



GOVERNMENT OF KARNATAKA

DEPARTMENT OF SERICULTURE

Annual Report

2022-23

[up to March - 2023]

Directorate of Sericulture
Bengaluru

Annual Report of the Department of Sericulture (2022-23 upto to March -2023 end)

1.0 Introduction

Sericulture is the rearing of silkworms coupled with mulberry cultivation and reeling of cocoons for the production of raw silk which is being practiced in the State for the last 250 years. This is a Farm-based, labour intensive and commercially attractive economic activity falling under cottage and small scale sector. Sericulture has been successful in eradication of rural poverty, resulting in social as well as economic development, mainly in rural areas. Importance has been given in the successive Five Year Plans to develop sericulture in the State. Sericulture once considered as a subsidiary occupation in the past is now being considered as an independent main avocation.

- 1.1 During 2022-23 the estimated mulberry raw silk production in India was about **27630 M.ts.** out of which **11823 M.ts** mulberry raw silk was produced in Karnataka, contributing **43%** to total mulberry raw silk production and the state continues to be the premier state in the production of mulberry raw silk in the country.

2.0 Aim and objectives of the Department:

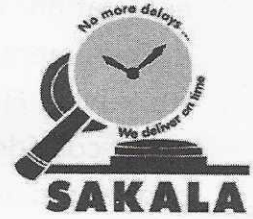
The Department has been playing an important role in the development of sericulture activities in the State. The following are some of the important services rendered by the Department:

- 2.1 Providing technical guidance and training in sericultural activities viz, mulberry cultivation, silkworm rearing and silk reeling etc.,
- 2.2 Multiplication and supply of high yielding mulberry varieties and silkworm races developed by the Research Institutes to sericulturists.
- 2.3 Maintenance of basic seed material and organizing supply of disease free layings (DFLs) to the sericulturists.
- 2.4 Providing extension, chawki rearing and disease control services.
- 2.5 Liasoning with financial institutions to obtain loans for sericulture activities to sericulturists and reelers.
- 2.6 Creating market facilities for sale of cocoons and raw silk.
- 2.7 Motivating to adopt improved and proven technologies to bring down cost of production by increasing production and productivity of quality cocoons and gradable silk.
- 2.8 Strengthening sericulture research and development activities.

2.9 Providing subsidy for installation of Automatic Reeling Machines (ARM) to produce international grade raw silk.

2.10 6, different services of the Department are included under "Sakala" The details are as below. During 2022, 10312 application are received in which 10354 applications are cleared.

1. Issue of pass books to sericulturists
2. Subsidy for sericulturists / reelers
3. Technical information related to sericulture
4. Technical information for mulberry cultivation and silkworm rearing
5. Providing technical guidance for post cocoon activities
6. Issue of of License to silk reelers



2.11 The Department has identified 11 services under "Seva Sindhu". The details are as below.

1. Issue of pass books to sericulturists
2. Subsidy for sericulturists for New mulberry plantation
3. Subsidy to Sericulturists for Drip irrigation
4. Subsidy to Sericulturists for rearing equipments
5. Subsidy to installation of Generators
6. Subsidy to installation of Heat Recovery Units
7. Subsidy for Reeling Equipments
8. Providing Technical information related to Sericulture
9. Providing Technical information releaed to mulberry cultivation and Silkworm rearing
10. Providing technical information related to post cocoon technologies
11. Issue of of License to silk reelers



3.0 Budget and Expenditure

The annual plan outlay under State sector and District sector for the year 2022-23 is as below.

(Rs.in lakhs)

Sl. No	Year	Allocated budget	Revised budget	Budget Released	Expenditure	% for the released budget
State sector						
1	2022-23	28718.200	26801.070	25207.145	23715.382	94
2	2021-22	28538.670	26515.620	26470.960	25406.314	96
District sector						
1	2022-23	9857.760	10049.900	9786.280	9204.730	94
2	2021-22	9725.800	9898.730	9875.980	9339.040	95

4.0 Physical Target and Achievement:

Raw silk target and estimated production details are as below. (MTs)

Sl. No	Details	2022-23			2021-22		
		Annual Target	Estimated Prodn.	% Achvt.	Annual Target	Estimated Prodn.	% Achvt
1	Cross Breed	9800	9144.617	93	9600	8752.775	91
2	Bivoltine	3200	2678.444	84	3000	2438.364	81
Total		13000	11823.060	91	12600	11191.139	88

5.0 Area Under Mulberry :

Target for new mulberry plantation and the achievement are as below. (Hectares)



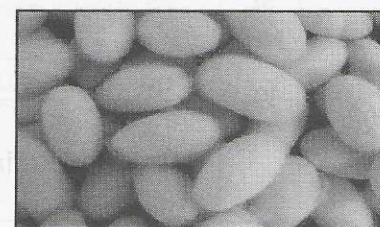
Year	Mulberry Plantation target		
	Annual Target	2022-23	
		Achievement	% Achievement
2022-23	6500	7684.64	118
2021-22	6500	5822.25	90

Cumulative total area under mulberry was **108018.51** hectares at the end of March 2022 and during 2022-23, new mulberry was planted in **7684.64** hectares, 3076.93 hectares was uprooted. Total area under mulberry was **112658.19** hectares upto the end of March -2023.

6.0 Seed Areas:

6.1 Mysore Seed Area:

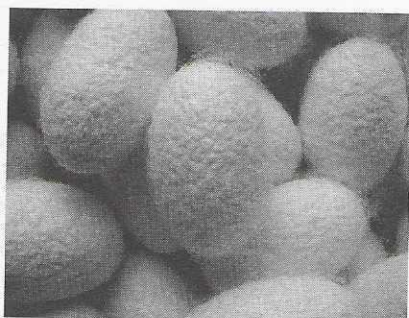
In Mysore Seed Area, Magadi taluk in Ramanagar District, Kunigal taluk & Hebburhobli of Tumkur taluk in Tumkur District are included. During 2022-23 progress details are as follows.



