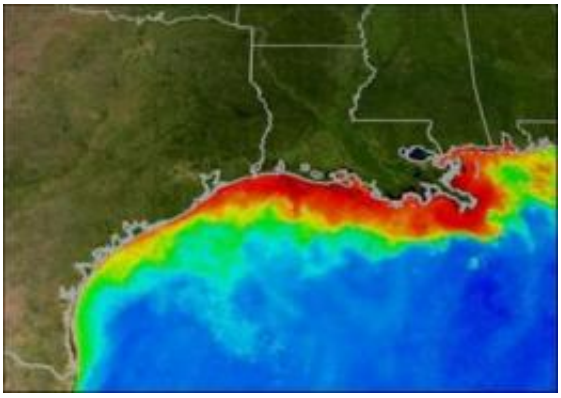

This is a map showing the Gulf of Mexico "Dead Zone." Low-oxygen areas appear in red. Credit: NASA; National Oceanic and Atmospheric Administration

Scientists in Pennsylvania report that boosting production of crops used to make biofuels could make a difficult task to shrink a vast, oxygen-depleted "dead zone" in the Gulf of Mexico more difficult. The zone, which reached the size of Massachusetts in 2008, forms in summer and threatens marine life and jobs in the region. Their study is scheduled for the Oct. 1 issue of ACS' semi-monthly journal *Environmental Science & Technology*.

Christine Costello and W. Michael Griffin and colleagues explain that the zone forms when fertilizers wash off farm fields throughout the Mississippi River basin and into the Gulf of Mexico. The fertilizers

cause the growth of algae, which eventually depletes oxygen in the water and kills marine life. Government officials hope to reduce fertilizer runoff and shrink the zone to the size of Delaware by 2015. But that goal could be more difficult to reach due to federally-mandated efforts to increase annual biofuel production to 36 billion gallons by 2022, the study says.

The scientists studied the potential effects of increased biofuel production on the "dead zone," with a life-cycle analysis of nitrate fertilizer use on biofuel crops such as corn, soy, switch grass and stover (corn stems and leaves). They conclude that meeting the biofuel production goals will likely increase the depletion of oxygen compared to current levels in the Gulf due to more nutrient runoff.

More information: "Impact of Biofuel Crop Production on the Formation of Hypoxia in the Gulf of Mexico", *Environmental Science & Technology*.

Source: American Chemical Society (news : web)