

Ethanol from sugar cane in Valley's future

By BROOKE RUTH, Digital Media News Editor

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With high fuel prices and increasingly more concern over climate change, a variety of sources of alternative energy have and continue to be explored, even in our own backyard.

California Ethanol + Power, LLC is in the permitting stage of building a sugar cane-based ethanol plant in Imperial, and is increasing the growth of sugar cane in the Valley to eventually sustain the facility.

At the Imperial Valley Conservation Research Center in Brawley different varieties of sugar cane are being tested to see which are best in terms of weather, salt tolerance and insect resistance, said Nora Batley, vice president of Imperial Valley matters for CE+P.

At the research center they are trying to determine which type of sugar cane grows best in the Valley in terms of water use and productivity, said Wayne Mitchell, executive vice president of technology and operations for CE+P.

One or two of the varieties being grown at the research center may be added to the two varieties already growing in the Valley that will eventually be used to make ethanol, Batley said.

There are approximately 700 acres of these two varieties growing in the Valley. In order to have enough sugar cane to operate the soon-to-be built ethanol plant they must have 37,000 acres growing.

The construction on the plant will begin in the third quarter of 2009 and will be located on Harris Road between highways 86 and 111, Batley said.

"In the production and burning of ethanol — if it is produced on land that is already agricultural land — it produces 80 percent less greenhouse gases than gasoline," said Imperial Valley College environmental science professor Jane Higginson.

Gasoline in California already has 5.7 percent ethanol, but every vehicle sold today can run on 10 percent ethanol, Mitchell said. He said there are also flex fuel vehicles that can run on up to 85 percent ethanol.

The fuel that is 85 percent ethanol and 15 percent gasoline is called E85. In California the average price of E85 is \$3.69, whereas gas is \$4.20 — which is a 12 percent difference, according to a Web site that monitors E85 prices.

Mitchell said burning sugar cane-based ethanol as opposed to burning gasoline is an 85 percent to 90 percent reduction in green house gases, whereas corn-based ethanol is a 10 percent to 30 percent reduction.

The use of sugar cane as opposed to corn to create ethanol is less controversial because it is not used for food, and cannot directly increase the price, Higginson said.

"We are not competing against other uses; there isn't a market for sugar cane in the Valley," Mitchell said.

Although Higginson said that if land used to grow food is instead used to grow sugar cane, a food shortage could occur causing a rise in food prices, or the need to import more food.

The acreage CE+P plans to use for sugar cane in the Imperial Valley is not being used for food production, Mitchell said.

He said that as opposed to corn, sugar cane can be grown and processed in the Imperial Valley and shipped locally.

Furthermore, "Sugar cane produces three times as many gallons of ethanol per acre than corn," Mitchell said.

But, both Mitchell and Higginson said sugar cane-based ethanol is not the only solution.

"Our culture relies too heavily on having engines that burn fuel; it releases emissions even though it is a biofuel," Higginson said. "We need a variety of different forms of energy, not just one — biofuels are one."

She also said certain types of energy may be more sustainable for certain regions.

CE+P plans to build five sugar cane ethanol plants in the Imperial Valley that would potentially be able to supply 30 percent of California's ethanol needs, said Mitchell.

"We think sugar cane ethanol is one part of the solution. It is one piece that will get us there. Projects in the Imperial Valley will help bring an alternative to the market, and get us to where we need to be in terms of renewable and sustainable fuels," Mitchell said.

The co-products of creating sugar cane-based ethanol include electricity, fertilizer and carbon dioxide. The carbon dioxide can be used for refrigeration or assisting in removing more oil and gas from oil wells, Mitchell said. The electricity created will power the ethanol plant and be added to the power grid, Mitchell said. "We essentially will use everything but the roots," Mitchell said. But, even the roots can be reused for five years because when cut once a year for five years it can regrow and does not need to be replanted, Batley said.

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