Sl.No	Details	Unit	2022-23	2021-22
1	Area under mulberry	Hectare	1158.18	1157.22
2	Villages	Nos.	474	474
3	Sericulturists	Nos.	5140	5147
4	Brushed DFLs (Chawki)	Lakhs	14.012	13.366
5	DFLs Harvested	Lakhs	12.598	12.815
6	Quantity of cocoon production	MTs	554.814	539.721
		Crores	44.852	44.777
7	Quantity of cocoon transacted for seed	MTs	344.629	313.700
		Crores	27.363	25.323
8	Quantity of cocoon transacted for Reeling	MTs	210.185	226.021
		Crores	17.489	19.453
9	Quantity of cocoons fit for seed but sold for reeling on want of demand	MTs	207.411	374.747
10	Bonus paid as Rs.175/-kg	Rs.in lakhs	462.742	550.807
11	Average yield for 100 DFLs	Kg.	44.00	42.00
		Nos.	35602	34941

Rs.29.695 lakhs incentive was paid for 3,95,640 Dfls during 2022-23 as chawki incentive for P1 pure Mysore race at the rate of Rs.750/- for 100 Dfls.

6.2 Bivoltine Seed Area:



31 taluks of 7 Districts in the state are identified to produce bivoltine seed cocoons. Hassan, Anekal, Tumkur and K.R.Pet are the seed areas which produce maximum quantity of BV seed cocoons. CSR-2race is mainly reared in bivoltine seed areas. CSR-2, CSR-4, FC1 and FC2 races are also reared for the production of bivoltine hybrid dfls under bivoltine programme.

During 2022-23, progress details are as follows:

Sl. No.	Details	Unit	2022-23	2021-22
1	Area under mulberry	Hectare	4018.35	3647.47
2	Sericulturists	Nos.	6181	5637
3	DFLs Chawki (inclusive of non-seed area)	Nos.	7.877	6.818
4	DFLs Harvested	Lakhs	6.941	6.394

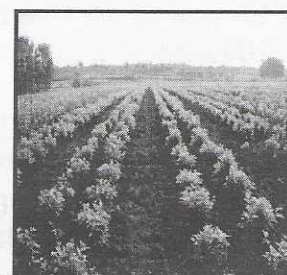
5	Quantity of cocoon production	MTs	370.20	347.11
		Crores	24.06	22.56
6	Quantity of cocoon transacted for seed	MTs	245.00	213.07
		Crores	15.92	13.849
7	Quantity of cocoon transacted for Reeling	MTs	125.20	134.04
		Crores	8.14	8.712
8	Quantity of cocoons fit for seed but sold for reeling on want of demand	MTs	109.665	143.962
9	Incentive paid as Rs.175/-kg	Rs.in lakhs	241.20	251.99
10	Average yield for 100 DFLs	Kg.	53.00	54.00
		Nos.	34668	35284

During 2022-23, **Rs.10091.369** lakhs incentive was paid for **1009.137** lakhs Dfls as chawki incentive for Bivoltine hybrid race at the rate of Rs.1000/- for 100 Dfls.

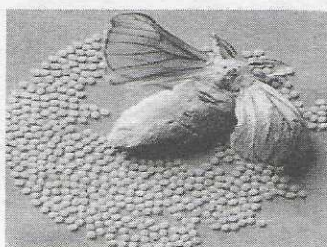
To encourage seed farmers for continuous supply of seed cocoons, productivity and quality based seed cocoon incentive of **Rs.926.197** lakhs was paid during 2022-23, at the rate Rs.70/ 120PerKg for Mysore and Bivoltine seed cocoons.

7.0 Silk Farms:

46 silk farms out of 89 silk farms are functional during the reporting year. **13.249** lakhs of basic seed cocoons were produced during 2022-23 in these silk farms as against the production of **13.885** lakhs during 2021-22



8.0 Production of Silkworm eggs:



During current year, 34 State Government Grainages, 6 NSSO grainages under Central Silk Board and 142 Private Registered Seed Producers were engaged in the production and distribution of silkworm layings to the sericulturists. Out of 34 Government Grainages, 15 are in Mysore Seed Area which produce and distribute Pure Mysore layings and 3 grainages produce and distribute pure bivoltine layings. The remaining grainages are functioning in non-seed area. During 2022-23, a total quantity of **1194.823** lakhs of layings were produced in all these Grainages including Private Registered Seed Producers as against **1082.557** lakhs layings produced during 2021-22.

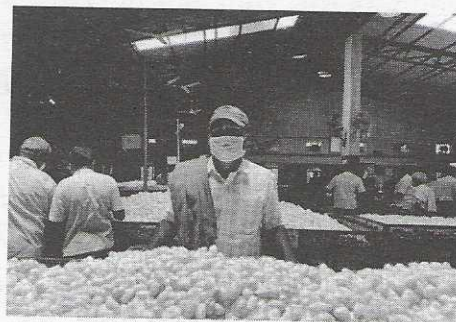
9.0 Cocoon Production:

9.1 Estimated cocoon production is as below.

Details	2022-23			2021-22		
	Annual Target	Estimated Production	% Achvt.	Annual Target	Estimated Production	% Achvt.
Cross Breed	70560.000	65689.902	93	69840	62857.246	90
Bivoltine	20800.000	17654.875	85	20150	16064.549	80
Mysore Race		554.814		705	539.721	77
Total	91360.000	83899.591	92	90695	79461.516	88

9.2 During 2022-23 the average cocoon price per kg is Rs.571/-which is Rs. 170/- higher compared to the price of Rs.401/- during 2021-22

9.3 e-auction system is already implemented in Kollegala, Ramanagara, Shidlagatta, Kolar, Kanakapura, Channapatna, Vijayapura, Malavalli, H.Cross and Chintamani Government cocoon markets for facilitating transparency in cocoon transaction and to provide competitive price. During 2022-23, e-auction systems Implemented in Srinivasapura and Kyalanuru cocoon markets. At present, more than 95% of cocoons are being transacted in e-auction.



