

A CONCEPT NOTE ON THE DEVELOPMENT OF SERICULTURE AND SILK INDUSTRY IN REPUBLIC OF KENYA

1. Introduction:

There have been significant efforts made by the Government of Kenya with the support of international and regional agencies for introducing and developing sericulture as an effective means for employment generation among the rural people. However, the sector is still in infant stage due to lack of value chain development. Silk industry has not taken root in Kenya due to lack of market linkages and very limited domestic consumption. Therefore, employment generation, entrepreneurship development and market linkage are the key issues to be addressed in the new strategy of the Government of Kenya. It is also to be noted that the sericulture sector in Kenya is highly fragmented and spread out and there is no organized system to cater to the post-harvest activities. Cooperative system has failed in the country earlier though some self-help groups do exist. Micro-finance has worked in horticulture but not tried in sericulture. As far as Govt. support for sustaining agriculture activities, including sericulture is concerned, it is observed that subsidy in Kenya is not an easy option. However, in the initial stage it is necessary to incentivise investments at farmer's level to enable the industry to reach a level of sustainability.

2. Some facts about the country

Kenya's economy is market-based, with few state-owned infrastructure enterprises, and maintains a liberalized external trade system. The country is generally perceived as Eastern and Central Africa's hub for financial, communication and transportation services. Economic prospects are positive with the GDP growth rate of 4-5%, due to expansion in tourism, telecommunications, transport, construction and recovery in agriculture. These improvements are supported by a large pool of English speaking professional workers. There is a high level of computer literacy, especially among the youth. The government, generally perceived as investment friendly, has enacted several regulatory reforms to simplify both foreign and local investment. An increasingly significant portion of Kenya's foreign inflows is from remittances by non-resident Kenyans who work in US, Middle East, Europe and Asia. Compared to its neighbours, Kenya has a well-developed social and physical infrastructure. It is considered as the main alternative location to South Africa, for major corporations seeking entry into the African continent.

3. Sericulture in Kenya

Kenya is one of the African countries where sericulture was introduced in 1904 but remained the business of a few individual farmers. In 1972 the Ministry of Agriculture through the Government approached the Japan International Cooperation Agency (JICA) to assist in establishing the viability of sericulture in Kenya. Sericulture was then introduced in Kenya by the Japanese Government in 1973 through a sponsored project. The Sericulture project was organized into 8 rural silk centers in the country, namely Kirinyaga, Nyeri, Thika, Machakos, Baringo, Homabay, Bungoma and Murang'a. From the Thika centre farmers received mulberry cuttings and bivoltine silkworm eggs, which are hatched and reared to produce silk cocoons. Research focusing on the suitability of local conditions for sericulture was conducted and it was established that sericulture was viable with good returns and Kenya has potential for the industry. The activity picked up for some years but later receded due to winding up of the project in 1982. The Ministry of Agriculture has continued with the work with very little external support. Presently some of the areas are still practicing sericulture include Turbo division (Sambut area), Laikipia district (Mutirithia area), Thika district (Kakuzi area), Murang'a district (Mathioya and Makuyu areas), Nakuru district (Lanet, Bahati and Elbugon areas) Nyeri district (Mweiga area) and Lamu district (Mpeketoni area).

In 1992, ICIPE (International Centre for Insect Physiology and Ecology) innovation Trust (IIT), an autonomous non-profit organization was mandated to initiate sericulture pilot project in Kenya. The principal objective was to establish and promote a community-based sericulture industry in the country through demonstration and training. It has also played an important role in supplying of silkworm eggs. This organization has continued its collaboration with the Ministry of Agriculture providing the necessary extension and technical back-up to the farmers. It has moreover, provided one of the marketing outlets for the small-scale silk production farmers.

ICIPE created facilities at its Institution for seed production, rearing, reeling, processing and weaving and organized till garment manufacture as a model under IFAD support. With the closure of the Project, ICIPE has reduced its sericulture activities, but still continue to maintain minimal activities and maintain and supply of basic seed to the National Sericulture Station at Thika and other African nations.

