



# Silk Association of India (SAI) NEWSLETTER

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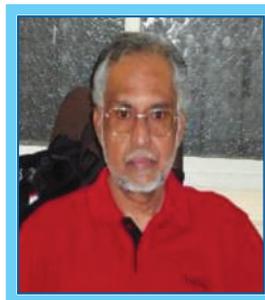
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## From the President's Desk.....

### COVID-19 Pandemic and Silk Industry



Ever since the COVID-19 pandemic has spread to many countries of the world, production, transport, trade related and employment activities have been badly affected and resulted in drastic downward trend in the international economy. India being an agrarian society, most of the agricultural activities have been badly affected and many people rendered jobless. Sericulture a major land-based enterprise and basically labor dependent is not an exception to this phenomenon. Silk industry and consumer markets were also severely hit across the globe. China, India, Italy, France, Brazil and

other major silk producing/consuming countries have been severely affected by the pandemic. Silk enterprise in almost all the major silk producing countries confronted unforeseen difficulties and challenges in fighting the pandemic, resumption of silk production, market transaction and other related activities which totally disrupted and paralysed the entire production value chain of the silk industry.

As a result of several measures taken by the Government to break the spreading chain such as physical distancing, ban on congregation of people, frequent travel, wearing mask, deceleration of lock down etc., many of the activities in production chain of silk have come to stand still. The important activities such as large-scale silkworm rearing, egg production, running of CRCs, cocoon and silk marketing etc. are facing problems. Because of all these, the estimated loss in production of raw silk is little more than 10%. Amid the COVID-19 crisis, both the Central and State governments considered sericulture activities related to production and marketing as 'essential services' and no restrictions of any kind were enforced in any state. During the pandemic period, Indian silk industry although went through a tough time, fortunately saved itself from a massive catastrophe with a predicted 10% decline in the raw silk production.

Realizing the grave situation created due to COVID-19 crisis, Silk Association of India (SAI) has also circulated the precautionary measures to be taken by all the stake holder involved in different activities of the industry to overcome the crises. Similarly, International Sericulture Commission (ISC) has conducted online survey through structured questionnaire with the main objectives of understanding the effects of COVID-19, Strategies adopted to mitigate the effects and broad frame work of strategic plan to be implemented to regain the loss etc. Based on the information received from different member countries, as well as from various organizations involved within the country, a comprehensive report entitled "Effect of on global silk industry and the way forward". According to the report, around 21.50 million people associated with silk industry in the world were affected in one way or the other way due to COVID-19 crisis. The reports also highlight the probable action plan to mitigate the ill effects of COVID-19 and also broad strategic action plan to help the industry to revive to the pre COVID-19 situation. In line with the above thinking, both Central and State Governments are extending the required

financial and other logistic support to help the affected stake holders besides covering all affected families under the other social support schemes of the governments. However, revival and normalization of the silk industry solely depends on the severity and the duration of the pandemic clubbed with the measures to be implemented by government.

- Government has correctly issued lockdown guidelines that exempted agriculture including sericulture activities and its supply chain from the normal restrictions imposed on other sectors. However, implementation problems related to labor shortages and price crashes should be addressed with suitable measures
- All the stake holders of Sericulture industry should be protected from the deadly coronavirus to the extent possible by mass testing in the cocoon markets, provisions to practice social distancing in all the places where sericulturists gather in large numbers and special vaccination drive for them and their families
- Improve the farmers access to the markets, especially in the new and far away places where government cocoon markets are not existing now
- Sericulturists and sericulture workers should be included in the governments 'Assistance Package' and other social

protection programmes addressing the crisis

- To sustain the demand for sericulture commodities, investments in key logistics must be increased. Moreover e-commerce, delivery companies and start-ups need to be encouraged with suitable policies and incentives
- Arrange soft loans at very low interest rate to the seed producers, chawki rearers, reelers and weavers and traders to meet their working capital expenditures.
- In view of the ban on imports from China, its is inevitable to gear up the production of import substitute bivoltine raw silk in the country to bridge the gap. Hence, encourage the production of bivoltine raw silk in the country through a 'National Silk Policy' on priority
- The government should think of extending required financial and other logical support to the stake holders
- Exploit the reverse migration of farm labor for the benefit of sericulture industry
- Conduct a survey to ascertain the effect of COVID-19 on different sectors of silk industry and identify the critical areas which needs support for strengthening/ revival.

