PTC.423 (N)
700

GOVERNMENT OF INDIA

TARIFF COMMISSION

REPORT

on

The Continuance of Protection to the Sericulture Industry

BOMBAY
1963

PRINTED IN INDIA BY THE MANAGER GOVERNMENT OF INDIA PRESS
PUBLISHED BY THE MANAGER OF PUBLICATIONS DELHI-8
1964

Inland) *Rs.* 7·50 (*Foreign*) 17*s.* 6*d. or* 2 $ 70 *cents.*

India, Tariff (——Commission)

Report on the Continuance of Protection to the Sericulture Industry, 1963.

CONTENTS

APPENDICES

PERSONNEL OF THE COMMISSION

SHRI K. R. P. AIYANGAR	*Chairman*
SHRI J. N. SEN GUPTA	*Member*
DR. R. BALAKRISHNA	*Member*

SECRETARY

SHRI PRAMOD SINGH

1—10 T. C. Bom/63

(8) As a class by itself catering to a special demand non-mulberry silk has a substantial market internally, and the tassar variety has recently manifested good export possibilities. As such this section of sericulture industry deserves more attention than it has so far received.

(9) A quota restriction on exports of silk waste taking into consideration the requirements of spun silk mills in the country on the basis of their present rate of operation is recommended. If a time is reached when the two spun silk mills can operate a second shift the picture will undergo a change and the policy of exports could also be reviewed.

(10) It would be in the interests of the filatures for making them a little more profitable to equip themselves with the specialised machinery for throwing and offer to the market thrown silk in future.

(11) Dissemination of information about the testing of raw silk undertaken at the testing houses and issue of certificates freely are necessary to meet the criticism of dealers with regard to the method of sampling for tests and the nature of tests conducted.

(12) Unless the authorities in the notified cocoon markets in Mysore State undertake objective tests to accurately grade the cocoons and create conditions conducive to an adjustment of prices on the basis of quality, the purpose of establishing such markets would not be carried to its logical end.

2. Government accept recommendation (1) and the necessary legislation will be taken in due course.

3. Government have taken note of recommendations (2) to (11) and steps will be taken to secure their implementation to the extent possible.

4. Attention of the Mysore State Government is drawn to recommendation (12).

ORDER

ORDERED that a copy of the Resolution be communicated to all concerned and that it be published in the *Gazette of India*.

H. D. SHOURIE,
Joint Secretary to the Government of India.

GOVERNMENT OF INDIA

MINISTRY OF INTERNATIONAL TRADE

New Delhi, the 18th Nov., 1963

RESOLUTION

Tariffs

No. 11(3)-Tar/63.—The Tariff Commission has submitted its Report on the continuance of protection to the Sericulture Industry on the basis of an inquiry undertaken by it under Sections 11(e) and 13 of the Tariff Commission Act, 1951. Its recommendations are as follows :—

(1) Protection to the Sericulture industry should be continued for a further period of three years, that is, upto 31st December, 1966 at the existing rates of protective duty under tariff item Nos. 46, 46(1), 47(a), 47(b), 47(c), 47(1), 48(a), 48(b) and 48(c).

(2) A general assessment of the industry shows that in view of its peculiar features and special handicaps the overall progress achieved by it since the last inquiry in 1958 has not been quite commensurate with either the prolonged protection granted or with the magnitude of the other assistance rendered by the Central Silk Board and State Governments.

(3) Irrigation, manuring, improvement of soil conditions and evolution of suitable grafts which will give better yield and study of nutritive value of leaves should receive the highest attention of research institutes and sericultural States.

(4) Steps should be taken towards the establishment of chawki rearing centres on co-operative lines in order that the quality of the raw silk may improve and the existing high renditta considerably lowered.

(5) The practice of earlier harvesting of cocoons should be corrected either through better incentives created by regulation of prices after suitable grading in the markets or through legislative enforcement that cocoons ought not to be brought to the market earlier than the fifth day.

(6) The possibility of establishing a central agency for the storage of cocoons in centres where there is a concentration of markets may be explored.

(7) A thorough examination of the relative advantages of different methods of reeling in the existing set up of the country (namely, charka, domestic basins and filatures) and the demand for their end products should be undertaken before proceeding any further with the policy of radically altering the proportions in which each makes its contribution to the existing demand for silk

REPORT ON THE CONTINUANCE OF PROTECTION TO THE SERICULTURE INDUSTRY

Previous tariff inquiries.

1. The sericulture industry was initially granted protection in 1934 on the recommendation of the Tariff Board in 1933. The Tariff Board again made recommendations in 1938 on the basis of an inquiry, but before Government could take a decision war broke out. However, protection was continued to the industry till the end of March 1949. The post-war Tariff Board conducted the third and fourth inquiries in 1949 and 1951 and on the basis of recommendations made by it protection to the industry was continued till the end of 1953. We made the fifth inquiry in 1953 and recommended continuance of protection for a period of five years till December 1958. Our recommendation was accepted by Government. The sixth inquiry in the series was conducted in 1958 and continuance of protection was recommended for a further period of five years ending 31st December 1963. The Government of India by the Ministry of Commerce and Industry Resolution No. 36(3)TR/56 dated 18th November 1958 accepted our recommendations that the existing rates of protective duty on tariff item Nos. 46, 46(1), 47(a), 47(b) 47(c), 47(1), 48(a), 48(b) and 48(c) covering raw silk, silk yarns and silk fabrics should be extended upto 31st December 1963.

Present inquiry.

2. As the period of protection granted to the sericulture industry is scheduled to expire on 31st December 1963 the present inquiry has been undertaken by us under Section 11(e) read with Section 13 of the Tariff Commission Act, 1951 under which we are authorised to inquire into and report on any further action required in relation to the protection granted to an industry.

Method of inquiry.

3.1. Questionnaires to producers of raw silk and consumers were issued in February 1963. State Governments were also requested to furnish information on the progress made since the last inquiry by the sericulture industry. The Central Silk Board, Bombay, was requested to submit a detailed memorandum on the industry. Separate questionnaires were also issued to mulberry cultivators, grainage owners, rearers of silk worms, reeling establishments, spun silk mills, silk throwing and twisting factories and weaving units. Sericulture Research Institutes were requested to furnish information on the progress of research carried on by them. The Ministry of Defence, the Indian Standards Institution, All-India Handloom Board, the Textile Commissioner and Khadi and Village Industries Commission were also addressed for certain specific information. A press note was issued during February 1963 inviting interested parties to obtain copies of the questionnaires issued by us and send replies thereto. A list of those to whom questionnaires or letters were issued and from whom replies were received is given in Appendix I.

3.2. Particulars are given in Appendix II of sericultural centres visited by us and our officers in connection with the inquiry.

3.3. A public inquiry into the industry was held at the Commission's office on 1st August 1963. A list of those who were present on the occasion is given in Appendix III.

Scope of the inquiry.

4. The existing scheme of protection applies to both mulberry silk and non-mulberry silk such as tassar, eri and muga. Though raw silk is the principal commodity that has been protected, silk fabrics have also been subjected to protective rates of duty. The scheme of protection for the sericulture industry is based on the cost of production of mulberry raw silk as it is more amenable to costing. Still the needs of the non-mulberry part of the industry are also kept in view and any measure of protection granted to the mulberry silk industry would automatically be available also to the non-mulberry section of the industry. The scope of the inquiry embraces raw silk and silk cocoons, silk waste and noils, silk yarn comprising thrown silk warps and yarn spun from either silk waste or silk noils, silk sewing thread and silk fabrics covered by I.C.T. Item Nos. 46, 46(1), 47(a), 47(b), 47(c), 47(1), 48(a), 48(b) and 48(c).

Implementation of ancillary recommendations made by the Commission in 1958.

5.1. In our Report (1958) we made certain ancillary recommendations besides the continuance of protection, for the development of the sericulture industry. In their Resolution Government stated that necessary steps would be taken to implement them. The extent to which the ancillary recommendations have been implemented is indicated in the following paragraphs.

5.2. We recommended that the existing concession regarding the import of silk worm seeds free of duty should be continued. This recommendation has been implemented by the importation, free of duty of silk worm seeds assessable under item No. 87 of the I.C.T. Schedule in accordance with the notification of the Ministry of Finance in January 1953.

5.3. The next recommendation was with reference to the distribution of disease free layings, through Government aided grainages, establishing seed production particularly the foreign races and the evolution of cross-breeds in the States, and implementing suggestions of the Japanese experts about producing cocoons of better grades. It was also suggested that steps should be taken to encourage formation of rearers' co-operative societies for chawki rearing and for the marketing of cocoons.

5.3.1. The Central Silk Board has stated that high priority has been given to the schemes for the development of the seed organisation and the organisation of the chawki rearing centres, for the preparation and distribution of industrial hybrids to the rearers. The Central Silk Worm Seed Station at Srinagar was established in 1958 for the purification of available races and for the evolution and fixation of potent races suitable for different regions. Zonal hill rearing stations have also been set up at B.R. Hills (Mysore), Kalimpong (West Bengal), Coonoor (Madras) and Mirgund (Kashmir) for the production and supply of basic seeds

to different States. The Central Silk Worm Seed Station at Srinagar supplies disease free layings to zonal stations. A few foreign races have also been used for the purpose of hybridisation. Chawki rearing centres have been set up in Mysore, West Bengal and Jammu and Kashmir.

5.4. Another recommendation was to prohibit the creation of any further capacity for silk filatures in the States of Mysore and Jammu and Kashmir till existing capacity is fully utilised and to insist that the existing filatures should introduce a system of grading cocoons so that silk of uniform quality could be produced. We were particular about the standardisation of cocoons by the restriction of rearing to one or two races only and also suggested that the reeling equipment at the existing filatures should undergo modernisation. The above recommendations had reference mainly to the States of Mysore and Jammu & Kashmir where no further increase in the number of filatures has been permitted. Regarding modernisation, the Central Silk Board states that in Jammu & Kashmir efforts are being made to modernise the existing filatures with the installation of 90 multi-end basins of the Japanese type. In Mysore 450 filature basins have been modernised with Japanese type of 10-end basins. Further, the number of cottage basins have increased with a corresponding reduction in the number of charkas and the change is being officially encouraged. Regarding the grading of cocoons by filatures it is stated that the filatures in Mysore grade the cocoons purchased by them before using them for reeling. It is also stated that regulated cocoon markets have been established in Mysore State.

5.5. We had also recommended that the Governments of Mysore and Jammu & Kashmir should consider the possibility of enforcing compulsory testing of filature silk produced in their States. The Central Silk Board has stated that conditioning and testing houses have been set up in Bangalore and Calcutta and that the entire output of filature silk produced in the Government filatures in Mysore is being tested and records are kept though certificates are given to buyers only on request. Compulsory testing and grading of the entire production has not so far been introduced as the standards tentatively fixed by the I.S.I. require modification. But at the public inquiry some dissatisfaction was expressed about the nature of the tests conducted at these conditioning houses. Having regard to such complaints and in keeping with our previous recommendations we would emphasise the need for issuing proper certificates of testing as a general practice.

5.6. In respect of research we recommended that the highest priority must be accorded to the establishment of research stations at the five centres proposed by the Central Silk Board and that they should be enabled to function as early as possible. To implement the above recommendation the Central Silk Board set up a Research Co-ordination Committee to advise on the schemes of sericultural research. As suggested by the Committee the Research Institute at Channapatna was taken over by the Central Silk Board and it proposes to reorganise the institute now shifted to Mysore on the lines indicated by the Committee.

The Central Silk Board has also decided to take over the Tassar Research Institute at Chaibasa from the Government of Bihar and locate it at Ranchi. There are at present four sericultural research stations functioning, namely, the Central Sericulture Research Station, Berhampur, Central Sericulture Research Institute, Channapatna, Regional Sericulture Research Institute, Titabar and the Tassar Research Institute, Chaibasa.

5.7. Finally, we recommended that the Central Silk Board should take positive measures to accelerate the pace of development of the tassar silk industry and render financial and technical assistance for the purpose. To implement the above proposal the Central Silk Board constituted a sub-committee to examine the needs of the non-mulberry silk industry. The Board decided to set up a Central Tassar Silk Worm Seed Station in Lakha in Madhya Pradesh to purify the indigenous races of tassar worms to be used in the programme of industrial seed production. It is likely to be established during the current Plan period. The Silk Board has several schemes for the development of seed organisation, improvement of reeling and spinning appliances and for the development of marketing organisation in respect of the non-mulberry silk industry.

Other investigations after 1958 affecting the industry.

6.1. The period since 1958 has been eventful in respect of the sericulture industry as several committees of inquiries were appointed for investigating its manifold problems. In April 1958 the Government of India set up a Working Group to evaluate the progress of the sericulture industry during the Second Five Year Plan, with Shri H.C. Dasappa, M.P., as Chairman. The Group was to undertake an evaluation of the financial provisions made and the actual expenditure in the first three years of the Second Five Year Plan. It had to assess the increase in output and the improvements in techniques along with the rise in the earnings of the sericulturists and make a general appraisal of the extent to which the results achieved were commensurate with the outlay. The Working Group submitted a comphrehensive report in December 1959 assessing the progress made in the various sectors of the sericulture industry and formulating schemes for its future development. The Central Silk Board formulated its programme of development during the Third Five Year Plan on the basis of recommendations contained in the report of the Working Group.

6.2.1. Later in 1959 we had to make a brief investigation of the industry in response to a letter addressed by the Chief Minister of Mysore in May 1959 to the Minister of Commerce and Industry, Government of India requesting a cessation of the import of raw silk, as it was affecting adversely the interests of the filature industry in Mysore which had accumulated large stocks. In the opinion of the Mysore Government there was no dearth of stocks of silk justifying imports in the interests of the weaving industry. The State Government also contended that it was not possible for the filatures in Mysore to reduce their cost of production to a figure corresponding to our estimate of Rs. 29·70 per lb. in

1958. The Government of India held that the import policy was guided by the necessity to ensure adequate supply of the desired quality of raw silk to the silk weaving industry and in view of the shortfall in output within the country the contention of the State Government was not justified, and the accumulated stocks of indigenous silk would be lifted if the prices were reasonable. It was further stated that the disparity between the estimated costs of production given by us and of the State Government was wide and that it ought to be narrowed down by better working of the State filatures.

6.2.2. On a re-examination of the cost of production we also came to the conclusion that the high cost of production at the Government filatures in Mysore was due to lack of efficient supervision. With a proper method of purchase of cocoons it could bring down its renditta and reduce cost of production and improve the quality of the filature silk. We, however, reassessed the fair ex-works price of the filature raw silk at Rs. 36·66 per lb. as against Rs. 32·17 per lb. estimated in 1958 and advised Government that there was no case either for a restriction of imports or for a revision in the existing rates of protective duty.

6.3. In August 1960 the Central Silk Board constituted the Central Research Co-ordinating Committee with Shri W. R. Natu as Chairman. It had to evaluate the work so far done at the research stations and prepare an integrated programme of research work for the next five years. The Committee submitted its report in July 1961 and the Central Silk Board took a series of decisions pertaining to the research stations to be established in the mulberry and non-mulberry zones, and the nature of the research work to be undertaken by them. We have referred to these steps in paragraphs 5.6 and 5.7.

6.4.1. In April 1961 the Central Silk Board constituted a Fact Finding Committee on the filature silk industry with Dr. H. L. Dey as its Chairman. Its terms of reference were to enquire into the working of filature establishments with particular reference to their cost of production, purchase and sales organisation and techniques of production. It had also to enquire into the specific problems of accumulation of stocks at frequent intervals at these filatures and suggest measures by which they could be run on efficient lines in order that filature silk could be marketed at competitive prices. The Fact Finding Committee submitted its report in September 1961 recommending the modernisation of the filatures in Jammu & Kashmir and suggested a scheme for the reorganisation of the silk filature industry in the country. The scheme aimed at increasing the production of filature silk from 3·46 lakh lbs. to 10 lakh lbs. by 1965-66. Towards this end the Committee suggested that the filatures in Mysore should be commissioned progressively to their full capacity and the establishment of similar filatures in the private sector should be encouraged. It was envisaged by the Committee that the ex-filature price of raw silk should be brought down progressively from the current average of Rs. 41·50 per lb. to Rs. 38 per lb. by the end of 1965-66. The Committee was of opinion that the future pattern of silk reeling in the country should be such that it should essentially be

based on the filature system of reeling and the number of charkas should be restricted by legislative measures. In the Mysore State, for instance, the charkas should be progressively reduced from 3000 to 1000 and the number of cottage basins should be increased from 2000 to 4000 by the end of 1965-66.

6.4.2. The Fact Finding Committee also made valuable suggestions for the efficient operation of filatures in order to bring down the cost of production and improve quality. The Committee suggested the introduction of incentive schemes linking production with wages without sacrificing quality. It also suggested that the filatures should fix norms of efficient production and engage and train young workers who would be dexterous. To enable the filatures to get the best available cocoons the Committee suggested immediate establishment of regulated cocoon markets. It also suggested that the filatures in Mysore State should be run on commercial lines and if necessary, a corporation may be set up for the coordinated management of the State-owned filatures. While it was not against the importation of silk it suggested that there should be a price differential of at least Rs. 5 between indigenous and imported raw silk released to the market. These valuable suggestions have been adopted to the extent possible by the Central Silk Board.

6.5. A few other developments have also taken place since 1958 contributing to the progress of the sericulture industry in India. The most important among them are the establishment of the Central Silk Worm Seed Station at Srinagar and the completion of the Silk Conditioning and Testing Houses at Bangalore and Calcutta. The Central Silk Board has taken over the hill rearing station at Coonoor and has set up an All-India Training Institute at Mysore. In 1961 Reserve Bank of India examined the credit requirements of the various sectors of the sericulture industry in Mysore. The Study Team of the Bank made recommendations with regard to the organisation of co-operatives in different tiers of the industry to meet its credit requirements. The spun silk mill at Channapatna was purchased by the Mysore Government and was re-started in 1961 as a State undertaking, and the Assam Government Spun Silk Mills went into production in December 1961.

