



Developing Wildlife Sensitive Biofuels in the United States

Biofuels can be a critical part of the solution to help reduce our nation's dependence on fossil fuels and to reduce our greenhouse gas emissions. Defenders of Wildlife is working to ensure that biofuel production is carried out in a way that won't degrade the environment.

Biofuels are fuels that are produced from living or recently living biological materials, typically plants. Ethanol is the dominant biofuel, but others, such as biodiesel, are also available. Ethanol contains less energy per gallon than gasoline, but it has the potential to reduce greenhouse gas impacts because the carbon it contains is recycled through living plants, whereas gasoline combustion releases "fossil" carbon that was stored underground for millions of years.

If grown, harvested, and produced properly, biofuel crops can be beneficial to wildlife and the environment. Defenders believes cellulosic ethanol produced from diverse feedstocks is the most sustainable approach to biofuels.

Ethanol Benefits, Challenges, & Recommendations



Switchgrass in Alabama, Warren Gretz

Grain ethanol production only uses the edible portion of the plant, not the entire plant. Most ethanol in the U.S. is produced from corn.

Unfortunately, expansion of corn acreage for ethanol production could be harmful to wildlife if certain

factors are not taken into account. Growing corn requires large amounts of fertilizers and corn lacks a strong root system so it can also cause erosion. Erosion degrades

water quality by washing soil into local waterways as well as excess fertilizers and pesticides, damaging water quality and impacting aquatic wildlife. In addition, unless crops are grown near the processing plant, more energy can be used in transport than is produced with this process.

The good news is these impacts can be minimized. Using riparian areas to buffer waterways can reduce runoff. In addition, a net reduction of carbon released into the atmosphere can be achieved when ethanol crops are grown near their processing plants.

Cellulosic ethanol is different from grain ethanol in that it uses the entire plant. Enzymes are used to break down the plant into simple sugars that can then be used to create ethanol. It can be made from a wide variety of sources, including switchgrass and wood trimmings. This creates several benefits including the more efficient use of the whole plant, the use of plants that do less damage to the environment, and plants that, if not grown in a monoculture, can provide wildlife habitat, something corn and other row crops often don't do.

The best news is that cellulosic ethanol use can reduce greenhouse gas emissions by as much as 80%, as opposed to only 20-30% for grain ethanol. Unfortunately, because the enzyme process to create cellulosic ethanol is new, it is not currently produced in the U.S. at a commercial level. The 2007 farm bill provides a unique opportunity to facilitate the development of a sustainable and wildlife-friendly cellulosic ethanol industry.

Cleaner Energy Is Not Enough

Defenders supports the environmentally responsible development of the cellulosic ethanol industry. However, while ethanol promises to reduce our reliance on fossil fuels, there simply isn't enough land to produce enough ethanol in the U.S. to meet our energy needs. Therefore, it is critical to also implement energy conservation measures. Further responsible development and use of other renewable energy sources, such as solar and wind power, are also needed to help reduce our carbon emissions.

Developing Wildlife Conscious Biofuels in the United States

Defenders of Wildlife believes that with the following measures implemented, we can reduce our nation's dependence on fossil fuels, reduce our greenhouse gas emissions, and protect wildlife and habitat.

Protect the Conservation Reserve Program

The Conservation Reserve Program (CRP) is one of the nation's largest farm bill conservation programs. The program allows farmers who undertake various conservation practices to enroll eligible lands into 10-15 year contracts, providing rental payments and cost-share assistance.

Some proposals include opening up the CRP lands to biofuels production and letting CRP participants out of their contracts early, enabling them to grow corn for ethanol production. Defenders of Wildlife opposes these proposals, as using CRP land to grow corn for ethanol production would pose a potential harm to wildlife. A vast majority of land enrolled in CRP is poor cropland and highly erodible. Their participation in CRP allows for the protection of this sensitive land. Putting CRP land back into production would lower water quality by carrying soil and excess nutrients into local waterways. Also, as corn requires large amounts of fertilizers, excess nutrients would only add to the water quality problems.

This land provides important habitat for a number of grassland birds, many of which are declining sharply. CRP lands are also important nesting grounds for many ducks and other waterfowl. Converting this land to corn would result in the loss of this wildlife habitat.

With nearly three million acres, roughly 10%, of CRP land eligible to leave the program in 2008, we do not need to allow farmers to break their contracts early. This program must continue its goal of protecting marginal lands.

Avoid Additional Destruction of Native Prairie or Rangelands

Native prairie land in the United States is quickly becoming a thing of the past. Utilizing these lands for biofuels production would further accelerate the destruction of this pristine, wildlife rich ecosystem. With plenty of additional land already available for biofuels production, breaking out these native lands is unnecessary and would have a negative effect on these vitally important habitats.

Avoid Increasing the Corn in Corn/Soy Rotations

Soybeans put nitrogen back into the soil. Increasing the frequency of corn growth in a corn/soy rotation would decrease the benefits the rotation provides to maintaining healthy soils. Additionally, decreasing the frequency of soybean plantings would increase the need for additional fertilizer usage to compensate for the lack of nitrogen fixation from growing soybeans.

Decrease Transportation Distances

Biofuels can help curb the greenhouse gas emissions that contribute to global warming. To achieve this, biofuels must be grown near the production plants that will be processing them. This minimizes transportation emissions and helps maximize the net energy gained from growing and processing the plants used. In addition, this adds economic and job benefits to rural communities across the country. Further greenhouse gas reductions can be achieved if renewable fuels are used in ethanol production itself.

Implement the Biofuels Innovation Program

Finally, Defenders of Wildlife supports a newly proposed "Biofuels Innovation Program" (BIP) aimed at jump starting the biofuels industry over the next ten years in a way that protects wildlife and the environment. It does so by protecting native prairies and lands protected by the Conservation Reserve, Grassland Reserve and Wetlands Reserve Programs. Additionally, participants must follow guidelines that restrict when a crop can be harvested and designate that a certain amount of ground cover remains for wildlife habitat.

To achieve these goals, Defenders supports the addition of the BIP to the Energy Title of the 2007 Farm Bill.

