

existing corn land is used as feedstock for the 2007 ethanol capacity, then 26 million lbs of herbicides and 821,000 lbs of insecticides use could be attributed to ethanol. This represents roughly 15% of the estimated 171 million pounds of herbicides and 5.3 million lbs of insecticides applied to the 2007 corn crop. That will include millions more pounds of Atrazine, a hormone-disrupting potential carcinogen, which water utilities across the Midwest now routinely pay to remove from drinking water.

• **Increased aquifer depletion** - According to the 2003 Farm and Ranch Irrigation Survey, corn continues to be the dominant irrigated crop, accounting for nearly 19 percent of irrigated land.¹⁰ The survey found that in 2003, 9.75 million acres of corn were irrigated, representing nearly 12% of the acres planted that year. Irrigated corn acres require about 1.2 acre-feet of water, or more than 391,000 gallons per acre. Thus, irrigated corn acres in 2003 required a total of 3.8 trillion gallons of water. If 12% of the corn acres needed to supply the 2007 ethanol facilities were irrigated, over 650 billion gallons of water would be required to grow this feedstock. Increasing the RFS mandate would dramatically increase irrigation demand for cornstarch-ethanol production, which would increase rates of aquifer depletion and strain other sources of water.



A family of geese on the Fox River, Illinois.
Source: Ducks Unlimited. Credit: Ron Dickenson Batavia, IL.

• **Loss and degradation of wildlife habitat** - We are also concerned that farmers in some areas will be expanding corn acreage at the expense of wildlife habitat. Corn requires large amounts of fertilizers and pesticides, which, when coupled with its weak root system, make it highly susceptible to erosion. The subsequent results are environmentally damaging on several fronts. Sedimentation blocks sunlight needed by plants, clogs fish gills, and buries spawning grounds and food supplies for aquatic creatures.¹¹ Pollutants, such as phosphorous and nitrogen, used in fertilizer can cause eutrophication, or reduced oxygen levels which kill or weaken many fish and crustacean species.¹² Furthermore, land in crop production is much less likely to provide adequate nesting grounds for a variety of birds. A recent study by Farrand and Ryan¹³ found nesting on CRP lands to be ten times higher than on land in crop production.

GUIDE TO COMMON SENSE RFS POLICY:

Given these unintended environmental impacts of corn production, a common sense Renewable Fuel Standard would aim to avoid these pollution problems by incorporating:

- a) **Minimum environmental safeguards for energy feedstock crops**
- b) **Greenhouse gas (GHG) reduction standards**
- c) **Certification and labeling program**

By setting **minimum agricultural standards for energy feedstock crops**, farmers would use practices that lower the losses of soils, nutrients, and chemicals and minimize water use and habitat destruction. Establishing a **greenhouse gas reduction standard** for all ethanol feedstocks to achieve signals to farmers and ethanol refineries a reward for transitioning to multi-species, perennial grass feedstocks that have higher GHG reduction benefits and lower environmental impacts than corn. Finally, a **certification and labeling program** will enable tracking of these environmental practices and allow the public to identify and patronize gas stations whose ethanol sources achieve these best practices. Only by anticipating the unintended consequences and by guiding this government-established market, can the public truly achieve its goals to reduce oil dependency and emit fewer climate-changing gases without increasing local and regional environmental harm.

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