6.6. *Plan Provision.*—Provision for sericulture has been successively raised from Rs. 56 lakhs in the First Plan and Rs. 400 lakhs in the Second Plan to Rs. 550 lakhs in the Third Plan. The progress of expenditure which was about 30 per cent for First Plan and over 55 per cent in Second Plan is showing considerable increase in the current Plan period with more active endeavour by the Silk Board and State Governments.

General features of the industry.

7.1.1. In spite of the measures elaborated above a general assessment of the industry shows that the overall progress achieved since our last inquiry has not been quite commensurate with either the prolonged protection granted or with the magnitude of the other assistance rendered by the Central Silk Board and State Governments. This is a disquieting feature which cannot be solved until the basic handicaps undermining the industry are examined. Though the lines on which the specific problems are considered and the reasonableness with which

the measures are implemented are laudable, the industry continues to be almost static in terms of efficiency of operation and its unit cost of production. All its activity during the past five years is largely neutralised by forces over which the authorities or the industry do not appear to have any control. Therefore, an investigation into its basic problems is imperative.

7.1.2. An examination of the characteristics of the industry may be helpful in making a realistic appraisal of its present position and in formulating a policy for the future. At the outset it is necessary to realise that sericulture offers a luxury product which unfortunately in this instance is manufactured with a poor agricultural base. Being a luxury product the demand for silk is elastic but the power of resistance of the producers being weak the supply is inelastic. Whatever be the price realised for the end product, those who participate in its manufacture have to continue the avocation, however uneconomic it may be. In other words, production cannot be sensitive to price. It is, therefore, obvious that the broad-based productive organisation of the industry must somehow be assisted by the State. The existing policy of large scale financial aid at various points is therefore not without justification. But the crucial issue is the burden of such subsidization on the community and the prospects of its termination within a reasonable period.

7.2. In the next place it is also important to bear in mind that sericulture is an agro-industry and it therefore lacks the flexibility and the manoeuverability of a purely manufacturing establishment. While other industries catering to a luxury demand could change their methods of production quickly and have alternative programmes of production to meet emergencies, sericulture with all its rigidities of organisation is incapable of adjustment to changing circumstances. Any rearrangement of its pattern of organisation and production is time-consuming.

7.3. Further, the industry is rooted to agriculture as the production of raw silk is dependent to a considerable extent on mulberry cultivation. Moriculture is at best a phase of the agricultural industry having all its characteristics. It is dependent on the vagaries of the weather and soil conditions. Hence no uniform measures of rehabilitation or development would be appropriate for the different parts of the country or sufficiently effective in varying climatic conditions.

7.4. Again the industry depends on the proper rearing of the silk worm as an important element in the success or failure of the industry. The yield from the silk worm depends on racial qualities, the indigenous worm being invariably poorer in this respect. Continuous efforts to evolve strains which will give the best yield are essential as racial qualities get degenerated through time. Besides, the silk worm is also susceptible to diseases. Thus unlike the raw material for other manufacturing industries whose uniformity of quality can be assured on the basis of established standards and inspection the silk worm is vulnerable to external and internal factors and not easily amenable to standardisation in respect of either its quality or yield. A considerable amount of research, which is time consuming, has to be undertaken not only to evolve suitable races but also to sustain them over a period of time.

7.5. Reeling of silk, which is the next stage in the industry, is no doubt correlated to human ingenuity but even that suffers due to the diversity in quality of the cocoons available. Technological developments in reeling suffer from the limiting factor of the nature of cocoons normally available in the country. Methods of reeling prevalent in other countries are not capable of being adopted unless the pre-conditions for their successful operation apart from human skill exist in the country. The quality of cocoons in other words also limits the degree of technological improvement that could be introduced in the country.

7.6. The organisation and control of the industry is also difficult because of the extensive base of the industry. Mulberry cultivation and silk worm rearing are not concentrated or even whole time avocations. They are so widespread that any scheme of reorganisation is extremely difficult to implement.

7.7. Finally dissemination of knowledge for making the results of research reach the periphery is not easy in view of the illiteracy of the primary layer of the base of the industry. Without an elaborate organisation like the national extension service it would be difficult to supplement the work of the sericultural organisations to make the results of research reach the people who are primarily concerned with the industry. At present we understand that the efforts of the N.E.S. are oriented to activities which do not cover sericulture in the States. In view of all these peculiar features and special handicaps the progress of this protected industry was not according to expectations. A more detailed analysis of the present position in different phases of the industry will make it easier to appreciate it.

7.8. The sericulture industry in India supports nearly 3 million people of whom a fourth are scheduled castes or tribes. Its output is over Rs. 8 crores per year of mulberry silk and Rs. 3 crores of other varieties.

Progress and present position.

8.1. The sericulture industry in India falls into mulberry and non-mulberry groups. The mulberry silk industry is more important at present as it is better organised and is responsible for production of raw silk having greater commercial value. In mulberry silk production India at present occupies the fourth place among sericultural countries, the first three being Japan, China and U.S.S.R. Italy, South Korea, France and other countries come after India, though at one time they were relatively more important. Non-mulberry silk industry though not so well organised plays an important role in ameliorating the conditions of the backward classes in the States of Bihar, Madhya Pradesh, Orissa and Assam. One-fifth of the developmental expenditure of the Silk Board is on this account. The non-mulberry part of the industry is distinctive as the silk worms producting tassar, eri and muga silks belong to a species different from the mulberry silk worm. Tassar thrives on wild trees under natural environments as distinct from the mulberry silk worm which is entirely domesticated. Attempts are now being made to domesticate these classes of worms to some extent. The rearing of cocoons and the subsequent processes upto the weaving of cloth are also different in the case of non-mulberry silks.

8.2.1. The growth of the sericulture industry is limited by factors like climate, soil, rain-fall and economic and social conditions. India has the unique advantage of having all the four known varieties of silk namely, mulberry, tassar, eri and muga and both the univoltine and multivoltine mulberry silk worms. Mulberry silk is mainly concentrated in the States of Mysore, West Bengal, Jammu & Kashmir which together account for 98 per cent of the country's total production of raw silk. Mysore and West Bengal breeds are multivoltine. The rearers in these areas take five to six crops of cocoons a year while the breeds in Jammu & Kashmir are univoltine giving only one crop. Though inferior in output and quality the former if properly developed would also offer more than compensating cost advantages. Mulberry silk industry also exists on a small scale in Punjab, Uttar Pradesh and Assam and to a limited extent in Madras, Andhra Pradesh, Bihar and Himachal Pradesh.

8.2.2. Tassar silk is mainly produced in the States of Madhya Pradesh, Bihar, Orissa and to some extent in Andhra Pradesh, Maharashtra and West Bengal. Eri silk is mainly produced in Assam which accounts for 90 per cent of its total production. The other eri producing areas are Bihar, Manipur, West Bengal and Orissa. The golden yellow muga silk is confined to Assam.

8.3. The Central Silk Board has admitted that in spite of developmental efforts overall progress has not been commensurate. Though the production of mulberry raw silk has increased by about 28 per cent the proportion of filature raw silk to total production continues to be meagre. It was 13 per cent in 1962 as against 12 per cent in 1958. The quality of silk has not improved appreciably to stand comparison with foreign silk and international standards. Costs of production have not been reduced; they have actually been on the increase and gone out of tune with the estimates made by us in 1958. Several reasons have been adduced in support of the slow progress in the industry. It is stated that most of the research and developmental schemes undertaken under the Five Year Plans have just been brought into effect and they would take a few more years to yield tangible results. There is no doubt that there are still potentialities for the development of the industry; but it requires nature's cooperation as well as human efforts to exploit them.

8.4. There are five distinct stages in the production of mulberry silk namely, cultivation of mulberry, rearing of silk worms including seed production, reeling of raw silk from cocoons, production of raw silk, silk twisting and spinning of spun silk yarn and silk weaving. The progress of the industry can be reviewed under these different stages.

8.5. *Mulberry cultivation.*—The area under mulberry cultivation has maintained a rising trend since 1952. From 56, 149 hectares in 1952 it has increased to 85, 518 hectares in 1962. This accounts for an increase of 52 per cent over 1952 and 15 per cent over 1958. The number of mulberry trees also increased from 2.7 million in 1958 to 3·9 million in 1962 recording an increase of about 45 per cent. The table in Appendix IV shows the progress made by different States in moriculture since the

last inquiry in 1958. Mulberry is cultivated as bush plantation in Mysore and West Bengal while it is propagated as trees in Jammu & Kashmir Punjab, Uttar Pradesh and Himachal Pradesh. The total area under bush plantation in Mysore and West Bengal is about 81,000 hectares while the number of trees in Jammu & Kashmir is 3·3 million. In all, 48 schemes were undertaken during the period under review for the development of the moriculture in the country. These schemes are for the preparation and supply of high yielding mulberry grafts, the provision of irrigation facilities and supply of fertilizers. The progress achieved in respect of the various schemes in the important mulberry growing States is reviewed.

8.5.1. *Mysore.*—There has been an increase in the area under mulberry cultivation in Mysore from 66,000 hectares in 1958 to 76,000 hectares in 1962. The increase in irrigated area was about 1,175 hectares. The yield of mulberry leaves has however remained almost constant since the last inquiry at 3,800 kgs. in rain-fed areas, and at 11,000 kgs. in irrigated areas. In the past many of the estimates of yield were conjectural being worked backward from cocoon production assuming a standard leaf consumption. The Director of Sericulture, Mysore assured us this time that the yield figures can be confirmed by actual surveys that had been made. The low yield per acre in Mysore State is stated to be mainly due to the poor quality of the mulberry grown, bushes in many areas being over fifteen years old and also to the vagaries of the monsoon. In order to increase the yield and also to obtain better quality leaves the State Government established graft nurseries, supplied manures and extended irrigation facilities. Besides the rugged but relatively poor indigenous variety, the Berhampur variety thrives satisfactorily. A Japanese variety called 'Konson' was found most suitable among several varieties tried out. Grafts out of it were issued from Government farms to farmers who were encouraged in the rearing of foreign races of silk worms. The progress in this direction in the Kanva nursery was however not much and the wider dissemination of such grafts was still to be established. The total area benefited by the new grafts was less than 200 hectares and the extension of irrigation facilities by sinking wells was about 600 hectares out of nearly 76,000 hectares. Consequently the yield of mulberry leaves remained more or less constant since the last inquiry.

8.5.1.1. At the public inquiry the representative of the Mysore Government informed us that the limiting factor was irrigation for which though a phased annual programme existed resources were inadequate. As observed in paragraph 7.4.5. of our Report (1958) better coordination between the Agricultural and Sericultural Departments of States and use of N.E.S. facilities may help the provision of irrigation and other facilities. No successful graft can be adopted on a large scale unless it was accompanied by extension of irrigation facilities. Consequently, the 'Kanva' varieties of graft could not be encouraged to be adopted on a larger scale. Grafts with local varieties as stock and foreign varieties as scion do not give adequate leaf and this is a serious problem for multivoltine rearing. Unless a suitable graft which can thrive in rain-fed areas and can

give better leaf yield than the native Mysore is developed, any improvement in the total yield of leaves may not be possible in the foreseeable future, as mulberry cultivation at present is predominantly in rain-fed areas. Extension of areas at the expense of other crops cannot also be envisaged.

8.5.1.2. Another disquieting feature which engaged our attention was the relative costs of mulberry leaves in rain-fed and irrigated areas. In our last Report we estimated the average cost of mulberry leaves in Mysore at 12·3 nP. per kg. and found that it was made up of 10·3 nP. for rain-fed areas and 14·3 nP. for irrigated areas. In 1961 the Fact Finding Committee estimated it at 17·3 nP. per kg. That shows that the cost of production continues to be higher in irrigated areas belieing normal expectations. We were however informed at the public inquiry that it is more than made up by better quality and greater filament length of cocoons spun by worms feed on mulberry leaves grown in irrigated areas. It was stated that the end product for calculation of costs should not be mulberry leaves but cocoons produced by worms fed on such leaves. Leaves grown in irrigated areas were more nutritive and manuring and improvement of soil conditions could better the yield. Research on these matters as well as study of nutritive value of leaves already started at some of the research institutes will have to be carried out exstensively and the successful results propagated for application by the cultivator. Otherwise the idea of irrigating mulberry bushes which involves *prima facie* higher initial and recurring costs will not be popularised. The research institutes and the sericulture States should take suitable steps for the purpose. Experts consider that the fruits of research may in the case of this industry go into the field in three to five years time.

8.5.2. *West Bengal.*—In West Bengal mulberry is cultivated mainly as bush plantation and the area increased from 5,970 hectares in 1958 to 6,297 hectares in 1962. The number of active trees in 1962 is stated to be 286,000. Although mulberry is grown as a rain-fed crop the yield of leaves per hectare per annum is said to be 11,000 kg. due to rich soil conditions and manuring in some cases. A few graft nurseries have been established and the department of sericulture has undertaken the production and supply of grafts of improved varieties to the agriculturists. The adoption of the new varieties by the agriculturists has been slow as in Mysore owing to the time lag between the up-rooting of the old plantations and the first flush from the new plantations.

8.5.3. *Jammu and Kashmir.*—Sericulture in this State is a Government monopoly and the cultivation of mulberry is entirely of the tree type. The number of active mulberry trees is estimated to have increased from 2.2. million in 1958 to 3.3. million in 1961. The State Government is maintaining a number of departmental nurseries for the preparation and supply of grafts of improved varieties. The planting of new mulberry trees is also being encouraged by the provision of cash incentives. Leaf is supplied to rearers free of cost.

2—10 T. C. Bom./63

8.5.4. *Other States.*—In Punjab mulberry is grown as trees on the road-side as in Jammu & Kashmir. Preparation and distribution of mulberry saplings and graft has been undertaken by the State Government with the establishment of nurseries. The number of mulberry trees in Punjab is stated to be 180,000 in 1962. The area under mulberry in Madras State increased from 804 hectares in 1958 to 1,340 hectares in 1962 but the yield of leaves declined from 3,800 to 3,000 kg. per hectare in rain-fed areas and from 7,350 to 5,700 kg. per hectare in irrigated areas. Consequently the average cost of leaf per kg. rose from 15 nP. to 18 nP. In regard to tree plantation it is reported that the number of trees increased from 5,500 to 22,000 in 1962. A mulberry graft nursery was established in 1958 for the preparation of mulberry garfts of a superior variety and for distribution among the private gardens. In Assam both tree type and bush type of cultivation are prevalent. The area under mulberry cultivation which is normally rain-fed increased from 893 hectares in 1958 to 950 hectares in 1962. The annual yield per hectare also showed an increase from 7,500 kg. to 10,000 kg. Among the other States where mulberry is cultivated such as Andhra Pradesh, Kerala, Uttar Pradesh and Himachal Pradesh and Manipur the area under mulberry cultivation and the yeld is not much. But improvement in the yield of mulberry through the distribution of new varieties of grafts from nurseries established for their preparation is being ...ed.

8.6. *Rearing of silk worms.*

8.6.1. *Seed production.*

8.6.1.1. The primary stage in the production of raw silk is the preparation of silk worm seed of good quality. It consists in the evolution of the basic seed of appropriate quality for each region. Since the parent stock deteriorates in quality with lapse of time or from inbreeding it is necessary to rejuvenate them to maintain their vigour. To assure an adequate supply of seed cocoons of high purity it is necessary that grainages should be maintained by Government and by private institutions under a licence. In our last Report we made several recommendations emphasising the importance of the development of seed organisations, rearers' co-operatives and chawki rearing centres for the purpose. We also recommended the preparation of suitable cross breed race for distribution to rearers for increasing the yield of cocoons and for improving quality of raw silk. Standardising a limited number of races is also necessary for ensuring uniform quality.

8.6.1.2. In pursuance of these recommendations the Central Silk Board and the State Governments gave high priority to the schemes implementing them. The establishment of basic seed stations, development of hill rearing stations, basic cocoon farms and supply of improved mountages have been undertaken. As a result production of examined seed showed an upward trend after 1958 rising by 50 per cent by 1962. A target of 100 per cent examined seed is desirable.

8.6.1.3. Imports of silk worm seeds are duty free and are allowed mainly to meet the demand in the univoltine areas of Jammu & Kashmir. It is also meant for maintaining the requirement of stock races

for seed and experiments undertaken by the Central and zonal silk worm seed stations. Imports permitted to Jammu and Kashmir was 20,000 ozs. for each of the years 1961-62 and 1962-63 as compared with 11,000 ozs. in 1958-59. Current imports account for about 50 per cent of the State's requirements. Such large imports were permitted on the recommendation of Dr. Tazima, the Japanese expert for the supply of protected seeds.

8.6.1.4. In Mysore hybrid seeds are prepared with exotic races and also with indigenous races. For exotic races the State has established two hill stations which work in close collaboration with the Central Silk Worm Seed Stations. For indigenous races a station is maintained at Kunigal with second stage farms and licensed grainages distributed at different centres within a controlled zone. The State Government has given effect to the Mysore Silk Worm Seed and Cocoon (Regulation of Production, Supply and Distribution) Act, 1959, in the entire State with effect from 30th January 1961. In place of aided grainages the system of licensing seed production has been introduced. State farms are in a position to meet the full requirements of basic seed and Government grainages produce about 25 per cent of the requirements of commercial seed, the rest being met by private licensed seed preparers who are said to be given assistance, guidance and testing facilities for this purpose. Extension of control over the whole sphere of seed distribution to ensure purity is the proper culmination.

8.6.1.5. In Jammu and Kashmir two basic seed stations have been established and a reproduction zone for basic seed cocoons has been demarcated. Grainages for production of basic seeds have been established. However, since the seed organisation in the State is still in its infancy a considerable proportion of its seed requirements is met by imports. Seed produced locally is said to be examined microscopically cent per cent.

8.6.1.6. In West Bengal the Government implemented a number of schemes for strengthening the seed organisation. The State is at present producing and distributing about 5.6. million ozs. of disease-free layings through 8 Government grainages and 25 aided grainages. A foreign race seed station is established at Kalimpong where 50 univoltine stock races are being maintained. Though not comparable with Japanese varieties, the local 'Nistari' seed has proved itself.

