

CFDC Letter to the Editor – Los Angeles Times

Re "Drunk on ethanol," editorial, Aug. 20, 2007

The editorial, using one-sided arguments that make the pursuit of ethanol look like a fruitless effort, failed to mention that ethanol reduces greenhouse gas emissions by an average of 20%, has a 34% net gain in overall energy and is the highest-performing fuel. The Times instead focused on reciting environmental statistics from a Stanford University study that has been widely challenged by experts and misinterpreted by the mass media. American farmers have the means and ability to feed and fuel this country. It's unfortunate that The Times would strategically pick and choose statistics to skew the reality of ethanol.

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The Letter to the Editor above was in response to Drunk on Ethanol below.

Drunk on ethanol

Basing energy policy on corn could fuel a potential disaster.

August 20, 2007

'Gasoline is going -- alcohol is coming. And it's coming to stay, too, for it's in unlimited supply. And we might as well get ready for it now.'

Those words might have come from President George W. Bush, or just about any member of the U.S. Congress, or every major presidential candidate from both parties. All are euphorically drunk on ethanol (a fancy name for grain alcohol), seen as the miracle fuel that will simultaneously solve our global warming problem and end our reliance on foreign oil. Actually, though, they were uttered by automotive pioneer Henry Ford nearly a century ago.

Ford might have been a visionary, but he was badly mistaken about ethanol. Unfortunately, so are Bush et al.

Alcohol is best taken in moderation, and that applies to cars as much as people. Ethanol isn't all hype -- it's a promising alternative fuel that could stretch gasoline supplies and cut emissions. But as politicians try to outdo one another by approving ever-bigger ethanol subsidies, production mandates and research grants, few are considering the environmental and economic effects of a massive, rapid rise in ethanol production. These are so severe that unless the mania ends soon, they could far outweigh any gains.

Food for fuel

The United States is the world's top producer of ethanol, most of which is made from corn. The bulk of our home brew is used as a fuel additive to make gasoline burn more efficiently; such use took off a few years ago after it was found that the more commonly used additive, methyl tertiary butyl ether, was contaminating groundwater. California is among more than two dozen states that have banned or restricted MTBE, with most replacing it with ethanol. It's also blended into a fuel called E85, a mix of 85% ethanol and 15% gasoline.

Corn-based ethanol is cleaner and more energy efficient than gasoline, though not by much. Studies agree that it reduces greenhouse gases, even if they differ on the magnitude. Yet it also can increase emissions of dangerous pollutants, especially at high concentrations. A recent Stanford University study showed that E85 produces so much ozone, a key ingredient in smog, that if it were used in Los Angeles instead of gasoline, it would raise ozone-related deaths 9%.

Nonetheless, Congress sees the kernel of something much bigger in ethanol. The 2005 energy bill mandated that production nearly double, to 7.5 billion gallons a year, by 2012; we're on track to easily pass that goal. In his State of the Union address in January, Bush upped the ante by calling for 35 billion gallons of alternative fuels (meaning mostly ethanol) by 2017. The Senate responded by passing an energy bill in June mandating 36 billion gallons of renewable fuels by 2022.

One problem here is that there's no such thing as a free lunch. In fact, when you produce such enormous quantities of corn-based ethanol, lunch gets more expensive for everybody. As demand for corn to make ethanol has soared, corn prices have shot up, nearly doubling their year-earlier level in early 2007. Other crop prices have risen too, because farmers are planting corn in fields that otherwise would have been used for crops such as soybeans or wheat. Prices for meat, eggs and dairy products are rising because animal feed is more expensive, as are prices for processed foods using corn and soft drinks made with corn-based sweeteners.

According to the consumer price index, grocery-store food prices rose 8% in the first half of this year. It's unknown how much of that hike is attributable to corn, but it was undoubtedly a factor. A recent study by Iowa State University estimated the per capita cost of higher corn prices at \$47 over the last year, meaning that the nation has paid \$14 billion in higher consumer prices for its ethanol obsession, not counting the \$2.7 billion in tax credits given to the industry last year.

Higher food prices are hard on low-income Americans, but they're even harder on the developing world. If more corn goes to ethanol, far less will be exported, spurring ever-higher world prices because the United States is the world's top corn grower. This is already causing an outcry in Mexico, which relies on U.S. corn for tortillas and other staples. In countries where the typical citizen makes less than \$5 a day, an increase of even a few pennies can be devastating.

