



GOVERNMENT OF INDIA
TARIFF COMMISSION

**REPORT
ON
THE CONTINUANCE OF
PROTECTION TO THE
SERICULTURE INDUSTRY**

BOMBAY

1966

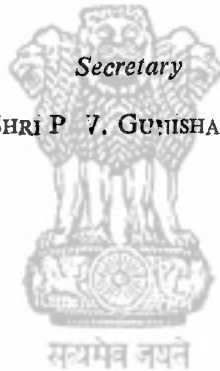


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GOVERNMENT OF INDIA
MINISTRY OF COMMERCE

New Delhi, the 19th Nov., 1966.

RESOLUTION

Tariffs

N. 11(1)-Tar/66.—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 ending 31st December 1969 and the present rates of protective duty maintained in view of the uncertainty of cocoon prices and likely fluctuations in the international prices.
- (2) Attention needs to be paid to the improvement of the charkha in such a way that it may become more efficient and the defects from which its product now suffers may be minimised; and also so as to incorporate labour saving devices.
- (3) It would be desirable to exercise caution to ensure that no duplicate or excess capacity is created for throwing and twisting. It would also be advisable to estimate the present shortage in production capacity and then to plan the installation of throwing and twisting equipment as part of filatures to meet the shortage.
- (4) It is desirable that certain units or areas of production should be entrusted to the testing houses and that they should test according to Indian Standards the entire production in these areas.
- (5) While it is desirable to explore the possibility of developing the sericulture industry in other States too, it would perhaps be more desirable to ensure that States where rapid progress in production and quality can be made should receive prior Government assistance.
- (6) While the Mysore State has enacted legislation prohibiting breeding from any but tested seed, other States have not so far taken this step. It is considered that other

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States also need to enact such legislation in order to improve yield and also to protect the industry from effects of epidemics affecting silkworms.

- (7) In order that yield may improve in West Bengal attention needs to be paid to the testing of seed and also to the improvement of rearing conditions by setting up common rearing centres, as well as by training and educating private rearers in more advanced methods of sericulture.
- (8) The Central Silk Board may give attention particularly in States like Jammu and Kashmir and West Bengal to train sericulturists even on a small scale, to start with, in order to secure a higher yield at a lower cost.
- (9) The object of setting up the spun silk mill in Assam where non-mulberry silk waste is available in substantial quantities would be not only defeated if this mill were to avoid processing non-mulberry silk waste and concentrate only on mulberry waste but also result in unhealthy competition with Champapatna.
- (10) The State of Mysore should develop mulberry nursery plantations to an extent which may be able to provide new high yielding and low cost varieties to the entire State within a reasonably foreseeable period.
- (11) Perhaps there would be greater incentive to improve production in Jammu and Kashmir if the sericulturist has a personal interest in the business by way of purchase of seed on payment, growing his own mulberry or purchasing rights to harvest leaf on payment. It is worthwhile making an experiment in a small area in order to ascertain if with the creation of such vested economic interests, the yield or performance improves or deteriorates.
- (12) There is much scope for improvement in the quality of raw silk, as there are complaints of unevenness, sub-standard quality, greater degumming loss and lack of lustre.

2. Government accept recommendation (1). Necessary legislation will be undertaken in due course for the continuance of protection to the sericulture industry for a further period of three years ending 31st December, 1969 at the present rates of protective duty applicable to I.C.T. items Nos. 46, 46(1), 47(a), 47(b), 47(c), 47(1), 48(a), 48(b) and 48(c).

3. Government have taken note of recommendations (2) to (9) and suitable steps will be taken to implement these recommenda-

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tions to the extent possible. The attention of State Governments is however invited to recommendations (5) and (6); in addition, the attention of the Government of West Bengal is invited to recommendation (7), of the Governments of Jammu and Kashmir and West Bengal to recommendation (8) and of the Government of Assam to recommendation (9).

4. The attention of the Government of Mysore is also invited to recommendation (10), and that of the Government of Jammu and Kashmir and the sericulturists in that State to recommendation (11).

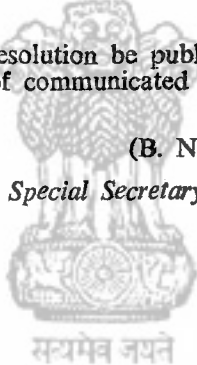
5. The attention of raw silk manufacturers is drawn to recommendation (12).

ORDER

Ordered that the Resolution be published in the Gazette of India and a copy thereof communicated to all concerned.

(B. N. BANERJI)

Special Secretary to the Govt. of India.



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REPORT ON THE CONTINUANCE OF PROTECTION TO THE SERICULTURE INDUSTRY

1. The sericulture industry was first granted protection in 1934 on the recommendation of the Tariff Board. The second inquiry was conducted in 1938 but war broke out before Government could take a decision. The protection which was initially granted was, however, continued up to the end of March 1949. The third inquiry was conducted by the Board in 1949 and an inquiry under Section 4(1) of the Indian Tariff Act, 1934 was undertaken by the Board in 1951, and protection to the industry was continued till the end of 1953. The fifth inquiry was conducted in 1953 and recommendation was made for continuance of protection for a period of five years till December 1958. The sixth inquiry was undertaken in 1958 and continuance of protection was again recommended for a further period of five years. The last inquiry, the seventh in the series, was conducted by the Commission in 1963 and it recommended that protection should be continued for a further period of three years *i.e.*, till 31st December 1966 and that the existing rates of 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 maintained. Government of India accepted the recommendation of the Commission in the Ministry of Commerce & Industry Resolution No. II(3)-Tar/63 dated November 18, 1963 and protection was extended up to 31st December 1966 by the Indian Tariff (Amendment) Act, 1963.

2. The period of protection granted to the sericulture industry is due to expire on 31st December 1966. The present inquiry has therefore 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, with a view to its increase, decrease, modification or abolition according to the circumstances of the case.

3.1. Questionnaires were issued in March 1966 to producers of raw silk through filature units or cottage of basins, and manufacturers of silk fabrics whether on power or handlooms, and their associations. Simultaneously, letters were also issued to State Governments, requesting them to furnish information on the progress made, since the last inquiry in the various

sectors by the sericulture industry in their respective States. The Central Silk Board was requested to submit a detailed memorandum on the industry. Separate questionnaires were also issued to mulberry cultivators, graineurs, rearers of silk-worms, spun silk mills and silk throwing and twisting factories. Central and Regional Sericultural Research Institutes were asked to furnish information on the progress of research carried out in their institutes and the results achieved. The Indian Standards Institution, All India Handloom Board, the Textile Commissioner and the Khadi and Village Industries Commission were also addressed for obtaining information relating to their activities in respect of this industry. A press note was issued on 9th March 1966 inviting interested parties to obtain copies of the relevant questionnaires and submit replies. A list of associations, firms and other bodies to whom questionnaires or letters were issued and those who replied thereto is given in Appendix I.

3.2. Particulars are given in Appendix II of the sericulture establishments and firms visited by us and our officers in connection with this inquiry.

3.3. The following three units were selected for investigation of the cost of production of raw silk :—

1. Kisan Silk Industries (P) Ltd., Mellur.
2. Government Silk Filature, Kollegal.
3. Uttar Pradesh Resham Audyogik Sahakari Sangh, Premnagar, Dehra Dun.

Our Cost Accounts Officer carried out the cost investigation in these units.

3.4. A public inquiry into the industry was held at the Commission's office on July 19, 1966. A list of those who were present at the inquiry is given in Appendix III.

4. There has been very little change in the scope of the inquiry during the last seven inquiries. The last Scope of the inquiry included raw silk and silk cocoons, inquiry 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). Since the very first inquiry the scheme of protection has been based on the cost of production of mulberry raw silk because the cost of production of raw silk is more amenable to costing and that the bulk of the raw silk produced is from mulberry. For the purpose of protective tariffs the term 'silk' includes both mulberry silk and non-mulberry silk such as Tasar, Eri and Muga, and on account of the fact that the bulk of the raw silk produced is from mulberry, any measure of protection

granted to the mulberry silk would adequately protect the non-mulberry section of the industry also. No request for the extension or reduction of the scope of inquiry was received from any source and therefore the scope of the inquiry is limited to the following items :—

Silk, raw (excluding silk waste and noils), and silk cocoons [I.C.T. Item No. 46.]

Silk, waste and noils [Item No. 46(1).]

Silk yarn including thrown silk warps. [Item No. 47(a).]

Yarn spun from silk waste. [Item No. 47(b).]

Yarn spun from noils. [Item No. 47(c).]

Silk sewing thread. [Item No. 47(1).]

Silk fabrics. [Item No. 48(a), (b) and (c).]

5.1. In the Report of 1963, the Commission made certain ancillary recommendations in addition to that of continuance of protection. In their Resolution Government stated that steps would be taken to secure their implementation to the extent possible. The extent to which these ancillary recommendations have been implemented is indicated in the following paragraphs.

Recommendation 1

5.1.1. "Irrigation, manuring, improvement of soil conditions and evolution of suitable grafts which will give better yields and study of nutritive value of leaves should receive the highest attention of research institutes and sericultural States." (Recommendation No. 3 of Government Resolution of 1963.)

This is a composite recommendation and each of its parts will be dealt with separately as follows :—

5.1.2. **Irrigation.**—The position with regard to the irrigation facilities in the area under mulberry in the chief sericultural States of Mysore and West Bengal was as follows :—

State	Year	Area (in Hectares)		
		Irrigated	Unirrigated	Total
Mysore . . .	1963	9,250	67,750	77,000
	1964	9,500	66,750	76,250
	1965	9,600	62,400	72,000
West Bengal . . .	1963	43	6,233	6,276
	1964	59	6,239	6,298
	1965	59	6,252	6,311

In the case of Jammu & Kashmir, since mulberry is grown in the form of stray trees and not as bush the question of irrigation does not arise.

5.1.3. It would be observed that the total area in the State of Mysore under mulberry cultivation has gone down. The reason given is the tendency on the part of cultivators to take up food crops which are sometimes more remunerative than mulberry. There has however been a very slight increase in the area under irrigation. The Mysore Government proposes to sink 35,000 wells during the Fourth Plan period. In West Bengal the area under mulberry cultivation with irrigation facilities constitutes less than one per cent of the total area under mulberry cultivation and there has been no significant increase in this area.

5.1.4. **Manuring.**—The Mysore Government appears to have taken no steps in respect of manuring of mulberry plantations but has stated that the Central Sericultural Research Institute is conducting experiments. The State of West Bengal has observed that experiments with different kinds of manures on the growth and yield of mulberry leaf are being conducted and trial cultivation is being carried on. The Government of Kashmir has said that its Department of Sericulture is conducting its own experiments on manuring. The Central Sericultural Research Station, Berhampore, West Bengal, has reported that a comprehensive manurial experiment under semi-dry conditions was undertaken on the fertiliser requirements of the mulberry plant and that it was found that 112 kgs. nitrogen per hectare applied as ammonium sulphate alone gave the yield of 23,556 kgs. of leaves per hectare as against 18,260 kgs. for control, i.e., without manure. Further, it discovered that the quality of leaves in particular the crude protein contents in the leaves also improved from 11.72 per cent to 17.67 per cent. The additional cost involved in manuring has been found to be economic as it has been possible to reduce the cost per kg. of leaf. It was also found that foliar application of urea was an effective method of applying nitrogen since the increased leaf yield was as much as 70 per cent over that of control as compared to 45 per cent increase in the case of application to the soil of equivalent amount of ammonium sulphate. The Central Sericultural Research and Training Institute, Mysore, has conducted experiments to find out the amount of nitrogen required for mulberry and reached certain conclusions. It appears, however, that the results of these experiments have not yet been applied on any significant scale.

5.1.5. **Improvement of soil conditions.**—The States of Mysore, West Bengal, Jammu and Kashmir have made almost no comments in respect of the improvement of soil conditions. The Central Sericultural Research Station at Berhampore as well as the Central Sericultural Research and Training Institute, Mysore,

have, however, conducted certain experiments. The latter collected nine soil profiles from parts of Bangalore and Tumkur Districts and morphological analysis of the soil is said to be under investigation.

5.1.6. Evolution of suitable grafts of better yield.—The Government of Mysore has reported that selected varieties of mulberry known as Kanva 1 and Kanva 5 were found to yield better leaves, and have been introduced with the result that now there are about 200 hectares under such mulberry plants in the State. It proposes in the coming years to increase the use of these varieties in the field. Mulberry graft nurseries run by Government have been preparing the popular Berhampore variety and supplying it to sericulturists. Only one Japanese variety, *i.e.* Kosen is prepared in limited numbers and made available to sericulturists. The Government of West Bengal has said that the selection of high yielding improved and indigenous variety of mulberry has been made and propagation of this variety has been pushed up. Experiments have been made with foreign varieties of mulberry and the varieties found suitable have been sorted out and grafts of the said varieties have been distributed amongst mulberry cultivators. In West Bengal the grafts of Kosen, China White, China Black, Taukasakua and Tomeiso varieties were giving good yield and their grafts were prepared and propagated in the hill region under the scheme 'Development of Sericulture in Darjeeling District'. No particulars of the extent to which the improved varieties were propagated, are available. The Government of Jammu & Kashmir has not touched upon this point in its reply to our questionnaire.

5.1.7. The two research institutes at Berhampore and Mysore have given detailed reports in respect of the research on mulberry grafting that they have been conducting. In Berhampore, research work was taken up in 1962 and it appears that about 570 strains of plants were under study. The Mysore Research Institute is also conducting experiments. For this purpose it has collected 65 varieties of mulberry plants both exotic and indigenous from different sericultural States in India and planted them in the Central Mulberry Farm of Central Sericultural Research and Training Institute at Mysore and the work on cytotaxonomical studies has only recently been started. It would thus appear that very little, if any, progress has been achieved in respect of the evolution of suitable grafts and the institutions are just at the beginning of experiments for developing more suitable varieties.

5.1.8. Study of nutritive value of leaves.—This matter is more or less dependent on the evolution of suitable grafts of better yield and unless further work on the evolution of suitable varieties is done, such studies cannot be fruitful. Since work on the selection of

suitable varieties is still in its initial stage, studies in respect of the nutritive value of the yield have not made any headway.

Recommendation No. 2

5.2.1. "Steps should be taken towards the establishment of chowki rearing centres on co-operative lines in order that the quality of raw silk may improve and the existing high renditta considerably lowered." (Recommendation No. 4 of Government Resolution of 1963).

The position with regard to the total number of disease free layings used in 1965 as against the number reared in chowkis in the three States which are the main producers of mulberry silk is as follows :—

State	No. of layings used in 1965	No. of d.f.ls. reared through chowkis	Percentage
Mysore . .	77,098,000	2,500,000	3.2
Bengal . .	33,512,000	Negligible	..
Kashmir . .	3,781,300	2,836,000	75

5.2.2. The percentage of d. f. ls. reared through chowkis in the case of Mysore comes to 3.2 only. No progress worth the name has been made in Bengal. Jammu and Kashmir has, however, been rearing most of its d. f. ls. through common rearing centres, which was more a consequence of State control over the production of silk than the result of adoption of more improved methods for rearing of worms. There is much room for improvement in the case of Mysore and Bengal and considering the fact that the State of Mysore, as revealed at the public inquiry, has found this method very popular and also conducive to the better production of cocoons by reduction of mortality in the early stages, it is expected that in course of time the proportion of d. f. ls. reared at chowkis would increase. No study of the renditta as a result of the worms being reared in chowkis as against that of those reared otherwise has been made and it is therefore not possible to conclude whether or not any lowering of renditta resulted from rearing through chowkis. Even so, on the ground of greater uniformity at the earlier stages of development it is desirable that chowki rearing centres should be increased and in course of time the entire rearing of worms in their earlier stages up to the second moulting should be done at chowkis. No progress with regard to formation of co-operative chowkis was reported from anywhere.

Recommendation No. 3

5.3.1. "The practice of earlier harvesting of cocoons should be corrected either through better incentives created by the 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." (Recommendation No. 5 of Government Resolution of 1963).

In Mysore there are regulated cocoon markets and no cocoons can be bought except in these markets. On the appointed day, rears of silk worms bring cocoons to the market and each lot is auctioned under the supervision of the State Government. An element of competition as well as valuation according to grade and quality is introduced as a result of this procedure. The cocoons come to the market unstified and the purchasers are fully alive to the necessity of the cocoons being ripe and not too green. On the other hand, the producer, if unscrupulous, is interested in selling the cocoons which have not reached the pupal stage,—since cocoons which have not yet reached the fifth day after spinning are heavier in weight,—as he stands to gain more if he receives the same price as for ripe cocoons. However, since it is possible to open a few cocoons for examination before making bids, purchasers are disinclined to buy cocoons which are not ripe and this operates as a deterrent to the tendency of bringing raw cocoons to the market. The possibility of some stocks of raw cocoons appearing on the market on account of the anxiety of the rearer to sell his cocoons as quickly as possible cannot however be entirely ruled out. The present practice operates quite satisfactorily in so far as the State of Mysore is concerned. Any other measures for grading or requiring the sale of cocoons to take place on the fifth day are said to be impracticable. In the State of West Bengal which is also multivoltine, it is reported that good progress has been made, that buying and selling of cocoons takes place on the basis of silk yield and quantity. The Silk Association of Malda decides from time to time the rate at which the cocoons should be sold and these rates have generally been found satisfactory by everyone concerned.

5.3.2. **Jammu and Kashmir.**—The purchase of cocoons is the sole privilege of the State Government and the rearers cannot sell their cocoons to any one else. Since the entire State of Jammu and Kashmir is univoltine, the cocoons have to be stifled by drying in the sun and then delivered to the Government godowns. They are delivered to the Government godowns much later than the fifth day. The problem of requiring that these should be brought on the fifth day does not therefore arise in the case of this State.

Recommendation No. 4

5.4. "The possibility of establishing a Central Agency for the storage of cocoons in centres where there is a concentration of markets may be explored". (Recommendation 6 of Government Resolution of 1963)

The Mysore Government has stated that the possibilities of establishing a Central Agency for the storage of cocoons in centres where there is a concentration of markets is being explored. It has also stated that most of the filatures owned by the Government are located in thick cocoon growing areas and that they possess adequate facilities for the storage of cocoons. It is necessary to stifle the cocoon before these can be stored. Facilities for stifling will therefore have to be provided in the same proportion as storage facilities. In the case of the two multivoltine States of Mysore and West Bengal, cocoons are sold unstiffed and the filature or the reeler stifles these to his own satisfaction and according to the facilities primitive or advanced, as may be available. The establishment of godowns for the storage of cocoons on behalf of the producer would therefore perhaps be not practicable in the case of multivoltine areas. In the case of Jammu & Kashmir, the cocoons have to be sold to the Jammu & Kashmir Industries Ltd. and the State Filatures are fully equipped with godowns which can hold the entire harvest for the whole year. The Bihar Government has stated that it has three Government storages at Chaibasa, Amrapara and Bengabad for tasar cocoons and one store at Begusarain in Monghyr district which caters to eri cocoons storage.

Recommendation No. 5

5.5.1. "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." (Recommendation No. 7 of Government Resolution of 1963).

The pattern of production of raw silk during the last three years was as follows :—

Pattern of production of Mulberry Silk

(In percentages)

	Filature	Charkha	Cottage basin
1963	12·8	66·6	20·6
1964	12·6	59·9	27·5
1965	10·0	77·5	12·5

It would be observed that in spite of the expansion of filatures the percentage fell from 12·8 in 1963 to 12·6 in 1964 and to 10·0 in 1965. In the case of cottage basins there was a rise in 1964 but there was considerable fall in 1965. There was a setback in charkha in 1964 but it gained in 1965 and it rose to 77·5% a proportion much higher than ever before.