At present National Sericulture Station (NSS), Thika is the only station mandated for sericulture development. It gives a short training or exposure to agriculture extension staff in the areas where sericulture is practiced. Around 600 farmers are scattered all over Kenya. Around 250 boxes of eggs (boxes of 40 DFLs each) are produced at the station and distributed to farmers. Chawkie rearing is conducted at

NSS and third instar larvae are supplied to the farmers. The total cocoon production in the country was to the tune of around 640 kgs per annum. The station imports eggs from Japan and China besides getting some quantity from ICIPE and undertakes the multiplication of seed twice in a year. NSS has got three-end reeling machine which was supplied by Japan in 1970s. 10 staff members are trained under TCTP, of which 7 are posted at NSS. For the past two years, a total of 147 extension staff has been trained at NSS. NSS also conducts 2-3 day training programme for farmers. For the procurement of modern and more efficient reeling machine, the unit was allocated 5,000,000 KSH (1 US \$ = 96 KSH) during the financial year.

The current acreage under mulberry stands at 250 acres, spread over in above mentioned areas. More farmers have continued to engage themselves in sericulture either in groups or individually. The expected cocoon yield was 640kgs/acre/year.

4. Silk Markets in Kenya:

All the silk produced in Kenya is consumed locally, and there is a bigger export market. Major consumers are the cottage industries, which also use cotton and wool. Most of the weavers use handlooms to weave very beautiful fabrics, which are purchased locally by tourists and also sold abroad. A survey carried out showed that the finer silk fibre found in the shops is imported. This is an indication that there is market for silk fabrics and silk fibre in Kenya. The silk market outlets are listed below:

1. National Sericulture Station, Thika
2. International Centre for Insect Physiology and Entomology (ICIPE), Nairobi
3. Kakamega Forest Silk Market Centre, Kakamega
4. Pendeza Weaving, Kisumu
5. Spin Weave, Nairobi
6. Gramwa, Kiambu
7. Mwingi Silk Market Place, Mwingi
8. Arabuko Sokoke Silk Market Place, Malindi
9. Molo Weavers, Elburgon
10. Rivatex, Eldoret (Prospective large scale buyer)
11. Kimahuri youth group, Nyeri county
12. Sarah Jane, Nairobi