8.6.1.7. In Assam additional facilities were provided to the existing 7 mulberry silk farms and grainages and 4 hill rearing stations. Assam is able to meet 95 per cent of its mulberry silk worm seed requirements. In Madras additional facilities were provided for the hill rearing station at Coonoor which is now under the control of Central Silk Board. It is also developing another station at Yercaud which has just reached the production stage.

8.6.1.8. The Central Silk Board established the Central Silk Worm Seed Station, Srinagar in 1958 for the purification of available races and for the supply of parent races to the States. It had also in view the fixation and evolution of potent races suitable for different regions. Its

activities have been strengthened by the acquisition of the hill rearing station at Coonoor. An integrated programme of rearing initiated during 1960 is being conjointly implemented by the Central and zonal stations. The station has also undertaken a subsidiary programme of polyhybridization as an experimental work in 1960.

8.6.2. *Production of cocoons.*

8.6.2.1. Production of cocoons is organised on a cottage basis as an ancillary to agriculture. It is scattered all over the area where sericulture is practised as an industry. In the rearing of silk worms for the production of cocoons considerable care is required at the initial stages as the tender worms are not only susceptible to heavy mortality as a consequence of careless rearing but may also yield poor quality cocoons if they are not properly fed at the early stages. It is therefore necessary that the silk worms are reared in the early stages under careful supervision. Till they reach the second moult at least it is preferable to have them reared at organised institutions instead of leaving it to private rearers. It is with this object that in our last Report we recommended widespread establishment of chawki rearing centres, if necessary on a cooperative basis to rear silk worms at their first stage. The idea of having chawki rearing centres merely for demonstration purposes may not yield quick results, though rearers are beginning to appreciate the advantages to them accruing from a shorter life cycle of the worm with them after it has received special care in the most vulnerable stage of its growth. Government cannot, however, develop an adequate number of chawkies to the entire supply of silk worm as seed ; nor can they supply reared worms at the cost of seeds. The practice of distributing the silk worm seeds to rearers cannot therefore be discontinued. They should, however, be encouraged to take supplies of hatched worms after they are reared at the first stage in the chawki rearing centres and assisted to form cooperative chawkies in important mulberry growing villages. We recommend that steps should be taken towards the fulfilment of this suggestion in order that the quality of the raw silk may improve and existing high renditta would be considerable lowered.

8.6.2.2. Since the last inquiry much work has no doubt been done in this direction. Various schemes were approved under the Second Plan relating to the establishment of demonstration chawki rearing centres, supply of improved equipment to rearers and grant of assistance for construction of modern rearing houses and organisation of rearers' cooperatives and have been implemented by the State Governments. In Mysore 40 chawki rearing stations were opened which in due course would be organised as cooperatives. In West Bengal two chawki rearing centres and two cooperative societies have been organised. In Jammu and Kashmir 82 collective incubation and chawki rearing centres have been established with a capacity to incubate 5000 ozs. of silk worm seed and to brush 1500 ozs. of seed for chawki. Similar steps in varying measures have been taken by the other states where sericulture is practised.

8.6.2.3. In the major sericulture State of Mysore estimated production of reeling cocoons, average yield from seed, average renditta obtained and the selling prices of cocoons during the last 5 years are tabulated below :—

Year	Estimated production of reeling cocoons	Average yield of cocoons per 30 grammes of seed	Average renditta obtained	Selling prices of cocoons
	(Million kgs.)	(kgs.)	(Number)	(Rs. per kg.)
1957-58	10·8	27	13·50	2·90 to 4·00
1958-59	12·6	29	15·00	2·80 to 4·00
1959-60	13·5	30	16·00	3·50 to 4·40
1960-61	15·3	33	17·25	3·00 to 4·75
1961-62	16·0	36	16·5	3·50 to 5·00

The average yield of cocoons from seed in Jammu and Kashmir is about 19 to 22 kgs. But the average renditta being low considerably reduces cost of cocoons.

8.6.2.4.1. Sale of cocoons is as difficult a process as its production. Sericulture being an industry closely associated with agriculture its marketing practice is as unorganised as that of the marketing of any agricultural produce. In the absence of suitable regulations silk worm rearers are not likely to realise from the sale of the cocoons what ought to legitimately accrue to them. Where the rearer is indebted to or has received advance from reelers or traders he is apt to be at a disadvantage as a seller. It is equally doubtful whether the discerning buyer of cocoons would be able to get what he requires at reasonable prices so long as the cocoon market is disorganised. It is to correct these defects that the Government of Mysore enacted, for establishing cocoon markets and for regulating the prices of cocoons, the Mysore Silk Worm Seed and Cocoon (Regulation of Production, Supply and Distribution) Act, 1959. Under this Act it is obligatory for the sericulturist to bring the cocoons to the notified markets and tender the same for sale by auction system. The State Government has notified 33 cocoon markets in the commercial cocoon growing arears besides 10 markets in the seed areas. They have a proposal to cover other sericultural tracts also by opening 33 more cocoon markets.

8.6.2.4.2. An important lacuna in the organisation of sericultural industry in India has been the absence of cocoon testing stations. This lacuna has not been removed with the establishment of the regulated markets. The cocoons that are compulsorily brought to those markets are not tested and graded as in Japan. What grading is done is purely on an empirical basis by the practical knowledge of the reeler or buyer. In the absence of objective tests no accurate grading would be possible. Unless the authorities in the markets undertake this responsibility and create conditions conducive to an adjustment of prices on the basis of quality the purpose of establishing such markets would not be carried to its logical end. Free play of market forces can be normal only on the basis of such grading and regulation of prices. Discerning buyers could bid and offer higher prices for superior varieties of cocoons in order to improve their renditta and reduce costs. Doubtless the operation of Government filatures in these markets, being the single largest buyer, will have a steadying influence. They too have a chance of getting better quality cocoons than before. In the absence of such conditions a mere increase in the regional coverage of the Act may not by itself yield desired results.

8.6.2.5. The amount of silk that could be reeled from cocoons depends not only on their quality but also on their maturity. Therefore the time of harvesting cocoons is a significant factor in the yield of cocoons. The practice in Mysore in respect of the time of harvesting varies from area to area. Such variance does not seem to depend on either the nature of cocoons or the time it takes to mature in different circumstances. The fullfledged activity of the worm in spinning cocoons is said to be over in 48 hours and moving it from the mounting for marketing after the fourth day is said to have no adverse consequences. Otherwise, earlier harvesting is said to result in loss of 10 to 15 per cent of silk material. Harvesting seems to depend entirely on the economic conditions of the silk worm rearers and also on the tradition prevalent in each area. While in the Sidlaghatta area of the Mysore State cocoons are harvested and brought to market after about five days of mounting they are brought earlier to the market in other parts of State. The latter practice is said to have become more prominent after the new marketing arrangements came up. Since price differentials in the market for cocoons do not at present depend on their time of harvesting, there is no incentive for the rearers to retain them till the complete cycle of spinning is over. This practice whether it is due to tradition or due to economic necessity could be corrected either through better incentives created by regulation of prices after suitable grading in the markets or through legislative enforcement that cocoons ought not to be brought to the market earlier than the fifth day. Since the supply of cocoons is from scattered sources they have to be purchased in small quantities and gathered for use by large scale filature establishments. So storage of cocoons is an important problem. In Japan cocoon warehouses are an important feature. We would suggest that the possibility of establishing a central agency for the storage of cocoons in centres where there is a concentration of markets may be explored.

8.6.3. *Reeling of silk.*

8.6.3.1. Reeling is the art of unwinding the filament of raw silk from the cocoons. Since the single filament is too fine to be of any commercial use the filament from a number of cocoons is combined in the process of reeling to give the required thickness. There are three systems of reeling in the country, namely, charka, the cottage basin and the filature. Reeling on the charka is essentially a cottage industry and it produces silk of a relatively poor quality. An improved charka was evolved and worked in West Bengal. The cottage basin is an improved equipment meant for replacing the charka. It was introduced during the latter part of the First Plan period and has now become popular in Mysore. But we are informed that the 'Nistari' cocoon in West Bengal is difficult to reel in such basin. The filature system of reeling is the modern method of reeling silk. It yields better quality silk as the temperature of the basin is controlled, degumming is effected better and the speed of reeling is mechanically regulated. On a comparison of the three systems of reeling it is found that the relatively less efficient ones, namely, charka and the cottage basin yield more silk than a filature. This is bacause the quality of the silk produced by them is poor as what would go as a wastage in a filature is partially rendered as silk by these two inefficient methods of reeling. The table given below shows the amount of raw silk produced since 1958 in the country by the three methods of reeling :—

(Tonnes)

Year	Mulberry raw silk					Non-mulberry raw silk				Total raw silk
	Filature	Cottage basin	Charka	Dupion	Total	Tassar	Eri	Muga	Total	
1958	131	62	916	31	1140	160	135	93	388	1528
(%)	(11.5)	(5.4)	(80.4)	(2.7)	(100)	(41.2)	(34.8)	(24.0)	(100)	
1959	126	89	894	32	1141	162	128	84	374	1515
(%)	(11.0)	(7.8)	(78.4)	(2.8)	(100)	(43.3)	(34.2)	(22.5)	(100)	
1960	157	142	821	34	1154	179	112	54	345	1499
(%)	(13.6)	(12.3)	(71.1)	(3.0)	(100)	(51.9)	(32.5)	(15.6)	(100)	
1961	161	170	889	44	1264	203	133	56	392	1656
(%)	(12.7)	(13.5)	(70.3)	(3.5)	(100)	(51.8)	(33.9)	(14.3)	(100)	
1962	186	320	850	45	1401	202	133	45	380	1781
(%)	(13.3)	(22.9)	(60.6)	(3.2)	(100)	(53.2)	(35.0)	(11.8)	(100)	

Statewise figures of production of raw silk are given in Appendix V.

It will be seen from the above table that there has been a steady upward trend in the total production of raw silk. Mulberry raw silk continues to account for the bulk of the total production. During 1962, mulberry raw silk accounted for 79 per cent of the total production. Among mulberry raw silk though production of charka silk has been gradually falling it still accounts for the bulk of the production. During 1962 its production fell to 61 per cent. There has also been a significant increase in the production of cottage basin silk indicating that it is really the charka which gets changed to a cottage basin. This is a very desirable trend. In 1962 it accounted for as much as 23 per cent of the total mulberry silk production. The proportion of filature raw silk production to total mulberry raw silk production is more or less steady being of the order of 13 per cent during 1962.

8.6.3.2. With regard to the different systems of reeling in existence at present in the country it is a matter for consideration whether the prevailing pattern of organisation should undergo a change. The Fact Finding Committee recommended that their should be a progressive reduction in the number of charkas in the country so that the proportion of silk produced in filature should increase. Since the main preoccupation of the Fact Finding Committee was to investigate the problems of the filature industry and envisage its future prospects a change in the organisational pattern of the industry in favour of filatures was suggested by it. Though this suggestion has already been in the process of implementation in the Mysore State as evidenced by the fall in the number of charkas, a rethinking of the problem appears to be necessary. The issue has various facets and some of them were discussed at the public inquiry. In the first place it is necessary to realise that charka reeling is a widespread occupation subsidiary to agriculture. Whether a reduction of them in the interests of the filature industry would undermine the social fabric is an extra-economic issue deserving careful consideration. But we are informed that the cottage basin really absorbs more labour per unit of output than the charka and as both are village industries the disruption of employment in charka is not a serious issue. However, in the hand-loom section of the silk weaving industry there exists a ready market for charka silk. The clientele of these fabrics are unlikely to change their tastes. There is traditional demand for these fabrics which would last as long as these traditions are likely to continue. Traditions die hard in this country. However inefficient may be the charka reeling if the silk produced by them along with the potential waste which goes with it is in demand for special purposes it would not be a correct policy to eradicate charkas altogether but it must be left to the market factors to decide its future. The next facet of the issue is whether the filatures in India are yet sufficiently modernised to make the best use of the cocoons which may be diverted from the charka reelers. In spite of repeated recommendations by us in the past the filatures in Mysore have not made any spectacular improvements. They have at present 1250 basins and are proposing to modernise 850 basins over a period of 5 years. Already 500 basins have been modernised to ten-end type and reeling on over-head basin. Incentive bonus has been introduced and

young workers are being trained. With all these measures an increase of output by 12½ per cent is claimed. They have not adopted the technological improvements in boiling, stifling etc. They are still to appreciate the advantages of hot air stifling over steam stifling. We are informed that the method of cooking of cocoons adopted by the filatures, though some improvements are effected, does not compare in efficiency with the method adopted by foreign countries like Japan.

As long as it remains outdated the economies and efficiency of filature reeling would not be available in this country. It is conceded that the quality of the cocoons in this country is so poor that they will not lend themselves to modern methods of cooking as in vogue in foreign countries. If that is going to continue as a permanent feature it would only lend support to the view that charka reeling is perhaps better suited in this country than filatures. At the public inquiry views expressed were more in favour of increasing the proportion of filature reeling in order that the country may get better quality silk for making finer fabrics and lace (jari) which would otherwise continue to be imported. Theoretically no doubt this argument is admissible but so long as filatures in this country are only filatures in name, not having been able to incorporate all the technological developments in other countries, neither the quality of the silk can be what may be desired nor the cost be reasonable.

8.6.3.3. This raises a further issue as to whether the domestic basin would be a better alternative to charkas in this country than filature. The existing filatures in Mysore do not seem to have any marked superiority over the domestic basins in respect of their output. It was admitted at the public inquiry that there is occasionally even a premium on the silk reeled in domestic basins over filature silk. It is therefore an open issue whether domestic basins being less expensive could be made to play a more important role in the organizational pattern of silk reeling in India. So long as the quality of cocoons is the limiting factor of technological development among filatures of Mysore, the future prospects of filature should necessarily be bleak. In Kashmir there are said to be no charka or cottage basins but about 150 mechanical basins are in operation. Installation of 100 multi-end basins of the Japanese type is contemplated and thereby increase in production by 25 per cent and reduction of costs by 10 per cent are expected. Perhaps in Kashmir and West Bengal where climatic conditions are better and crops are limited, filatures may have a better role ; but West Bengal should also be circumspect in its policy of extending the filature section observing the experience in Mysore. The incidence of silk waste in filature is also quite high. The explanation offered is that in the process of producing high quality silk the percentage of waste would necessarily be high. This may not pass muster without a study of waste percentage of filatures elsewhere. If it is correlated to efficiency in reeling, our filatures should find ways and means of reducing their waste percentage with the adoption of better methods of reeling. We are told that the changeover from cottage basin to filature is a progressive trend and has taken

place within living memory in main sericultural countries like China. To deny this trend to India will put our silk outside the international grade for all time. In view of these divergent views and conflicting issues we would recommend a thorough examination of the relative advantages of different methods of reeling in the existing set up of the country and the demand for their end products before proceeding any further with the policy of radically altering the proportions in which charka, domestic basins and filatures make their contribution to the existing demand for silk.

8.7. *Non-mulberry silk.*

8.7.1. Non-mulberry silks have always remained outside the purview of our estimates of costs as the varieties of silk worm that spin them live generally in a wild state and are not domesticated. As such, calculations about their rearing cost would depend on uncertain data. Its exclusion is not, however, likely to vitiate the conclusions about protection, as the total output of these varieties of silk in 1962 was only 380 tonnes as compared with 1,401 tonnes of mulberry silk. Non-mulberry silk consists of three varieties, namely tassar, eri and muga. The tassar silk worm is found in various areas feeding on certain varieties of forest trees like 'Asan', 'Arjun' and 'Sal'. Tassar rearing is undertaken outdoor by the tribal people in Bihar, Madhya Pradesh and Orissa. As the rearing is practised on primitive lines it does not have an arrangement for supply of disease-free eggs. It is also devoid of modern methods of reeling and spinning. This section of the silk industry has no organised marketing facilities. The Central Silk Board has, however, formulated development programmes and has been offering financial and technical assistance to the industry. Under the Third Five Year Plan Rs. 98·80 lakhs has been allocated to it out of a total of Rs. 553·76 lakhs to the sericulture industry for its development. The Central Silk Board constituted an Expert Committee for examining the appliances used in the industry and suggest improvements. The Board has also set up a Central Tassar Seed station in Madhya Pradesh and a Central Tassar Research Station in Bihar. The following table shows the progress made by the tassar industry since 1958.

Items	Unit	1958	1959	1960	1961	1962
1. Production of d.f.1s.*	Million Nos.	3·98	4·06	4·58	5·03	5·03
2. Production of cocoons*.	Thousand Kahans.	159	162	179	201	201
	(Million Nos.)*	(203)	(207)	(229)	(257)	(257)
3. Production of raw silk.	Tonnes .	159	162	179	202	202
4. Silkwaste . .	Tonnes .	119	86	92	137	111

(*Estimated. Data relate to both Government and private grainages.).

8.7.2. Eri silk industry is located mostly in Assam and to some extent in Bihar, Orissa, Manipur and West Bengal. Eri silk worm rearing is sometimes practised indoors as a subsidiary domestic occupation. The main food for the eri worm is castor, though some other leaves are also used for feeding the worm. These worms are hardier and can withstand variations in temperature and also diseases. These are multivoltine. Since the filament is not continuous these cocoons are not reeled but spun. To step up production a number of eri seed supply stations have been established.

8.7.3. The muga is a multivoltine semi-domesticated silk worm passing its caterpillar stage on the trees. The cocoon, moth and egg stages are passed indoors. Muga silk is produced only in Assam. The worm feeds on leaves of 'Som' and 'Soalu' trees. To increase output the Assam Government has set up three basic seed farms. Multiplication of basic seed cocoons is done by seed cocoon growers. The reeling of the cocoons is done on country reeling equipment which is outmoded. To improve the equipment the State Government has approached a Japanese firm for devising improved muga reeling machines. There has been a decline in the output of muga silk from 93,166 kgs. in 1958 to 45,000 kgs. in 1962.