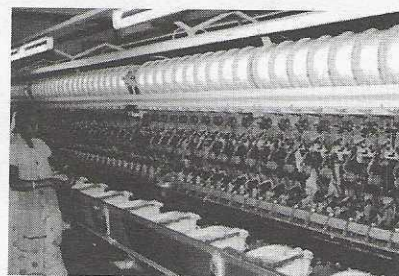
9.4 Cocoon testing laboratory buildings have been constructed at Ramanagara, Kollegala, Shidlagatta, Kolar, Kanakapura, Channapatna and Chintamani Government cocoon markets. Grading of cocoons has already been started at cocoon markets in Kanakapura, Kollegala and Channapatna on experimental basis.

9.5 e-payment systems is started at Ramanagara, Kolar, Shidlagatta, Kanakapura, Chintamani, Vijayapura, Channapatna, Kollegala, Chikkaballapura and Mysore Government cocoon markets. 100% of e-payment is implemented in Kolar,

Sidlaghatta, and Vijayapura. In the remaining markets, action is being taken to implement e-payment. In this system, the value of cocoons is directly transferred to bank accounts of the farmers.

10.0 Raw Silk Production:

10.1 The target of raw silk production is 13.000MTs. including 3,200 M.ts. of Bivoltine silk during the year 2022-23. The estimated total silk production was 11823.060 Mts. of which 2678.444 Mts. was Bivoltine silk.



10.2 The average raw silk prices per kg are as below:

		(in Rs.)	
Sl.No	Details	2022-23	2021-22
1	Multiend	4434	2610
2	Automatic Reeling Machine (ARM)	3257	2351
3	Filature	4372	2438
4	Charaka	3433	1877
5	Dupion	2674	1688

11.0 Government Silk Filatures:

Government Silk Filatures were established in the State at Kollegal, Mambally, Santhamarahally and Chamarajanagar in Chamarajanagar District and at Tholahunase in Davanagere District. Tholahunase Silk Filature is an independent small semi-automatic unit established under the World Bank Scheme. These Filatures were non-functional during 2015-16 to 2022-23.

12.0 Co-operative Societies:

There are 94 Silk Co-operative societies in the State. Out of these, 44 were modified as Sericulturists and Farmers Co-Operative Societies. The main objective of these Co-operative Societies is to provide crop loan with 0% interest for sericulturists and farmers from the Co-Operation Department through District Central Co-operative Banks of the respected districts. Out of remaining 50 Co-operative societies, 20 are other Silk Co-operative societies involved in sale of silk and silk by-products and are not covered under Silk Reelers and Industrial Co-operative societies, 30 are Silk Reelers / Reelers Co-Operative Societies. Out of these, 20 are working, 03 are defunct and 07 are liquidated. Karnataka State Silk Co-operative Marketing Federation is one among these.

13.0 Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA):

Under MGNREGA, priority has been to provide employment and for creation of assets which helps the rural people in improving their economic status. Mulberry garden development programmes like nursery, plantation establishment and its maintenance, tree plantation and its maintenance were implemented for providing additional benefits to the rural farmers depending on sericulture. The entire labour cost for the above programmes is borne under MGNREGA.

By implementing these activities, not only area under mulberry increases but also soil fertility especially soil health is improved, resulting in enhanced production of quality cocoons improving socio-economic status of the sericulturists.



During 2022-23, **13,200** works & financial target of **Rs.121.38** crores was proposed (**Rs.12.39** crores convergence amount from Department and **Rs.108.99** crores NREGA fund). **13200** works were initiated and total expenditure was **Rs.69.91**crores. (**Rs.6.27**crores from department and **Rs.63.64** crores from NREGA) and **17,88,117** mandays were created.

Details of expenditure are as below:

SL. NO	Particulars	2022-23		2021-22	
		Phy (Acres)	Fin (lakhs)	Phy (Acres)	Fin (lakhs)
1	Raising of Nursery	160	129.78	277	259.85
2	Mulberry Plantation	8423	4403.72	8492	4677.22
3	Department Fund (Convergence)		626.63		105.08
4	2 nd and 3 rd year maintenance of Mulberry Garden	2044	1607.30	6034	5027.48
5	Tree Plantation	258	121.12	804	535.57
6	2 nd and 3 rd year maintenance of Tree Mulberry Garden	143	102.95	479	267.40
	Total	11028	6991.50	16086	10872.60
	Person days generated	1788117		3368366	

14.0 Sericulture Development Programme

In this Scheme, Incentive/subsidies are being provided for beneficiary oriented important programmes like subsidy for construction of independent rearing houses, construction of mounting hall, disinfectants, mulberry garden maintenance supply of



equipments/silkworm rearing equipments, establishment of CRC. These are helpful in quality mulberry leaf production and cocoon production. Incentive/ subsidies are being provided for post cocoon activities establishment of Automatic Reeling Machines, Multi End Reeling Machines, Upgradation Cottage Basin Units, Pupae Processing Units and Reeling Accessories also. During 2022-23, the allocation is Rs.7833.00 lakhs and the expenditure for the end of March-2023 is Rs.7727.129 lakhs.

Details are as below: (Rs.in lakhs)

Sl. No.	Details	Allocation	Expenditure
1	Subsidiary Expenses(015)	100.000	80.555
2	Other Expenses(059)	800.000	792.476
3	Subsidies(106)	5133.000	5088.251
4	Special Component Sub Plan(422)	1250.00	1224.16
5	Tribal Sub Plan(423)	550.000	541.683
	TOTAL	7833.000	7727.129

15.0 Balance amount under as per SCSP & TSP Act 2013

During 2022-23, Subsidies for silkworm rearing equipments programme is provided under this and Rs.5.670 lakhs expenditure is incurred against the allocation of Rs.5.700 lakhs.

16.0 Programmes implemented by Price Stabilization Fund:

In this Scheme, following programmes are being implemented during 2022-23.

- Other Expenses** - Maintenance of Departmental Institutions like Government Cocoon Markets & Silk Exchanges being implemented under this Rs.649.501 lakhs expenditure was incurred against the allocation of Rs.660.000 lakhs.

