

REPORT OF THE COIR BOARD
DELEGATION TO FOREIGN
COUNTRIES

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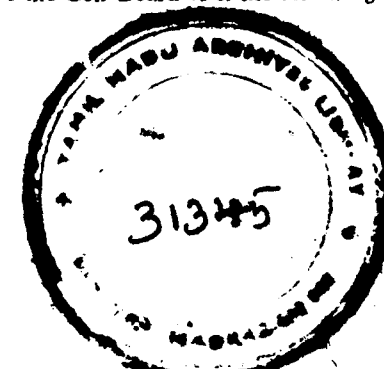
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REPORT OF THE COIR BOARD DELEGATION TO FOREIGN COUNTRIES

INTRODUCTORY

With a view to promoting our trade in coir and coir products and to establish goodwill between the importers abroad and our exporters, the Coir Board had recommended that a Delegation be sent abroad. Pursuant to this recommendation, the Government of India, by their letters No. 42-SSI (B) (85)/56, dated 10th December 1958 and No. 42-SSI (B) (85)/56, dated 1st April 1959, sanctioned that a Delegation of the Coir Board visit the following countries : —

- (1) Italy.
- (2) Switzerland.
- (3) France.
- (4) Belgium.
- (5) Holland.
- (6) West Germany.
- (7) The U. K.
- (8) U. S. A.
- (9) Canada.



The work of the Delegation as outlined by the Coir Board was approved by the Government of India. This included, among others—

- (1) finding new markets;
- (2) endeavouring expansion of existing markets;
- (3) finding new uses of coir;
- (4) finding out the end uses of coir fibre and yarn;
- (5) study of the techniques of manufacture of sisal yarn, coir yarn and coir products in foreign countries;
- (6) study of the nature and extent of competition to coir from other hard fibres;
- (7) tariffs and import restrictions in importing countries and possibility of reducing them;
- (8) collection of information regarding the extent of production of coir manufactures, including rope, separately;
- (9) inquiry into the reasons for any reduction in exports to the countries concerned;
- (10) study of the effects of implementation of European Common Market Scheme on exports of coir and coir products from

- (11) study of the reactions in foreign countries on introduction of Metric System of Weights and Measures in India ;
- (12) exploring the possibilities of joint advertisement schemes with interests concerned in foreign countries ;
- (13) creating greater confidence in Indian coir products in the minds of foreign buyers.

2. The Delegation consisted of four members, viz., Sri T. M. B. Nedungadi, Chairman of the Coir Board, Leader, Sri C. T. Jacob, Vice-Chairman, Coir Board, Sri R. Krishna Ayyar, Member, Coir Board, and Sri Revi Karunakaran, Member, Coir Board.

3. Before leaving India, the Delegation interviewed institutions, associations and chambers of commerce interested in coir in Alleppey, Shertallai, Cochin and Calicut, and had preliminary discussions with them regarding the scope of the Delegation's work and their suggestions.

4. We also had an interview with Sri S. Ranganathan, I.C.S., Secretary, Sri K. B. Lall, I.C.S., Additional Secretary, Sri C. S. Ramachandran, I.C.S., Joint Secretary, and Sri Nageswara Bahadur, I.C.S., Joint Secretary of the Ministry of Commerce and Industry and received advice from them regarding the Delegation's work and the lines on which the Delegation should find facts and explore the possibilities for developing the market.

5. The Delegation left Bombay on the 21st March 1959, and after visiting the countries mentioned in the G.O., returned to India in the third week of June 1959, via the Pacific Coast of U.S.A. On their return, members of the Delegation had to touch Tokyo and took that opportunity of visiting some of the factories which manufacture machinery for spinning of coir yarn and making of coir ropes and also factories manufacturing coir mats which were on sale in certain cities in America.

6. The Delegation had to move rapidly from place to place so as to complete its programme of work and it was handicapped by the fact that during the period of its tour, the Easter holidays intervened. In many of the places both Saturdays and Sundays were holidays. Nevertheless, we have been able to cover approximately 27,000 miles visiting 52 cities. With arrangements previously made by our Embassies or Consulates, we have been able to interview over 300 institutions and individuals interested in our activities besides a large number of Departmental Stores (vide Appendix). We have had also the benefit of discussions with our Embassies abroad.

7. The subjects of study of the Delegation were mainly those that had already been indicated previously. For the sake of convenience, we propose

to deal with in this report the results of our study under the following sections :—

- Section I—Coir Fibre.
- Section II—Coir Yarn.
- Section III—Coir Mats and Matting.
- Section IV—Coir Rope.
- Section V—Production Methods—Improvement in Equipment and Technology.

SECTION I—COIR FIBRE

Exports of Coir Fibre to the U.K., U.S.A., Canada and other Continental countries from the Alleppey, Cochin, Calicut and other Malabar Ports

Countries	1947-48	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
U. K.	980	485	500	750	970	845	750	735	900	780	953
Belgium	349	80	..	90	120	143	280	74	80	20	40
Holland	10	..	..	..	100	2	..	..	..	100	..
France	2,300	..	..	..	..	..	..	..	..	300	..
Germany	..	..	100	..	..	..	..	..	..	..	760
Italy	980	1,980	4,360	17,540	9,680	12,611	10,510	7,508	8,220	5,956	12,035
Switzerland	..	..	..	..	..	..	..	..	..	..	..
Other Continental countries	80	168	369	299	206	380	354	1,050	1,260	2,212	1,446
Total for U. K. and Continental countries	4,699	2,713	5,329	18,679	11,076	13,981	11,894	9,367	10,460	9,368	15,234
U. S. A.	180	400	160	220	200	302	..	56	30	20	..
Canada	990	74	54	160	280	163	100	275	380	93	50
Grand total of foreign exports	5,869	3,187	5,543	19,059	11,556	14,446	11,994	9,698	10,870	9,481	15,284

8. Coir fibre as such does not form an important item of export from India for the chief reason that most of the 120,000 tons of fibre produced in India is spun into coir yarn, but a comparatively small quantity of the fibre that we produce is imported by Italy for special purposes. Otherwise, as will be seen from the statistics furnished above, our exports to other destinations are negligible.

9. The main use for which Italy imports our fibre is for the manufacture of filters used in the pressing of Olive Oil. Filters are of various kinds and are manufactured from (a) coir fibre, (b) coir matting, and (c) coir yarn. The filters made from (a) and (b) above are called in Italy by the name of "Dischi" and that made from coir yarn is known by the name of "Fiscoli".

10. The fibre which is used for making "Dischi" is our FFFF quality. During our visit of a well-known factory in Brindisi (Ditta Eugenio Quartulli), we discussed with Dr. Quartulli the possibilities for the development of the trade in coir fibre. As the figures of exports show, the consumption of our fibre in Italy is increasing. We were told that for the purpose of manufacture of "Dischi", it was important that the fibre should satisfy the following conditions:—

- (1) Cleanness of fibre;
- (2) Quality should be FFFF;
- (3) If possible, the staple should be longer.

This firm was of the opinion that our fibre, because of its superiority over other fibres produced elsewhere, could hold the Italian market provided exporters paid attention to the conditions enumerated above. We learned, however, that firms manufacturing "Dischi" were also making use of synthetic fibres, e.g., "Movil" fibre. This fibre is manufactured in a factory in Milan. We saw both the fibre and Dischi made out of it. The advantage claimed by the manufacturer of Dischi from Movil fibre is that it lasts four times as much as coir fibre and saves the time and trouble for frequently replacing the filters. But on price, Dischi made of coir fibre is at an advantage in that it costs only 4/5th of the Movil-Dischi. Nevertheless, Dr. Quartulli was of the view that Movil fibre was making inroads and can become a serious competitor to coir fibre if the synthetic fibre becomes cheaper.

11. Discussing the prospects for the development of Dischi and other types of filters generally, we were able to gather that Italy was also exporting oil filters of the three varieties to Portugal, Greece and Lebanon where the olive oil pressing is an important industry. In the south Mediterranean countries, with the development of modern mills for the extraction of olive oil,

there are prospects of more of oil filters of the three varieties being sold. This depends upon the development of the olive oil pressing industry in those countries where the methods employed at present are primitive. Modern machinery is gradually being introduced in those countries and with the expansion of the olive oil pressing industry, the market for coir filters is also expected to develop.

Production of olive oil
(in tons)

	1935-39 (Annual average)	1956-57	1957-58	1958-59
Europe				
France, Greece, Italy, Portugal, Spain, Yugo- slavia	822,800	879,200	1,025,500	770,000
Middle East				
Israel, Syria, Lebanon, Turkey	63,000	112,200	46,000	103,700
Africa				
Algeria, Morocco, Tunisia, Lybia	82,200	170,000	106,500	199,500
Italy alone	256,000	190,000	350,000	220,000

12. In the other countries which import our coir fibre, the uses are only occasional and mostly confined to the mattress trade. In all the European countries and the U. K., several coir fibre industries have developed. They import coir fibre mostly from Ceylon which is the most important supplier of the bristle and mattress fibre. The following are the figures of export of Ceylon mattress and bristle fibre to these countries.

Export of Bristle Fibre from Ceylon
(Year : January-December)

Name of countries	1953 Qty. (Cwts.)	1954 Qty. (Cwts.)	1955 Qty. (Cwts.)	1956 Qty. (Cwts.)	1957 Qty. (Cwts.)	1958 Qty. (Cwts.)
1	2	3	4	5	6	7
Italy	3,954	5,309	7,111	9,287	6,798	9,984
Switzerland	447	1,052	364	360	329	82
France	18,722	19,334	14,791	15,916	16,112	29,740
Belgium	11,739	14,763	20,209	16,645	17,318	18,362
Holland	18,594	21,837	32,782	43,438	35,164	39,312
W. Germany	60,037	73,842	70,182	78,258	70,935	78,563
U. K.	30,253	29,355	36,097	23,565	25,829	38,082
U. S. A.	243	..	354	100	41	278
Canada	..	..	..	..	102	..

Export of Mattress Fibre from Ceylon
(Year : January—December)

Name of countries	1953 Qty. (Cwts.)	1954 Qty. (Cwts.)	1955 Qty. (Cwts.)	1956 Qty. (Cwts.)	1957 Qty. (Cwts.)	1958 Qty. (Cwts.)
1	2	3	4	5	6	7
Italy	2,064	3,946	11,703	20,581	26,654	39,166
Switzerland	7,297	14,588	12,365	26,226	27,103	22,387
France	4,740	4,972	5,646	7,425	6,401	7,265
Belgium	13,036	12,840	15,535	13,752	14,263	9,049
Holland	7,430	8,139	19,368	18,744	25,297	41,478
W. Germany	34,393	69,108	103,153	132,898	167,751	198,877
U. K.	585,092	629,129	528,251	502,583	470,676	487,230
U. S. A.	10,059	2,227	16,898	10,227	5,983	2,047
Canada	..	..	..	..	..	..

Source: Annual Report of the Ceylon Chamber of Commerce.

It would also be interesting to note the figures of imports by Japan of bristle and mattress fibre from Ceylon.

Import of Mattress and Bristle fibre into Japan from Ceylon
(Year : January—December)

Products	1953 Qty. (Cwts.)	1954 Qty. (Cwts.)	1955 Qty. (Cwts.)	1956 Qty. (Cwts.)	1957 Qty. (Cwts.)	1958 Qty. (Cwts.)
1	2	3	4	5	6	7
Bristle fibre	97,219	91,063	124,871	107,680	116,244	127,830
Mattress fibre	7,490	5,958	6,435	10,448	13,173	8,802

Source: Annual Report of the Ceylon Chamber of Commerce.

13. Several industries in the European Continent and U. K. consume both mattress fibre and bristle fibre. The former is used in the upholstery trade, whilst the latter in the manufacture of brushes and brooms. In addition to supplies received from Ceylon, European countries obtain their supplies from other sources also, such as Surinam, Dutch New Guinea, Sierra Leone, Liberia, Nigeria, Mexico, Brazil and Indonesia, but the quantities supplied by these countries are comparatively small.

14. On an examination of the consumption of mattress fibre, particularly, it will be seen that Germany is foremost. When the Delegation was in Germany, our Embassy had arranged with Messrs. Schantung Handles, A. G., Hamburg, to assist us in studying the machines available for various processes in coir manufacture. This company is one of the Export Organisation, recognised by the Government of Germany as operating for the purpose of promoting German exports. We are deeply indebted to Messrs. Emil Linders R. J. Hemker and Hienr. Stolttenberg, through whose good offices we were able to visit several manufacturing firms engaged in the production of coir goods and machinery for making them. One of the firms produces machines for the decortication of coconut husks and the extraction of fibre. They are also manufacturing matting looms (Messrs. Thorwald Classen, G.M.B.H. Maschinen Fur die Kokos Garn Verarbeitende Industrie, Hamburg). We learnt that this factory has supplied machines to New Guinea, Zanzibar and other coconut growing areas. A copy of the catalogue and prices is available for perusal in the Office of the Coir Board. Another factory which we visited uses coir fibre imported from Ceylon for making matting of about 1" thick. This matting is intended to be used as a felt, especially for insulation purposes, in the building industry, for sound-proofing, etc. Of course, this factory is only one of its kind. The fibre imported by this firm is very coarse, but is mechanically cleaned before it is fabricated into pads. Samples of the pads are available for perusal in the Office of the Coir Board. Another factory in Kitzingen manufactures rubberised mattress from coir fibre. After cleaning the fibre, it is twisted continuously and untwisted and, in the latter process, the fibre becomes curled. The curled fibre is then spread out to form a bed on both sides of which a thin compound of latex is mechanically sprayed. We were told that the compound had a latex content of 60 per cent. The mattress is then dried and vulcanized and is ready for use. After vulcanization, the mattress retains its elasticity even under heavy pressure and it is claimed that this mattress is in some respects superior to foam rubber. Most of the cars manufactured in Germany are upholstered with this mattress because it is more economical and has a life of about 20 years. The additional advantage claimed for this process is that furniture upholstery

could be moulded in any shape and the moulding process is comparatively cheaper than that of foam rubber.

15. Similar industries exist in the other Continental countries and in the U.K. Germany and the other Continental countries obtain their supplies of coir fibre for this purpose from Ceylon. The fibre is obtained either in pressed bales or twisted and press-packed. We were told that for purposes of twisting, Germany had supplied machinery to Ceylon. Reference to coir fibre being twisted, packed and exported from Ceylon was made in the Report of the Delegation of the Coir Board which visited Ceylon. We were able to learn while in Germany that the use for which the twisted fibre was obtained is in the rubberised mattress industry.

16. India has great potentialities for the development of the coconut fibre industries if we could fully exploit the raw material resources which we have. India has an area of over 16,00,000 acres under coconut cultivation distributed as follows:—

State	Area in thousand acres	Production of coconut (in thousands)
1. Andhra ..	88	233,007
2. Assam ..	2	12,787
3. Bombay ..	20	40,071*
4. Kerala ..	1,107	3,099,000
5. Madras ..	127	417,453
6. Mysore ..	218	499,345*
7. Orissa ..	11	32,576
8. West Bengal ..	17	22,205
9. Andaman Islands ..	4	2,500
10. Laccadive and Amindive Islands ..	7	9,625
Total ..	1,601	4,368,569

*Provisional.

[Source : The Indian Central Coconut Committee, Ernakulam.]

17. The Kerala State, as was stated earlier, produces approximately 1,20,000 tons of coir, but only a small percentage of which is available as fibre. Even in Kerala, large coconut-growing areas in Malabar, where the traditional retting facilities do not exist, are not industrially utilising the coconut husks. Opportunities exist in those areas and also in the other States

in India for the extraction of fibre and the development of many fibre industries.

18. We recommend to the States concerned to organise the extraction of fibre by simple mechanical means and the fabrication of such fibre into various articles such as have been mentioned previously. Besides being able to supply the rubberised mattresses and the insulation pads to various industries in India, our railways and motor coaches and cars will find an extremely useful material for upholstery purposes. This is a matter which we consider must be earnestly pursued and as quickly as possible, as the possibilities of utilising our raw material resources, opportunities for providing employment and also opportunities of securing foreign exchange through exports are immense. The cost of the machinery is comparatively small. What is needed is an intensive effort for organising production. We also recommend that the Government of India should take a live interest in this matter and make suitable provision for the development of these industries in the various States during the Third Five-Year Plan period. By developing these industries, we shall also be able to build up a new line for the coir industry. This becomes absolutely necessary because of the many difficulties which hinder the progress of our traditional coir matting industry in Kerala.

SECTION II—COIR YARN

19. India's largest buyers of coir yarn are the European countries, the U.K., U.S.A. and Canada. Among the continental countries, Holland, Germany and France are among the foremost buyers. The statement given hereunder furnishes the exports of coir yarn from India to the U.K., various continental countries, U.S.A. and Canada. We have given the figures of exports from 1947-48 to 1957-58 so that they will give a correct perspective of our export trade to the individual countries mentioned. These figures will also show the importance of the continental countries and, among them, chiefly, France, Holland and Germany. Out of an annual average of 40 thousand tons exported to the U.K. and continental countries, the U.K.'s off-take has been steadily dwindling from 14,100 tons in 1947-48 to 5,300 tons in 1957-58, i.e., from her share of 37 per cent to 13 per cent approximately. Holland's off-take has been more or less steady at about 25 per cent. Likewise Germany's off-take has also been steady round about 20 per cent. The fall in exports to the U.K. is very significant.

