

OPERATIONAL DEFINATION

1. Unspun yarn

In the manual extraction process, Lotus Fibers are extracted from the petioles and winded on the pern without imparting any twist. Due to the inherent cohesiveness property of Lotus fibers it naturally forms a yarn like structure when extracted from petioles. This form of yarn winded on the pern is defined as “unspun yarn”.

2. Machine extracted yarns

In the research, specific machine was fabricated in such a way that it can extract and spin the fibers to form a yarn like structure. Both the operation that is extraction and spinning is done simultaneously one at a time to develop 100 % Lotus yarn. Different counts of yarns developed from the fabricated machine are defined as machine extracted yarns.

3. Hygrowaste

The term hygrois a combining form of “wet”, “moist” or “moisture. In the study, hygro refers to the Lotus plant that is widely cultivated in the wetlands. Lotus petiole is considered as a waste after picking the flowers. This Lotus petiole from the wetland is defined as hygrowaste.

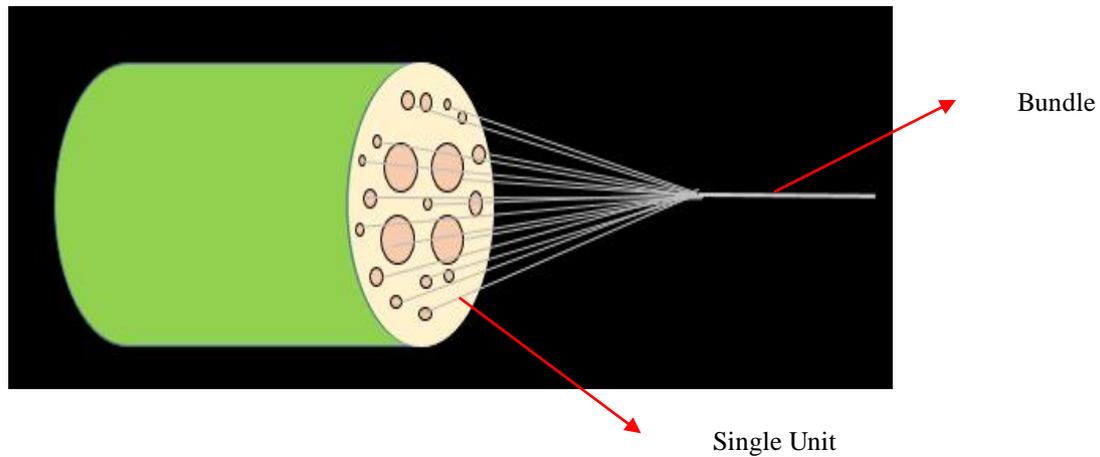
4. Raw fiber

The nature of the Lotus fiber extraction is when the fiber is been extracted and stretched from the petioles it naturally forms a yarn structure. Raw fiber is defined as extracting the fibers without forming a yarn like structure. Extracting the fiber without imparting any preliminary twist.

5. Single Unit:

Fibres taken from one cell (hole) is considered as single unit. Inside the lotus petiole there are two types of xylem cells: Tracheids and Vessels. Tracheids are elongated narrow tube like cells with hard thick and lignified walls with large cell cavity. Vessels are cylindrical tubular structure with thin lignified wall. These cells helps in transportation of water and

some nutrients from the roots to the leaves and also provide mechanical support to the plant. Lotus fibres are arranged in these cells in the form of “Helix”.



6. Bundle

Fibres taken out from all the cells (holes) is considered as bundle. It is very difficult to extract a continuous uniform length of fibre from one cell (hole).

7. Major yarn

Major yarn in the study is defined as Lotus yarn which is used in the ply yarn preparation

8. Component yarn

Component yarn in the study is defined as a other natural fibers (Cotton, Silk and Wool) used the ply yarn preparation.