

Do no (more) harm

by the St. Louis Post-Dispatch

Corn-based ethanol is the alternative fuel of choice for many politicians and investors. It's not hard to understand why.

Ethanol's most enthusiastic backers say it promises both to reduce the nation's dependence on foreign energy sources and to provide a new market for Corn Belt farmers. Some 115 ethanol plants already are operating in the United States, four in Missouri and 11 in Illinois. Another 80 are under construction.

Like many in the Midwest, we'd like to see ethanol become a part of our successful economy and our energy system. But the cost of producing ethanol from corn includes more than just the cost of growing corn and transforming it into fuel-grade alcohol. Evaluating its role requires a clear-eyed assessment of the costs of the technology as well as its apparent benefits:

Some ethanol plants, for example, burn coal for power, so part of the overall cost of the process is increased air pollution, as Post-Dispatch Washington Bureau Chief Bill Lambrecht has pointed out in an indispensable series of articles. It also can take three or more gallons of water to make each gallon of ethanol, Lambrecht has reported. Some of that water can be recycled, but much of it is lost, so part of the cost of producing ethanol is an increased need for water - a scarce resource. In Southwest Missouri, local opponents filed suit in an unsuccessful effort to stop an ethanol plant about 20 miles from Springfield on the grounds it would use too much water.

Lambrecht's latest reports, published Sunday, looked at the effects of the increased use of nitrogen-based fertilizers needed to produce increased amounts of corn for ethanol. Unlike other crops, corn can't process nitrogen from the atmosphere; helping the plants mature requires significant amounts of added fertilizer.

When the fertilizer runs off the land into rivers and streams, Lambrecht reports, it encourages the growth of plants such as algae, which consume the available oxygen in the water, choking out other forms of life, including fish. The result is that the runoff from small creeks and rivers in the upper Midwest have contributed to a vast and growing dead zone in the Gulf of Mexico, where the health of the commercial and sport fishing industries is in jeopardy.

There's nothing new about fertilizer run off, of course. Like air pollution and fights over scarce water, the problem has been around for decades. Moreover, as Lambrecht was careful to point out, it is unfair to blame farming for all of it. The development of great swaths of residential housing contribute, as do the discharges of sewage treatment plants.

But the ethanol boom has farmers planting - and heavily fertilizing - thousands more acres of corn this year than last. High gasoline prices are squeezing American families and fueling repressive regimes in the Middle East. It's tempting to think that by subsidizing ethanol production - which is what we do when we fail to calculate all of its costs - we can solve two monumental crises.

The risk is that we may be trading one set of problems for another. There has been too little cost-benefit analysis of the ethanol-from-corn process, and much of what has been done has been too limited in scope. And there has been almost no effort to mitigate the predictable effects - dead waters, dirty air, diminished water supplies - of a corn-based ethanol boom.

Ethanol subsidies should be tied to policies that reduce fertilizer overuse, protect potable water supplies and prevent new sources of air pollution. The logical place to do that is in the giant farm and energy bills Congress is taking up this summer.

The failure to act could leave us with the illusion of a solution, instead of the real thing.

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