Countries	(In thousand tons)										
	1947-48	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58
U. U. K.	14.1	10.9	8.1	8.8	7.9	7.4	8.0	7.3	6.7	7.2	5.3
Belgium	1.5	0.9	0.9	1.3	0.6	0.8	1.0	1.1	0.9	1.0	0.6
Holland	9.3	8.7	10.8	14.9	6.1	9.7	12.4	11.1	12.4	13.4	8.1
France	3.7	1.8	2.6	3.7	3.4	3.1	4.2	4.7	4.0	5.0	4.4
Germany	..	2.7	9.3	8.4	7.3	9.6	9.5	10.0	9.6	10.4	9.7
Italy	3.3	1.7	2.0	3.0	4.1	3.4	4.7	4.0	4.3	3.3	4.9
Switzerland	1.2	1.0	1.0	1.6	1.0	0.5	1.2	0.8	1.3	0.8	0.5
Other Continental countries	4.9	4.3	4.4	6.6	4.8	4.4	5.3	6.4	5.5	7.1	5.3
Total for U. K. and Continental countries	38.0	32.0	39.1	48.3	35.2	38.9	46.3	45.4	44.7	48.2	38.8
U. S. A.	2.6	2.7	2.8	3.8	2.8	2.7	2.0	2.1	2.6	3.0	4.2
Canada	0.3	0.4	0.2	0.5	0.3	0.2	0.2	0.4	0.3	0.4	0.2
Other foreign countries	4.5	4.2	3.4	5.7	4.3	7.3	5.8	5.7	5.8	8.2	6.7
Grand total of foreign exports	45.4	39.3	45.5	58.3	42.6	49.1	54.3	53.6	53.4	59.8	49.9

20. The uses to which coir yarn is put are more or less uniform so far as they relate to Belgium, Holland, France, Germany and Switzerland, whereas Italy and the U. K. have some special characteristics. In the former group of countries, almost the entire quantity of coir yarn imported goes into the manufacture of floor coverings. In Italy, 60 per cent of the coir yarn goes for the manufacture of oil filters, 15 per cent for mats and mattings, 15 per cent for cordage and the remaining 10 per cent for Tunnefishing. These are estimates only. Some importers of coir yarn in Italy expressed their desire of being members of the London Coir Association, but that they were not aware whether it would be possible. We pointed out that there should be no difficulty and all that was necessary was to write to the London Coir Association as that Association serves not only the U. K. but other markets also. So far as the consumption of coir yarn in the U. K. is concerned, about 4 to 5 thousand tons are normally used in the hop fields for training hop vines and, except for a negligible quantity used for rope making, most of the remaining imports of coir yarn are used in the mats and matting factories in the U. K. There may have been some re-exports from U. K. also. However, the steady decline of British imports is the index of the decline of the mats and matting manufacturing industry which now consumes about 2 to 3 thousand tons. So far as the United States are concerned, the large majority of imports go for agricultural purposes, i.e., hop growing. Only comparatively small quantity goes for the manufacture of mats.

21. Our Embassies or Consulates had been kind enough to arrange previously with various trade organisations to enable us to meet and discuss with them the purpose of our visit and the mutual problems confronting us. A list of the Trade Associations, Chambers of Commerce or Board of Trade, by whatever name called in the respective countries, as well as the Stores and individuals interviewed, is appended. We have been able to meet representative bodies and ascertain from them their views as to their requirements and explain to them what is being done at this end to give the importers satisfaction. If our halt in the cities which we visited had been of longer duration, we feel we could have met a larger number of interested parties.

22. In all the countries we visited, there are certain common factors relating to our supplies. First and foremost, importers stated that they were bewildered by the number of grades even under the well-known trade descriptions such as, Anjengo, Aratory, Alapat, etc. It was stated that this increase in the number of grades is a recent development. This complaint is true to a very large extent. Many exporters of coir yarn have now come into the field in the process of a natural diversification and in their competition with each other, they quoted for various grade names, these grade names themselves

having no meaning or relation to any particular standard of quality. Such a state of affairs, has resulted from the absence of any recognised standards of quality, although the grades of established exporters are well-known in the markets. But so far as importers are concerned, generally, they would naturally like to buy their requirements as cheap as possible, but they are confronted with serious difficulties regarding fixation of quality in relation to the grade names for which quotations are made.

23. The only means by which this difficulty can be overcome is by standardisation of quality. No doubt, the Indian Standards Institution has taken this work on hand, but the progress so far made has been unfortunately very tardy. On what lines the Indian Standards Institution would be able to standardise and furnish specifications is a matter which it is not possible to anticipate. But it is obvious from our interviews with various buying organisations and individual buyers that something has to be done urgently whereby we could assist our buyers in determining the quality of coir yarn which they contract to buy. This is equally important for our sellers also. We discussed with the organisations various means by which this could be done. Under the existing methods of production, our buyers overseas realised the practical impossibility of laying down exact specifications on the basis of the number of twists per unit of length or weight per unit of length, or colour or tensile strength. Opinion has crystallised in favour of our suggestion to have boxed samples of various grades of yarn ordinarily exported under each trade description, such as, Anjengo, Alapat, Aratory, etc. These boxed samples would be sealed and maintained in the Office of the Coir Board and replicas would be supplied to various Trade Associations and if required also to importers. These grades will bear certain code names which will be the property of the Coir Board and if anyone wishes to export any particular grade of coir yarn under that name, he shall have to conform to the quality according to sealed samples. Such an arrangement is considered to have far important advantages, viz., (1) there will be a reduction in the large number of grades which are confusing the minds of the importers; (2) there will be uniformity in the grade names; (3) there will be the undoubted facility for sellers and buyers to have a correct understanding as to the grade on which contract is made; and (4) there will be fewer occasions for disputes.

24. Secondly, there was a problem presented to us of a gradual deterioration in the quality of coir yarn supplies. From the manufacturers' point of view, the deterioration has taken place in the matter of regularity and evenness of twist, length, colour, tensile strength, too many and poor splicing. In some places, manufacturers were prepared to pay a little more for better quality yarn, whereas in other places they were afraid that if standardisation

meant increased cost, it would be easier for sisal to oust coir yarn. On the question of quality, various suggestions were made, some asking for fresh water yarn and others wanting unbleached yarn. It is, of course, not possible to supply only fresh water yarn which was very well understood. But bleaching is only a matter of taste and could easily be settled as between the importer and exporter, since some buyers really wanted it to be bleached before export. Preference in this direction could be regarded therefore only as individual.

25. From the point of view of hop growers also, there was complaint of deterioration in quality and their main complaint was that they had at the moment to buy more by weight to cover the same area of hop field than before. Their suggestion was that runnage for a given unit of weight should be guaranteed. We understand that the Coir Yarn Balers' Association in Cochin has come to some arrangement in this regard. Another point which they stressed was that the coir yarn now supplied has not the same tensile strength as before, with the result that tying operations in the hop fields are impeded and that farmers had to meet higher labour charges. Members of the Delegation who visited some of the hop fields in Kent, found how difficult it would be for the farmers if the coir yarn did not have sufficient resistance. In all these respects, we feel convinced that there is considerable scope for improvement in quality and as we are the sellers we have to keep foremost in our minds the service which we were to render our buyers and the satisfaction which they received.

26. The deterioration of quality complained of seems to stem from severe competition and price cutting arising from the entry into the trade more recently of a large number of exporting firms. This natural consequence has got to be arrested by a serious effort both on the part of the exporters and on the part of the Coir Board. Whilst the former have to realise the permanent interests of this industry and their responsibility to the very large number of people which it supports, the Coir Board has to provide facilities whereby standards of quality could be maintained. We have already suggested previously how the Coir Board may assist standardisation on the basis of sealed samples. Steps should be taken to this end without delay.

27. Another means by which an improvement in quality can be brought about is by the rapid use of the new type of treadle spinning machine. The coir yarn importers in various countries were shown the type of yarn spun on this treadle machine and without exception they approved of the quality.

28. According to the Coir Board's census, there are at present 29,941 spinning wheels in use in the coir industry. If an all out effort is made, it should not be difficult to replace these age-old type spinning wheels by the

more modern treadle spinning machines. This requires a planned programme whereby the target of complete replacement can be achieved within a definite period of not more than 5 years. The coir industry in the Travancore-Cochin State and many parts of Malabar was carried on as a cottage industry, women spinning the yarn by hand without any accessory whatsoever. It was only about 100 years ago that the spinning wheel was introduced and this spread rapidly practically throughout the industry. We do not see why the new type of machine cannot take the place of the old type even more rapidly than the spinning wheel or the Ambar Charka in the Khadi industry. To promote the use of the new type of spinning machine in the cottages, there is need for propaganda, finance and provision of spare parts. So far as finance is concerned, a general subsidy to start with would be necessary. Once the advantages of the new machine are realised by the spinners, it would be easy to make the machine universally popular, not only in the Kerala State, but in other parts of India as well. The Coir Board has got to take the lead in this matter, with adequate finance from the Government of India. We strongly recommend therefore that, in the interests of the industry which is of great economic importance especially to the large number of people on the Malabar Coast, the Coir Board through a special *Ad hoc* Committee, prepare a plan and that the Government of India provide adequate finance for the manufacture and supply of the spinning machines and spare parts. We cannot adequately stress the importance of the step in the interests of our export trade. The advantages which the industry stands to gain by the popularisation of this machine are (1) regularity, (2) evenness of twist, (3) a more finished appearance with much less of hairiness, (4) a continuous length which is automatically reeled on the spool even when the yarn is spun, so that the number of splices which now occur could be avoided, and (5) as the space required for working the machine is very small household, the inclemencies of weather would not be a bar for working on it. The spinning wheels now in use have to be worked in open yard and workers are subject to the conditions of sun and rain.

29. Thirdly, complaints relating to baling hoops were heard in various countries. The first of these related to the irregular supply of baling hoops which reacted on the regularity of supply of coir yarn, both for agricultural and industrial purposes. Irregular supply of coir yarn to the hop-growers, especially, would result in serious consequences to the crop which naturally depends upon the season. This will also ultimately react upon the coir yarn trade as, because of the uncertainty of supplies, the consumers may turn to other fibres. While in England, we invited the attention of the Government of India to this matter by a cablegram and we once again recommend to them

that suitable arrangements should be made with the mills concerned to pay special attention to regular supplies of steel hoops to the coir yarn baling industry. The other point related to hoop-rust or hoop-burn as it is called in the U.S.A. The origin and extent of damage to the coir yarn arising from hoop-rust have not been adequately assessed. Although balers take sufficient precaution by painting the steel hoops with anti-corrosive paints before the coir yarn is baled, damages from hoop-rust are occasionally reported by buyers. Balers at this end are prepared to do everything possible to protect the hoops which they obtain from manufacturers in India; nevertheless, the problem has not been solved. It is being studied both by the balers and the importers. A careful study of it has also to be made by the Central Coir Research Institute, especially in regard to the conditions under which hoop-rust may occur.

30. Fourthly, we had discussions with importers in various countries as to the necessity or otherwise of pre-examination of coir yarn either on a voluntary basis or compulsorily. Complaints of shippers having shipped coir yarn below quality of samples on which the sale was made were very few. We had heard of claims having been made by some buyers in Holland on sellers in India and therefore we tried to make a probe into this matter when we discussed the question with the importers in Holland. They did not wish any enquiry be made in this direction and, generally speaking, such cases were very few and there was no dispute which had not been settled. In Germany, importers had no complaint of this kind. During our discussions with the General Purposes Committee of the London Coir Association, this question was raised by the Delegation with a view to ascertaining whether anything could be done at this end in order to protect the buyers from shipments below the contract quality. Whilst it was conceded that there may have been occasional disputes, the importers did not find there was any situation which required drastic action at this end. In all centres we visited, we brought to the notice of importers of coir yarn the provision in the Registration and Licensing Rules of the Coir Board for pre-inspection and that this was being done on a voluntary basis where the buyers required such pre-examination. Opinion was unanimous that such a provision should not be made compulsory as it would lead to interminable difficulties and it would not be healthy for the growth of confidence between the seller and the buyer operating in a free market. Moreover, it was pointed out to us that if compulsory inspection became the rule, the mutual confidence between the seller and the buyer would be supplanted by the Coir Board's pre-examination. They also asked if the Coir Board would undertake the responsibility and guarantee to the buyer the quality of the coir yarn shipped. Unless, therefore, a clear case has been made

out for such pre-examination, we cannot recommend that this course should be adopted. All that the Coir Board need do to ensure quality is to provide the facilities through standardisation as suggested previously, and for pre-examination on a voluntary basis where pre-examination is required either by the seller or by the buyer. In course of time, the I.S.I. Standards will become available for the sellers and buyers.

31. Lastly, we have to assess the force of competition to coir yarn from other fibres, principally sisal. This point will again arise for discussion in the next section where we are dealing with coir mats and mattings. However, it is important to note the effects of competition on the imports of coir yarn by the countries visited. Taking the U.K., the imports of coir yarn by this country in 1957-58 have been less than 40 per cent of what they were in 1947-48. As will be seen from the figures given, imports by the U.K. have practically been tapering off. Importers of coir yarn are as much concerned as we ourselves are here about this tendency. The fall has been ascribed to poor off-take by manufacturers of mats and mattings who have turned over to sisal by and large with the result that the demand from hop growers in the U.K. is our main-stay. Even here, paper twine is being tried as an alternative because of the poor quality of coir yarn which is now being made and supplied. It was recognised that there are several difficulties in the way of using paper twine, such as susceptibility to rot in contact with water and too much strength for the picking machine. Experiments are being conducted to overcome these difficulties. Tying of hop vines in the U.K. is not a mechanised industry and labour charges are, therefore, an important factor. Unless hop growers are assured of coir yarn of sufficient strength, it would be difficult to expect to give them satisfaction. Exporters of coir yarn have, therefore, to bear in mind the importance of our industry and their long-term interest as exporters. We have already stressed this point and we think that it would not suffer by repetition. The position of over-all imports as between Belgium, Holland, France and Germany, may not be unsatisfactory, but during the period of 10 years, the progress has not been such as to give us any satisfaction. In the face of competition from sisal, coir has certain weak points, although manufacturers of floor coverings in these countries have assured us that, provided the quality of coir yarn is markedly improved, they would still work their mills with coir. In this connection, it would be interesting to compare the prices of coir and sisal yarn during the past few years in Holland.

		Value per Kg. in Hfl.				
		1952	1953	1954	1955	1956
Coir yarn	..	1.35	0.99	0.99	1.07	1.10
Sisal yarn	..	2.62	1.96	1.71	1.58	1.46

These figures will show how the differential which existed between the prices of coir yarn and sisal yarn in 1952 has narrowed down in 1956. This must be a clear pointer to the danger facing the coir industry from sisal. These figures have been obtained through the courtesy of the Bureau for Market Analysis in Amsterdam which has undertaken a market survey for our Embassy in the Netherlands. Figures of imports into the Continental countries and the U.K. of sisal will also confirm this trend. The following are the figures of imports :—

		In thousand tons						
		Average 1934-38	Average 1946-50	1952	1953	1954	1955	1956
U.K.	..	29	65	52	60	63	75	63
West Germany	..	45*	13	29	28	38	42	53
France	..	25	19	28	26	37	46	52
Netherlands	..	21	8	9	18	23	28	28
Belgium	..	16	2	8	13	14	20	24
Italy	..	2	1	2	4	7	7	10

*Whole of Germany.

Source : "Industrial Fibres", 1958.

The Bureau for Market Analysis has given the figures of imports of sisal into Holland for 1957 and 1958 also. These are—

	(In thousand tons)	
	1957	1958
Holland	29	33

32. Before concluding this Section, we wish to make a brief observation on the European Common Market. Six countries of Europe, viz., Italy, France, Holland, Germany, Belgium and Luxemburg are the six Common Market countries which are working towards free trade amongst themselves. The aim is to promote a fuller understanding of the O.E.E.C.'s (Organisation for European Economic Co-operation) work as a whole and thus to put into a better perspective the success of the activity of the organisation. The success in the field of trade, finance and economic policies, would assist the attainment of the unity of the European countries. This scheme has therefore political, social and economic objectives in that the standard of living of the European community could be raised by making consumer goods available to them more freely and at reduced prices and by the expansion of the intra-market, through breaking down the trade barriers. The six European countries in which the scheme has now been introduced from the 1st January 1959, will have a common import tariff as against imports from outside these countries, whilst as between the six countries, the tariff rates will be lowered with a view to ultimately attaining free trade in the course of 10 to 15 years.

33. So far as coir yarn is concerned, it is not expected that there will be any tariff or restriction on imports into any of these countries, but because of the introduction of free trade between the six countries, some of them may have superior advantages of manufacturing coir floor coverings over some others. Although the aim of the Common Market Scheme is to reduce inequalities in the matter of wage rates and other conditions affecting labour there can still be some vantage point for certain countries in manufacturing coir goods. The distribution of imports of coir yarn may, therefore, undergo some change, but the overall imports by all the six countries will not be affected. On the other hand, under satisfactory conditions imports of coir yarn into all these countries together can register an increase.

SECTION III—COIR MATS AND MATTINGS

34. All countries in the world which the Delegation visited have either mat manufacturing industry or matting manufacturing industry or both in a larger or smaller measure. All of them are importing coir yarn from India. Except in workshops for the blind and disabled people, the manufacturing industry is carried on by the aid of power, although to a very small extent door mats with pile are still made on handlooms in the traditional way. In this Section of our report, it is proposed to discuss in detail the position of the industry in each of the countries. It is also proposed to examine the possibilities of our being able to expand our markets in these countries. As a background for such an examination, the following figures of exports from India to these countries would be helpful :—

COIR MATS

Exports of Coir Mats to the U.K., U.S.A., Canada and other Continental countries from the Alleppey,
Cochin, Calicut and other Malabar Ports

Countries	1947-48	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
U.K.	30,234	85,141	144,511	84,937	48,872	78,257	100,809	110,028	96,441	106,937	117,225
Belgium	3,046	1,801	2,192	1,588	1,727	1,951	2,258	3,737	2,861	4,840	3,114
Holland	585	162	106	70	225	59	739	1,215	1,539	1,498	1,382
France	..	..	..	..	..	..	4	..	..	46	..
Germany	..	..	..	12	..	3,041	3,128	3,455	4,749	5,324	9,601
Italy	..	13	..	10	..	..	1,060	1,138	816	879	3,253
Switzerland	..	336	..	29	..	97	189	105	153	172	..
Other Continental countries	596	2,800	4,789	682	1,896	1,746	2,333	3,004	3,066	1,257	3,344
Total for U.K. and Continental countries..	34,461	90,253	149,598	87,328	52,720	85,151	110,520	122,682	109,625	120,953	137,919
U.S.A.	14,262	30,218	49,342	47,637	34,897	30,751	35,064	35,224	42,969	41,012	39,390
Canada	1,129	2,375	6,219	7,561	5,914	7,364	8,569	10,338	10,060	11,921	10,208
Grand total of foreign exports	49,852	122,846	205,159	142,526	93,531	123,266	154,153	168,244	162,654	173,886	187,517

35. It will be seen from the figures that our exports during the past five years have been satisfactory, to the extent that some increases have been recorded in the case of some countries, whilst in the case of others, our exports have been steady.

