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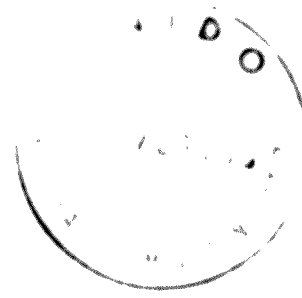
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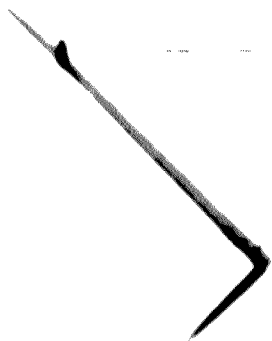
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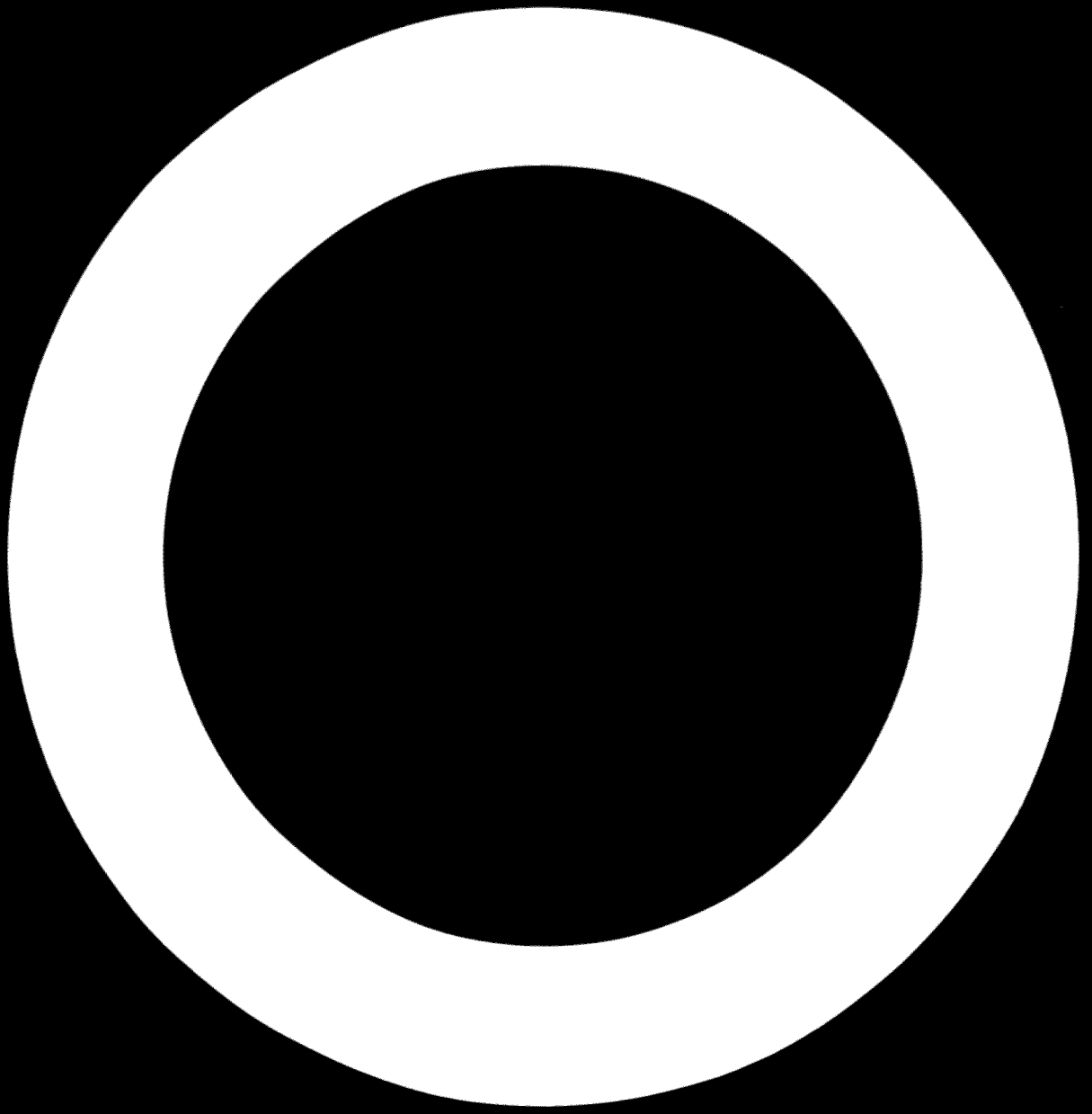
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Mr. [Name], Chairman
Mr. [Name], Member
Mr. [Name], Member

... of the consultants and
... of the ...





MEASURES

- 1) Control of Production of Jute
- 2) Guaranteed Minimum Price
- 3) Fibre Fibres
- 4) Baling
- 5) Fibre Inspection and Control
- 6) Establishment of Regulated Markets for Kerala
- 7) Re-organization of the Jute Mills

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RAK KILAT

Commodity prices of kenaf in Thailand are very volatile. The price of kenaf in Thailand is determined by the world market. The price of kenaf in Thailand is very low compared to other countries. It is very low because of the low quality of kenaf in Thailand. The price for kenaf on the world's markets are very low. The price for kenaf in Thailand is very low. In the previous year there have been considerable fluctuations in the quantity produced each year. In 1966, for example, about 100,000 tons were produced, compared to only about 10,000 tons in 1965.

These wide fluctuations in the size of the crop create wide fluctuations in prices and create an unstable situation.

Kenaf production is of considerable importance to Thailand's economy. In an average season when the crop ranges between 80,000 to 100,000 tons and with a price of about Bht. 2.00 per kilo for mixed grade fibre, the income to the farmers for growing kenaf amounts to between 200 to 400 million Bht. To the poorer farmers in the Northeast of Thailand, income from kenaf is invaluable since it is generally the only cash crop, rice in this area being cultivated mainly for family consumption. The crop is an attractive one, particularly to farmers in the Northeast, because it is grown on uplands unsuitable for rice cultivation, and it is, in fact, more profitable than rice since with a yield of 200 kilo of fibre per rai and a price of Bht. 2.00 per kilo, his income from kenaf is around Bht. 400 per rai compared with glutinous rice which with a yield of 120 kilos to 200 kilos per rai and a price of Bht. 0.80 per kilo gives him an income of only Bht. 100.00 to Bht. 160.00 per rai.

employment in the off season. Over the last 7 months in the year it is about 200,000 persons in the area, and in addition to the state mills there are 1000 small agricultural area mills which are of a small industrial nature.