**V. Balasubramanian**

## **Meeting with Hon'ble Sericulture Minister of Karnataka to discuss contemporary issues and release of SAI Publications**

**M. Ramachandra Gowda**

SAI is the only non-governmental organization in the country that is constantly endeavoring for the all-round growth of the entire silk industry, which needs further prominence and encouragement in the coming days. In this direction SAI regularly organizes interaction meets with the bureaucrats, policy makers and technocrats, involving all the stake holders to address the critical issues confronted by the silk industry. Besides, it also has plans to bring out publications useful to all those who are directly and indirectly involved in the development of silk industry. On these lines a function was organized on 26-02-2021 to release SAI's first publication '**Nanu mattu Reshme**' an autobiography written by Dr. S.B. Dandin, Vice- President of SAI, who has been closely associated with silk industry for the past 43 years. In this book he has outlined the services and achievements he has rendered to the silk industry during his tenure. Simultaneously, it was decided to use this opportunity to invite Hon'ble Sericulture Minister of Karnataka Sri R Shankar and bring to his kind notice the pro-development activities carried out by SAI, besides drawing



**Inauguration of function**

his attention for addressing the long pending issues of Karnataka's silk industry.

Function was inaugurated by Hon'ble Minister Sri R Shankar by lighting the lamp along with other dignitaries. Sri M Ramachandra Gowda, Secretary, SAI extended a warm welcome to all the



**Release of “Nanu mattu Reshme’**

dignitaries, press personnel and other participants. In his welcome speech he gave a vivid picture of the activities of SAI and expressed his pleasure for releasing SAI's first publication. He added that another 5-6 technical manuals are ready and will be released in due course.

Sri Umesh Katti, Hon'ble Minister of Karnataka said that he is delighted to release the first publication of SAI, '**Nanu mattu Reshme**' an autobiography written by Dr. S.B. Dandin. He recalled all the good deeds of Dr. S.B. Dandin, carried out during his tenure as Vice-Chancellor of Bagalkot Horticulture University. He congratulated the author for documenting all his experiences accrued over 40 years.

Dr. Manu Baligar, applauded the efforts of Dr.S.B.Dandin and said that his biography goes a long way in motivating others to contribute their might for the development of any sector wherever they are working. He also appealed others including the Honorary President, Sri C. Narayanaswamy, Ex M P to pen their biographies for the benefit of youngsters. Dr. Ashok Alur, said that Dr.S.B. Dandin is a farmer's friend and very popular among the farming community.

Smt. Savitha Amarshetti, Chairman, KSMB releasing SAI's Newsletter, said that she is happy that a non-governmental organization like SAI is actively involved in the development of silk industry across the country. She added that, she is aware of potentials of SAI and assured her full cooperation.

Sri D N Munikrishna, IPS (Retd), Director SAI and a sericulturist by himself narrated the problems faced by the stakeholders, especially the farmers as the price of cocoons fluctuate a lot very frequently. He on behalf of SAI submitted a 'Memorandum' to the sericulture minister and urged him to initiate necessary action and help the domestic silk industry. The 'Memorandum' submitted to the minister highlighted the following issues.

1. Revitalise and strengthen the Karnataka Silk Marketing Board (KSMB)
2. Increase staff strength and provide more funds for Research, Extension and Development activities