36. Though the statistical position appears to be satisfactory, it is not possible to say that there is room for complacency on our part, as it should be our endeavour to develop the demand which already exists. The demand seems to be generally for the cheaper grades of plain mats, under the pressure of severe competition which has resulted not in improvement of quality, but in price cutting. We have been supplying to the world's markets cheap mats which cannot give entire satisfaction to the consumers. Importers are probably responsible for setting in motion a demand for cheaper articles. This has naturally reacted on a reduction in the standards of quality of the mats manufactured. We, as suppliers, have necessarily to guard ourselves against this tendency and ensure a satisfactory future for our industry. A long-term policy would demand such a course of action.

37. The U.K. is still our single largest market for door mats and imports 3 times as much as the whole of the Continental countries or the U.S.A. It is in this market that we have the largest number of importers also. To illustrate the point relating to price cutting, one of the importers in London in a circular issued by them in May 1959, when the Delegation was there was quoted C.L.X. Plain, 14 oz., No. 1, 24 sh. 9d. per dozen ex-wharf. For L.B. Plain, 24 oz., No. 1, the same firm has quoted 40 sh. 10d. per dozen. Likewise, for M.B. Plain, 28 oz., the quotation is 60 sh. 5d. per dozen. From these quotations, those in the trade here would be able to judge how keen the competition is. Some manufacturers have stated that the prices were impossible so far as they were concerned.

38. The continuance of this position is not a healthy sign. Properly organised, the industry must be able to supply the right goods at the right price giving a reasonable margin of profit for the manufacturer and the exporter. If this be not the case, the consequences will be that the country as a whole will be losing and, apart from this, there is a grave danger of exporters being tempted to sell off-quality goods. Ultimately, consumers will lose interest in our products and this will react most unfavourably on the industry, as it has already happened in the case of coir matting. Therefore, it becomes essential that the exporters should organise themselves in a manner which will ensure both quality and reasonable price. To suggest a Central Marketing Organisation or State Trading would be a counsel of despair and none of the importing countries favours such a course. On the other hand, many of the importers, especially in the U.S.A., wish that they could buy their

requirements through one channel. It was pointed out to us that where a large number of exporters quoting against each other for custom, cut the margins of profit so clean, importers at the other end have also to cut their profits correspondingly. This results in importers losing interest in this line of business. It is true that the I.S.I. have now prepared a draft specification for one type of door mats. The Catalogue issued by the Coir Board has also been found by importers to be of great assistance to them in furnishing information regarding specifications for coir mats. Whilst this course of action can help to stabilise standards of quality, it does not offer a solution for the real problem which is price-cutting in a process of competition and reduction of quality. In a free economy like ours, we can only recommend to the trade that they must organise themselves in a manner which will strengthen the Nation's industry and in the interests of the economy of our country. Some suggestion has been made that exporters must be members of recognised associations in order that they may obtain export licence. How far such a suggestion is practicable is a matter which has to be examined by the Board. In this connection, we consider that the *Netherland esche Cocos Conventie* which is an organisation of manufacturers of mattings and rugs in Holland would offer a suitable example of voluntary organisation for the trade here to adopt. The functions of this organisation are given in paragraph 56 *infra*, but the most important of them are (1) joint advertisement and sales promotion in which is included the marketing of the member's products under a common quality mark, viz., "Ster Cocos" and (2) consideration of questions relating to buying and selling prices. The Associations of mats and matting manufacturers here have all provided in their memoranda for the "promotion" and "protection" of their trade. So far no Association has seriously given thought as to how they may organise themselves in order to promote their own interests. It is somewhat pathetic that every one in the industry while complaining of "cut-throat competition", is either unable or unwilling to co-operate and build up a strong association such as the *Netherlandesche Cocos Conventie*. We have the Travancore Coir Mats and Matting Manufacturers' Association, Alleppey, which claims to represent some 60 per cent of the total exports of mats and mattings; there is the Associated Cottage Industries and Shippers' Union in Shertallai which has a much larger membership than the former; there is the Travancore-Cochin Coir Mats and Matting Exporters' Association with its headquarters at Alleppey; and may be that there are other similar associations as well. None of these associations, to our knowledge, has taken up organisational work of the industry on a voluntary basis for their mutual protection and the promotion of exports. We strongly recommend that they organise themselves into a powerful body such as the *Netherlandesche Cocos Conventie*.

39. Although it is recognised in all the countries which the Delegation visited that no other substitutes serve the purpose of brushing the dirt off the feet as a coir mat, we found that a number of substitutes have made their inroads. Rubber link mats made out of discarded motor tyres are becoming popular because they have the advantage of being exposed to rain and snow without being damaged. They have also the additional advantage of the water seeping through the links and keeping surface dry, whereas a coir door mat exposed to rain will hold the water and drying will be a problem. Rubber mat made out of vulcanized rubber is also competing with our door mats, although because of its cost it is not quite so popular. In the Departmental Stores, especially in the West Coast of America, coir mats imported from Japan are on sale. These mats have a novelty in that they have a brush made out of coconut fibre and they are also reversible. Fabricated from bristle fibre mostly imported from Ceylon and designed as our Sinnet mats, these mats have the advantage of letting water through the chinks and because the brush is formed from bristle fibre in the manner of the brush used for washing bottles, it wipes clean enough, perhaps not as any brush mat will do. Comparatively, this mat is as costly as an M.B. mat, but it is something new. In one of the Warehouses in New Orleans which we visited, we saw a few fibre mats of the "Imperial" type in actual use, but they were not made out of coir fibre. The fibre used is probably the Mexican fibre known as "Ixtle Palma". We have not been able to get confirmation on this point as we did not see such mats offered for sale in any of the Departmental Stores which we visited. The information, however, is of great interest in that a competitive article is being manufactured in South America out of other fibres than coir. Ixtle Palma, we learned, costs only about 40 per cent of coir.

40. In all the countries that we visited, the importers as well as Departmental Stores which handled mats, said that no advertisement was being done since mats were in event being sold as an article of utility. The Departmental Stores which we visited treated door mats as a "casual" item. They, however, agreed that with advertisement, the sales of door mats could be pushed up. In fact, many whom we met said that they did not know about this article and advertisement in Home Magazines would definitely develop the consumer demand for this article. Once the consumer demand is created, the Departmental Stores and the importers would also be interested. Advertisement to this end has to be undertaken by the manufacturers or their organisations or through the Coir Board. Any expenditure incurred in this direction would be richly rewarded by the development of our overseas markets. It would be fatal to adopt the attitude of some importers of mats in foreign

countries that because mats were selling, in any case, no advertisement was needed. We as the supplying country having the permanent interests of the industry at large have not only to maintain our exports, but to hold our position in the markets where there is a demand at present. The two largest consumers of our mats are the U.K. and the U.S.A. Publicity in the U.K. is dealt with in paragraph 72 et seq. So far as the United States are concerned, the problem of trade promotion through publicity is entirely different. The immensity of the area to be covered, the very high cost of national advertisement programme in proportion to the value of the commodity, and the difficulties of organising a publicity campaign would seem to rule out any publicity on the basis of a national advertisement programme. But it is possible effectively to promote sales through advertisement by following a phased programme of publicity, taking one area after another. For this purpose, it would be possible to have two or three States or more as one area. In some cases, it may be that one State will have to be taken as the area to be covered, e.g., Louisiana. The advantage is that each State has its own newspapers and broadcasting system and if we concentrate on each area for one year and then take up another area, in course of time we could cover the entire United States where we have the possibilities of sale. It has also the additional advantage of our being able to test the effect of publicity in each area so that we can decide whether or not this form of publicity should be continued. These considerations, therefore, make us strongly recommend that publicity for our coir products—mats particularly—be undertaken in the United States on a phased programme of, say 5 years, taking one area after another.

Coir Mattings and Rugs

41. Statistics of exports of coir mattings and rugs present a somewhat sad story. The following are the figures of exports from India:—

Exports of Coir Mattings and Rugs to the U.K., U.S.A. Canada and other Continental countries from the Alleppey, Cochin, Calicut and other Malabar Ports

Countries	1947-48	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
U.K.	145,863	207,695	239,970	157,254	130,529	156,122	176,548	135,656	120,718	99,344	74,141
Belgium	595	349	798	633	410	2	8	576	328	601	103
Holland	8	55	15	5	5	114	430	636	39	206	15
France	..	..	..	..	..	4	46	10	..	16	..
Germany	84	171	19	69	..	24	..	61	52	442	1,447
Italy	..	3	..	..	..	53	1,090	225	1,134	761	938
Switzerland	..	..	..	20	93	158	1,038	1,108	172	149	..
Other Continental countries	874	855	903	491	555	1,873	1,078	366	816	2,095	503
Total for U.K. and Continental countries	147,424	209,128	241,705	158,472	131,592	158,350	180,238	138,638	123,261	101,614	77,147
U.S.A.	3,910	4,477	6,474	8,985	5,877	7,887	10,350	11,433	9,621	11,549	7,045
Canada	1,229	1,978	2,634	2,044	2,153	2,908	3,062	3,154	3,703	4,099	3,340
Grand total of foreign exports	152,563	215,583	250,813	169,501	139,622	169,145	193,650	153,225	136,585	117,262	87,532

Among the countries which we visited, the U.K., U.S.A., and Canada are still our principal markets. Whilst our exports to the U.K. have been steadily declining, and the exports in 1957-58 have been only 43 per cent of 1953-54 exports, the U.S.A. and Canadian markets have at best shown no signs of any expansion. In spite of the reduced exports, the U.K. is still our largest single market and absorbs nearly 80 per cent of our total exports to all countries in the world, but our total exports to all countries of the world, have also declined very rapidly. This shrinkage of the markets has been of greatest concern to the manufacturing industry and the Government of India and the Delegation had to make a special study of the causes which have led to it.

42. The Continental countries are themselves manufacturers of coir mattings, rugs and carpets. They manufacture coir mattings chiefly for their domestic consumption. The industries established in these countries are fully mechanised and are producing mattings and rugs of quality and design far superior to those which we manufacture on our handlooms and can offer to the world at large. If several decades ago our mattings woven on handlooms could compete with European countries, when their techniques of production had not been either so efficient or organisation so strong, it was purely on the basis of price, because of our cheap labour. But we can no longer compete with those countries under the present conditions of our production and the high disparity of wage costs which weigh against us. The Continental countries, without exception, have also protected their native industries by high customs tariff, the rates of which vary. It is, therefore, obvious that unless we mechanise and modernise our production, we will not be able to compete with them. France, Holland, Germany and Switzerland have the following rates of duty:—

France

Coir Yarn, 2-ply	..	Free.
Coir rope	..	18 per cent ad valorem plus 8 per cent tax.
Door mats and mattings	..	25 per cent ad valorem plus 20 per cent tax.

Sisal rope, mats and mattings are also subject to the same rates of duty.

Holland

Coir yarn	..	Free.
Mats and mattings	..	24 per cent ad valorem.

Germany

Coir yarn	..	Free.
Mats, mattings and carpets	..	20 per cent ad valorem.
Knotted carpets	..	35 per cent ad valorem.

Switzerland

502 a Coir yarn, 1—2 ply; Mattress fibre; Coir fibre raw	..	Fr. 0.50 per 100 Kg.
503-a Coir yarn, 1—2 ply; Mattress fibre; Coir fibre dyed	..	Fr. 1.50 per 100 Kg.
506 Mats and mattings, raw	..	Fr. 35.00 per 100 Kg.
507 Mats and mattings, dyed or with design	..	Fr. 50.00 per 100 Kg.

In addition to the high tariff, permission is not generally accorded for imports or, where permission is granted, it is subject to a global quota such as is happening in Germany. In any event, the protectionist sentiment is very strong.

43. Apart from import duties, where we can compete, it is only on price, but not on quality; and the consumer who considers price only will go in for our products. The standard of living in the European countries has gone up with the increase in the spendable surplus available with wage-earners. Preference is therefore for quality. In all the countries we visited, we had the benefit of the advice of India's Ambassadors or Consuls-General who have unequivocally stated that unless we gave up our antiquated methods of production, we would not be in a position to compete with the European countries which are highly advanced in the techniques of manufacture, and this, in spite of the high labour costs prevailing in those countries.

44. Before proceeding with a detailed consideration of the coir matting trade in various countries of Europe and the U.K., it would be helpful if we have a perspective of the floor coverings trade in general. Such a perspective can be had from the O.E.E.C. Statistical Bulletin.

Exporting country	Importing countries in Europe (All floor coverings)
U.K.	2,255 Metric tons
Germany (F.R.)	7,053 "
Austria	133 "
Belgium	11,097 "
Denmark	45 "
France	231 "
Italy	464 "
Netherlands	6,529 "
Sweden	146 "
Switzerland	201 "

These figures show that the U.K., Germany, Belgium and the Netherlands are the largest floor covering manufacturing countries which supply to the various countries of Europe.

Italy

45. In Italy, factories manufacturing coir floor coverings are established in Northern Italy. In the Departmental Stores which we visited, we found side by side with coir mattings manufactured in Italian factories those imported from India. Although coir matting formed only a small part of their business in floor coverings generally, we were told that the requirements in coir matting were for 4 shaft Herringbone Weave, in solid colours, such as green, red and blue. Our mattings have to pay 23 per cent ad valorem duty for entry into Italy. If our quality and prices are competitive, the firms which we visited were prepared to import small quantities of coir matting.

46. Factories also make mattings of basket weave type, both for domestic use and for the oil filter industry. It was mentioned earlier in our report under the fibre section that olive oil filters of the Dischi type were being made also from matting. In the olive oil filter manufacturing factory which we visited, we had discussions with the head of the firm as to the possibilities of his importing our matting. He said he had already tried it because of the favourable cost, but had to give it up as the quality was not as good as the matting produced in the factories in Italy.

47. In Italy, we had also the opportunity of meeting the Chambers of Commerce and Trade Associations in various centres and showing to them the samples of our coir products which we had taken with us. Whilst several of the importers present showed interest in our mats, more especially the creel mats of the "Carnatic" type, interest in our mattings was not keen.

Switzerland

48. In Switzerland, we have only a small market for our coir products. We interviewed among others the Swiss Union of Coir Carpet Manufacturers at Langenthal. The President said that coir had certain advantages and that manufacturers in Switzerland still preferred to work with coir if supplies of coir yarn from India would maintain quality. In order to compete with sisal, they also wanted that the price of coir yarn should be lower. The cost of production in Switzerland is comparatively high, and therefore the production charges in relation to the cost of raw material impinged adversely upon the total cost of the finished goods. Coir matting is, therefore, receiving a setback in Switzerland. This can be seen from the figures of imports of coir yarn into that country and from the imports of finished goods from Holland. Moreover, consumers in Switzerland were quality-minded and could afford

better class of floor covering than we could offer or the coir industry in that country itself could offer. The general attitude of the Union in regard to imports of coir products was summed up by the President saying that the manufacturers in Switzerland had during a period of 70 years, created a growing demand in their country for the "formerly unknown coir products" and that coir yarn producers in India benefited by this enterprise on their part. He, therefore, considered it not fair that coir products manufactured in India should be thrown on their markets at "derisive" prices. Moreover, he was of the view that the quality of coir matting made in India was so poor that if they were imported into Switzerland, it would be very detrimental to the trade in coir matting as a whole. Switzerland, however, was importing till 1956-57 small quantities of our mattings and rugs. She has also been importing coir mattings from Holland. The total imports of Dutch made mattings in 1958 amounted to 156,000 kg. as against 348,000 kg. in 1955. This seems to indicate the diminishing popularity of coir matting in Switzerland.

France

49. We had very important discussions in France both at Marseilles and at Paris. At Marseilles, we met members of the Chamber of Commerce, Syndicate of Textile Industries and the Syndicate of Coir and Coir Products. At Paris, we had a meeting with the Textile Union of which Mr. Benoit is the President and Mr. Vigie is the Vice-President. Mr. Benoit is also the Vice-President of the European Coir Manufacturers' Association.

50. Our discussions with these bodies mainly centred on the quality of coir yarn which they imported as this was an important factor in maintaining their manufacturing industry. Their ability to import coir yarn from India depended upon the prosperity of their manufacturing industry. Their suggestions mainly were (1) uniformity in twist should be attained; (2) colour of Quilandy, Beypore and Fine Unsoaked yarns should be improved; (3) standardisation of quality should be effected; and (4) yarn should not be bleached.

51. Regarding import by France of manufactured goods, we were told politely that it was difficult at present, although they assured that they are friendly to India and would consider the possibility of importing manufactured goods also in addition to coir yarn.

52. During our discussions, we learned that the manufacturing industry in France was importing sisal from French possessions in Africa and that coir has been replaced by sisal by over 25 per cent. It was because of currency difficulty that they were obtaining supplies of sisal from the French territory, but the taste for sisal developed and with increased production, prices of sisal had decreased; whereas prices of coir had risen. The taste of the consumers

in France has developed in favour of sisal, but it is claimed that through the efforts of the coir matting manufacturers by intensive advertisement, they are able to maintain their present position for coir mattings.