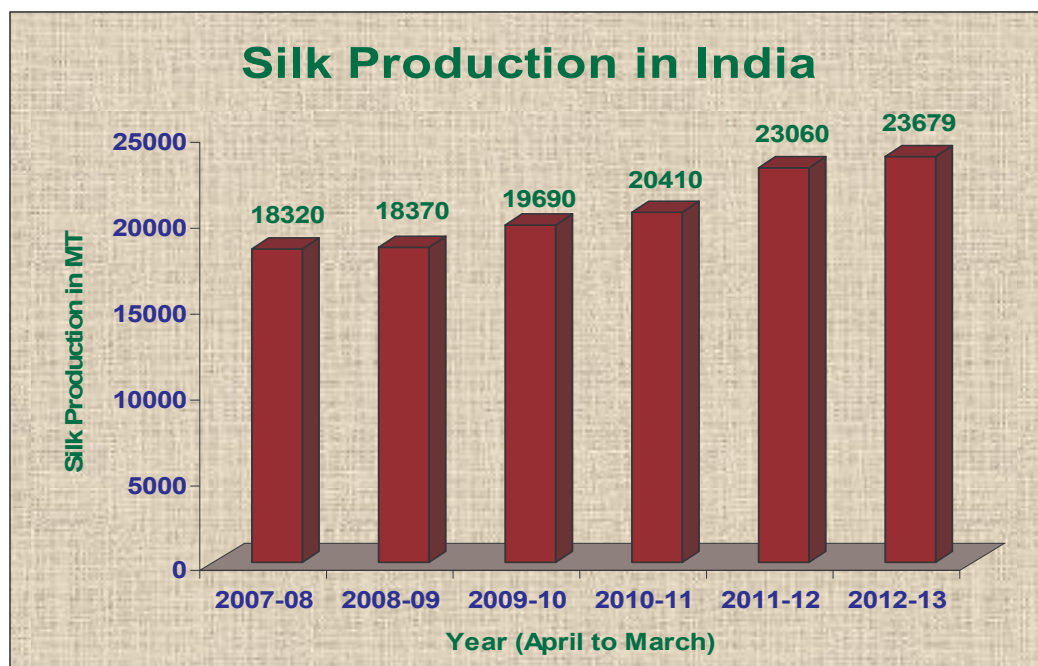
5. Prospects of Sericulture

Kenya provides excellent comparative advantage for sericulture and seri-business due to its suitable agro- climatic conditions, availability of leaves throughout the year, cheap labour, high quality cocoon yield, absence of any natural disease, etc. Many Government officials were trained in India under the Third Country Training Programme of JICA. The current policy of the Government is favourable towards cottage industry and hence local financial institutions have percolated to sericulture sector. Large scale private enterprise in this sector can be supported as the Government is focusing on agri-business and would encourage enterprises with public private partnership to build capacities. However, the challenges in sericulture sector are availability of silkworm seed, machinery for processing and human resources. If these areas can be supported externally it could be a viable sector for intervention.

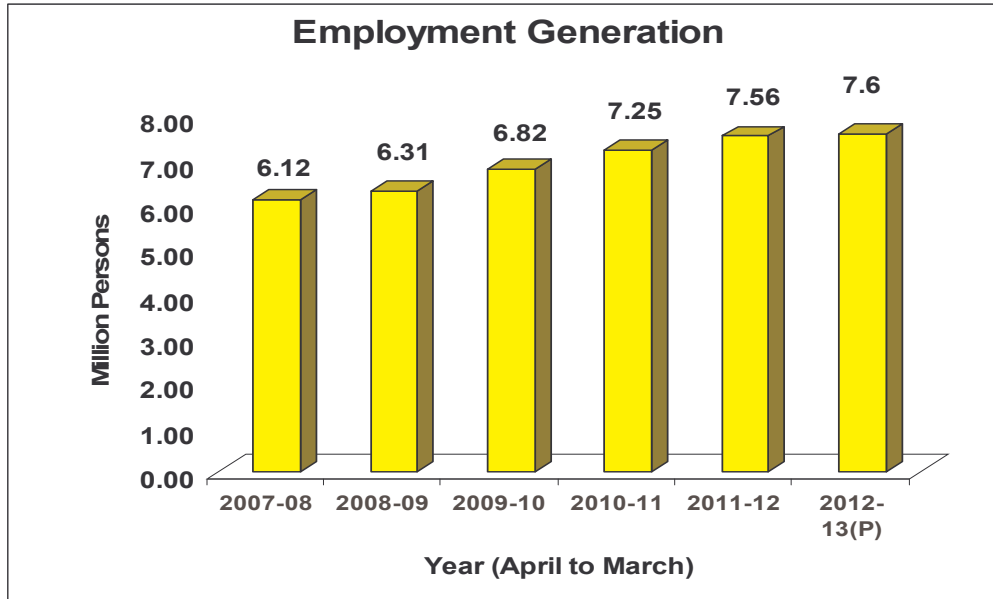
6. Sericulture – a Success story in India

Sericulture is practiced as a successful commercial rural enterprise in India especially among the women and down trodden people of the country. The country now produces about 24,000 MT of silk, which gives employment to about 7.6 million persons. The sericulture practiced in India can be considered as a model to replicate in various developing countries like to Kenya. The major facts about Indian sericulture are given in the following two graphs:

(a) Silk Production:



(b) Employment Generation



7. Observations

Kenya holds a good potential to produce around 2000 MT of silk every year, if the agro-climatic conditions of Kenya and land available is suitably utilized with proper investment planning and scientific method of cultivation, rearing and processing of silk. As per their assessment, out-grower system may not be very suitable for Kenya. But a private investment using a large chunk of land divided into smaller units given to local trained farmers for contract farming and rearing and a centralized processing unit would work well. It may be appropriate to start with a chunk of land available with the National Sericulture Station, Thika to be developed as PPP mode. It is also suggested that 2000 acre land available with the MORI University can be availed with some payback arrangement and benefit sharing with the local community.