- b) **Building Expenses** - Maintenance works of **55** Cocoon Markets & 10 Silk Exchange buildings being implemented under this **Rs.71.760** lakhs expenditure was incurred against the allocation of **Rs.75.000** lakhs.
- c) **Financial Assistance/Relief** - Financial Assistance for Invention of New Technologies will be provided to Karnataka State Sericulture Research & Development Institute, Thalaghattapurabeing implemented under this **Rs.10.000** lakhs expenditure was incurred against the allocation of **Rs.10.000** lakhs.
- d) **Grant-in-Aid-General-** Grants-in-Aid to Karnataka Silk Marketing Board to meet the Administrative expenses of the Board being implemented under this **Rs.300.000** lakhs expenditure was incurred against the allocation of **Rs.300.000** lakhs.
- e) **Subsidies-** **Rs.2000.00** lakhs provided to “Bonus to Mysore Seed Cocoons, Incentive to Bivoltine Seed Cocoons, Incentive to Seed Cocoons based on production & productivity, Cocoon Protection Price/Cocoon Incentive, Incentive to ARM BV Silk, 50% Interest subsidy to loan availed by Women for Sericulture activity, **90%** subsidy for Pierced Cocoons used for making handicrafts, Pledge loan to Reelers, Post Cocoon Sector - Subsidy to Reeling equipments like Boiler, Solar Water Heater, Generator/Solar Power Generator, Heat Recovery Unit, Installation of Reeling Machinaries like Improved Cottage/Filature basin, Italian Cottage/Filature basin, Subsidy for Construction of Reeling Sheds, Working Capital to Reelers with 0% Interest” under this. **Rs.3472.793** lakhs expenditure was incurred upto end of March 2023.
- f) **Major Works** – An allocation of **Rs.1015.000** lakhs have Provided for repair works and Maintenance works, repair works of 55 Cocoon Markets and Silk Exchanges on expenditure of **Rs. 424.822** lakhs have been incurred at the end of March 2023

In the year 2022-23, a total allocation of **Rs. 7110.00** lakhs have been provided and the expenditure for the end of March-2023 is **Rs. 4928.876** lakhs Details are as below:

(Rs.in lakhs)

Sl. No	Details	Allocation	Expenditure
1	Other Expenses(059)	600.000	649.501
2	Building Expenses(071)	75.000	71.760
3	Financial Assistance/Relief(100)	10.000	10.000
4	Grant-in-Aid-General(103)	300.000	300.000
5	Subsidies(106)	5050.000	3472.793
6	Major Works(139)	1015.000	424.822
TOTAL		7110.000	4928.876

17.0 Civil Works:

Major Works - During 2022-23, expenditure incurred was Rs.93.999 against the allocation of **Rs.94.00** lakhs for the maintenance, repairs and new works of the departmental buildings.

SCP & TSP - During 2022-23 under SCP & TSP, **Rs.6.000** lakhs expenditure was incurred against the allocation of **Rs.6.000** lakhs for providing subsidy for the construction of rearing houses.

NABARD Works Scheme:-An allocation of **Rs.46.150** lakhs have been provided under this scheme for the year 2022-23 and the expenditure was **Rs. 46.148** lakhs

18.0 Balance amount under as per SCSP & TSP Act 2013:

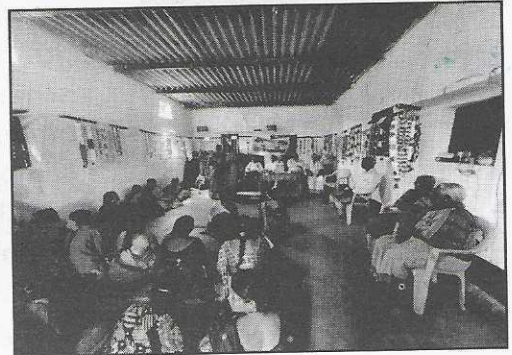
During 2022-23 under TSP, expenditure incurred was Rs. **0.009** lakhs upto end of March 2023 against the allocation of **Rs.0.010**lakhs.

19.0 State Sericulture Industries /Silk Industries (Textiles)

During 2022-23, **Rs.9999.865** lakhs expenditure was incurred upto end of March 2023 against the allocation of **Rs.10645.590** lakhs, for the maintenance, salaries and allowances of officers and staff of the Institutions under State Sericulture Industries. **Rs 907.686** lakhs expenditure was incurred upto March 2023 against the allocation of **Rs.1060.620** lakhs, for the created posts, maintenance, salaries and allowances of officers/staff and workers of the Institutions/industries under the scheme of silk industries (Textile industries).

20.0 Women Development Programmes:

Earmarking of 1/3 of the total budget allocation of the beneficiary oriented schemes for women development programmes is continued in this year also. Preference was given for women in all the beneficiary oriented programmes. During 2022-23, **Rs. 2445.114** lakhs is provided for women beneficiaries under various schemes under Gender Budget.



Central Sponsored Schemes:

21.0 Pradhana Mantri Krishi Sinchayee Yojana (PMKSY)

In the Budget 2022-23 the Government Provided **RS. 906.00** lakhs under Pradhana Mantri Krishi Sinchayee Yojana (PMKSY) & released to Nodal Department, Horticulture (TO Single Nodal Agency Account) The fund



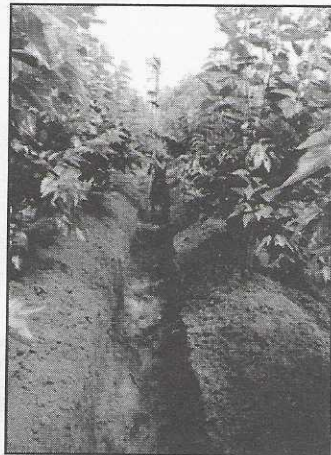
has been released to the Department Of Sericulture through Department of Horticulture to implement said scheme. Subsidy for installation of drip irrigation units is provided under this Project. During 2022-23, **Rs.1561.626** lakhs expenditure is incurred against the allocation of **Rs.1789.704** lakhs for providing subsidy amount to drip irrigation covering **1911** hectares.

