

## **Ethanol boom. Page 1**

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### **COMMENT: Let's make the biofuel boom an environmental boon**

By George Boody

Corn-based ethanol is generating a lot of excitement in Minnesota's rural communities these days. It's clear that corn-based ethanol owned by farmers and local community investors, along with improvements in fuel efficiency, are interim steps in our efforts to become less dependent upon imported oil. Minnesota has shown how farmers can be major players and profit from this growth industry. But we must take steps now to make sure this boom doesn't become a long-term bust for our landscape or for farmers and rural communities.

On Sept. 6, the USDA's chief economist announced that the U.S. would need 90 million acres of corn by 2010 to meet the burgeoning demand for ethanol while maintaining existing markets for exports and animal feed. That's 10 million more acres than what farmers have been planting in recent years. Where will that extra corn come from? Well, 7 million acres could be raised on land currently covered in grass and other perennial plants as part of the Conservation Reserve Program (CRP), said the economist, Keith Collins.

Unfortunately, Collins is assuming that CRP land is sitting "idle" and not serving much of a purpose other than as future corn ground. About 36 million acres of cropland has been set aside

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as CRP. By replacing annual row crops with grasses and other perennials, CRP has reduced erosion, protected water resources, trapped carbon and provided wildlife habitat. If CRP acres come back into production, it will be important to transition them into grass-based livestock production, or forms of biomass other than annual row crops.

Collins' comments also could have negative impacts on efforts to create more opportunities for farmers who use diverse crop rotations and perennial systems such as pasture and hay to increase profits while protecting the environment. Debate on the 2007 Farm Bill, which will determine federal ag policy for at least the next five years, is heating up. Unfortunately, policymakers could see the economist's assessment of the ethanol situation as a cue that they should keep in place and even expand policies that punish farmers for diversifying.

Collins's statements ignore the fact that one of the most exciting areas of biofuel research and development is cellulosic ethanol. Whereas corn ethanol is made from the actual grain of the corn plant, cellulosic fuels can be cooked up from other parts of perennial plants, such as the stalks of grasses and the woody material in trees. Most of the industry's interest in cellulosic technology so far has been in making cornstalks into fuel. That could be an environmental disaster—cornstalks provide valuable protection to harvested cropland, while returning organic matter to the soil. Scientists say heavier spring rainfalls lead to extreme soil erosion if the ground is not covered with plant materials. But making native perennial grasses, forbs and wood plants into cellulosic biofuels could provide many long-term benefits. Besides protecting the soil year-round, such stands could store carbon and provide wildlife habitat. The Department of Energy has found that making fuel from switchgrass could be 15 times more energy efficient than corn-

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based ethanol. But monocrops of switchgrass aren't the final solution. Researchers such as the University of Minnesota's David Tilman see a time when stands of diverse grasses and forbs will be grown for biofuels in Minnesota, replicating prairie ecosystems. This could be done on marginal working farmland without high amounts of fertilizer, pesticides and energy. Cellulosic energy could help working farmland produce ecological, economic and energy-based services long into the future.

Technical issues have to be worked out to make cellulosic biofuel commercially viable. But a day after the USDA's Collins said CRP ground could be plowed up to make corn ethanol, the Department of Energy announced that within a year it will issue loan guarantees for the first commercial-scale cellulosic biofuel plants. With our rich soil and good grass-growing climate, not to mention our innovative, hardworking farmers, Minnesota is in a perfect position to take advantage of cellulosic energy. We've been pioneers in corn ethanol; now it's time to push into new areas of biofuels.

*George Boody is the Executive Director of the Minnesota-based Land Stewardship Project.*