There has been a considerable increase in the export earnings accruing from the sale of kenaf. For the years 1960-61 they averaged over 20 million dollars and are represented on average nearly 15% of the total export earnings of the country.

Kenaf is the main source of the world's production of jute, kenaf is called kenaf in the world market. Table II shows that in the last three seasons the share of total world production of kenaf has increased from 1.5% to 2.5%, with an average of 2.5%. On the other hand, the world's exports of these fibres is concerned, she has a most important role since Pakistan and Thailand provide between them about 95% of the world's exports, and Thailand herself exports about 32% of the world total. In fact, over the last four seasons, Pakistan exported an average of around 1,100,000 tons per season and Thailand around 335,000 tons, or approximately 30% of the Pakistan figure. (See Table III) Her position as an exporter is all the more important in that by being able to export such large quantities of kenaf at a price which is lower than jute it has enabled the spinners of the natural fibres to use it in admixture with jute and thus lower their raw material cost and by so doing to withstand much better the threat of some of the newer cheaper synthetics which can be used for some purposes for which jute is normally used. Moreover, supplies of kenaf from Thailand provide a most useful reserve in those years when for one reason or another the crops in India or Pakistan are smaller than normally. Her world role as an exporter is therefore vital.

Table I.

PERCENTAGE OF VALUE ADDED UNDER EXPORT
 DUTY IN THE VALUE OF EXPORTS IN THE

Year	Value Added Under Export Duty as a Percentage of Value	Total Value Added Under Export Duty	Total Value of Exports
1947	40	1,000	2,500
1948	60	1,200	2,000
1949	55	1,100	2,000
1950	250	1,000	400
1951	600	1,100	1,833
1952	570	1,100	1,930
1953	350	1,100	314
1954	495	12,300	24,847
1955	1,100	12,300	11,177
1956	1,114	14,200	12,700
1967	685	14,200	20,730
1968	674	12,200	18,100

Source: Department of Customs.

II.

UNIT, 1974

1974

	United	World	World
	10	74	104
	10	75	111
	10	75	170
	7.5	20.5	140
5	7.5	20.5	100.

... of ... (CP:JV) - ...
 ... Alternative Committee - Conference January 1970

Table III.

THAI KENAF EXPORTS
 Breakdown Grade Wise from 1966 to 1969

Year	Grade Super	Grade A	Grade B	Grade C	Grade D	Buttings	Parjies	Caddies	Total
1966	M/Tons	157.706	146.553	115.716		54.735	1.50	200	489,292
	¢	32.50	30.28	23.95		11.7	1.1	1.0	130.30
1967	M/Tons	119.077	91.332	67.234		31.238	7.75	1.0	244,224
	¢	36.73	29.17	20.74		11.12	1.71	0.4	130.30
1968	M/Tons	129.634	36.730	40.370		27.592	1.44	1.26	207,889
	¢	43.74	30.10	13.12		11.14	0.14	0.43	130.30
1969	M/Tons	145.531	52.37	18.770		27.9	4.22	1.0	231,500
	¢	56.65	20.47	12.45	1.04	12.42	1.1	1.0	130.30
Average 1966-1969	M/Tons	147.440	379,340	248,230		247.3			
	¢	40.53	77.77	16.12					

SOURCE: The Thai Jute Association.

The seed is obtained from the plants... (text is very faint and partially illegible)

This is obtained in the same manner... (text is very faint and partially illegible)

because it is so good as a crop to be grown on land unsuitable for other crops, in many areas planting and cultivation practices are poor and yields of fibre are low compared with those which can be obtained if the crop is cultivated properly using seed with a good germination rate, preparing the soil properly before planting, sowing by line instead of broadcasting seed, application of fertilizer, etc. and proper weeding at the right time. The return to the farmer at present is lower therefore, than it might be.

Faint, illegible text, possibly bleed-through from the reverse side of the page.

Incorporated in the State of California
under the name of the
The Board consists of Mr. F. Kent
Mr. V. S. ...

1.2.1.2. IN THE LAB

The following are the steps to be followed in the laboratory for the determination of the fibre content of a sample of cotton. The sample should be dried to a constant weight at 105°C in a desiccator over phosphorus pentoxide. The dried sample should be weighed and the weight recorded. The sample should then be retted in a retting tank for a period of 10-15 days. The retted sample should be washed in water to remove the gummy matter. The washed sample should be dried to a constant weight at 105°C in a desiccator over phosphorus pentoxide. The weight of the dried sample should be recorded.

The fibre content of a sample of cotton is calculated as follows: $\frac{\text{Weight of dried sample} - \text{Weight of retted sample}}{\text{Weight of dried sample}} \times 100$. The fibre content of a sample of cotton is expressed as a percentage of the original weight of the sample.

1.2.1.3. FACTORS AFFECTING FIBRE QUALITY

The quality of cotton fibre is influenced by many factors. The most important factors are: (i) Soil conditions, (ii) Climate, (iii) Irrigation, (iv) Fertilizers, (v) Pests and diseases, (vi) Harvesting, (vii) Retting, (viii) Ginning, (ix) Spinning, and (x) Weaving. The quality of cotton fibre is also affected by the quality of the seed and the quality of the water used for irrigation and retting. The quality of cotton fibre is also affected by the quality of the machinery used for harvesting, retting, ginning, spinning, and weaving.

(i) **Soil conditions** - Cotton plants require a well-drained soil with a pH of 6.0 to 7.5. The soil should be rich in nitrogen, phosphorus, and potassium. The soil should also be free from pests and diseases. The quality of cotton fibre is often poor when the soil is not well-drained or when the soil is too acidic or too alkaline. The quality of cotton fibre is also poor when the soil is not rich in nutrients.

2) Fibre quality

(a) If fibre of high quality is to be obtained, ample supplies of clean water are essential for retting and washing the fibre. In many areas

which is not normally sorted into grades before sale. Consequently, it is an incentive to him to produce higher grade fibre. Kenaf in Penang is a comparatively new crop, and, unlike jute farmers in India and other countries, farmers in Thailand have a limited knowledge of the methods required in good quality fibre. They need educating in the methods of fibre grading and some incentive to produce better quality fibre.