5.5.2. The Director, Government Silk Industries, Mysore, has stated that due to wage differences between filature, cottage basin and charkha reeler, the filatures have to face a stiff competition with the other two. They have to follow the provisions of labour laws and to extend facilities such as holidays with wages, provident fund etc. while these amenities are not provided by the charkha reeler and cottage basins. Almost the same arguments could be advanced by any other industry to defend its higher cost of production as against the lower cost in corresponding cottage industry. However, this is not so, for in every sphere of the conversion of raw product whether in the form of fibre, chemicals or minerals into finished products, industry run by power and mechanical plants has generally resulted in reduction in the cost on account of other advantages of production that organised industry enjoys. Today however the situation is that charkha reeled silk is the cheapest and priced at the lowest rates, while cottage basin silk comes next and the filature silk is the most expensive. From the evidence tendered at the public inquiry, it is clear that cottage basins, which work on the same principle as filature except for the fact that they do not use electricity for turning the machines and do not have centralised hot water supply system for boiling the cocoons, are producing almost as good a quality of raw silk as filatures. There appears therefore to be something drastically wrong with the economy of the filature *vis-a-vis* the quality and the reliability of the cocoons produced in India which renders filatures uneconomic. The present tendency is towards the greater use of the charkha. There is, therefore, no fear of the charkha being supplanted by cottage basin or filature.

Recommendation No. 6

5.6.1. "As a class of by itself catering to a special demand, non-mulberry silk has a substantial market internally and the tasar variety has recently manifested good export possibility. As such this section of sericulture industry deserve more attention than it has so far received." (Recommendation No. 8 of the Govt. Resolution of 1963).

The Central Silk Board has stated that in pursuance of this recommendation both the Central Silk Board as well as the State Governments concerned have been paying special attention to the

development of the tasar industry. The Central Silk Board had set up a sub-committee in 1960 for this purpose realising the importance of the tasar industry and also of other non-mulberry silk sectors. The Committee's recommendations which cover different aspects of the industry beginning from stepping up the production of tasar cocoons to reeling are being implemented by the States. The Central Tasar Research Station, which was originally established at Chaibasa was shifted to Ranchi in November, 1964. A forest block of 35 hectares has been acquired in the vicinity of Ranchi where experimental rearing is being conducted in a systematic manner. The Central Silk Board took over the Central Tasar Silk Worm Seed Station situated at Lakha near Raigarh in M. P. This station originally belonged to the Tribal Welfare department of M. P. Government and is now being developed into a Central Seed Station. It has shown considerable progress during the short period that it has been in operation.

5.6.2. It was, however, stated at the public inquiry that of late, there has been a decline in the demand of tasar silk in the export market and this was a source of some alarm considering the outlay made on the development of tasar silk.

Recommendation No. 7.

5.7.1. "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." (Recommendation No. 9 of the Government Resolution of 1963.)

The Central Silk Board constituted a Committee to go into the question of export of silk waste *vis-a-vis* the economic working of the spun silk industry. The export of silk waste of South Indian origin was regulated with effect from 21st March, 1964. Under this revised policy exports of mulberry silk waste of South Indian origin were allowed through the port of Madras only and the exporters were permitted to export double the quantity of what they sold to the Government Spun Silk Mills, Channapatna. This is known as the linking system. In December, 1964 the linking system was modified to 1.3 instead of 1.2; but this linking system was related only to the Spun Silk Mills, Channapatna. Such linking was not made with the supply relating to the Assam Spun Silk Mills, Jagi Road till the end of last year. Since February 1966, linking system has been enforced there also, but a quantitative restriction of 40,000 kilograms has been introduced.

Recommendation No. 8.

5.8.1. "It would be in the interest of the filatures for making them a little more profitable to equip themselves with the special-

lised machinery for throwing and offer to the market thrown silk in future.” (Recommendation No. 10 of Government Resolution of 1963)

The Government of Mysore has stated that there is already a twisting unit with 3000 spindles working at the Government Silk Filatures, Kollegal, with a capacity to twist 1150 kgs. of raw silk which is about 50% of the total production of the filature unit per month. But due to increase in wages paid to the workers of this twisting unit, twisting charges are very high compared to those in the private sector. It has therefore been difficult to market thrown silk due to the keen competition from private throwing establishments. It has also stated that in the other filature unit at Kanakapura a small silk twisting unit has been installed, which is producing orgazine and weft required by the handloom section of the filature.

5.8.2. In West Bengal, the filature unit which is under erection is yet to be commissioned. It has been reported that it is proposed to set up a throwing and twisting unit also as a part of the filature establishment.

5.8.3. The private filature unit, Kisan Silk Industries Private Ltd., Mellur, has stated that for the throwing/twisting of its entire filature production it needs financial help to instal 360 spindles which it has not yet been able to secure.

5.8.4. In Jammu and Kashmir, raw silk is mostly used by handloom for making fabrics of simple texture such as tabby for which thrown silk is not used. Only when larger quantities of silk become available and the demand for thrown silk develops the State Government proposes to consider this suggestion.

Recommendation No. 9.

5.9.1. “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.” (Recommendation No. 11 of the Government of India Resolution of 1963).

There are two silk conditioning and testing houses in India, one at Bangalore and the other in Calcutta. The procedure for testing at both the testing houses is the same. Tests are conducted in respect of the following items :

1. Conditioning of silk.
2. Sizing for denier estimation.
3. Winding.

4. Tenacity.
5. Elongation.
6. Cohesion
7. Seriplane tests for
 - (i) Evenness.
 - (ii) Cleanliness and
 - (iii) Neatness.

5.9.2. No figures of the actual number of tests under each of the above-mentioned item have been furnished. In Jammu and Kashmir there is no testing house, but some of the testing equipment is available in the filatures. None of the silk producing States has sent its comments with regard to the extent to which dissemination of information about raw silk testing undertaken at the testing house had been made.

Recommendation No. 10.

5.10. "Unless the authorities for 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." (Recommendation No. 12 of Govt. of India Resolution of 1963).

The comments in respect of recommendation No. 5 cover, to a certain extent, this recommendation also. The market of cocoons fluctuates from day to day depending upon the season and weather conditions, production of mulberry leaves, the right proportion of humidity and temperature available for the rearing of worms, the extent of the arrivals of cocoons in the market and to some extent also on the market for silk fabrics. Grading of cocoons cannot therefore be determined in advance and prices fixed accordingly. The Mysore Government has therefore reported that under the existing system the reelers pay higher prices for better quality cocoons judging the quality visually.

6.1. In the production of mulberry silk India continues to occupy the fourth place among the sericultural countries, the first three being Japan, China and U.S.S.R., South Korea, Italy and Iran and other countries come after India. The following figures furnished by the Central Silk Board would show the estimated production of raw mulberry silk in the chief silk producing countries in the world for the year 1964.

6. Progress and present position of the industry

Country	Production in Metric Tons	Percentage to total
1. Japan	19,458	59.9
2. China	7,000	21.6
3. U.S.S.R.	2,618	8.1
4. India	1,466	4.5
5. South Korea	787	2.4
6. Italy	561	1.7
7. Iran	145	0.4
8. Brazil	89	0.3
9. Turkey.	72	0.2
10. Yugoslavia	60	0.2
11. Rest of the world	206	0.7
	32,462	100

6.2. In India non-mulberry silk is produced to the extent of about one third of the mulberry silk, but comparable figures for other countries are not available since China is the only other country where a very large quantity of tasar silk is produced. Eri and Muga silk is not known to be produced on a commercial scale anywhere else in the world. Based on the figures for the year 1965, the proportion of production of mulberry as well as non-mulberry silk in India in the different States is as follows :

State	Percentage of mul- berry silk produc- tion to total production	Percentage of non- mulberry silk pro- duction to total pro- duction	Percentage of mul- berry and non- mulberry
Mysore	76.21	..	57.9
West Bengal	29.01	4.26	15.5
Jammu & Kashmir	3.25	..	2.5
Assam	0.86	47.40	12.5
Madhya Pradesh	0.04	23.17	5.6
Bihar	0.06	21.52	5.2
Orissa . . . . .	..	3.20	0.7
Others	0.57	0.45	0.5
TOTAL	100.00	100.00	100.00

6.3. More than 98 per cent of the total mulberry silk produced in the country is from the States of Mysore, West Bengal and Jammu and Kashmir. In the case of non-mulberry silk more than 92 per cent of the production is from the States of Assam, Madhya Pradesh and Bihar, the remaining States accounting for eight per cent only. Mulberry silk worms reared in Mysore and West Bengal are multivoltine. In the case of other States, mulberry silk worms are either bivoltine or univoltine. Non-mulberry silk worms are multivoltine. The approximate total value of the raw silk produced in 1965 comes to about Rs. 18 crores and that of silk fabrics produced in the country from indigenous raw silk comes to about Rs. 30 crores.

6.4. In the multivoltine areas, sericulture tends to become a whole-time occupation since six to seven crops are available in a year and the sericulturist has to keep busy almost continuously and cannot take up any other occupation. In the case of univoltine areas, the situation is entirely different. The duration of the crop of cocoons is about five weeks and the sericulturist has therefore to find alternative occupation for the rest of the year since the extent to which he can produce cocoons in one year is limited by the factor of univoltinism and also by the extent of rearing house accommodation available and other expenses. It has therefore been observed that in univoltine areas, the sericulturist relies for the greater part of his income on cultivation other than mulberry.

6.5. The production of mulberry as well as non-mulberry silk in India has shown considerable headway ever since protection was granted to it in 1934. Figures for both mulberry and non-mulberry raw silk for the whole country at certain intervals are as follows :

(In million kg.)			
Year	Mulberry	Non-mulberry	Total
1931-32	0·938	0·249	1·187
1949	0·971	0·377	1·348
1954	1·088	0·232	1·320
1962	1·401	0·380	1·781
1965	1·634	0·518	2·152

6.6. It would be observed that during the last thirty four years the total production of silk in India has registered a rise of 81 per cent. and in the last three years the increase has been of the order of 20%.

6.7. Sericulture is a composite term for three different but interdependent activities viz., (i) moriculture which is entirely agricultural, (ii) worm husbandry-breeding and rearing silk works which produce cocoons on a large scale, and (iii) fabrication. The state of the industry as well as its growth can therefore be examined only with reference to these three disparate activities. At the stage of fabrication, the activities become more varied and these can be sub-divided into four stages, namely, reeling and production of silk; twisting and throwing; weaving and lastly utilisation and disposal of silk waste. We shall therefore study separately the progress made in each of these fields of sericulture.

6.8.1. **Moriculture.**—In Mysore as well as in West Bengal which are multivoltine areas, mulberry is cultivated as bush plant. In Jammu & Kashmir it is propagated as trees. The same generally holds good of the areas where univoltine worms are reared. Mulberry cultivation has not shown any significant rise during the last four years. The area stood at the figure of 85,433 hectares in 1962 and is reported to be 86,191 hectares in 1965.

6.8.2. In the case of trees their number appears to have fallen from 3.42 millions in 1962 to 3.29 millions in 1965. The figures in Appendix IV show the progress made by the different States in moriculture since the last inquiry in 1963. The progress achieved in the important mulberry growing States is as follows:

6.8.3. **Mysore.**—The position in respect of mulberdy cultivation for the State of Mysore is as follows:

Year	Area under mulberry cultivation in hectares			Yield of leaves in kgs. per hectare per annum		Average cost of production in paise per kg.	
	Irrigated	Rainfed	total	Irrigated	Rainfed	Irrigated	Rainfed
1963	9250	67,750	77,000	8500 to 12,500	3000 to 3200	20	15
1964	9500	66,750	76,250	8000 to 12,000	3000 to 3200	20	15
1965	9600	62,400	72,000	8000 to 12,000	2800 to 3000	21	17

6.8.4. The area has fallen in the course of three years by about 5,000 hectares. The State Government has stated that this decline has resulted from the tendency to change over to food

crops. The incentives and awards extended to the cultivator for the production of more food crops are substantially greater than any available for the cultivation of mulberry.

6.8.5. It would be observed that out of a total area of 72,000 hectares under mulberry cultivation 62,400 hectares are rainfed and only 9,600 hectares irrigated. The yield from irrigated areas is from 8,000 to 12,000 kg. per hectare as against 2,800 to 3,000 kg. from rainfed areas. At the last inquiry it was found that the cost of mulberry amounted to 12.3p per kilogram from rainfed land and 14.3p per kilogram from irrigated land. It has since been reported that the cost has gone up to 21p. for irrigated and 17p for unirrigated areas. The average cost at the last inquiry was 12.3p while the average cost now comes to 19p which shows a rise of 15.4 per cent within a period of three years. This has significant bearing on the price of cocoons. The Government of Mysore has not given any reasons for such high rise in the cost of production of mulberry leaves. The Central Silk Board has however reported that the present varieties of mulberry in Mysore have extremely narrow ranges of response to cultural practices and in their case the law of diminishing returns manifests early; the amount of labour spent on cultivation does not therefore repay in the same proportion as the plantations grow older. The selected varieties of Kanva 1 and Kanva 5 which were found to yield better leaves have been introduced but on a small scale; and at present there are about 200 hectares only, in which this new variety has been propagated. The Mysore Government has reported that another Japanese variety Kosen has also been made available to sericulturists. The area in which this has been introduced has not been reported. However, it appears that only the fringe of the problem has been touched. For, according to the State Government's report itself new varieties have been extended to 0.3 per cent of the total area under mulberry cultivation.

6.8.6. Financial assistance has been given to mulberry growers by way of loans, and loan-cum-subsidy for digging wells so as to provide irrigation for lands under mulberry cultivation. In the course of the Third Five Year Plan it was proposed to sink 871 wells but actually only 582 were sunk bringing in about 200 hectares under irrigation. Here again the improvement effected is almost insignificant, since the additional irrigation of 200 hectares constitutes a transfer of only 0.3 per cent from unirrigated to irrigated area. In the Fourth Five Year Plan the State proposes to provide financial assistance for digging of 3000 wells and if this is done about 6000 hectares more will come under irrigation.

6.8.7. Such slow and feeble attempts at the increase of irrigation as well as the replacement of new varieties are not likely to yield much progress. The cost of labour has already risen

and unless measures to counteract the rise in the cost of production are taken by propagating improved varieties in such a way that the entire State is covered with these within a period of 10 to 12 years the cost of production of mulberry is likely to go up even more steeply making cocoons more expensive and resulting ultimately in uneconomic production of raw silk. The State should develop mulberry nursery plantations to an extent which may be able to provide new high yielding and low cost varieties to the entire State within a reasonably foreseeable period.

6.8.8. As regards irrigation facilities it is not possible to make any comments since it has to be conceded that the areas under food crops claim higher priority and areas under mulberry will continue to receive only secondary attention. For a long time to come, therefore the state will have to rely on rainfed areas for the production of mulberry leaves.

6.8.9. **West Bengal.**—The area under mulberry cultivation which was 6275 hectares in 1963 increased to 6298 only in 1964 and has been reported to be 6312 in 1965. In addition to these plantations there are said to be about 700,000 mulberry trees of which 400,000 yield leaves. The State Government has stated that the average yield per hectare is 13,952 kg. in rainfed and 16,500 kg. in irrigated areas. The yield of mulberry in the rainfed area in West Bengal is more than four times the yield in similar area in Mysore. Out of the total area of 6312 hectares in West Bengal only 59 hectares are irrigated. The cost of production per kg. in rainfed area comes to 15.4p and in irrigated area to 15.5p. In the case of trees the average cost of production is reported to be 10.2p per kg. West Bengal appears to have a great advantage over Mysore in so far as supply of leaves is concerned. Though experiments are being made in the State for introduction of new varieties no serious attempt has been made so far nor has any substantial area been covered by new and better varieties. The yield from unirrigated areas is so good that it would not be of any great advantage to provide irrigation facilities on any extensive scale, particularly if it has to be at the cost of land under food crops.

6.8.10. The great difference in yield from rainfed area under mulberry in West Bengal and similar area in Mysore would warrant the assumption that the nutritive value of the leaves being similar the hectareage needed in West Bengal would be one fourth for producing the same quantity of cocoons with a similar, differential in cost or conversely with the same hectareage West Bengal would produce four times the cocoons at a very low cost but the following analysis for the year 1965 reveals an altogether different picture.

Area, Yield & Costs in Mysore and West Bengal

Particulars	Mysore	West Bengal
1. <i>Area under mulberry in hectares :</i>		
(a) Rainfed	62,400	6,252
(b) Irrigated	9,600	60
2. <i>Trees bearing leaves :</i>	..	400,000
3. <i>Average yield in kgs. per :</i>		
(a) Rainfed hectare	2,900	14,000
(b) Irrigated hectare	10,000	16,500
(c) Tree . . . . .	..	10
4. <i>Total yield (in '000 Kgs.) :</i>		
(a) Rainfed	180,960	87,528
(b) Irrigated	96,000	990
(c) Trees . . . . .	..	4,000
TOTAL (a+b+c)	276,960	92,518
5. <i>Cost per kg. in paisa :</i>		
(a) Rainfed	17	15.4
(b) Irrigated	21	15.5
(c) Trees . . . . .	..	10.2
6. <i>Total cost of mulberry leaves (in '000 Rs.)</i>		
(a) Rainfed	30,763	13,479
(b) Irrigated	20,160	153
(c) Trees . . . . .	..	408
7. <i>Total cost of mulberry leaves (in '000 Rs.)</i>	50,923	14,040
8. <i>Cocoons produced (in '000 Kgs.)</i>	18,855	4,865
9. <i>Raw silk produced (in '000 Kgs.)</i>	1,245	311
10. <i>Leaves consumed per Kg. of cocoons (in kg.)</i>	14.69	19.02
11. <i>Average cost of leaves per kg. of cocoons (in Rs.)</i>	2.70	2.89
12. <i>Average cost leaves per kg. of raw silk (in Rs.)</i>	40.90	45.21

6.8.11. As these figures would show, while the yield of mulberry leaves per hectare in Mysore in the rainfed area is less than one fourth of that of similar area in West Bengal, and the cost

is also higher in terms of weight, the consumption of leaves per kg. of cocoons comes to 14.69 kg. in Mysore and 19.02 kg. in West Bengal, and the cost of leaves per kg. of cocoons is 19p higher in West Bengal than in Mysore. The average cost per kg. of raw silk is Rs. 4.31 higher in West Bengal than in Mysore, while the renditta for Mysore is 15.1 as against 15.6 for West Bengal. The advantage of low cost of mulberry is more than nullified by other factors which it is not possible to determine in exact terms. Since the Government of West Bengal did not send a representative to the public inquiry it was not possible to obtain any evidence on this issue. The reasons which may account for this disparity can be any one or more of the following: the yields or area estimates in the case of West Bengal may be exaggerated; the quality of leaves is extremely poor, or that there is high mortality of worms in the fourth stage after they have already consumed most of the leaves. This matter needs the attention of the Central Silk Board as well as the Government of West Bengal. For if the advantage of low cost of leaves is lost because of their poor quality, the removal of this handicap may enable this State to produce at less cost and with equivalent area more than four times the raw silk produced in Mysore.

6.8.12. Jammu & Kashmir.—Cultivation of mulberry is entirely in the form of trees in this State and these trees belong to the State Government. Rearers of silk worms are allowed only to harvest leaves from the trees. The State Government has stated that it is not possible to say what the total number of trees is. The Central Silk Board has however been able to give estimates of their number. The number of trees was estimated at 2·120 million in 1963, 2·090 million in 1964, and only 1·800 million for 1965. Of the existing number 1·72 million is estimated to be in Kashmir and the rest in Jammu. The State expects to increase this to 2·60 million by large scale propagation of saplings. The fall in the number of trees is attributed to natural destruction and various developmental programmes undertaken in the State such as building of roads etc. There are a number of mulberry plantations belonging to the State Government now managed by Jammu and Kashmir Industries Ltd. where improved varieties of mulberry are grown and used to replace the older varieties when trees grow old and have to be supplanted. The State Government has spent Rs. 14 lakhs in 1965-66 on the maintenance of mulberry nurseries, layout of fresh plantations, preservation of old mulberry trees and payment of incentives to planters. Moriculture is said to be providing employment to 1250 persons directly. The extent to which decayed trees have been replaced by new and improved varieties has not been reported.

