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Potentiality of Ericulture in the char-chapori areas of Assam

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ABSTRACT

Famous for its golden silk, Assam has great potential for the development of Eri culture in the Char-chaporiregion along the Brahmaputra River. Due to annual flooding, these areas have fertile soils, making them ideal for agriculture. Eri culture, which focuses on raising *Samia ricini* silkworms primarily on castor and kesseru plants, brings economic benefits to local communities, especially in flood-affected areas. Castor is a hardy crop that requires minimal soil preparation and thrives in these conditions. This practice can improve livelihoods by providing a stable source of income and supporting inclusive development. The Eri culture is labour intensive and provides employment opportunities, especially for women who are actively involved in silk production. Low production costs and dependence on local resources make it profitable for small and marginal farmers. Productivity can be further increased by using modern technologies such as using resistant breeds, improving chawki rearing and managing pest and diseases.

Keywords: Eri culture, Char-Chapori, castor cultivation, sustainable development, women empowerment.

INTRODUCTION

Assam the gateway of Northeast India, is renowned for its unique golden silk and the ahimsa silk. The state, known for its rich biodiversity, covers a total land area of 78,438 sq km (Phukon, 2021), with the char area comprising about 3,609 sq km, or 4.6% of the total land mass (Handique, 2014). The Char-Chapori areas of Assam are the riverine or sandbar regions primarily located along the mighty Brahmaputra river and its tributaries. The char areas or the riverine areas has population which are frequently affected by floods that affects their economic and social growth. The goal of inclusive growth will only be fulfilled if the development of people living in the char areas are taken into account. These regions are notable for their distinct geographical features, socio-economic

challenges, and cultural diversity. The Brahmaputra is the main river in the state, stretching 640 km within Assam (Jain et al., 2007). The Char-Chapori areas along the Brahmaputra play a significant role in the state's economy. Due to annual flooding, these areas are enriched with fertile humus deposits, making the land exceptionally suitable for agriculture. Consequently, the fertile land supports the cultivation of various crops agricultural crops. The vegetable markets of Assam are largely supplied by agricultural products from the char-chapori areas. Humus rich and sandy soil is very much favourable for castor plantation which is the primary host plants of eri silkworm. Therefore, plantation of annual plant liker castor will be very much suitable for ericulture. Excess water and flood comes down by post monsoon period therefore plantation can be done by September- October.

Eri culture in Assam has been emerging like dazzling star in the present times. Contribution of Assam alone to the country's raw silk production is 5465 MT. Eri culture, the cultivation of eri silkworms for eri silk production, is rapidly emerging as a lucrative cash crop. With a high global demand for silk in the fashion and textile industries, eri culture provides significant economic opportunities, particularly among the destitute. Economic condition among the inhabitants of the cha-chapori areas is very pathetic. Eri culture can be instrumnental in poverty reduction in this regard. The goal of sustainable development requires inclusive growth for both rural and urban population of India. Eri culture in rural areas particularly like the char-chapori areas will improve the socio-economic status of the inhabitants.

Potentiality

Minimum Land Preparation

The Char area is a collection of isolated river islands that were historically considered an anomalous zone. These areas now represent an important resource for landless populations (Mahamud, 2011). Eri cultivation can be a sustainable economic activity for the Char-chapori people. Minimal soil preparation is one the advantage for the cultivation of host plants needed for rearing the silkworm. Eri cultivation can be a sustainable economic activity for the Char-chaporipeople. One of the advantages of growing host plants for ericulture in char-chaporiarea is that soil preparation is minimal. These areas can be cultivated without major changes, but are often subject to flooding and erosion. However, choosing an elevated area within the char-chaporiareas can minimizes the risk of flooding. Castor crop can tolerate a wide range of soil conditions, making it an ideal crop for the Char-chaporiregion. Additionally, it is a perennial plant that survives most seasons and is relatively easy to harvest, making it an attractive option for farmers. This makes it a castor crop as an ideal crop for areas where land is limited. Additionally, these crops are hardy, tolerate the region's semi-fertile soils, and have high resistance to pests and diseases, making them even more attractive to farmers and relatively inexpensive to produce, making them ideal for farmers looking to maximize their profits.