- (2) Incentive to produce better quality fibre and sort and grade fibre. There is no guarantee that he will receive a higher price for it. At present most farmers have only a few outlets for disposing of their fibre, viz, to the middlemen who tour their area and buy from them. One of them often runs a grocery store. In many cases, because of a lack of capital the farmer is often obliged to borrow money for seed, seed, fertilizer, if he uses it, and for other purposes, and is consequently usually under an obligation to sell his fibre to the middlemen to repay his debts. He is, therefore, very much at the mercy of unprincipled middlemen, and whatever the quality of his fibre generally has to take whatever price is offered for it since his bargaining position is weak.

There are no open regulated markets to which he can take his fibre and sell it to the best buyer. Moreover, with a few exceptions, there are no other buyers available for him to which he can sell. Lack of proper credit facilities on reasonable terms for farmers in the country districts is one of the obstacles in the way of increasing the production of better quality fibre.

3) Fibre Fineness

As compared to true jute, kenaf is restricted in the uses to which it

can be put because the ultimate fibre bundles, or strands are not so fine as those of jute.* Consequently, where it is possible to spin jute down to counts as low as 4 lb. per spindle (i.e., 14,400 yards of yarn weigh 4 lb.)

with Kenaf it is not possible to spin commercially below counts of, at the lowest, 9 lb., and only then by the use of the best selected fibre. Consequently, kenaf cannot be used on its own for the manufacture of goods requiring fine yarns such as finer hessians or carpet backing. Kenaf fibre from some parts of Thailand, such, as, for example, in the Kien Kaen area and Udorn, is known to be finer than that, for example, from Ubon, and some balers in Thailand and spinners prefer lighter coloured but coarser fibre. It should be mentioned that finer fibre occurs in all grades of quality not necessarily only in the best grades. The finer the fibre the more it can be used in admixture with jute and the more possibility there is that it can be spun down to finer counts on its own. There is no doubt that if more finer fibre could be obtained there would be an appreciably larger market for Kenaf from Thailand, and finer fibre might also fetch a higher price.

Although Kenaf from some other parts of the world is stated to be finer than Kenaf from Thailand some confusion probably exists because the term Kenaf is used for the fibre from both Hibiscus cannabinus and Hibiscus sabdariffa var. altissima (Thei Kenaf) and it is known that fibre from the latter is inherently rather coarser than that from the former.

Although there seems some evidence that the inherent fineness of the fibre in the plant depends on the variety of seed which is used and that, for example, early flowering varieties yield a finer fibre, there are

It should be pointed out here that retting has no effect on the inherent fineness of the fibre. Proper retting should isolate the fibres in their original inherent fineness and in this sense fineness should not be confused with quality.

There are other indications that the fineness also depends on growing conditions, such as growth, density of spacing and the time at which the crop is harvested. Many farmers in India, for example, have for some years been harvesting their jute before it has reached maturity, obtaining a shorter and weaker fibre, partly because they then have more water available for their crops. Any reliable information regarding the real reasons why the fibre from some areas is finer than that from others might enable the farmer to produce a finer fibre to be produced.

The fibre which is sold to middlemen by the farmers is in turn sold to middlemen in the districts who sort, grade and bale it and send it to Bangkok to balers who further re-grade it for the exporters. As far as the grading and quality of the fibre being exported is concerned, therefore, the grading by up-country balers is of paramount importance.

There are about 10 balers in Thailand, many of them small and working on a scale which is uneconomic in India or Pakistan. The small capacity of these balers is one of the chief causes of irregularity of supply for export. Some of the balers appear to have little knowledge of fibre quality and some are probably in the baling business because it enables them to deal in fibre, often as speculators. Because of lack of experience and fraudulent practices by some of these balers, e.g., putting stones and dirt in the bales, mis-labelling bales, etc., much of the fibre reaching the exporters and the mills is of poor non-uniform quality. From the point of view of exports this bad grading and misrepresentation of grades is particularly serious and is the most common cause of complaint by buyers overseas.

At present, any person who wishes to set up a baling plant may do so. Although there exists a Thai Jute Balers Association, membership of the Association is voluntary and, in fact, only about one-third of the number of balers belong to the Association. On the other hand, all exporters of fibre are required by law to be registered with the Ministry of Economic Affairs and to hold a licence to export and to sell. In order to do this they must tender a certificate of membership of the Thai Jute Balers Association.

All shipments of fibre have to be inspected before export but since only 5 per cent of the bales are inspected there is always a possibility under present conditions that the remaining 95 per cent of the bales may contain fibre that is below the grade which it is supposed to contain. For it is not possible to open every bale before shipment would be impracticable and too time-consuming.

Proper grading, sorting and baling, therefore, needs to start at the stage where the loose fibre is obtained, i.e., at the up-country spinning presses, and some form of control and supervision of these baling plants seems essential.

5) Fibre Inspection

The present system of inspection of bales before export seems on the whole to be working reasonably well. Its main defects are due:

- (a) partly to corruption on the part of some inspectors, both those employed by the Government and by private firms, which, if only on a limited scale, lowers the value of the fibre as a whole in the export markets and must be stamped out vigorously by all possible means;
- (b) to a lack of sufficient staff in the Inspectorate of the Standards Commodity Division of the Ministry of Economic Affairs;
- (c) to some lack of authority, experience, and lack of confidence on the part of the Government inspectors, so that differences regarding quality sometimes are decided by which party to the dispute can bring

pressure to bear rather than on the real quality of the fibre
about which there is a dispute;
provision of sufficiently large standard samples which are supplied for
reference to the auction services;
elimination of the duplication of functions between the Government inspectors
and the private firms.
The present system of grading at the up-country baling plants which makes
the work more difficult and time-consuming.
The assessment of fibre quality is not easy since it is a subjective
matter unless scientific standards are used. There is a need for more
scientific methods of assessment of fibre quality for farmers, middlemen,
exporters, and also for buyers, buyers for agricultural co-operatives, and
users of kenaf in the kenaf industry in one way or another.

6) Effect of Fluctuation in the Size of the Crop

Over the last decade there have been violent fluctuations in the size of
the kenaf crop. From year to year, the total quantities produced in one year
varying from a low of about 150,000 tons to a high of over 500,000 tons.
Wide fluctuations in the size of the crop lead to wide fluctuations also in
the price of the fibre. Such fluctuations, which were also a feature of jute
in India and Pakistan until steps were taken to remove them as far as possible
are in the long run detrimental to the kenaf industry as a whole. Farmers,
exporters and users overseas and any action taken to reduce these fluctuations
will be beneficial.