8.7.4.1. The non-mulberry section of the silk industry has so far shared in the benefits of protection to the mulberry section of the industry, no independent assessment of adequacy of protection being feasible on account of lack of data. The financial aid received by it from the State has been largely in the shape of assistance to the backward tribal classes engaged in it rather than based on exploitation of its commercial potentialities. As a class by itself catering to a special demand non-mulberry silk has a substantial market internally, and the tassar variety has recently manifested good export possibilities. As such this section of the industry deserves more attention than it has so far received.

8.7.4.2. Among the three varieties of non-mulberry silk the muga seems to be a virtual monopoly of India. Therefore there is no fear of any imports competing with it in the local market. The problem therefore is one of developing it to the extent possible after ascertaining possibilities of substitution with other varieties in catering to local demands. In the case of tassar for which export markets have been found recently, there is need for development. Its cost should necessarily be cheaper as about half the life cycle of the worm is spent in a wild state. An improvement on the organizational side may establish it on a firmer foundation particularly for exports. In its present state of organization and quality, indigenous mulberry silk of the filature type has no prospects of exports ; and only markets for coarser fabrics, dupion silk and special handloom products have developed. Our immediate hopes of exports should, therefore, rest more with non-mulberry silk. A comparison of the relative costs of the two varieties will reveal that non-mulberry silk s definitely cheaper. We consider that it would be profitable in the long

run to explore this possibility and hence a careful examination of the economic aspects of its development apart from the sociological necessity to sustain it may be made.

8.8. *Silk Waste.*

8.8.1. In the process of reeling cocoons silkwaste is obtained which is good silken material capable of being further spun into yarn for fabrics. It has therefore a demand and its disposal at remunerative prices helps the reeling industry to bring down its cost of production. Some decades ago when the external markets had not developed and silk waste was being only used as manure because there was no other internal demand for it, the setting up of the first spun silk mill in Mysore became a necessity. Foreign demand for silk waste has now developed and the bulk of it is being exported leaving a balance to be utilised by the spun silk mills in Mysore and Assam and the hand spun silk industry in the States of Bihar, West Bengal, Orissa and Assam. The following table shows the production, exports and availability for internal consumption silk waste since 1958.

(In tonnes)

Year	Production	Exports	Availability
1958	819	119	700
1959	738	369	369
1960	762	524	238
1961	862	785	77
1962	921	752	169

Most of the exports have been to Italy and the exports of silk waste have been on the increase since 1958 and exporters feel apprehensive about losing their market if steady supplies are not ensured. There appears to be a conflict of interests within the country in respect of the export of waste silk. It is to the advantage of the reeling section of the industry to export it at remunerative prices which are being offered by foreign buyers as it would reduce their cost of production of reeled silk. The users of silk waste in the country, particularly the spun silk mills, complain about the higher prices and the non-availability of silk waste for their use owing to the free export of waste silk to foreign users. To reconcile the conflicting claims of the two interested parties, a policy of restricted exports has been adopted.

8.8.2. Upto the end of 1958 the export policy for silk waste was formulated by the Government of India after taking into consideration the requirements of the indigenous spun silk industry. Accordingly, exports of silk waste from South India were regulated on the basis of a ceiling recommended by the Central Silk Board which took into account the production of silk waste in the region, stocks of silk waste held by mills and the requirements of the mills for a period of six months. Silk waste produced in other areas was licensed freely for exports without quantitative restrictions. After the closure of the spun silk mills at Channapatna in December 1958, the export of silk waste of South Indian origin was licensed freely, while the export of silk waste produced in other areas was decontrolled. The export of tassar waste has been banned in view of the great demand for hand-spun tassar yarn for manufacture of fabrics for exports. The policy was reviewed in December 1962 and it was decided to allow exports of silkwaste upto a ceiling of 2·50 lakh lbs. during the year 1963. The spun silk mills have strongly urged that the exports of silkwaste should be strictly regulated so that they could obtain their raw materials at reasonable prices. On the other hand, it is contended by exporters that in view of the inefficient operation of the spun silk mills in the country it is wrong policy for the country to deny itself the valuable foreign exchange it can earn by the export of silkwaste which is in great demand abroad. Such realisations would, however, reduce the prices of raw silk in the country only if the reeler gets the benefit of the higher price for waste or the cocoon grower is given an attractive enough price taking note of this realisation also.

8.8.3. There are two spun silk mills in the country, one in Mysore at Channapatna and the other in Assam. The one in Mysore was started as early as 1938 for utilisation of the silkwaste produced in Mysore and Madras. Uptil 1951 the mill worked successfully but suffered a set back subsequently due to high prices of silk waste leading to its closure in December 1958. Later the Mysore Government purchased the mill to rehabilitate it and it started functioning partially during 1961. The Assam Spun Silk Mills in Gauhati commenced production in December 1961. Though a public limited company, the Government of Assam has also contributed towards its share capital. The installed capacity and annual requirements of the silkwaste of the two existing spun silk mills are as follows :—

	Installed capacity	Requirements of silk-waste	
	(spindles)	Single shift (tonnes)	Double shift (tonnes)
1. Government Spun Silk Mills, Channapatna, Mysore.	6,000	260	500
2. Assam Spun Silk Mills, Jagi Road, near Gauhati, Assam.	3,000	50	100
TOTAL .	9,000	310	600

The Government of Mysore imported several spare parts from Japan for reconditioning the machinery in the spun silk mills at Channapatna. It has also a proposal to install additional units of machinery of the latest type so as to improve the quality of its products. The spun silk mills in Mysore is consuming only mulberry silkwaste to the extent of 270 tonnes. The Assam Spun Silk Mills consume about 51 tonnes of silk-waste comprising of 30 tonnes of non-mulberry silkwaste and 21 tonnes of mulberry silkwaste. They complain that the moment exports are announced by Government, speculation is on the increase and prices of silkwaste are unnecessarily raised with the result that silkwaste becomes unprofitable for the spun silk mills to use. Consequently, their costs of production of spun silk yarn and noil yarn have gone up and they are not able to stand in competition with reeled silk or man-made fibres. They feel that for their survival it is absolutely necessary to ban the exports of silk waste from the country.

8.8.4. Imports of spun silk yarn have been allowed since 1958 to help the spun silk weaving industry in the country in view of the non-availability of spun silk yarn due to the closure of the mills at Channapatna. Such imports are canalised through State Trading Corporation and their distribution is effected by the Central Silk Board. However, there have been no imports since 1962. It seems anomalous to provide for such imports when the potential for waste spinning in the country can be better developed. As for waste silk exports, if they are made through a common body or by limiting quotas and qualities available for export, adequate supply for the spun silk units can be ensured, speculative price increases by the trade avoided and a steady return to the reeler may be ensured. It is found that the two spun silk mills require about 310 tonnes of silkwaste on single shift operation which is all that they have been able to perform so far. On double shift operation they would require 600 tonnes annually which is problematic considering their present state of affairs. That means they are capable of absorbing about a third of the total output of the silk waste in the country which is about 1,000 tonnes inclusive of mulberry and non-mulberry varieties. It would certainly not be correct policy to ban exports in the interest of the mills which are capable of absorbing a little less than a third of the total output of the waste silk. Not only the reelers of silk would lose the benefit of the high prices on the balance of silk waste produced by them but the country will also lose foreign exchange to that extent. We were informed that there is at present an arrangement of linking the spun silk mills in Mysore with Government filatures for the offtake of the silkwaste produced by the latter. To that extent the market forces created by free exports cannot have an impact on the prices of filature silkwaste available to the spun silk mills. We also understand that on cost and other considerations spun silk mills cannot use exclusively filature waste but must have a blend of other types of silk waste. But the spun silk mills at Mysore consume only 90 tonnes of filature silk out of their total requirements of 270 tonnes. They procure 67 tonnes of waste produced by domestic basins and 113 tonnes of waste of charka and other good quality waste. Obviously, about two-thirds of their requirements must be obtained from the open market. Though the Government filatures

may deny themselves the benefit of the high prices prevailing in the market for silkwaste through the linking arrangement, it would be unfair to link any of the private domestic basins or charka reelers with the spun silk mills for meeting this portion of the silkwaste requirement by spun silk mills. They must have the benefit of the prevailing prices for waste. We therefore, recommend only a quota restriction on exports taking into consideration the requirements of the spun silk mills in the country on the basis of their present rate of operation. If a time is reached when the two spun silk mills can operate a second shift the picture will undergo a change and the policy of exports could also be reviewed.

8.9. *Silk throwing and twisting.*

8.9.1. Raw silk as received from reelers has to undergo further processing before it can be put on looms. It is wound on bobbins and several threads are combined together to give the desired thickness of yarn and twisted. This process is commonly known as silk throwing. Of the many varieties of thrown silk yarn, the most common ones are organzine and tram. Different twists are given for yarn required for fabrics like crepe, georgette, hosiery, etc. According to the Central Silk Board there are at present over 100,000 spindles in the country for silk throwing of which nearly 80,000 spindles are operated in Bangalore in 30 factories. Other twisting centres are Varanasi, Kanchipuram and Peddapuram. The Mysore Government estimates that there are 246 units in Mysore State with about 123,000 spindles inclusive of doubling spindles in this industry. Most of them are owned by individuals engaged in twisting and throwing. The Government Filature at Kollegal has about 4000 spindles attacked to it and a private filature owns about 300 spindles. Certain weaving mills like the Government Silk Weaving Factory and the Bangalore Woollen, Cotton and Silk Mills Ltd., have their own plants for twisting.

8.9.2. It is a matter for consideration whether the twisting establishments need to be distinct units. Some of the important weaving establishments have their own plants for throwing, and one of the filatures in Mysore has a throwing plant. Important weaving establishments which have their own throwing plants seem to have installed them to assure themselves of efficiency in throwing in order that the fabrics produced by them may be of good quality. Obviously, the smaller establishments in weaving and particularly the hand loom weavers cannot afford to have their own throwing equipment. They have necessarily to depend on others who could given them silk in a form ready for being put on their looms. There does not seem to be much justification for the filatures in the country to put in the market reeled silk which is not thrown. In the interest of a better market for their reeled silk they ought to have throwing equipment attached in their filatures to offer the consumers silk yarn of a good quality in a form which could be directly used by them. There can be no assurance of good reeled silk being properly thrown if the throwing parts of the industry is scattered and uncontrolled. Besides, the filatures in their present set up are not very profitable. In view of their limitations in respect of further technological development as discussed earlier, the only way of making them a little more profitable lies

in their undertaking a further processing of the raw silk and offering a finished product, namely, silk yarn, which would have undergone some more transformation within their premises. This is borne out by the experience of some of the costed units. We therefore recommend that it would be in the interests of the filatures to equip themselves with the specialised machinery for throwing and offer to the market only thrown silk in future. This, of course, would not apply to such of their consumers who have their own throwing equipment and prefer to take reeled silk from the filatures. This recommendation no doubt may have its impact on the small scale throwing establishments in existence in the country but in view of the rising demand for silk and also in view of the policy of not licensing any more filatures in the near future till the existing capacity is fully utilised, the small throwing units may not be adversely affected.

8.9.3. *Silk Weaving.*—Silk weaving section of the industry is the final one in the series of stages through which raw silk has to pass. The Indian silk weaving industry is largely confined to handlooms. With change in fashion for thin and finer silks like georgettes and crepes the powerloom sector is also making a headway. Nevertheless, the bulk of the silk fabric production in the country is still mainly confined to the handloom sector. According to information received by us there are at present 1163 power looms and 106,844 handlooms engaged in silk weaving in the country. The powerloom sector includes 25 silk weaving mills with a capacity of 903 power looms. The principal use for silk in India is in the manufacture of sarees, brocades and other articles of apparel and production of lace. The estimated production of silk fabrics in the country during the last four years is as follows :—

(In million metres)

Year	Power looms		Handloom		Total
	Output	Per cent	Output	Per cent	
1959	2·2	11	17·3	89	19·5
1960	2·4	13	16·3	87	18·7
1961	2·6	13	18·0	87	20·6
1962	3·7	17	18·3	83	22·0

8.9.4. *Khadi silk.*—The khadi silk industry comes within the purview of the Khadi and Village Industries Commission. The bulk of the recognised institutions are in West Bengal. This sector of the industry is able to use in the production of raw silk pierced and otherwise unreelable cocoons. It makes handspun yarn with taklis and charkas from raw silk and silk waste. Certain varieties of 'Kora' fabrics (khadi) are woven on hand-looms from hand spun, hand reeled yarn without twisting. It was mentioned that a modified cottage basin is used in West Bengal and its output is of better quality and carries a premium. Khadi units absorb their product also when possible. The total value of fabrics produced from khadi silk is estimated to be Rs. 130·50 lakhs per year.

Domestic demand

9.1. In 1958 we estimated the current demand for raw silk of all types at about 4 million lbs. (1.8 million kgs.) a year. Regarding future demand it was considered that as long as prices of raw silk remained high it would not exceed the above figure. If, however, the cost of production could be reduced bringing down prices, domestic demand which is elastic might rise to some extent.

9.2.1. The Central Silk Board is now of opinion that even if prices are not reduced there may be an increase in demand owing to the general rise in living standards following an increase in per capita income. Therefore it has fixed a target of production of 2.30 million kgs. of raw silk for the Third Plan. The Government of Mysore is, however, sceptical of this not only in view of the high cost of silk but also on account of the change in taste of consumers with the advent of man-made fibres. Hence they do not expect any marked increase in demand in the near future. According to some of the leading dealers in silk the present high prices are due to its short supply rather than to increase in demand for silk. Thus it is attempted to prove that high prices need not necessarily indicate potential demand. As import prices are still lower than for comparable indigenous varieties, recent trend for a rise in the former would not directly affect our internal demand. The following table indicates the apparent availability of raw silk during the last five years.

(In million kgs.)

Year	Indigenous production		Total	Imports	Availability
	Mulberry	Non-mulberry			
1958	1·140	0·388	1·528	0·056	1·584
1959	1·141	0·374	1·515	0·150	1·665
1960	1·154	0·345	1·499	0·108	1·607
1961	1·264	0·392	1·656	0·106	1·762
1962	1·401	0·380	1·781	0·112	1·893

The net domestic offtake of raw silk for 1962 would be about 1.9 million kgs. This in itself will not be the sole indicator of demand. Equally the premium for fine denier of imported silk which caters to a special or sophisticated section of the market, imports being restricted, cannot be a measure of demand trends. Taking all factors into consideration and in view of the existence of unsatisfied demand, it was agreed at the public inquiry that the annual domestic demand for raw silk may be placed at 2·00 million kgs.

9.2.2. Filature raw silk is used for specialised varieties of fabrics. According to the Fact Finding Committee on the Filature Silk Industry the potential demand for filature quality raw silk in the country was placed at one million lbs. (0·45 million kgs.). The available supply of filature raw silk, made up of domestic production and imports, was of the order of 300,000 kgs. in 1962. From the evidence received there is indication that there is always unsatisfied demand for filature raw silk. The improved quality of raw silk obtained from domestic basins partly filled the gap in domestic demand. After discussion it was agreed at the public inquiry that the demand for filature raw silk may be placed at about 800,000 lbs. (360,000 kgs.) a year taking note of the indigenous production and limited scope for enlarging imports.

9.3. *Spun silk yarn.*—In 1958 we estimated the future demand for spun silk yarn at 200,000 lbs. (0·09 million kgs.) a year. The Central Silk Board has observed that with the closure of Mysore Spun Silk Mills the traditional markets for spun silk yarn were lost, as the handlooms which were using it have switched over to staple fibre yarn. Being used mainly for mens-wear, spun silk faces even more heavily the impact of artificial silk fabrics. Besides, the high cost of production and the poor quality of the spun silk yarn produced in the country are also impeding the rise in demand for it. However, with the modernisation of the Spun Silk Mills at Mysore and the establishment of Assam Spun Silk Mills it is expected that the quality of yarn would improve and there may be revival of the original demand for it. The annual production from the two mills is estimated by the Central Silk Board at 49,000 kgs. on single shift working. After discussion at the public inquiry it was agreed that the demand for spun silk yarn may be taken at 0·1 million kgs. a year.

9.4. *Silk fabrics.*—In 1958 we did not attempt to make an estimate of the demand for silk fabrics in the country. The Central Silk Board has estimated the production of silk fabrics in 1962 at 22 million metres. Deducting exports the apparent availability of silk fabrics for indigenous consumption in 1962 was about 20 million sq. metres. This may be taken as the probable annual demand for silk fabrics in the country.

Quality, research and training

10.1. At our last inquiry (1958) the quality of raw silk produced in the country was not considered satisfactory. There has always been a premium on imported raw silk. Even now the consumers of raw silk are not satisfied with the progress made towards improvement in the quality of indigenous raw silk. The Central Silk Board is not sparing any efforts towards the improvement of the quality of raw silk produced in the country. As a result the production of better quality mulberry silk has increased from 17 per cent of total production in 1958 to 36 per cent in 1962. There has been a corresponding fall in the sub-standard Charka silk which accounted for 61 per cent in 1962 as against 80 per cent in 1958. According to the Government of Mysore though there may be an improvement in the average quality there has been no appreciable rise in the quality of top grade indigenous silk to approach international standards. The introduction of the cottage basins has however

resulted in the production of better quality silk. It is contended that with the developmental schemes now being implemented for rearing and in respect of filatures, there may be an improvement in quality in the near future. Demand for coarser varieties of charka or khadi silk will always continue and has to be met.

10.1.1. The Government Silk Factory, Srinagar claims that its brand "Chinar" raw silk corresponds to 'AAA' of international grade. It is certainly heartening to hear that Kashmir can reach such high standard. In fact the only sericulture area in India which can reach such high levels in quality is Srinagar, as it is favourably placed not only in respect of its climate but also on account of the univoltine variety of its silk worm.