**Release of SAI Newsletter**

3. Launch a new comprehensive sericulture improvement project with the World bank aid
4. Prepare and implement new Karnataka State Silk Policy
5. Organize periodical meetings with State Sericulture Department, Central Silk Board and SAI. More important is the monthly Bivoltine Coordination Committee (BCC) meetings
6. Ensure quality linked uniform pricing for parent seed cocoons, commercial silkworm seed and chawki silkworms
7. Set up a well-equipped silk museum at Bengaluru
8. Declare route from Kolar to Mysore as State's Silk Tourism Route, develop silk tourist spots and promote the development of silk industry
9. Strict enforcement of accumulated Price Stabilization Fund (PSFA) solely for the development of silk industry
10. Procurement and distribution of quality disinfectants
11. Requesting to release immediately the pending bivoltine Chawki incentives
12. Appoint an efficient Commissioner for sericulture development and Director with a service of not less than three years, to the Department of Sericulture, GoK
13. Constitute a 'Task Force' to oversee the progress of Karnataka silk industry and get suitable advice from time to time
14. In the coming days there will be a huge demand for bivoltine silkworm seed and to meet it, motivate the private entrepreneurs (RSPs) through financial and technical assistance
15. Make Karnataka Silk Industry Corporation (KSIC) more functional and open its show rooms in all potential parts of the country
16. Provide office accommodation to SAI at Okalipuram or KSSRDI Thalagattapura and provide land for construction of its own building
17. SAI does not have any financial resources. Hence, provide annual grants of Rs 1 crore to make it work more efficiently

18. Actively utilize SAI services in all the developmental programmes carried out by the department

Responding to the above Sri R Shankar, Hon'ble Minister for Sericulture, Karnataka said that he will favorably consider all the issues and sort them out very soon. He added that his government is very proactive and willing to introduce many beneficial schemes which ensure socio-economic development of the grassroot level farmers. He continued to say that he will very soon arrange a meeting of all the stakeholders and the concerned officers to discuss the problems threadbare and seek remedial measures.

Responding to all the speakers, Dr. S.B.Dandin said that he is not finding words to express his heartfelt thanks to all the dignitaries who have spoken very high of him. He attributed all his success and achievements to his close associates, well-wishers and colleagues of different institutes where all he worked. He thanked Sri Umesh Katti, Hon'ble Minister, for advising him to write a book on his contributions to Karnataka Horticulture and appreciating his work as Vice-Chancellor Horticulture University, Bagalkot. Dr.S.B.Dandin thanked Sri R Shankar for gracing the occasion, inaugurating it and assuring all support to SAI. Further,

he thanked Dr. Manu Baligar for making it convenient to attend this function despite his busy schedule. He thanked him for kind words and requesting both the Ministers to use his services for the development of Sericulture and Horticulture in Karnataka. Similarly, he thanked Dr Ashok Alur his former colleague for speaking a lot about his book and appreciating his literary knowledge. He also thanked Sri C Naryanaswamy, Ex M P and President of the function for expressing his good feelings about him and the support extended. Sri Munikrishna IPS (Retd) Director SAI also received thanks. Sri M Ramachandra Gowda, Secretary, SAI was specially thanked by Dr.S.B.Dandin. he said that Sri Ramachandra Gowda is a guiding force behind all the activities of SAI.

Sri C. Naryanaswamy, Honorary President SAI, in his presidential speech congratulated Dr S.B. Dandin for his autobiography. He briefed about the role that SAI is playing to supplement the efforts of both DoS and CSB for the development of silk industry across the country and sought support from all the governmental agencies for accomplishing the goals of SAI.

Function was concluded with vote of thanks by Dr. E.Muniraju, Joint Secretary, SAI.

## SAI Proposes to adopt Doddaralagere village

**M.A. Khan**

Majority of the Indian sericulture villages still face constraints such as access to advanced technologies, financial assistance, availability of quality inputs and market information. In this background SAI proposes adoption of villages especially in backward regions for ensuring holistic and integrated development of the villages through expansion, strengthening and stabilization of sericulture activities. When this concept was mooted, DoS Karnataka authorities suggested Doddaralagere a backward village, which is located in Hoskote Tehsil of Bengaluru Rural district in Karnataka. The total geographical area of this village is 211.69 hectares with a population of around 800 dwelling in 184 houses as per 2011 census.

A preliminary meeting with the farmers and the departmental officers was held on 06-01-2021 to ascertain the sericulture status and its suitability for adoption. Besides 24 sericulturists, officers of DoS, Karnataka and SAI office bearers participated in the meeting. Sri Ramakrishna Reddy, Assistant Director of Sericulture welcomed the gathering. Sri M K Prabhakar, Deputy Director Sericulture, in his speech informed the participants that SAI proposes to adopt Doddaralagere subject to its suitability. Further, he added that 26 farmers of this village are cultivating mulberry in 17.28 hectares and half of the farmers (about 13) are already practicing bivoltine sericulture.