Central Sector Schemes

22.0 Silk Samagra:

Central Sector Silk Samagra Scheme is implemented by the Department with the financial Assistance of Central Silk Board. Beneficiary –oriented Programmes like subsidy for construction of independent silkworm rearing house, disinfectants, supply of Mulberry garden maintenance equipments/silkworm rearing equipments, establishment of Chawki Rearing center (CRC), establishment of Automatic Reeling Machines, Multi End Reeling Machine, Upgradation of Cottage Basin Units, Pupae Processing Unit, have been implemented under the scheme. During 2022-23 amount released is **Rs.7149.828** lakhs & expenditure incurred as on March 2023 is **Rs.7149.828** lakhs

23.0 Rashtriya Krishi VikasaYojane:



Centrally sponsored Rashtriya Krishi vikasaYojane is being implemented by the Department since 2011-12. During 2021-22, the main activities under this programme are; Package for enhancement of soil health for quality and productivity, Assistance for trenching /mulching in mulberry gardens for mysore / bivoltine seed farmers, providing subsidy for purchase of bamboo mountages, strengthening and upgradation of P2 silk farm, K.P.Doddi, Ramanagara, installation of mini cold storage at basic seed farm bilidevalaya, strengthening and upgradation of P1 Grainage, Kuduru and Magadi Taluk, installation of incubation chamber at P1 grainage Magadi and Kuduru Govt. Grainage. Reshme Samrudhi Yojane for doubling the income of farmers.

During 2021-22 of Rs.891.00 lakhs was released. Out of this, an expenditure of Rs.733.967 lakhs was incurred upto January-2022.

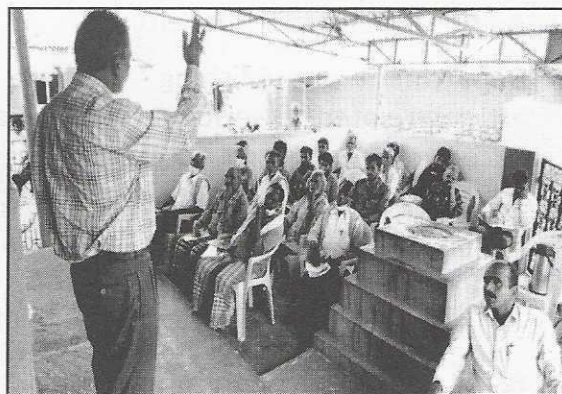
24.0 Credit Programme:

Commercial Banks, Regional Rural Banks and Primary Co-Operative Agricultural Rural Development (PCARD) Banks and Co-operative Land Development Banks are providing loans to sericulturists and reelers for sericultural activities. During

the year 2022-23 for the target of **Rs.994.00** lakhs, the achievement is **Rs.463.71** lakhs (47 %). Loans were sanctioned to sericulturists and Silk reelers for mulberry plantation, construction of rearing houses, purchase of rearing equipments and drip irrigation and installation of reeling units.

25.0 Human Resource Development / Training :

25.1 The Department has six Sericulture Training Institutes. These training institutes impart periodical training to sericulturists, reelers, chawkirearers, entrepreneurs and licensed seed preparers. They play an important role in propagating new technologies developed by the Research Institutes through demonstration. In addition, refresher training is also provided to the technical staff of the department



to update their technical knowledge. Handicraft training is being provided to the women beneficiaries in preparation of bouquet, garlands and greeting cards etc., by using pierced/cut cocoons. Separate hostel with boarding facility is provided for women participants.

In addition to these, training is being imparted for sericulturists in Government Silk Farm, Hirebagewadi in Belagavi district and women demonstration farm in Bidar district. Training programmes are being conducted at Karnataka State Sericulture Research and Development Institute (KSSRDI) also.

During the year 2022-23, various training programmes are conducted and the progress is as below:

Sl.No	Details of training	No. of participants
1	Workshop for officers	90
2	Refresher training to technical staff	358
3	Cocoon Handicrafts training	100
4	One day training to farmers in field level	8864
5	Reelers training	60
Total		9472

Apart from the above, **2570** sericulturists were trained at the village level in **46** bivoltine clusters of 22 districts by the progressive bivoltine farmers under "Farmers to Farmers Training Programme".

25.2 Training programmes are also being conducted for the technical Officers : staff of the Department in different Research Institutes like Karnataka State Sericulture Research and Development Institute (KSSRDI), Thalaghattapura, Silkworm Seed Technology Laboratory (SSTL), Kodathi, Central Sericulture Research and Training Institute (CSR&TI), Mysore and Central Silk Technological Research Institute (CST&RI), Bangalore regarding recent technologies brought out for sericulture development.

The Departmental Officers/staff are also deputed for special trainings conducted by Extension Education Institute and MANAGE, Hyderabad, and IIPA, New Delhi in coordination with State centre for e-Governance, State Administrative Training Institutes, Sri Abdul Nazeer Sab Rural Development and Administrative Training Institute, Mysore and District Training Institutes, Fiscal Policy Institute, EMPRI Bangalore.

26.0 Audio – Visual and Publicity:

Department is publishing “Reshme Krishi”, a bi-monthly magazine in which articles related to sericulture activities, new technologies, seasonal and weather based suggestions, success stories of stakeholders of sericulture industry, scientific and useful information, cocoon and raw silk prices are being published.

Publicity programmes regarding developmental activities, technologies, various schemes and programmes of the department through different media were conducted during 2022-23.

Rs.14.34 lakhs expenditure was incurred for printing and publicity during 2022-23

27.0 Sericulture Farmer Producer Organization (FPO)

A scheme was announced to establish 750 Farmers Producer Organizations during the year 2021-22 to celebrate 75th year of Independence. Target was given to establish 45 Farmers Producer Organizations in coming 3 years. Target to establish 15 Farmers Producer Organizations was given in the 1st year. During the year 2022-23, 20 Farmers Producer Organizations have been registered.

Scheme implementation period is three years & project cost is **Rs.29.784** lakhs for each Farmers Producer Organization. Watershed Development Department is the Nodal Department for various Departments implementing the Project. During the year 2022-23, **Rs.200.88** lakhs were released for the FPOs through Watershed Development Department for establishing and maintenance of Amruth FPOs. Expenditure incurred was **Rs.198.26** lakhs.