The area of land which the farmer in Thailand puts under kenaf depends
largely on the price he received for his fibre in the previous year. If
prices were low in the previous year he puts less land under kenaf. This
means a smaller crop with higher prices so that the following year the farmer

puts more land under kenaf, the crop is larger and the price consequently lower. Thus this system to some extent perpetuates fluctuations in price and size of the crop from year to year. Admittedly in some years when prices are low at harvesting time the farmer does not bother to harvest his crop but he tends to make reliable estimates as to the amount of fibre likely to be forthcoming difficult to obtain and only adds to the uncertainty about the real size of the crop.

Although the problems with kenaf in Thailand are very similar in many respects with those with jute in India and Pakistan there is one considerable difference. In Thailand, because kenaf is only grown on areas that are not suitable for rice there is not the same relationship between rice and kenaf as there is between rice and jute in India and Pakistan where there is a competition for land between the two crops since rice land is also used for some jute cultivation. In Thailand competition between rice and kenaf is one of labour not land.

Another reason why fluctuations in the size of the kenaf crop can be violent is that there is as yet no overall shortage of land for growing kenaf. In some areas farmers move into new virgin land to plant kenaf each year. Consequently, there is no automatic regulator on the size of the crop due to limitations in the amount of land available as there is in India and Pakistan. Consequently, it might be difficult to stabilize the annual production of the fibre by limiting the area put under kenaf, if it were considered desirable, without some system of allocation of quotas to the farmers to put a definite area under kenaf each year, but to adopt such a system might well be both costly and impracticable to enforce.

However, one means of limiting the area put under kenaf would appear to be available. One third of the crop is stated to be grown on new land in the Forest Reserves there, in fact, such cultivation is illegal. Fines imposed for breaking the law are, however, apparently so small that they do not act

...the strict enforcement of the laws regarding planting of
...and heavier penalties could be used if necessary.
...and the wide fluctuations which occur from year
...in the size of the crop and the uncertainty about
...lead to speculation in the fibre and in the past
...unscrupulous elements into the trade.
...will forward but default on their contracts if prices
...their commitments, and sometimes go into liquidation
...Kenaf in overseas markets. For
...deal adequately with this type of
...better control of the size of the crop
...numbers of such speculators in the market

...but that some of the uncertainty about the
...in the estimates which are made
...season. The present system of compiling
...appear to be very satisfactory. The number
...for the work of providing estimates for the kenaf
...and the methods used may need improv-

...and the Maintenance of a Minimum Price

...the way of reducing the fluctuations in prices and the size of the crop
...a guaranteed minimum price to the farmer, announced before the
...of the planting season. This would avoid the uncertainty to the
...farmer which now exists regarding the price he will get and would help to
...the wide fluctuations which occur at present in the areas planted to
...It would also be of great value in stabilizing the export price of
...fibre which is vitally important as regards the continuance and possible

expansion of the market overseas.

The Government has been well aware for some time of the need to give assistance by way of a minimum price to the farmers and the buyers, it appears, also pay the minimum price. Whether the farmers generally receive this price is questionable, however, and the price does not, for reasons which have been already mentioned, give him a real incentive to produce the best quality fibre. To assist in ensuring that the farmer gets the minimum price the Government has established the Thai Jute Corporation which is supposed to buy kenaf from the farmers at a guaranteed price which is not to be less than the minimum price fixed for the farmers. Since the Corporation can buy only when it has a surplus of fibre there must be many farmers who receive no benefit from the Corporation's activities owing to the tied relationship they have with the Government which make it difficult for them to sell to the Corporation. In any case, the Corporation's functions are more in the nature of fire-brick operations and do not include the overall function of maintaining a minimum price to farmers as a whole. The scale of its operations is too small, locally, to have any real effect. In 1969, for example, only 700 tons of fibre were bought. The Corporation's activities are limited by a lack of finance and staff to undertake large purchases.

Some form of guaranteed minimum price for the higher grades of fibre, which are the grades which are in demand, in order to increase production of these grades seems essential.

The future of the market for kenaf depends on an improvement in the quality and grading of the fibre and on its being available on the world's markets at a price which is competitive with certain grades of jute. The minimum price fixed therefore must not only be one which gives the necessary incentive and return to the farmer but must also be such that it enables the fibre to be exported at a competitive price.

General Remarks

The general remarks of the mills visited by the spinner member of the Commission are given in Appendix 'A' of this report. It is only necessary to refer to the main general problems which affect the mills in the following paragraphs. The export of other than gunny bags, high quality gunny bags, is required and the mills are unable at present to supply the same at competitive prices. If exports by the mills are to be profitable, high quality fibre are essential. The quantity of seed available to the mills and the cost of seed is a serious problem, the large labour force which they employ is a disadvantage compared to the mills in other countries, the high rate of depreciation (about 20 per cent) especially when labour is scarce, the shortage of skilled labour for repair and maintenance, the rates of production in the mills are high. The mills in Finland are small compared with those in India and there are fewer larger mills working at full capacity. Economies of scale might have been obtained. On the other hand the mills are located in the agricultural districts where they are easy to obtain and they give industrial employment in the rural areas where it is difficult to obtain industrial employment which would absorb the same number of workers. Consequently when considering rationalization of the industry the social benefits accruing from the mills as they are at present located must be taken into account.

- (d) Prices of bags fixed for local use are fixed by the Siam Gunny Bag Company which is an association of the six privately owned mills. The price is probably fixed at a price which will give at least some profit to the least efficient mill. If so, this does not help to

promote the overall efficiency of the industry as a whole. The consumers may be paying more for their bags than they should be.