6.8.13. **Assam.**—In Assam both tree as well as bush type of mulberry plantations exist. The State Government has not been able to furnish data in respect of the number of trees but the total area under mulberry is estimated at 950 hectares which is entirely rainfed. The yield of leaves is estimated at 10,000 kg. per hectare per annum and the cost of production at 9p. per kg. The propagation of trees was until recently effected mainly by cuttings but the plantation of seedlings is being encouraged now. Graft with superior varieties as stock and exotic varieties as scion is also being undertaken on a limited scale. It has been reported that in most cases the grafts of exotic species do not appear suitable for the spring crop owing to the late sprouting of leaves. The State Government continues to be of the view that indigenous varieties of mulberry trees are more acceptable to sericulturists because of their good quality, better assimilability and early sprouting of leaves.

6.8.14. **Madras.**—The area under mulberry has not shown any appreciable increase in the last three years. It stood at the figure of 1460 hectares in 1965. The yield in rainfed areas was 2685 kg. per hectare in 1963, it declined to 1965 kg. in 1964 but improved to 2066 kg. in 1965. There has however been a steady improvement in yield in irrigated area and it is estimated to have been 6162 kg. in 1965. The cost of production declined from 20p. per kg. in 1963 to 15p. in 1965. In rainfed areas the cost per kg. declined from 24p. in 1963 to 21p. in 1965. The State Government has given the number of trees in State as 25,000 for the three years, 1963 to 1965. Replacement of aged and uneconomic local varieties with Berhampore variety of graft prepared in the nurseries at Hosur and Talavadi has been undertaken. In addition, private nurseries aided by State have also been supplying improved grafts. During the last three years about 75 thousand grafts have been prepared and planted. Aided by the State Government, 35 wells have been dug to irrigate sericultural farms and experiments are being conducted to evolve a suitable variety for the State at the Central Silk Research Institute, Mysore.

6.8.15. **Bihar.**—Bihar is mainly a non-mulberry silk producing State but whatever mulberry is cultivated is entirely rainfed and in the form of bush and occupies an area of 125 hectares only. The yield of leaves is reported to be 11,000 to 12,000 kg. per hectare which is almost equivalent to that of West Bengal. The cost of leaves is 7p. per kg. which is indeed very low. There are also about 7,000 mulberry trees in the State.

6.8.16. **Other States.**—Mulberry Silk farms exist also in Uttar Pradesh, Madhya Pradesh, Andhra Pradesh, Himachal Pradesh and Manipur. But information in respect of moriculture has not

been received from most of them. It is understood that the area under bush cultivation is as follows :—

	Hectares.
Madhya Pradesh	300
Andhra Pradesh	290
Uttar Pradesh	214
Manipur	130
Punjab	71
Himachal Pradesh	60

In Kerala and in the centrally administered area of Tripura sericulture has recently been introduced but it is still in a nascent stage. The area under moriculture in these States is negligible.

Non-mulberry food plants

6.9. Eri silkworm can thrive on about ten varieties of wild growing plants, but the main source of nutrition is the wild growing castor plant. Muga thrives on about nine varieties of forest plants and tasar on about twenty-three varieties. These are available in forest areas, but the States producing most of the non-mulberry silk, viz., Assam, Madhya Pradesh and Bihar have undertaken to raise compact blocks so that the rearers have an easy access to rearing zones and the plantations are maintained in good condition for securing better results.

Seed Production & Import

6.10.1. One of the absolute requirements for sericulture to be paying is to breed worms from disease free layings. After this has been accomplished, improvement in yield of raw silk and reduction of cost can be achieved by evolving a breed of silkworm which may produce greater quantity of silk at lower cost. But the silk yielding characteristics of any strain are not stable, and the parent stock deteriorates in quality with the lapse of time or from inbreeding. Constant vigilance and effort have therefore to be directed to rejuvenation of races and to the evolution of new ones to maintain an even standard of production. In Mysore, the Mysore Silkworm Seed & Cocoon (Regulation of Production, Supply & Distribution) Act 1959, requires strict control of preparation and distribution of silkworm eggs and only licensed breeders who have the necessary qualifications and equipment to ensure isolation of diseased layings from healthy ones are allowed to distribute disease free layings for breeding.

6.10.2. **Mysore.**—The entire basic seed requirements of Mysore State are met from Government grainages. In addition about 20% of commercial seed is produced in Government Centres, and the rest by licensed seedment. The total number of

licensed seed preparers is 500, and that of Government grainages 52. Two combinations of seed viz. Pure Mysore crossed with C. Nichi and ————— Pure Mysore crossed with H. S. 6, have been found successful, and have been extensively propagated in recent years. The position of the production of seed in Government grainages in Mysore during the last three years was as follows :—

Year	No. of grainages	Estimated requirement of cross breed layings per annum.	Production in Govt. grainages (D.f.is.)	Percentage of d.f.is. used for rearings
		million		
1963-64	44	80.00	18,595,548	100
1964-65	50	75.00	19,148,465	100
1965-66	52	75.00	18,239,205	100

6.10.3. **West Bengal.**—The State Government has reported that stock breeding as a specialised function has not developed much except in Government nurseries in West Bengal. The State seed farms however supply disease free P1. seed to selected rearers as well as to cocoon growers. Testing of mother moths produced by some of the rearers is done by Government sericultural demonstrators on a sample basis. Government farms at Kalimpong Kursoong and Siliguri handle and multiply exotic as well as indigenous races. There are nine Government grainages for supply of basic multivoltine seed to commercial seed growers as well as to cocoon growers. Private seed growers are free to rear from Government grainage seed, selected rearers' seed or their own seed, and to sell their outturn to commercial rearers without any requirement of examination. As a result of this, the major portion of the seed distributed remains unexamined and not necessarily disease free. The figures of production of seed in Government grainages during the last three years were as follows :—

Year	No. of grainages	Estimated requirement of seed layings per annum	Production in Government grainages	Production in State aided grainages	Percentage of D.f.s. issued
1963	Not reported	31,085,800	6,731,300	3,996,800	36.3
1964	Not reported	32,060,900	8,236,496	2,805,158	39.2
1965	9	33,512,000	9,604,400	4,662,000	42.58

6.10.4. **Jammu & Kashmir.**—All the seed used in Jammu and Kashmir is of foreign races, the indigenous races having died out long ago. About half of the requirement is produced in the main basic seed station at Mirgund with branches at Srinagar, Achhabal, Banihal and Batote, and the remaining seed is imported from Japan or Russia. Efforts are however a foot to make the State self-sufficient in respect of its seed requirements by 1968. Unlike the States of Mysore and West Bengal no stable pattern of hybridization has so far been evolved and cross breeding is still done on an experimental basis necessitating almost yearly modifications in the pattern of crosses. As a result of research being conducted by the Central Silk Worm Research Station of the Central Silk Board at Barzhala, Srinagar as well as that being carried on at Mirgund, it may be possible in future to evolve more stable races whose yield could be anticipated with some degree of certainty. Since the entire industry was a Government monopoly and is now the concern of Jammu & Kashmir Industries Ltd., production of seed has been in the hands of grainages run by this organisation and all seed is examined before issue. The position with regard to seed production during the last three years was as follows :—

(In kilogrammes)

Year	No. of grainages	Seed used	Production of grainages	Imports
1963	3	1333	822	511
1964	3	1216	691	525
1965	3	1070	432	638

6.10.5. A comparative analysis for the three States which together produce more than 98% of mulberry raw silk, of the layings produced, imported, tested as well as their weight and production of cocoons in 1965 is as follows :—

Production Import and Testing of Layings

Particulars	Names of States		
	Mysore	West Bengal	Jammu and Kashmir
1. D.f.l.s. from Govt. grainages .	18,239,205	9,604,400	1,527,000
2. D.f.l.s. from State aided/licensed grainages.	58,758,795	4,662,000	Nil
3. Untested layings	Nil	19,245,600	Nil
4. D.f.l.s. imported	Nil	Nil	2,254,000
5. Total layings used	77,098,000	33,512,000	3,781,000
6. Percentage of tested layings .	100	42	
7. Percentage of imported layings .	Nil	Nil	59.6

The performance of these layings in the production of cocoons is as follows :—

Layings and Cocoons produced

Particulars	States		
	Mysore	West Bengal	Jammu and Kashmir
Layings used in nos. . . .	77,098,000	33,512,000	3,781,000
Equivalent weight in kgs. . .	14,000	6,700	1,070
Weight per laying in gram. . .	0·18	0·20	0·28
Cocoons produced (in kg.) . .	18,855,000	4,865,000	851,300
Cocoons produced per kg. of seed used (in kg.)	1346·7	726·1	795·6
Cocoons produced in kg. per ounce of seed.	34·2	20·4	22·5

It would be observed that while the entire seed requirement of Mysore and also that of West Bengal is produced in the respective States, Jammu & Kashmir continues to import about half of its requirement of seed from abroad. In 1965, the total quantity imported by Jammu & Kashmir was 638 kg. at a cost of Rs. 8,41,500. In the States of Mysore and Jammu and Kashmir the testing of seed is hundred per cent., and the possibility of disease is thus altogether eliminated, but in West Bengal the testing of seed is not yet obligatory and most seed used is untested. In 1963 36·3% of the entire laying were said to have been tested and the figure for 1965 stands at 42·68%.

6.10.6. In Mysore one kilogram of seed yielded 1346·7 kilogram of cocoons, but in West Bengal the yield was only 726·12 kg. or 53·9% of the yield in Mysore. Jammu & Kashmir registered a yield of only 795·7 kg. which is only 58·4% of that of Mysore. In Japan the same quantity of seed would produce 3000 kg. of cocoons, and in terms of Japanese standards the performance of Kashmir which uses not only similar but the same seed was only 26% or about one fourth. In the case of Jammu & Kashmir low production is attributed to extensive failure of seed imported from Russia. The representative from Jammu & Kashmir stated at the public inquiry that as a result of the failure of the crop of cocoons in 1964, an effort was made to improve the position by importing a new race. But this proved to be a greater error. Although the worms grew to a very large size and ate voraciously giving hope of a very good harvest, they died in large numbers just before spinning cocoons. It has not been possible to ascertain why the yield from seed in West Bengal has been

so poor; one of the reasons is likely to be preponderance of tested and possibly disease-laden seed. While Mysore has enacted legislation prohibiting breeding from any but tested seed, other States have not so far taken this step. We consider that other States also need to enact such legislation in order to improve yield and also to protect the industry from effects of epidemics affecting silkworms.

6.10.7. **Other States.**—Particular mention needs to be made of Uttar Pradesh which registered remarkable progress through advanced technology in respect of seed production techniques. Though this State's contribution to the production of raw silk is only 0·2% of the entire output of the country its performance in the field of production of seed was so satisfactory that the Central Silk Board has recommended the techniques followed by it to other States also for adoption. Uttar Pradesh is not only in a position to raise its own requirements but also to supply substantial quantities to other States. The table below gives the quantities of seed supplied by Uttar Pradesh in 1965 for spring and autumn rearings in 1966.

State to which seed supplied	Quantity in grammes
Punjab	22,640
Jammu & Kashmir	14,150
Himachal Pradesh	1,698
	<hr/> 38,488

Non-mulberry silk worm seed

6.10.8. The total estimated demand for non-mulberry silk worm seed as also the actual production during 1964 is furnished in the table below :

Variety	Unit	Estimated require- ments	Production under Govt. supervision Actuals 1964	Percentage of 4 to 3
1	2	3	4	5
Tasar	D.f.1s. in Milli- ons.	5·400	1·063	19·7
Eri	D. f. 1s. in Millions	3·346	1·258	37·6
Muga	Seed Cocoons in millions.	3·500	0·510	14·6

In the case of Tasar seed, there was no organisation at the beginning of the 2nd plan for supply of examined seed, but by 1962 about 14% of the total requirement was met by examined seed and it is estimated that in 1965, nearly 30% of the total requirements consisted of examined seed, produced by grainages either run or supervised by Governmental agency.

6.10.9. Eri Seed.—94% of Eri raw silk is produced by Assam and this State has taken adequate measures to attain self-sufficiency in the production and distribution of examined seed.

6.10.10. Muga seed.—Assam is the only State producing Muga Silk and though the production of basic seed under departmental control was low in comparison with the requirements, it is now catching up and as against the production of 15% of the requirement in 1964. Government farms or farms supervised and controlled by Government are expected to have produced 33% of the total requirement in 1965.

Production of Cocoons

6.11.1. Broadly speaking the hatching of eggs and rearing of worms into cocoons can be divided into two parts, the first being the hatching of eggs and rearing upto the second moult, and the second, rearing from after the second moult upto and after the formation of cocoons. The first part requires delicate and expert handling since the worms are very tiny and tender having very narrow range of toleration and are easily susceptible to adverse effects of temperature, humidity and feed. Deft handling ensures a large proportion of survival while rough or inexperienced handling would result in heavy mortality. After the second moult, the worms become more hardy and can withstand some variation in environment and feeding routine. Since all rearing for commercial and some for breeding purposes is conducted as cottage industry by poor people who generally are economically the most backward, they are unable to employ techniques which can be available in an organised rearing house. It was recommended by the Commission in 1958 that organised rearing centres or chowkis on a co-operative basis should be opened. This proposal has unreservedly been agreed to by all the States producing mulberry silk and they have also started acting upon it though the progress has been very slow.

6.11.2. In Mysore loans are given to sericulturists to construct model rearing houses. In the Fourth Plan it is proposed to build common rearing houses, and to store and hire out mountages which may help sericulturists to improve their rearings. The position in this respect for the year 1965 is as follows :—

State	Percentage of D.f.1s. reared through chowkis	No. of chowkis
Mysore	3.2	107
West Bengal	Negligible	4
Jammu and Kashmir	75	254

These figures indicate that while most rearing in the first stage is done in chowkis in Jammu and Kashmir, the States of Mysore and West Bengal are still behind hand. In the case of Mysore, however, lack of chowki facilities does not operate as a handicap as the following figures of cocoon production and renditta would show.

State	Year	Estimated production of cocoons in '000 kgs.	Average yield of cocoons per 28.3 grammes of seed in kgs.	Average renditta obtained
Mysore	1963	16,957	30.8	16.62
	1964	17,655	35.3	16.35
	1965	18,855	34.2	15.14
West Bengal	1963	3,519	15.8	11.98
	1964	4,169	18.2	14.45
	1965	4,865	20.4	15.66
Jammu and Kashmir	1963	1,016	21.5	11.62
	1964	773	17.86	10.18
	1965	851	22.51	16.03

The quality of cocoons in Jammu and Kashmir is far superior to that of Mysore or West Bengal but overall renditta is not very much lower though in individual lots it has been reported to be as low as nine. The renditta on the whole is very high and more attention needs to be paid to research for the evolution of high yielding and low renditta races.

6.11.3. Both in the case of West Bengal as well as Jammu and Kashmir, the yield from seed is very low. In West Bengal which is multivoltine the yield ought to be comparable to that of Mysore if not greater. In Jammu and Kashmir the output

ought to be very much higher than in Mysore or West Bengal since it is univoltine and the size and weight of cocoons is much greater in univoltine races than in multivoltine. It was ascertained at Mirgund that with similar seed which yielded an average of 18.83 kilogrammes per ounce in the case of private rearings, the centre had been able to produce 56 kilogrammes of cocoons. This shows that with better rearing conditions there is scope of increasing the yield about three fold. Comparable yields in Japan from the same races as reared in Kashmir are 85 kilogrammes per ounce. In order that the yield may improve in West Bengal attention needs to be paid to the testing of seed and also to the improvement of rearing conditions by setting up common rearing centres, as well as by training and educating private rearers in more advanced methods of worm husbandry. We apprehend that there is high mortality and wastage of worms in the rearing stages in this State. If all the layings used in 1965 were to propagate as well as they did in Mysore, this State could have produced almost double the weight of cocoons it did produce, and consequently double the quantity of raw silk.

Stifling, storage and sale of cocoons

6.11.4. In Mysore sale of cocoons is regulated by the provisions of the Mysore Silk Worm Seed and Cocoon (Regulation of Production, Supply and Distribution) Act 1959, under which 61 regulated markets have been notified where lots of cocoons are auctioned and knocked down in favour of the highest bidders. The prices of cocoons therefore depend upon the competition among buyers, the supply, and demand, and the silk market. With the present system of disposing of cocoons for the highest prices, the rearers do get better returns on the same day in the same market for better quality. The Government of Mysore has reported that owing to want of proper space in the rearing houses, want of adequate spinning mountages, and also owing to anxiety to secure the proceeds at the earlier moment, the sericulturist rushes to the market to sell his cocoons. Silk reelers pay a better rate for mature cocoons, than for immature lots, but the sericulturist is sometimes not convinced that such a price is better than the price he would have realised if he had brought them unripe to the market, for he is not certain of the market conditions. The Government of Mysore has in view schemes to afford storage facilities to rearers in order that the tendency to sell unripe cocoon may be curbed. In West Bengal there are no regulated markets but purchases by Government of raw silk are made on a standard price fixed by the Silk Association, Malda, and the trade representative after a lot test at Peddie Reeling Institute, Malda. In Jammu and Kashmir all cocoons are purchased from the sericulturist by the Jammu and Kashmir Industries Ltd., at a fixed rate which was Rs. 70 for 1963-64 and Rs. 80

for 1964-65 per maund. It is Rs. 100 now, per 37 kilogrammes, which works out to Rs. 2.70 per kg. only. On the face of it this rate appears to be very low but considering that the sericulturist receives seed as well as mulberry leaves free, it is not so unfavourable in comparison to the rates of other States. Owing to low yield of cocoons from seed the pro rata cost of imported seed per kilogram of cocoons works out to Rs. 2.22. The Jammu and Kashmir Industries Ltd., thus makes an outlay of Rs. 2.70 + Rs. 2.22 or about Rs. 5 per kilogramme of cocoons in addition to the expenditure on the upkeep of mulberry trees. The actual cost for 1965 per kilogram of cocoons, after payment of the rearing compensation comes to Rs. 5.99. The rearers do not however appreciate the facilities provided to them and clamour a higher rate. Perhaps there would be greater incentive to improved production if the sericulturist has a personal interest in the business by way of purchase of seed on payment, growing his own mulberry or purchasing rights to harvest leaf on payment. It is worthwhile making an experiment in a small area in order to ascertain if with the creation of such vested economic interests, the yield and performance improves or deteriorates. Cocoons are sun dried for stifling and delivered to Government godowns where adequate space for storage exists.

Reeling of Silk

6.12.1. The following figures show the quantity of mulberry raw silk produced in the country by the three processes viz. Filature, Cottage basin and Charkha.

(in Kilogrammes)

Year	Filature	Charkha	Cottage Basin	Dupion	Total
1963	176,936 (12.43)	919,591 (64.60)	283,771 (19.94)	43,144 (3.03)	1,423,442
1964	179,564 (12.25)	855,031 (58.31)	392,351 (26.76)	39,367 (2.68)	1,466,313
1965	160,556 (9.83)	1,248,892 (76.45)	201,300 (12.30)	23,154 (1.42)	1,633,602

(The figures in brackets are percentages.)

Statewise details under each of these heads for the same period are in Appendix V. During the last two years there has been an increase of almost 12% in the production of mulberry raw silk, all of this and more contributed by the State of Mysore. In 1964 raw silk processed through charkha registered a fall of

about 6% and a corresponding increase was in evidence in cottage basin, filatures remaining stationary, but in 1965 both filatures and cottage basins suffered a setback and there was a corresponding gain by charkhas. Charkha silk is cheaper to produce, its renditta is lower since part of the floss is also reeled with the strands, and it can withstand effective competition in price though not in quality against filature or cottage basin raw silk, and this accounts for its phenomenal rise within a year. At the public enquiry it was revealed that proprietors of cottage basins have on occasion switched back to charkha, finding cottage basins unremunerative.