53. The import duties into France were 25 per cent plus tax 20 per cent for door mats and mattings and 18 per cent plus 8 per cent tax for rope. For 2-ply coir yarn, there is no import duty. An import licence is still needed for the import of coir yarn, but this is only nominal as licences are being granted liberally. The same rates applied for sisal also.

54. While in France, we had the benefit of discussions with Mr. Griere, Ministry of Economic Affairs, France, through the introduction given by our Embassy. On the question of reduction of import tariff on manufactured coir products and relaxation of licensing of imports, all that he could say was that the present was not a propitious moment to consider it, but he assured that it would be taken up as soon as an opportunity arose.

Belgium

55. In Belgium, we met representatives of both importers and manufacturers. The meetings were held, in the consulate. They mentioned that imports of coir yarn into Belgium had declined because of the decline in the coir matting manufacturing industry as there was severe competition from Netherlands. For the same reason, the prospects for our mattings in Belgium market are not bright. Belgium was one of the most important manufacturer of coir carpets, but this trade has practically dwindled out of existence, but Belgium is still one of the largest manufacturers and exporters of other floor coverings, particularly woollen carpets.

Holland

56. Holland is the largest consumer of coir yarn and the largest manufacturer of coir floor coverings. The manufacturing industry is very highly developed in Holland. But these factories are using all hard fibres, such as sisal, jute, etc., in addition to coir. According to market research made by the Bureau for Market Analysis and Sociography on behalf of the Indian Embassy in Holland, there are 46 mills of which 10 worked with more than 25 workers and these concerns consume about 85 per cent of the total import of coir yarn by Holland. The tendency is towards a greater concentration of production capacity by a process of combination. Although cartels are prohibited by law, they have in Holland a powerful organisation of the larger employers by the name of *Nederlandsche Cocos Conventie*, the office of which is in Amsterdam. There are 10 manufacturers who are members of this organisation, but they consume about 85 per cent of the total imports of coir yarn. The functions of this organisation, amongst

others, are (1) joint advertisement and sales promotion in which is included the marketing of the products of its members under a quality mark, viz. "Ster-Cocos", (2) consideration of wage problems, (3) questions regarding buying prices and selling prices, and (4) industrial organisations and research. This organisation is frequently consulted by the Dutch Government Departments on questions of commercial policy relating to coir.

57. We met the Cocos Conventie in their Office at Amsterdam. In addition to Dr. Vorstman, the Secretary of the Association, five members of the Conventie were represented. The stand-point of the Conventie, as presented by Dr. Vorstman, was (a) the Dutch people have been in the mats and matting industry for very many years; (b) they developed the industry through their initiative and enterprise and have been importing more and more coir yarn from India; (c) they do not naturally wish that others cut into their market for manufactured goods; and (d) that their production capacity was sufficient to meet the demands of Dutch people. Whilst being friendly in their disposition towards the Delegation and India generally, they are equally frank in presenting their point of view. The problem which was of interest to them is improvement in the standard of quality of coir yarn which they import for their manufacturing industry. Their complaints regarding the general deterioration in the quality and supply of coir yarn, the emergence of "hundreds of marks" and descriptions which made purchasing extremely difficult are in common with the complaints heard in other countries as well.

58. We have already dealt with in the previous section the suggestions in regard to the improvement in quality through standardisation. We might, therefore, confine our remarks in regard to this matter only to the approval which they expressed of the proposed methods of standardisation. On the point of pre-inspection and certification, we were asked if that would imply any financial guarantee by the Coir Board and we explained to them that provision was made in the Rules for pre-inspection and certification on a voluntary basis only, as a measure of assistance to buyers where such assistance is required. They thought that even where certificate of inspection was issued, it should be open to buyers to claim on their suppliers where the supplies were found not to conform to contract.

59. Another point which they raised was in regard to their having to purchase through the London Brokers. This they said, was necessitated because of the advantages of the certainty of the supplies of the right quality. They also raised the question of guaranteeing runnage. They took strong objection to the Cochin Balers' Association guaranteeing runnage to hop growers but not extending that guarantee to the matting manufacturers in

Holland which was considered illogical. This was the result of misunderstanding as to what the guarantee to the hop growers actually meant. The position was fully explained to them. It was also pointed out that, under the present methods of production, it would not be possible to effect sales on runnage without a tolerance so large that it would have no meaning for the manufacturers of matting. We took this opportunity of showing to them coir yarn spun on the treadle spinning machine which the Coir Board is endeavouring to popularise. The quality of the yarn was appreciated by the members. It was pointed out to them that the popularisation and the universal use in the coir industry of this machine could not be effected all on a sudden, but when this is done it may be possible to guarantee the runnage which they wanted.

60. The total consumption of coir, sisal and other vegetable fibres by the large and small factories in Holland has been as follows:—

1955	1956	1957
	(In millions)	
17.8 Kg.	17.2 Kg.	18.5 Kg.

It is estimated that coir yarn forms about 50 per cent of the total consumption. But information is available regarding the consumption of coir yarn by the larger factories which is as follows:—

1954	1955	1956	1957
	(In millions)		
8 Kg.	8 Kg.	7.3 Kg.	7.6 Kg.

The total consumption of all yarns by these factories was as follows:—

1955	1956	1957
	(In millions)	
14.7 Kg.	14.2 Kg.	15.5 Kg.

61. During the course of our discussions with the members of the Conventie, we were told that coir floor covering was receiving very great competition from other floor coverings, and that this had resulted in recession in the sales of coir floor coverings recently. Moreover, the fashion had grown for wall-to-wall carpeting of living rooms as a result of which coir carpets are used much less. The development of synthetic floor coverings, such as Polyvinyl and Coloviny and plastic tiles has resulted in increasing uses of these floor coverings in corridors, entrance halls, kitchens and even in living rooms and offices. In certain respects, sisal is reported to have taken the place of coir matting, e.g., stair runners. We have given the statistics of

imports of sisal into the various Continental countries under paragraph 31. For convenience of reference, the imports into Holland are repeated hereunder:

1946-50 (Average)	1955	1956	1957	1958
	(In thousand tons)			
8	28	28	29	33

It is also stated that the manufacturing industry has introduced a new processing method for sisal which is yielding satisfactory results. However, it is not possible to draw conclusions regarding replacement of coir by sisal, as sisal floor coverings themselves do not appear to be universally popular. There are conflicting opinions expressed by Departmental Stores regarding the use of coir mattings. One of the largest Departmental Stores to which we were introduced, viz., N. V. Magazijn "De Bijenkorf" had coir mattings and carpets bearing "Ster-Cocos" mark. The head of the Department concerned told us that the public generally considered coir floor coverings are not enough attractive. The chief buyer of another business house said that there was no diminution in the sale of coir products. His customers though that coir floor coverings provided articles which were strong and cheap in comparison with others. This difference in opinion perhaps arises from the difference in the class of customers to which the respective firms catered. However, the imports by Holland of coir yarn and the imports by that country of sisal would seem to offer an index to be rather declining popularity of coir floor coverings and an increase in use of sisal, wholly as sisal matting or in combination with coir. The general opinion amongst the manufacturers seems to be that, provided we could supply coir yarn of better quality such as the sample we showed of the yarn spun on the new machine, coir could still retain the market. Whilst it is true that almost the whole of the coir mats and mattings produced in Holland are being consumed in the country itself, they are also being exported to various countries. The following are the figures furnished by the Bureau for Market Analysis:—

Carpets from Coir by the Yard
(Weight unit—1000 kilograms)

Importing countries	1955	1956	1957	1958
Belgium and Luxembourg	303	227	175	109
West Germany	11	40	108	348
Iceland	28	19	9	..
Sweden	118	60	52	32
Denmark	82	47	61	21
Switzerland	316	200	199	138
U.S.A.	33	49	62	84
Canada	16	8	21	..
Surinam	3	..	..	..
Indonesia	5	..	..	..
France	..	5	..	..
Uruguay	..	5	26	..
Total	933	669	728	746

*Carpets from Coir—(Standard Sizes) included: Mourzouks,
coir carpets, coir mats*

(Weight in 1000 of kilos.)

Importing countries	1955	1956	1957	1958
Belgium and Luxembourg	115	111	143	108
France	22	28	31	26
West Germany	6	18	64	130
Norway	4	10	..	..
Sweden	34	17	11	12
Denmark	13	16	29	10
Switzerland	32	40	24	18
Italy	6	5	16	5
Belgium Congo	6	..	..	..
U.S.A.	6	21	..	20
Canada	5	8	8	..
Neth. Antilles	7	11	12	11
Neth. Guinea	..	3	..	..
Surinam	..	..	..	5
Total	256	303	349	361

From the above figures, it is clear that the quantities exported are not large at present. Exports to West Germany are increasing, but exports to other European countries are on the decline. Exports to U. S. A. have increased. The total quantity exported to U. S. A. in 1958 was 104,000 Kg. (approximately 102 tons). Dutch manufacturers seem to be putting up additional plant and machinery and looking forward to an expansion of the U. S. A. and European markets.

Import Duties.

(a) The import of raw and undressed coir fibre and coir yarn in the Netherlands is exempt from import duties as far as they are intended for use as industrial fibres; consequently for further processing.

(b) For yarns and coir fibres ready for retail sale, i.e., 2,500 metres per winding material or less, an import duty of 15 per cent is levied.

(c) Brushes and brooms—also on rough wood—made of coir are subject to 15 per cent import duty and 5 per cent sales-tax on the invoice amount.

Finished products, viz., carpets, mats, stripes of carpet, etc., wholly or partly made of coir fibre are subject to an import duty of 24 per cent. This rate was introduced to protect the Dutch coir processing industry against dumping of imported finished coir products.

62. The total earnings of workers in the coir industry consist of a basic wage and certain allowances and the total earnings are subject to a ceiling. The average total earnings therefore are respectively for men and women 1.44 Hfl. and 0.91 Hfl. per hour. They work 48 hours a week. The weekly wages therefore are approximately 69 Hfl. for man and 43.7 Hfl. for women. In one of the Dutch factories which we visited we were told that, depending upon the quality of the matting woven, 3 to 5 rolls of matting, one metre wide and 50 metres long, could be woven per day of 8 hours, one man minding the loom.

West Germany

63. In Germany, most of the coir yarn imported is consumed by the mats and matting manufacturing industry; only a small quantity went into rope manufacture. Apprehension was expressed by some Hamburg firms regarding the displacement of coir by sisal. The gentlemen whom we met were satisfied with their suppliers and said that they did not have to make any claims on the yarns or products which they imported. On the question of the effect of European Common Market, they thought that competition from Holland on manufacturing industry in Germany would be serious. If that happens, Germany's current imports of coir yarn from India would be reduced,

but this will be compensated for by a corresponding increase in the imports by Holland.

64. Regarding import duties against India, manufactured goods were charged to an ad valorem 25 per cent duty till 1956, but that rate had been reduced to 20 per cent as a result of the GATT. They also stated that a quota of 1,200,000 D.M. a year was allotted for coir goods, but this being a global quota, full advantage could not be taken for importing goods from India, allotments out of the quota being made quarterly or from time to time. Although coir rug had longer life and there was some buying preference on this account, sisal is in fact being used more and more. As in other countries, synthetic fibres are also taking the place for floor coverings. They realised that once a market for coir is lost, it would be very difficult to regain it and it was because of this that German manufacturers were interested in promoting the sale of coir manufactured goods. The manufacturers in Germany have been working on coir yarn imported from India for many decades and if on grounds of balance of trade between India and Germany or for any other reason, more mats and mattings are imported from India, German manufacturers would naturally lose their interest in that trade.

65. In Frankfurt, we met the members of the Fachverband Koko-sindustrie, which is an association of manufacturers of mats and mattings. Eight members were present, also the Director of the Indian Trade Promotion Centre. The attitude of the Association generally is that Germany cannot object to the importation of manufactured coir goods, but that the choice for India is either to export coir yarn or manufactured goods. The President of the Association said he knew well the problem of unemployment on our coast and sympathised with India, but he desired that we realised that Germany also had similar problems. He said that his Association was investigating if any types of coir goods produced in India could be sold in Germany without any disturbance in the existing industry, but had not come to any conclusion. But for the campaign of advertisement which his Association has started some years ago, the market for coir matting in Germany would have been entirely lost. He frankly stated that his Association would like to keep down the imports of manufactured goods into Germany. Asked if Dutch made mattings were not being imported into Germany, he said that they were small and that even if there are imports now, the position would change very soon as under the Common Market Scheme, wages in Holland would be levelled up to what they were in Germany. Referring to our discussions with Dr. Franz Wilhelm about the possibilities of co-operation between India and Germany in the matter of joint propaganda, one of the members said that there was possibly a misunderstanding. The idea was that through joint propaganda, German

market for coir products may be developed so that more coir yarn may be consumed by Germany. This appears to be a somewhat far-fetched explanation, but we did not consider it important enough to pursue further. We gathered the impression that Germany's real objection was in regard to our mattings. Manufacturers present at that meeting realised quite fully that the balance of trade position between India and Germany was most favourable for India and that in every possible way imports from India into Germany had to be promoted, but not at the expense of the home industry. We have discussed the position with our Embassy. Although no hope of a favourable result was entertained, it may be possible that the allotments under the global quota may be made more liberal for mats and mattings from India. We recommend that the Coir Board make further representations to the Government of India in this respect.

The United Kingdom

66. Our first trade interview in London was with the General Purposes Committee of the London Coir Association. At that meeting, we discussed the case of the manufactured coir products first. It was recognised that there was no good enough substitute for coir door mats and there was no decline in the imports of this article into U.K. from India. On the other hand, imports were increasing. The decline was in the import of coir mattings which was both steady and steep. Our discussions were therefore more in regard to an examination of the causes for this decline and the possible remedies. The following are the figures of our exports of coir mattings to the U.K. :—

1953-54 Cwt.	1954-55 Cwt.	1955-56 Cwt.	1956-57 Cwt.	1957-58 Cwt.
176,548	135,656	120,718	99,344	74,141

The members of the General Purposes Committee felt equally with us very concerned about this decline, because the causes for this decline affected not only the British manufacturing industry but also the imports of coir yarn into U.K. The problem in this respect in England is therefore different from the problem which faces us in Holland and Germany. So far as the U.K. is concerned, it is a common problem of the matting manufacturing industry in India and the matting manufacturing industry in the U.K.

67. The causes for the decline in imports of matting were discussed. The same subject was also discussed by the Delegation with the British Mat and Matting Manufacturers' Association and later with the British Importers

of Mats and Matting also. The causes attributed may be summarised as follows:—

(1) Increase in supply of other cheap substitutes such as sisal matting in pastel shades and more pleasing patterns, regular weave and better appearance generally. Plastic tiles for kitchen floors and halls and corridors are being commonly used in the place of coir matting.

(2) The buying capacity of the people who were formerly the users of coir matting had increased. Miners, particularly, received a much higher income and enjoyed a higher standard of living.

(3) Modern Council Houses which have been constructed on a national scale throughout the country had wooden floors or plastic tiles. So also floors of houses destroyed during the war were demolished and better flooring laid.

(4) Parquet floors are becoming the fashion.

(5) The younger people have a distinct prejudice against coir matting because of its roughness and comparative dullness. They like the softness of feel of other floor coverings.

(6) The predominant influence was the higher standard of living of the people in England. Sisal carpets are used, but not in living rooms where wall-to-wall wollen carpets have become the fashion. The use of sisal matting is largely as runners.

(7) It is possible to obtain immediate delivery of sisal matting manufactured in England from stock and therefore more sisal matting is being readily sold.

(8) Hairchord and rubber-backed runners are also being used.

(9) Sales on hire-purchase by household goods shops have increased as a result of the removal of all Government restrictions on hire purchase from October 1958. It is estimated that the new hire-purchase business of finance houses has been as much as 10 per cent higher. A further increase in the demand for household durable goods is expected. Coir matting will not come under this category, whereas wollen carpeting will.

68. A comparative statement of British home production and supplies of various floor coverings will reveal the extent of home production and supplies to the home market.

(In thousand of square yards)

		* Linoleum		* Printed felt base		Wool carpets and rugs	
		† Production	Supplies for home market	† Production	Supplies for home market	† Production	Supplies for home market
1	2	3	4	5	6	7	
1955-56							
December—February	4,438	2,941	6,147	3,969	3,273	2,882	
March—May	4,824	3,228	8,032	5,817	3,337	3,046	
June—August	4,312	3,088	6,623	4,851	2,847	2,594	
September—November	4,921	3,496	8,914	6,657	4,048	3,719	
1956-57							
December—February	3,995	2,584	6,186	4,226	3,424	3,136	
March—May	4,782	3,168	7,362	5,729	3,816	3,554	
June—August	4,746	3,358	6,113	4,778	3,256	2,996	
September—November	5,020	3,467	7,871	6,137	4,314	4,024	
1957-58							
December—February	† 4,035	† 2,777	† 6,09	† 4,222	3,553	3,213	
March—May	4,918	3,557	6,903	5,109	3,793	3,543	
June—August	4,398	3,129	7,075	5,398	3,190	2,936	
September—November	4,679	3,324	7,087	5,220	4,701	4,515	

* From April 1958 figures relate to calendar quarters.

† Sales by manufacturers.

‡ Average of 4 months December 1957—

March 1958.

[Source : Board of Trade]

* From April 1958 figures relate to calendar quarters. † Average of 4 months December 1957—March 1958. [Source : Board of Trade]

69. In regard to coir matting, it would be interesting to contrast the home production with the supplies for the home market.

(In thousand of square yards)

	Coir matting	
	* Production	Supplies for home market
1955-56		
December—February ..	98	528
March—May ..	111	444
June—August ..	86	465
September—November ..	109	423
1956-57		
December—February ..	82	480
March—May ..	..	..
June—August ..	..	..
September—November ..	90	349
1957-58		
December—February ..	68	318
March—May ..	84	264
June—August ..	60	269
September—November ..	70	283

* Sales by manufacturers.