Besides, Kashmir has the advantage of frequent replenishment of its stock of foreign race seeds. But until its output is standardised at that high level and made to correspond to the international standards there could neither be assured offtake within the country for the special uses for which it is needed nor can there be a foreign demand. The Banaras Industrial and Trade Association says that there is no testing and grading in the case of indigenous silk and that each lot has to be examined by weavers and dealers. Unless this position is rectified the potentialities of the sericulture industry in Kashmir cannot be fully exploited. Consumers generally are not very appreciative of the quality of indigenous raw silk. One of the important consumers has pointed out that the indigenous filature silk does not compare favourably with imported varieties. At the public inquiry the producers admitted that the indigenously produced silk is not capable of satisfying the uniformity or neatness test. In respect of spun silk hopes are being held out that with the reconditioning of the machinery in the mills in Mysore there would be an improvement in the quality of the product.

10.1.2. The Indian Standards Institution published 21 standards (Tentative) for raw silk in 1953 and 5 standards for hand-loom silk fabrics in 1961 and 1962. The industry, however, has not made use of these standards. It was considered necessary to provide two systems of grading of raw silk, one which will be comparable to that which is generally accepted in international trade and another for regulation of internal trade. The Central Silk Board has estimated that the former standards could be applied in Jammu and Kashmir but not in Mysore. Owing to various factors, the silk produced in the Mysore area cannot come up to the standards prescribed. Therefore a revision of standards to meet the actual requirements obtaining in the production centres is under the consideration of Central Silk Board and the Indian Standards Institution.

10.1.3. In our Report (1958) we recommended that the possibility of enforcing compulsory testing of filature silk should be considered. This recommendation has not yet been fully implemented, and the Central Silk Board has stated that it could be taken up in Mysore only after the revision of the standards. In the meanwhile conditioning and testing houses have been set-up at Bangalore and at Calcutta. In both

these places filature silk produced in Government institutions are at present being tested. There is a proposal to set-up a full-fledged conditioning and testing house in Kashmir. The dealers did not however appreciate what is being done in this direction. The method of sampling for tests and the nature of the tests conducted are criticised. Dissemination of information about their tests and issue of certificates freely will take off the edge of the criticism.

10.2. As stated in our earlier Report, research must have the highest priority in the development of the industry and it is satisfactory that research stations at four centres have been established. The Central Sericulture Research Station at Berhampur is directly under the control of Central Government. This research station is regarded as the central institute for purposes of supervising and co-ordinating research activities at the institutes and substations. So far the progress has not been quite adequate but it is expected that in the near future the station will evolve superior varieties of silk worm and new strains of mulberry which would contribute towards increased production of good quality silk. The Central Sericulture Research Institute at Channapatna was taken over by the Central Silk Board in 1961 and it is being reorganised. It is also being shifted to Mysore as its initial location was considered unsuitable. The Sericulture Research Station at Titabar has been established with financial assistance from the Central Silk Board. Its research is directed towards muga and eri silk industries. It is under the administrative control of the Government of Assam. The Tassar Seed Supply and Research Station at Chaibasa which is proposed to be shifted to Ranchi is engaged in the preparation and supply of seed cocoons to the tassar silk worm rearers. All research work concerning tassar/silk worm is to be undertaken in this institute. Finally Silk and Art Silk Mills' Research Association of Bombay has also been helpful to the industry in conducting research into silk besides manmade fibres.

10.3.1. We had previously recommended that the Central Silk Board should undertake the training of technical personnel to supervise the progress of various schemes implemented. In response to this the Central Silk Board set up an All-India Sericulture Training Institute at Mysore. Other training institutes have also been established under state auspices at various centres such as Channapatna, Titabar, Berhampur, Srinagar and Nathnagar in Bihar. Besides such training within the country the Central Silk Board also assisted the State Government to get their technical officers trained abroad.

10.3.2. While the establishment of such training institutions is laudable it is necessary for the Central Silk Board to maintain some statistics regarding the class of people that come for training in these institutes. It would be useful to know whether the people already engaged in the sericulture industry are anxious to acquire further knowledge or are outsiders taking the training to pursue the avocation later. Steps may also be taken to keep track of the persons who have received training in their institutes. An attempt should be made to find out whether they get absorbed in the industry after the training or the training is being

wasted by their migrating to other professions. It would be most interesting to find out whether any of the trainees have started rearing worms and reeling of silk with domestic basins on their own initiative. If there is a trend in this direction it would be all to the good of the industry .

11.1. *Imports.*

11.1.1. Since the licensing period July-December 1956 imports of raw silk have been arranged by the Central Silk Board through the State Trading Corporation of India and its distribution is administered by the Board. This arrangement has been adopted to ensure stabilisation of prices and to meet the demand for higher grade raw silk required by the zari and the handloom industry, as there is a deficit between the demand and availability within the country. Imports are also required for allotment to exporters under the export promotion scheme. Further for the production of high grade silk fabrics imported raw silk is necessary. The Central Silk Board has stated that the imports of raw silk have been restricted to the minimum, safeguarding the interests of the sericulture industry within the country. The policy of graduated releases has checked violent fluctuations in internal prices of raw silk and enabled the consumers to obtain their requirements. The system therefore has been approved and appreciated and its continuance recommended by the Working Group on Sericulture and by the Fact Finding Committee.

Imports and exports

11.1.2. Imports of all types of silk yarn and silk sewing thread have been banned since 1958. Yarn spun from silkwaste has been canalised through the State Trading Corporation as in the case of raw silk.

11.1.3. Imports of raw silk were from Japan and China till 1960 and only from Japan since 1961. There have been no imports of spun silk yarn since January 1962. Similarly there have not been any imports of reeling cocoons or silk noils during recent years. Only silk worm seeds are being imported. Details of imports of raw silk and spun silk yarn are given in Appendix VI.

11.2. *Exports.*

11.2.1. Regarding exports only silk fabrics and silk waste are exported from the country. There has been a steady improvement in the export of mulberry silk fabrics. It increased from 0·35 million sq. meteres in 1958 to 0·89 million sq. metres in 1962. Exports are being made to many countries and those to U.S.A. have been increasing. Further, the share of non-traditional markets has been showing an upward trend as compared to the share of traditional markets. Under a special arrangement since 1958 tassar fabrics are exported to the U.S.A. Recently sizeable exports of dupion silk are also noticed. A target of Rs. 100 lakhs in respect of mulberry silk fabrics and of Rs. 65 lakhs in respect of tassar silk fabrics for export has been fixed for the year 1963-64. The bulk of the fabrics exported are hand-loom fabrics which have an appeal

because of their artistic design. The export of power-loom silk fabrics may be barely 20 per cent of the total exports.

11.2.2. Under the export promotion scheme exporters were given allotment of imported raw silk at preferential rate equivalent to two-thirds of the f.o.b. value of the pure silk fabrics exported, subject to a maximum of Rs. 10 per sq. yard. A few additional incentives are also given such as the grant of licences for import of dyes and chemicals to the extent of 3 per cent of the f.o.b. value of certified exports and the grant of drawback of duty on certified exports of mulberry silk fabrics at Rs. 2·64 per kg. of mulberry silk content in the fabric exported. The scheme has been further revised with an increased quantum of incentives from 1st October, 1962 as described hereunder :—

(a) Coaltar dyes and chemicals as are permitted to be imported under the Red Book, machinery, machinery parts and equipments and spare parts and accessories as may be approved by the Textile Commissioner.	Not exceeding 10% of the the f.o.b. value.
(b) Embellishments, such as zip fasteners, buttons, sewing thread, man-made fabrics.	Not exceeding 10% of the f.o.b. value.
(c) Silk waste	Not exceeding 37½% of the f.o.b. value.
(d) Raw silk	Balance out of 75% of the f.o.b. value of exports after deducting value of import entitlements issue if any, out of (a) to (c) above . The total entitlements as at (a) to (d) above shall not exceed 75% of the f.o.b. value of the exports subject to the maximum of Rs. 15 per sq. metre.

The export promotion scheme is being implemented by the Textile Commissioner. There is a pre-shipment inspection of silk fabrics for export under the scheme. There is also a special scheme of export promotion for tassar fabrics. Exporters of tassar fabrics were eligible for licence to import dyes and chemicals to the extent of 3 per cent of the f.o.b. value of exports which has been enhanced to 10 per cent recently. The question of export incentives was discussed at the public inquiry and there was a consensus of opinion that the existing incentives were adequate.

12. Raw silk, silk yarns and silk fabrics are assessed under item Nos. 46, 46(1), 47, 47(1) and 48 of the First Schedule to Indian Tariff Act, 1934. Relevant extracts from the schedule showing current rates of protective duty are given below :—

Existing rates of duty

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protection rates of duty
				The United Kingdom	A British Colony	Burma	
1	2	3	4	5	6	7	8
46	Silk, raw (excluding silk waste and noils), and silk cocoons.	Protective	35 per cent *ad valorem* plus Rs. 8·80 per kilogram.	..	..	10 per cent *ad valorem.*	December 31st, 1963.
46(1)	Sik, waste and noils.	Protective	35 per cent *ad valorem.*	..	..	10 per cent *ad valorem.*	December 31st, 1963.
47	Silk yarn including thrown silk warps and yarn spun from silk waste or noils, but excluding sewing thread.	..	..	..	..	10 per cent *ad valorem.*	December 31st, 1963.
	(a) Silk yarn including thrown silk warps.	Protective	35 per cent *ad valorem* plus Rs. 8·80 per kilogram.	..	..	..	..
	(b) Yarn spun from silk waste	Protective	35 per cent *ad valorem* plus Rs. 11·60 per kilogram.	..	..	..	December 31st, 1963.
	(c) Yarn spun from noils.	Protective	35 per cent *ad valorem.*	..	..	..	December 31st 1963.
47(1)	Silk sewing thread.	Protective	35 per cent *ad valorem.*	..	..	10 per cent *ad valorem.*	December 31st, 1963.

1	2	3	4	5	6	7	8
48	Fabrics, not otherwise specified, containing more than 90 per cent of silk, including such fabrics embroidered with artificial silk.	..	..	..	..	20 per cent *ad valorem.*	..
	(a) Pongee .	Protective	120 per cent *ad valorem* plus Rs. 18·70 per kilogram.	..	..	..	December 31st, 1936.
	(b) Fuji, Boseki and corded (excluding white cord.	Protective	120 per cent *ad valorem* plus Rs. 18·70 per kilogram.	..	..	..	December 31st, 1963.
	(c) Other sorts	Protective	120 per cent *ad valorem* plus Rs. 13·80 per kilogram.	..	..	..	December 31st, 1963.

NOTES. —

(1) Under Section 23(1) of the Finance Act 1963 a surcharge (additional duty of 10 per cent of the duty has been levied on all the above items for the financial year 1963-64.

(2) Item No. 48 is liable to countervailing excise duty under the Section 2A of the Indian Tariff Act, 1934.

(3) Under Government of India, Ministry of Finance (Department of Revenue Notification No. 137-Customs, dated the 10th may, 1958 as subsequently amended by Notification No. 20-Customs dated the lst March, 1960, and No. 106-Customs dated the lst October, 1960, articles specified in column 1 of the Schedule hereto annexed are exempt from the payment of so much of the Customs duty leviable thereon as is in excess of the amount specified in the corresponding entry in the column 2 thereof:—

SCHEDULE

Name of article	Amount of duty
Chinese silk piece-goods, the following:—	80 per cent *ad valorem plus* Rs. 3·50 per kilogram plus countervailing excise duty.
Ghat-Pote, plain and flower Gauze, plain and flower.	
Paj, all sorts	120 per cent *ad valorem plus* countervailing excise duty.

13. Imports of raw silk are canalised through the Central Silk Board and the State Trading Corporation. Imports of silk fabrics have been banned since the licensing period October-March 1958 and no imports of yarn including those spun from silk waste have been made since January 1962. Nor are there imports of waste, noils or sewing thread. For the purpose of determining protection, the available data regarding raw silk should as in the past, be a sufficient guide and afford compensatory protection to the other categories. The current c.i.f. price furnished to us by the Central Silk Board for the latest imports made through the S.T.C. based on existing contracts was given as Rs. 8240 per kg. for the Japanese raw silk of 20/22 denier 2A grade. The representatives of the trade however gave us at the public inquiry a lower quotation of Rs. 75·93 for this grade. They also cautioned that for several months now there have been speculative increases in the silk prices in Japan and the crest has already been passed and the prices are coming down. Silk prices (f.o.b.) for the above grade per Kg. which on an average had remained at about Rs. 43, Rs. 40, Rs. 46 and Rs. 54 for the years 1958, 1959, 1960 and 1961 respectively began to spurt from April 1962 rising to Rs. 75 in December 1962. The rise continued at the beginning of this year to Rs. 85·73 in March since when there has been a slight decline. Forward quotations indicate a possibility of further decline and the recent market quotations in July-August confirm this trend. We are informed that the market surveys indicate efforts on the part of Japanese firms to stabilise prices for exports at 5,200 yen (Rs. 68·80) for silk of 20/22 denier grade 2A. Surveying the trends over a period, the recent increases in Japanese prices are somewhat unusual and the trend might get reversed. We have, therefore, taken Rs. 68·80 per kg. mentioned above as the basic f.o.b. price for calculating the c.i.f. prices on which protection has to be determined. On the basis of Rs. 68·80 f.o.b. or Rs. 70·86 c.i.f. price, the landed cost would work out as follows :—

C. i. f. prices and landed costs

	Rs. per kg.
1. C.i.f. value	70·86
2. Customs duty.	36·96
3. Clearing charges	0·50
4. Landed cost	108·32

14.1. *Scope and method of costing.*—Our Cost Accounts Officer examined the costs in respect of mulberry cultivation and cocoon production, silk reeling (Charka, domestic basins and filatures), spun silk and silk throwing and weaving in Mysore State which accounts for the largest part of indigenous silk production. For want of properly recorded

Commission's estimates of cost of production and fair ex-works prices

data, the costs in respect of mulberry leaves mostly grown by small cultivators and for rearing and cocoon production, and raw silk produced in charka or domestic basins which is a cottage industry had to be mostly estimated by our Cost Accounts Officer on the basis of oral enquiries. Again for want of data in sufficient details in the unit selected for finding out the costs of silk throwing and weaving at Bangalore. such costs were built up on certain broad assumptions and estimates. One Government filature and a private filature were costed in detail. The report of the Cost Accounts Officer embodying the details of the costs is forwarded to Government as a confidential enclosure to this Report.

14.2. *Cost of cultivation of mulberry and production of cocoons.*— Cultivation of mulberry and production of cocoons generally go together. Silk worm rearing is practised as a cottage industry, subsidiary to agriculture, giving substantial additional income to the ryot. The labour of the entire family of the agriculturist is utilised for the purpose of mulberry cultivation and silk worm rearing. Four establishments, two in rainfed areas of Kollegal and two in irrigated areas of Sidlaghatta and Ramanagaram were selected for cost determination. On the basis of the costs worked out by our Cost Accounts Officer and the discussions we had with the Director of Sericulture, Mysore State, we have estimated the fair prices for mulberry leaf at 11·50 nP. per kg. for rainfed area and 15·50 nP. per kg. for the irrigated areas, the average for the Mysore State being taken as 12 nP. per kg. The fair prices per kilogramme of cocoons for the two areas have been estimated by us at Rs. 3·75 and Rs. 5·00, the average for the State being Rs. 3·85. In estimating the above fair prices we have taken into account the value of the service rendered by the family members of the cultivator/rearer in addition to the other expenses incurred by him, and have provided sufficient margin for contingencies also after allowing a fair return.

14.3. *Cost of production of raw silk :*

(i) *Charka and domestic basins.*—The costs of production of raw silk on charkas and domestic basins were also discussed by us with the Director of Sericulture, Mysore, State, in the absence of the representatives of the small units costed. On the basis of these costs making due allowance for renditta and realisation on waste we have estimated the fair ex-works prices per kilogramme of raw silk reeled on charka at Rs. 60·25 and that reeled on domestic basins at Rs. 69·50.

(ii) *Filatures.*—The units selected for working out the costs of filature raw silk are (a) The Kisan Silk Industries Private Ltd., Mellur, and (b) Government Silk Filatures, Kollegal. While the former unit is a private enterprise, the latter is owned and run by the Government of Mysore. Cost details were discussed with their respective representatives. The following table gives a summary of the costs and the fair ex-works

prices estimated by us for the two units and the weighted average cost for the industry for raw silk of 20/22 denier.

Rs./Kg.

	Kisan Silk Ind.	Govt. Silk Fil.
1. Cost of cocoons	68·01	72·20
Less Credit for silk waste	4·50	6·60
Net material cost	63·51	65.60
2. Conversion costs	18·25	23·91
3. Cost of production	81·76	89·51
4. Return	3·49	3·49
5. Fair ex-works price	85·25	93·00
Estimated production (kgs.) . . .	5,738	30,600
Weighted average fair ex-works price . .	91·78	
Or say Rs.	92	

14.3.1. *Raw materials.*—In working out the above costs the rates of cocoons have been adopted at Rs. 5·00 per kg. for Mellur and Rs. 4·00 per kg. for Kollegal. The renditta estimated being 13·5 and 17 respectively for the two units. In the case of Kollegal, the Director of Sericulture Mysore, State, stated that as large scale single buyers of cocoons, it may not be always possible for them to obtain the cocoons at the fair price estimated by the Commision, particularly in view of the present tendency of rising prices, and that suitable allowance should be made for this factor. It was, therefore, decided to adopt a rate of Rs. 4·00 per kg. as against an estimated average rate of Rs. 3·85 for the State as a whole. Credit per kg. of silk waste has been taken at Rs. 10 in the case of Mellur and at Rs. 11 in the case of Kollegal, the precentages of wastes being 45 and 60 respectively, on the good silk produced.

14.3.2. *Conversion charges.*—The number of working days in both the units have been assumed to be the same at 300 and the average number of basins to be worked at about 85 per cent of the active basins. The labour requirement has been estimated to be in direct proportion to the basin days to be worked. In the case of Kollegal, however, which has got an incentive bonus scheme for production above 10 ozs. per basin day, the incentive bonus element for the averge production over 10 ozs. has also been included. An increase of 5 per cent per annum has been anticipated in the emoluments of clerical, supervisory and managerial staff. The total expenditure in respect of repairs and maintenance and power has been increased in proportion to the basin days expected to be worked which will also take care of any possible increase in their rates. The fuel required for stifling and boiling of cocoons has been estimated in relation to the volume of cocoons to be consumed. Depreciation has been calculated at income tax rates for Mellur and at the rates fixed by the Mysore Government for Kollegal. Suitable increases have been given in respect of the items included under overheads; depending on the nature of the expenditure.