Humas rich soil

Farmers in the Char zone mainly engage in flood-dependent agriculture. The nutrient-rich mud deposited during floods makes the soil fertile and enables the cultivation of crops such as rice, jute and mustard. Cultivation of host plants such as castor (*Ricinus communis*) and tapioca (*Manihot*

esculenta) are very important for the growth of silkworms as they provide the necessary nutrition for their rearing. Castor is traditionally used to rear silkworms, particularly the *Samia ricini* silkworm, and its availability is crucial for continued cocoon production (Kakati, 2018). Tapioca, also known as cassava, has been shown to tolerate dry conditions, suggesting potential for cultivation in the char region, which is typically characterized by dry, sandy soils (Su'udi et al., 2022). Therefore, although these host plants can also be grown in char areas, their cultivation must be carefully managed as the economic value of both crops extends beyond sericulture.

Labour

Ericulture is a labour-intensive activity but offers significant employment opportunities, particularly in rural areas where employment prospects are limited. Due to the high labor intensity of ericulture, family labour, which is underused in the off-season, can be effectively used in the Char-chaporiregions. This not only reduces costs but also generates additional income. This labour-intensive nature takes a lot of work and supports many families. In areas where traditional agricultural employment is declining, ericulture provides a viable alternative and promotes the economic stability and resilience of local communities in the Char-chaporiregions.

Women involvement

The role of women in sericulture, particularly in the Char-chaporiregion, is crucial for both economic empowerment and community development. Women can actively participate in the various phases of sericulture and contribute significantly to household income and the local economy. About 60% of silkworm farmers are women and they are involved in everything from mulberry farming to silk weaving (Sarkar et al., 2017). Sericulture is an important source of income in rural areas, and women's income contributes significantly to improving family well-being and education (Raveesha et al., 2016). Women's inherent qualities such as patience and adaptability increase their efficiency in silk production. Their involvement is particularly pronounced in post-cocoon activities such as spinning and marketing silk, where they often outnumber males (Bukhari et al., 2019). Despite their contributions, women face challenges such as low literacy and lack of access to technology. Empowering women through training and resources can further strengthen their role in sericulture and lead to broader socio-economic benefits (Chowdhijri et al., 2011).

Low cost of production

The low production cost of sericulture in Char-Chapori region can be attributed to several factors including minimal land requirement, low initial investment and dependence on family labour. This makes ericulture an attractive option for local farmers looking to diversify their economy. Ericulture is characterized by low production costs compared to other species of silkworm rearing operations. The main required input, a host plant that can be grown in Char Chapori, can reduce transportation and input costs. Furthermore, the use of traditional methods and local resources minimizes the need for expensive machinery and chemicals. This profitability makes ericulture an attractive option for farmers in the Char-chaporiregion, where financial constraints are widespread.

CONCLUSION

The unique combination of fertile soil and the need for economic upliftment makes these regions well-suited for sericulture. By harnessing the advantages of eri culture, not only can Assam boost its silk production, but it can also address socio-economic challenges in flood-affected areas. This approach could lead to significant improvements in income and living standards for residents, fostering inclusive and sustainable development.

New techniques like chawki rearing developed by Central Muga Eri Research and Training Institute, Lahdoigarh is very much good for enconomic rearing. Popularization of eri chawki rearing is been conducted in a rapid manner.

Eri culture has the potential to be a transformative force in the char areas of Assam. It can leverage the fertile land and favorable conditions for castor cultivation, providing economic benefits and improving living standards. For successful implementation, it is crucial to support local farmers with the necessary resources and knowledge to maximize the benefits of eri culture, ultimately contributing to sustainable development and poverty alleviation.

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