



Banana Pseudo Stem Fiber Extraction and its Utilization

Agenda

1. Need for working on a by-product

2. Methods of Fiber extractions

3. Utilization of Fibers and waste

4. By products During fiber extraction

5. References

1. Need for working on a by-product

- After the harvesting of the banana, the Pseudo stem is burnt or goes to waste, causing a lot of landfilling and air pollution.
- Banana stems can be developed into products such as sanitary napkins and hair extensions.
- Products are considered safe & recyclable.



- High concern for creating an eco-friendly environment by reducing environmental problems and nature pollution.
- The utmost pollutions are from the textile industry, dye industry, and healthcare industry.
- A good alternative for synthetic hair extensions in the market.



2. Extraction of fibers

The fibers from the pseudo stem are extracted by 2 methods :

1. Manual method
2. Mechanical method



2.1.Manual method

Applicable where small-scale production of the fibers is present.

- Requires a lot of skill and patience
- The fibers that are extracted are brittle & weak in strength.
- Time consuming process.



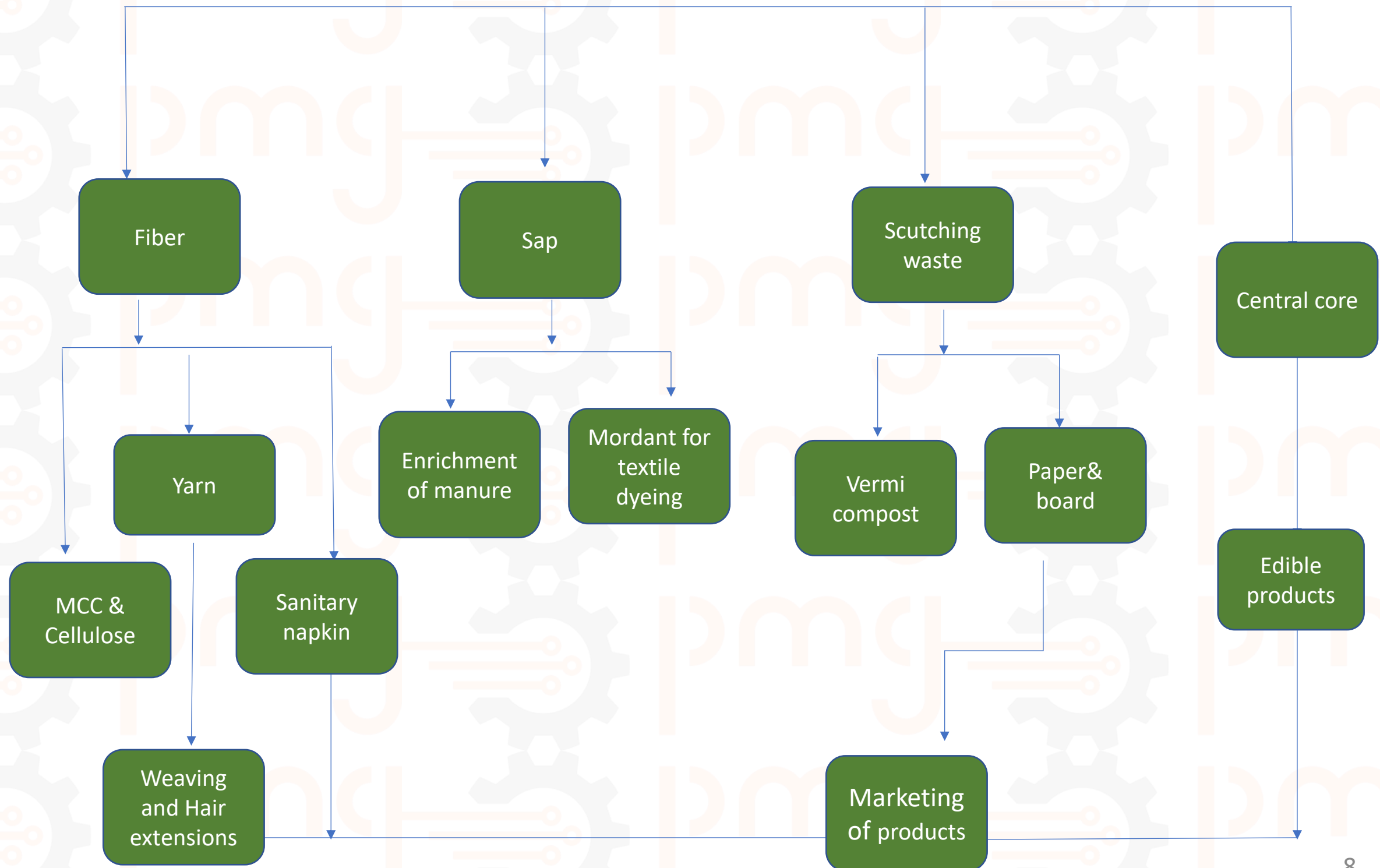
2.2.Mechanical method

In the mechanical method Decorticator machine is used.

- It consists of a rotating drum mounted on the shaft that creates crushing beating, backing plate, and pulping action.
- The pulpy material is removed when it is halfway through.
- And then pseudo stem are slowly pushed from the drum & fallout of the conveyor belt. Fibers are collected from the bucket.



3.Utilization of Pseudostem



3.1.Utilization of fiber

Extracted fibers are utilized as follows:

- Sanitary napkins, and hair extensions, and are also used for weaving purposes in textile industries.
- The fiber that is extracted is biodegradable.



4.By products During fiber extraction

Two products that are extracted are **Sap**, **Scutching waste**.

The sap that is extracted and is used for :

- the enrichment of manure.
- mineral content present in the sap is high helps the plants to grow.
- And these sap can be used as Mordant for textile dyeing.

The Scutching waste is used as :

- vermicompost and also with the help of the pulp we can prepare paper & Board.



5. References

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