14.3.3. *Return.*—Return has been calculated at 12 per cent on the capital employed, the requirement of working capital having been estimated at three months' cost of production excluding depreciation.

14.4. *Yarn spun from silk waste.*

14.4.1. Cost of production of spun silk yarn 2/120s and 2/60s manufactured by the Government Spun Silk Mills, Channapatna, was examined by our Cost Accounts Officer. These costs and also the basis for estimating the future cost were discussed with the representative of the mills. We were informed that under the Third Five Year Plan a sum of Rs. 19 lakhs has been earmarked for modernisation, replacement and expansion of the existing plant under a phased programme. According to that programme, certain of the capital items should have been acquired by March 1963, but no such purchases have been effected. The scheme is already lagging behind for over two years and it has not been possible to visualise when it would materialise. In the meanwhile the unit is already faced with the problem of disposing of its stock and at itmes with the problem of availability of raw materials both quantitatively and qualitatively at economic prices. We have, therefore, estimated the costs on the basis of 50 per cent capacity, actually worked by the unit during the year ended March 1963, and have projected the costs for future.

14.4.2. A summary of the costs and the fair ex-works prices for the two counts, *viz.*, 2/120s and 2/60s, is given below :—

	Rs./Kgs.	
	2/120s	2/60s
1. Raw materials	46·91	39·30
2. Manufacturing expenses	25·82	18·04
Total cost	72·73	57·34
3. *Less* credit for recoveries	7·89	6·60
Net cost of production	64·84	50·74
4. Return	6·24	4·54
5. Fair ex-works price	71·08	55·28

In working out the above fair ex-works prices, the average rate of all types of silk waste, the raw material for the spun silk yarn, has been taken at Rs. 6·19 per kg. Credit for noils and droppings has been taken at their estimated realisable value. Return has been calculated at 12 per cent on the employed capital the, working capital requirements, in normal conditions having been assessed at four months' cost of production.

14.5. *Silk throwing and weaving.*—Sri Sreenivasa Silk Throwing an .Weaving Mills, Bangalore, was costed for ascertaining the cost of sil throwing and weaving. As stated in paragraph 14·1 this unit did no have sufficient details from which our Cost Accounts Officer could work the costs and he could assess them under certain broad assumptions. The imports of silk fabrics have been banned and we have no c.i.f. prices available. Silk weaving is an old and established industry and at present it is the cost of raw silk which is the biggest element in the fabric's cost accounting for about 75 per cent. weaving costs proper of the costed unit accounted for less than 20 per cent of the cost in the case of undyed fabrics. The protection required for the silk fabrics is only of a compensatory nature. Under the circumstances we have not made any attempt to estimate the costs of production of varieties of silk fabrics with a view to separately determining the quantum of protection.

Comparison of landed cost without duty of imported raw silk, silk yarns and silk fabrics with the fair ex-works prices of the indigenous products

15.1. As stated in paragraph 13, we have not been able to obtain c.i.f. prices of any sericultural products other than raw silk imported from Japan. The c.i.f. price of Japanese raw silk relates to 20/22 denier of 2A grade. The indigenous filature silk is stated to be of a grade far below the imported one. It would, therefore, be necessary for us to adjust the c.i.f. price indicated in paragraph 13 suitably to make it comparable with the indigenous filature raw silk for which fair ex-works prices have been estimated by us. It was agreed at the public inquiry that a differential of 92 nP. per kg. may be adopted for this purpose. On the above basis the duty indicated for equating the landed cost with that of the fair ex-works price estimated by us, works out to 30·8 per cent as shown below :—

	Rs. per kg.
C.i.f. price of Japanese 20/22 denier 2A grade raw silk . .	70·86
Less grade differential	0·92
C.i.f. price for raw silk comparable to indigenous grade . .	69·94
Clearing ch arges	0·50
Landed cost without duty	70·44
Fair ex-works price of indigenous raw silk . . .	92·00
Difference between landed cost without duty and fair-ex-works price.	21·56
Difference as a percentage of c.i.f.	30·8
	say 30 per cent.

15.2. As regards spun silk yarn, though a unit was costed, we have not made a similar comparison as we could not obtain c.i.f. prices. Regarding silk fabrics too we have not made the comparison for several reasons.

Due to their large variety and not being strictly comparable to imported types we have not determined their fair ex-works prices. The protective duty for silk fabrics at present is in the nature of a compensatory duty measured in terms of raw silk content or spun silk yarn content of the fabrics included under I.O.T. items 48(a), 48(b) and 48(c). Further, in the event of there being no protection, silk manufactures as articles of luxury consumption would carry its due tax burdens.

Measure of protection

16.1. The comparison of c.i.f. price and estimated fair ex-works price as explained in the previous paragraph indicates that the measure of protection required for raw silk would be 30 per cent *ad valorem*. Since we are not sure of the permanent character of the present trend in Japanese silk prices we cannot also take this level of disparity for granted.

16.2.1. In this context to decide whether protection is no longer needed, the primary question for consideration is whether the industry has now come of age, as reflected by the margin of difference between the c.i.f. price of imports and the fair ex-works price of indigenous product. It is no doubt a matter for gratification that much leeway has been made, thanks to the developmental measures implemented, since the last inquiry in 1958. As explained earlier, there are several schemes still on the anvil and many measures already implemented have not had time to yield their fruits fully. The Central Silk Board is just now getting to grips with the tantalising problems of the industry which cannot be easily settled. Preparation of new grafts for mulberry cultivation, extension of the irrigated area under cultivation, preparation of disease free layings at suitable seed stations, starting of chawki rearing centres, institution of regulated markets and modernisation of reeling methods are but a few of the many activities for improvement of sericulture for which onerous responsibilities are assumed by the Central Silk Board. Reduction in costs and improvement in quality of silk are also tied up with the evolution of better hybridized races of silk worm and we understand a number of schemes for this purpose and work connected with dietary and morphology of the silk worm are in hand with the main research institutes. It is a far cry in terms of years between the work in the laboratory and its organised commercial exploitation in the field. It is necessary to appreciate in this context that none of these measures could be enforced as in a regimented economy. A greater part of the organisational pattern of the industry is still in private hands and their response could be secured only through educative propaganda and offer of incentives. Our sericulture industry is a unique example of an economic organization where public and private sectors have to co-exist in a complementary position for their mutual benefit. Even in areas, as in Jammu and Kashmir, where it is a virtual state monopoly the cooperation of private rearers is essential.

16.2.2. The far reaching suggestions made by the special committees appointed since 1958, such as the Working Group, the Central Research Coordination Committee and the Fact Finding Committee are not capable of quick disposal. The Research Organisation for instance that is being

set up could show tangible results only gradually. The fundamental research conducted at the Central Institute should lead to applied research at the zonal stations, suitable for each area. The results in a commercialised form should then be taken to the field through a net work of national extension services. All these are time consuming measures and there is no way of short circuiting it. The machinery that has been set up for the purpose is conceived on sound lines but it must be allowed to operate on the basis of trust and understanding. Having given them the opportunity, to watch their progress over time should be the concern of the authorities. By deprotection and disassociating itself from the industry at this stage the Government agencies may not be able to watch with interest its progress and lend a helping hand when needed most.

16.2.3. It may be argued that the industry has had protection for a long time and the leeway made is sufficient to let it depend on its own resources for facing future competition. But the degree of improvement evinced by it now does not yet firmly establish its viability. Further, the measures that are now in the process of implementation can bear full fruit only within the next two or three years. By deprotecting it at this stage we might run the risk of the industry coming back after an interval to ask for the protective shield. A wiser course to follow would be to extend protection for another short period. The prevalence of a controlled market at present owing to regulated imports and the consequent redundance of tariff protection is beside the point. That is a vulnerable position in more senses than one. Relaxation of import control may be allowed on behalf of any special interests. There is no obligation on the part of Government to maintain an insulated market. A state of uncertainty is bound to be created the moment the statutorily accepted obligation of tariff protection is removed. We would like to point out that tariff protection and a controlled market are neither identical in nature nor equally invariable in their performance.

16.3.1. While recommending continuance of protection is a matter of principle, to determine the measure of protection is somewhat pragmatic. Costs and c.i.f. prices are bound to vary over time but it would be imprudent to make frequent changes in the rates of duty. Besides, c.i.f. prices need not faithfully reflect cost conditions at home. They are generally lower than home market prices and could be scaled down for furtherance of exports. Therefore, though the duty required to protect raw silk against foreign competition may be 30 per cent as shown in the preceding paragraph as against the current rate of 35 per cent *ad valorem* plus a specific duty of Rs. 8·80 per kg. which together is equivalent to about 52 per cent *ad valorem*, we are not in favour of recommending any revision downwards of the rates of protective duty. It is preferable to shorten the duration of protection rather than reduce its measure if the objective is to accelerate development of the industry. The prices in Japan had recently shown a tendency to rise. In taking a decision while they are almost at their crest it is necessary to envisage the contingency of a further fall necessitating a readjustment. Further, though our main objective is developmental protection we cannot completely ignore the considerations referred to in paragraph 15·2 of what

would be the natural position of an article like silk in our normal tariff structure. We therefore recommend continuance of the existing rate of protective duty on raw silk but for a shorter period, namely, three years. We expect a further fall and a greater stabilisation in ex-works price within this period. That would be an appropriate time to consider a revision, if not complete withdrawal, of protection. A shorter period would avoid complacency among producers but a lower rate of duty would instill fear and create uncertainty among them.

16.3.2. The measure of protection required for items other than raw silk is, as already explained not determinable easily due to the non-availability of corresponding c.i.f. prices since their imports were negligible or have remained banned for a considerable time. The position in this respect has not been very different from what it was during the last inquiry when the compensatory protection for these items was continued at the prevailing rates. It may be mentioned that for silk waste and noils which we are now in a position to export, there is no proper basis for costing. Allowance for realisations on this account has been made in the price of raw silk. The prices now fetching in the export market are also quite comfortable as there seems to be a limited supply. The question of specific quantum of protection would be somewhat academic. For silk yarns the basis has to be compensatory protection and also for silk sewing thread. With regard to spun silk yarn the differential in overseas markets like Japan for f.o.b. prices between it and reeled silk is not as pronounced as it is in this country. Imports though not banned have ceased since the beginning of 1962 and the situation is, therefore, such that we consider the existing rate of duty should be adequate even taking note of the present cost of production of spun silk. As for fabrics, about 75 per cent of their value comprises the cost of silk. The weaving industry in the country is a long established one and the conversion costs are not such as will have to be specially offset by an element when determining the quantum of protection purely on the basis of protection for the raw silk element. We, therefore, recommend that protection to the sericulture industry should be continued for a further period of three years till 31st December 1966 at the existing rates of protective duty on the tariff item Nos. 46, 46(1), 47(a), 47(b), 47(c), 47(1), 48(a), 48(b) and 48(c).

Summary of conclusions and recommendations

17. Our conclusions and recommendations may be summarised as under :—

(i) A general assessment of the industry shows that in view of its peculiar features and special handicaps the overall progress achieved by it since the last inquiry in 1958 has not been quite commensurate with either the prolonged protection granted or with the magnitude of the other assistance rendered by the Central Silk Board and State Governments.

(Paragraphs 7.1.1. and 7.7)

(ii) Irrigation, manuring, improvement of soil conditions and evolution of suitable grafts which will give better yield and study of nutritive value of leaves should receive the highest attention of research institutes and sericultural States.

(Paragraph 8.5.1.2.)

(iii) Steps should be taken towards the fulfilment of our suggestion regarding chawki rearing centres on co-operative lines in order that the quality of the raw silk may improve and the existing high renditta considerably lowered.

(Paragraph 8.6.2.1.)

(iv) Unless the authorities in the notified cocoon markets in Mysore State undertake objective tests to accurately grade the cocoons and create conditions conducive to an adjustment of prices on the basis of quality the purpose of establishing such markets would not be carried to its logical end.

(Paragraph 8.6.2.4.2.)

(v) The practice of earlier harvesting of cocoons should be corrected either through better incentives created by regulation of prices after suitable grading in the markets or through legislative enforcement that cocoons ought not to be brought to the market earlier than the fifth day.

(Paragraph 8.6.2.5.)

(vi) The possibility of establishing a central agency for the storage of cocoons in centres where there is a concentration of markets may be explored.

(Paragraph 8.6.2.5.)

(vii) A thorough examination of the relative advantages of different methods of reeling in the existing set up of the country (namely, charka, domestic basins and filatures) and the demand for their end products should be undertaken before proceeding any further with the policy of radically altering the proportions in which each makes its contribution to the existing demand for silk.

(Paragraph 8.6.3.3.)

(viii) As a class by itself catering to a special demand non-mulberry silk has a substantial market internally, and the tassar variety has recently manifested good export possibilities. As such this section of sericulture industry deserves more attention than it has so far received.

(Paragraph 8.7.4.1.)

(ix) A quota restriction on exports of silk waste taking into consideration the requirements of spun silk mills in the country on the basis of their present rate of operation is recommended. If a time is reached when the two spun silk mills can operate a second shift the picture will undergo a change and the policy of exports could also be reviewed.

(Paragraph 8.8.4.)

(x) It would be in the interests of the filatures for making them a little more profitable to equip themselves with the specialised machinery for throwing and offer to the market only thrown silk in future.

(Paragraph 8.9.2.)

(xi) The annual domestic demand is estimated at 2·00 million kgs. for raw silk, 0·36 million kgs. for filature raw silk, 0·1 million kgs. for spun silk yarn and 20 million sq. metres for silk fabrics.

(Paragraphs 9.2.1. to 9.4.)

(xii) Consumers generally are not very appreciative of the quality of indigenous raw silk.

(Paragraph 10.1.1.)

(xiii) Dissemination of information about the testing of raw silk undertaken at the testing houses and issue of certificates freely are necessary to meet the criticism of dealers with regard to the method of sampling for tests and the nature of tests conducted.

(Paragraph 10.1.3.)

(xiv) Protection to the sericulture industry should be continued for a further period of three years, that is, upto 31st December 1966 at the existing rates of protective duty under tariff item Nos. 46, 46(1), 47(a), 47(b), 47(c), 47(1), 48 (a), 48(b) and 48(c).

(Paragraph 16.3.2.)

Acknowledgements

18. We wish to express our thanks to the various individuals, associations, State Governments and the Central Silk Board for their co-operation in this inquiry.

K. R. P. AIYANGAR,
Chairman.

J. N. SEN GUPTA,
Member.

R. BALAKRISHNA,
Member.

PRAMOD SINGH,
Secretary.

Bombay, *9th September*, 1963

APPENDIX I

[*Vide* Paragraph 3.1]

List of firms/bodies/associations to whom the Commission's questionnaries or letters were issued

*Those who replied to questionnaires/letters or submitted memoranda.

†Those who stated that they were not interested.

A. PRODUCERS

(i) *Mulberry Cultivators/Graineurs/Rearers of Silkworm.*

1. Shri Y. C. Bajjappa, Sericulturist, P.O. Devanahalli, Bangalore District, (Mysore State).
2. Shri Vasant Yeshwant Gurar, At-Kavathe Ekand Tal-Tusgaon, Distt. Sangli.
3. Talanki Gurappa Setty, 12, Lakshminarasimhiah, Silk Koti, Avenue Road, Bangalore-2.
4. S. Puttabosappa, Silk-Worm Rearer, Dugahatty Village, Honnur Post, Yelandur Taluk, Mysore District.
5. M.M. Patwardhan, L.C.P.S., Pali, Tal. Sudhagad, Dist. Kolaba.
*6. K.B. Jayadovappa, Gundlupet, Mysore District, (Mysore State).
7. Dr. N. Nagaraja Rao, Sri Venkateswara Grainage, Market Road, Kollegal.
8. Government Silk Farm, Hindupur, (Anantapur Dist.) Andhra Pradesh.
*9. Sericulture Export, Himachal Pradesh, Administration, Simla.
10. Central Craft Nursery, Mirgund, Srinagar, (Jammu & Kashmir).
11. Mulberry Craft Nursery, Quasigund, Srinagar, (Jammu & Kashmir).
12. Government Nursery, Jammu, Tawi, (Jammu & Kashmir).
13. Central Silk Farm, Yeshwantsagar, Indore, (Madhya Pradesh).
*14. Government Silk Farm, Hosur, Salem Dist., (Madras State).
15. Central Silk Farm, Chingmeirong, Manipur.
16. Central Silk Farm, Kollegal, (Mysore State).
17. Government Silk Farm, Channapathna, Mysore.
18. Government Silk Farm, Mugur, Mysore.
19. Government Silk Farm, Mysore.
*20. Central Silk Farm, Kudige (Coorg Dist.), Mysore.
21. Government Silk Farm, Hindalge, Belgaum Dist., Mysore.
*22. Central Nursery, Sujanpur, (Gurdaspur Dist.), Via Pathankot, (Punjab).
*23. Central Silk Farm, Mukerian, (Hoshiarpur Dist.), (Punjab).
24. Central Silk Farm, Premnagar, Dehradun, (Uttar Pradesh).
25. Government Nursery, Beldanga, Kumarpur (Near Berhampore), (West Bengal).
26. Government Nursery, Berhampore, (West Bengal).
27. Government Nursery, Piasbari, Malda, (West Bengal).
28. Government Nursery, Matigara, Near Siliguri, (West Bengal).
29. Government Nursery, Kurseong, Darjeeling Dist., (West Bengal).
30. Multivoltine Seed Farm, Depalpur, (Madhya Pradesh).