- (e) The mills are endeavouring to increase their exports of bags to reduce their overheads by working to fuller capacity, but some of them export at a loss. One or two mills, however, have demonstrated that it is possible to manufacture and export some items such as yarns, wool-packs, etc., at a profit provided good quality fibre is used and the mill is efficiently run. Such mills however, receive no assistance from the Government to encourage them to increase exports whereas those mills which concern themselves primarily with the manufacture of bags for home consumption are, in fact, protected by the import duty which is imposed by the Government on imported bags.
- (f) Most of the mills were established in the first place for the manufacture of bags for local use. This single-minded approach still persists in some mills and there is a need for a different outlook in the industry with much more emphasis on efforts towards diversification of products. This will require investment in the purchase of some new machinery.
- (g) Wide fluctuations in the price of fibre make it more difficult for spinners to make long-term commitments for export.
- (h) There are at present, three Government mills all managed by different Ministries and all working in competition with each other. There would probably be savings in the cost of production if the buying and selling activities were combined and if the overall management were in the hands of one Ministry.
- (i) The Government mills were the pioneers in the industry and were established because there were no mills in Thailand producing bags for local consumption. They have now fulfilled their original

... were the ... investment and losing money consistently ...
... apart from their social benefit value in ...
... they will remain in business, ...
... in Thailand are at present working

... development of the kenaf industry is ...
... ministries and Departments, semi- ...
... are all involved in one way ...
... but there is no one organisation ...
... of the industry. Consequently there ...
... between the various organisations ...
... exactly what is being done by each and ...
... with the activities of another, ...
... co-operation between some ...
... best results in ...

... responsible for co-ordination, the overall ...
... seems essential.

WATER PROBLEMS

1. Setting up of Kenya Commission

The Mission has proposed to recommend the Commission should be set up but has quite recently learned that the Government has in fact set up such a Commission and that the Chairman and Secretary of the Commission have been appointed.

The precise functions of the Commission have not yet been finalized. It is suggested, however, that the Commission, from whatever regular meetings it may hold, should meet once a year around February, or well before the start of the rainy season, to provide advice to the Government regarding the minimum price which should be paid to the farmer, the minimum price as regards kenaf fibre and finished goods, the minimum price for assisting the farmer with regard to retting facilities, provision of seed and fertilizer, and the provision of credit, etc. and to take steps where necessary to accelerate action, mitigate seasonal smooth out difficulties and ensure that all the efforts of the organizations are properly co-ordinated to produce the best results. The Chairman will obviously need to be able to make contact at the very highest level when follow-up action is required.

If necessary, small select sub-committees of the Commission, reporting to the main Committee, could be appointed to deal in more detail with more specialized subjects such as grading, baling, etc.

2. Guaranteed Minimum Price

The main essentials for the production of high quality fibre are that the plants should be harvested at the right time and that plentiful supplies of clean water, preferably moving, should be available for retting and washing.

to induce the farmer to cut his crop at the right time and to ensure that, if water is available the Mission recommends that:

(a) The Government announces by the end of February at the latest that the guaranteed minimum price for loose unspun grade 'A' fibre will be Bts. 2.30 per kilo and that this price will only be guaranteed for fibre sold by the farmer before first of December. (The reasons for recommending this price are set out in Appendix 'A' of this report.)

(b) To ensure that farmers are able to receive the minimum price, the Government undertakes to buy, through agents and, if possible, all the loose unspun grade 'A' fibre produced at this price (Suggestions regarding the organization of Government purchases might be organized according to Appendix 'B' of this report).

B. Fibre Fineness

The Mission recommends that, as a first step, a survey should be made to ascertain the reasons for the differences in fibre fineness which occur in fibre from different areas in Thailand.

The survey will necessitate the collection of fully authenticated samples, with complete details of cultivation conditions, maturity at time of harvesting, etc. The samples of fibre will need to be tested under proper laboratory conditions and it is understood that this can be done at the fibre testing laboratory of the Applied Scientific Research Corporation.*

*Plans for the programme of the first stage of the scheme have already been discussed in more detail with the Applied Scientific Research Corporation.

An offer to co-operate with the testing of Kenaf from both Thailand and Pakistan, should it be required, has been made by the Scottish Textile Research Association through the F.A. In some circumstances it might be advantageous because the Association is in very close touch with spinners in Dundee who are analysing the finer kinds.

This project should be started for a limited period so that information can be obtained from the 1972 crop.

After this first survey has been completed, it may be necessary to follow it up with a more extensive programme involving trials, testing fibres/different varieties of Kenaf, but this will depend on the results of the first survey.

4. Baling

Until the provision of grading is taken into account, viz, the up-country baling plants, much of the benefit accruing from inspection before export is being lost. There is a need, therefore, for some control over the activities of the baling plants so that the overall standard of grading may be improved and a that action can be taken where any baler persistently grades and bales badly, fraudulently labels his bales or generally fails to conform to the standards which balers should be expected to observe.

It seems desirable that two forms of action need to be available to those responsible for the enforcement of control viz, positive and advisory. Positive action would involve, ultimately, the withdrawal of a licence to operate as a baler. Advisory action should aim at assisting those balers who need some advice and guidance in sorting, grading, cutting, etc., and should aim at

... overall standard of grading. To be effective, control ... regular inspection at the baling plants by inspectors ... efficiency of grading at the plants and to ... where necessary.*

... may be raised that a scheme of up-country ... intractable and too costly but the Mission ... It is known that the Baler's Association is anxious ... standards and their full co-operation would probably ... whether responsibility for the scheme should lie ... Association or with the Inspectorate of standards ... of Economic Affairs or by both in co- ... The costs of the scheme could be ... at least by a cess on the quantity of fibre ... If the proposed scheme is adopted it will ... benefits, e.g.; once the standard of grading begins ... the inspectors becomes easier; there will be ... quality; the costs of pre-selecting fibre in ... and the mills will be able to make better ... their chances of exporting competitively; the ... of the fibre exported should be better.

*The type of inspection envisaged would be somewhat similar to that carried out by the Inspectorate and Quality Control Division of the Indian Jute Mills Research Association in connection with the export of some jute goods.

The Mission recommends, therefore, that:-

- (1) All persons operating baling presses should be required to obtain an annual licence to do so from the Ministry of Economic Affairs (or some other Government Department) and that the granting of a licence should be dependent upon the production of a certificate of membership of the Thai Jute Balers Association.

For the first year it is suggested that all persons who are known to be at present operating as balers should be granted a licence and that they should be accepted as members of the Thai Balers Association. This will avoid any suggestion of discrimination by present members of the Association against present non-members and avoid delay in putting the scheme into operation.

Renewal each year of the licence to bale will depend on the behaviour and competence of the baler.

- (2) A scheme for frequent regular inspection of all baling plants should be introduced without delay.

5. Fibre Inspection and Control

The Mission recommends that the Government should approach the United Nations for assistance in obtaining the services for, say, two years of an expert in the preparation and grading of fibre who would be attached to the Standards Commodity Division of the Ministry of Industry, as an Adviser.