[Source : Board of Trade]

70. As evidence of the higher standard of living, it was pointed out that wage earners were better off than before. The average weekly earnings of men were £6 3sh. 5 d. in 1947. In 1958, these have increased to £12 14sh. 11d. The figures represent average earnings including bonus, overtime, etc., before deduction of income-tax or insurance contribution. More or less similar increase has also taken place in the earnings of women. The indices for retail prices have been altered thrice since 1947 resulting in a break in continuity, which makes comparison difficult. But it is estimated that wage increases have kept pace with the higher standard of living and the prices between 1951 and 1958. Total consumers' expenditure has increased from 10,047 million pounds to 48,869 million pounds in 1958. On floor covering the expenditure during this same period has increased from 286 million pounds to 428 million pounds. The other group which has registered a larger increase is motor cars, radio and electrical goods. These are clear evidences of more money being available in the hands of the people in the U.K.

71. Discussing the adoption of remedial measures to meet the situation it was thought that large-scale publicity for coir matting was needed as the public had to be brought back to coir and coir minded. Such publicity had to be done in bulk as importers individually would not be interested nor be able to do it. The importers of mats and mattings in the U. K. are either importers pure and simple or are also manufacturers of mats and mattings. Whilst the manufacturers have an association under the name of British Mat and Matting Manufacturers' Association, the importers who are not manufacturers are not organised at all. When we discussed these problems with a fairly large representative meeting of importers—some of them were also manufacturers—we raised the question of the possibility of the U. K. importers organising themselves into a body so as to enable joint operation. There did not appear to be much enthusiasm as, first and foremost, they were particular that the imported prices of coir products should under no circumstance increase. Finally, Mr. M. Pelham Burn, Vice-Chairman of the London Coir Association, suggested that it should be possible to discuss the matter further in the London Coir Association with a view to examining the possibility of organising the U. K. importers under the auspices of the London Coir Association. In any scheme of joint advertisement or marketing, we consider that it is essential to have the co-operation from all sections of the trade. We consider also that the Coir Board should pursue this matter with the London Coir Association and avail itself of the services kindly offered by Mr. Pelham Burn in this connection. Television advertisement pointing out the comparative merits of coir as against other hard fibres should be able to put coir back to popularity. It was mentioned in this context that a firm which advertised fibre mat under his own mark met with marvellous success. But advertisement on a national scale through television or otherwise would be extremely expensive for any individual. The feeling was that general publicity had to be done from the manufacturing side both in India and in England. During the course of the discussion with the British Mat and Matting Manufacturers' Association, opinion was unanimous that it should be possible to run a Public Relations Campaign on the basis of a joint operation by the Coir Board and the the Association. The interest of women purchasing coir matting had to be increased. Although a difficult task, coir matting must again be made a fashionable one and that the advantages of the product must be brought to the notice of the consuming public. If retailers had to be made to stock mattings, the demand factor must be introduced to enable the retailers to do so. There was a consensus of opinion that the drop in sales of coir matting has been going on for some time and that there was not much time left to stop it. It was noticed that the sales of better quality mattings were diminishing with the introduction of cheap qualities. Mention was made of an importer in

England who offered Vycome Fancy Stripe matting, 27"×54" size at round about 41 sh. per dozen ex-wharf. Likewise, Anjengo Diamond Tile, 36"×66" was offered at 116 sh. per dozen ex-wharf. These prices were quoted in May. Selling at such ridiculous prices did not do the industry in India or in England any good whatsoever.

72. When discussing the problems of advertisement, the question was raised as to whether it was not necessary to have certain standards of quality and some trade marks under which the goods may be marketed as, otherwise, the benefit of such advertisement could be misused. We had in our mind the common mark under which the Netherlands Cocos Conventie was marketing as also several other instances such as "Harris Tweed". Finally, we agreed upon discussing the question of advertisement and the form it may take with an Advertising Specialist. The Association members and the Delegation met Mr. J. B. Cameron, Director of Messrs. Mather & Crowther, Ltd., and discussed with him our problems. Mr. Cameron's opinion was that loss of public confidence arising from low quality goods could be a reason for the fall in sales. It could also result from lack of advertisement of the products of an industry. In any case, it was essential first to discover what the task before the publicity campaign was. To find out the position, research was essential. A pilot research should determine the best form of the advertisement campaign. He felt that the goods seemed to have gone out of fashion with the younger generation and would therefore not advise a full-fledged advertisement campaign until and unless the trends had been actually ascertained. The research would be on the established basis, covering area, age group, earning capacity, etc. The retail trade and multiple store would also be covered. So also the question of a common mark.

73. Subsequent to this discussion, Mr. Cameron has submitted to the British Mat and Matting Manufacturers' Association proposals for a market research into coir floor coverings in the U.K. A copy of this has been furnished to the Coir Board. According to these proposals, the cost of the pilot research would be £2,000. This cost is proposed to be shared between the British Mat and Matting Manufacturers' Association and the Coir Board, on the basis of our exports to the U.K. and the British production of matting. On the basis of 1958 figures, the British Mat and Matting Manufacturers' Association has estimated their share as £600 and the Board's share as £1,400.

74. We consider that the research proposed is most essential and has to be undertaken at the earliest possible opportunity. So long as our coir products are admitted into the U.K. free of duty, we share with the British Manufacturers the common interest of promoting the sales. The friendly co-operation from the British Association has to be accepted if we should make

any progress towards recovering the lost ground in the U.K. market. Whether or not it would be possible to regain the market can be ascertained only after a research of the kind contemplated. Mr. Cameron assured us that his firm would not advise embarking upon any large scheme of Public Relations unless the facts warranted such a course and there was reasonable assurance that we could put coir back in its position. Even though many are pessimistic about it, we have to make an investigation into the facts before we could decide against a Publicity Campaign. Such a research has been made on our behalf in Holland. We therefore strongly recommend that the Coir Board take an immediate decision in this matter and provide the necessary funds for the purpose.

75. While on the question of advertisement in the U.K., an interesting feature is the effort being made to help the ordinary shopper to make a satisfying choice of a product from a profusion of consumer goods which compete for his custom. Two organisations of consumers have been started which offer guidance to the consumers in this field. One is the privately organised Association, viz., Consumer Research, Ltd., with a membership of 1,40,000 and this organisation publishes for the benefit of its members a monthly magazine called "Which". It makes a critical appraisal of various types of goods and services offered to the public. The other is Consumer Advisory Council organised by the British Standards Institution. This organisation publishes a "Shoppers Guide" which is sold to associated members for a nominal subscription. These media can be made use of in any scheme for a campaign of advertisement.

The United States of America

76. The U.S.A. (Continental) is a very vast country with an area of 3.02 million sq. miles and a population of only 150.7 millions (1950 census). Most of the areas of high density are to the east of the Mississippi and north of the Ohio and Potomac rivers. The most sparsely populated areas (under 2 persons per sq. mile) are in the Western half of the United States. It is along this Western Coast of the U.S.A. lie the hop fields where our coir yarn is used for hop tying. About 60 per cent of the total population live in the urban area. It is reckoned that the largest Cities in America are 20 in number. Of these, we visited New York, Chicago, Detroit, Baltimore, Houston, New Orleans, Seattle, San Francisco, Portland and Los Angeles. The latter four Cities are on the Pacific Coast of U.S.A.

77. For facility of reference, our exports of coir mats, mattings and rugs, coir yarn, coir fibre and cordage and rope of vegetable fibre to the U.S.A. are repeated below :—

Year (July-June)	Coir Mats Cwts.	Coir Matting and Rugs Cwts.	Coir Yarn Cwts.	Coir Fibre Cwts.	Cordage and Rope of vege- table fibre Cwts.
1953-54	35,064	10,350	41,439	..	..
1954-55	35,224	11,433	42,332	56	217
1955-56	42,969	9,621	52,701	30	281
1956-57	41,012	11,549	60,789	20	117
1957-58	39,390	7,045	84,621	..	..

We have already dealt with the position of the U.S.A. market for coir mats and competing articles. In all the Departmental Stores which we visited, coir mats are treated only as a "casual" item. There is practically no advertisement whatsoever for this product. At the same time, we were told that it was possible to develop our sales of door mats through advertisement and participation in International Fairs and Exhibitions which offered great opportunities for expansion.

78. One common feature of the demand for door mats is preference for plain mats. This is because of the fact that coloured designs printed or woven on mats were not fast and some of the Departmental Stores which we visited mentioned that consumers complained that the dyes from printed door mats were transferred on wet feet and spoiled their carpets. However, we found in some places buyers showing some interest in our thin Creel mats of the "Carnatic" type. We felt that the consumers in America are not fully aware of the articles which our industry can supply. Individual effort on the part of exporters to back any programme of advertisement or participation in fairs and exhibitions by the Coir Board should bring in results, more especially in the West Coast of the U.S.A.

79. A new development in our mats line is possible. One of the important firms (Electronics Company, 8352, Brochurst Ave., Anaheim, Calif.) is contemplating the utilisation of coir mats for golf links. Mr. Hallamore, President of this concern, interviewed us when we were in Los Angeles and made enquiries regarding the supply position and prices. In

outline, his idea is to have coir mats dyed green and laid on the golf links as substitute for natural grass. For this purpose, mats have to be made in large enough sizes. This project is still in an experimental stage. We have arranged for the supply of samples to Mr. Hallamore. Regarding the question of bulk supplies, he desired that they should be routed through one channel which can be relied upon, as it would be impossible to deal with many and maintain uniform quality. He was favourable to the suggestion that they could be made through a Syndicate of manufacturers here, but he did not wish that they should be routed through the State Trading Corporation or any Governmental Agency. It is too soon to report the progress of the project as this can be done only if the experiments proved successful.

80. We wish now to consider the market in U.S.A. for our matting. As in other countries, there is a significant drop in the off-take of mattings by the U.S.A. We have had discussions with importers of mattings in New York. Most of the Departmental Stores throughout the U.S.A. were obtaining their supplies through importers only. Very few were buying directly from exporters in India. The reason stated was that there were too many exporters and they did not take the trouble of choosing those who were reliable. Another reason put forward was that because of the small quantity consumed, the Stores did not want to maintain any large stock. They, therefore, preferred to obtain their supplies at short notice through the importers. It was mentioned as a difficulty that immediately a new design was put on the market, it was copied and exporters cheapened it and made it not worthwhile for importers or Departmental Stores to handle that line. The demand in the U.S.A. is for something new always.

81. On the question of the fall in demand, without any exception, importers and Departmental Stores stated that consumers in America having substantial spendable earnings sought for a better class of floor covering which had a better appearance and is smoother and softer. The Netherlands is advertising sisal matting and is also exporting to the U.S.A. In several Departmental Stores, sisal mattings manufactured in the Netherlands are on sale as large size rugs. In the International Mart at New Orleans in which 17 countries were participating and in which goods were exhibited for the benefit of merchants from other centres, we found a large number of floor coverings other than coir. We found to our surprise that India has not yet decided to participate in this Trade Mart. Considering many other countries much smaller than ours keen on developing their export trade are participating in this Mart, we think that it is very necessary that India should also make arrangements for participating in this Trade Mart. In which case, coir and coir products will also have a chance of being better known in the areas

which are fast developing. In this connection, we may mention that New Orleans is a fast developing City in which the business community is looking forward to, and working for, a great future. This City has increased its buying income by about 400 per cent over pre-war. With large investments in new and expanded industrial facilities and with extensive natural resources in oil, sulphur, natural gas, etc., this centre should be regarded as affording immense possibilities for our products. New Orleans is the key to the vast markets of the entire Mid-Continent area of the U.S. which has 55 per cent of the total area and holds over 40 per cent of the population. The Chamber of Commerce of the New Orleans areas would be prepared to assist exporters here. The International House in New Orleans is also working for the promotion of the trade and it is a non-profit institution. Trade associations interested in the promotion of any line of trade could enlist themselves as members of the International House. It has published a Directory of importers and buyers of imported merchandise. For details in regard to membership and other matters, Trade Associations interested in the development of the coir trade may write to the World Trade Department of the International House, New Orleans, 12, L.A., or to the New Orleans Chamber of Commerce.

82. In Chicago, an International Trade Fair, and Exposition was sponsored by Chicago Association of Commerce and Industry. We had discussions with Mr. J. H. Coulter, Chief Executive Officer of the International Fair, regarding the possibilities for promoting the sales of coir matting. Launching an advertisement campaign in the United States was extremely costly. In any case, it would be necessary to take the opinion of advertisers or Management Consultants. We had an interview with Messrs. Booz Allen and Hamilton, Management Consultants, 135 S. La Salle Street, Chicago-3, to whom we explained our problems. They advised that considering the size of our industry and the present off-take of its product by the U.S.A., the best method which they would suggest would be the establishment of Press Relations by write-ups in weekly newspapers and journals. They were very helpful and said that they would be willing to send up proposals for the Coir Board's consideration, if asked.

83. Chicago also has a Merchandise Mart in which manufactured products from various countries are exhibited. In the Floor Covering Section of this immense building covering 93 acres were exhibited a very large number of woollen carpetings and also innumerable floor coverings made of synthetic materials, Corolan, Vinyl, etc., plastic tiles and boards, many grades of linoleum in an amazing range of designs and varieties. There was, however, no coir floor covering, although Dutch made sisal rugs and even grass

matting mats had been exhibited. We consider participation in this Mart must provide us good contact with the trade. It would undoubtedly be one of the sure means of advertisement.

84. On the West Coast of the U.S.A., we were told that interest was shown in mats and mattings in the San Francisco Trade Fair, but that the interest which the Exhibition has created had not been maintained or backed by stock of goods. In order to promote sales of our mattings and rugs, it is not enough if we merely participate in Exhibitions. It is also necessary to support the exhibits by actual stock. This selling job has got to be done by the trade and unless the business community also takes a keen interest, the effect of participation in Exhibitions by the Coir Board would be lost. If properly designed, we were advised that mattings could be used for boats. In homes also, new uses could be found. It was suggested that experiments should be made whether coir matting could not be used for blinds for large windows folded in the shape of slats. For these and other matters, it would be useful if the trade got in touch with designers.

85. At Portland, keen interest was evinced in our visit to that City. Mr. Harold K. Cherry, Manager, U. S. Department of Commerce, and Mr. Egil E. Krogh were members of a delegation which visited India in 1957 and whom the Chairman and another member of the Coir Board met at Coimbatore. Mr. Cherry had sponsored a meeting with the business community which afforded us opportunities of contacts. At the time we visited this City, they were celebrating the 100th Anniversary and in that connection, an International Exhibition was also being arranged. India, however, did not participate in this exhibition. On going through the Exhibition grounds, we shared the regret of the sponsors of the Exhibition that those engaged in the coir mats and mattings trade, did not participate in it. If they had taken the initiative, they would have been in a position to cover the entire area of the grounds of the Exhibition measuring some 200 acres with our coir mattings.

86. The Government of India have already a Trade Centre in New York. It is reported that a Trade Centre is to be opened in San Francisco also. These Trade Centres, if they are suitably manned and adequately financed, can render immense service for the promotion of India's export trade. So far as the Coir Industry is concerned, we were advised by the officers concerned that it was essential to have stocks available for sale corresponding to the articles exhibited as, without ready stocks, interest of consumers could not be sustained. We were also advised that price was not an important factor, at any rate, not quite so important as quality and newness of design. The impression which we gained on visiting the various cities in America

was that considerable market research has to be done and it should be followed by adequate advertisement. Although it is true that coir mattings are not very much in favour, we consider that there is still scope for trade promotion if the trade in India could offer a better quality material with more modern designs in colours which are reasonably fast to water. In some of the Departmental Stores which we visited, we were shown how the colour on our mattings could be rubbed off with a wet towel in contrast with the Dutch-made mattings. Colour fastness is only one factor. The appearance of the matting itself is important. Dutch mattings are made on power looms and, in appearance, were many times better than our mattings. Of course, Dutch-made sisal mattings looked even better and it is because of this that buying preference was in favour of sisal. There is, therefore, great need for the improvement in quality of our products if we are to be in a position to develop sales in a market where consumers have a sense of discrimination. We have therefore to stress the importance and urgency of introducing power looms if we should expand our sales in those markets which are open to us. The Netherlands are already exporting coir mattings and we were told that they are looking forward to an expansion of their trade. Once these markets are lost to us because of the superiority in the quality and selling organisation of our competitors, it would naturally be a well-nigh impossible task to re-enter those markets. We, therefore, strongly recommend that the industry should mechanise and modernise production and, because the interests between the employers and workers are common in this matter, we trust that there would be full co-operation between them. We also recommend that the Government of India and the State Governments concerned should encourage and render every form of assistance possible in this direction if private enterprise is forthcoming. Trade promotion would then be more effective and fruitful and will repay the amount spent on it.

Canada

87. In Canada, we met the business community at Toronto, Montreal and Vancouver. Our contacts were mainly with the Boards of Trade, as Chambers of Commerce are known in this area. In these places, we found that other floor coverings had almost nearly ousted coir matting, although coir mattings made in India were also on sale. Being in the Commonwealth, we enjoy preferential tariff and certain other advantages in Canada. Floor coverings made of wool, sisal, plastic and vinyl products are the principal items on sale. Among the plastic rugs, we found inlaid plastic rugs which gave the effect of superior wollen floor covering. Plastic rugs padded with jute fibre produce a felt effect and these rugs were also very popular. Opinion of sellers in Canada was that coir mattings can improve in sales to some extent

if faster and brighter colours could be used. In all these centres, we exhibited the samples of coir products which we had taken and, although interest was evinced, opinion regarding expansion of sales carried with it a tone of diffidence. The absorption of coir mats by Canada had increased during the past 5 years and has remained steady at about 10,000 cwts., but the off-take of mattings has been rather poor. The fall recorded is not significant; it is therefore, possible that with advertisement and more selling effort, we could promote the sales of coir mattings in Canada if we could produce mattings of quality.