6.12.2. We shall now consider the position of filatures, cottage basins and charkhas in the different States.

6.12.3. **Mysore.**—The filature industry in Mysore is about 30 years old. In 1937 the State Government organised a joint stock company for the establishment of two filatures. The first factory was started in Mysore and another was added in T. Narsipur. During the Second World War, the Central Government helped the industry to increase the production of filature silk in the State by advancing grants and loans under filature expansion schemes. With this help, Mysore Silk Filatures added five more factories. Almost at the same time the Government of Mysore started a filature at Kanakapura with the assistance of the Government of India. In Madras, a private filature established at Kollegal was taken over by the State Government. During the war years the cocoon and also silk prices were controlled and the silk that was produced was supplied to the Defence Department at a fixed price. Under these controlled conditions, the filatures were able to earn profits. However, after the end of the Second World War, the controls were lifted and import of foreign silk was allowed in large quantities and the filatures in the State which had large stocks of silk produced at a high cost could not compete with the imported silk which was available at low price. They had no other alternative but to sell their stock below cost which resulted in almost all the filatures losing their working capital. The Government of Mysore assisted the Mysore Silk Filatures located at T. Narsipur by granting loans but in spite of the assistance provided, the working results of the company did not improve. Ultimately the State Government had to take over the six branches of the company situated at Mysore, T. Narsipur, Chamrajnagar, Santhemarahalli, Mamballi and Kuderu. In 1956, Kollegal was transferred to the Mysore State Government. At present, the State Government has three filature groups with seven units. Four of the units taken over from the Mysore Silk Filatures Ltd., have been organised into one group known as the Government Silk Filatures, Mysore. Two units one functioning at Mamballi and the other at Kollegal are

together known as Government Silk Filatures, Kollegal. The third unit is known as the Government Silk Filature, Kanakapura. The details in respect of installed capacity, and the average number of basins worked in 1965 are as follows :—

Filature Group	Year	Installed capacity	Average number of basins worked
Mysore	1965	598	523 (all ten ends)
Kollegal	1965	452	312 (old six ends)
Kanakapura	1965	200	136 (all new ten ends)

There is a private filature at Mellur which is known as Kisan Silk Industries Limited. The installed capacity is 53 basins but the average number of basins worked in 1965 was 35, (all old six ends). Production in Government filatures in the old type six end basin (20/22) is about 336 grammes per day whereas in the new ten end basin, it comes to about 400 grammes. The private filature at Mellur has stated that the maximum output could be 600 grammes per basin per day with good quality cocoons. Since the reeler has to use both hands in the new type basin, the stamina of the worker is the limiting factor with the result that production is almost the same with both types of basins. In the Mysore Group of filature units 570 basins have been replaced with new ten end ones, in Kollegal group 196 basins have been replaced of which only 56 have been commissioned and in Kanakapura unit out of 200 basins only 136 are working, all of them new. As it is difficult to produce enough cocoons to work to full capacity, there is no proposal to expand the existing capacity. In the private filature, no replacement has taken place and it has been stated that there is no programme for that purpose.

6.12.4. The Kollegal unit has a twisting unit attached with 3000 spindles which can twist about half the output of the unit. But as the wages are higher, the cost of production of twisted silk has become higher. The Kanakapura unit also has a small twisting unit which is producing orgazine and weft for handloom sections. The private filature Kisan Silk Industries has stated that it has to instal at least 360 spindles more to twist all the silk produced by it. But as it could not secure financial help, it could not go ahead with the project.

6.12.5. The quantity of silk reeled by the filatures and the average renditta obtained in the State during the past three years is as under :—

Production and renditta in Mysore Filatures

(In Kilogrammes)

	1963		1964		1965	
	Production	Renditta	Production	Renditta	Production	Renditta
Mysore . .	34,875	20·63	45,394	20·98	50,524	20·98
Kollegal .	30,853	19·9	28,234	20·3	26,654	20·7
Kanakapura .	25,776	18·6	22,274	17·2	19,450	17·6
Mellur . .	4,208	14·8	4,015	14·3	3,800	14·8

6.12.6. The Central Silk Board has been making efforts for the past many years to modernise filature silk industry. It has been envisaged by it that there should be a concerted drive towards the progressive reduction of charkhas and corresponding increase in cottage basins and filatures. The re-organisation scheme for Mysore recommended by the Fact Finding Committee in 1961 aimed at an increase in filature basins from 800 in 1961 to 1300 in 1965, and cottage basins from 2000 in 1961 to 4,875 in 1965 and a reduction of charkhas from 3000 in 1961 to 1000 in 1965. The results have however been the opposite. Instead of increasing to 1300 basins, the filatures have stopped at 1074 basins and as against 4857 cottage basins aimed at, there are only 3100. The charkhas have instead of coming down to 1000 gone upto 3500. The Second Working Group on Sericulture in its report brought out in 1964 observed that since the filatures in Mysore had not been able to incorporate all the technological development found in other advanced countries, there was little prospect of improvement either in quality or reduction in costs. It recommended that domestic basins should be increased and these units should be organised into inexpensive compact miniature filatures with power and steam facilities.

6.12.7. **West Bengal.**—A filature unit of 100 basins is being erected at Malda, but the progress has been very slow and it has not yet started functioning. In pursuance of the recommendations made by the 2nd Working Group on Sericulture in 1964, the provision for the establishment of the 2nd filature with 50 basins at Murshidabad has been dropped. The present production in West Bengal is only through Charkhas and cottage basins.

The number of charkhas and cottage basins during the last three years was as follows :—

Year	Charkhas	Cottage Basins
1963	4,290	687
1964	4,290	687
1965	4,290	691

6.12.8. The position of charkhas as well as cottage basins is almost stationery though there has been some increase in the production of raw silk as the following figures would show :—

(in Kilogrammes)

Year	Charkhas	Cottage Basins
1963	2,78,380	15,403
1964	2,75,582	13,000
1965	2,91,766	19,598

6.12.9. **Jammu & Kashmir.**—In the State of Jammu and Kashmir there are no charkhas and no cottage basins. There are two filature units, one at Srinagar and the other at Jammu, both owned by the State Government and they have been working for a very long time. The Fact Finding Committee on Filature raw silk recommended in 1961 the following pattern for the State filature modernisation in Jammu & Kashmir.

No. of basins	1962	1963-64	1964-65	1965-66
Old	750	750	500	250
New	200	450	700	950
Production in '000 kg. .	16.0	20.4	21.6	28.2

The modernisation programme of filature in this State though initiated during the 2nd Plan has not met with success. The plant of hundred basins supplied to Jammu had not been functioning satisfactorily and therefore another plant of 200 basins meant for Srinagar has not even been unpacked for installation.

6.12.10. There has been considerable divergence of views on the issue whether or not silk filatures are working satisfactorily and whether these can be modernised in order to give more satisfactory results. It has not been possible to ascertain whether or not a study has been made of the characteristics of cocoons in order that these can be processed through sophisticated automatic machinery. It was however pointed out at the public inquiry that in order to use successfully the automatic reeling machinery of advanced design now being used in Japan it is necessary that the filament strand should be longer than that of cocoons now being produced in India and that there should be no breakages in the process of unwinding of the cocoons the entire length of the strand—approximately more than 1000 metres—to be unreeled in one operation. This would limit the throwing operation for replacement of fresh cocoons by used ones.

6.12.11. These are however matters which need to be studied seriously before advocating or implementing the increase of the number of filatures, or their modernisation. As matters stand now, filatures which are in no way modern and which were installed with a view to process the cocoons that were then available are not economic for, it cannot be denied that the quality of the cocoons in the matter of length, uniformity or tensile strength has not deteriorated; on the other hand it is likely to have improved. This matter needs to be examined and a very careful and thorough probe into the working of the filatures in India, almost all of which are Government owned, on a work study basis in order to discover the reasons for their being uneconomic is called for. Until then it would not be desirable to advocate either the increase of filatures or their modernisation. On the other hand, it would be desirable to provide facilities of power and steam to cottage basins, which are identical sub units of filatures without the facility of steam and automation. It was revealed in the course of the public inquiry as well as during the visits made by us to the silk producing centres that the weaving industry sometimes prefers cottage basin silk to filature silk and finds greater uniformity of denier in the former than in the latter. Again almost three-fourths of the entire raw silk production is from charkhas. Attention needs therefore to be paid to the improvement of the charkhas in such a way that it may become more efficient and may also incorporate labour saving devices so that the defects with which its product now suffers may be minimised.

Position in Univolted States :

6.12.12. **Punjab.**—As the supply of examined seed in the Punjab did not reach a satisfactory stage, the target for production of filature raw silk set by the Fact Finding Committee has not so far been realised. Attempts are however being made by the State Government to start a 25 basin filature at Nurpur.

6.12.13. **Uttar Pradesh.**—With the progressive increase in seed production and adequate supplies of silk worm seed to rearers the State has been able to organise a filature of 30 basins under the U. P. Resham Udyog Sahakar Sangh and it is making satisfactory progress. The production during 1965 was 3059 kilograms. On account of its good quality it is reported to be in great demand even at a price as much as Rs. 1.15 per kilogram higher than the ruling prices.

Non-mulberry Silk Industry

6.13.1. This consists of Tasar, Eri and Muga and is confined to the States of Assam, Madhya Pradesh, Bihar, Orissa and some parts of Andhra Pradesh, West Bengal, Manipur and Tripura. It is largely practised by the tribal people in these States. The production of different varieties of non-mulberry raw silk was as under :—

Production of non-mulberry silk

(In '000 Kgs.)

Year	Tasar	Eri	Muga	Total
1963	229.7	196.4	50.0	476.1
1964	226.7	203.4	50.0	477.1
1965	257.3	202.6	58.0	517.9

6.13.2. The Statewise production of different varieties of non-mulberry silk is given in Statement 'B' of Appendix V. A concerted drive to sustain the economic life of the tribal people by helping the development of this industry has been undertaken by the Central Silk Board since the First Plan.

6.13.3. **Tasar Silk Industry.**—In its report of 1963 the Commission stressed the economic importance of this section of sericulture and recommended that greater attention should be paid to its development, especially in view of its export potential. As the progress achieved during the Third Plan period was not upto the expected levels, the Ministry of Commerce constituted a special committee to review the working of the different schemes in Bihar, Madhya Pradesh and Orissa, to recommend further measures, such as floor prices for tasar cocoons and to examine the proposal of Madhya Pradesh to set up a corporation with participation of the Central Silk Board and the Tasar States of Bihar, Madhya Pradesh and Orissa for the development of the industry. The Committees' report has just been published.

6.14.1. **Silk Waste.**—Silk waste is obtained during the process of reeling of cocoons and it is further hand spun or mill spun. The return the reeler or the filature gets from the disposal of silk waste helps to keep down the cost of production of raw silk. Silk waste could also be classified into mulberry and non-mulberry, of which the mulberry silk waste has larger production as well as demand both in the export and domestic markets. Pierced mulberry cocoon has a considerable demand for hand spinning to produce silk yarn known as Matka. All mulberry silk waste forms raw material for the spun silk industry. The bulk of the non-mulberry silk waste however is used for hand spinning. The quantity of silk waste produced in reeling ranged from 30 to 35 per cent of reeled raw silk in charkhas, 35 to 40 per cent in cottage basins and over 50 per cent in filatures. The realisation from silk waste therefore assumes importance in the cost structure of raw silk. It has been estimated that the return from raw silk waste forms 10 to 12 per cent of the total cost of production of raw silk. The table below shows different varieties of silk waste produced in India during the years 1963, 1964 and 1965.

Production of Silk Waste

		(In '000 kgs.)		
Type		1963	1964	1965
1. Mulberry Silk Waste				
(i) Filature		108	113	126
(ii) Charka		407	367	485
(iii) Cottage basin		134	195	91
(iv) Dupion		1	19	12
TOTAL MULBERRY		650	694	714
2. Non-mulberry Silk Waste				
(i) Tasar		140	148	181
(ii) Eri		62	62	63
(iii) Muga		19	19	28
TOTAL NON-MULBERRY		221	229	272
Grand Total (1+2)		871	923	986

6.14.2. Appendix VI gives the Statewise production of silk waste of all types for the year 1965.

6.14.3. The major portion of the mulberry silk waste produced in the country is exported and the balance is utilised by the hand spun silk industry located in the States of Bihar, West Bengal, Orissa and Assam and the spun silk mills in Mysore and Assam. The table below shows availability for the last three years.

Indigenous availability of silk waste

(In tonnes)

Year	Production	Exports*	Availability
1963	871	604	267
1964	923	382	541
1965	945	549	396

*Silk Board figures.

It would be seen that the availability has been reduced in the year 1965 though it is greater than that in 1963.

6.14.4. With the commissioning of the two spun silk mills in 1961 and 1962 in Mysore and Assam respectively the policy with regard to the export of silk waste, particularly of South Indian Origin, was reviewed by the Government of India on the recommendation of the Central Silk Board, to ensure economic working of the spun silk mills. Until the beginning of 1963 exports of silk waste had been allowed freely from all the ports. Thereafter on representation of the Government Spun Silk Mills at Channapatna, a ban was imposed on the export of silk waste, excepting such varieties of silk waste which could not be gainfully utilised by the mills.

6.14.5.1. The imposition of the ban on export, while helping the spun silk mill to secure their requirements of raw silk at reasonable prices, reduced export earnings of foreign exchange. The trade made representations to Government for reconsideration of the ban and requested for permission to allow them to fulfil their pre-ban commitments. The position was therefore reviewed and a fresh notification was issued in June 1963 allowing the Indian exporters to fulfil their commitments already entered into by them with foreign buyers up to February 8, 1963 in respect of exports of silk waste of Kashmir and West Bengal origin. In so far as silk waste of south Indian origin was concerned exports were allowed only to the extent of quantities actually contracted by the parties as on 20th April 1963. The Central Silk Board was authorised to assist the trade in assessing the stocks held by them on 30th April 1963.

6.14.5.2. As a result of the representations made by the Government of Mysore, the Central Silk Board constituted a committee to go into the question of exports of silk waste *vis-a-vis* the economic working of the spun silk industry. In pursuance of the recommendations of this committee the exports of silk waste of South Indian origin were regulated with effect from March 1964. The revised policy allowed exports of mulberry silk waste of South Indian origin through the port of Madras only and the exporters were permitted to export double the quantity they sold to the Government Spun Silk Mills at Channapatna. In December 1964 this arrangement which came to be known as the 'linking' system, was modified and the exporters were permitted to export treble the quantity instead of the double that was sold to the Spun Silk Mills at Channapatna.

6.14.5.3. The Mysore Spun Silk Mills stated that the present export policy has helped the mills in securing raw material. But the Assam Spun Silk Mills has stated that as exports are linked only to the extent of 40,000 kilograms, no supplier is willing to give any price concession for this linked quantity as they feel that the Mill cannot afford to wait indefinitely. The Mill has asked that the trade notice should be amended to link the export of Mysore silk waste to it without any quantitative restrictions. The Assam Silk Mill was expected to utilise Eri and Muga waste, but it finds it easier to process mulberry silk waste which is now popular. The object of setting up this mill in Assam where non-mulberry silk waste is available in substantial quantities would be not only defeated if the mill were to avoid processing non-mulberry waste and concentrate only on mulberry waste, but unhealthy competition with Channapatna would also result.

6.14.5.4. The installed capacities of the two mills are as under :—

Spun silk capacity

Installed capacity	Mysore mill	Assam mill
Spun silk spindles	6,000	3,000
Noil spindles	420	420
Power Looms	15	Nil
Carpet Looms	8	Nil

6.14.5.5. The consumption of silk waste by the two mills and the anticipated requirements for the next three years are as follows :—

Consumption and requirements of silk waste

(In tonnes)

Year	Mysore Mill			Assam Mill			Grand
	Mulber-ry	Non-mulber-ry	Total	Mulber-ry	Non-mulber-ry	Total	Total
<i>Consumption</i>							
1963	222	..	222	2	30	32	254
1964	210	..	210	51	32	83	293
1965	185	..	185	109	25	134	319
<i>Requirements*</i>							
1966	250	..	250	n.a.	n.a.	72	322
1967	250	..	250	n.a.	n.a.	72	322
1968	250	..	250	n.a.	n.a.	90	340

*On single shift basis.

6.14.5.6. The actual production of different types of yarn during the last three years by the mills was as follows :—

Production of spun silk yarn

(In kgs.)

Name of the Mill/Types				1963	1964	1965
<i>Mysore Mill</i>						
Spun Silk yarn	.	.	.	33,000	32,422	37,100
Noil Yarn	.	.	.	19,600	25,790	34,890
<i>Assam Mill</i>						
Spun Silk yarn	.	.	.	15,600	14,500	17,147
Noil yarn.	.	.	.	20,689	23,595	26,838

6.14.5.7. The Mysore Spun Silk Mill is at present working partly on single shift and partly on double shift. This has been the case with Assam Silk Mills also during the last three years. Working on full three shifts is not contemplated by the Mysore Spun Silk Mills in view of the offtake of finished yarn being not very encouraging on account of competition from cheap substitutes. The Mill in Assam is already working on double shift in certain departments on an experimental basis and proposes to switch on to complete double shift in course of time.

6.14.5.8. The average cost of production of spun silk yarn of 210 counts as reported by the Central Silk Board is Rs. 76.21 per kg. As against this the f. o. b. price of Japanese spun silk yarn is Rs. 51.26 per kg. only. The main handicap of the spun silk mills according to the Central Silk Board is the poor quality of the raw material. The Central Silk Board has stated that while the supplies have improved the reduction of costs appears to be not immediately possible. The import of spun silk yarn has been banned since 1962 in order to protect the interests of the spun silk industry. It is however difficult to believe that the Indian Silk waste is inferior in quality, for the same silk waste is exported for processing into yarn which by all accounts is superior to that produced in India.

6.14.5.9. The Central Silk Board has reported that the quality of spun silk yarn has shown considerable improvement. It has however added that the quality cannot be compared with the imported material. The mill in Mysore has replaced some of its machinery with Japanese components. Certain technical improvements have also been incorporated.

6.14.5.10. The Silk Waste Committee of the Central Silk Board considered the question of the establishment of a third spun silk mill either in West Bengal or Bihar. At present the entire Tasar Silk waste is used for hand spun yarn by the Adivasis in the area and in view of the good export potential for fabrics made out of this yarn, it was considered unwise to divert the waste to the mills. Moreover, at present the spinners are realising better prices for the product than what the spun silk mills would be able to offer. Consequently, the question of setting up of a spun silk mill in Bihar has for the present been dropped. As regards West Bengal though the silk waste that would be left after meeting the demand from the Matka spinners and pedal charkas would warrant setting up of a third mill, considering the economic condition of the existing mills and the current slackness in demand for spun silk yarn, the Silk Waste Committee recommended that the proposition need be considered only after January 1968.

Silk throwing and twisting

6.15.1. At the time of the last inquiry it was reported by the Central Silk Board that there were more than one hundred thousand spindles in the country. The second Working Group on Sericulture in its report (1964) stated that the processing industry is able to cater for over 50% of the needs of the silk weaving industry. Most of the throwing establishments are working in Mysore and only about a small number in the States of Madras, Andhra Pradesh, Uttar Pradesh and Jammu and Kashmir and West Bengal. The Statewise distribution as adopted by the Working Group is as follows :—

Number of spindles twisting silk

State	No. of spindles
Mysore	80,000
Madras	13,278
Jammu & Kashmir	6,300
Andhra Pradesh	12,050
Uttar Pradesh	8,944
West Bengal	300
TOTAL	120,870

6.15.2. The Mysore Government has stated that a good portion of the silk produced in the State is twisted and made available for sale along with untwisted silk. Twisting is done on indigenous machinery. Some throwers twist on behalf of silk merchants and some for the weavers. There is a twisting unit attached to the Government Silk Filatures, Kollegal, and it has an installed as well as an active capacity of 3000 spindles. This is decidedly a very small capacity in comparison to the total capacity for twisting in the country. The Commission had in their last report recommended that it would be in the interests of the filatures to equip themselves with specialised machinery for throwing and offer to the market only thrown silk in future. It has since been ascertained that throwing and twisting is likely to further increase the costs of the raw silk produced by filatures. On the other hand there is extensive twisting capacity in the country installed either by weaving establishments or independently to cater for the needs of handloom weavers. At the public inquiry it was represented to us that it would not be desirable to render such twisting establishments idle by creating additional

capacities in filatures and it was suggested that should there be a gap between the total requirements in the country and the existing capacity for twisting, filatures be encouraged to instal twisting machinery to the extent of this gap. As we have observed already, the total quantity of silk reeled through filatures is not even 10%, and the existing filatures are not fully equipped to process all the raw silk produced by them through throwing and twisting machinery. It is therefore unlikely that even if the filatures equip themselves with throwing and twisting equipment any significant effect would be made on the twisting equipment installed and run by private organisations outside of weaving establishments. However, it would be desirable to exercise caution to ensure that no duplicate or excess capacity is created. It would also be advisable to estimate the present shortage in production capacity and then plan the installation of throwing and twisting equipment as part of filatures to meet this shortage. In passing it is interesting to note that the bulk of filature silk in J & K is used for the less expensive varieties of fabrics without being twisted.