28.0 Main Achievements during 2022-23

28.1 Mulberry area was **108018.51** hectares during 2021-22 it was increased to **112658.19** hectares during 2022-23 with an increase of **4639.68** hectares. (4.3% increase)

28.2 **16065** M.Ts of bivoltine cocoons and **2438** MTs of bivoltine silk were produced during 2021-22. In 2022-23, **17654.875** M.Ts of bivoltine cocoons and **2678.444** M.Ts of bivoltine silk was produced.

28.3 e-auction system is being implemented in Kollegala, Ramanagara, Shidlagatta, Kolar, Kanakapura, Channapatna, Vijayapura, Malavalli, H.cross, Srinivasapura, Kylanuru and Chintamani, for facilitating transparency in cocoon transaction and

to provide competitive price. At present, more than 95% of cocoons are being transacted through e-auction.

28.4 e-payment system has been started at Ramanagara, Kolar, Shidlagatta, Kanakapura, Chintamani, vijayapura, Channapatna, Kollegala, Chikkaballapura, SantheyMarahalli, Malavalli land Mysore Government cocoon markets. In this system, 100% value of cocoons is directly transferred to bank accounts of the farmers. e-payment will be introduced in the remaining markets.

28.5 Cocoon Testing laboratories are constructed in Ramanagara, Kollegala Kolar, Shidlagatta, Kolar, Kanakapura, Channapatna, and Chithamani Cocoon Markets.

Cocoon grading has been started in Kanakapura, Kollegala and Channapatna Government Cocoon Markets.

KARNATAKA STATE SERICULTURE RESEARCH AND DEVELOPMENT INSTITUTE

Annual report (2022-23)

Karnataka State Sericulture Research & Development Institute is a R&D institute established by the Government of Karnataka (in 1981) with the mandate to provide technical solutions for the development of sericulture in the state. The Institute works jointly with the Department of Sericulture, GOK, for the development of sericulture industry.

During the reporting period of 2022-23, the Institute has implemented its research programs in all the four Divisions *viz.*, **Moriculture, Sericulture, Silk Technology, and Extension and Training Divisions**. The details are enumerated as below.

3. MORICULTURE DIVISION:

The R & D activities of the Division were carried out in 03 sections i.e., Mulberry Management Section, Mulberry Breeding and Genetics Section and Mulberry Pathology and Microbiology Section. Totally 15 projects under 07 thrust areas and 02 service programs were implemented.

A. Mulberry Management Section:

09 research projects and 01 long term service oriented projects were implemented in the Mulberry Management Section. Under Punaschetana funded project the intercrops in the tree mulberry gardens are raised and collected the yield data. The technologies such as Green manuring to enrich the soil fertility, soil test based fertilizer recommendation, trenching and mulching, mulberry varietal demonstration, growing mulberry at different spacing's and pruning methods are demonstrated in the Institute. Soil analyses have been done and Soil Health Cards are distributed to the Sericulturists of Karnataka. The study on the effect of Panchagavya and Jeevamrutha on growth and yield of mulberry is in progress. The demonstration of fertigation and cost effective methods for production of quality mulberry leaf in five districts is in progress.

B. Mulberry Breeding and Genetics section:

04 research projects have been implemented in the section. 16,750 suvarna-3 mulberry saplings and 15,000 Suvarna-3 cuttings have been supplied to farmers. 18,000 Suvarna-3 cuttings have been planted for further saplings distribution under RKVY project. Under the internal funded project on "Development and identification of superior mulberry genotypes from open pollinated hybrids" and Evaluation of mulberry varieties selected from new germplasm bank are in progress under internal funded project for the development of new mulberry varieties. Germplasm bank has been established and maintained in the institute with 300 mulberry genotypes.

C. Mulberry Pathology and Microbiology Section (MPMS)

D. 06 research projects, including 01 service oriented long term and 01 inter divisional (Insect Pathology and Pest Management Section, Sericulture Division) research projects are being implemented in Mulberry Pathology and Microbiology Section. Under the Punaschetana funded project research work is completed and data compilation is under progress. Under the Rashtriya Krishi Vikas Yojana (RKVY) funded research project, integrated disease management of soil borne diseases in mulberry is under progress and waiting for the funds. Under the Price Stabilisation Fund Authority (PSFA) funded research project of "Demonstration of composting technology using seri-wastes", four cement compost tanks were constructed. To evaluation of Waste Decomposer to hasten seriwaste is completed and the data compilation is under progress. Under inter-divisional research project, a biological control *Verticillium lecanii*, is under progress. Management of bio-inoculants stock cultures and parental efficacy assessment at the MPM Section are periodically evaluated and maintained.

2. SERICULTURE DIVISION:

Sericulture division comprises of three sections namely, Silkworm Breeding and Genetics; Silkworm Crop Improvement and Insect Pathology and Pest Management Section along with sub-stations at Ooty and B.R.Hills. The division mainly worked on the popularization of new silkworm hybrids viz. 'Bengaluru Belli' (ICB) & 'Aditya' (Bivoltine-DH), coupled with scientific maintenance of multivoltine and bivoltine germplasm races & cold storage. The data on reeling performance of new races is encouraging both in MER and ARMs. A total of twelve research projects under "Punaschetana program" were implemented. In addition, the molecular characterization of diapause inhibiting factor in KS10 race has been carried-out. This apart, maintenance of Pure Mysore-P4 and IMH races; nutritional studies of new silkworm races; development of rearing gadgets to reduce drudgery in silkworm rearing have been carried-out.

In Insect Pathology and Pest Management section, under the project "Effect of pesticides on silkworm" funded by DOSK, nearly fifty four pesticides/weedicides were screened by soil application, bioassay and analysis method and have identified the pesticides/weedicides that cause silkworm mortality/non-spinning. The non-spinning problem of silkworm in different zones of Karnataka was addressed.

Mass culture of hyperparasitoids of mulberry pests (thrips & mites) is being carried-out for screening the pesticides for their control and suitable recommendations were given to farmers. More than fifteen lakhs hyper-parasitoids (*Nesolynx thymus*), a bio-control agent were released in markets, and nearby villages for control of uzi fly. Nandi Vishwas a general disinfectant was licensed to M/s Nandi Agro Vet, Bengaluru, for mass production and sale.