Then there are the environmental effects. Corn is a very water- and chemical-intensive crop. Ordinarily, farmers rotate crops annually to avoid soil exhaustion, but high corn prices encourage them to plant corn in the same fields year after year. The only way to make this work is to pour on more fertilizers, which seep into waterways and create algae blooms that suck up all the oxygen and kill everything else. Two "dead zones" caused by chemical fertilizers in the Gulf of Mexico are already the size of Connecticut, Delaware and Rhode Island combined. Meanwhile, herbicides used in cornfields seep into groundwater supplies and raise risks of cancer and birth defects.

Further, there's only so much farmland to go around. To meet the Senate's 2022 renewable-fuels mandate of 36 billion gallons using corn would take 96 million acres. Last year, the entire corn crop, most of which went to food, was grown on 80 million acres. The only source of unused farmland is 37 million acres in the federal Conservation Reserve Program, under which the government rents cropland from farmers for wetlands and wildlife conservation. Farming this land would destroy critically endangered Midwest wetlands and savannas and contribute to soil erosion, contaminated water and deadly algae blooms.

Bait and switchgrass

Of course, not even the most enthusiastic ethanol boosters expect to make 36 billion gallons of the stuff out of corn. The great hope for the future is "cellulosic" ethanol, which can be made from a wide variety of biological matter. Cellulosic ethanol is an exciting development because it's much more energy efficient than corn ethanol and emits less pollutants. It can also be made out of waste materials such as wood

chips or cornstalks, though the fuel source considered to have the most potential is switchgrass -- a native plant that once blanketed the American prairie.

Yet even cellulosic ethanol has production limits. Making it out of plant materials gathered from forest floors, as some have proposed, would reduce the health of forests. Farmers intentionally leave cornstalks and other crop waste in their fields in order to till them into the soil; removing it would reduce soil quality and thus require more fertilizers. And widespread switchgrass cultivation once again raises worries that conservation lands would be dedicated to farming.

The other thing about cellulosic ethanol is that it doesn't actually exist -- no one has yet figured out how to make it economically in commercial quantities. The result is that farmers will plant more corn to meet federal mandates, even as the number of corn-based ethanol refineries skyrockets. There are 124 in the United States, with 76 more being built, according to the Renewable Fuels Assn. Their investors are operating on the assumption that use of corn-based ethanol will expand for years to come. If the economic and environmental effects of this practice are bad now, they'll soon get far worse.

The ethanol craze, like so much of U.S. energy policy, is designed more to please small but politically powerful constituencies such as corn growers and Detroit automakers than to solve the nation's energy problems. There is no other way to explain the flip-flops by presidential candidates Hillary Rodham Clinton and John McCain, who as senators were critical of ethanol but, desperate to win the primary in corn-growing Iowa, have more recently become ethanol boosters.

Likewise, there's no other way to explain the country's 54-cent-a-gallon tariff on Brazilian ethanol, which, because it's made of sugar, is dramatically more energy efficient (as well as being much cheaper to produce) than U.S. corn ethanol. The tariff protects corn growers while guaranteeing higher prices for consumers.

Meanwhile, our fuel-economy rules allow automakers to build lower-mileage cars than they could otherwise if they also make flex-fuel vehicles capable of running on E85. Yet E85 requires an expensive, separate fueling infrastructure, which is why it's available at just 1% of gas stations nationwide and at only four in California. Thus, Detroit gets to build bigger gas-guzzlers in order to boost an inefficient, highly polluting fuel that almost no one uses.

There are much better ways to cut greenhouse gas emissions and decrease our reliance on foreign oil. They start with improving fuel economy standards, as the Senate proposes to do in its energy bill. There's no compelling reason to make E85, let alone for the government to promote it. Instead, Congress could mandate a national fuel blend containing a minimal percentage of ethanol, with the quantity rising over time as cellulosic comes on line. The tariff on Brazilian ethanol has to go, though some sort of import cap may still be needed to avoid encouraging Brazilian farmers to clear the Amazon rain forest to grow more sugar cane.

Henry Ford, whose Model T ran on ethanol, made the mistake of thinking alcohol for motor fuel could be made in limitless supply. He didn't count on how widespread his invention would become, nor the fact that the world's population would grow so large that there wouldn't be enough agricultural land or fresh water on Earth to feed us all. We may have already passed that point, and the human population is expected to rise an additional 50% or so by 2050. This means that turning vast quantities of food into fuel is a recipe for global starvation. Ethanol will definitely play a role in our future energy mix, but not the starring role its advocates predict.