

# east orange FORUM

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## 4th of July happenings

By Sandra Carr

Special Correspondent

Celebrate the red, white and blue around Central Florida during the Fourth of July. Fireworks will be lighting up the sky as folks commemorate our nation's birthday. Find out which areas will be a blast during this year's patriotic parties.

### Universal Orlando Resort

The Universal Orlando Resort's guests can celebrate the nation's anniversary by watching Universal 360: A Cinesphere Spectacular, which is a high-tech lagoon show that features scenes from more than 100 Universal Pictures films and fireworks at Universal Studios at 10 p.m. The event is included with park admission.



# Citrus growers eye jatropha

## Hardy plant, which can last as long as 50 years, is biofuel source

By Erika Pitera

Special Correspondent

As the price of gasoline continues to climb, the scramble for alternative fuel sources, including biofuels, ensues. One such biofuel, produced from the seeds of a plant called *Jatropha curcas*, has caught the attention of farmers and proponents of alternative energy around the world.

*Jatropha* is a hardy perennial that can grow in arid, non-agricultural land. One plant can last as long as 50 years, and it produces seeds that contain as much as 40 percent oil, which can then be crushed and processed to produce a biofuel.

*Jatropha* has become an attractive crop as the prices of other biofuel feedstock, such as soy, palm and canola, continue to rise. India, China and Brazil are the current leaders in *jatropha* cultivation, but the crop may appeal to Florida citrus growers who struggle with diseased citrus crops and marginal land.

According to My Dream Fuel LLC, a



*Jatropha curcas*



Guayule

company planting *jatropha* in La Belle, Fla., *jatropha* can be harvested after two years and does not compete with food crops. In addition, the residue left over after processing the seeds is a nitrogen-rich organic fertilizer.

Kyle Freund, communications co-

ordinator for Coffee Kids, a non-profit organization that helps "coffee-farming families improve the quality of their lives," said he believes in the potential of biofuels, particularly *jatropha*.

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# Biofuel

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"Looking at the options, I don't think there will be a silver bullet that will solve all of our energy problems," Freund said. "People have to utilize a variety of options from biofuels and conventional fuels to solar, wind and geothermal energy."

Freund said that Coffee Kids has helped fund a project in a coffee-growing community in Guatemala to plant jatropha and castor beans on fallow land to use for biofuel.

"According to the Global Petroleum Club, it yields up to 202 gallons of biodiesel per acre versus soybeans, which produce only 48," Freund said. "At this point it is essentially a weed, instead of a full-fledged crop, so work will need to be done to provide for consistent yields. But it is extremely hardy and provides a favorable yield."

"It seems as if everyone wants to scale biofuel production up to the level of petroleum, but that won't be possible without taking massive quantities of land out of

Energy from Biomass Sources			
Crop	Yield (tons/acre)	Energy Content (dry)	Biofuel/Co-Products
Jatropha	16.2	9400 Btu	Biodiesel
Guayule	20	9200-11000 Btu	Electrical power
Corn	4.3	8100 Btu (kernels)	Ethanol
Soybean	1.2	10230 Btu (bean)	Biodiesel
Sugarcane	35.0	8532 Btu (bagasse)	Ethanol
Canola	0.7	N/A	Biodiesel

(Data provided by Yulex Corporation) - Btu stands for British thermal unit, a unit of energy used to measure the heat created by burning a material; Bagasse is the biomass left over after crushing sugarcane to extract the juice.

GRAPHIC BY ERIKA PITERA/SPECIAL CORRESPONDENT

food production and destroying ecologically sensitive areas."

Freund said he does not think corn-based ethanol is the optimal choice for alternative energy, as "it takes almost more energy to produce than ethanol itself produces."

Orlando-based Xenerga, Inc., has also turned its attention to

building plants and establishing turn-key biodiesel production facilities, according to Partner Coordinator Jon Kunstman. Xenerga recently opened a plant in LaPorte, Ind., and is building three others in the U.S.

"We still believe that jatropha and algae will be the most viable sources of feedstock in the future,"

Kunstman said.

Jatropha isn't the only crop grabbing the attention of biofuel supporters; a plant called guayule (pronounced why-you-lee), native to the southwestern U.S. and Mexico, is being used for biofuels and its natural rubber latex.

Yulex Corporation is one such company that is using guayule

to create medical and bio-based industrial products, such as a non-allergenic plant-based latex.

According to Betsy Brottlund, a Yulex representative, guayule has nearly 50 percent more energy content in its biomass than other cellulosic feedstocks.

"As a perennial cultivated crop, guayule offers the grower an economically attractive alternative to, for example, cotton and alfalfa," Brottlund said. "Guayule can be harvested as soon as 18 months after planting and, thereafter, harvested on an annual cycle, yielding an unrivaled 20 tons of biomass per acre."

"It's not a food source, so it won't drive up food prices and can be established in marginal, arid agricultural lands. Rain forests are being cleared in the Amazon for sugarcane and palm-oil plantations while guayule is grown here in the U.S."

Many people believe that jatropha and guayule have potential as biofuels, but as with any alternative fuel source, both crops will require further research and experimentation to determine if they will one day compete with petroleum.