3. SILK TECHNOLOGY DIVISION:

Silk Technology Division has two sections of Silk reeling and Fabric manufacturing and Silk Processing and By-product utilization Section working on different aspects of post cocoon sector addressing the field problems during the period. In silk reeling and fabric manufacturing section extensive work was been carried-out for development of bivoltine cocoon testing protocol. The protocol developed has been presented before different committee comprising of DOS,CSB,UAS Bangalore and said protocol has been sent to Govt. for approval. The scientists have also involved in training of man power and setting up cocoon testing labs for testing CB cocoons at Kolar, Chithamani and Siddlagatta Market.

The section has mainly worked towards development of user friendly technologies which are cost effective and need of this hour. In this direction the section has developed a modified type of Italian reeling machine based on ergonomic design to facilitate comfortable sitting arrangement for carrying out reeling activities. The machine enables to produce quality silk as it is fitted with jettebow mechanization for easy casting of cocoon and slit metallic button for ease threading of filaments.

Silk processing and by product utilization section:

Silk processing and by product utilization section is working mainly on By-product utilization for enhancing the income of sericulture stake holders. During the period more than 11 cosmetics were developed using sericin and two cosmetics have been taken for testing on human application for standardization. The section has also developed Ayurvedic formulation like Toodasava and Tooda capsules in joint collaboration with SSACMS for control of diabetic and hypertension which is being tested for Acute oral toxicity studies before being tested on humans.

The joint collaborative research projects with CIIRC has been implemented and few products have been developed using sericulture waste.

- 1 Bio-composite boards produced from mulberry stem.
2. Silk scaffolds from electro spun fibres which from sericin and PVA composite are used in medical industry.
3. Bio-diesel from pupae oil.
4. Pupae cake for Fish feed.

4. EXTENSION AND TRAINING DIVISION:

CSB sponsored Program: KSSRDI implemented CSB sponsored programme for training on "Chawki Rearing" for RCRCs (Registered Chawki Rearing Centres) owners under the refresher training programme.

Handicraft training programme: In the women handicraft training programme, 35 women were trained for value addition in sericulture. The technical information is given to visitors and farmers as and when required. Further, a well-established 'Sericulture Museum' is being maintained by the division.

Karnataka Silk Industries Corporation Limited

I. Brief History and Background of the Company:

Karnataka Silk Industries Corporation Limited

(KSIC), a Government of Karnataka undertaking established in 1912. Mysore is rich for its Royal heritage and Grandeur and it is no surprise that the silk produced there reflect the traditional splendour through its rich yet delicate motifs. The name Mysore silk is a befitting tribute to its ancestry. Karnataka Silk Industries Corporation Limited (KSIC) the proud inheritor of this royal legacy, has treasured it for over seven decades, has been producing 100% pure silk with pure gold zari. We are in the business of manufacturing quality silk products of varied designs for end user consumption. The Products include finest of designer silk sarees, Shirts, Kurta's, Silk Dhoti and Men's Tie. The silk Products are manufactured in our factories located in Mysore district of Karnataka state, INDIA. The silk weaving factory in Mysore, presently owned by KSIC, was established in the year 1912 by Sri. Nalvadi Krishnaraja Wodeyar, Maharaja of Mysore province. Initially the silk fabrics were manufactured & supplied to meet the requirements of the royal family and ornamental fabrics to their armed forces.

The unit was started with 10 looms and gradually increased to 138 looms over a period. The looms and preparatory machines were imported from Switzerland and was the first of its kind in India. After India gained Independence the Mysore state Sericulture Dept. took control of the silk weaving factory.

In 1980 the Silk weaving factory was handed over to Karnataka Silk Industries Corporation Ltd., a Govt. of Karnataka enterprise and is popularly known as KSIC. What makes Mysore Silk different from other silk fabrics available in India? It is made of the finest quality of natural silk yarn obtained from cocoons reared in the old Mysore areas of Karnataka. This gives it an extra ordinary lustre, more so, a geographical flavour to the fabric. The texture of Silk Sarees is made out of 26-28 denier with high speed twist.

KSIC is the only organization in the country commanding the entire gamut of silk production right from reeling of cocoons to the weaving of pure silk fabric of various shades and designs, all under one roof. KSIC uses only high quality pure natural silk and 100% pure gold zari. The zari will never tarnish and looks fresh even over a long period of usage. To assure authenticity, KSIC Mysore Silk stamps a unique code number and hologram as identification marks on each of its zari sarees.

II. PERFORMANCE FOR THE YEAR 2022-23 as on 31.03.2023(Provisional)

Rs. in Lakhs

Sl. No.	Performance	2022-23	2021-22
A	Fabrics produced(Mtrs.)	5,41,823.55	4,23,636
B	Production Value (Rs.)	21,078	16,481
C	Sales Value (Rs.)	20,507	16,516
D	Other Revenue (Rs.)	900	714
E	Fabric Sales (Rs.)	20,345	16,375
F	By-products (Rs.)	162	141
G	Profit for the year before tax(Provisional)	4,767.35	4,451.33
H	Profit for the year after tax (Provisional)	3,467.35	3,164.49

Your Board is pleased to report significant improvement achieved during the year under report. Multiple factors which have contributed to earn profits during the year 2022-23 as on 31.03.2023 are mainly the following:

- a. Modernisation and up gradation of technology.
- b. Better Control over expenditure on overheads and selling expenses.
- c. Increased sales in terms of Value.
- d. Vigorous institutional sales to supplement to sales through showrooms.
- e. Effective Working Capital and Resource Management.
- f. Introduction of New products in variety of designs and colours in the Market by installing electronic Jacquard Machines.
- g. Extra ordinary Income on account of receipt of amount from the Government towards refund of recovered amount from the pension payable to the employees of KSIC, who were transferred from the Department of Sericulture to KSIC at the time of takeover of the Government units.
- h. Introduction of computerisation in production units.

III. DIVIDEND:

Subject to approval of the Shareholders at the Annual General Meeting after completion of financial year 2022-23. Minimum

Dividend will be recommended by the Board and same will be put up in the AGM for declaring of Final dividend.

