

Biomass / Agro Waste to Natural Fibers for Circular Materials: Barracuda Technologies

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Abstract

There are millions of tons of agri residue being wasted or burnt every year throughout the globe. Some research estimates put this number much beyond one billion tons per year. Biggest contributors are rice straw, Palm EFB/waste, tree replacements and such. A lot is burnt. Little is used to make energy/power. But this requires incineration which generates GHG's and pollution. The value generated from these wastes have been little to none in macro terms.

Conversion to natural fibers opens up a whole new world of applications and value generation. Many high value products and applications have been developed and proven. Barracuda labs have developed a process to make very potent natural fibers from these wastes via a series of pretreatments and defibrillation of this biomass in a chemical free environment. The entire process is very environmentally friendly. These fibers are tweakable in terms of its properties as per the desired application. The inherent moisture level and oil content (if any) doesn't seem to be an issue for the Barracuda process but rather, the moisture is an advantage as it reduces water consumption in the entire value chain. The fibers produced has been successfully used in many applications like molded fiber and non-woven applications like kraft paper and packaging. It's a clean process and doesn't generate any on-ground or in-air effluent. Water is mostly recycled or used by the end application. This process is a very good fit for the PPP model (People, Planet and Profits). The value generated is quite good e.g. molded fiber application say tableware products are today sold in the range of \$3000 to \$5000 per MT at wholesale level.

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Biography:

Navin Singhania is Supervisor of Barracuda Technologies Inc. San Francisco (USA). He also provide Environmental Consulting service.