Current Events

Study: Ethanol Production Brings Water Risk

USA Today (AP)

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USA Today

WASHINGTON (AP) — When it comes to solving the fossil fuel crisis, it seems like every silver lining comes accompanied by a dark cloud.

As attention turns more and more toward using corn and other products to produce ethanol for fuel, experts warn that increased production of these crops could pose a threat to the nation's water supplies.

Both water quality and the availability of water could be threatened by sharply increasing crops such as corn, said Jerald L. Schnoor, professor of environmental engineering and co-director of the Center for Global and Regional Environmental Research at the University of Iowa.

Schnoor is chairman of a National Research Council panel that studied the potential impact of increased use of biofuels on water supplies. The committee report was released Wednesday.

A stated goal is to increase biofuel production about six times, to 35 billion gallons by 2017, Schnoor said.

"That would mean a lot more fertilizers and pesticides" running into rivers and flowing into the oceans, he said in a telephone interview.

Water available depends on where the crops are grown, he added. If it is an area needing irrigation, it takes 2,000 gallons of water for every bushel of corn: "That's a high amount of water."

And that's in addition to the secondary issue of how much water is needed by the factories that produce the ethanol, he said.

What is needed is a breakthrough in technology so that ethanol can be produced from cellulose such as grass, wood and sawdust, Schnoor said. "If we could do that it would be much better environmentally."

While Brazil is having success producing fuels from sugarcane, "we don't have much tropical land in the United States," Schnoor observed.

Also, he noted, Brazil uses waste from the cane to fuel its ethanol factories, while the U.S. uses natural gas or other fuels.

The report notes that water "is an increasingly precious resource used for many purposes including drinking and other municipal uses, hydropower, cooling thermoelectric plants, manufacturing, recreation, habitat for fish and wildlife and agriculture."

Supplies are already stressed in some areas of the country, including a large region where water is drawn from the underground Ogallala aquifer, which extends from west Texas up into South Dakota and Wyoming.

Growing biofuel crops requiring additional irrigation in areas with limited water supplies is a major concern, the report says.

The report suggests the possibility of irrigating crops for biofuel with wastewater that would not be suitable for food crops.

Other suggestions include developing more water-efficient crops and adopting agriculture practices that reduce the amount of chemical runoff.

The study was sponsored by the McKnight Foundation, Energy Foundation, National Science Foundation, U.S. Environmental Protection Agency and National Research Council Day Fund.

The National Research Council is an arm of the National Academy of Sciences, an independent organization chartered by Congress to provide science, technology and health policy advice.

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For Discussion

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1. What does the opening sentence of the article mean?

2. Is there a fossil fuel crisis? Explain.

3. "A stated goal is to increase biofuel production about six times, to 35 billion gallons by 2017." Whose goal is this? What is the reason for it?

4. List all of the adverse effects of biofuel production mentioned in the article.

5. Does biofuel production use water efficiently? If water is a limited resource, how do we decide how to allocate it among all of the different competing uses?