31. Basic Seed Farm, Bidadi, Mysore.
32. Basic Seed Farm, Kunigal, Mysore.
33. Basic Seed Farm, Dodballapur, Mysore.
34. Government Silk Farm, Shillong, (Assam).
35. Basic Seed Farm, Mirgund, Srinagar, (Jammu & Kashmir).
36. Basic Seed Farm, Udhampur, (Jammu & Kashmir).
37. Foreign Race Seed Station, (Hill Rearing), Kalimpong, (West Bengal).
38. Central Grainage, Hindupur, (A.P.).
39. Government Grainages, Srinagar, (Jammu & Kashmir).
40. Government Grainages, Achbal, (Jammu & Kashmir).
41. Government Grainages, Banihal, (Jammu & Kashmir).
42. Govt. Cross Breed Grainage, Berikai, Hosur Taluk, Salem Dist., (Madras State).
43. Govt. Grainage, Kanakapura, Mysore.
44. Government Grainage, Chintamani, Mysore.

*45. Government Grainage, Devanhalli, Mysore.

46. Government Grainage, Magadi, Mysore.
47. Government Grainage, Sugganhalli, Mysore.
48. Government Grainage, Doddaballapur, Mysore.
49. Central Grainage, Kollegal, Mysore.
50. Government Grainage, Haldwani, Uttar Pradesh.
51. Government Grainage, Ajitmal, Uttar Pradesh.
52. Government Grainage, Matigara, West Bengal.
53. Government Grainage, Piasbari, West Bengal.

*54. Shri M. N. Nanjundaih, Licensed Seed Preparer, President, Mysore State Licensed Seed Preparers Association, Mugur, Mysore State.

*55. Shri A. R. Srinivasa Iyengar, Licensed Seed Preparer, General Secretary, Mysore State Licensed Seed Preparers Association, T—Narasipur, Mysore State.

*56. Shri T. S. Ranga Rao, Licensed Seed Preparer, Secretary, Mysore Division Seed Preparers Association, T—Narasipur—Mysore State.

57. Shri S. N. Thapasappa, Licensed Seed Preparer, Secretary, Kolar Division Licensed Seed Preparers Association, Dosakote, Bangalore District.

58. Shri G. S. Deva Doss, Licensed Preparer, Secretary, Channapatna Division Licenced Seed Preparers Association, Maddur, Mysore State.

59. Shri Nagaraja Rao, Licensed Seed Preparer, Secretary, Kollegal Division Licensed Seed Preparers Association, Kollegal, Mysore State.

60. Shri B. A. Keshavamurthy, Licensed Seed Preparer, Secretary, Chamarajanagar Division, Licensed Seed Preparers Association, Chamarajanagar, Mysore State.

*61. Shri T. G. Sishagiri Rao, Licensed Seed Preparer, T—Narasipur, Mysore State.

62. K. Siddegowda, Licensed Seed Preparer, Kanakapura, Mysore State.

*63. Shri M. Munegowda, Licensed Seed Preparer, Anur, Sidlaghatta Taluk, Kolar, Mysore State.

64. Shri H. D. Nanjappa, B.Sc., Licensed Seed Preparer, Silk Merchant, Treasurer, Mysore State Licensed Seed Preparers Association, Chikkaballapur, Mysore State.

65. Shri Devegowda, Sericulturist, Kamkerai, Kollegal.

*66. Shri H. S. Jaya Rao, Licensed Seed Preparer and Sericulturist, Ex-Member C.S.B., Ramanagaram.

67. Divisional Sericulture Officer (HA), Palampur, (Kangra).

(*ii*) *Producers of Raw Silk* (*Reelers*).

(*a*) *Filatures.*

1. General Manager, Government Silk Filatures, Mysore.
2. Managing Director, The Mysore Silk Filatures Pvt. Ltd., Sidlaghatta, (Mysore State).
3. Chairman, Sarvamanya Silk Filatures, Mysore.
*4. Shri K. M. Nanjundappa, M.L.C., Chairman, Kisan Silk Industries, Mallur, Sidlaghatta Taluk, Mysore State.
5. Managing Agents, Karnataka Silk Filatures, Veswesvrapuram, Bangalore-2.
*6. Government Silk Factory, Srinagar.
7. Government Silk Factory, Jammu (Tawi).
8. Doon Valley Sericulture Co-operative Society (P) Ltd., Dehradun.
9. Government Silk Filatures, Kollegal, (Mysore State).
10. Government Silk Filatures, Kanakapura, (Mysore State).
11. The Secretary, Reelers Co-operative Society, Talavady, (Madras State).
12. Reelers Association, Malda, West Bengal.
13. Domestic Reeling Units, Malda, West Bengal.

(*b*) *Charka and Cottage Basins.*

1. Kanaka Silk Industries, Kanakapura, (Mysore State).
2. Shri Mahadewa Silk Industries, Mudigundam, (Kollegal Taluk), Mysore State.
3. Mispa Silk Filatures, Kanakerai, (Kollegal Taluk), Mysore State.
4. Shri G. L. Ramachandra Rao, Domestic Basin Owner, Ikkadahalli, (Kollegal Taluk), Mysore State.
5. Swastic Silk Industries, Kanakapura, (Mysore State).
6. Shri Ali Raochegowda, Surapuram (Kollegal Taluk), Mysore State.
7. Shri M. Madiah Alias Gogiah, Mamballi, (Yolundar Taluk), Mysore State.
†8. Shri Abdul Rahim Alias Baji Saheb, Charka Reeler, Mamballi, (Yelundar Taluk), Mysore State.
9. Shri Hayath Khan Sahib, Charka Reeler, President, Reelers' Association, Mamballi, (Yellundar Taluk), Mysore State.
10. Shri Mantayya, Charka Reeler, Mamballi, (Yelundar Taluk), Mysore State.
11. Shri Md. Hassan Ali Choudhry, Atagama, District Malda, West Bengal.
*12. Shri S.K. Multan, P.O. Dakhin Lakshmipur, Village Imamjagir, (District Malda), West Bengal.
13. Shri Nasiruddin Biswas, Village & P.O. Sujapur, Malda, West Bengal.
14. Shri Bijan Kumar Chattarji, (P.O. & Village Kamarpur), (Murshidabad District), U.P.
15. Shri Haji Amin Munshi Filature. Kaiachaka, (Malda), West Bengal.
16. Shri Satheswar Hazra, Barisa, P.O. Bagñasar, (Midnapur District), West Bengal.
17. Shri Badu Mondal, Village Ray Gram, P.O. Amriti, (District Malda), West Bengal.
18. Shri Tamisuddin Sheikh, P.O. Beldanga, Murshidabad District, U.P.

19. Talanki Gurappa Setty, K. Lakshminarasimhaih, Silk Koti, Avenue Road, Bangalore-2.

*20. Abdul Rub. Silk & General Merchant, M.G. Road, Chintamani, Kolar District, Mysore.

21. The Superintendent of Sericulture, Reelers Co-operative Society, Kumarpur, (Berhampore), West Bengal.

22. Shri Samar Chaudhry, Cottage Basin Relling Unit, Jote (Near Malda), West Bengal.

23. Shri Chote Sahib, Cottage Basin Reeling Unit, Ramanagaram, (Mysore State), Mysore.

24. M/s. Abdul Majid, Silk Merchant, Ramanagaram, (Mysore State), Mysore.

25. M/s. Abdul Khaliq, Silk Merchant, Ramanagaram, Mysore.

26. M/s. Gafar Qurashi, Silk Merchant, Ramanagaram, Mysore.

27. M/s. Basheer Ahmed Agha, C/o. Syed Peer Agha, Silk Merchant, Ramanagaram, Mysore.

28. Handloom Weavers Co-operative Societies Union, Nathnagar, Uttar Pradesh.

(*iii*) *Spinning Units.*

(*a*) *Spun Silk Mills.*

*1. Government Spun Silk Mills, Channapatna, Mysore State.

*2. Assam Spun Silk Mills Ltd., Jagi Road, Nowgong, Assam.

(*b*) *Silk Throwing and/or Twisting Factories.*

1. Shri Shanmugha Twisting Factory, Prop : M/s. Badra Shetty & Sons, Hosur, (Salem District).

2. Kanchipur Silk Twisting Factory, Kanchipuram.

3. Shri Lakshmi Silk Twisting Factory, Arni.

*4. M/s Mangalambika Silk Twisting Factory, 18, Andiappa Mudaliar Street, Kumbakonam.

*5. P.S.S. Bommania Chettiar & Sons, Gugai, Salem-1.

6. Talanki Gurappa Setty, K. Lakshminarasimhiah, Silk Koti, Avenue Road, Bangalore-2.

7. M/s. Muddiah & Sons, Saurashtra Pet, Bangalore City.

8. Shri Lakshmi Venkateshwara Silk Throwing Factory, Narasimraja Road, Bangalore City.

9. Government Silk Filatures, Twisting Section, Kollegal, Mysore State.

10. M/s. Kabadi Chinagusa Factory, (Silk Throwing), Bangalore City.

11. M/s. Dhanamal Silk Mills, Surat.

12. M/s. Rambansi Silk Mills, Manufacturers of Spun Silk Fabrics, Bhagalpur, Bihar.

13. Government Silk Institute, Nathanagar, Bhagalpur, Bihar.

14. M/s. Suresh Silk Industries, Manufacturers of Spun Silk Fabrics, Wankaney, Saurashtra.

*15. S. Dhondusa Gold Thread Factory, Subedar Chatram Road, Bangalore-9.

16. M/s. Seethalakshmi Textiles, Nagarthpet, Bangalore.

17. M/s. Srinivasa Silk Throwing Factory, 6, Mission Road, Bangalore.

18. M/s. Janardhana Silk House, L-15 Jumma Masjid Road, Bangalore-2.

19. M/s. Rajlakshmi Textiles, Mysore Road, Bangalore.

20. M/s. Chammundi Textiles, Ramnagaram, Mysore.

*21. M/s. Bangalore Woollen, Cotton & Silk Mills Ltd., 23, Agraharam Road, Bangalore-23.

*22. Mysore Government Silk Weaving Factory, Mananthody Road, Mysore.
23. M/s. Hanuman Silk Weaving Factory, Chickpet, Bangalore.
†24. Government Silk Weaving Factory, Rajbagh, Srinagar, (Jammu & Kashmir).
25. M/s. Kapoor & Co., Srinagar, Jammu & Kashmir.
26. M/s. Kashmir Silk Mills, Dehra Dun, Uttar Pradesh.
*27. The Bangalore Silk Mills, 79, Masjid Bunder Road, Mandvi, P.O. Box No. 3218, Bombay-3.

(*iv*) *Manufacturers of silk fabrics.*

*1. Shri D. Hanumanthappa, Vice-President, The Mysore State Silk Handloom Weavers' Central Co-operative Society Ltd., P. B. No. 845, Bangalore-2.
2. M/s. Janardhana Silk House, Jumma Masjid Road, Bangalore-2.
3. Ghanta Hutchanna, 13th Cross Road, Near Nandi Motor Service, Cubbonpet, Bangalore City.
4. Shri Budal Mudranagappa & Sons, Kavadi Revanna Steeypet, Bangalore-2.
5. Silk Handloom Weavers' Co-operative Society, Kanchepuram, Madras State.
6. Shri Murgappa Mudaliar, Silk Cloth Manufacturers, Kanchepuram, Madras State.
7. M/s. Srinivasa & Co., Silk Cloth Manufacturers & Dealers, 131, Thirucachi-Nambi Street, Kanchepuram, Madras State.
*8. Shri Sawdambirai Devanga, Weavers' Co-operative Production and Sale Society Ltd., No. K. 1517, Coimbatore, Madras State.
*9. M/s. P.S.S. Bommanna Chettiar & Sons, Cloth Merchants, Gugai, Salem, Madras State.
10. M/s. Thammanna Chettiar & Sons, Bhoomi Street, Gugai, Salout (Salem District), Madras State.
11. M/s. Kunjilal & Co., Lakhichotra, Banaras.
12. Silk Manufacturing Sahakari Samathi Ltd., Madnapore, Banaras.
13. Silk Manufacturing Federation Lakhi Chantra, Banaras.
14. Shri P.C. Patnaik, Poor Cottage Industries, Cuttack, Orissa.
15. M/s. Bangalore Woollen Cotton & Silk Mills Ltd., Agraharam Road, Bangalore-2.
16. M/s. Seethalakshmi Textiles, Magarthapet, Bangalore-2.
17. M/s. Chamundi Textiles, Ramanagaram, (Mysore State).
18. M/s. V. T. Surappa & Sons, G-39, Honnurappa Lane, Cubbonpet, Bangalore-2.
19. M/s. Pravati Textile Mills Ltd., P.O. Panihatti, 24-Parganas, Calcutta.
20. M/s. S.S. Bagchi & Co., P.O. Berhampore, (W. Bengal).
21. M/s. India Textiles Ltd., Great Eastern Hotel, Calcutta.
*22. Government Silk Weaving Factory, Rajbagh, Srinagar.
23. Artex Mills, Srinagar.
*24. Government Silk Institute, Nathnagar, P.O., Bhagalpur (Bihar).
25. Rambansi Silk Mills, Bhagalpur.
*26. M/s. Kasetty Rangappa & Sons, Bharmavaram, (Anantapur Dist.), Andhra.
27. Soalkuchi Rasham Sambaya Ltd., Soalkuchi P.O. District Kamrup, Assam.
28. Assam Co-operative Silk House Ltd., Panbazar, Gauhati.
29. Resham Silpi Sangha, 12/18&14 Hare Street, Calcutta-1.
†30. M/s. Sree Silk Mills, Maldahiya, Banaras.
31. Training-Cum-Production Centre Textiles, Chanderi (M.P.).

32. M/s. Dhammal Silk Mills, Manohar Mansion, Dhobi Talao, Bombay
†33. The Bombay Silk Mills, Industrial Estate, Lalbaugh, Bombay.
34. M/s. Bipin Silk Mills, No. 12, Dadar Road, Bombay.
†35. M/s. Modern Textiles Rayon & Silk Mills Pvt. Ltd., Opp. B.D.D. Chawl, No. 155, Bombay-13.
36. M/s. Ichharam Ramchand, Navpura, Golwadi, Surat.
*37. M/s. S. Dhondusa Gold Thread Factory, Subbedar Chatram Road, Bangalore-9.
38. M/s. D. Arasappa & Sons, Sri Narasimharaja Road, Bangalore-2.
39. M/s. T. K. Krishnaswamy Chettiar, P.B. No. 6, Komarapalayam, Via Bhavani, Erode (S. Rly.).
40. M/s. Radha Silk Emporium, 14, Sannadhi Street, Mylapore. Madras-4.
41. M/s. Raja S. Venkatachalapathi Iyer & Sons, 46, West Street, Kumbakonam.
42. M/s. Muddiah & Sons, Sowrashtrapet, Bangalore-2.
43. Talanki Gurappa Setty, K. Lakshminarasimhiah, Silk Koti, Avenue Road, Bangalore-2.
44. A.M. Veerabhadraiah & Bros., Handloom Silk Cloth Manufacturer, New Street, Kollegal.
45. Raparti Silk Weavers Co-operative Society, Raparti, Andhra Pradesh.
46. Silk Weavers Co-operative Society, Ramkrishna Colony, Malda, West Bengal.
47. U. P. Industrial Co-operative Association, Varanasi, Uttar Pradesh.
*48. The Assam Co-operative Silk House Ltd., Gauhati, Assam.
49. M/s. Dhondosa Gold Throwing Factory, Subedar Chatram Road, Bangalore City.
50. M/s. Seethalakshmi Textiles, Nagarthpet, Bangalore.
51. M/s. Srinivasa Silk Throwing Factory, 6, Mission Road, Bangalore.
52. M/s. Janardhna Silk House, 1-15, Jumma Masjid Road, Bangalore -2.
53. M/s. Rajlakshmi Textiles, Mysore Road, Bangalore.
54. M/s . Chammundi Textiles, Ramanagaram, Mysore.
*55. M/s. Bangalore Woollen & Cotton Silk Mills Ltd., 23, Agraharam Road, Bangalore-23.
*56. Mysore Government Silk Weaving Factory, Manathody Road, Mysore.
57. M/s. Hanuman Silk Weaving Factory, Chickpet, Bangalore.
*58. Government Silk Weaving Factory, Rajbagh, Srinagar, Jammu & Kashmir.
59. M/s. Kapoor & Co., Srinagar, Jammu & Kashmir.
60. M/s. Kashmir Silk Mills, Dehra Dun, Uttar Pradesh.
*61. The Secretary, All India Handloom Fabrics Marketing Co-oeprative Society, Janmaboomi Chambers, Fort Street, Bombay-1.
62. M/s. Shrinivasa Textiles, Narasimha Raja Road, Bangalore-2.

B. IMPORTERS/DEALERS

*1. M/s. Nagindas Foolchand Chinai, 79, Masjid Bunder Road, Mandvi, P. O. Box No. 3218, Bombay-3.
2. Harilal Bhikabhi & Sons, Temple Bar Building, 147, M. G. Road, Bombay-1.

C. ASSOCIATIONS

*1. The Silk and Art Silk Mills Research Association, 'Sasmira', Dr. Annie Besant Road, Worli, Bombay-18.
2. The Mysore Silk Handloom Weavers' Association, 13, Jumma Masjid Road, Bangalore-2.

