Application of modern technology to silk farming

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India is the second-largest producer of silk and its products in the world. But if we observe closely, the gap between numbers one and two is enormous. Even though the Indian silk industry is centuries old, with a rich history, it is still plagued by a disorganized supply chain, which in turn has slowed down the growth rate and not to mention, the toll it takes on individual stakeholders.

Currently, the Indian silk industry is valued at over $8 billion dollars while its exports for the year 2018-19 stood at $219 million. As a sector, it is complex, diverse, and has multiple stakeholders. These complexities and the lax view towards imports of foreign silk have devalued the presence of Indian silk in our own markets. There is a lack of technological intervention at the grassroots level and this has led the sector to stagnate and produce sub-standard output.

There are ample opportunities for growth in the Indian sericulture sector. With the aim of making India Atmanirbhar, or self-reliant in silk production, technology should be a major focus point today.

Technology in Sericulture

Due to the lack of proliferation of technology in the Indian sericulture industry, the silk producers are using outdated methods of production, which has led to the stagnation of production and hampering quality.

From improving the production of cocoons and mulberry plants to checking and standardizing the quality of yarn and sarees, technology can have a dramatic impact on the sector.

One way this can be done is by providing sericulture requirements, input, marketplace access, and logistics in a consolidated manner. The best way to enable this is with an application that is easy to use and solves these problems by plugging into a core technology platform that enables the above-mentioned objectives. Applications bring a lot of transparency to supply chains and ease processes. It is easy to provide solutions such as fintech and scientific advisories via an app.

Internet of Things

IoT can be used in various situations in sericulture. It can help in crop monitoring for mulberry farms and assisting farmers with precise information and advisory. This can help in disease detection and control, thus massively impacting production.

For sericulture, the rearing of silkworms is a major step in the process. This is done in a controlled environment. IoT devices are a major development in this industry. These devices can monitor and advise farmers to adjust essential parameters within rearing sheds. In addition, it also improves the quality of cocoons produced as well as eliminates diseases. It also helps in improving cocoon quality and quantity, decrease disease prevalence and hence improve farmer’s livelihoods.

Testing and standardization

Quality is a crucial aspect of the silk supply chain. Farmers do not have access to easy and efficient testing processes. Applications can help solve this. Another significant technological process that can be used is AI/ML. By using AI/ML models to ascertain the quality of cocoons and yarn, practitioners can get scientific results. Data is also collected which can make these models stronger and reliant over a period of time. It can bring a massive change in the way prices are set, which is currently completely arbitrary and is heavily skewed towards traders and middlemen.

There has been a drain of talent from the sericulture sector due to incessant losses they have to cope with. With the inclusion of technology at the right intervals, the younger generation will be excited to join and take up sericulture. Coupled with enabling safer financial transactions via apps, logistics tracking, and easy access to scientific advisories, technology can be a massive boost to the Indian sericulture industry.

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