In this position he would act as adviser to the Division with regard to grading generally; act as an entirely independent arbitrator in disputes regarding quality; be generally responsible for training government inspectors; be responsible for liaison

between the Government Inspectorate and the private inspection firms; make visits to the baling presses to give expert advice where necessary and to act as an independent arbitrator where questions regarding withdrawals of licences were involved; arrange for courses in fibre grading and assessment to be given to agricultural extension officers, managers of co-operatives, farmers and others who need to know something about the grading of fibre.

The Establishment of Regulated Markets for Kenaf

Under the scheme which the Mission recommends should be adopted for a guaranteed minimum price there is still the possibility that the middlemen will not pay the minimum price particularly in those cases where the farmer is in debt to the middleman for previous transactions. Although under the proposed scheme he will be able to sell to the local Government buying agent it may be difficult, for various reasons, for him to do so. Legislation could be introduced, of course, to make it an offence for any person to buy from the farmer below the minimum price but to be effective such legislation would have to be enforced and this might involve considerable expense and be impracticable. Moreover, since the minimum price would only apply to grade 'A' fibre and for a certain period of the year, for the rest of the year and as regards the lower grades of fibre he will still generally be obliged to sell his fibre to the middleman at the price which the latter will pay. (These comments should not be taken as a general criticism of the middlemen, many of whom provide a very useful service and without whom the marketing operations would not function).

The establishment of proper regulated markets in the kenaf growing areas, to which the farmer could take his fibre and where

he would have a wider choice of buyers to whom he could sell his fibre. The markets would help to remove some of these handicaps. The markets should have proper weighing facilities subject to frequent inspection and standard samples of the different grades of fibre should be available so that the farmer could form some idea of the value of his fibre. Farmers visiting the market would be kept themselves regularly informed of the prices ruling at the market from time to time. The markets could be run by committees made up of representatives of all those concerned, viz., farmers, middlemen, balers, etc., and possibly a member nominated by the local government. The members of the committee would render their services on a voluntary basis. The Government would be responsible for the supervision of the markets, the provision of maintenance of go-downs and baling presses, etc., and for the collection of market fees. A go-down where fibre can be stored while a buyer is being sought where the farmer can if necessary leave his fibre and sell it to a buyer at a price satisfactory to him. The running costs of the market would be met in time by the various fees mentioned above but for the first few years the capital and running costs would no doubt have to be provided by a Government loan or subsidy.

It is worth mentioning here that it is known that some farmers carry their fibre over distances as great as 60 kilometres to sell to the buyers for the Thai Jute Corporation. Obviously, therefore, many farmers would be prepared to travel some distance if necessary to obtain a better price for their fibre at a proper local market.

The location of such markets needs to be decided carefully since they should be so sited that as many farmers as possible in the area can make use of them and they need to be sited near or on the main roads so that the fibre can be easily transported to its final destination.

For practical and financial reasons it would obviously be impracticable to establish any large number of these markets immediately. The Mission recommends, however, that consideration be given to the establishment of such markets in the first place in, say, the Khon Khuen, Ubon and Buoyai areas within the next two years at the latest.

6. Re-organization of the Jute Mills

The mills in Thailand differ in their use of raw materials and in their internal organization. In the good mills with good administration, the raw material is used correctly and the manning of the machines is right. Such mills operate with one worker per spinning frame and one worker to four looms and the organization is satisfactory.

In the less efficient mills, however, the raw material is often too good for the type of product being made and two workers are employed per spinning frame and one worker to each loom. In such mills, reorganization would undoubtedly result in savings.

The Mission recommends, therefore, that the Government approach the United Nations for the services of an expert for a period of, say, six months to make a preliminary technical survey of the less efficient mills and to make suggestions for further more extensive studies should he consider them desirable.

GENERAL OBSERVATIONS AND MINOR DEFECTS

a) Improvement of cultivation methods

Owing to the attitude among farmers in the North East, it is not possible to grow where no other crop, including the staple crop, is grown. In the cultivation practices, the use of seed, fertilizer, irrigation, etc., yields per acre of fibre are much lower than those of other crops. The Department of Agriculture is doing its best to persuade farmers to adopt better cultivation methods, but this is limited by the numbers of agricultural extension workers in the Department and to the fact that cotton is not as profitable as other crops that are grown.

It is always difficult to persuade farmers to adopt new methods unless they see some advantage in them. In the North East, they have not, for the most part, seen any advantage in doing so. Also, too, the farmer knows only the well-framed crop and he knows that he to obtain higher yields the bigger the crop and the bigger the size of the fibre. This is one reason why the price paid for the size of the crop and the price paid for the size of the fibre should be fixed so that the wide fluctuations which have been the cause of Xant up till now should no longer occur.

b) Irrigation

Increased yields of fibre in some areas could be an embarrassment rather than a benefit unless sufficient water were available at the right time for retting and this is another reason why better and increased retting facilities are urgently needed. The Irrigation Department in the North East has a programme for the erection of retting tanks run on a communal basis, using the water from its

... .. Farmers are assisted in the formation of Irrigation farmers, encouraging them to make proper use the construction and themselves. The work of this assisted and developed, more money Department if it is required, particularly in the North part is one of the most important where Kenaf cultivation is more often farmer's expense. Aple in this area are, therefore, vitally

7. Ribbing

... .. to some extent, on the the dark ribbon, which the ribbons In this is the normal method used for reduces be carried and the ribbons are dried until water is again available for setting. of the ribbons from the stem is done by various ways have been devised by which this work can be and more rapidly. It remains to be seen, however, whether farmers in Thailand would be willing to adopt ribbing or what the real benefits would be.

Much work, which is fully documented, has been done in a number of countries, including Thailand, on the use of mechanized methods of ribbing. The machines devised are too expensive for the individual farmer in Thailand to buy, however, and until the Kenaf farmers become

more organized into groups or co-operative societies. In the case in only a few areas at present, the use of such machines like these is not practical.

One advantage of ribboning is that they could be used as raw material for central retteries where the fibre could be put out under controlled conditions and there a higher quality more uniform and better graded fibre could be produced. Retteries might be run, for example, by a pulp mill using the waste and some of the fibre for pulp manufacture, or by a factory. Concerns of this type would have warm water available and the technical expertise necessary to run a project of this kind.