88. Montreal is the commercial centre of Canada. At a meeting arranged by the Board of Trade of Montreal, we exhibited samples of coir products to the businessmen who had gathered. We were told that coir products are not sufficiently known in Montreal as there is no advertisement for these materials. In Vancouver, the Delegation was very well received and, as arranged by our Embassy in Ottawa, Dr. D. P. Pandya, L.L.B., Barrister-at-Law, introduced us to a very large and influential section of the citizens of Vancouver. We had also a meeting at the Vancouver Board of Trade. The businessmen were more interested in coir yarn for supply to the hop fields. The complaint made was similar to those we heard elsewhere, viz., the confusion created by too many nomenclatures and descriptions. Among the manufactured products, interest was shown in car mats of the Carnatic type.

89. Vancouver is a fast developing city and the possibilities for expansion of sales of our coir products is possible.

SECTION IV—COIR ROPE

90. Among the countries which the Delegation visited, only the U.K. and U.S.A. have been importing regularly some quantities of rope, as the following figures of exports will show. Italy had imported 160 cwts. in 1955-56 and Germany 44 cwts. in 1953-54.

Names of countries	1953-54	1954-55	1955-56	1956-57	1957-58
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Italy	..	..	160	..	..
Switzerland	..	..	..	..	..
France	..	..	..	..	..
Belgium	..	..	..	..	..
Holland	..	..	..	..	..
West Germany	..	44	..	..	..
U.K.	..	296	665	644	556
U.S.A.	..	..	217	281	117
Canada	..	..	..	..	..

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91. Although coir is recognised to have certain properties to withstand moisture by contact with sea water, other vegetable fibres such as Manila Hemp, and Sisal are preferred. The European countries and the U.S.A. which consume large quantities of Manila Hemp and Sisal for rope making demand a high standard of quality. In fact, they have their own roperies. There does not therefore appear to be any possibility for developing a market for this product in the countries visited by us.

SECTION V—PRODUCTION METHODS—IMPROVEMENT IN EQUIPMENT AND TECHNOLOGY

92. In this Section, we propose to give an account of the improved production methods, equipment and technology, adopted by the countries, in the processing of coir and manufacture of coir products and the machinery available for mechanisation. Some of the industries which we visited have also suggested new lines for our industry and these are also included in this Section.

Decortication and Cleaning of Fibre

93. In Hamburg, Messrs. Thorwald Classen, G.M.B.H., Maschinen Fur die Kokos Garn Verarbeitende Industrie, are manufacturing machines for the decortication of coconut husks and the extraction and cleaning of fibre. Detailed specifications and illustrations in regard to the machine are given in a Catalogue which is available for perusal in the Office of the Coir Board. It was mentioned that a number of machines had been supplied to Kenya, Zanzibar and other coconut-growing areas.

94. In the U.K., we met the representatives of Messrs. E.W. Downs and Son (Tropical), Ltd., Glemsford, Suffolk, at the High Commissioner's Office in London. They are manufacturing machines for dehusking which are manually operated. They claim that 600 to 700 coconuts can be dehusked in an hour by two men. They are also manufacturing a decortivating plant which is in two parts consisting of a mill and sifter. The mill bursts open the husks and the sifter completes the opening and removes the greater part of the dust and short fibres. The clean fibre is discharged from the outlet of the sifter. Dust and short fibres are discharged through the screens. There is considerable quantity of dust; it is stated that there would be 15 cwts. from each ton of husks processed. The dust and the waste will form the raw material for a Board industry. There is also a final cleaning machine the operation of which is by beating the fibre with the swinging beaters as the fibre passes through.

95. These mechanical contrivances can be of great help in areas where we have not got the traditional methods of producing fibre and it is our view that the introduction of these machines in those areas will develop

the production of coconut fibre which can be used both as bristle fibre and mattress fibre, both of which will be required for other fibre industries. This will assist the employment of a large number of people in a new line of industry which will also be productive of wealth to the country.

96. On our return to India, we had to touch Tokyo and we took that opportunity of visiting Messrs. Sato Bamboo and Rattan Machinery Works Co., Ltd., Omiya, Saitama, Japan. This is a machinery manufacturing firm which produces simple machinery for decortivating coconut husks, cleaning coir fibre, spinning coir fibre into yarn, rope making, etc. A copy of the illustrated catalogue issued by this firm is available with the Coir Board.

97. All these machines are of interest to us; particularly the spinning machine. While the decorticator and cleaning machine are operated by power, there are two types of machines for spinning coir yarn. One is a treadle type, manually operated and the other is power-driven. The treadle machine has some improvements over the type of machine which the Coir Board has supplied to various institutions and on which experiments are being carried on in the Research Institute. The improvement consists particularly in the provision of a gear which will regulate the number of twists. The gear ratio determines the type of yarn. By means of this gadget we could obtain both hard-twist and soft-twist yarn. The advantages of this machine over the spinning wheel now in use in the industry in India have been mentioned earlier. Chief among them are (1) we can get continuous lengths of coir yarn, evenly spun, because as the yarn is spun it is automatically wound on a cop or spool; (2) there is less of hairiness and in every way, the yarn has a better appearance; (3) it occupies very small space and can be put down on the verandah of the cottages in the coir spinning districts and worked by day and by night or by shine or shower; (4) as the spinning wheel now in use could not be worked during rains, and as it requires a length of yard for the movement of the spinners and the spinning wheel, these difficulties are overcome by this new type of machine.

Dyeing

98. Improvement in our dyeing methods in the production of quality coir matings has become an urgent necessity for the promotion of exports. We have, in this connection, visited two factories manufacturing machines for dyeing textiles. The first was in Belgium, Messrs. A. Annicq in Renai. In this factory, we saw the processes employed for dyeing various types of yarns, such as wool, jute and sisal. Their machines are fitted for dyeing yarns in cheese—form under high pressure. Whether coir would lend itself to this form of dyeing has not been tried by the firm. The necessity

and the practicability of making coir into cheese were obviously some of the difficulties. The firm however undertook to try their method of dyeing if we can supply them with samples of coir yarn. Since our return, the types of yarn for dyeing have been sent to the firm. The results are awaited.

99. Our High Commission in the U. K. had arranged with the Associated Agencies (Manchester), Ltd., Manchester, for our visit to Messrs. Samuel Pegg and Sons, Ltd., Leicester, a firm of manufacturers of dyeing machinery of various types. We examined several types of dyeing plant and found that the equipment for loose-stock dyeing as most suitable for our purpose. We have obtained illustrated catalogues giving specifications and also approximate prices for the machinery. Details regarding this plant will be sent by the manufacturers through the India High Commission in London.

100. While in Germany, through the courtesy generously extended to us by Messrs. Bayers, we visited their factory at Leverkusen where Dr. Winterhalter, Chief of the Export Organisation, provided us facilities to visit their laboratory in which research on bleaching and dyeing were being conducted. We held discussions with Dr. Liebhaber who had been for many years conducting research on coir and other vegetable fibres and the methods adopted for bleaching and dyeing. In regard to bleaching coir, he admitted that sulphur was the cheapest, but had certain defects. The best results were obtained by bleaching with hydrogen peroxide, but this was costly. "Decrolin" was considered to be both effective and comparatively cheap. Dutch manufacturers were said to be bleaching coir yarn with "Decrolin" before dyeing.

101. In regard to dyeing, Dr. Liebhaber was not in favour of pressure dyeing. He was of the view that it was easier and more effective to bleach or dye coir yarn than coir fibre. For the purpose of dyeing coir yarn, "Isolan" and other fast dyes could be used. What was needed for dyeing coir yarn is a quicker circulation of the liquor over a longer period of time under low pressure. We saw in the laboratory a test machine worked with a propeller. Dr. Liebhaber kindly agreed to give us samples of dyed and bleached coir yarn together with the recipes, samples of dye-stuffs, etc. Information on these points has been passed on to the Coir Board's Director of Research and action is being taken by him. The type of equipment required for dyeing suggested by Dr. Liebhaber was seen by us at Messrs. Samuel Pegg and Sons, Ltd., Leicester. Reference to this has already been made.

Fibre Industries.

102. Under Section I (Coir Fibre) of our report relating to fibre, results of our visit to certain factories in Germany where fibre is being made into insulation pads or it is used in the manufacture of rubberised mattress have

been given. It would be most useful to develop these industries as India has great potentialities for development, both within the Kerala State and in other States of India. Since this has been mentioned in detail in an earlier Section, we do not wish to repeat but would draw attention to paragraphs 11 and 12.

103. Details regarding these items of machinery may be obtained by the Coir Board from Messrs. Schantung Handels, A. G., Hamburg, through our Embassy in Bonn.

Mat and Matting Looms

104. The Coir Board has already recommended that a fully equipped pilot plant for the manufacture of mat and matting should be installed in the Central Coir Research Institute. We have also seen in the earlier paragraphs that the mats and matting manufacturing industry is fully mechanised in the European countries, in the U. K. and in the U.S.A. We have referred previously to the urgent necessity of our adopting improved methods of production, should we be able to compete with other producing countries in the markets which are available to us.

105. During our visit to Germany and the U. K., we had the benefit of examining three factories which produced modern looms. In Germany, we visited the following factories :—

- (1) Messrs. Thorwald Classen, G.M.B.H., Maschinen Fur die Kokos Garn Verarbeitende Industrie, Hamburg.
- (2) Messrs. Bergendorfer Eirenwork A.C., Astra-Worke, Hamburg, Bergdorf.
- (3) Messrs. Albert Jurgens, Emsdettan.

106. Whilst in the first two factories, we did not see looms actually at work, we saw the looms manufactured by Messrs. Albert Jurgens in operation in one of the largest and up-to-date matting manufacturing factories in Holland. These looms are recommended by manufacturers as incorporating up-to-date techniques in weaving. It is stated that these looms can produce 3 to 5 rolls of matting in a day of 8 hours. Reference to these looms has already been made under Section III relating to mats and mattings.

107. In England, we visited Messrs. Wilson and Longbottom, Ltd., Barnsely, in fulfilment of a correspondence between the Coir Board and the firm. This firm manufactures looms for the weaving of coir and sisal matting and is one of the well-established firms supplying machinery to manufacturers of mats and mattings in England. We saw the looms manufactured by this firm at work, in one of the largest factories in England, Messrs. Green Brothers, Ltd., Hailsham. Detailed specifications, blue-prints and photographs have been furnished to the Coir Board. Looms manufactured by this firm

have also been supplied to Kenya on which sisal matting is being woven. The looms have been modernised with a view to high production and safety of operation. The looms are sturdy.

108. A study of the comparative merits of the looms should be made by the Director of Research with the assistance, if necessary, of a Textile Engineer.

Braiding and Sole making

109. The Coir Board was in correspondence with Messrs. Douglas Fraser and Sons, Ltd., Arbroath, where machinery is manufactured for braiding jute and other textile yarns. We were advised that this improved braiding machine would be most useful for coir also. Machine braiding is not new to the coir industry here and, in fact, we have a few power-driven braiding machines. But the one that we saw with Messrs. Douglas Fraser and Sons is of a new type. It is now used for braiding jute twine. Braids made of jute twine are being further fabricated as jute soles for canvas shoes. We were advised that this braiding machine has the advantage of being automatic and practically fool-proof, in that whenever there was a breakage in the yarn, the whole machine would stop automatically. This is of special interest to us in the coir industry because it can open a new avenue for the industry. Together with their machines for making soles—press and stitching machines—we envisage the possibility of manufacturing coir soles and put into the market a cheap foot wear which would be within the reach of the population in India and in other countries where cheap foot wear is needed. Soles made of coir yarn have certain advantages. They are light, resistant to moisture, non-slippery and hard wearing. This is a new line of industry which can be started in India and it would also open up new uses for coir yarn. The immense possibility which such an industry deserves to be fully exploited. We strongly recommend this to the Board.

Conclusion

110. We have given in an Appendix a list of the individuals whom and institutions which we visited. We are grateful to all of them for the warmth of friendliness with which they received us at various centres. We had the benefit of frank discussions with them in regard to the mutual problems facing the coir industry. In some places, although meetings commenced with some caution, we have been eventually able to understand each others' points of view and create mutual goodwill. One of the important results which this Delegation has been able to achieve is the creation of a better understanding and goodwill between ourselves and all those interested in the industry abroad. We should like to make special mention of the interest shown in our Delegation by the London Coir Association and the

British Mat and Matting Manufacturers' Association. It is hard to realise the fund of goodwill which exists between us. Apart from business contact, the sentiments of old cultural ties and friendship still continue. The London Coir Association was kind enough to give us an opportunity of meeting a wider section of the business community at a reception which they had arranged for us at the London Guild Hall. We are deeply indebted to the Chairman and members of the London Coir Association for the privilege which they have accorded us.

111. We have referred in the appropriate places about our visits to our Embassies and Consulates in various countries. We are grateful for the uniform courtesy extended to us. We would be failing in our duty if we do not acknowledge with thanks the assistance rendered by individual officers of the Embassies and Consulates and kind directions we received from our Ambassadors and Consul Generals. One of the points which was stressed in all places was that our Embassies have not the machinery for attending to trade development and are handicapped in many ways in assisting such delegations as ours. They also referred to the importance of opening more trade centres like those we have in New York and Frankfurt. Considering the size of the U.S.A. and the number of Cities where the prospects for our exports lie, there is definitely the need for more trade centres being opened. Such trade centres have to be equipped in the same manner as the American International Trade Marts, if our export promotion efforts should be able to make an impression upon importers and consumers in the U.S.A. It is not possible for any particular industry to make a recommendation in this regard, but if such trade centres are opened, many of our industries in India can be expected to gain immense benefit thereby.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Coir fibre

1. Because of its superiority over coir fibre produced elsewhere, our coir fibre could hold the Italian market, provided exporters paid attention to conditions of cleanness, quality and staple length. "Movil" is a synthetic fibre produced in Italy which can develop as competitor to our coir fibre (paragraph 10).
2. With the development of the olive oil pressing industry in various countries in the south and east Mediterranean, there is scope for increasing consumption in Italy of our coir fibre (paragraph 11).
3. Several industries in the continent and the U.K. consume mattress fibre and bristle fibre imported from Ceylon and other countries.

Opportunities exist in several States in India for the production of coir fibre and the development of similar fibre industries (paragraphs 13 to 17).

4. We recommend to the States concerned to organise the extraction of fibre by simple mechanical means and the fabrication of such fibre into a variety of products such as, fibre matting, rubberised coir mattress, etc. Besides being able to supply these materials to various industries in India, our railways and motor coaches and cars will find an extremely useful material for upholstery purposes (paragraph 18). By developing these industries, we shall also be able to build up a new line for the coir industry which has become absolutely necessary because of the many difficulties which hinder the progress of our traditional coir matting industry in Kerala.
5. We recommend that the Government of India also should take a live interest in this matter and make suitable provision in the Third Five-Year Plan (paragraph 18).

Coir yarn

6. Belgium, Holland, France, Germany and Switzerland use almost the entire quantity of coir yarn imported by them in the manufacture of floor covering, whereas in Italy 60 per cent is used in the manufacture of oil filters. The United Kingdom now use most of the yarn imported by her for hop-growing. Likewise the United States of America (paragraph 20).
7. The fall in the imports of coir yarn into the U.K. over a period of 10 years is very significant. At present British hop fields are on main-stay (paragraph 19).
8. The complaints which we heard regarding the supplies of coir yarn are—(i) that importers were bewildered by the number of grade names for which quotations are now being made by a large number of new exporters; (ii) that there is a gradual deterioration in the quality of coir yarn supplied; (iii) that supplies of coir yarn were irregular because of the irregularity of supply of baling hoops; and (iv) that damage was caused by occurrence of hoop-rust (paragraphs 22 to 32).
9. Complaints of shippers having shipped coir yarn below quality were few (paragraph 30).

10. The following are our recommendations to remedy the difficulties complained of:—

- (i) Difficulty relating to multiplicity of grades can be overcome only by standardisation of quality. Buyers overseas have favourably received our proposals to standardise grades on the basis of boxed samples. We recommend that the Coir Board should take immediate further steps in this matter (paragraph 23).
- (ii) The rapid popularisation of the new type of treadle spinning machine is recommended as the yarn spun on this machine has been approved of all buyers. For this purpose, a planned programme is necessary whereby the target of complete replacement of the existing old spinning wheels can be achieved within a period of not more than 5 years. There is also need for propaganda, finance and provision of spare parts (paragraph 28).
- (iii) A careful study of the problem of hoop-rust has to be made by the Central Coir Research Institute (paragraph 29).
- (iv) We also recommend to the Government of India that suitable arrangements be made with the Steel mills concerned to pay special attention to regular supplies of steel hoops to the coir yarn baling industry (paragraph 29).

11. Whilst it was conceded that the setting up of machinery for pre-inspection may be helpful where parties desired such pre-inspection, opinion was unanimous that it should not be made compulsory as it would not conduce to the healthy growth of confidence between the seller and the buyer on which ultimately trade relations depend. No case has been made out for such pre-inspection and we cannot recommend this course as a remedial measure (paragraph 30).
12. Unless the hop-growers are assured of coir yarn of sufficient strength, there are possibilities of substitutes, such as, paper twine, coming in. Exporters of coir yarn have to bear in mind the importance of the hop-growing industry in the U. K. and the long-term interest of our coir industry (paragraph 31).