**Inauguration of the meeting**

Speaking on the occasion Sri Ramachandra Gowda, Secretary, explained about the establishment, objectives and activities of SAI. He added that it is SAI's intention to make it a bivoltine village by converting the remaining 13 farmers as bivoltine sericulturists and a survey will be taken up by the SAI members for ascertaining its suitability for adoption. Sri S V Kumar, Joint Director Sericulture giving details of the departmental schemes urged the eligible farmers to make use of them for expanding sericulture activities. Dr.B.S. Angadi, Director, SAI emphasized on the need for adoption of advanced technologies for increasing the production, improving the productivity and enhancing the quality of silk produce.

Responding to this many farmers spoke and highlighted the following problems faced by them and sought remedies.

To overcome the labour problem, mechanization facilities for the small and medium scale farmers

50% of the farmers are not rearing bivoltines for want of separate rearing house and sought financial assistance for construction of separate rearing houses

Providing false ceiling to reduce heat radiation and maintenance of optimum temperatures in the rearing houses during summer

To combat drought conditions, adoption of drum kit technology

for assured irrigation

Responding to the farmers Dr. E. Muniraju, Joint Secretary, SAI emphasized the need for improving the soil health for improving leaf quality and thus successful harvest of cocoons.

While concluding the meeting, office bearers of SAI assured the farmers of fulfilling their requirements and favorably considering adoption of Doddaralagere after taking up the matter in the next Executive Committee meeting of SAI.

Meeting concluded with vote of thanks by Sri Ramakrishna Reddy, Assistant Director of Sericulture.

## Chaos at Ramanagar government cocoon market: Private cocoon market picks up

### E. Muniraju and B.S. Angadi

During the 51st executive committee meeting of SAI held on 15-03-2021, hardships faced by the farmers at GCM, Ramanagar and cropping up of a private cocoon market 'Resha Mandi' were actively discussed. To get first-hand information on both the issues, a fact-finding team was organised. The team visited GCM, Ramanagara on 18-03-2021 and its findings are narrated below.

DoS, Karnataka introduced e-payment to the farmers recently in 6 major cocoon markets, in continuation to the e-auction that was introduced 6 years back. Although, all other markets efficiently adopted the new system without giving room for any complaints from both the farmers and the reelers, GCM, Ramanagar not only trailed behind, but also invited unwarranted complaints.

Although, only 10-15% of the stakeholders who opted for e-payment system were in the loop, at an average payment of 30-35 farmers was delayed every day. Team was informed that the accumulated pending amount was to the tune of Rs 65-70 lakh. Delayed payment is invariably and mostly to the farmers coming from far off places. Interactions with the market officers, farmers and reelers indicated the following reasons for e-payment delays.

Inefficiency and casual approach by the Deputy Director, GCM Ramanagara who is alone authorised to operate the online transactions

Not indicating the actual weight of cocoons for every individual lot and the amount due by the reelers. Only the estimated quantity is indicated and thus the reelers will not be aware of the actual amount due and hence there could be few hours delay in making the online transfers to their virtual accounts

Incomplete bank details of the farmers because of bank mergers led to change in account numbers, address, IFSC code etc,

Typographical errors while preparing detailed statements to submit to the bank like name, date, amount etc.