Although the Mission feels that the proposal for action it has made, should, if implemented, produce a more rapid improvement in the position of the Kenaf industry as a whole, it feels nevertheless that the work on ribboning should be continued. In view of the advantages of ribboning, it is important to find out what possibilities are in Thailand.

d) Credit Facilities for the Farmers

Mention has been made above of the lack of farmers' groups, co-operative societies, etc., in Thailand. Such organizations can be of invaluable aid to the farmer since by providing him with credit facilities and a market for his fibre, they enable him to break free from his dependence on the middleman so that he can, in many cases, obtain a better return for his Kenaf. Although a number of organizations, including some of the Banks are encouraging this sort of activity much more needs to be done and much more money provided in this very important field. For example, the only marketing co-operative in Thailand for Kenaf, which has 1,500 members, cannot get funds from the Co-operative Bank because it is a marketing

... percent of its funds from U.S.O.M.
...

... generally
... about
... of
... credits

... in detail
... farmers
... improvement
... made
... and

... and
... fibres
... fibres,
... scibi-
... lined
... years,
... fibre
... resorbable
... commercially
... required

* Research Project No. 1/10 Report No. 1 "An Economic Study of
the Industrial Marketing of Kenaf" by Chaingyi Samart et al.

if the efforts in demand are to be at all successful. The
new uses which are likely to create a fairly wide demand
are difficult to find. Moreover, the few uses which
were found in the past are not very profitable. It
is thus not surprising in demand for
pulp.

In the last few years the Government of Thailand
has, and in Thailand on the whole, been carrying out
extensive research into the possibilities of using
carried out at the Royal Forestry Department, Bangkok,
Thailand and the Royal Forestry Department, Bangkok,
has carried out extensive research into the possibilities
of using various types of paper. It has found that
the possibilities of the material from a
such small trials and plans have been made
pulp trials of about 10 tons of material
local pulp mill. The results of these trials have
to be more definitely whether the material is
difficulties in using the fibre for pulp.

One pulp mill in Calcutta has carried out extensive
trials of the material and reached the conclusion that it is
feasible to make satisfactory pulp from the material
materials. They found, however, that the real problem was
technical one but one of logistics and economics in getting
of the raw material to the pulp mill. This will probably be the
main problem with kenaf in Thailand.

This production in the form of paper...
to in the section...
...
improved...
paper...

Future Prospects for Kenaf Fibre

Finally, something should be said...
for Kenaf fibre...
are concerned, the demand can be expected...
pattern of the demand for jute. The...
and Allied fibres...
of jute... in 1975 would be...
maximum...
tons so that the anticipated increase...
11% maximum

The... steep upward trend...
declined in 1966 and 1967 and showed...
The last three seasons have produced smaller...
larly that for 1968/9 which was almost a...
the high prices ruling for jute and Kenaf...
to accentuate the growing threat to jute...
propylene. Competition from polypropylene continues to grow and...
with new factories being put into production in many countries, one

(•) "Prospects for Jute, Kenaf and Allied Fibres in 1975", C. C. P: JU
68/13. Published July, 1967.

The present... will... a... If... on... at... the... the... use... An... better... in... fine... purposes... since... cheaper... incurred... will... is... the... produced... known...

What needs stressing, however, is that time is running out and unless urgent action is taken now it may be too late and the opportunity to preserve and strengthen the position of Thai kenaf as a raw material for cordage and other jute goods will be irretrievably lost. This need for

... by the Mission when

... these recommendations,

... implemented without

2.1. Prospects for the Kenaf Manufacturing Industry.

The long term prospects for the Thai Kenaf manufacturing industry would appear to be rather brighter and safer than those of its main competitors, India and Pakistan, because two of the main components of the costs of the finished goods, viz. raw material and labour, are cheaper in Thailand.

2.1.1. Pakistan.

In Pakistan, at the minimum price of Rs.30 per maund which is often guaranteed to farmers for "X Bottom" jute, the spinners will have to pay the equivalent of Bts.3.59 per kilo. for the lowest quality long jute and the price for jute cuttings at this price level will be around Rs.75 per bale, or about Bt.972 per kilo. There is no guaranteed price for mesta (locally) in Pakistan but since normally the price for "X Bottom" mesta is 15 per cent lower than jute the price for mesta is around Bts.3.08 per kilo.

In India, the minimum guaranteed price for Assam Bottom is Rs.40 per maund, or about Bt.3.06 per kilo. On these figures it would appear that the Indian spinners should be able to obtain their raw material at lower prices than spinners in Pakistan but experience over the last decade shows in fact that the internal price level of raw jute in Calcutta is about the same, if not higher, than in Dacca.

In Thailand, at the guaranteed minimum price of Bt.2.00 for mixed grade Kenaf or at the price recommended by the Mission of Bt.2.50 per kilo for uncut grade 'A' Kenaf the spinners should be able to cover their requirements for grade 'C' Kenaf suitable for heavy count yarns and complementary to jute cuttings at a price of Bt.1.70 per kilo. Cut grade 'A' Kenaf, suitable for good quality warp yarn ranging from 9 to 12 lb./spynale will be available at Bt.2.50 per kilo.

It can be assumed, therefore, that for fibre for the heavy counts spinners in Thailand would have to pay prices only slightly lower but as regards warp yarn in medium counts they would be in a much more advantageous position since they should be able to acquire fibre for these purposes at a price about 35 per cent cheaper than their competitors in India and Pakistan would have to pay. Consequently these lighter yarns and fabrics made from them would appear to offer the best prospects for exports.

b.) Labour.

In Pakistan the salary of workers in the jute mills is Rs.150 per month or Bts.650. In addition the workers are entitled to 13 working days holiday and participate in the "bonus vouchers" earnings of the mill which amount to about Rs.100 or Bts.400 per year.

In Thailand workers in the Kenaf mills are paid a daily rate between Bts.8 to Bts.20, those employed in the spinning section earning on an average not more than Bt.15 per day including all social amenities. Assuming 25 working days per month this amounts to a monthly salary around Bts.375. In general, too, the Thai workers are more technically minded and industrious than their counterparts in the mills in India and Pakistan.

Consequently, as regards the cost of raw materials and labour the mills in Thailand would appear to be better placed than their competitors to resist the impact of synthetics, assuming that no great changes take place in the present situation.

THANKS

Appendix "D" contains a list of the many people to whom interviews were held. The Mission wishes to express its thanks to all of them for their courtesy and co-operation at all times and for their willingness to impart information. Their assistance was invaluable.

