

To Whom This May Concern.

**REF: Arundo Donax, the future of biomass**

Energy can be generated from a wide variety of biological materials, including agricultural crop residues, forestry wastes (woody biomass), and even municipal solid waste. Electricity generation from biomass sources has the advantage of providing reliable baseload renewable power and can offset some of the intermittency of wind and solar generation in an integrated electricity system.

Arundo Donax is a perennial rhizomatous bamboo or cane-like grass widely diffused in subtropical and warm temperate regions. It is increasingly being considered as a potential bioenergy crop due to its high biomass production rate by virtue of its inherent spontaneous and rapid growth.

The key benefits of Arundo Donax are :

- High calorific value (17-18 MJ/kg).
- Year round availability (ensuring constant availability of biomass to the power plant)
- The capacity to grow in poor soil and in general in marginal land which contributes to a better utilization of the territories, avoiding or minimizing the competition between fields used to produce food/feed and fields used to produce biomass. High yield (>120 t/hectares).
- Lower nutrients and water requirements compared to sugar cane (50% lower fertilizer, herbicide and water).
- Hydrophobic - crop structure permits natural drying (does not rot like other crops). Stalk does not absorb moisture after it is harvested and naturally dries to less than 20% humidity in around 10 days.
- Low agricultural management requirements (reduced cost of production).
- Very resistant to plague and diseases.
- Resilient - tolerates extreme climatic conditions such as severe flooding or droughts.
- Available during the whole year for fibre harvesting - not seasonal as sugarcane.
- High carbon sequestration potential.

There is another dimension to Arundo Donax, the social one. The cultivation of Arundo Donax is an attractive option that shall be of interest to the farmer' community in particular the ones located in marginal areas.

It is expected that farmers could be offered a predictable and sustainable solution i.e. a guaranteed market and a secure price by embarking in bioenergy crops cultivation. Besides providing the best opportunity for using available marginal land, bioenergy production can also be conducive to shares participation opportunity (by planters and other stakeholders) in power generation. The advantage of Arundo Donax over all other bioenergy crops is that it provides a solution in poor and marginal lands, where most of small farmers have been relegated due to the pressure of other cash crops, like soy beans, for instance.

It may surprise many people, but it is in the small Island of Mauritius where Arundo Donax may prove its value as the sustainable fuel of the future. With a very serious methodology approved by the University of Mauritius and agricultural field trials, closely monitored, undertaken over the past 3 years with the assistance of the Food and Agricultural Research and Extension Institute of the



Ministry of Agro-Industry and Food Security; Arundo Donax proved its value and showed that it is up to the expectations. The results of these trials were so significant that now Mauritius is in its way to export the know-how developed in the country.

In conclusion, Arundo Donax is a serious option for abating climate change impacts while diversifying the energy supply. Its reliance to climate change shows that it adds resilience to the energy matrix. Its potential social impacts can also contribute to some of the Millennium Development Goals, taking poor rural communities out of poverty.

It is not time for the world, and in particular for the financing community, to start paying attention to this wonder crop?

A handwritten signature in black ink that reads 'Manuel Fuentes'. The signature is written in a cursive style with a horizontal line underneath the name.

Dr Manuel Fuentes  
Director  
May 06<sup>th</sup>, 2018