

*Besarte is an artisan company located in Pesquera (Cantabria, Spain) which focuses on the cultivation and promotion of the natural fiber obtained from *Sambucus Nigra* (black elder). The location of this activity facilitates the relationship with nature through the exploitation of native plants and associated commercial activities. This relationship is reflected in their products of natural medicine, food and handicrafts.*

Approach

The interaction with nature and coexistence with it in all its forms are the pillars of the Besarte company. The process is closely linked to the natural ecosystem which



surrounds the company, it takes advantage of the resources offered by its estate and re-uses the waste generated. Besarte calls for innovation based on retrieving the value and know-how of an ancient technology. Around 3000 B.C. in Egypt, writing on Papyrus had already started: "the first green paper".

Model

1 Planting and gathering of branches of black elder. Collection of rods and planting is done manually on the estate of the company. Rods are visually selected and cut into sticks of 30 cm.

2 Soak in water and boiled. The collected branches are placed into water and boiled for two hours.

3 Collection of fiber and dissolution of ashes. A dissolution from wood ashes is prepared. After being boiled, the branches are opened with a hammer and the inner sponge is removed. The fiber is ground in a compost mill. Fiber is placed into the dissolution of ashes and boiled for at least two hours.

4 Dutch pile and improvement of rheology. Fiber is passed to the Dutch pile and water is added, keeping the pile alight for 10 hours. Pulp obtained on the pile is placed in a container and a dissolution of Tororo (polyethylene oxide) is added to improve its rheology.

5 Formation of paper sheets. Paper sheets are formed using rectangular screens and a 45 μm mesh maximum light. Subsequently, the retrieved paper is placed on felt and is pressed for at least two hours. Finally, the sheets are removed and left to dry to obtain the final product.



Benefits

Besarte unveils the value of recovering knowledge of processes of 'green chemistry', dating from antiquity to re-connect with nature and the countryside. It contributes to the improvement of the quality of life of the surrounding population, flora and fauna. The use of indigenous natural resources and their sustainable and circular processing contribute to the elaboration of products with high added value that possess a zero ecological backpack. The recovery of the know-how of our ancestors is a source of innovation that Besarte knows how to use in order to diversify their family economy and promote a balanced way of rural life and opportunities.

Challenges

The company is involved in other plant resources for the production of natural fiber and diversification of its range of products for interior design materials. Besarte faces the challenge of maintaining an eco-artisan process which is respectful to its environment, with technical innovations derived from the investigation of their processes. In addition, it is aware of the importance that it has to design a business model with viable and consistent principles for the sales and international distribution of its products.

More information

Besarte's web: <http://www.besarte.com/>

Besarte's video: <https://youtu.be/T-PoZqpJe0U>

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