

# Growth and Development of Sericulture Farming in Karnataka: A Trend Analysis

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**Abstract:** Sericulture farming is one of the most important agriculture allied sectors, provides income and employment generating, economic development, and improvement in the quality of life to the people in the rural areas. Therefore, it plays an important role in the anti-poverty scheme and prevents migration of rural people to the urban area in search of employment. It is a very significant means for the socio-economic development of the rural area. It is a vastly labor-intensive, profit-oriented, and low-input-covered activity that gives frequent periodicity of economic returns. However, it is a crucial role subsidiary activity which provides year around employment to family labour and help in augmenting household income to large and weaker sections of the people in the rural areas. The study was undertaken to examine the role of sericulture farming in India as well as Karnataka. The present study discussed growth trends in areas under mulberry cultivation, cocoon production, raw silk production, and employment generation in sericulture farming in Karnataka. The present study was covered the study period between 2000-01 and 2017-18.

**Key Words:** Sericulture, Mulberry Area, Cocoon Production, Raw Silk Production, and Employment Generation.

## 1. INTRODUCTION:

Theory Sericulture sector is a major labor-intensive, agro-based industry and it provides additional income to marginal farmers in India as well Karnataka state, especially women. This sector is rearing of silkworms for silk production and export oriented commercial activity. An essential part of sericulture is the cultivation of host trees of the respective silk worm to ensure continuous supply of natural food for the silk worm. It is an important cottage industry in Karnataka. Sericulture sector provide socio-economic development for weaker sections of the society in the rural areas. Sericulture, in this way, is one of the most labour- intensive activities combining both agriculture and industry in the developing country as well as State. Sericulture sector provides employment to about 8.25 million peoples in rural and semi-urban areas in the country. Of these, a sizeable the number of workers belong to the economically weaker sections of the community, including women. India's traditional and culture bound domestic market and an amazing diversity of silk garments that reflect geographic specificity have facilitated the country to achieve a leading position in silk industry.

## 2. OBJECTIVES:

The present study the specific objectives are following as given below:

- 1) To study the performance of sericulture farming in India as well as Karnataka state.
- 2) To analyze the growth trends in area, production and employment in mulberry sericulture in Karnataka.

## 3. LITERATURE REVIEW:

### Present Scenario of Sericulture Sector in India

India is the second largest producer of silk in the world. India has the unique difference of being the only country producing all the five known commercial silks, namely, mulberry, tropical tasar, oak tasar, eri and muga, of which muga with its golden yellow glitter is unique and prerogative of India. Mulberry sericulture is mainly practiced in five states namely, Karnataka, Andhra Pradesh, Assam and Bodoland, West Bengal, Jharkhand and Tamil Nadu are major silk producing states in the country. North East (NE) has the unique distinction of being the only region producing four varieties of silk viz., Mulberry, Oak Tasar, Muga and Eri. Totally, the NE region contributes to 18 per cent of India's total silk production. Among the four varieties of silk produced in 2020-21, Mulberry accounted for 70.72% (23,860 MT), Tasar 8.02% (2,705 MT), Eri 20.55% (6,935 MT) and Muga 0.71% (239 MT) of the total raw silk production of 33,739 MT (Provisional).

## 4. MATERIALS:

### Performance of Sericulture Industry in Karnataka

Sericulture sector is one of the allied activities of the agriculture sector. It is one of the major employments generating sectors particularly in rural Karnataka. It stands for livelihood opportunity for millions owing to high employment oriented, low capital intensive and remunerative nature of its production. The very nature of this sector with its rural based on-farm and off-farm activities and enormous employment generation potential has attracted the attention of the planners and policy makers to recognize the industry among one of the most appropriate avenues for socio-economic development of a largely agrarian economy like Karnataka. The main activities of sericulture sector comprise of food-plant cultivation to feed the silkworms, which spin silk cocoons and reeling the cocoons for unwinding the silk filament for value added benefits such as processing and weaving. This sector is one of the major generating of income and employment sectors in the state and its growth has immense employment generation potential, particularly in rural Karnataka.

## 5. RESEARCH METHODOLOGY:

The present study is mainly based on secondary data. It has time series data on mulberry area, production, and productivity of mulberry silkworm cocoon in Karnataka for the period from 2010-11 to 2018-19 were collected from Economic Survey of Karnataka, Sericulture Board Department of Karnataka and Directorate of Economics and Statistics, Bangalore. In order to study the growth of mulberry area, cocoon production, raw silk production and employment generation, Compound Annual Growth Rate (CAGR) and Annual Growth Rate (AGR) analysis was carried in this study.