6.16.1. Weaving.—At the time of the last inquiry it was reported that there were 106,844 handlooms and 1963 powerlooms engaged in silk weaving. The Central Silk Board has now reported that there are 123,313 handlooms and 2,852 powerlooms dispersed as under :—

Dispersal of the silk weaving industry

State	Handlooms	Powerlooms
1. Uttar Pradesh	40,000	18
2. Assam	35,000	..
3. Madras	20,300	34
4. Andhra Pradesh	9,700	—
5. Mysore	7,500	2,612
6. West Bengal.	4,500	10
7. Madhya Pradesh	1,500	..
8. Bihar	1,300	30
9. Jammu & Kashmir	1,030	148
10. Gujarat	547	..
11. Maharashtra.	436	..
TOTAL	123,313	2,852

6.16.2. It has been estimated that more than 2 lakh persons are engaged in the weaving industry alone. The 2nd Working Group has stated that the co-operative field covers only 20% of the weaving sector and that the majority of the weavers continue to be poor wage earners only. The working of powerlooms calls for heavy capital and silk fabrics being a luxury product, the off-take is slow. Consequently no factory is able to work to its full capacity. As art silk yarns are interchangeable in a silk powerloom, unauthorised working with other yarns is resorted to by small scale establishments. We are inclined to agree with the Working Group that the enforcement of registration of powerlooms under the Textile Control Order should be made stricter and that additional powerlooms need be installed only if the fabrics produced on them are exclusively intended for export. The production of silk fabrics during the last three years was as follows :—

Production of silk fabrics

(Million sq. metre)

Year	1963	1964	1965
	26·11	27·88	29·71

6.16.3. **Khadi Silk.**—Khadi Silk Industry comes within the purview of the Khadi and Village Industries Commission. Institutions certified by the Khadi and Village Industries Commission produce raw silk from pierced and otherwise unreelable cocoons on charkhas and in cottage basins. They make hand spun yarn with taklis and charkhas from silk waste. Certain varieties of cloth are woven on handlooms from this handspun/hand reeled raw silk yarn. This silk is known as Khadi silk.

6.15.5. The Khadi and Village Industries Commission has given the following information relating to certified institutions assisted by it.

Information in respect of Khadi Silk

Particulars	1963-64	1964-65	1965-66 (Target)
1. Number of reeling charkhas engaged in production of Khadi raw silk/yarn.	345	353	360
2. Number of handlooms engaged in weaving Khadi silk.	5,516	5,586	5,600
3. Production of Khadi silk fabrics in mill. sq. metres.	1·859	1·890	2·000

6.16.4. Based on the figures for 1965 the total value of silk fabrics produced in India comes to about Rs. 30 crores. Out of this, silk fabrics of about total value of Rs. 2.45 crores are exported while the rest are utilised within the country.

Plan Schemes

6.17.1. During the First Plan, grants-in-aid amounting to Rs. 56.89 lakhs were provided to State Governments from out of provisions made for other village industries. But the utilisation amounted only to Rs. 15.24 lakhs. The causes for low utilisation were procedural delays by the States granting sanction for implementation of the schemes and paucity of technical personnel.

6.17.2. During the Second Five Year Plan, the Planning Commission made an allocation of Rs. 408 lakhs which was reduced to Rs. 379.25 lakhs as a result of making annual allocations and this amount was to be spent on the implementation of 339 schemes by the States. The actual central assistance was of the order of Rs. 253 lakhs out of which Rs. 152 lakhs were actually utilised by the State Governments.

6.17.3. During the Third Five Year Plan a provision of Rs. 703 lakhs was made for the development, of the industry comprising of Rs. 553 lakhs for the States' schemes and Rs. 150 lakh for central schemes including the administration of the Central Silk Board, Central Sericultural Research Station, Berhampore and its sub-station at Kalimpong. Particulars of the allocation and expenditure during the first 4½ years of the plan i.e. upto September 1965, percentage of the State's share in the total allocation as compared to the State's production of raw silk in the year 1965 is set out in the statement as below. This statement also shows the proposed allocations for the Fourth Plan, which are still in the process of finalisation.

States	% of raw silk produced in 1965 to total Mulberry and non-Mulberry	Allocation during Third Five Year Plan (in lakh Rs.)	% to total	Expenditure in 4½ years	% to allocation	Allocation proposed during Fourth Plan (in Lakh Rs.)	% to Total
1	2	3	4	5	6	7	8
1. Mysore	57.9	125.00	22.6	79.17	63.33	500.00	40.0
2. West Bengal	15.5	79.00	14.2	18.23	23.10	150.00	1.0
3. Assam	12.1	75.00	13.5	36.58	48.77	100.00	8.0
4. Madhya Pradesh	5.6	23.80	4.3	24.40	102.50	50.00	4.0
5. Bihar	5.2	60.00	10.8	15.39	25.66	80.00	6.4
6. Jammu & Kashmir	2.5	75.00	13.5	35.35	47.13	140.00	11.2
7. Orissa	0.7	12.00	2.2	9.21	76.75	25.00	2.0
8. Uttar Pradesh	0.2	35.00	6.3	25.81	73.74	60.00	4.8
9. Punjab	0.09	22.00	4.0	13.97	63.50	35.00	2.8
10. Madras	0.1	12.17	2.2	12.94	106.33	50.00	4.0
11. Andhra Pradesh	0.04	15.00	2.7	7.37	49.13	20.00	1.6

1	2	3	4	5	6	7	8
12. Manipur
13. Tripura
14. Himachal Pradesh
15. Kerala
16. Maharashtra
17. Rajasthan
18. NEFA
19. Nagaland
	100	553.81	100	286.07	..	1,250.00	100.00

6.17.4. It would be observed that when only six months out of the five years of the Plan were left the utilisation was only about 52 per cent while it should have been 90 per cent. Another important feature which emerges from these allocations is that the share of the three States which produce 98 per cent of the total mulberry silk produced in the country comes to only 63.2 per cent. It appears that States which have a high potential for development are receiving less than what their performance would justify. While it is desirable to explore the possibility of developing the sericulture industry in other States too, it would perhaps be more desirable to ensure that States where rapid progress in production and quality can be made should receive prior assistance.

7.1. In 1963 the Commission estimated the domestic demand at 2 million kg. annually for mulberry as well as non-mulberry raw silk. The Commission also estimated that as against the availability of 300,000 kg. of filature silk both from domestic production as well as from imports in 1962 the demand for filature raw silk may be placed at 360,000 kg. per year, taking note of the indigenous production and limited scope for enlarging imports. As against these estimates the actual production and availability during the last three years has been as follows :—

Indigenous Production

						(Tonnes)
Year		mulberry	Non-mulberry	Total	Imports	Availability
1963	. .	1,423	476	1,899	100	1,999
1964	. .	1,466	477	1,943	103	2,046
1965	. .	1,634	518	2,152	49	2,021

Availability of Filature Raw Silk

Year			Indigenous production	Imports	Total
1963	. . . . .		177	100	277
1964	. . . . .		180	103	283
1965	. . . . .		161	49	210

7.2. It would be observed that the indigenous production of mulberry as well as non-mulberry raw silk has steadily increased to 2152 tonnes in the year 1965. The matter was discussed

at the public inquiry and in view of this recent trend in production it was considered fair to estimate the demand for both varieties of silk for the year 1967 at 2·20 million kg. rising annually by 0·15 million kgs. upto the year 1969. It is not possible to estimate with any degree of certainty the demand for filature raw silk since there is a tendency now to use cottage basin silk in place of filature raw silk. We have therefore not attempted a separate estimate for filature silk particularly in view of the fact that production has gone down considerably and there are very little prospects of augmentation through imports. The quality of cottage basin silk has almost been as good, if not better, as that of filature. It is expected that a considerable part of the demand for the filature quality silk will be satisfied by cottage basins and sometimes even by charkhas.

7.3. *Spun silk yarn*.—The Commission had estimated during 1963 the demand for spun silk yarn at 0·100 million kg. As against this the production of spun silk yarn by the two spun silk mills was 48,600 kg. in 1963 ; 46,922 kg. in 1964 ; and 54,247 kg. in 1965 as reported by the two spun silk mills. There was a fall in 1964 but there has been improvement in 1965, but the Central Silk Board has cautioned against the expectation of further rise in view of the fact that the demand for spun silk yarn has slackened and the offtake of yarn produced by the mills has not been keeping pace with production. In any case it is very unlikely that the demand will go below 54 tonnes which was the actual production last year.

7.4. *Silk fabrics*.—The Commission had estimated in 1963 that the probable annual demand for silk fabrics in the country could be placed at 20 million sq. metres after allowing for exports to the extent of 2 million sq. metres. The production and export of silk fabrics both mulberry and non-mulberry during the last three years has been as under :—

Production and exports of silk fabrics

(In million sq. metres)

	1963	1964	1965
Production	26·11	27·88	29·71
Exports	2·09	2·05	2·50
Availability	24·02	25·83	27·21

There has been a steady rise in the production and domestic demand may safely be placed at 28 million sq. metres for the

year 1967 rising at the rate of 1.5 million sq. metres annually upto 1969.

8.1. *Standards*.—The Indian Standards Institution has published 11 standards on grading and testing of raw silk. These standards have now been revised and three classes have now been formulated. By introducing these three classes it has become possible to bring all varieties of raw silk produced in the country whether on filature, domestic basin or charkha under one set of standards. The I. S. I. has also published a number of standards on silk fabrics and some are still in the stages of preparation. Standard for tasar is under preparation and standards for Muga and Eri silk fabrics are under consideration.

8.2. *Quality*.—Though the quality of cocoons produced in Kashmir is capable, if properly processed, of yielding raw silk of international standard 'A', it has been accepted all round that Indian raw silk is very much inferior and is not even covered by the bottom categories of international standards. The Central Silk Board has expressed the view that the indigenous raw silk does not stand in comparison with regard to either the price or quality of Japanese raw silk. Consumers have generally expressed dissatisfaction with the quality. The main complaints are those of lack of uniformity and evenness, variation in thickness in terms of denier and lack of tensile strength. It has been represented by a number of consumers that the denier is generally found to be higher than exhibited on the book. Zari manufacturers have said that their industry needs silk of fine quality with high uniformity of denier since the silk thread is covered with silver or gilted silver, and lack of uniformity results in imperfect finish. They have complained of unevenness, sub-standard quality, greater degumming loss and lack of lustre. There appears thus to be much scope for improvement in quality.

8.3.1. *Testing of raw silk*.—Conditioning and testing houses have been set up in Bangalore and Calcutta. The tests which can be conducted by them are in respect of the following items:—

1. Determination of conditioned weight.
2. Winding test.
3. Determination of size (denier) and its maximum deviation.
4. Determination of conditioned size.
5. Test for tenacity and elongation.
6. Test for cohesion.

The total number of tests conducted by the testing and conditioning house at Calcutta in the last three years were as follows :—

1963	.	.	.	194
1964	.	.	.	136
1965	.	.	.	65

The number of tests conducted at the conditioning and testing house at Bangalore has not been given but the number of samples received for testing during the previous three years is as follows :—

1963-64	.	.	.	455
1964-65	.	.	.	585
1965-66	.	.	.	881

8.3.2. In Mysore the production of filature silk alone is equivalent to about 100,000 kg. and if samples were to be taken at the standard rate at least 5,000 samples would have to be tested. No wonder therefore that there was severe criticism of lack of testing certificates on the silk sold even by the filatures. The testing houses both at Calcutta and Bangalore appear to be considerably under-utilized and to have tested only a small fraction, of the output in their respective States. This lack of adequate testing is also responsible for the absence of quality-consciousness amongst producers notwithstanding persistent clamour of the consumers. Since these testing houses are not in the nature of research institutions but meant to grade and give certificates for the raw silk produced in the respective States, it would be desirable that certain units or areas of production are entrusted to them and that they should test according to Indian Standards the entire production in those areas.

- 9.1. A comparison of productivity in India *vis-a-vis* that of Japan as given by the Working Group in its Report (1965) is given below :—

	India	Japan
Average production of green cocoons as per 10 of silk worm eggs (in kg.).	12.28	28.4
Requirement for production of 1 bale (60 kg.) of silk		
(i) Mulberry area (hectares)	1.2	0.57
(ii) Silk worm seed (ounces)	42.6	4.5

These figures show that the present research endeavour of the industry is grossly inadequate. The need for greater and more concentrated research is therefore obvious.

9.2. There are at present four centrally sponsored research institutes functioning in the country viz., (i) Central Sericultural Research and Training Institute, Mysore; (ii) Central Sericultural Research Station, Berhampore; (iii) Central Silkworm Seed Station, Srinagar; and (iv) Central Tasar Research Institute, Ranchi. During the Third Plan period the estimated expenditure approved by the Central Silk Board for these projects was Rs. 40.14 lakhs of which an expenditure of Rs. 38.54 lakhs was anticipated to be incurred upto the end of the Third Five Year Plan. The activities of these research institutes are briefly mentioned as follows :—

9.3. *Central Sericultural Research & Training Institute Mysore.*—This institute was originally located in Channapatna and was shifted to Mysore in 1963. It has sericulture, botany, reeling, physiology, chemistry and agronomy sections. A land measuring 53.5 acres has been purchased for the establishment of mulberry plantation. This institute is engaged on evolution of strains of silkworms and mulberry and has already evolved a few races such as Mysore Princess, Kolar Gold and Kollegal Jawan which are in experimental stages. Similar experiments are being made in the field of mulberry production. There is also a univoltine Research Cell at Dehra Dun, which is functioning under the Central Sericultural Research & Training Institute Mysore and aims at evolving new races for univoltine areas.

9.4. *Central Sericultural Research Station, Berhampore.*—This station was established in 1943. But systematic research was instituted only in 1961 on the lines recommended by the Research Co-ordination Committee. There are eight sections in this institute, viz., silkworm breeding and genetics, physiology, entomology, pathology, statistics, chemistry, agronomy and mulberry breeding and genetics. A sub-station under this station is functioning in Kalimpong.

9.5. *Central Silkworm Seed Station, Srinagar.*—This station was established in Srinagar in 1958 and forms a part of the mulberry farm at Pampore. The aim of this station is to work as a central station to evolve and supply all the States including subsidiary hill stations high quality pure strains of uni and bivoltine races which they could deploy for the production of experimental and industrial seed. Special emphasis is being given at this station to meeting the need of univoltine States, especially of Jammu and Kashmir. This research station has been very active during the past two years and has successfully evolved a few strains.

9.6. *Central Tasar Research Station, Ranchi.*—The Central Silk Board took over the Tasar Research Station, Chaibasa in March 1964 from the Government of Bihar. Subsequently in November, the station was shifted to Ranchi and steps were taken to initiate the programme of research work on the lines recommended by the Research Co-ordination Committee. It has been conducting research in rearing work.

9.7.2. There are at present sericulture training schools in the States of Mysore, West Bengal, Jammu & Kashmir, Assam and Bihar which conduct regular courses of training for a period of one year mainly to secure adequate trained technical personnel in the lower subordinate level. The All India Sericultural Training Institute, Mysore, which is under the control of the Board, imparts training both in the lower and higher courses to trainees deputed by State Governments and the persons who pass out are absorbed by the Government. Training is being imparted to persons who generally seek employment in sericultural establishments run by Government. There does not appear to be any programme for sericulturists in order to enable them to utilise the results of research as well as emulate the practices adopted in similar areas elsewhere in the country or abroad. The Central Silk Board may give attention particularly in States like Jammu and Kashmir and West Bengal to train sericulturists even on a small scale, to start with, in order to secure a higher yield at a lower cost.

10.1. The selling prices of cocoons in different States as reported in the replies to the questionnaire are given as follows :—

(Rupees per kg.)			
State	1963	1964	1965
Mysore	3.38 to 5.83	3.13 to 5.43	3.70 to 7.50
West Bengal	3.90 to 7.00	4.00 to 7.30	4.45 to 8.27
Jammu & Kashmir	5.62	5.88	5.99

In the case of Jammu & Kashmir the figures are notional. For, the expenses incurred on seed, feed for worms, as well as the expenditure on the staff for the maintenance of mulberry plantation and handling other matters concerning sericulture such as distribution of seeds have to be added. The amount for these items comes to Rs. 3.72 per kg. for 1965 and the same amount has been added to the figures of the purchase price of cocoons for each of the years 1963 and 1964.

10.2. The Central Silk Board has furnished the price variations of cocoons in the three important areas in the main sericultural State of Mysore which are as follows :—

Year	(per kg.)		
	Sidlaghatta area	Channapatna area	Mugur area
	Rs.	Rs.	Rs.
1963	4.00 to 7.46	3.61 to 6.96	3.50 to 5.90
1964	4.23 to 7.14	3.35 to 6.58	3.67 to 5.45
1965	4.49 to 7.70	3.53 to 5.56	3.62 to 5.54

The Central Silk Board has stated that even in 1963, the selling prices of cocoons were very much higher than the fair price fixed by the Commission. The fair price assessed by the Commission in the rainfed areas in 1963 was Rs. 3.75 per kg. The Central Silk Board avers that it would be appropriate to state that the prices for the Mugur quality remained at Rs. 4.50 per kg. and continue to be so at present also, although the quality is not quite satisfactory. The price of Rs. 4.50 per kg. shows an increase of 20% over the Commission's estimate made in 1963.

10.3. *Raw Silk*.—The selling prices of mulberry raw silk made by charkhas and cottage basins were as follows during the three years 1963, 1964 and 1965.

State		Rs./Kg.	
		Charka	Cottage Basin
Mysore	1963	80.00	96.00
	1964	78.00	95.00
	1965	85.00	98.00
West Bengal	1963	72.00-95.00	95.00-125.00
	1964	74.00-95.00	99.00-128.00
	1965	75.00-98.00	100.00-140.00
Bihar	1963	67.00	..
	1964	68.00	..
	1965	70.00	..
Madras	1963	..	81.57-103.62
	1964	77.00	78.76-112.50
	1965	70.40	90.50-112.50
Assam	1963	65.00	65.00
	1964	70.00	70.00
	1965	75.00	75.00

10.4. The selling prices of filature silk produced in Mysore and Jammu & Kashmir were as follows :—

(In Rs./Kg.)

Name of the filature	1963	1964	1965
Government Filatures Mysore (20/22 denier)	87·10 to 104·72	101·42 to 104·72	97·00 to 101·42
Kisan Silk Industries, Mellur (20/22 denier) .	95·33	109·62	106·68
Government Filature, Kashmir (Variety not specified).	39·14 to 120·09	40·25 to 122·17	45·80 to 145·00
Government Filature, Jammu (variety not specified).	31·24 to 92·51	30·80 to 106·04	40·00 to 116·69

10.5. The co-operattive filature of the U. P. Resham Audyogic Sahkari Sangh Ltd., Dehradun has given selling prices of raw silk as under :—

(Per kg.)

1964	(i) Bivoltine raw silk	Rs. 90·00 to 95·00
	(ii) Bivoltine Dupion silk	Rs. 50·00
	(iii) Multivoltine raw silk	Rs. 70·00 to 75·00
1965	(i) Bivoltine raw silk	Rs. 90·00 to 100·00
	(ii) Bivoltine Dupion silk	Rs. 60·00 to 65·00
	(iii) Multivoltine raw silk	Rs. 95·00.