Coir Mats

13. The manufacture of coir products in the countries visited is carried on by the aid of power (paragraph 34).

14. Our exports during the past 5 years of coir mats have been satisfactory, but there is no room for complacency on our part (paragraphs 35 and 36).
15. Supply of cheaper quality of door mats is not considered a healthy tendency (paragraph 36).
16. It is essential that exporters should organise themselves in a manner which will ensure both quality and reasonable price. We recommend that the model of the *Nederlandesche Cocos Conventie* for adoption by our trade associations (paragraph 38).
17. Although it is recognised that nothing serves so well as a coir mat, a number of substitutes have made inroads (paragraph 39).
18. No advertisement is being done in the U.S.A., since mats are, in any case, sold. Departmental Stores and retailers treat door mat as a "casual" item (paragraph 40).
19. With sufficient publicity, there is scope for promotion of sales of coir mats and therefore we recommend a phased programme of publicity taking one area after another in the United States (paragraph 40).

Coir mattings and rugs

20. The continental countries are themselves large manufacturers of coir mattings, rugs and carpets, mostly for their domestic consumption (paragraph 42).
21. Production in those countries is now fully mechanised. If several decades ago we could compete with those countries on the basis of price, because of our cheap labour, it is not possible to do so now when the technique of production in those countries has become so efficient and marketing organisation strong and scientific. Productivity of our labour is very low. It is, therefore, obvious that unless we mechanise and modernise our production, we will not be able to compete with them (paragraph 42).
22. All countries in the continent and the U.S.A. have varying rates of duty on coir products imported into them (paragraph 42).
23. The standard of living in the U.K. and the European countries and in the U.S.A. and Canada has gone up. Preference is, therefore, for quality, irrespective of price. Only the class of consumers who considers price will go in for our products (paragraph 43).

24. In Holland, manufacturers of coir products have a powerful organisation by the name of the *Nederlandesche Cocos Conventie* (paragraph 56).
25. The problem which is of interest to the manufacturers in Holland is improvement in the standard of quality of coir yarn (paragraph 57).
26. The Dutch manufacturers have strong objection to balers in India guaranteeing runnage to hop-growers, but not extending that guarantee to manufacturers (paragraph 59).
27. Out of the total consumption of coir, sisal and other vegetable fibres by the floor covering industry in Holland, it is estimated that coir forms about 50 per cent. The proportion of coir used in the major factories is less (paragraph 60).
28. It is not possible to draw conclusions regarding the extent of replacement of coir by sisal. The general opinion amongst manufacturers is that provided we could supply coir yarn of better quality, coir could still hold the market (paragraph 61).
29. In all countries of the West, sisal is being used more and more and floor coverings made of synthetic fibres and plastics are also offering competition to both coir mattings and sisal mattings (paragraph 64).
30. The decline in the import of coir mattings into the U. K. has been both steady and steep. The causes for this decline are of importance not only to the British manufacturing industry but also to the importers of coir yarn in the U.K. They are of vital importance to us as exporters of coir yarn and coir matting. So far as the U.K. is concerned, therefore, it is a common problem of the matting manufacturing industry in India and the corresponding industry in the U.K. (paragraph 66).
31. Many causes have contributed to this fall (paragraph 67).
32. A pilot research to find out the present position is considered essential and we recommend that it should be undertaken at the earliest possible opportunity (paragraphs 72, 73 and 74).
33. It is desirable that the U.K. importers of mats and matting who are not manufacturers have an association of their own which will enable joint discussion and consultation on matters of common interest (paragraph 71).

34. There are possibilities for the promotion of sales of door mats in the U.S.A. by following the line of advertisement earlier recommended (paragraph 77).
35. A new development in the mats line is possible in the U.S.A. and it is being studied (paragraph 79).
36. In the U.S.A. markets, price not being the important factor so much as quality, we have to stress the importance and urgency of modernising our production if we should be in a position to compete with other producing countries. We strongly recommend that the industry should mechanise and modernise production. The Government of India and the State Governments concerned should encourage and render every form of assistance possible in this direction (paragraph 86).
37. In Canada, it is possible to promote the sales of our coir mattings if we could produce mattings of quality. India has certain tariff advantages in Canada (paragraph 87).
38. We suggest that the Government of India participate in several Merchandise Fairs and International Trade Fairs opened in various Cities of U.S.A. for the promotion of the import and export trade (paragraphs 81 to 85).
39. We also suggest that the Government of India consider the question of opening more Trade Centres (paragraph 86).
40. International fairs and exhibitions in the U.S.A. offer a great opportunity for the trade to expand their sales provided there is sufficient enterprise and individual initiative on the part of our exporters (paragraph 85).
41. The various machines in connection with the decortication and cleaning of fibre described in paragraphs 93, 94, 95, and 96 are of interest to us.
42. The new coir yarn spinning machine with gear adjustments for making hard and soft twist yarn is of special interest. We recommend that the Central Coir Research Institute attends to this matter urgently (paragraph 97).
43. We recommend that immediate steps should be taken to set up the pilot plant already recommended by the Board (paragraph 104).
44. Private enterprise should come forward and modernise production methods without waiting for the results of the research (paragraph 104).

45. Making of soles out of coir yarn for cheap foot-wear is a new line which is possible (paragraph 109)

P.S. We wish to record our grateful thanks to our colleague in the Delegation, Shri R. Krishna Aiyar, for the valuable services rendered by him in recording notes of interviews and discussions and amplifying them on our return to India so that these notes may form the basis for our report. He has also acceded to our request to draft this report, regardless of his health and convenience.

R. KRISHNA AIYAR, Member	(Sd.)
REVI KARUNAKARAN „	(Sd.)
C. T. JACOB „	(Sd.)
T.M.B. NEDUNGADI, Leader	(Sd.)

Ernakulam, }
28th November 1959. }

APPENDIX

Names of individuals and institutions interviewed by the
Delegation during their tour

(Paragraphs 6 and 21)

ITALY

Rome.

- 22- 3-1959 1. Sri Khub Chand, Ambassador for India in Italy.
2. Indian Embassy—Officers, Mr. S. K. Guha, I. A. S.,
First Secretary.
- 23- 3-1959 3. Camera Di Commercio Industria E. Agricoltura,
Roma (Chamber of Commerce and Industry and
Agriculture).
President, Gr. Uff. Rag Constantino Parisi.
4. Confederazione Generale Italiana Del Commercio
Roma (Federation of Trade Associations, Rome).
(i) Vice-President, Mr. Alliotta.
(ii) Secretary, Dott. Francesco Collucci.
5. Messrs. Carlo Bisses & Figli, Tessuti, Roma, via
Delgesi, 93 (Palazzo Altiera)—Important business
house dealing in floor coverings.
6. S. P. A. Casa De L'Arredamento, Largo Torre,
Argentina 8, Roma (117).
7. Dr. Elio Tosarelli, Trade Promotion Department of
the Ministry of Foreign Trade, Italy.

Brindisi.

- 24- 3-1959 8. Messrs. Ditta Eugenio Quartulli, Manufacturers of
oil filters.

Milan.

- 25- 3-1959 9. Confederazione Industrie, Varie, via Legnano-4,
Milan.
Dr. Tedeschi, Chairman.
10. Messrs. La Rinacente, Chain Stores.
Mr. Balsamo, Foreign Manager.

Genoa

- 26- 3-1959 11. Mr. Mentholovich, Businessman,
12. Mr. Icardi, Importer of coir yarn.
13. Mr. Isetti, "
14. Mr. Tobino, "

SWITZERLAND

Berne

- 28- 3-1959 15. Sri M. K. Vellodi, Ambassador for India.
16. Sri M. V. Deo, I.A.S., First Secretary (Commercial)
to the Embassy of India.

Langenthal

- 31- 3-1959 17. Verband Schweiz Cocosteppich Fabrikanten (The
Swiss Union of Coir Carpet Manufacturers),
Langenthal
(i) Mr. Walter Ruckstuhl
(ii) Mr. R. Hauser Glatbrugg.
(iii) Mr. A. Juker Ebrikan.

Winterthur

- 1- 4-1959 18. Messrs. Volkart Brothers.
(i) Mr. P. Reinhart.
(ii) Mr. B. Reinhart.
(iii) Mr. W. Hardmare.
(iv) Mr. H. Buechi

FRANCE

Marseilles

- 3- 4-1959 19. Chamber of Commerce of Marseilles.
(i) Mr. Berard—Redacteur du Service des Etudes
et du Commerce Exterieur.
(ii) Mr. Courjaret—Delegue Regional du Conseil
National du Commerce Exterieur.
20. Syndicat Des Industries Textiles Members :
(i) Mr. Duboul—President.
(ii) Mr. Roux—Manager of the firm—Messrs Les
Fils De De Louis Roux.
(iii) Mr. Michelin—Manager of the firm :
Messrs Societe De Corderie & Filature
Mecaniques De Marseilles.

(iv) Mr. Viossat—Manager of the firm :

Messrs E. Viossat—Viron.

(v) & (vi) Mr. and Mrs. Turcat.

21. Syndicat Des Epices and Products d'Outre Mer
Member :

(i) Mr. Denery—Vice-Chairman.

(ii) Mr. Marvaldi—General Secretary of Chamber
of Commerce.

Paris

- 6- 4-1959 22. Sardar K. M. Panikkar, Ambassador for India in
France.
23. Sri H. K. Kochar, First Secretary (Commercial to
the Embassy of India).
- 7- 4-1959 24. Mr. Corneille, Banque Francaise Du Commerce
Exterieur.
25. Chambre Syndicate de Fabricante de Sparteire—
Textile Union.
- (i) Mr. Benoit—President and Vice-President of
the European Coir Manufac-
turers' Association.
- (ii) Mr. E. Vigie—Vice-President.
- (iii) Mr. Turnell—Member.
- 8- 4-1959 26. Mr. Griare, Ministry of Economic Affairs, France.
27. Mr. Guenon, Coface (Export Risk Guarantee
Corporation).

BELGIUM

Brussels

- 9- 4-1959 28. Sri Misra, Charge d'Affairs at Brussels.
29. Mr. H. C. Hogg, Second Secretary (Commercial) to
the Embassy of India.
30. Mr. Bogaert Roger (Messrs. }
Brachsht and Co.) }
31. Mr. Van Bogaert Charles A. M. } Importers of coir
32. Mr. J. H. Dirks } and coir pro-
33. Mr. J. R. De. Pooter } ducts.
34. Mr. Walter A. Herman }
35. Mr. A. Schittecatte-Annica—Manufacturers of Dyeing
Machines.

HOLLAND

Amsterdam

- 10- 4-1959 36. Sri J. A. Thivy, Ambassador for India at The Hague,
37. Sri G. L. Puri, First Secretary.
38. The Nederlandse Cocos Conventie at Keisers-
gracht, 230, Amsterdam.
- (i) Mr. H. Bonthuis, Genemuiden.
- (ii) Mr. J. Bosman, United Rope Works, Rotterdam.
- (iii) Mr. J. Haverkorn Van Rijsewijk, Nederlandse
Cocosfabriek, Apeldoorn.
- (iv) Mr. H. Heijmeijer Sr. } N. V. Heijmeijer,
(v) Mr. H. Heijmeijer Jr. } Amsterdam.
- (vi) Mr. K. De. Lange } E. De. Lange and Zoon,
(vii) Mr. D. De. Lange } Genemuiden,
- (viii) Mr. Vorstman—Secretary.

- 11- 4-1959 39. Dr. Diederich—Bureau.
40. Mr. Schmit and Mr. Scholten of Messrs. J. R.
Scholten and Zoon, Keizengratt 197, Amsterdam.
41. Messrs. N. V. Magazijn de. Bijenkorf, Department
Stores, Amsterdam.
- 13- 4-1959 42. Messrs. Korinklijke Vereeningde Tapistfabr N. V.
(K.V.T.)
- 14- 4-1959 43. Mr. J. P. Breur, Representative of Messrs. Red Star
Fibre Company.
44. Mr. V. Ootmarsun, "Internatio", Importer of coir
yarn.
45. Mr. F. Dalenoord, Tilburg, Holland.
- 15- 4-1959 46. Mr. Henk Hentzen N. V., Forwarding and
Warehousing Agents, Rotterdam.
- 16- 4-1959 47. Mr. J. M. Bulder, Rokin-91, Amsterdam, Holder of
patent for making Boards from Coir.

GERMANY

Hamburg

- 17- 4-1959 48. Messrs. Thorwald Classen, G.M.B.H., Maschinen
Fur die Kokos Garn Verarbeitende Industrie
Hamburg.
49. Messrs. Bergendorfer Eirenwerk A. G., Astra-Werke,
Hamburgdorf.

Berlin

- 17- 4-1959 50. Messrs. Berlin Fibre Matting Co., Berlin.

Hamburg

- 18- 4-1959 Meeting at the Office of the Consul-General of India with importers of coir and coir products.
51. Mr. R. D. Sathe I.F.S., Consul-General of India was also present.
52. Dr. Ceelen, Messrs. C. G. Helling & Co., Hamburg-11, Herrengarten 26/29.
53. Mr. Berg, Messrs. Kurt W. Berg & Co., Hamburg-11, Kl-Reichenstr-1.
54. Mr. Hans-Detlef Kneesch, Messrs. Hans Koch & Co., Hamburg-1, Ballindamm-11.
55. Mr. Schwabe, Messrs. Ludolph Struve & Co. G.M.B.H., Hamburg-36, Amelungstr-3.
56. Mr. Steidtmann, Messrs. Steidtmann & Nagel Monekebergstr-17, Hamburg-1.
57. Mr. Sierk, Messrs. Arnold Otto Meyer, Hamburg-1, Ballindamm-1.
58. Mr. Kuhn, Messrs. Geertz Gebr., Hamburg-11, Deichstr-29.
59. Mr. Lange, Messrs. C. Illies & Co., Hamburg-36, Gansemarkt-45.

Kitzingen

- 20- 4-1959 60. Dr. Ernest Fehrer's Spezialmaschinenfabrik (Rubberised Fibre mattress manufacturing Factory).

Emsdetten

- 20- 4-1959 61. Messrs. Albert Jurgens, Manufacturers of Looms for weaving coir mats and mattings.

Steenwijk (Holland)

- 21- 4-1959. 62. One of the largest factories manufacturing coir and sisal mattings and mats.

Gennemuiden

- 21- 4-1959 63. Small factories where matting is woven on power looms.

Bonn

- 22- 4-1959 64. Sri B. F. H. B. Tyabji, Ambassador for India.

Leverkussen

- 22- 4-1959 65. Messrs. Bayers Works, Leverkusen.
- (i) Dr. Winterhalder, Chief of the Export Organisation of Bayers.
- (ii) Dr. Navin Dalal } Bayers.
- (iii) Dr. Liebhaber }

Frankfurt

- 23- 4-1959 66. Fachverband Kokosindustrie, Frankfurt (Association of Coir Manufacturers)
- (i) Mr. August Strasser, Messrs. A. Strasser, Kokosweberei, Neu-Vlm.
- (ii) Mr. Heinrich Lucke, Messrs. Hoersteler Kokosweberei, B. T. Williams Kg. Hoerstel.
- (iii) Mr. Werner Seeliger, Messrs. Fa. A. Strasser.
- (iv) Mr. Werner Golze, Messrs. Ogo Golze & Sohne —Ogos—Hamelin
- (v) Mr. Hanns Brosche, Messrs. Wurtt, Kokosindustrie.
- (vi) Mr. Richard Noll, Messrs. Conract Daum Nachf, Kassal.
- (vii) Dr. Dorinkel, Messrs. Fachverband Kokosindustries (Secretary)
- (viii) Mr. Hans J. Schverholz, Messrs. Schverholz M. Sehe, Dorsten.
67. Mr. R. N. Philips, Director, Indian Trade Centre Frankfurt.
68. Messrs. Schantung Handels A. G., Hamburg, Export Organisers.
- (i) Mr. Emil Linder.
- (ii) Mr. R. J. Hemker.
- (iii) Mr. Heinr Stottenberg.

(Deputed by Indian Embassy to visit factories—17th April 1959 to 22nd April 1959).

UNITED KINGDOM**London**

- 24- 4-1959 69. Office of the India High Commission—Sri S. Krishnamoorthi, I.F.S., Counsellor (Commercial) to the High Commission of India.

25- 4-1959 70. Visited Hop fields in Kent in the Company of Mr. M. St. J. Sandys of Messrs. Harrison Johnson Ltd., London.

27- 4-1959 71. London Coir Association—General Purposes Committee :

- (i) Mr. J. Bibby (Chairman).
- (ii) Mr. Pelham Burn (Deputy Chairman).
- (iii) Mr. T. E. Gover.
- (iv) Mr. A. Meadows.
- (v) Mr. M. St. J. Sandys.
- (vi) Mr. H. E. K. Wheeler.
- (vii) Mr. V. R. B. Smallwood (Secretary)
- (viii) Mr. M. C. R. Moppett.

28- 4-1959 72. The British Mat and Matting Manufacturers' Association.

- (i) Mr. H. C. Smith (Chairman).
- (ii) Mr. J. E. Hawkins (Vice-Chairman)
- (iii) Mr. D. C. Skey.
- (iv) Mr. Clifford.
- (v) Mr. R. A. Palmer.
- (vi) Mr. Cooper.

Leicester

29- 4-1959 73. Messrs. Samuel Pegg and Son, Ltd., Manufacturers of Dyeing Machines.

74. Mr. Brian A. Rankillor, Managing Director of Associated Agencies (Manchester) Ltd., Piccadilly House, Piccadilly, Manchester-1.

Barnsley

30- 4-1959 75. Messrs. Wilson and Longbottom Ltd., Barnsley.

- (i) Mr. G. Porter, Managing Director.
- (ii) Mr. Ian Porter.
- (iii) Mr. F. M. Harvey.

Arbroath

1- 5-1959 76. Messrs. Douglas, Fraser and Sons, Ltd., Arbroath.

Hailsham (Sussex)

4- 5-1959 77. Messrs. Green Brothers, Ltd.

London

6- 5-1959 78. Mr. Cameron, Messrs. Mather and Crowther Ltd., London, Advertising Consultants.