3. The Bihar Chamber of Commerce, Patna.
4. The Bhagalpur Silk Mills Owners' Association, Bhagalpur (Bihar).
5. The Hindpur Silk Reelers' Association, Hindpur, (Madras).
6. The Mysore Chamber of Commerce, Bangalore.
*7. The Mysore Silk Association, C/o The Govt. Silk Conditioning and Testing House, Asiatic Buildings, Gandhinagar, Bangalore-9.
8. The Mysore Raw Silk Merchants' Association, Resham Mahal, Kempe Gowda Road, Cross, Bangalore-2.
9. The Secretary, Weavers Co-operative Producers' Society Ltd., Ilkar.
*10. The Surat Chamber of Commerce, Safe Deposit Chambers, Surat.
11. Murshidabad Silk Association, Murshidabad.
12. Jangipore Silk Association, Jangipore, Murshidabad.
13. Jalapur Silk Rearers' Organisation, Sujapur, Malda (West Bengal).
14. Fatchami Silkworm Reelers' Organisation, Sujapur, Malda (W.B.).
*15. Kolar Division Charka Reelers' Association, Sidlaghatta, Kolar District (Mysore State).
*16. Banaras Industrial & Trade Association, Chowk, Varanasi,
*17. M/s. Coimbatore Devanga Weavers' Co-operative Society Ltd., 15/193, Oppanakkara Street, Coimbatore-1.
18. M/s. Cambay Sadi Manufacturers' Co-operative Society, Rana, Chakla, Cambay.
19. M/s. Banarasi Cloth Merchants Chambers, Lakhichowtra, Varanasi.
20. M/s. Bankar Sahakari Samithi Maryadit, Chanderi (M.P.).
21. M/s. Surat District Industrial Association Ltd., 98, Sadadiwala Market Baranpuri, Bhagol, Surat.
22. M/s. Kancheepuram Silk Weavers' Co-operative Production & Sales Society Ltd., 443, Gandhi Road, Kancheepuram (Madras).
23. Mysore State Handloom Weavers' Central Co-operative Society, Near Sampangi Tank, P. B. No. 45, Bangalore.
*24. M/s. Raw Silk Merchants' Association, 39, Abdul Rehman Street, Bombay-3.
†25. The Silk and Art Silk Mills' Association, Resham Bhavan, Vir Nariman Road, Bombay-1.
*26. The Surat Jari Merchants' Association, Safe Deposit Chambers, Surat.

D. STATE GOVERNMENTS

*1. The Director of Sericulture & Weaving, Government of Assam, Shillong.
*2. Secretary to the Govt. of Madras, Department of Industries, Labour & Co-operation, Fort St. George, Madras.
3. The Secretary to the Government of Punjab, Industries Department, Chandigarh.
*4. The Director of Industries, Government of West Bengal, New Secretariat Building, 1, Hastings Street (9th Floor), Calcutta.
*5. The Secretary to the Government of Madhya Pradesh, Agriculture Department, Civil Secretariat, Bhopal.
6. The Secretary to the Government of Andhra Pradesh, Industries Department, Hyderabad.
*7. The Secretary to the Government of Kerala, Industries (E) Department, Trivandrum.
*8. The Secretary to the Government of Maharashtra, Industries & Labour Department, Sachivalaya, Bombay-32.
9. Assistant Secretary to the Government of Rajasthan, Industries & Mines Department, Jaipur.

*10. The Director of Industries, Government of Bihar, Department fof Industries and Mines, Patna.

11. The Director of Industries, Uttar Pradesh, Kanpur.

*12. The Secretary to the Government of Mysore, Commerce & Industries Department, Bangalore.

13. The Secretary to the Government of Himachal Pradesh, Industries & Supplies Department, Simla.

*14. The Secretary to the Government of Jammu and Kashmir, General Department (Political Section), Srinagar.

*15. The Secretary, Tripura Administration, Department of Industries, Agartala.

*16. Director of Sericulture, Government of Mysore, Bangalore, Mysore State.

*17. Dy. Director of Industries (Sericulture) Government of West Bengal, Berhampore, West Bengal.

*18. Secretary to the Government of Orissa, Department of Industries, Mining and Geology, Bhubaneshwar.

19. Secretary to the Govt. of Gujarat, Department of Industries, Ahmedabad, Gujarat.

*20. Director of Industries, Manipur.

E. GOVERNMENT DEPARTMENTS

*1. The Director, Central Sericultural Research Station, Berhampore (West Bengal).

2. The Director, Central Sericultural Research Institute, Channapatna.

3. The Director, Regional Sericultural Research Station, Titabar, (Assam).

4. The Secretary, Central Silk Board, Meghdoot, 95-B, Marine Drive, Bombay-2.

5. The Secretary to the Govt. of India, Ministry of Defence, New Delhi.

*6. The Director, Indian Standards Institution, Manek Bhavan, 9, Mathura Road, New Delhi.

*7. The Secretary, All India Handloom Board, P.B. No. 10004, Wittet Road, Ballard Estate, Bombay-1.

*8. The Textile Commissioner, (Silk and Art Silk Section), Mistry Bhavan, Dinsha Wacha Road, Bombay-1.

*9. The Chief Executive Officer, Khadi & Village Industries Commission, Erla Bridge, Bombay-56.

*10. The State Trading Corpn. of India, Industry House, Churchgate, Reclamation, Bombay-1.

APPENDIX II

[*Vide* Paragraph 3.2]

Statement showing the sericultural units and centres visited by the Commission and Officers

Name of Member/Officer	Name of the unit/Centre visited	Date of visit
Shri K. R. P. Aiyangar, Chairman.	Sericultural farms at Lalgondhalli, Vijayapura and Kunigal.	23-6-63
	Silk Coverturing & Testing House, Janardhana Silk House, Dhondusa Gold Thread Factory, Silk Marketing Co-operative Society, Silk Handloom Weavers Co-opertive Society, Central Silk Powerloom Weavers Co-operative Society and Seethalakshmi Hall (All at Bangalore).	24-6-63
	(i) Bidadi Farm, Kanta Nursery, Channapatna Farm and Government Spun Silk Mills, Channapatna, (ii) Maddur Nursery Government Silk Filatures, Kollegal, Kollegal Farm and a few silk testing units.	25-6-63
	Government Silk Filatures and Government Silk Weaving Factory, Mysore, Chamarajanagar Farm, G. R. Hills Seed station and cocoon Markets in Chamarajanagar and Nangangad Taluks.	26-6-63
	Government Silk Filatures, Kunakapura.	27-6-63
Shri J. N. Sen Gupta, Member.	Central Sericulture Research Institute, Berhampore and some Sericultural units in Malda District of West Bengal.	1-7-63 and 2-7-63
Dr. R. Balakrishna, Member.	Government Silk Filatures, Mysore	1-5-63
Shri S. R. Mallya, Cost Accounts Officer.	Shri Devegowda, Sericulturist, Kamkerai, Kollegal. Shri Nagaraja Rao, Venkateswara Seed Grainage, Kollegal. Shri A. M. Manegowda, Sericulturist, Anur. Shri H. S. Jaya Rao, Sericulturist, Ramanagaram. Shri Ali Rachegowda, Silk Reeler, Surapuram, Kollegal. Government Silk Filatures, Kollegal. Kissan Silk Industries, Mellur Government Spun Silk Mills, Channapatna. Shri Srinivasa Silk Factory, Bangalore.	May-June 1963.

APPENDIX III

[*Vide* Paragraph 3.3]

List of persons who attended the Commission's public inquiry on 1st August 1963

1. Shri R. Doraiswamy, Chairman 2. Shri S. R. Ullal, Secretary	Representing	The Central Silk Board, Meghdoot, 95-B, Marine Drive, Bombay-2.
3. Shri M. S. Ramnath	,,	The Textile Commissioner, Mistry Bhavan, Churchgate, Bombay-1.
4. Shri A. P. Choudhury 5. Shri S. R. Sen	,,	Khadi & Village Industries Commission, 3, Erla Road, Bombay-56.
6. Shri N. K. Ramaswamy	,,	Indian Standards Institution, 9, Mathura Road, New Delhi-1.
7. Dr. S. Krishnaswami	,,	Central Sericultural Research, Station, Berhampore (W. Bengal).
8. Shri K. Subramanyam	,,	Government of Madras, Industries, Labour and Co-operation Department, Fort St. George, Madras.
9. Shri C. V. Achaiah	,,	Government of Andhra Pradesh Industries Department, Hyderabad.
10. Shri B. N. Satapathy	,,	Government of Orissa, Industries Department, Bhubaneshwar.
11. Shri S. N. Hussain	,,	Government of Bihar, Department of Industries, Patna. and Government Silk Institute, Nathnagar, Bhagalpur (Bihar State).
12. Shri B. M. Ghosh	,,	Government of West Bengal, New Secretariat Building, 9th Floor, Calcutta-1.
13. Shri A. T. Janakiraman	,,	Government of Uttar Pradesh, Industries Department, Lucknow.
14. Shri V. R. Uthaman	,,	Government of Mysore, Commerce and Industries Dept., Vidhana Soudha, Bangalore. and Silk Marketing Co-operative Society, No. 89, Kamadhanu Building, Avenue Road, Bangalore-2.

15. Shri H. G. Anantaraman .	Representing	Kisan Silk Industries (Pvt.) Ltd., Mellur, Sidlaghatta Taluk, Mysore.
16. Shri D. R. Gunduraj .	,,	Government Spun Silk Mills, Channapatna, Mysore State.
17. Shri S. Khosla . .	,,	Assam Spun Silk Mills Ltd., Jagi Road, Nowgong, Assam.
18. Shri Vinod J. Chinai. .	,,	The Bangalore Silk Mills, 432, Avenue Road, Bangalore-2.
19. Shri A. R. Takyar . .	,,	All India Handloom Fabrics Marketing Co-operative Society Ltd., Janmabhoomi Chambers, Fort Street, Bombay-1.
20. Shri Babubhai M. Chinai . 21. Shri Buddisagar M. Chinai	,,	Nagindas Foolchand Chinai, 79, Masjid Bunder Road, Bombay-3.
22. Shri S. N. Sapre . .	,,	State Trading Corporation of India Private Ltd., 159, Churchgate Reclamation, Bombay-1.
23. Shri Ramniklal . 24. Shri Suresh M. Shah .	,,	Harilal Bhikabhai & Sons, Temple Bar Building, 147, M. Gandhi Road, Bombay-1.
25. Shri K. Sidde Gowda .	,,	Mysore Silk Association, Asiatic Building, Gandhi Nagar, Bangalore-9.
26. Shri Prahlad Das . .	,,	Banaras Industrial & Trade Association, Chowk, Varanasi (U.P.)
27. Shri J. B. Chokhawala .	,,	Surat Chamber of Commerce, Safe Deposit Chambers, Surat.
28. Shri C. N. Jariwala . .	,,	Surat Jari Merchants Association, Safe Deposit Chambers, Surat.
29. Shri Punjalal N. Shah . 30. Shri Ratilal K. Patel . 31. Shri N. G. Manubhai Gokuldas.	,,	Raw Silk Merchants' Association, 39, Abdul Rehman Street, Bombay-3.
32. Shri J. G. Parikh . .	,,	Silk and Art Silk Mills Research Association, Dr. Annie Besant Road, Bombay-18.

APPENDIX IV

[*Vide* Paragraph 8.5]

Statement showing area under Mulberry cultivation and number of active Mulberry trees in different states in 1958 *and* 1962

State	Area under bush mulberry (In hectares)		Number of active trees (In thousand numbers)	
	1958	1962	1958	1962
1. Andhra Pradesh	134	200	..	..
2. Assam	893	950	..	..
3. Bihar	80	120	..	..
4. Jammu & Kashmir	N.A.	36	2,200	3,300
5. Kerala	10	16	..	..
6. Madhya Pradesh	94	160	..	..
7. Madras	884	1,340	5	22
8. Mysore	66,000	76,000	..	..
9. Punjab	50	67	160	180
10. Uttar Pradesh	69	175	65	88
11. West Bengal	5,970	6,297	250	286
12. Himachal Pradesh	14	50	20	20
13. Manipur	8	107	..	..
TOTAL	74,206	85,518	2,700	3,896

APPENDIX V

[*Vide* Paragraph 8.6.3.1]

Statement showing statewise production of raw silk

(A) MULBERRY RAW SILK

(Figures in Kgs.)

State	1958					1959					1960				
	Filature	Charka	Cottage Basin	Dupion	Total	Filature	Charka	Cottage Basin	Dupion	Total	Filature	Charka	Cottage Basin	Dupion	Total
1. Andhra Pradesh	..	335	..	..	335	..	158	..	..	158	..	225	..	..	225
2. Assam	..	14,156	..	..	14,156	..	13,860	..	..	13,860	..	11,250	..	..	11,250
3. Bihar	..	1,125	..	..	1,125	..	1,125	..	..	1,125	..	1,125	..	..	1,125
4. Himachal Pradesh	..	173	..	..	173	..	173	..	..	173	..	96	..	..	96
5. Jammu & Kashmir	63,280	..	..	..	63,280	62,403	..	..	..	62,403	84,437	..	..	..	84,437
6. Madhya Pradesh	..	135	..	..	135	..	225	..	..	225	..	270	..	..	270
7. Madras	..	90	..	..	90	..	675	450	..	1,125	..	482	760	..	1,242
8. Mysore	66,632	688,320	57,524	30,902	843,378	63,141	659,332	85,243	31,524	839,240	71,958	586,280	138,970	33,750	830,958
9. Punjab	..	7,532	..	..	7,532	..	7,084	..	..	7,084	..	4,539	..	..	4,539
10. Uttar Pradesh	1,080	..	..	..	1,080	822	..	..	..	822	873	..	..	..	873
11. West Bengal	..	204,707	4,386	..	209,993	..	211,270	3,126	..	214,396	..	216,806	2,027	..	218,833
12. Manipur	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTAL	130,992	916,573	61,910	30,902	1,140,377	126,366	893,902	88,819	31,524	1,140,611	157,268	821,307	141,575	33,750	1,154,082

APPENDIX V—*contd.*

(Figures in Kgs.)

States	1961					1962				
	Filature	Charka	Cottage Basin	Dupion	Total	Filature	Charka	Cottage Basin	Dupion	Total
1. Andhra Pradesh .	..	300	..	..	300	..	300	..	..	300*
2. Assam . . .	..	12,773	..	..	12,773	..	13,000	..	..	13,000
3. Bihar . . .	..	1,114	..	..	1,114	..	1,136	..	..	1,136
4. Himachal Pradesh .	..	285	..	..	285	..	403	..	..	403
5. Jammu & Kashmir .	96,949	..	..	..	96,949	95,919	..	..	2,351	98,270
6. Madhya Pradesh .	..	300	..	..	300	..	..	300	..	300
7. Madras . . .	..	224	2,782	..	3,006	..	..	2,250	69	2,319
8. Manipur . .	..	613	..	..	613	..	395	20	10	425
9. Mysore . . .	63,715	660,000	153,000	44,000	920,715	89,458	553,575	304,500	42,530	990,063
10. Punjab . . .	..	6,925	..	..	6,925	..	4,173	157	..	4,330
11. Uttar Pradesh .	255	..	..	..	255	270	..	60	..	330
12. West Bengal . .	..	207,148	14,097	..	221,245	..	276,000	12,996	..	289,989
TOTAL .	160,919	889,682	169,879	44,000	1,264,480	185,657	849,975	320,283	44,960	1,400,865

(B) Non Mulberry Raw Silk

(Figures in Kgs.)

States	1958				1959				1960			
	Tassar	Eri	Muga	Total	Tassar	Eri	Muga	Total	Tassar	Eri	Muga	Total
1. Andhra Pradesh	..	..	..	..	308	8	..	316	315	23	..	338
2. Assam	..	121,010	93,167	214,177	..	110,948	83,880	194,828	..	101,153	54,000	155,153
3. Bihar	72,000	12,600	..	84,600	70,200	15,862	..	86,062	74,250	9,012	..	83,262
4. Madhya Pradesh	67,500	..	..	67,500	67,500	..	..	67,500	83,250	..	..	83,250
5. Maharashtra	..	..	..	..	2,463	..	..	2,463	958	..	..	958
6. Manipur	..	..	..	..	..	..	..	..	..	890	23	913
7. Orissa	14,670	370	..	15,040	16,200	157	..	16,357	14,515	363	..	14,878
8. Uttar Pradesh	..	..	..	..	..	69	..	69	53	81	..	134
9. West Bengal	5,215	1,080	..	6,295	5,581	1,291	..	6,872	5,850	602	..	6,452
Total	159,385	135,060	93,167	387,612	162,252	128,335	83,880	374,467	179,191	112,124	54,023	345,338

APPENDIX V (*Contd.*)

(Figures in kgs.)

States	1961				1962			
	Tassar	Eri	Muga	Total	Tassar	Eri	Muga	Tota l
1. Andhra Pradesh .	1,400	..	..	1,400	1,400*	..	..	1,400*
2. Assam . .	..	120,000	56,255	176,255	..	120,000	45,000	165,000
3. Bihar . .	78,350	9,776	..	88,126	81,818	9,079	..	90,915
4. Madhya Pradesh	100,000	..	..	100,000	95,000	..	..	95,000
5. Maharashtra .	1,429	..	..	1,429	1,607	..	..	1,607
6. Manipur . .	..	1,982	..	1,982	..	1,366	..	1,366
7. Orissa . .	14,641	34	..	14,675	14,641*	34*	..	14,675*
8. Uttar Pradesh .	..	..	..	..	..	33	..	33
9. West Bengal .	6,537	1,513	..	8,050	7,407	2,147	..	9,554
TOTAL .	202,357	133,305	56,255	391,917	201,873	132,677	45,000	379,550

(*Estima ted)

APPENDIX VI

[*Vide* Paragraph 11.1.3]

Statement showing imports of Raw Silk and Spun Silk yarn

(A) Raw Silk

Year	Imports from Japan		Imports from China		Total Imports	
	Quantity (Thousand kgs.)	Value (Lakh Rs.)	Quantity (Thousand kgs.)	Value (Lakh Rs.)	Quantity (Thousand kgs.)	Value (Lakh Rs.)
1958 . .	38	17·09	18	7·72	56	24·81
1959 . .	138	55·38	12	4·45	150	59·83
1960 . .	78	33·59	30	12·45	108	46·04
1961 . .	106	57·51	Nil	Nil	106	57·51
1962 . .	112	62·12	Nil	Nil	112	62·12
1963 (Jan.-June)	53	38·80	Nil	Nil	53	38·80

(B) Spun Silk Yarn

Year	IMPORTS	
	Quantity (Thousand kgs.)	Value (Lakh Rs.)
1958	4	1·32
1959	8	2·55
1960	28	10·92
1961	21	8·68
1962	Nil	Nil
1963 (Jan.-June) . .	Nil	Nil

GIPN—S3—10 T. C. Bom./63—12-3-64—700.


सत्यमेव जयते