10.6. In order to compete with cottage basins as well as charkha raw silk the filatures have had to keep their prices lower than even their cost of production and this has been particularly so with the filatures in Mysore. That is all the more reason for going into the question of filatures continuing to be uneconomic notwithstanding the improvement in the method of reeling.

10.7. *Non-mulberry silk*.—The selling prices of non-mulberry silk in the States of Assam and Bihar were as follows :—

(Rs. per kg.)

State	Type	1963	1964	1965
Assam	Bri (Handspun) Muga	22—30 80—100	24—40 120—140	24—40 100—150
Bihar	Bri (Handspun) Tasar	17—21 90—105	16—21 90—105	16—28 145—150

10.8. *Spun Silk Yarn*.—Government Spun Silk Mills, Channapatna has given the prices fixed for spun silk, slub silk and noil yarn as follows :—

	Rate per Kg. Rs.
I. <i>Spun Silk Yarn</i>	
2/300s	88·00
2/280s	83·78
2/240s	79·37
2/110s extra special	86·00
2/210s special	78·93
2/210s	74·62
2/140s special	74·80
2/140s	67·71
2/100s	61·29
2/60s	42·00
60s singles	42·00
3/35s	41·00
II. <i>Slub Silk Yarn</i>	
2/140s	65·50
2/100s	59·00
2/60s	39·00
III. <i>Noil Yarn</i>	
15s	31·50
10s	25·50
7s	20·00
5s	14·00
3½s	12·00
2s	11·00

These prices are net ex-Channapatna, Mysore State and are inclusive of sales tax, packing and forwarding charges.

10.9. Selling prices of different types of fabrics manufactured by Government Silk Weaving Factory, Mysore during the years 1963 to 1965 were as follows :—

(per metre)					
Sl. No.	Name of the fabric	Article No.	1963	1964	1965
1	Crepe-de-chine . .	506 (45" width)	14·70	16·20	17·00
2	Crepe Saree . .	550/1	17·30	16·60	19·50
3	Crepe Saree . .	550/6	22·60	24·30	25·50
4	Crepe Saree . .	560/9	21·10	22·80	23·80
5	Crepe Saree . .	550/11/ G-610	34·50	37·30	37·30
6	Georgette . .	1000	12·80	13·60	14·00
7	Georgette Sarees . .	2600/4	..	20·00	21·10
8	Tafetta fabrics . .	36	13·40	13·40	13·50

11.1. Imports and distribution of raw silk were canalised through the agency of the Central Silk Board since the licensing period for the first half year of 1955. During the second half of the year 1956 this agency was the State Trading Corporation of India. The canalisation policy continued till July 1st 1964 when the Government of India decided to issue licences directly to the exporters for import of raw silk under the export assistance scheme. The object of the canalisation policy was to arrest the wide fluctuations in the prices of raw silk in the internal market and also to enable the silk weaving industry, particularly the handloom sector and the metallic thread manufacturers to secure their needs for high quality silk at reasonable prices.

Imports of all types of silk yarn and silk sewing thread have been banned for all licensing periods since October-March 1958. Imports of spun silk yarn have also not been allowed in view of the fact that the two spun silk mills in India are able to meet the internal demand. Exporters of mulberry silk fabrics, ready-made garments and other made up garments of mulberry silk have been permitted to import noil yarn or nep yarn against their export entitlements upto an extent not exceeding 75 per cent of the f.o.b. value of certified exports. This arrangement came

to an end in June 1966 as a result of devaluation and the termination of import entitlements. Imports of all types of silk fabrics are banned since the licensing period October-March 1958.

11.2. Imports of raw silk since 1961 till the canalisation policy was stopped in 1964 and the anticipated arrivals since then were as follows according to the Central Silk Board :—

(In '000 kgs.)

Year	Imports
1961 . . .	106
1962 . . .	112
1963 . . .	100
1964 . . .	103
1965 . . .	49

11.3. In addition to raw silk a quantity averaging 570 kgs. of silk worm seed was imported during recent years in order to augment the rearer's production of seed in Jammu and Kashmir. Particulars of silk worm seed imported and its c.i.f. value are as follows :—

Year	Qty in kgs.	c.i.f. value in Rs.
1963	510	6,71,592
1964	525	7,03,375
1965	638	8,41,500

12.1. In January 1958 exporters were allowed to import raw silk against exports. In 1961 the scheme was extended to cover ready-made garments made out of pure mulberry silk fabrics and provision was made for the grant of licences for imports of dyes and chemicals to the extent of 3% of the f.o.b. value of certified exports. In July of the same year the scope of the scheme was enlarged to cover silk mixed fabrics containing not less than 40% of pure mulberry silk. The quantum of assistance for these fabrics was fixed at 25% of the f.o.b. value of certified exports subject to a ceiling of Rs. 3, Rs. 5 and Rs. 7.50 per sq. yard for light, medium and heavy mixed fabrics respectively. In January 1963 the scheme was further liberalised. The scheme covered all fabrics made out of

12. Export Assistance and Exports

natural silk and ready-made silk garments, and any article containing 70% or more of natural silk of any type was covered under the scheme. The overall import entitlement was increased to 75%. In respect of tasar silk fabrics, the import entitlements were raised from 3 to 10%. With a further amendment in March 1963 the ceiling prices for purposes of computation of the entitlements were increased from Rs. 10 per sq. yard to Rs. 15 per sq. metre. Silk waste was included as an additional item allowed for import to an extent not exceeding 37½% of the f.o.b. value of certified exports. The scheme was subsequently extended to cover exports of pure silk embroidery and darning threads and all other made-up articles of natural silk and exports of mill-made mulberry spun silk yarn. In July 1964 Government permitted exporters of mulberry and tasar silk fabrics, ready-made garments and made-up articles to import raw silk themselves directly against entitlements earned by them on exports effected on or after July 1st 1964. In January 1966 the scheme was further liberalised with a view to stimulate exports of tasar fabrics and ready-made garments. In the wake of devaluation all import entitlement schemes have now been withdrawn.

Exports

12.2. Until five years ago the traditional market for India's silk was Ceylon, Singapore, Malaya and East African countries. However there was a shift in 1961 and our fabrics were being increasingly absorbed in the non-traditional markets of U.S.A., U.K. and West Germany and other European countries. The table below shows the shift in the direction of export trade since 1959 :—

(Value in '000 Rs.)

Year	Traditional market	Per cent- age to total	Non-tra- ditional market	Percentage to total	Total
1959 . . .	5,320	72	2,064	28	7,384
1960 . . .	5,010	62	3,126	38	8,136
1961 . . .	2,969	44	3,737	56	6,706
1962 . . .	3,569	41	5,038	59	8,607
1963 . . .	5,297	35	9,885	65	15,182
1964 . . .	3,516	25	10,335	75	13,851
1965 . . .	5,977	35	11,333	65	17,310

12.3. Variety-wise exports of traditional silk fabrics during the years 1963 to 1965 are given below :—

(Figures in '000s)

Item	1963			1964			1965		
	Qty. Sq.m.	Value Rs.	Per- cent- age	Qty. Sq.m.	Value Rs.	Per- cent- age	Qty. Sq.m.	Value Rs.	Per- cent- age
Sarees . . .	410	4,254	28	182	1,814	13	501	4,512	26
Furnishing and dress materials	556	6,163	40	592	7,035	50	674	7,690	44
Scarves/Stoles .	610	4,509	30	597	4,319	31	637	4,446	26
Ties . . .	7	145	1	25	382	3	10	712	1
Others . . .	6	111	1	14	301	3	26	790	3
TOTAL .	1,589	15,182		1,419	13,851		1,848	17,310	

12.4. A statement showing the country-wise exports of tasar silk goods during the years 1961 to 1965 is given in Appendix VII.

Exports of tasar silk fabrics which were hardly worth Rs. 310,000 in 1958 rose to Rs. 72 lakhs in 1965 of which nearly 70% was exported to the U.S.A. Of late, however, a certain amount of slackening of interest in tasar silk goods has been noticed as a result of which there is alarm in the circles concerned with the production of tasar silk. This has however demonstrated that caution should be exercised in developing an industry solely depending upon changing fashions in the foreign market which may prove to be temporary.

12.5. The balance of foreign trade is silk and silk products is favourable to India according to the Central Silk Board. The figures for the last three years show that the export earnings are much more than import expenditure even granting that about 5 per cent of the f.o.b. value of exports are used for import of dyes, chemicals etc. The figures given by the Central Silk Board are as follows :—

(Figures in '000 Rs.)

	1963	1964	1965
1	2	3	4
Imports—			
1. Raw Silk	7,765	6,276	3,067
2. Silkworm seed	670	700	917
TOTAL .	8,435	6,976	3,984

1	2	3	4
Exports—			
1. Mulberry silk fabrics	15,182	13,851	17,319
2. Tasar silk fabrics	6,429	8,445	7,187
3. Silk Waste	4,299	2,578	3,741
TOTAL	25,910	24,874	28,238
Excess of exports over imports	17,475	17,898	24,254

With devaluation of the rupee export assistance schemes have been withdrawn and to earn the devalued level of foreign exchange the physical quantity of exports will have to be considerably increased. The export effort will, therefore, have to be intensified.

13.1. The protected items of silk and silk products are covered by Item Nos. 46, 46(1), 47(a), 47(b), 47(c), 47(1), 48(a), 48(b) and 48(c) of the I. C. T. Schedule. The rates of duties as were in operation till 6th June 1966 are given in Appendix VIII.

13.2. As a consequence of devaluation, the import duties have been revised vide notification No. 43(2)-Tar/66 dated 6th June 1966. The modified rates of duty are as under :—

S. No.	Item No. under the First Schedule to the Indian Tariff Act, 1934	Modified duty
1	2	3
1.	46	50 per cent <i>ad valorem</i> plus Rs. 8·80 per kg.
2.	46(1)	50 per cent <i>ad valorem</i> .
3.	47(a)	50 per cent <i>ad valorem</i> plus Rs. 8·80 per kg.
4.	47(b)	50 per cent <i>ad valorem</i> plus Rs. 11·60 per kg.

1	2	3
5.	47(c)	50 per cent <i>ad valorem</i> .
6.	47(1)	50 per cent <i>ad valorem</i> .
7.	48(a)	100 per cent <i>ad valorem</i> plus Rs. 18·70 per kg.
8.	48(b)	100 per cent <i>ad valorem</i> plus Rs. 18·70 per kg.
9.	48(c)	100 per cent <i>ad valorem</i> , plus Rs. 13·80 per kg.

The Regulatory duty of 10% *ad valorem* levied has been withdrawn from the date of devaluation.

13.3. The import duties that were prevalent since 1963 on raw silk were as under :—

Period	Rates of duty
January & February, 1963	35 per cent <i>ad valorem</i> plus Rs. 8·30 per kg.
From 1-3-1963 . . .	Plus 10 per cent surcharge over (1) above.
From 17-2-1965 . . .	38·5 per cent <i>ad valorem</i> plus 10% regulatory duty plus Rs. 9·68 per kg.
From 10-8-1965 . . .	60 per cent <i>ad valorem</i> plus 10 per cent regulatory duty plus specific duty of Rs. 8·80 per kg.
From 6-6-1966 . . . (Devaluation of the Rupee)	50 per cent <i>ad valorem</i> plus Rs. 8·80 per kg. specific duty.

14.1. In 1963 for the purpose of determining the disadvantage suffered by the indigenous silk industry and for recommending the rates of duty on different silk products, the Commission adopted a c.i.f. price of Rs. 70·86 for Japanese raw silk of 20/22 denier of 2A grade. Protection granted to other silk products was of a compensatory nature. Silk fabrics covered under I.C.T. items 48(a), 48(b) and 48(c) are accorded protection by levying duty measured in terms of raw silk content or spun silk yarn content. The Commission could not obtain the c.i.f. prices of spun silk yarn in 1963.

14.2. It is not possible to obtain the corresponding c.i.f. prices easily since imports have been negligible. We had therefore to rely upon forecast of future prices based on the investigations and analysis made by the Central Silk Board.

It was stated before us by the Deputy Chairman of the Central Silk Board that Japan which is the largest producer of raw silk in the world has to sell its raw silk at the floor price of 4700 yens per kg. which works out to Rs. 100.18 and it is very unlikely that this price would go up in view of the keen competition with China.

15.1. *Scope of costing.*—In the past we have been trying to ascertain the costs in respect of mulberry cultivation and cocoon production, silk reeling (charkha, domestic basins and filatures), spun silk and silk throwing and weaving. For want of properly recorded data, the costs in respect of mulberry leaves, mostly grown by small cultivators, cocoon production, a part-time vocation of the cultivators, and raw silk production on charkha and domestic basin, cottage industry, had to be estimated by our Cost Accounts Officers on the basis of oral information. Again for want of data in sufficient detail the costs of silk throwing and weaving had to be built upon certain broad assumptions. Imports of spun silk have not been allowed for a long time. Imports of all types of silk yarn, other than raw silk, and all types of silk fabrics have been banned since the licensing period October-March 1958. Therefore, the effective competition from imported product, if at all, that has to be faced by the indigenous manufacturer, is only in respect of raw silk. For these reasons, we decided to cost this time only raw filature silk manufactured in the country.

15.2.1. *Units selected for costing.*—We selected the following three units, viz.

- (i) Uttar Pradesh Resham Audyogic Sahakari Sangh Limited, Premnagar, *Dehra Dun*,
- (ii) The Kisan Silk Industries Private Ltd., *Mellur*,
- (iii) Government Silk Filatures, *Kollegal*,

and deputed our Cost Accounts Officer to ascertain the actual costs of production of raw silk manufactured by them. The costs were examined for raw silk of 20/22 denier.

15.2.2. Uttar Pradesh Resham Audyogic Sahakari Sangh Ltd. is a co-operative venture established in Uttar Pradesh. Its production of silk, which was started on a commercial scale only in 1964, is mainly from cocoons of bivoltine type. Both Kisan Silk Industries Private Ltd., and Government Silk Filatures, Kollegal, are in Mysore State and reel raw silk from cocoons of multivoltine type. The former is a private enterprise, perhaps the only one in existence in Mysore State, while the latter is owned and run by the Government of Mysore. Uttar Pradesh Resham Audyogic Sahakari Sangh has an installed capacity of 30 basins, Kisan Silk

Industries 53 basins and Kollegal Filatures 386 basins. Actual costs were examined for the period of six months ended 31st December 1965 in respect of Uttar Pradesh Resham Audyogic Sahakari Sangh, for the period of ten months ended 31st January 1966 in respect of Kisan Silk Filatures and for the period of nine months ended 31st December 1965 in respect of Government Silk Filatures. The details of the actual costs are incorporated in the Report of the Cost Accounts Officer, which is being sent as a separate confidential enclosure to this Report.

15.3. *Estimates of costs and fair ex-works prices.*—The actual costs worked out in respect of the two Mysore units, viz., Kisan Silk Industries and Mysore Government Filatures, as also the basis of estimating the future costs, were discussed with their representatives. Uttar Pradesh Resham Audyogic Sahakari Sangh, however, expressed its inability to send any representative to our inquiry nor was any representative from Uttar Pradesh Government present. We had, therefore to estimate our future costs and fair ex-works prices on the basis of only two units from the State of Mysore. The costs and the fair ex-works prices estimated by us are given below :—

	Denier of raw silk : 20/22	
	Rs. per	kg.
	Kisan Silk Industries	Government Silk Filatures
1. Cost of cocoons	90.21	91.30
Less credit for silk-waste, etc.	4.00	7.66
Net material costs	86.21	83.64
2. Conversion costs	21.04	33.99
3. Packing Costs	0.10	0.06
4. Costs of production	107.35	117.69
5. Return	5.41	5.82
6. Fair ex-works price	112.76	123.51
Production estimated (Kgs.)	6,080	34,450
Weighted average for the industry (Rs./Kg.)	121.90	

15.4.1. *Raw materials*.—Raw silk is reeled from cocoons. The determination of average prices at which they are likely to be available to the industry in the near future is a difficult problem. There are quite a number of factors which affect the trend of their prices. The factors that govern them are the seasonal conditions, the usual relationship between demand and supply, the fluctuations in the prices of the end product, viz., silk, the prices realisable for other alternate crops, etc. We were informed that in the latter half of 1965 and the first half of 1966 the movement in the prices of cocoons has been erratic because of the near drought conditions prevailing in Mysore. There was considerable decline in the production of cocoons and the prices ruled high. The same condition may not repeat itself in the near future. But it is almost certain that the level of prices of food articles, has a bearing on the cocoon prices. Consequently the average prices payable for cocoons are not likely to be less than what were paid during the costed period of 1965; on the other hand these are likely to go up. We have, therefore, adopted the same average rates as were obtained during the 1965 period for the purpose of estimating the future costs in respect of the two units, viz., Rs. 6.43 for Kisan Silk Industries and Rs. 5.17 for Government Silk Filatures per kilogram of cocoons, inclusive of transport charges and loss on double and flimsy cocoons. The prices payable for cocoons are always in relation to a certain renditta number of units of cocoons required to produce one unit of raw silk. We have adopted the same renditta as was obtained during the actual period, i.e., of 14.03 and 17.66 for Kisan Silk Industries and Government Filatures respectively. The average realisation in respect of sale of silk waste, floss, dead pupae, etc., has been taken for both units at the 1965 level, the percentage of waste on the good silk produced also having been estimated at the same level as that of the actual period.

15.4.2. *Conversion charges*.—For both the units the average number of working days has been taken at 300 annually and the average number of basins to be worked at 85 per cent of the installed capacity. Production per basin day has been estimated at 450 grams in the case of Kisan Silk and at 350 grams for Government Silk Filatures. The average number of workmen per basin has been taken at 2.5 in each of the units, the average wages for Kisan having been estimated at Rs. 2.23 and those for Government Filatures at Rs. 3.53. In regard to other items of expenditure, suitable adjustments have been made taking into consideration the reeling efficiency anticipated and also the probable variations in the price factors. Depreciation has been calculated at normal income-tax rates. Packing cost has been assumed to be at the same level as obtained during the actual period.

15.5. *Return*.—Return has been allowed at 15 per cent on the employed capital, taking working capital at three months

cost of production excluding depreciation, allowing for the present higher rates of bank charges and the minimum bonus to industrial workers.

- 16.1. The c.i.f. price of Rs. 100·18 adopted by us for purpose of determining the quantum of protection relates to Japanese silk of 2A Grade 20/22 deniers. The silk produced indigenously was stated to be much inferior in quality and, therefore, to compare the Japanese raw silk c.i.f. price with that of indigenous silk, suitable adjustment will have to be made. We had taken a differential of 92 paise per kg. at the time of the last inquiry. It was agreed that the same differential may be taken now, which after the devaluation of the rupee would work out to Rs. 1·27 and the consequent comparable c.i.f. price at Rs. 98·91. Taking this c.i.f. price as the basis, the disadvantage for indigenous raw silk would work out to 23 per cent as shown below :—

	Rs./Kg.
1. C.i.f. price of Japanese 20/22 denier raw silk comparable to indigenous quality.	98·91
2. Clearing charges	0·50
3. Landed cost without duty	99·41
4. Fair ex-works price of indigenous raw silk	121·90
5. Difference between landed cost without duty and fair ex-works price.	22·49
6. Difference as a percentage of c.i.f.	22·74 or say 23%

- 17.1. As explained in the previous paragraph, comparison of estimated c.i.f. price and estimated future fair ex-works price indicates that the measure of protection required for raw silk would be 23% *ad valorem*.

17.2. The industry has enjoyed protection for more than 30 years now and we have to decide whether or not protection is any longer necessary. It would have been expected that this period should have been enough for the industry to come of age and to be able to stand competition against foreign producers.

