

**Ethanol Facts for the Optimist**  
By Jack LaValla, Instructor  
Riverland Community College, St. Charles FBM

Ethanol production is providing a simple alternative source of energy to fossil fuels. It is readily available, easy to produce and is providing economic opportunities for farmers while reducing our dependence on fossil fuels. It is good for America and American agriculture.

1. Ethanol and biodiesel have a net positive energy balance compared to yield in BTUs of fossil fuel.
2. E85 is easy to use and handle. Existing petroleum equipment may be converted over to use it.
3. Biofuels are good for the environment. E85 reduces ozone pollution by 20% and greenhouse gas emissions by nearly 30%.
4. We don't need to grow enough corn to replace all petroleum needs. Because of the amounts of fossil fuel used even minor displacements of fuel usage will have a major impact on world pricing and supply.
5. Ethanol is renewable...use it up – grow more!
6. Ethanol degrades quickly in water thus reducing the threat from fuel leakage and major spills.
7. World oil production will peak around 2010 at around 90 million barrels per day and over the following 25 years will fall to about 50 million barrels. What will gas prices be like then??
8. The demand for biofuels is causing major changes in grain markets providing financial opportunities for farmers.
9. Projections indicate 8.2 billion gallons of ethanol will be produced this year and 12.9 billion gallons by 2009.
10. Not a corn only proposition...biomass found in high fiber crops and even in trash are potential sources for ethanol production.
11. Flex Fuel Vehicles are available and affordable now and more are being developed.
12. The American lung association indicates that the long term health benefits of burning ethanol fuels will extend and improve the quality of our life and affect great savings in health care.
13. Opportunity is knocking and public support is strong. All of us use fuel and this just makes good sense!

**Ethanol Facts for the Pessimist**  
By Wayne Pike, Instructor  
Riverland Community College, LeRoy/Plainview FBM

In Minnesota, we use 148 million bushels of corn for ethanol. That is 12% of the state's crop. We produce 550 million gallons of ethanol annually.

This is unsustainable, uneconomical and may be financially hazardous for the following reasons:

1. Corn will become too expensive. 75% of the cost of ethanol is corn. \$4 corn equals \$1.48 per gallon at a 2.7 gallon/bushel conversion rate.
2. Natural gas prices are tied to oil. High oil prices and high natural gas prices and high corn prices will make production too expensive.
3. Consumers will rebel. The cost of production of chicken is already up 40%, hog cost of production is up 16%. These costs are passed on to consumers.
4. Demand cannot keep up with supply. If all gasoline were mixed with 10% ethanol we would need 14 billion gallons of ethanol per year. We can do that by 2010. However, we would need 50 million more cars that burn E85 to use it up. That is very unlikely to happen.
5. Supply may be here sooner than we think. President Bush was in Brazil making a deal with President Luiz Inacio Lula de Silva. We signed a deal with Brazil on March 9 promising to help them develop their ethanol industry.
6. We cannot grow enough corn no matter what. We now use 12% of our corn to produce ethanol that replaces 2% of our gas. If we used 100% of our corn for ethanol, that would replace only 12% of our gasoline but that would only save 2.4% of all fossil fuels.
7. FAPRI – The Food & Ag Policy Research Institute says that, all else being equal, tax incentives that expire in 2008 – 2010 may bring sharply lower prices in corn.
8. Environmentalists will rebel: Ethanol takes 3 gallons of water for each gallon of ethanol produced.
9. Ethanol contains only 25% more energy than it takes to make it.
10. Environmentalists: Corn requires massive amounts of fertilizer that run off into our streams.
11. Environmentalists: Farmers will take land out of hay and CRP and reduce the number of wildlife habitats.
12. Ethanol produces more carbon monoxide, volatile organics, particulates and sulfur and nitrogen oxides than gasoline. It does reduce greenhouse gases by 12% as compared to gasoline, but not if we take land out of grass to plant corn. Overall, E85 pollutes more than gasoline.
13. Biodiesel and soydiesel is a much better energy deal than ethanol and will take ethanol's place.