Death of account holders

Two or more days of continues holidays

The service providing bank HDFC Bank is well equipped and there is no inordinate delay from the bank side

***Based on the discussion and understanding ground realities, SAI team strongly feels that the inefficiency of the concerned market officer (Deputy Director), his vested interests and malafide intensions are the main causes for the e-payment delay.***

***However, DoS authorities took a decision to stop e-payment at GCM, Ramanagar with effect from 18-03-2021. Many stakeholders believe that SAI team's visit actually triggered this action.***

### Reelers Association views

On the above occasion, SAI team had detailed discussions with Sri Muhammed Muheeb Pasha, President, Silk Reelers Association, Ramanagara and Secretary, Sri. Habibulla. They opined that, there is absolutely no problem for reelers to adopt e-payment system provided that the;

- Actual cocoon weight is taken at the entry point only and indicated to the bidder for depositing the amount in their virtual accounts
- Elder-friendly gadgets are provided for easy operations, as the aged reelers are unable to operate mobile app
- High capacity WIFI routers are installed in the cocoons markets which will help hassle free participation in e-auction process

While, they opposed the establishment of private cocoon markets, they expressed their concern for the purchase of Multi-end reeling quality cocoons from markets and sending the hot air-dried cocoons to PR China through Nepal, Bangladesh and Sri Lanka by the middlemen. And the silk reeled there is exported back to India. Although, this needs authentication, such development could be detrimental to the domestic silk industry. Reelers association office bearers also requested SAI to impress upon the Government of Karnataka to establish High-tech cocoon market at Ramanagara only, against its proposal of Channapatna.

## Resha Mandi

Self-proclaimed 'The New Backbone of Indian Silk', 'Resha Mandi' is purportedly the Nation's 1st silk agritech startup digitizing India's silk supply chain. Sri. Mayank Tiwari, Sri. Saurabh Agarwal and Sri. Utkarsh Apoorva who ventured into this business say that with a plan to start something around the supply chain of natural fibres, researched the different aspects of the Handicrafts and Handloom industry to begin with. In the process they banked on harnessing technology to produce transparent, robust and inexpensive solutions for silk supply chain. They also claim that taking help from Central Silk Board (Ministry of Textiles), Reshamandi brought farmers together to give them market linkages. They also add that, digitized setup helped farmers fetch better price through scientific testings, precise advisory and reduced logistic costs.

With its corporate office at Bellandur, Bangalore has 80 staff members working for it with a network of 9 cocoon collection/sales centres spread over Karnataka. All these are located in the traditional belt except two (Hiriyur and Haveri).

### How do they transact cocoons?

- Staff of Reshamandi directly go to the farmer's house, negotiate the price and ask the farmer to bring cocoons to the nearby cocoon collection centre
- At the cocoon collection centre renditta of the lot is assessed and the rate is finalised scientifically. It was informed to us that a system is developed to find out the renditta which is patented
- No market fee or service charge is collected from both the farmers and the reelers
- Disinfectants required are supplied to the farmers
- Reelers come to the cocoon collection centre, negotiate the price and take the cocoons
- The value of the cocoons is transferred through e-payment to the bank account of the farmer within 24 hours
- For reelers credit will be extended up to 3-4 days



Team with Sri Mayank CEO of Resha Mandi

- Cocoons left unsold are hot-air dried and preserved for sale afterwards
- The silk produced by the reelers is purchased and sold to the weavers and like-wise the silk fabrics produced are purchased

They have a future plan to deal with all commodities in all stages of production chain in Sericulture starting from Chawki to fabrics.

### Legal stand

It was SAI was informed that, Resha Mandi is working under the provisions of Rule 54 of Central Silk Board Amendment Act, 2006, a copy of which is pasted at the entrance of the cocoon collection / sale centre which reads as: **“Trade and Commerce in of the products of Silk Industry:** The restrictions on the movement of the raw materials and products of Silk Industry contained in any law for the time being in force, shall not apply to storing, distribution, trade and commerce of the silkworm seed, cocoons including reeling cocoons, silk yarn and other products of the silk industry.”



Team at Ramanagara Resha Mandi

## Observations of SAI

**Based on the discussion and understanding ground realities the SAI team notes that;**

- Although, the company says that the silk commodity transactions are carried out as per the provision made under the Rule 54 of CSB Act, the legal standing is not clear. Neither the DoS nor CSB has granted written permission for the trade activities
- Certificate issued by the Department of Labour, Government of Karnataka in its certificate has indicated the nature of business as E-business which needs to be examined
- In the beginning, it is natural that a few farmers are attracted by instant online transfer of cost of cocoons, so called quality checks and other perks
- But in the long run as there is no hold by any of the governmental agencies, the farmers security is at risk. If something goes wrong in future, industry will be adversely affected
- Company has not created any infrastructure and it is functioning only in rented buildings of residential localities and at any time activities could be closed
- Concept of development of business linkages without written commitment to any of the stakeholders appears to be threatening in future
- Resha Mandis are not paying any market fee for the quantity of cocoons/silk sold / purchased by them. Market fee is not collected from Farmers, Reelers and silk traders
- SAI may have to take up the issue with both DoS and CSB to gather sufficient information about the authenticity of the company

