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Innovative energy crops dedicated for pulp & paper; bioenergy & biorefinery - Case study for Pyoil co-processing

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Biomass supply (Upstream) is one of the greatest barriers to the economic deployment of current and future Biorefinery and Bioenergy technologies (Downstream). Quality, homogeneity, composition, availability and production/transportation cost are the main quality criteria and concerns in the viability of any Biorefinery and Bioenergy initiatives. Forestry/Agricultural Residual or Municipal/Industrial waste are specific alternatives, but in general doesn´t meet the downstream quality and cost processing requirements. In general this is not the main sustainable and competitive pathway, for large scale and competitive Biorefinery and Bioenergy conversion alternatives. After many years of intensive development, there are recent successful achievements in dedicated Energy Crops, especially those derivate from Polyploid and C4 monocotyledonous perennial grass from the Saccharum genus, for a perfect feedstock fit in Bioenergy, Biorefinery and Pulp & Paper Industry. The achieved target was focus in: High Biomass yield; Quality Fibers (Pulp & Paper Industry); Fermentable Sugars availability (Ethanol and other fermentable process); High Rusticity and Tolerance to Poor Soils; Flexible Implementation & Operation (mechanization); Scalability; Availability all year long; Low Carbon Impact and Low Production/Transportation cost. Successful results from these programs already generated innovative and proven Energy Crops (Biorefinery Energy Cane - BEC) varieties for dedicated utilization in different application such: Power Generation; Pyrolysis; Gasification; Pulp & Paper, Bio-Ethanol, etc. These innovative Energy Crops are similar and apply the existing and proven technologies of Sugarcane production (planting; treating; harvesting; transporting and processing), with additional benefits derivate from the BEC higher rusticity. The utilization of BEC biomass could benefit the majority of existing Bioenergy and Biorefinery processing technologies, bringing them to a real economic and commercial viability. Recent developments on Crude/Petroleum Oil refinery integration, by upgrading or co-processing Pyrolysis oil in an FCC unit, could now be successful implemented using this innovative, flexible and low cost Energy Crop (Energy Cane).

Biography

Ivo Fouto, is a seasoned business and technical professional with Engineer, Finance and Administration graduation with biotechnology, chemical and energy background in C-level positions in large multinational companies with international exposure. Founder of Cenerbio, company focused in global Pulp&Paper; Bioenergy and Biorefinery project development (Upstream and Downstream integration), utilizing advanced, sustainable and non-transgenic Energy Crops, associated with modern and large scale Agriculture and Geotechnology management tools and technologies.

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