Ramie Fiber Characteristics and Production Process

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Ramie is one of the most distinguished flowering plants. It is part of the nettle family and most of the time it is located in Eastern Africa. One of the notable facts about the plant is that it is an herbaceous perennial that can grow as tall as 2.5 meters. The pants' leaves are heart-shaped and can grow about 6 cm long (Yu and Li, 2014). They are broad white in the outer appearance thus giving them some silvery appearance. Most of the time, it is confused with the stinging nettles but one of the key differences in both of the plants is the fact that while the leaves of the nettles are lush green, there is a dull texture to the Ramie fiber (Shuang et al. 2015).

History of the Plan

Ramie Fiber is witnessed most of the time in China. It has been quite a few centuries now, and the farmers working in ancient China have used it extensively to ensure that fiber can be created (Zhou et al. 2014). The fiber that is created from these plants is used most of the time to weave clothes. The mummies also use fiber to wrap cloth (Shuang et al. 2015). An open weave fabric named Mechera and Ramie Fiber has been used extensively for the production of that plant. It has been found to be particularly useful when there are instances when the temperature has become too warm (Shuang et al. 2015).
Properties

Part of the reason Ramie Fiber has been used extensively is that it is one of the stronger natural fibers. It seems to show great strength, especially when it is a bit moist (Zhaoling et al. 2016). Also, the fiber has been well known for its durability in holding its shape and ensuring that the wrinkles often witnessed on the clothes are reduced. Also, it tends to introduce somewhat of a silky texture, and thus not only the fabric that is made by it is rather durable as it does not lose its shape, but it has also been found to be elegant, to say the least.

Production Process

The dry weight that is harvested from the crops is bound to range between 3.4 to 4.5 t/ha/year. It means that there is a likelihood of a sizeable yield if the crops are taken care of in the right manner (Shuang et al. 2015). Now, coming towards the extraction of the fiber, most of the time it is bound to occur in three stages (Shuang et al. 2015). The first stage called the cortex is the one where the bark is removed. In the next phase, it is made sure that the bark can be removed from the band and this process is termed de-cortication (Yu and Li, 2014). After that, the cortex is removed so that the layer

of the outer bark being formed can be removed one way or another (Shuang et al. 2015). When the process is completed, there is a final part in which it is made sure that the residual cortex material is washed and then dried to ensure the creation of the spinnable fiber is correspondingly carried out (Shuang et al. 2015).

Characteristics

Despite the fact that ramie fiber has quite a few qualities that would have been useful in textiles, its usage is somewhat limited in the textile industry. One of the reasons it has not been used a lot is that its overall extraction and clearing process is not only time-consuming but very expensive. Most of the time, the cost is incurred due to the extensive time that all these processes take and the difficulty through which they can be made. The other problem is that the fiber spinning is quite difficult here as the hairy surface of the yarn complicates the weaving. There is also the likelihood that the yarn would be damaged considerably during the whole process. Due to its durability, it is used in industrial products, such as sewing, thread packing, and wrapping raw materials (Zhaoling et al. 2016). Currently, China leads the production of ramie, and the main exporters are Japan and some other European countries.

Conclusion

As far as the fiber production is concerned, it is done after the harvesting season for the obvious reasons. When harvesting seasons are completed, the stems are decorticated. When the decorticated process is carried out, it is made sure that the plant is still fresh. It has to be noted that if the plant is not fresh during the whole process, there is a strong likelihood that the leaves will dry out rather quickly and thus become quite hard to remove later on. When that is done, the bark ribbon is used and dried as quickly as possible. It is also important as it ensures that the bacteria and other fungi do not attack the plants (Yu and Li, 2014).

Works Cited

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