You may have noticed signs at the gas station to alert you to the ethanol content of our fuel. Soon, all stations in Florida will be required to convert to 10% ethanol. This move is not to support the farmers out west. It is to reduce our dependence on foreign oil as well as reduce carbon dioxide, particulate matter and other atmospheric pollution which is harmful to our health and contributes to the greenhouse effect and global warming.

Ethanol is 100% (200 proof) alcohol produced from distilling sugars from some type of organic matter. The first organic sources were corn. Commercial production of adult alcoholic beverages and white lightnin’ home brew use the same basic process. Small amounts of gasoline are required to be added to make ethanol unsafe to drink.

There has been lots of press regarding corn going to fuel production and causing a jump in food prices. Corn ethanol uses feed corn, they type used for livestock feed, not food corn. USDA released a report early this month indicating that ethanol production has only increased world food prices by 3%. The rising fuel, and therefore fertilizer and transportation prices are having the greatest impact on farmers and consumer food prices.

USDA also indicated that ethanol blended with gasoline has helped reduce the costs at the pump. Imagine what it would be without that reduction.

Corn is not the only source of sugar for ethanol production. Brazil, a world leader in ethanol production and use, produces much of its ethanol from sugarcane. Other sources include switchgrass, wood waste and forest products.

University of Florida has been involved in biomass to energy research for about 20 years, but new research at UF by Dr. Lonnie Ingram is looking at a variety of plant waste products suitable for “cellulosic” ethanol production. The ethanol produced is the same; the source and process is different, allowing more efficient use of organic wastes for fuel production.

The University of Florida is also involved in a project in Osceola County that will help answer some questions about non-food crop sources for ethanol production. The research began this spring at the new town of Destiny at the south end of the county. Dr. Zane Helsel is trying out varieties of sweet sorghum to see what might be adapted to Florida growing conditions.

Sweet sorghum has lots of sugar in the stem and is generally considered well adapted to hot, dry conditions. Dr. Helsel is checking on how varieties grow in our central Florida climate, comparing sugar production on muck and sandy soils. He will be looking at irrigation needs including growing some without irrigation. The idea is to find sugar sources that require the least inputs of water, fertilizer and processing and produce the most sugar for ethanol production at an economic commercial scale.

Destiny is interested in crops for ethanol to provide for local energy needs in their growing community. Considering transportation costs add to the cost of fuel, local sugar sources and local ethanol production and distribution have the potential to keep prices lower than gasoline.
Will your car run on ethanol? It probably already is since some of the local gas stations have ethanol blends up to 10%. Ethanol is available in blends with gasoline from E10 to E85. E10 is 10 percent ethanol while E85 is 85%. Indycars have been using ethanol since 2006 and now use 100% ethanol because of the performance as well as for the environmental benefits.

Ethanol blends are higher octane than regular gas, about 100 compared to 87. You will notice a reduction in fuel economy and get lower miles per gallon, but the engine stays cooler and cleaner and produces less pollution. At these prices, it is even more important to be sure your car is properly tuned, tires are properly inflated and you use good driving habits to maximize fuel economy, regardless of the type fuel you use.

All vehicles and even lawn equipment, atv’s, and boats can use E10 according to the American Coalition for Ethanol. Some manufacturers even recommend it. Be sure the manufacturer approves of the use of ethanol. Check ACE’s website http://ethanol.org so you know you are not voiding the warranty.

Vehicles that can use gasoline, or ethanol blends up to E85 are rated as flex-fuel vehicles. You may have one and not even know it. Flex-fuel should be written on the fuel cap. You can also use a searchable database maintained by the National Ethanol Vehicle Coalition to search for the VIN (vehicle identification number) at http://www.e85fuel.com. The website will also help you find information if you are shopping for a vehicle that is flex fuel compatible.

Citizens, businesses, fleet managers and others interested in biofuels including ethanol and biodiesel should consider attending the upcoming Farm to Fuel Summit at the Rosen Shingle Creek in Orlando, July 30 - August 1, 2008. The conference is organized by the Florida Department of Agriculture and Consumer Services to discuss issues related to research, production, distribution and use of biofuels in Florida. Discounted registration of $250 is available through June 30 and increases to $300 on July 1. For additional information and a copy of the full agenda, visit www.floridafarmtofuel.com. Presentations from the first 2 summits are online.

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