CHAPTER VIII

SERICULTURE

India continues to be the second largest producer of silk in the world and has the distinction of producing all the four varieties of silk. In 2000-01, mulberry accounted for 91%, eri 6.9%, tasar 1.5% and muga 0.6% of the total raw silk production in the country.

Sericulture is an important labour-intensive and agro-based cottage industry, providing gainful occupation to more than five million persons in the rural and semi-urban areas in India. Of these, a sizeable number of workers belong to the economically weaker sections of society. There is substantial involvement of women in this industry.

PRODUCTION:

Production, employment and exports during the year showed increase as follows:

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<tbody>
<tr>
<td>I.</td>
<td>Standing Area under mulberry (Lakh ha.)</td>
<td>2.16</td>
<td>2.40</td>
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<tr>
<td>II.</td>
<td>Production of raw silk (tons)</td>
<td>15857.00</td>
<td>18380.00</td>
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<td>III.</td>
<td>Employment (lakh persons)</td>
<td>54.00</td>
<td>55.73</td>
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SILK EXPORTS:

Silk export earnings during the years 1999-00, 2000-01 and 2001-02 (April to Sept.) were as follows:

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<tbody>
<tr>
<td>1.</td>
<td>Natural Silk Yarn, fabrics &amp; Made-ups</td>
<td>1038.62</td>
<td>1412.28</td>
<td>647.75</td>
</tr>
<tr>
<td>2.</td>
<td>Readymade Garments</td>
<td>538.32</td>
<td>852.64</td>
<td>309.2</td>
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<tr>
<td>3.</td>
<td>Silk Carpets</td>
<td>145.43</td>
<td>110.94</td>
<td>90.80</td>
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<tr>
<td>4.</td>
<td>Silk waste</td>
<td>33.18</td>
<td>45.56</td>
<td>21.30</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1755.55</td>
<td>2421.32</td>
<td>1069.05</td>
</tr>
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* Provisional figures & subject to change.
Source: Directorate General of Commercial Intelligence & Statistics, Kolkata
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CENTRAL SILK BOARD:

The Central Silk Board (CSB) was set up in 1949 when Central Government assumed responsibility for the development of the silk industry by Parliament passing the Central Silk Board Act, 1948. Headquartered at Bangalore, and headed by a Chairman and 35 members, the Board’s work is in the three broad areas of Research & Technology Development, Seed Maintenance, and Development of Sericulture & Silk Industry, to support, supplement & facilitate the efforts of the State Governments.

Research and Development:

The main Research & Training Institutes of the CSB function to provide R&D and Training support for the development of sericulture. The Institutes at Mysore (Karnataka), Berhampore (West Bengal) and Pampore (J&K) deal with mulberry sericulture and the one at Ranchi (Bihar) deals with Tasar. The newly established Institute at Ladoigarch, Jorhat (Assam) deals with Muga and Eri. Regional Sericultural Research Stations (RSRS/RTRS) for mulberry and non-mulberry have been functioning for the dissemination of research findings and tackling the regional field issues of the industry. Besides, a network of Research Extension Centres (REC) for mulberry and non-mulberry are also functioning to provide extension support to sericulturists. In order to provide R&D support in post-cocoon processing the Board has established a Central Silk Technological Research Institute (CSTRI) at Bangalore. In addition, the CSB has also set up a Silkworm Seed Technology Laboratory (SSTL) in Bangalore (Karnataka), a Central Sericultural Germplasm Resources Centre (CSGRC) at Hosur, (Tamil Nadu) and a Seri?Biotech Research Laboratory (SBRL) at Bangalore.

Research work on the on-farm side is directed mainly to evolve stress tolerant mulberry varieties, which give high leaf yield, breeding superior silkworm hybrids, besides evolving improved techniques of silkworm rearing, integrated control of pests and diseases of both mulberry and silkworms. During the year 2001, 4 Bivoltine and 4 Multivoltine hybrids evolved by CSB research institutes were approved for Race Authorization trials during autumn and spring at 25 Test Centres spread all over the country.

Silk Cocoons
Research work on tasar, muga and eri silk is directed towards improvement of productivity potential of non-mulberry silk in India.

On the post cocoon side a multiend reeling package for reeling quality silk from bivoltine and crossbreed cocoons has been developed and efforts are on to popularize it. The Central Silk Technological Research Institute, Bangalore has also fabricated a low-cost multifuel drying chamber as also a tail end cutter and slit buttons which are being field tested.

The Research Institutes of CSB have developed low cost improved pedal-cum-motorised reeling-cum-twisting devices for tasar and muga and improved spinning wheel for muga and eri, which will produce better quality silk/spun yarn with less wastage, thereby fetching higher income.