## Could silk cocoons help to restore lost sight?

(Source - <https://qei.org.au/news/could-silk-cocoons-help-to-restore-lost-sight/>)

**B.S. Angadi and H.K. Basavaraja**

QEI researchers are currently investigating the role of a protein called sericin (taken from silk cocoons), as an antioxidant agent to hinder the harmful activity of unstable molecules in the eye.

QEI Chief Scientist Professor Traian Chirila, Senior Research Officer Dr Shuko Suzuki and Research Assistant Dr Onur Sakiragaoglu are a part of the first team of researchers to assess and report on the biological and clinical responses of various cells of the eye to the two proteins that make up the silk thread (fibroin and sericin). After much investigation, the researchers demonstrated that sericin is a more effective surface for the growth of the corneal and retinal cells.

Free radicals are unstable molecules that are extremely reactive and have the ability to chemically damage other molecules in the body. They are produced during the normal metabolism of cells in our body, however can be generated in excess due to exposure to harmful factors or when the body is suffering from disease.

A balance between free radicals and antioxidants is essential for a normal, healthy life. When the balance is disrupted, a condition called “oxidative stress” occurs, and the body can no longer control the damaging effects of the free radicals. Oxidative stress and the presence of free radical molecules have been associated with major degenerative eye diseases such as age-related macular degeneration (AMD), glaucoma and diabetic retinopathy.



AMD is one of the leading causes of blindness in the developed world. In Australia alone, one in seven people over the age of 50 show signs of early macular degeneration. Current treatments are aimed at slowing vision loss. However, there is no treatment available to reverse the toxic effects caused by oxidative stress on the retina and photoreceptor cells, and no current treatments are able to restore their function. Retinal cell transplants have thus far proven to be of limited value to patients, as the healthy cells are eventually exposed to the same high levels of oxidative stress once they are transplanted.

QEIF researchers discovered that solutions of sericin isolated from silk cocoons and added to cells grown in the laboratory had a significant antioxidative effect.

With this evidence, the QEIF research team are able to continue investigations using sericin produced by a mutant silkworm, created by Japanese scientists. The mutant silkworm produces

cocoons that contain only sericin, which means no extraction or purification steps are needed.

Currently, work is in progress to further monitor and assess the antioxidative effect of these membranes on the growth of retinal photoreceptor cells.

## Innovative technologies for self rearing & mountages for production of quality cocoons

**B.S. Angadi**

Sericulture farmers have adopted most of the advanced rearing technologies and increased their cocoon yields. However, farmers are not adopting 'Rotary Mountages' technology, owing to space constraints and requirement of more labours, although it is the most advanced and feasible technology for ensuring uniform cocoons with less defective cocoons. Farmers are more inclined towards labour and space saving 'Plastic Mountages'. It is well established that the cocoons spun using 'Rotary Mountages' are far superior to the cocoons spun on 'Plastic Mountages'. All the advanced technologies used in the rearing will not pay dividends until good mounting technologies are adopted. One of the methods of lowering the labour requirement and saving the space is to use a combination of two or three mounting methods.

Combined mounting technology advocated by CSRTI, Mysore between 2005 & 2007 when Dr S.B.Dandin was the Director of that institute is adopted by few innovative farmers of Tamil Nadu. In place of fixed shoot rearing racks, farmers use dismantling type of racks and the rotary moutange concept with modified the conventional moutange. At the time of spinning, the shoot rearing racks are dismantled and space for modified rotary mountages is



created. Cocoons spun on such mountages is of uniform quality and comparable to the Japanese type of 'Rotary Mountages' and giving more economic returns to the farmers.



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