

Interactions UTC

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Agro-resources: cooperation and innovation



One of the reasons underlying the new interest for Brazil is the possibility this offers to compare sugar-cane processes in a tropical country with those develop in France to transform sugar-beet and miscanthus (commonly known as Elephant Grass). *"If we adopt the logic of the PIVERT bio-refinery, consisting of valorising the whole plant, the key value is the biomass production per hectare. Sugar cane, admittedly, produces less sugar per hectare than sugar beet, but the bagasse (pulp of sugar cane after sugar extraction) is valorised in co-generation powers stations, an advantage that allows Brazilian industrialists to be self-sufficient for their energy procurement. This alone increases the competitiveness of Brazilian ethanol in the market-place! This simply is impossible using sugar-beet"*, says Prof. Thomas.

Paraná, São Paulo and Alagoas

Numerous interactions have been set up with the relevant industrial

Federations, notably in the Brazilian States of Paraná, Sao Paulo and Alagoas, where large quantities of cane sugar grows and with the Federal University of Paraná, where Professor Soccol is the most cited Brazilian research scientists, with his prolific high-level scientific papers. Contacts with UTC are also developing via the company Tereos - one of the inner core partners of IAR (Industry and Agro-Resources cluster)) alongside Roquette, Vivescia, Cristal Union, Soufflet and Sofiprotéol) - who has become the second largest ethanol and sugar producer in Brazil via the subsidiary Guarani, registered on the Stock Exchange. "I had the honour in November 2012 of opening the annual conference on sugar cane in the State of Alagoas, and I shall be returning in March to address another conference about energy transition and agro-resources" adds Daniel Thomas.

The road to 2nd generation bio-fuels

Efforts to produce 2nd generation bio-fuels are attracting lots of interest in both Brazil and Europe. In Europe, the FUTUROL Project (certified by the IAR Cluster) has a budget of 76.4 Meuros. 3 000 km to the West, GraalBio, a biotech company located in the Brazilian State of Alagoas has announced an investment plan of 91 Meuros to build the first 2nd generation bio-fuel plant. "We are in contact and exchanging with them. In Brazil, only the sugar cane leaves are not yet valorised, i.e., some 3-4% of the biomass and that is then part that will be used to produce the 2nd generation bio-ethanol. In order to gather the leaves rather than burn them in situ, the Brazilians have developed a novel form of agricultural machine and this alone is very interesting in terms of exchange between our respective industrial partners. They have proved very innovative in all the processes that lead from the sugar-cane plantations to the transformation factory", feels Prof. Thomas, recalling that the largest employer in the Picardie Region is AGCO-Massey Fergusson! UTC and its partners are also engaged in forward planning that will lead to assembly of a viable bio-refinery.