**Seed Maintenance:**

The National Silkworm Seed Project (NSSP) has been entrusted with the responsibility of production of quality Silkworm Seed. During 2001-02 (upto Sept., 2001) 104.33 lakh dfls (disease free layings) were produced by Silkworm Seed Production Centre (SSPC) functioning under NSSP in different states. Also in the year 2001-2002 (upto Sept'2001) 6.45 lakh tasar basic seed, 0.46 lakh oak tasar basic seed and 1.30 lakh muga basic seed were produced and supplied to State Departments by CSB, for further multiplication. The muga and eri SSPCs have produced 1.25 lakh & 0.15 lakh commercial seeds respectively during the Ez year 2001-02 (Upto Sept. 2001).

**Training:** The CSB organizes a number of training programmes at its Research and Training Institutes. The total number of persons trained during 2000-2001 and 2001-2002 (upto Sept' 2001) is detailed below:

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<tr>
<td></td>
<td></td>
<td>No. of courses conducted</td>
<td>No. of Persons Trained</td>
</tr>
<tr>
<td>1.</td>
<td>Structured Courses</td>
<td>3</td>
<td>2</td>
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<tr>
<td>2.</td>
<td>Capsule Courses</td>
<td>26</td>
<td>380</td>
</tr>
<tr>
<td>3.</td>
<td>Adhoc Courses</td>
<td>-</td>
<td>804</td>
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<tr>
<td>4.</td>
<td>Foundation/ Re-orientation/ Induction Courses/ Summer School Training Programme Professor</td>
<td>-</td>
<td>-</td>
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**Tussar Silk Worm**

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Development schemes and programmes:

Development Schemes & Programmes supported by the CSB include those which are fully funded by the CSB, those which are fully funded by the Center, those financed by Centre and State both, and those which are externally assisted. Progress during the year in the main schemes is briefly given below:

Catalytic Development Scheme:

Thirty six catalytic schemes of the CSB were approved at a cost of Rs. 89.27 crore for the IX plan. These are targeted to motivate State efforts towards productivity, quality and market support. Central Silk Board has so far received and approved (upto September, 2001) a total of 295 schemes for implementation at a cost of Rs. 108.55 crore of which CSB's share is Rs. 61.23 crore. The States have initiated implementation of these schemes in 1998-99 and CSB has released till September, 2001, Rs. 33.71 crore to the States for implementation of these micro projects.

The United Nation's Development Programme (UNDP):

In collaboration with UNDP, Govt. of India has initiated a Sub-programme on development of Non-mulberry silk - tasar, muga and eri in Andhra Pradesh, Assam, Bihar, Jharkhand, Chhattisgarh, Orissa, Meghalaya, Nagaland and West Bengal under Fibres and Handicrafts Programme (FHAP) of Country Co-operation Frame Work - 1 (CCF-1) with a total outlay of Rs.1356.32 lakh, of which Govt. of India shares is Rs. 403.78 lakh and UNDP share is Rs.952.84 for a period of three years from 1999-2000.

The Central Silk Board is implementing the Sub-programme which aims to increase quality egg production and supply, impart necessary training and skill up-gradation to the farmers particularly women in good management practices, provide technological support in pre-cocoon and post cocoon processes including reeling, spinning and processing of silk through pilot initiatives and provide replicable models of entrepreneurship. Design upgradation and marketing assistance and Human Resource Development (HRD) are also built in the sub-programme structure. The targeted beneficiaries largely belonging to weaker sections of the society have been grouped into co-operatives, women groups, self help groups etc. involving NGOs. Nearly, 10,000 beneficiaries are proposed to be covered with an estimated direct employment generation of 3.55 lakh man years. The expected production of tasar raw silk is 46 tonnes, tasar spun silk 21 tonnes, muga raw silk 16 tonnes, muga spun silk 13 tonnes, eri spun
silk 293 tonnes and eri pupae 2232 tonnes through this programme.

The project outlay is indicated in the table given below:

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<tbody>
<tr>
<td>1.</td>
<td>Non-mulberry silk</td>
<td>Assam, Bihar, Jharkhand, Andhra Pradesh, Meghalaya, Orissa, West Bengal, Nagaland and Chhattisgarh</td>
<td>952.84</td>
<td>125.41</td>
<td>141.38</td>
<td>136.99</td>
<td>403.78</td>
</tr>
</tbody>
</table>

During 2001-02 upto December, 2001, an amount of Rs. 259.67 lakhs has been released to the Central Silk Board under UNDP component.

**Japan International Cooperation Agency (JICA) assisted Bivoltine Project:**

The first phase of JICA assisted Bivoltine Sericulture Technology Development Project (BSTD) was implemented from 1991 to 1997. During this phase, JICA made available 12 long-term experts, 28 short term experts and trained 28 counterparts, apart from providing equipment valued about 321 million Japanese Yen. With the implementation of this project, a comprehensive practical Bivoltine Sericulture Technology suitable to Indian conditions was developed.