## 6. DISCUSSION:

The silk production has been reduced in the country due to the disruptions caused by the Covid-19 pandemic during 2020-21. The total raw silk production in the country during 2020-21 was 33,739 MT, which was 5.8% lesser than the production achieved during the previous year 2019-20 and registered around 86.5% of achievement against the annual silk production target for the year 2020-21. The bivoltine raw silk production declined by 3.4% to 6,772 MT during 2020-21 from 7,009 MT during 2019-20. Similarly, vanya silk, which includes Tasar, Eri and Muga silks, have reduced by 13.8%, 3.7% and 0.8%, respectively during 2020-21 over 2019-20. The area under mulberry has reduced by 0.8% in 2020-21 compared to previous year. (2.38 lakh ha.). The export earnings during 2020-21 were Rs.1418.97 crores. The estimated employment generation under sericulture in the country was 8.7 million persons during 2020-21 compared to 9.4 million persons in 2019-20, indicating a reduction of 7.4%. The demand for superior quality bivoltine silk is increasing in India for domestic consumption as well as value added silk products for the export market.

## 7. ANALYSIS:

### Growth and Development of Sericulture Farming in Karnataka

The Sericulture farming is one of the main generating of income and employment sectors, especially in rural areas of Karnataka state. The area under mulberry cultivation is 110209.18 hectares in the State up to November 2020, which is higher than the area under mulberry cultivation in 2019-20. Out of 79.701 Metric Tonnes (MTs) of cocoons production, about 40.875 MTs of cocoons marketed, 11.143 MTs of raw silk produced and 13.830 lakh of employment has been generated in 2019-20. According to the Karnataka Silk Marketing Board Ltd, it has made a turnover of Rs.346 lakhs as against the previous year of Rs.383.61 lakhs in 2019-20. India has ram silk was produced is 32.057 MTs during the period from 2017-18 to 2020-21. An amount of Rs.9900.68 lakhs has been incurred as outlay as against the allocation of Rs.9923.11 lakhs provided under state and central plan schemes in 2019-20. During this period 42,595 Sericulture Beneficiaries were covered.

Table – 1.1

Mulberry Cocoon Production and Raw Silk Production in Karnataka (2010-11 to 2018-19)

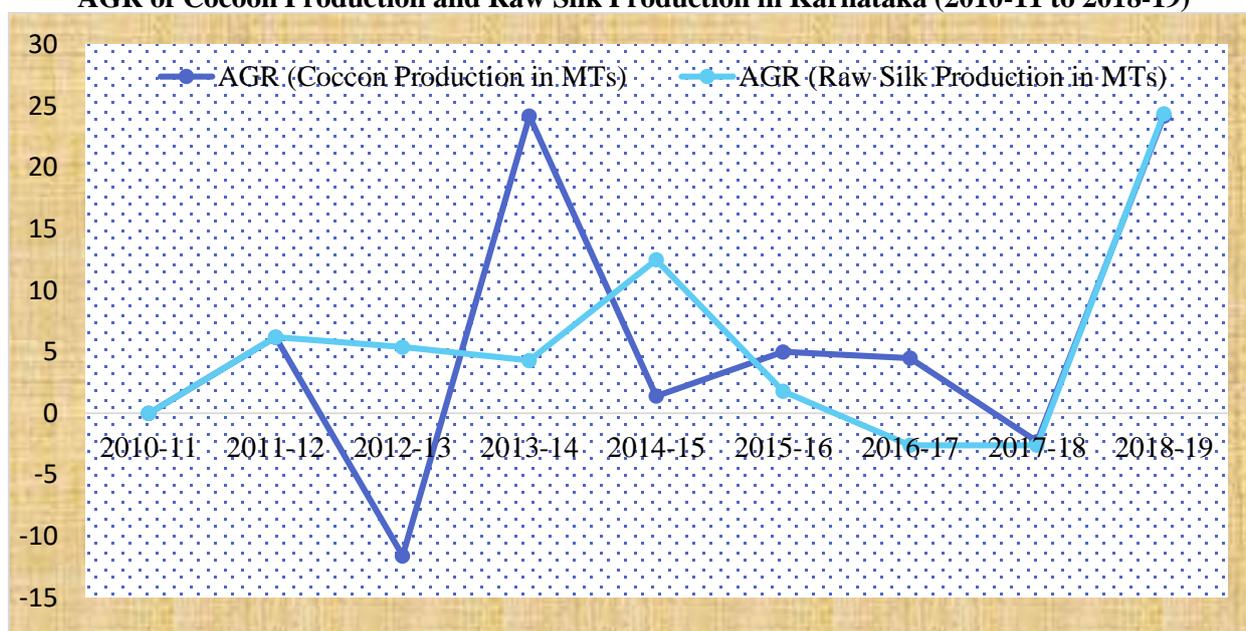
Year	Cocoon Production ('000 MTs)	Growth Rate (%)	Raw Silk Production ('000 MTs)	Growth Rate (%)
2010-11	52709	0	7338	0
2011-12	55957	6.2	7796	6.2
2012-13	49441	-11.6	8219	5.4
2013-14	61419	24.2	8574	4.3
2014-15	62302	1.4	9645	12.5
2015-16	65412	5.0	9823	1.8
2016-17	68381	4.5	9571	-2.6
2017-18	66833	-2.3	9322	-2.6