IV. PERFORMANCE BUDGET

During the year 2019-20 Company has received the Grant Rs.3,00,00,000/- towards modernization of the factory at Channapatna and work in progress. Company has not received any Grants during the year 2022-23 as on 31.03.2023.

KARNATAKA SILK MARKETING BOARD LIMITED

(A GOVERNMENT OF KARNATAKA ENTERPRISE)

1st and 2nd FLOOR, RESHME BHAVAN, VATAL NAGARAJ ROAD, OKALIPURAM, BANGALORE – 560 022

INTRODUCTION

The Karnataka Silk Marketing Board Ltd., promoted by the Govt. of Karnataka was established in 1979 along with the formation of Silk Exchange.

OBJECTIVES OF THE COMPANY

- To minimize price fluctuations in raw silk.
- To ensure that the Reelers get a satisfactory return for their produce by buying aggressively when there is slump in the market.
- To develop institutional customers who are directly concerned with the welfare of weavers.

ACTIVITIES

Karnataka Silk Marketing Board purchases silk yarn from licensed reelers at Silk Exchanges at Karnataka. From the purchased silk some portion of silk is also given for twisting purpose by paying minimum processing charges to twister. The silk yarn is sold at selling branches of Karnataka and Tamil Nadu through cash and credit sales. KSMB is completely commercial and is established towards stabilizing the price of silk yarn in the market. Therefore, KSMB is not a profit oriented Company and this is to be considered as a social welfare company. KSMB is the only company which is established by Govt. of Karnataka for stabilizing the price of silk yarn.

IMPORTANT LEGISLATIONS APPLICABLE:

Companies Act, 1956 and 2013

BOARD OF DIRECTORS:

1. Chairman
2. Principal Secretary to Govt. Horticulture & Sericulture Dept.
3. Commissioner for Sericulture Development & Director of Sericulture.
4. Commissioner for Textile Development & Director of Handloom & Textile.
5. Deputy Secretary to Government (Administration & Coordination), Finance Department.
6. Managing Director – Karnataka Silk Marketing Board Ltd.,
7. Government Nominated Directors.

PREVIOUS YEAR TRANSACTIONS:

Year	Purchase		Sales		Profit	Cum.	Net worth
	Qty.	Val.	Qty.	Val.	loss (-)	loss (-)	
	(InTons)	(Value in Cr.)	(In Tons)	(Value in Cr.)	Val. (Value in Cr.)	Val. (Value in Cr.)	Val. (Value in Cr.)
2008-09	127	15.69	147	18.98	(-) 3.61	(-) 21.81	9.64
2009-10	171	26.61	163	26.54	(-) 2.59	(-) 24.40	7.05
2010-11	201	41.79	161	34.44	(-) 3.99	(-) 28.40	3.06
2011-12	270	50.33	215	43.20	(-) 3.69	(-) 32.09	(-) 0.63
2012-13	118	26.96	209	46.48	(-)1.54	(-)33.63	(-) 2.17
2013-14	132	39.32	129	38.54	(-)5.42	(-)39.05	(-) 7.59
2014-15	66	18.01	80	23.22	(-)4.39	(-)43.44	(-)11.98
2015-16	45	9.68	47	11.47	(-)4.16	(-)47.60	(-)16.15
2016-17	18	5.22	25	8.26	(+) 0.06	(-)47.57	(-)16.12
2017-18	10	3.56	10	4.01	(-)0.54	(-)48.12	(-)16.68
2018-19	20	5.60	12	3.82	(-)1.33	(-)49.45	(-)18.00
2019-20	03	0.77	12	3.73	(-) 1.39	(-) 50.84	(-)19.39
2020-21	69	16.03	62	16.50	(+) 1.64	(-) 49.24	(-) 17.78
2021-22	--	--	6.06	2.36	(-) 0.16	(-)49.39	(-) 17.94
2022-23	0.03	0.01	0.02	0.01	Not Audited		

FINANCIAL POSITION OF THE BOARD:

- The Board has a paid up share capital of Rs.31.45 Cr from Govt. of Karnataka
- The Board is in loss due to low transaction, administrative expenses and due to provision in books towards of 10.25 % interest and 2.75 % penal interest on Rs.10.00 Cr. loan released by Govt. of Karnataka for purchase of silk yarn.
- In the year 2010-11 (Feb-2011) the rates of the silk yarn had come down to the lowest price and to stabilize the price of silk yarn in the market the Govt. of Karnataka released Rs.12.00 Cr. as loan and also sanctioned Government Guarantee for Bank loans to increase the Boards transactions.
- In the year 2012-13 budget Rs. 2.00 Cr. grant was released.
- In the year 2014-15 Sericulture Dept. released Rs.50.00 Lakhs grant for purchase of silk yarn.

- For the year ending 31-03-2019 the Board incurred a total loss of Rs.49.45 Cr.
- In the year 2015-16 Govt. of Karnataka released Rs.10.00 Cr. loan for purchase of silk yarn.
- In the year 2020-21 Govt. of Karnataka released Grant of Rs.20.00 Cr. for purchase and pledge of silk yarn during COVID-19 pandemic. The board has purchased 69 tons of Silk Yarn amounting to Rs.16.30 Cr and pledged 65 tons of Silk Yarn amounting to Rs.9.67 Cr. Out of the said transaction the board has made a profit of Rs.2.60 Cr. The amount of Rs 20.00 Cr. which was released under Head of Account – 2851-00-101-1-51(106) was returned to Receipt Head 0851-00-107-0-01-000 as per the directions of the Government Order No: ರೇಷ್ಮೆ 67 ರೇಕೃವಿ 2020 Dt: 31-03-2021.
- Administrative Grants Released:-

SL NO.	YEAR	GRANT AMOUNT (in Crores)
1	2016-17	Rs.5.00 Cr.
2	2017-18	Rs.5.00 Cr.
3	2018-19	Rs.3.00 Cr.
4	2019-20	Rs.2.27 Cr.
5	2020-21	Rs.3.00 Cr.
6	2021-22	Rs.3.00 Cr.
7	2022-23	Rs.3.00 Cr.