7- 5-1959 79. Meeting with importers of coir mats and mattings at the India House.

- (i) Mr. E. G. Green, Messrs. Bastone and Firminger Ltd., 6 Laurence Pountney Lane, London E. C. 4.
- (ii) Mr. Scott, Messrs. Harris (Liverpool) Ltd., Imperial Buildings, Exchange St, Bart, Liverpool 2.
- (iii) Mr. R. Stirtion Smith, Messrs. Harrison and Johnson Ltd., Audrey House, 10/14 Dukes Place, London E.C. 3.
- (iv) Mr. R. M. Bethell,
- (v) Mr. G. P. Plummer, Messrs. Bethell Bros. Ltd., 86/88 Paul Street, London E.C. 2.
- (vi) Mr. W. S. Pedley, Messrs. W. S. Pedley, 61 Howard Road, Kings Heath, Birmingham 14.
- (vii) Mr. D. M. S. Tucker, Messrs. Monsoon Coco Matting Co., Ltd., Clyd Sdale House, 27, Turner Street, Manchester 4.
- (viii) Mr. C. W. Evans, Messrs. W. H. Evans, 17 Cedar Avenue, Windness, Lancashire.
- (ix) Mr. A. P. Waterkeyn,
- (x) Mr. G. Waterkeyn, Messrs. Darrah, Smail and Co., Ltd., 41 Queens Street, London E.C. 4.
- (xi) Mr. W. M. Pritchard, Messrs. Burfield and Son, Ltd., South Road, Hailsham, Sussex.
- (xii) Mr. G. C. Dixon.
- (xiii) Mr. G. B. Stark.
- (xiv) Mr. G. H. Cross, Messrs. Bruce Starke and Co., Ltd., 5 Fenchurch Street, London E.C. 3.
- (xv) Mr. C. B. Maggs, Messrs. C. W. Maggs and Co. (Melksham) Ltd., Spa Road, Melksham, Wilts.

- (xvi) Mr. M. Pelham Burn, Messrs. Vavasseur and Co., Ltd., 15 America Square, London E.C. 3.
- (xvii) Mr. A. W. Lowndes,
- (xviii) Mr. S. J. Cross, Messrs. Wyre and Hawkes, R. Crosby Square, London E.C. 3.
- (xix) Mr. H. V. Whalebone, Messrs. Peirce, Leslie and Co., Ltd., 35 Crustched Friars, London E.C. 3.
- (xx) Mr. Hugh Gilchrist, Messrs. Coir Industrials Ltd., 66 Lymburn, Glasgow C. 3.
- (xxi) Mr. R. G. King, Messrs. Orion Textiles Ltd., 6/10 Dale Street, Manchester.
- (xxii) Mr. J. B. Neal.
- (xxiii) Mr. J. R. Somerville, Messrs. Gray Dawes and Co., Ltd., 122 Leadenhall Street, London E.C. 3.
- (xxiv) Mr. Hugh Smith, Messrs. Oriental Mats and Matting Co., Ltd., Vorda Works, Highworth, Wilts.
- (xxv) Mr. D. C. Skey, Messrs. Wm. Goodacre and Sons, Ltd., Ceylon Mills, Custom House, London E. 16.
80. First Secretary, High Commission of India.
81. Dr. Jagdish Chand, Second Secretary, High Commission of India.

UNITED STATES OF AMERICA

New York

11- 5-1959

82. Sri M. Gopala Menon, Consul-General for India.
83. Sri S. G. Kurikoti, Director, India Trade Centre, New York.
Importers of Coir Yarn and Mats and Matting.
84. Mrs. F. Stafford, Messrs. Volkart Bros., 120, Wall Street, New York City.
85. Mr. Alistan C. Fyfe, Messrs. James Fyfe & Co., New York City.
86. Miss Dorothy A. Dohrmann, Messrs. Wall Rope Works, Inc., 48, South Street, New York City.

87. Mr. Russel H. Smith, Messrs. Murphy & Beece Inc., New York City.
88. Mr. T. Mcbridge, Messrs. William Goodacre and Sons, Ltd., 295, Fifth Ave., New York City.
89. Mr. Carl Mentrup, Messrs. Carl Mentrup & Co., 295, Fifth Ave., New York City.
90. Mr. Bernard F. Murphy, Messrs. Bingham & Co., Inc., New York City.
91. Mr. Noni G. Bose, Indo-Overseas Traders, New York City.
92. Mr. W. J. Russel } U. S. Department
93. Mr. Donald J. MacMill'n } of Commerce.
- 12- 5-1959 Representatives of Journals in New York:
94. Mr. W. H. McCleary "Floor Covering Profits".
95. Mr. Larry Levenson "Home Furnishings Daily".
96. Mr. Always, "Journal of Commerce".
97. Mrs. Mildred Hughes—Far Eastern Market Council for Economic Development, 1270, Avenue of Markose, New York.
- 13- 5-1959 98. Messrs. R. H. Macy's, Harold Ssquare, New York (Departmental Store)
99. Mr. Martinussi, Director, do.
100. Mr. N. Lawrence Nagle, do. (Buyer).
101. Messrs. Blumindaes Departmental Stores, New York City.
102. Mr. Burton, New York City.

Baltimore

14- 5-1959

103. Baltimore Association of Commerce, 22 Light Street, Baltimore-2.
104. Mr. Edward A. Brannon, Director, Export and Import Bureau of the Baltimore Association of Commerce.
105. Messrs. Hochschild, Kohn, Baltimore Md. (Departmental Stores).
106. Messrs. Hutzler Brothers Co., Baltimore Md.
(i) Mr. Ellis Eisen, Sales Manager, Baltimore Md.
(ii) Mr. Richard Aarons, Rugs Department, Baltimore Md.

New Orleans

15- 5-1959

107. Mr. Andres Horcasitas Jr., Manager, Foreign Department of the Chamber of Commerce of New Orleans Area.
108. The International Trade Mart, New Orleans.
109. The International House, New Orleans.
110. Mrs. Tina E. Herlinger, World Trade Department International House.
111. The New Orleans Chamber of Commerce, New Orleans.
112. Dr. French, Chief Officer of the Board of Commissioners of the Port of New Orleans.
113. Mr. Haverstick, Superintendent, Foreign Trade Zone and Public Commodity Warehouse.
114. Messrs. Bob Stone Cordage Co., National Twine Distributors, 4 Knoz Road, New Orleans.
115. Messrs. Schofield Trading Co., Inc., 344 Camp Street, New Orleans. (Departmental Stores).
 - (i) Mr. J. W. (Jim) Richards.
 - (ii) Mr. E. A. (Mike) Schofield.
 - (iii) Mr. Ben Hogan.
116. Messrs. D. Holmes Co., Ltd, New Orleans (Departmental Stores).
 - (i) Mr. E. Davis McCutcheon, Sales Promotion Manager.
 - (ii) Mr. Bill Langenstein, Buyer, Floor Coverings Department.

Houston

17/18- 5-1959

117. Houston Chamber of Commerce :
 - (i) Mr. Marvin Hurley, Executive Vice-President.
 - (ii) Mr. E. J. Fay, Manager of the World Trade Department.
 - (iii) Mr. A. Felix Prieto, Assistant Manager, World Trade Department.
 - (iv) Mr. George Back, Desk Officer for India Nepal and Burma. (U.S. Department of Commerce).

- (v) Mr. John Duffy, Business Analyst, U.S. Department of Commerce.
- (vi) Mr. George Malherbe, Manager, Houston District Office, U.S. Department of Commerce.

118. Messrs. Lone Star Bag and Bagging Co., Houston.
Mr. Levy.
119. Messrs. Foley's Houston, Texas (Departmental Stores)
Mr. Shelby Price, Carpet Department.
120. Messrs. Pedon Iron & Steel Co., 700 N. San Jacinto, Houston, Texas.
Mr. Ray Brazil, Purchasing Department.

Chicago

19- 5-1959

121. Chicago International Fair & Exposition.
 - (i) Mr. Richard Reven, Managing Director.
 - (ii) Mr. J. H. Coulter, Chief Executive Officer.
 - (iii) Mr. Robert L. Bean, Director of the World Trade Division of the Association of Commerce and Industry, Chicago.
122. Messrs. Booz Allen & Hamilton, Managing Consultants, 135 S. La. Salle Street, Chicago 3.
 - (i) Mr. Joseph Kubert.
 - (ii) Mr. Thornton W. Snead, Jr.
123. Messrs. Carson, Pirie Scott & Co., Chicago.
Mr. Spadoni, Chief of the Carpet Department.
- 20- 5-1959 124. Association of Commerce and Industry, Chicago (at the Chicago University Club).
 - (i) Mr. Arthur Gutterman, Messrs. Manny Gutterman & Associates, 1407, Merchandise Mart, Chicago 54.
 - (ii) Mr. Alexander Gunderman, Imports Manager Messrs. Marshall Field & Co., Chicago.
 - (iii) Mr. Ulrich Eallenger, Messrs. Goldblatt Bros., Departmental Stores, Chicago.
 - (iv) Mr. O. W. Johnson, Messrs. Johnson Products Co., 612 N. Union Area, Chicago 10

- 125. The Merchandise Mart, Chicago 54.
- 126. Mr. Walden Porter, Jr., Director of Marketing Services, Chicago International Trade Fair, 30 West Munroe Street, Chicago.

Detroit

- 21- 5-1959 127. The Greater Detroit Chamber of Commerce, Detroit.
- 128. Messrs. J. L. Hudson & Co., Departmental Store, Detroit.
- 129. Messrs. James W. Stanckart, 18401, East Waverly, Detroit, 36.

CANADA**Toronto**

- 22- 5-1959 130. Mr. J. W. Wakelin, Toronto Board of Trade.
- 131. Mr. S. K. Mcbirnie, General Merchandise Office, The T. Eaton Co. Ltd., Toronto (Departmental Stores).
- 132. Mr. Albert F. Wood, President General Agencies Ltd., Toronto (Representative, Messrs. Aspinwall & Co. Ltd., Alleppey).
- 133. Mr. Franklin G. Coppy, The Robert Simpson Co. Ltd., Toronto (Departmental Store).
- 134. Mr. Clifford Moon, The Aikenhead Hardware Ltd., 17, Temperance Street, Toronto, (Representative of Messrs. Indian Coir Manufacturing Co., Alleppey)

Ottawa

- 24- 5-1959 135. Shri. C. S. Venkatachari, I. C. S., High Commission for India.
- 136. Shri. M. K. Roy, First Secretary.

Montreal

- 25- 5-1959 137. The Board of Trade of Montreal.
 - (i) Mr. Gould, Vice-Chairman
 - (ii) Mr. Tracy, Assistant Executive Officer.
- 138. The Montreal Board of Trade Club.
 - (i) Mr. H. C. Hayes, President, Montreal Board of Trade.

- (ii) Mr. R. B. Warwick, Chairman, International Trade Section, Montreal Board of Trade.
- (iii) Mr. S. P. Aikaman, Vice-Chairman, International Trade Section, Montreal Board of Trade.
- (iv) Mr. K. C. Khanna, Haik and Haik Rug Co., Ltd., 5241, Decarie Blvd., Montreal.
- (v) Messrs. George. Cowrey and Sons, Ltd., 405, St. Sulpice, Montreal.
- (vi) Mr. Harry Gordon, City House Furniture Co., 372, St. Catherine Street, W. Montreal.
- (vii) Mr. J. Allen Ritchie, Ritchie Textiles, 1117, St. Catherine Street, W. Montreal.
- (viii) M. F. E. Dorin, Nakes, Wilson and Co., Ltd., 731, Common Street, Montreal.
- (ix) Mr. R. B. Miller, Messrs. Lewis Bros., Ltd., 920, Bleury Street, Montreal.
- (x) Mr. R. G. Smith, Messrs. Brock Ltd., 390, Notre Dame Street, E. Montreal.
- (xi) Mr. Jules Noiseaux, Messrs. Noiseaux Eng., 2480, Notre Dame Street, Montreal.
- (xii) Mr. Pussire, Messrs. Letang Hardware, 30, St. Paul Street, Montreal.
- (xiii) Mr. Maurice, Selch, Messrs. Universal General Supply Co., 1449, St., Alexander Street, Montreal.

Vancouver

- 27- 5-1959 139. Dr. D. P. Pandya, LL.B., Bar-at-Law.
- 140. Vancouver Board of Trade, 1164, Melville Street, Vancouver, 5 B.C.
 - (i) Mr. R. T. Elmer, Secretary, Transportation and Customs Bureaux.
 - (ii) Mr. Alex. E. Scoten, Foreign Trade Bureaux.
 - (iii) Mr. McIntyre, J. A., General Manager, Canada Western Cordage Co., Ltd., 20, Walter Street Vancouver f, B.C.
 - (iv) Mr. R. A. Morris, Director, Messrs. M. P. Morris Ltd., 1575, West, Sixth Ave., Vancouver 9.

- (v) Mr. T. Morris, Director, Messrs. M. P. Morris Ltd., 1575, West, Sixth Ave., Vancouver 9.
- (vi) Mr. Malkit, S. Parhar, Pakistan-India Trading Co., 2724 West, 4th Ave., Vancouver.
- (vii) T. A. H. Tylon, Manager, Western Mat Co., Ltd., 1603, Franklin Street, Vancouver 6.
- (viii) Mr. Frank Battye, Messrs. General Agencies, Ltd., 78, Denman Street, Vancouver 5.
- 141. Miss Galdwell, Acting Mayor of Vancouver City.
- 142. Chief Justice, Mr. Lett of British Columbia.
- 143. Mr. H. W. Smith, General Manager, British Columbia Engineering Co., Ltd., Vancouver.
- 144. Mr. Johnson, Electric Cable Manufacturing Works, Westminster Island, Vancouver.

UNITED STATES OF AMERICA

Seattle

- 31- 5-1959 145. Seattle Chamber of Commerce.
 - (i) Mr. Lamont McDonald, Import Manager, Messrs. Marshal Field and Co., Seattle, Trinidad.
 - (ii) Mr. L. D. Knappert, Messrs. Balfour Guthrie and Co., Ltd., Exter Horton Bldg., Seattle 4.
 - (iii) Mr. M. M. Smart, Messrs. Balfour Guthrie and Co., Ltd., Dexter Horton Bldg., Seattle 4.
 - (iv) Mr. Charles K. Wiggins, Manager, Washington State International Trade Fair, 215 Columbia Street, Seattle-4.
 - (v) Mr. Clarence L. Hulford, Vice-President, The National Bank of Commerce of Seattle.
 - (vi) Mr. Earl G. De. Anguera, Assistant Vice-President, International Banking Department, The National Bank of Commerce of Seattle.
 - (vii) Mr. Martin J. O. Rorke, Manager, Marketing and World Trade Depts., 215 Columbia Street, Seattle-4.

- (viii) Mr. Stephen Namisnak, Business Analyst Seattle Field Office, U.S. Department of Commerce, 809 Federal Office Bldg., Seattle-4, Washington.
- (ix) Mr. H.W. Alma, District Manager, Transpacific Transportation Co., Seattle.
- (x) Mr. R. W. Soderquist, Assistant Manager, Foreign Department, Seattle-First National Bank, Seattle.

Portland

- 2- 6-1959 146. U. S. Department of Commerce, Field Office, 217 U. S. Courthouse (Old), 520, S. W. Morrison 9, Portland (Oregon).
 - (i) Mr. Harold K. Cherry, Manager, U.S. Department of Commerce, Field Office.
 - (ii) Mr. Harry Mis Rimins, Messrs. Johnson Lieber Co., 2505 NePacific, Portland 12, Oregon.
 - (iii) Mr. David C. Duncan, Administrative Assistant Messrs. Jackson, Lower Bldg., Portland 5, Oregon.
 - (iv) Mr. Chistoph Moser, Mat Transport A.G.
 - (v) Mr. Jack E. Lewis, C/o., New York Merchandise Co., 1900 N.W. 22nd Ave., Portland, Oregon.
 - or
New York Merchandise Co., 34 E. 42nd Street, New York City, New York.
 - (vi) Mr. Egil E. Krogh, General Merchandise Manager, Messrs. Meiser and Frank and Co., Portland, Oregon.
 - (vii) Mr. George R. Grove, Traffic Manager, Commission of Public Docks, Portland, Oregon.
 - (viii) Mr. Carter Brandon, Manager, World Trade and Shipping Dept., Portland Chamber of Commerce, Portland, Oregon.
 - (ix) Mr. Carvel C. Linden, Senior Vice-President The U.S. National Bank, Portland, Oregon.

San Francisco

- 3- 6-1959 147. Shri R. Reghunath Sinha, I.F.S., Consulate General of India.
148. San Francisco Chamber of Commerce, 333 Pine Street.
Mr. Henry H. Keith, Assistant Manager, World Trade Department of the Chamber of Commerce.
149. The U.S. Department of Commerce, Field Office.
Mr. Philip M. Creighton, Business Analyst, Foreign Trade.

Los Angeles

- 4- 6-1959 150. Mr. Hallamore, President, Electronics Co., 8352, Brochurst Ave., Annahein, California.
151. Los Angeles Chamber of Commerce, 404, South Bixie Street, Los Angeles,
Mr. John A. Sawers, Manager of the World Trade Department.

San Francisco

- 5- 6-1959 152. Messrs. Hales, 867, Market Street, San Francisco-3, (Department Stores)
Mr. Donald Anderson, Buyer of Floor Coverings Section.
153. Messrs. Tubbs Cordage Co., 200 Bush St., San Francisco.
Mr. Herman D. Nichols, Vice-President.
154. M. J. Jackman, Indian Consulate Office, San Francisco.

JAPAN

Tokyo

- 9- 6-1959 155 Messrs. Sato Bamboo Rattan Machinery Works Ltd., Omiya, Saitama, Japan.
- Messrs. Yama and Co., Ltd., Waka Yama, Japan.