Barring the northern and eastern regions, rest of Kenya is well suited for mulberry sericulture. There is plenty of arable land much of which is very little utilized. In addition, the country has acute unemployment problem which can be absorbed into silk industry, if organized well.

National Sericulture Station is the only dedicated institute for the development of silk industry in the country, but with acute shortage of technical manpower especially to

use and maintain the silk processing machinery and infrastructure. National Sericulture Station has been working with outdated primitive machinery. The looms on which silk is woven are also too primitive. The agriculture extension staff trained by this unit takes care of the sericulture activity across the country. Hardly there is any importance to the post-cocoon activities. Barring one or two, the rest of those trained in sericulture in India and Japan are continuing with the sericulture activities.

There has been lack of a focused approach to support the development of silk industry in the country. There is a need for a well structured organization to meet the needs of all the sectors of silk industry.

8. The way forward

The international Sericultural Commission has undertaken an in-house review of the sericulture development in African countries, including Kenya. The ISC observed that there is a high potential to develop sericulture and silk industry as an economically viable enterprise for the rural people in Kenya because of the three major inherent advantages; (1) availability of agriculture land and ideal climatic conditions suitable for mulberry cultivation and silkworm rearing, (2) availability of human resources, (3) the inherent inclination of the Kenyan people to attend the skilled jobs. The other external factors that are critical and needed for the sustainability for the industry could be imbibed to the sector by careful and meticulous planning at the Governmental level. On this occasion, the International Sericulture Commission can play a crucial role to revive and introduce the industry in the region not only by extending support at its command but also source resources and support from other multilateral agencies and organizations. The following are the strategic plans conceived by the ISC for the region:

- (1) A preliminary diagnostic study by an international expert group (comprising field visit and discussion with the concerned agencies) can be undertaken in the country to get first hand information on the present status of sericulture and the prospect of reviving the industry in an organized manner. Experts required for undertaking this study can be deputed by the ISC under the Volunteer Expert Programme. The report submitted this Group would be the Base Paper for strategizing sericulture development for Kenya in future.
- (2) A Meeting of the different agencies associated with the development of sericulture in the country can be organized by the Govt. of Kenya to enable ISC to make a presentation on the future course of action. ISC suggests that a Sericulture Development Programme can be taken up for the Kenya similar to the World Bank assisted sericulture Project taken up in India. This project

should be an exhaustive all round developmental programme to build infrastructure for R&D, seed production, extension, marketing, etc., capacity building for various disciplines, initial support to the farmers, creating various linkages, develop the three tier seed multiplication system and tie up with the market. The Project can be placed before World Bank or similar international organization through the ISC.

- (3) Once the different agencies are in agreement to go ahead with the proposal, ISC would make an initial proposal to the World Bank or a similar agency for funding the Project. The correspondence with the funding agency and other technical clarifications on the matter would be dealt by the Project Team of ISC.
- (4) After receiving a letter of initial consent is received from the funding agency, ISC would despatch a Project Preparation Team (s) to Kenya to visit the areas for preparing a comprehensive Sericulture Development Project. The locations for the requisite infrastructure, manpower requirements and linkages needed for the industry would be identified and be made an integral part of the project component. ISC would act as the interface between Govt. of Kenya and the funding agencies for providing technical information or the clarifications on the issues thereof.
- (5) The ISC can provide other support for the Project like; training, supply of materials and resources, consultancy, volunteers, etc.
- (6) In order to enable ISC effectively intervene in the sericulture development of the country Kenya may enroll as the Member country of ISC.