2018-19	83017	24.2	11592	24.4
<b>CAGR (%)</b>	<b>5.23</b>		<b>4.79</b>	

**Source:** Government of Karnataka (2020), Economic Survey of Karnataka (2011-12 to 2020-21), Planning, Programme Monitoring and Statistics Department, Bangalore.

The Table-1 demonstration that the cocoon production and raw silk production in Karnataka in terms of MTs, average growth rate and compound growth rate of both cocoon production and raw silk production from the period of 2010-11 to 2018-19. The raw silk and mulberry raw silk are same, because only mulberry silk is producing in Karnataka. There was a fluctuation in the production of cocoon in Karnataka, which was 52709 MTs in 2010-11, has decreased to 49441 MTs in 2012-13, then it increased to 61419 MTs in 2013-14, and again it increased to 83017 MTs in 2018-19. Whereas, the raw silk production in the state, which was 7338 MTs in 2010-11, has increased to 9823 MTs in 2015-16, then it decreased to 9312 MTs in 2017-18, and again it increased to 11592 MTs in 2018-19.

**Graph –1.1**  
**AGR of Cocoon Production and Raw Silk Production in Karnataka (2010-11 to 2018-19)**



The AGR of cocoon production and raw silk production of sericulture farming in Karnataka during the period from 2010-11 to 2018-19. The AGR of mulberry cocoon production was 6.2% in 2011-12, has changed to 24.2% in 2013-14, changed to 4.5% in 2016-17, then it changed to 24.2% in 2018-19. The CAGR of mulberry cocoon production is positive, which means on an average the cocoon production is increased by 5.23% per annum in the period of 2010 to 2019. The AGR of raw silk production was 6.2% in 2011-12, has changed to 4.3% in 2013-14, changed to -2.6% in 2016-17, then its positive growth changed to 24.4% in 2018-19. The CAGR of cocoon production and raw silk production are positive growth, which means, on an average the cocoon production and raw silk production is increased by 5.23% and 4.79% respectively per annum from the period of 2001-2015.

