



Method for production of organic textile fiber

Plantain extracted fiber environmentally developed from Agricultural residue



Universidad Tecnológica de Pereira

Target Markets / Potential Applications

- A raw material for the textile industry.
- Interior cover for the automotive industry
- Materials for building industry
- Organic Paper
- Food packaging industry

IP Status

Patent: [NC2019/0005884](#)

Offer: Worldwide exclusive license of all potential applications.

Method to produce biodegradable textile fibers, taking advantage of plantain residues.

Innovators at The *Universidad Tecnológica de Pereira* have developed an alternative and sustainable method to obtain textile fibers, benefiting from the rachis that remains from the plantain plant residues.

The growing interest in the circular economy and changes in people's lifestyles make has incremented the offer of environmentally friendly technologies that tap into nature's resources and can be biodegradable over time. In this way, the textile fiber technology provides a sustainable fashion alternative for people who have or want to be environmentally conscious.

Benefits



Non-polluting - environmentally friendly



Easily reproducible



Waste management



Low cost



The need

There are a variety of crop residues in nature that are highly polluting and generate socio-environmental problems; therefore, it is necessary to give them different and profitable use. This technology takes advantage of rachis residues of plantain to produce textile fibers avoiding plant damage. As it is usual in the process of obtaining fibers the removal from the stem in which the plant is completely cut.

These sustainable alternatives add value to fashion, granting character among those who wear them. Environmentally conscious people, well represented by **Boho-Chic style**, want to find textile elements that allow them to stay fashionable, but at the same time show their green print responsibility.

The solution

Method of fabrication of textile fibers, from the remaining rachis from the plantain. The method is responsible for the environment, using green like approaches because no chemicals are used for fiber production, and the resulting fibers will be biodegradable, and their production will have a low cost.

This new textile fiber extracted from a plant work has a substitute of the fique in the manufacturing of fashion items such as bags, wallets, shoes, among others.

According to the preliminary research, the cost and contamination made to produce fique fiber (most usable vegetable fiber) is higher than the rachis plantain fiber technology.



Fig. 1 Rachis of the plantain.

Innovators

Main innovator



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Innovation Maturity

TRL4 – Prototyping stage (Lab validation)

- A purse made of textile fiber and recycle tire.

CRL1 – First business model hypotheses identified stage:

- Boho chic style people segment client archetype was described.

What are the TRL & CRL?

Other relevant information

Suggested certifications

- GOTS (Global Organic Textile Standard).
- Textile Exchange – Organic Content Standard (OCS).
- NATURTEXTIL IVN certified BEST.