Agave And The Future Of The World Final

Document Transcript

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AGAVE: THE MISSING ENERGY CROP

Agave can greatly contribute to solve mankind's worst problems:

- Global warming,
- Overpopulation,
- Hunger,
- Poverty,
- Lack and Dependence of oil,
- Stagnation of the Economy...

Tens of biofuels and bioproducts can be derived from agave's sugars and biomass:

- Ethanol (distilled and cellulosic),
- Butanol, Biodiesel, Biochar, Biocoal, Biooil,
- H2, methanol, green gas, jet-fuel,
- cellulose pulp and paper, non-woven material,
- bioplastics, fructose syrup, healthy sweeteners,
- inulin, fertilizers, acids, fiber boards, molded furniture,
- gel, biopolymers, geotextiles, composite materials,
- phenol, CO, CO2, antifreeze, photographic film,
- adhesive, insulating foam, concrete additive,
- detergent, esters, wax...

Agave is so productive and versatile that it's the ideal feedstock for a biorefinery where electricity, biofuels and value-added bioproducts are produced.

After 29 years of research, Prof. Remigio Madrigal Lugo at the University of Chapingo, developed enhanced varieties –not GMO- of Agave tequilana weber and two other species.

One hectare of our Ultra-high-density agave variety annually produces:

3x more sugars than sugarcane in Brazil,

4x more cellulose than the fastest growing eucalyptus

5x more dry-bone biomass than GMO poplar tree.

Agave annually produces several times more dry-bone biomass per hectare than any terrestrial ecosystem or commercial plantation in the world.

Agave can put an end to the 'Food VS Fuel' dilemma:

- It thrives in marginal lands, even salty and acidic soils and steep hills,
- In semiarid and temperate climates (2/3 of Earth's habitable land);
- Needs neither watering nor agrochemicals;
- Can be easily cultivated at a very low cost.

One hectare of our variety of agave tequilana annually produces an average of seven thousand gallons of ethanol (after year 3). The 36 billion gallons of ethanol that the USA will consume by 2022 could be produced in roughly 5 million hectares of agave plantations. In Mexico, there are over one hundred million hectares of marginal land where agave plantations could be established.

One hectare of our semiarid variety annually produces 5,000+ gallons of cellulosic ethanol. We are developing an ultra-high-density temperate-climate agave variety (-20°C), with a similar yield.

Although we are still in the R&D stage, we foresee a golden future for agave.

The environmental, economic and social benefits that Agave Project can bring to the semiarid regions of the world –where a high percentage of poor people live- are enormous.

We want to give the world a Mexican most precious gift: Agave.

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