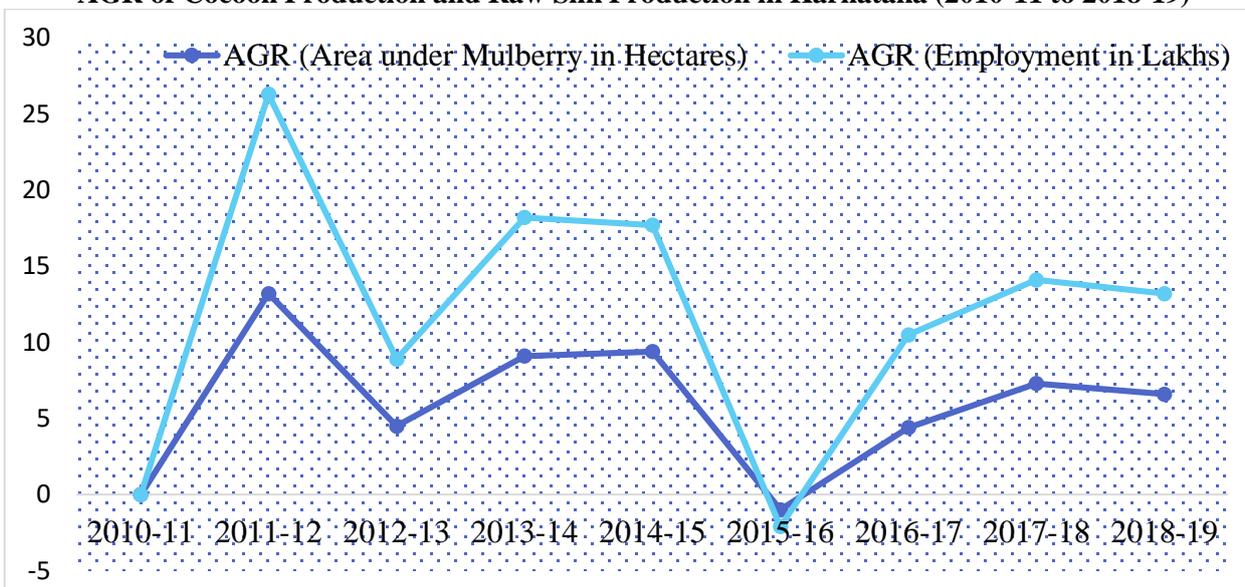
**Table – 1.2**  
**Area under Mulberry and Employment Generating in Karnataka (2010-11 to 2018-19)**

Year	Area under Mulberry ('000 Hectares)	Growth Rate (%)	Employment (In Lakhs)	Growth Rate (%)
2010-11	62691	0	815	0
2011-12	70962	13.2	922	13.1
2012-13	74130	4.5	963	4.4
2013-14	80871	9.1	1051	9.1
2014-15	88489	9.4	1138	8.3
2015-16	87597	-1.0	1125	-1.1
2016-17	91490	4.4	1194	6.1

2017-18	98135	7.3	1275	6.8
2018-19	104578	6.6	1359	6.6
<b>CAGR</b>	<b>6.04</b>		<b>6.03</b>	

**Source:** Government of Karnataka (2020), Economic Survey of Karnataka (2011-12 to 2020-21), Planning, Programme Monitoring and Statistics Department, Bangalore.

**Graph –1.2**  
**AGR of Cocoon Production and Raw Silk Production in Karnataka (2010-11 to 2018-19)**



From the above Table - 2 presents the area under mulberry and employment generating of sericulture farming in Karnataka in terms of hectares, lakhs, average growth rate and compound growth rate of both mulberry area and employment generating from the period of 2010 to 2018. There was a fluctuation in the area under mulberry in Karnataka, which was 62691 ha in 2010-11, has decreased to 87597 ha in 2015-16, then it increased to 104578 ha in 2018-19. Whereas, the employment generating of sericulture farming in the state, which was 815 lakhs in 2010-11, has increased to 1138 lakhs in 2014-15, then it decreased to 1125 lakhs in 2015-16, and again it increased to 1359 lakhs in 2018-19. The CAGR of area under mulberry cultivation and employment were positive growth trend, which means, on an average the area under mulberry and employment generating is increased by 6.04% and 6.03% respectively per annum from the period of 2001-2015.

## 8. FINDINGS & RESULT :

An increasing growth trends in area, cocoon production, raw silk production and employment generating sericulture farming in Karnataka. The cocoon production and raw silk production were tremendously increasing trends with the mulberry acreage.

## 9. CONCLUSION:

From the present study, an increasing growth trends in area, cocoon production, raw silk production and employment generating sericulture farming in Karnataka. However, the compound growth rate of sericulture farming development over the periods was positive and significant. Karnataka is playing a major role in sericulture activities. The cocoon production and raw silk production were tremendously increasing trends with the mulberry acreage. Directly and indirectly sericulture is providing jobs for people, at present more families are participating in the sericulture activities in Karnataka. On the other hand, it stands for livelihood opportunity for millions owing to high employment oriented, low capital intensive and remunerative nature of its production. The very nature of this industry with its rural based on-farm and off-farm activities and enormous employment generation potential has attracted the attention of the planners and policy makers to recognize the industry among one of the most appropriate avenues for socio-economic development of a largely agrarian economy like Karnataka.

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