17.3. The actual state of affairs, however, gives an entirely different picture. We have already observed that mulberry plantations have deteriorated, new grafts have hardly been substituted and that major work for the improvement of mulberry leaves as well as creation of new grafts more suitable for conditions prevailing in the different silk producing regions has yet to be done. The need for extension of irrigated area has been receiving the attention of silk producing States for a number of years but much progress has not been made. It has been seen that West Bengal, the second largest producer of mulberry silk uses more than half untested seed.

Only Mysore has regulated markets for cocoons or any control whatsoever on sericultural operations. Filatures are, by and large, uneconomic and Mysore, the major silk producing State, has over a number of years been selling raw silk at much below the cost price. Improvements which could be made in cottage basins and charkhas have yet to come. Little progress has been made in hybridisation of races and Kashmir, the third largest mulberry silk producing State, still uses imported seed for more than half of its requirements. Very little education, if any, in the methods and techniques of sericulture has been imparted to sericulturists. Sericulture in India is still very much behind other countries and particularly Japan. If the industry is deprived of protection at this stage, it would harm the interests of a large number of sericulturists who depend upon it as a source of subsidiary income. The measures now being taken to place the industry on a scientific footing in order to yield performance equivalent to that of the sericulture industry in Japan are in their infancy and many of them are still at the laboratory stage and will take some time to fructify. Almost all the interests relating to sericulture, namely, the Central Silk Board, State Governments of Mysore, West Bengal, Jammu and Kashmir, Madras, Assam, Himachal Pradesh and Bihar, Government Silk Filatures, Mysore, Kisan Silk Industries, Mellur, Co-operative Silk Filature, Uttar Pradesh, interests representing cottage basins in Malda, Mysore Raw Silk Merchants' Association, Bangalore and importers have advocated protection. The disadvantage of the industry is 22.7 per cent. In the past the quantum of protection adopted for raw silk was assumed also to apply to the other products, such as, waste and noils, spun yarn and sewing thread. The rate of protective duty on raw silk has recently been reduced to 50 per cent *ad valorem* plus Rs. 8.80 per kg. We recommend therefore that the present rates of protective duty on raw silk and other products referred to in paragraph 13.2 be maintained for a period of three years ending 31st December 1969 in view of the uncertainty of cocoon prices and the likely fluctuations in the international prices.

Our conclusions and recommendations are summarised below :—

18. Summary of conclusions and recommendations

1. The State of Mysore should develop mulberry nursery plantations to an extent which may be able to provide new high yielding and low cost varieties to the entire State within a reasonably foreseeable period.

[Paragraph 6.8.7.]

2. If the advantage of low cost of leaves in West Bengal is lost because of their poor quality, the removal of this handicap may enable this State to produce at less cost and with equivalent area more than four times the raw silk produced in Mysore. This matter needs the attention of the Central Silk Board as well as the Government of West Bengal.

[Paragraph 6.8.11.]

3. While the Mysore State has enacted legislation prohibiting breeding from any but tested seed, other States have not so far taken this step. We consider that other States also need to enact such legislation in order to improve yield and also to protect the industry from effects of epidemics affecting silkworms.

[Paragraph 6.10.6.]

4. In order that yield may improve in West Bengal attention needs to be paid to the testing of seed and also to the improvement of rearing conditions by setting up common rearing centres, as well as by training and educating private rearers in more advanced methods of sericulture.

[Paragraph 6.11.3.]

5. Perhaps there would be greater incentive to improved production in Jammu and Kashmir if the sericulturist has a personal interest in the business by way of purchase of seed on payment, growing his own mulberry or purchasing rights to harvest leaf on payment. It is worthwhile making an experiment in a small area in order to ascertain if with the creation of such vested economic interests, the yield or performance improves or deteriorates.

[Paragraph 6.11.4.]

6. Attention needs to be paid to the improvement of the charkha in such a way that it may become more efficient and the defects with which its product now suffers may be minimised; and also so as to incorporate labour saving devices.

[Paragraph 6.12.11.]

7. The object of setting up the spun silk mill in Assam where non-mulberry silk waste is available in substantial quantities would be not only defeated if this mill were to avoid processing non-mulberry silk waste and concentrate only on mulberry

waste but also result in unhealthy competition with Channapatna.

[Paragraph 6.14.5.3.]

8. It would be desirable to exercise caution to ensure that no duplicate or excess capacity is created for throwing and twisting. It would also be advisable to estimate the present shortage in production capacity and then to plan the installation of throwing and twisting equipment as part of filatures to meet the shortage.

[Paragraph 6.15.2.]

9. While it is desirable to explore the possibility of developing the sericulture industry in other States too, it would perhaps be more desirable to ensure that States where rapid progress in production and quality can be made should receive prior Government assistance.

[Paragraph 6.17.4.]

10. The demand for both mulberry and non-mulberry varieties of silk for the year 1967 is estimated at 2.20 million kg. rising annually by 0.15 million kgs. upto the year 1969.

[Paragraph 7.2.]

11. The demand for spun silk yarn is unlikely to go below 54 tonnes which was the actual production in the year 1965.

[Paragraph 7.3.]

12. There is much scope for improvement in the quality of raw silk.

[Paragraph 8.2.]

13. It is desirable that certain units or areas of production should be entrusted to the testing houses and that they should test according to Indian Standards the entire production in these areas.

[Paragraph 8.3.2.]

14. The Central Silk Board may give attention particularly in States like Jammu and Kashmir and West Bengal to train sericulturists even on a small scale, to start with, in order to secure a higher yield at a lower cost.

[Paragraph 9.7.2.]

15. Of late a certain amount of slackening of interest in tasar silk goods has been noticed as a result of which there is alarm in the circles concerned with the production of tasar silk. This demonstrates that caution should be exercised in developing an industry solely depending upon changing fashions in the foreign market which may prove to be temporary.

[Paragraph 12.4.]

16. Protection to the sericulture industry should be continued for a further period of three years ending 31st December 1969 and the present rates of protective duty maintained in view of the uncertainty of cocoon prices and likely fluctuations in the international prices

[Paragraph 17.3.]

19. We wish to acknowledge the help we have received from the various associations and individuals who furnished us with information and gave evidence before us. Our thanks are also due to State Governments for the assistance rendered by them during the inquiry.

M. P. PAI,
CHAIRMAN

B. G. GHATE,
MEMBER

M. ZAHEER,
MEMBER

K. T. MERCHANT,
MEMBER

P. V. GUNISHASTRI,
SECRETARY.

Bombay, 13th September, 1966.



APPENDIX I

[Vide paragraph 3.1]

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

*Indicates those who replied or submitted memoranda.

@ Indicates those who 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 Gurur, 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. K. B. Jayadovappa, Gundlupet, Mysore District, (Mysore State).
- @6. Dr. N. Nagaraja Rao, Shri Venkateswara Grainage, Market Road, Kollegal.
7. Government Silk Farm, Hindupur, (Anantapur Distt.) Andhra Pradesh.
8. Central Graft Nursery, Mirgund, Srinagar, (Jammu & Kashmir).
9. Mulberry Graft Nursery, Quasigund, Srinagar, (Jammu & Kashmir).
10. Government Nursery, Jammu, Tawi, (Jammu & Kashmir).
11. Central Silk Farm, Yeshwantsagar, Indore, (Madhya Pradesh).
12. Government Silk Farm, Hosur, Salem, Distt. (Madras State).
- *13. Central Silk Farm, Chingmeirong, Manipur.
- *14. Central Silk Farm, Kollegal, (Mysore State).
- *15. Government Silk Farm, Channapatna, Mysore.
16. Government Silk Farm, Mugur, Mysore.
17. Government Silk Farm, Mysore.
- *18. Central Silk Farm, Kudige (Coorg Distt.), Mysore.
- *19. Government Silk Farm, Hindalge, Belgaum Distt., Mysore.
20. Central Nursery, Sujampur, (Gurdaspur Dist.), Via Pathankot, (Punjab.)
- *21. Central Silk Farm, Mukerian, (Hoshiarpur Dist.), (Punjab).
- *22. Central Silk Farm, Premnagar, Dehradun (Uttar Pradesh).

23. Government Nursery, Beldanga, Kumarpur (Near Berhampore), (West Bengal).
24. Government Nursery, Berhampore, (West Bengal).
- *25. Government Nursery, Piasbari, Malda, (West Bengal).
- *26. Government Nursery, Matigara, Near Siliguri, (West Bengal).
- *27. Government Nursery, Kurseong, Darjeeling Dist., (West Bengal).
- *28. Multivoltine Seed Farm, Depalpur, (Madhya Pradesh).
- *29. Basic Seed Farm, Bidadi, Mysore.
30. Basic Seed Farm, Kunigal, Mysore.
31. Basic Seed Farm, Doddaballapur, Mysore.
- *32. Government Silk Farm, Shillong, (Assam).
- *33. Basic Seed Farm, Udampur, (Jammu & Kashmir).
34. Foreign Race Seed Station, (Hill Rearing), Kalimpong. (West Bengal).
- *35. Central Grainage, Hindupur, (A.P.).
36. Government Grainages, Srinagar, (Jammu & Kashmir).
37. Government Grainages, Achbal, (Jammu & Kashmir).
- *38. Govt. Cross Breed Grainage, Berikai, Hosur Taluk, Salem Dist., (Madras State).
- *39. Government Grainage, Kanakapura, Mysore.
40. Government Grainage, Chintamani, Mysore.
- *41. Government Grainage, Devanhalli, Mysore.
42. Government Grainage, Magadi, Mysore.
43. Government Grainage, Sugganhali, Mysore.
- *44. Government Grainage, Doddaballapur, Mysore.
- *45. Central Grainage, Kollegal, Mysore.
46. Government Grainage, Haldwani, Uttar Pradesh.
47. Government Grainage, Matigara, West Bengal.
48. Government Grainage, Piasbari, West Bengal.
- *49. Shri M. N. Nanjundaih, Licensed Seed Preparer, President, Mysore State Licensed Seed Preparers Association, Mugur, Mysore State.
50. Shri A. R. Srinivasa Iyengar, Licensed Seed Preparer, General Secretary, Mysore State Licensed Seed Preparers Association, T-Narasipur, Mysore State.
51. Shri T. S. Ranga Rao, Licensed Seed Preparer, Secretary Mysore Division Seed Preparers Association, T-Narasipur, Mysore State.
52. Shri S. N. Thapasappa, Licensed Seed Preparer, Secretary, Kolar Division Licensed Seed Preparers Association, Dosakote, Bangalore District.
- *53. Shri G. S. Deva Doss, Licensed Preparer, Secretary, Channapatna Division Licensed Seed Preparers Association, Maddur, Mysore State.
- @54. Shri Nagaraja Rao, Licensed Seed Preparer, Secretary, Kollegal Division Licensed Seed Preparers Association, Kollegal, Mysore State.

55. Shri B. A. Keshavamurthy, Licensed Seed Preparer, Secretary, Chamarajanagar Division Licensed Seed Preparers Association, Chamarajanagar, Mysore State.
56. Shri T. G. Seshagiri Rao, Licensed Seed Preparer, T-Narasipur, Mysore State.
57. K. Siddegowda, Licensed Seed Preparer, Kanakapura, Mysore State.
58. Shri M. Munegowda, Licensed Seed Preparer, Anur, Sidlaghatta Taluk, Kolar, Mysore State.
59. Shri H. D. Nanjappa, B.Sc., Licensed Seed Preparer, Silk Merchant, Treasurer, Mysore State Licensed Seed Preparers Association, Chikkaballapur, Mysore State.
60. Shri Devegowda, Sericulturist, Kamkerai, Kollegal.
61. Divisional Sericulture Officer (Ha), Palampur, (Kangra).

II. Producers of Raw Silk (Reelers)

(a) Filatures

- *1. General Manager, Government Silk Filatures, Mysore.
- *2. Chairman, Kisan Silk Industries, Mellur, Sidlaghatta Taluk, Mysore State.
3. Managing Agents, Karnataka Silk Filatures, Veswesvrapuram, Bangalore-2.
4. Government Silk Factory, Srinagar.
- *5. U. P. Resham Audyogik Sarakari Sangh Ltd. Premnagar, Dehra Dun, (U.P.).
- *6. Government Silk Filatures, Kollegal, (Mysore State).
- *7. Government Silk Filatures, Kanakapura, (Mysore State).
8. The Secretary, Reelers Co-operative Society, Talavady, (Madras State).

(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, Kamakarai, (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 Mantayya, Charka Reeler, Mamballi, (Yelundar Taluk), Mysore State.
8. Shri Md. Hassan Ali Choudhry, Atagama, District Malda, West Bengal.
9. Shri S. K. Multan, P.O. Dakhin Lakshimpur, Village Imamjagir, (District Malda), West Bengal.
10. Shri Nasiruddin Biswas, Village & P. O. Sujapur, Malda, West Bengal.

11. Shri Bijan Kumar Chattarji, (P. O. Village Kamarpur), (Murshidabad District), U.P.
- *12. Shri Haji Amin Munshi Filature, Kaiachaka, (Malda), West Bengal.
13. Shri Satheswar Hazra, Barisa, P. O. Bagnasar, (Midnapur District), West Bengal.
14. Shri Badu Mondal, Village Ray Gram, P.O. Amriti, (District Malda), West Bengal.
- *15. Shri Tamisuddin Sheikh, P.O. Beldanga, Murshidabad District U.P.
16. Talanki Gurappa Setty, K. Lakshminarasimhaih Silk Koti, Avenue Road, Bangalore-2.
- *17. Abdul Rub, Silk & General Merchant, M. G. Road, Chintamani, Kolar District, Mysore.
18. The Superintendent of Sericulture, Reelers Co-operative Society, Kumarpur, (Berhampore), West Bengal.
19. Shri Chote Sahib, Cottage Basin Relling Unit, Ramanagaram, (Mysore State), Mysore.
20. M/s. Abdul Khaliq, Silk Merchant, Ramanagaram, Mysore.
21. M/s. Gafar Qureshi, Silk Merchant, Ramanagaram, Mysore.
22. M/s. Basheer Ahmed Agha, C/o. Syed Peer Agha, Silk Merchant Ramanagaram, Mysore.
23. 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, Prof : 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. Lakshminarasimhaih, 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. Rajlakshmi Textiles, Mysore Road, Bangalore.
- 19. M/s. Chammundi Textiles, Ramnagaram, Mysore.
- 20. M/s. Bangalore Woollen, Cotton & Silk Mills Ltd., 23, Agraharam Road, Bangalore-23.
- 21. Mysore Government Silk Weaving Factory, Manathody Road, Mysore.
- 22. M/s. Hanuman Silk Weaving Factory, Chickpet, Bangalore.
- 23. Government Silk Weaving Factory, Rajbagh, Srinagar, (Jammu & Kashmir).
- 24. M/s. Kapoor & Co., Srinagar, Jammu & Kashmir.
- 25. Kashmir Silk Mills, Dehra Dun, Uttar Pradesh
- 26. The Bangalore Silk Mills, 79, Masjid Bunder Road, Mandvi, P.O. Box No. 3218, Bombay-3.

IV. Manufacturers of Silk fabrics.

- 1. Ghanta Hutchanna, 13th Cross Road, Near Nandi Motor Service, Cubbonpet, Bangalore City.
- 2. Shri Budal Mudranagappa & Sons, Kavadi Revanna Steeypet, Bangalore-2.
- 3. Silk Handloom Weavers' Co-operative Society, Kanchepuram, Madras State,
- 4. Shri Murgappa Mudaliar, Silk Cloth Manufacturers, Kanchepuram, Madras State.
- *5. M/s. P. S. S. Bommanna Chettiar & Sons, Cloth Merchants, Gugai, Salem, Madras State.
- 6. M/s. Thammanna Chettiar & Sons, Bhoomi Street, Gugai, Salem, (Salem District), Madras State.
- *7. M/s. Kunjilal & Co., Lakhichotra, Banaras.
- 8. Silk Manufacturing Sahakari Samathi Ltd., Mandnapore, Banaras.
- 9. Silk Manufacturing Federation Lakhi Chantra, Banaras.
- 10. Shri P. C. Patnaik, Poor Cottage Industries, Cuttack, Orissa.
- *11. M/s. Bangalore Woollen, Cotton & Silk Mills Ltd., Agraharam Road, Bangalore-2.
- 12. M/s. Seethalakshmi Textiles, Magarthpet, Bangalore-2.
- 13. M/s. Chamundi Textiles, Ramanagaram, (Mysore State).
- 14. M/s. V. T. Surappa & Sons, G-39, Honnurappa Lane, Cubbonpet, Bangalore-2.
- 15. M/s. Pravati Textile Mills Ltd., P. O. Panibatti, 24-Parganas, Calcutta.

16. M/s. S. S. Bagchi & Co., P. O. Berhampore, (W. Bengal).
17. M/s. India Textiles Ltd., Great Eastern Hotel, Calcutta.
18. Government Silk Weaving Factory, Rajbagh, Srinagar, (Jammu & Kashmir).
19. Artex Mills, Srinagar. (Jammu & Kashmir).
20. Government Silk Institute, Nathanagar, P. O. Bhagalpur (Bihar).
21. Rambansi Silk Mills, Bhagalpur.
22. M/s. Kasetty Rangappa & Sons, Dharmavaram, (Anantapur Dist), Andhra.
23. Soalkuchi Resham Sambaya Ltd., Soalkuchi P. O. District Kamrup, Assam.
- *24. Assam Co-operative Silk House, Ltd., Govinda, Taroon, P. O. Gauhati, Assam.
- *25. Resham Silpi Sangha, 12/18 & 14 Hare Street, Calcutta-1.
26. M/s. Sree Silk Mills, Maldahija, Banaras.
- *27. Training-Cum-Production Centre Textiles, Chanderi (M.P.).
28. M/s. Dhanamal Silk Mills, Manohar Mansion, Dhobi Talao, Bombay.
29. M/s. Ichharam Ramchand, Navpura, Golwadi, Surat.
30. M/s. S. Dhondusa Gold Thread Factory, Subbedar Chatram Road, Bangalore-9.
31. M/s. D. Arasappa & Sons, Sri Narasimharaja Road, Bangalore-2.
32. M/s. T. K. Krishnaswamy Chettiar, P. B. No. 6, Komarapalayam, Via Bhavani, Erode (S. Rly.).
33. M/s. Radha Silk Emporium, 14, Sannadhi Street, Mylapore, Madras-4.
34. M/s. Raja S. Venkatachalapathi Iyer & Sons, 46, West Street, Kumbakonam.
35. M/s. Muddiah & Sons, Sowrashtpet, Bangalore-2.
36. Talanki Gruappa Setty, K. Lakshminarasimhiah Silk Koti, Avenue Road, Bangalore-2.
37. A. M. Veerabhadraiah & Bros., Handloom Silk Cloth Manufacturer, New Street, Kollegal.
38. Raparti Silk Weavers Co-operative Society, Raparti, Andhra Pradesh.
39. U. P. Industrial Co-operative Association, Varanasi, Uttar Pradesh.
40. The Assam Co-operative Silk House Ltd., Gauhati, Assam.
41. M/s. Dhondosa Gold Thread Factory, Subedar Chatram Road, Bangalore City.
42. M/s. Seethalakshmi Textiles, Nagarthpet, Bangalore.
43. M/s. Srinivasa Silk Throwing Factory, 6, Mission Road, Bangalore.
44. M/s. Janardhna Silk House, 1-15, Jumma Masjid Road, Bangalore-2.
45. M/s. Rajlakshmi Textiles, Mysore Road, Bangalore.
46. M/s. Chammundi Textiles, Ramanagaram, Mysore.