The second phase of the JICA assisted Project for Promotion of Popularising the Practical Bivoltine Sericulture Technology (PPBST) of 5 years duration has been implemented from 1st April, 1997 for field verification and demonstration of Bivoltine technologies evolved in the first phase. JICA has made available so far the services of 1 Term Leader, 1 Co-ordinator, 9 Long Term experts, 22 Short Term experts and accepted 34 Indian scientists for training under the counterpart training component. In the year 1997-98, two bivoltine technology verification trials, in 1998-99, three trials, in 1999-2000, three trials, in 2000-01 four trials and in 2001-02 (up to September, 2001), three bivoltine technology verification trials with the identified farmers were conducted. The performance of these Bivoltine races has been good and the average yield has been over 60-80 Kg /100 Dfls, a renditta of 5.5 to 6 Kgs and a high
quality 2A-4A grade rawsilk has been obtained consistently. With the success achieved, the project implemention has been extended to the states of Tamilnadu and Andhra Pradesh. The experience is being used to design a programme to take bivoltine sericulture to scale.

A Joint Evaluation Team comprising experts from the Japanese and Indian sides have visited the project sites between 15th and 31st July, 2001 for final evaluation of the project. The Joint Evaluation Team has appreciated the efforts of the project participants and successful completion of the project.

Encouraged with the results of the project, a third phase in under preparation to provide technical assistance to seed supply systems and extension services. A Project outline has been mutually drawn up. Sanctions are likely to come in Feb.,2002; implementation to begin in June,2002.

SERI - 2000:

Under an agreement entered into with the Swiss Agency for Development and Cooperation (SDC), SERI-2000 programme is being implemented at an outlay of Rs. 12.5 million Swiss Francs from 1997-2002. The phasing has been extended to 2004. The programme covers projects both in public and private sector in Karnataka, Andhra Pradesh, Tamil Nadu and West Bengal. The Govt. of India through the participating institutions provides facilities, personnel and services as per the requirement of the programme. The aim is to generate viable enterprises, employment and sustainable income, primarily for the weaker sections of the population, including women, in rural and semi-urban areas.

As on March, 2001, 51 project proposals under private sector at an outlay of Rs.1098.89 lakh have been approved. Under public sector, 38 projects at an outlay of Rs. 1110.79 lakh have been approved.

Chhattisgarh Sericulture Project:

This project earlier with Madhya Pradesh, is being implemented by Department of Sericulture, Chattisgarh with loan assistance from the Japanese Bank for International Cooperation (JBIC). The project cost is Rs. 117.10 crore for first phase and Rs.631.70 crores for the second phase. First phase is for a period of 7 years and second phase 5 years. Its objective is to raise 4000 ha of tasar plantation covering
4000 beneficiaries; achieve production of 75 MT of raw silk and 22.5 MT of Spun Silk Yarn annually from 4th year; and give employment for 10,000 persons.

**Manipur Sericulture Project:**

This project is being implemented by DOS, Manipur with funding from JBIC. The outlay is Rs.134.52 crores for the first phase and Rs.356.09 crores for second phase to be implemented over a period of 7 years for first phase and 5 years for the second phase. The objectives are raising of 1020 ha of mulberry plantation covering 3000 beneficiaries; achieve production of 60 MT of raw silk annually from 4th year; and provision of employment for 7000 persons.

The Detailed Overall Development Plan (DODP) of the Project is under consideration of the State Government and is likely to be finalized early.

**Budget:**

For the year 2001-02, a provision of Rs. 84.20 crores under Plan and Rs. 19.00 crore under non-plan have been made for CSB. The entire provision has been released.

**Miscellaneous:**

To plan for optimal use of infrastructure created under the National Sericulture Project (1989-1996), and reassess the manpower requirements of CSB, Ministry of Textiles had commissioned a study by National Institute of Science Technology & Development Studies (NISTADS).

Based on NISTAD's Report, Scheme of right-sizing/restructuring of CSB has been approved. The implementation aspects of the scheme are under consideration of the Ministry.

**INDIAN SILK EXPORT PROMOTION COUNCIL:**

The Indian Silk Export Promotion Council (ISEPC), Mumbai continues to undertake activities relating to promotion of exports of natural silk goods from India and to act as the registering authority for silk exporters. The Council produces and disseminates information to its members about market developments in the world, changes in the trade policies etc.

*Silk Thread*
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through its weekly bulletin known as the "Silk Net". The silk sample catalogues containing sample swatches of the full range of silks available in India brought out by the Council are available to potential buyer, importing textile agents and Indian Missions abroad. The Council participated in Pret-a-Porter Fair, Paris, (Sept 7-10, 2001) and TIP 9 Fair, Brussels (September 8-11, 2001)

To enable exporters of silk goods access to quality silk at international prices, the Government has allowed silk exporters the facility to import raw material requirements on duty free basis under the Advance Licensing Scheme (ALS). In addition, in the current year the import of silk is allowed under Open General License (OGL).