- *47. Mysore Government Silk Weaving Factory, Manathody Road, Mysore.
- 48. M/s. Hanuman Silk Weaving Factory, Chickpet, Bangalore.
- 49. Government Silk Weaving Factory, Rajbagh, Srinagar, Jammu & Kashmir.
- *50. M/s. Kappor & Co., Srinagar, Jammu & Kashmir.
- 51. M/s. Kashmir Silk Mills, Dehra Dun, Uttar Pradesh.
- 52. The Secretary, All Indian Handloom Fabrics Marketing Co-operative Society, Janmaboomi Chambers, Fort Street, Bombay-1.
- 53. 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. Indian Silk Association
13-N, Connaught Circus,
New Delhi 1
- 2. The Mysore Silk Handloom Weavers' Association, 13, Jammu 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, Murshidabad.
- 13. Jalapur Silk Research Organisation, Sujapura, 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 (Gujarat).
19. M/s. Banarsi 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 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, 9th Floor, Kiron Sankar Road, 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 for Industries and Technical Education, 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. Secretary to the Government of Orissa, Department of Industries, Mining and Geology, Bhubaneswar.
18. Director of Industries, Manipur.

E. RESEARCH INSTITUTES/RESEARCH ASSOCIATIONS

- *1. The Director, Central Sericultural Research Station, Berhampore (West Bengal).
- *2. The Director, Central Sericultural Research and Training Institute, Santhi Vilas, Nazarbad, Mysore-1.
- 3. The Director, Regional/Sericultural Research Station, Titabar, (Assam).
- *4. The Director, Central Tasar Research Institute, Ranchi (Bihar).
- *5. Silk & Art Silk Mills Research Association "SASMIRA", Dr. Annie Besant Road, Worli, Bombay-18.

F. CENTRAL GOVERNMENT DEPTS/OTHERS

(a) Central Govt. Department.

- *1. The Secretary,
Central Silk Board, 95-B, Marine Drive,
Bombay-2.
- *2. The Textile Commissioner,
New C. G. O. Building,
New Marine Lines,
Bombay-1.
- *3. The Secretary,
All India Handloom Board,
New C. G. O. Building,
New Marine Lines, Bombay-1.
- *4. The Chief Executive Officer,
Khadi & Village Industries Commission,
Kurla, Bombay-56.

(b) Others.

- *1. The Director,
Indian Standards Institution,
Manak Bhavan,
Mathura Road, New Delhi.
- *2. The State Trading Corporation of India Ltd.,
Express Building,
Mathura Road, New Delhi.

APPENDIX II

[Vide paragraph 3.2]

Particulars of Sericultural establishments visited by the Commission and its officers

Sl. No.	Name of the Unit	Date of visit	By whom visited
1	2	3	4
MYSORE STATE			
1	Government Silk Farm, Kunigal	15th April, 1966	Shri M. Zaheer, Member.
2	Government Silk Filatures, Karakapura	16th April, 1966	Prof. K. T. Merchant, Member.
3	Government Silk Filatures, Kollegal		Shri M. Zaheer, Member.
4	Government Silk Farm, Mudigundam		Prof. K. T. Merchant, Member.
5	Government Cocoon Market, Chilukawadi		
6	Filatures and Cocoon Market, T. Narasipur		
7	Government Silk Farm, Onamarajinagar	17th April, 1966	Shri M. Zaheer, Member.
8	Government Silk Farm, B.R. Hills		Prof. K. T. Merchant, Member.

9	Government Silk Weaving Factory, Mysore . . .		
10	Government Mulberry Graft Nursery, Maddur . . .		
11	Government Spun Silk Mills, Channapatna . . .	18th April, 1966	
12	Cottage Basin and Charka Establishments, Ramanagaram		
13	Private Rearing Houses, Vandarkuppa . . .		
14	Silk Conditioning & Testing House, Bangalore . . .		
15	Silk Marketing Cooperative Society, Bangalore . . .		
16	M/s. Dhondusa Gold Thread Factory, Bangalore . . .		
17	M/s. Sethalaxmi Hall Weaving Estt., Bangalore	19th April, 1966.	
18	State Silk Worm Handloom Coop. Society, Bangalore		
19	Provincial Silk Handloom Coop. Society, Bangalore . . .		
20	Mysore Silk Association, Bangalore . . .		
21	Sericultural Section, Congress Exhibition, Bangalore . . .		
22	Hindusthan Textile Engineering Works, Bangalore . . .	20th April, 1966	
23	Kisan Silk Industries Pvt. Ltd., Mellur . . .	12th March, 1966	
	Government Silk Filatures, Kollegal . . .	14th & 15th March, 1966	
	UTTAR PRADESH		
24	U. P. Rasham Adyogik Sahkari Sangh Ltd., Premnagar, Dehradun.	26th April, 1966, 10th & 11th Feb., 1966.	

Shri M. Zaheer, Member.

Prof. K.T. Merchant, Member

Shri M. Zaheer, Member.

Prof. K. T. Merchant, Member.

Shri M. Zaheer, Member.

Prof. K. T. Merchant, Member.

Shri S. R. Mallya, Cost Accounts

Officer.

Shri S. R. Mallya, Cost Accounts

Officer.

Dr. B. G. Ghate, Member.

Shri M. Zaheer, Member.

Prof K. T. Merchant, Member.

Shri S.R. Mallya, Cost Accounts

Officer.

1	2	3	4	
25	Jhajhar Mulberry Farm	} 26th April 1966	Dr. B. G. Ghate, Member.	
26	Kashmir Silk House, Lachhiwala Farm Boiwala Farm		Shri M. Zaheer, Member. Prof. K. T. Merchant Member.	
27	Forest Research Institute, Majra Farm	27th April, 1966	Shri M. Zaheer, Member, Prof. K. T. Merchant, Member.	
JAMMU & KASHMIR				
28	Vehi Reproduction Zone	} 16th May, 1966	Shri M. Zaheer, Member. Prof. K. T. Merchant, Member.	
29	Shar Rearing and Plantation			
30	Jaunbrari and Pahalgam Rearing and Plantation	} 17th May, 1966	Shri M. Zaheer, Member. Prof. K. T. Merchant, Member.	
31	Sakhras and Sofipura Plantation			
32	Takia Bastpora Plantation Blocks			
33	Gulmarg Rearings			
34	Dhobiwam Plantation and Rearing	} 18th May, 1966	Shri M. Zaheer, Member. Prof. K. T. Merchant, Member.	
35	Lalpur Nursery			
36	Acāhabal F 1 Seed Production Centre			
37	Kukarwag Plantation			
38	Quazikund Graft Nursery	}		
39	Pampur Plantations of Central Silk Board			

40	Mirgund Rearings	19th May, 1966	Shri M. Zaheer, Member.
41	Taparwaripora Block and Rearings		Prof. K. T. Merchant, Member.
42	Diamond Silk Weaving (Power Loom & Handloom)	20th May, 1966	Shri M. Zaheer, Member.
43	Pearl Power Looms and Handlooms		Prof. K. T. Merchant, Member.
44	Special Diamond Looms		
45	Kapur Silk Factory		
46	Rearing Centres in Jammu	23rd May, 1966	Shri M. Zaheer, Member.
47	Filatures in Jammu.	24th May, 1966	Prof. K. T. Merchant, Member.
	WEST BENGAL		
48	Silk Conditioning House, Patipukur, Calcutta	4th June, 1966	Shri M. P. Pai, Chairman.
		22nd Nov., 1965	Shri M. Zaheer, Member.
			Prof. K. T. Merchant, Member.
			Shri S. Saha, Technical Director (Chemicals)
49	Sericultural Institutes, Farms and grainages, Berhampore and Malda.	18th & 19th Nov., 1965	Shri S. Saha, Technical Director (Chemicals).
	ASSAM		
50	Sericulture Units at Khanapura, Mongpoh and Shillong and Spun Silk Mills, Jagi Road.	13th & 14th Nov., 1965	Shri S. Saha, Technical Director (Chemicals).
	BIHAR		
51	Central Tasar Research Station, Government of India, Ranchi.	24th Nov., 1965	Shri S. Saha, Technical Director (Chemicals).

APPENDIX III

[Vide paragraph 3·4]

*List of persons who attended Commission's public inquiry on
19th July, 1966*

A. Producers—

- | | | |
|----------------------------|--------------|---|
| 1. Shri H. G. Anantharaman | Representing | The Kisan Silk Industries (P) Ltd., Mellur. |
| 2. Shri S. M. Aga | Do. | Jammu & Kashmir Industries P. Ltd., Srinagar. |

B. State Government Departments—

- | | | |
|-----------------------------|----------------------|---------------------------------------|
| 3. Shri V. R. Uthaman | } . . . Representing | Government of Mysore, Bangalore. |
| 4. Shri D. R. Gunduraj | | |
| 5. Shri B. B. Shetty | Do. | Government of Madras, Madras. |
| 6. Shri J. N. Barthakur | Do. | Government of Assam, Shillong. |
| 7. Shri A. T. Janakiraman | Do. | Government of Bihar, Patna. |
| 8. Shri S. C. Krishnamurthy | Do. | Government of Madhya Pradesh, Bhopal. |
| 9. Shri B. N. Satpathy | Do. | Government of Orissa, Bhubaneswar. |

C. Importers—

- | | | |
|--------------------------------|----------------|---|
| 10. Shri B. M. Chinai | } Representing | M/s. Nagindas Foolchand Chinai, Bombay-3. |
| 11. Shri Buddhisagar M. Chinai | | |
| 12. Shri R. M. Shah | } . . . Do. | M/s. Harilal Bhikabhai & Sons, Bombay-1. |
| 13. Shri D. R. Shah | | |

D. Consumers/Consumers' Associations—

- | | | |
|-------------------------|--------------|--|
| 14. Shri Mahindra Singh | Representing | The Bangalore Woollen, Cotton & Silk Mills Co. Ltd., Bangalore-23. |
| 15. Shri R. P. Tiwari | Do. | Training-Cum-Production Centre, Textiles, Chanderi (M.P.). |

- | | | |
|----------------------------------|--------------|--|
| 16. Shri Prahlad Das | Representing | Banaras Industrial & Trade Association, Varanasi. |
| 17. Shri K. Siddagowda | Do. | Mysore Silk Association, Gandhinagar, Bangalore-9. |
| 18. Shri Syed Siraj | Do. | The Mysore State Marketing Co-operative Society Ltd., Bangalore-2. |

E. Research Institutes Associations—

- | | | |
|--|--------------|---|
| 19. Dr. E. S. Narayanan | Representing | Central Sericultural Research & Training Institute, Nazarbad, Mysore. |
| 20. Dr. S. Krishnaswamy | Do. | Central Sericultural Research Station, Berhampore (W. Bengal). |
| 21. Dr. M. S. Jolly | Do. | Central Tasar Research Station, Ranchi. |
| 22. Dr. R. V. R. Subramanian | Do. | Silk & Art Silk Mills Research Association, Bombay-18. |

F. Central Government Departments—

- | | | |
|---------------------------------------|----------------|---|
| 23. Shri T. S. Pattabiraman | } Representing | Central Silk Board, Bombay-2. |
| 24. Shri S. R. Ullal | | |
| 25. Shri Satyapal Thakur | Do. | Khadi and Village Industries Commission, Bombay-56. |

G. Others—

- | | | |
|------------------------------------|--------------|--|
| 26. Shri N. K. Ramaswamy | Representing | Indian Standards Institution, New Delhi-1. |
| 27. Shri M. Singh | Do. | Observer. |

APPENDIX IV

[Vide paragraph 6·8·2]

Statement showing the Area under Mulberry Cultivation and Number of trees utilised for rearing purpose

State	Hectarage under Mulberry					No of trees (in '000s)				
	1963	1964	1965	1963	1964	1965	1963	1964	1965	
Andhra Pradesh	290	363	363	24	25	25	25	25	25	25
Assam	950	960	960	800	800	800	800	800	800	800
Bihar	120	120	120	5	5	5	5	5	5	5
Jammu & Kashmir . . . . .	..	..	..	2,120	2,090	1,800	2,120	2,090	1,800	1,800
Kerala	12	30	17	..	..	..	..	..	..	..
Madhya Pradesh	200	300	300	..	..	..	..	..	..	..
Madras	1,362	1,478	1,454	..	25	3	..	25	3	3
Mysore	76,000	76,000	76,000	..	..	..	..	..	..	..
Punjab	67	71	71	105	65	65	105	65	65	65

APPENDIX

Statement A (Vide paragraph 6·12·1) showing the State-wise produc

Sl. No.	States	1963				Total
		Filature	Charka	Cottage Basin	Dupion	
1	2	3	4	5	6	7
1	Andhra Pradesh	190	100	109	2	401
2	Assam . . . . .	..	13,800	..	..	13,800
3	Bihar . . . . .	..	1,136	..	..	1,136
4	Jammu and Kashmir	85,746	..	..	1,720	87,466
5	Madhya Pradesh . . . . .	..	..	586	..	586
6	Madras . . . . .	..	..	2,865	133	2,998
7	Mysore	91,000	626,000	264,000	39,000	1,020,000
8	Punjab . . . . .	..	2,104	374	..	2,478
9	Uttar Pradesh . . . . .	..	..	404	..	404
10	West Bengal . . . . .	..	276,100	15,403	2,280	293,783
11	Himachal Pradesh . . . . .	..	130	..	..	130
12	Manipur & Tripura . . . . .	..	221	30	9	260
TOTAL		176,936	919,591	283,771	43,144	1,423,442

Statement B (Vide paragraph 6·13·2) showing the State-wise silk during 1963,

Sl. No.	States	1963			
		Tasar	Eri	Muga	Total
1	2	3	4	5	6
1	Andhra Pradesh	569	39	..	608
2	Assam . . . . .	..	183,750	50,000	233,750
3	Bihar	79,545	9,433	..	88,978
4	Madhya Pradesh	110,000	..	..	110,000
5	Maharashtra	1,112	..	..	1,112
6	Orissa	25,090	..	..	25,090
7	Uttar Pradesh . . . . .	..	73	..	73
8	West Bengal	13,418	2,692	..	16,110
9	Manipur . . . . .	..	369	..	369
10	Tripura . . . . .	..	4	..	4
TOTAL		229,734	196,360	50,000	476,094

V

tion of different varieties of mulberry silk during 1963, 1964 & 1965

(In Kilogrammes)									
1964					1965				
Filature	Charka	Cottage	Dupion	Total	Filature	Charka	Cottage	Dupion	Total
8	9	10	11	12	13	14	15	16	17
..	1,025	..	..	1,025	..	880	..	..	880
..	13,800	..	..	13,800	..	14,000	..	..	14,000
..	909	..	..	909	..	1,032	..	..	1,032
75,643	..	..	301	75,944	52,402	..	..	672	53,074
..	290	333	..	623	..	..	580	..	580
..	382	1,641	35	2,058	..	..	1,537	112	1,649
103,000	576,000	363,000	38,000	1,080,000	104,000	940,000	179,000	22,000	1,245,000
326	1,279	85	..	1,690	831	1,626	89	..	2,546
476	..	465	225	1,166	3,059	..	176	350	3,585
..	274,782	13,000	800	288,582	13	290,967	19,585	..	310,565
119	51	..	..	170	251	..	..	..	251
..	313	27	6	346	..	387	33	20	440
179,564	855,031	392,351	39,367	1,466,313	160,556	1,248,892	201,000	23,154	1,633,602

production of different varieties of non-mulberry 1964 & 1965

(In Kilogrammes)							
1964				1965			
Tasar	Eri	Muga	Total	Tasar	Eri	Muga	Total
7	8	9	10	11	12	13	14
489	98	..	587	340	35	..	390
..	185,250	50,000	235,250	..	187,500	58,000	245,500
79,546	12,159	..	91,705	103,181	8,295	..	111,476
115,000	..	..	115,000	120,000	..	..	120,000
1,047	..	..	1,047	865	..	..	865
16,000	..	..	16,000	16,500	48	..	16,548
10	72	..	82	42	84	..	126
11,565	5,480	..	17,045	16,359	5,680	..	22,039
..	408	..	408	..	505	14	519
..	3	..	3	..	466	..	466
226,657	203,470	50,000	477,127	257,287	202,628	58,014	517,929

APPENDIX VI

[Vide paragraph 6·14·2]

Mulberry Silk waste Production 1965

(Figs. in Kg.)

State	Production				Total
	Filature	Charka	Cottage Basin	Dupion	
Andhra Pradesh . . .	..	632	..	..	632
Assam . . .	..	6,500	..	..	6,500
Bihar . . .	..	1,032	..	..	1,032
Jammu & Kashmir .	65,136	..	..	1,491	66 627
Madhya Pradesh .	..	..	300	..	300
Madras . . .	..	..	788	..	788
Mysore . . .	60,000	299,000	79,000	10,000	448,000
Punjab . . .	317	636	55	..	1,008
Uttar Pradesh .	823	..	96	103	1,022
West Bengal . .	3	177,501	10,970	..	188,474
Himachal Pradesh .	56	..	..	..	56
Manipur . . .	..	19	2	..	21
Tripura . . .	..	..	1	..	1
TOTAL.	126,335	485,320	91,212	11,594	714,461

Non-Mulberry Silk waste Production 1965

(Fig. in Kg.)

State	Tasar	Eri	Muga	Total
Andhra Pradesh	302	44	..	346
Assam . . . . .	..	62,500	28,000	90,500
Bihar	77,363	..	..	77,363
Madhya Pradesh	60,000	..	..	60,000
Orissa	8,700	535	..	9,235
Maharashtra	433	..	..	433
Uttar Pradesh	18	12	..	30
West Bengal	34,123	34,123
Manipur	7	..	7
Tripura
TOTAL	180,939	63,098	28,000	272,037

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APPENDIX VII

[Vide paragraph 12·4]

Statement showing the exports of tasar silk fabrics

(F.O.B. Value '000 Rs.)

Country	1961	1962	1963	1964	1965
1. U.S.A. . .	3,239	2,800	4,399	6 051	5,595
2. Hongkong. .	282	450	1,121	937	592
3. United Kingdom	12	40	113	95	86
4. West Germany .	51	169	157	244	301
5. Canada . .	31	42	107	187	81
6. Australia . .	5	27	114	246	92
7. Italy . .	5	4	105	36	7
8. Switzerland .	5	18	69	117	63
9. Japan . .	19	28	65	129	134
10. France . .	4	32	59	161	25
11. Sweden . .	10	10	39	98	112
12. Netherlands .	..	9	28	3	12
13. Aden . .	1	..	18	15	20
14. East Germany .	..	..	..	29	..
15. Malayasia .	20	4	4	12	8
16. Kuwait . .	..	..	..	45	..
17. Belgium . .	1	..	..	10	16
18. Denmark . .	..	..	..	8	12
19. Lebanon . .	..	1	..	9	6
20. Greece . .	..	..	..	2	8
21. Newzealand .	..	..	14	1	5
22. Others . .	37	33	17	10	12
TOTAL .	3,722	3,637	6,429	8,445	7,187

APPENDIX VIII

[Vide paragraph 13.1]

Rate of duty on protected items of silk in operation till 6th June 1966

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 protective 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	60 per cent ad valorem plus Rs. 8.80 per kilogram.	..	..	10 per cent ad valorem.	31st, December 1966.	
46(1)	Silk, waste and noils	Protective	60 per cent ad valorem.	..	..	10 per cent ad valorem.	31st, December 1966.	
47.	Silk yarn including thrown silk warps and yarn spun from silk waste or noils, but excluding sewing thread—					10 per cent ad valorem.		
	(a) Silk yarn including thrown silk warps.	Protective	60 per cent ad valorem plus Rs. 8.80 per kilogram.	..	..		31st, December 1966.	

1	2	3	4	5	6	7	8
	(b) Yarn spun from silk waste.	Protective	60 per cent ad valorem plus Rs. 11.60 per kilogram.	..	..	..	December 1966. 31st,
	(c) Yarn spun from noils.	Protective	60 per cent ad valorem.	..	..	..	December 1966. 31st,
47(1)	Silk sewing thread	Protective	60 per cent ad valorem.	..	..	10 per cent ad valorem.	December 1966. 31st,
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 1966. 31st,
	(b) Fuji, Boseki and corded (excluding white cord).	Protective	120 per cent ad valorem plus Rs. 18.70 per kilogram.	..	..	..	December 1966. 31st,
	(c) Other sorts	Protective	120 per cent ad valorem plus Rs. 13.80 per kilogram.	..	..	..	December 1966. 31st,

NOTE : A regulatory duty of 10% has been levied on all imports since February 1965.