Thanks are also due to the staff of the U.N.D.F. office for their general assistance and particularly with regard to typing.

The Mission also wishes to acknowledge gratefully the kind and courteous assistance provided by so many different members of the staff of the Applied Scientific Research Corporation of Thailand wherever it was required, and to the Corporation for providing office accommodation, secretarial services, transport, etc. Special thanks are due to Mr. Nippon of the Corporation who accompanied the various members on their visits, arranged transport facilities, etc. and generally took care of the Mission.

APPENDIX

Minimum Price of the Minimum Fibre for Grade "A" Fibre

It is suggested that the minimum price of loose uncut grade "A" kenaf should be fixed at Bht. 2.30 per kilo. The Mission took into account the following considerations:

The price fixed should be high enough to provide an incentive to the growers but not too high, so as to cause an over-supply, likely to be harmful to the stability of prices in foreign markets.

According to the study made by ASRRT in 1967*, 69% of kenaf growers stated that they would continue to grow kenaf provided that they would receive not less than Bht. 2.00 per kilo. of kenaf fibre and 31% stated that they would be satisfied if they received not less than Bht. 1.50 per kilo. The incentive of Bht. 0.30 per kilo. over the price which the majority of growers consider reasonable should be sufficient to induce the farmers to cut kenaf at the proper time and to ret it when ample supplies of clean water are available.

(*) At the meeting of the Consultative Committee on Jute, Kenaf and Allied Fibres in February, 1970, in Rome, the Thai delegation proposed $\text{f} 10 + \text{f} 5$ per ton C.I.O.S. Bangkok as the indicative price

(*) Research Project No. 1/10 Report No. 1. "An Economic Study of the Production and Marketing of Thai Kenaf". By Chaiyong Chuchart, Norman L. Waite and Satchee Suthasathien.

for Thai kenaf grade "A". The representatives of the kenaf consuming countries, however, maintained that to secure a steady demand for Thai kenaf, the indicative price for this grade should be £ 67 10 s. ± £ 5 per ton, f.o.b. Bangkok, and no agreement was reached on this subject.

With a price to the farmer of Bht. 2.30 per kilo for uncut loose grade "A", the minimum price for export would be £ 67 per ton f.o.b. Bangkok, so that this would represent an indicative price of £ 72 ± £ 5 per ton f.o.b. Bangkok.

In view of the fact that if the policy of a guaranteed minimum price to the farmer is adopted the consumer should have the opportunity to obtain a more uniformly selected grade "A" it is hoped that this compromise solution will be acceptable to both parties.

- (3) By limiting the period during which the minimum price will be paid, it is hoped to induce the farmers to harvest their kenaf at the right time and to ret it while ample supplies of water are available.

The oncost from the price to the farmer to a price f.o.b. Bangkok has been calculated as follows :-

	Bht. per kilo
Price to farmer, loose uncut grade "A" per kilo	2.30
<u>Marketing charges</u>	
Unloading & warehousing	0.03
Assorting	0.07
Loss in weight (moisture & foreign matter) 5%	0.11

	<u>Bht.</u> <u>per kilo</u>
Cutting. 1% at less value 60% = 3%	0.07
Baling Bht. 11.00 per bale } Rope Bht. 1.00 " " }	0.07
Transport to Bangkok, average	0.10
Profit of the Baler	0.07
Brokerage in Bangkok, 1%	0.02
<u>Exporter's charges</u>	
Unloading and warehousing	0.05
Surveying, weighing and loading	0.05
Profit of exporter (2% per ton)	0.10
Export duty 2.0% and valorem	0.06
	<hr/>
	3.10 Bht. per kilo •

A price of Bht. 3.10 per kilo is equal to \$67 per ton f.o.b. Bangkok.

APPENDIX " B "

Suggestions Regarding the Way in which Government
Purchases of Fibre could be Organized

Some of the details of the scheme will obviously need to be worked out. The main features of the scheme which the Mission recommends, however, are the following :-

- (1) At the time when the announcement about the minimum price is made or at least one month before the crop should be harvested the Government will publish the names and full addresses of its agents who will be prepared to buy fibre at this price in any quantity.
- (2) The announcement regarding the guaranteed minimum price and the names of the Government buying agents must be given the widest publicity in the Press, on radio and television. In those areas where this type of communication has a small impact, the information can be passed on to the farmer by agricultural extension officers, farmer's associations and co-operatives, etc., etc.
- (3) As far as is possible, the Government will make use of those purchasing channels which already exist for the marketing of the fibre. It can use as its accredited buying agents, for example, co-operatives where they exist, accredited and reputable balers in the kenaf growing areas, Banks such as the Bangkok Bank, and the Bank of Agriculture & Agricultural Co-operatives who are already buying or financing the buying of kenaf in certain areas, and, if necessary reputable middle-men who are known to be regular traders in kenaf. Credit

facilities for the purchase of fibre by the Government agents will be provided by means of Government guarantees to the banks who will provide any necessary loans to the agents. The advantage of making use of the normal channels of marketing is that the godowns, baling facilities, etc., which already exist can continue to be used in the normal way.

Agents undertaking to act as buying agents for the Government shall not be precluded from buying on their own account but shall deliver to the Government the quantities of fibre bought on private account and the prices at which it was bought. Any agent found to be buying below the minimum price on government or private account shall have its authority to buy for the Government withdrawn permanently.

- (4) It is recommended that the Thai Jute Corporation should be the Government organization responsible for Government buying arrangements through agents since it is already empowered to buy kenaf from farmers who approach it and it already has some experience of Government buying in order to help maintain a minimum price for kenaf. The Corporation has some staff who have had some experience in buying kenaf; a go-down and a baling press; and some experience in selling kenaf to the Government mills and other buyers. It seems to be the most suitable body, therefore, to administer and supervise the scheme.

Since it is recommended that full use should be made as far as possible of the normal channels of marketing it is not anticipated

that the Corporation will have to increase its buying operations to any great extent but it must, nevertheless, be in a position to do so, if required. Consequently, it will need to have the necessary financial guarantee and increased staff from the Government for whatever purchases it may have to make. It is vital, should the necessary co-operation of the buyers, balers, etc., not be forthcoming to support the scheme, that the Corporation be able to buy whenever and wherever it is necessary to support the minimum price because if the scheme is to work satisfactorily and the farmers are to have confidence in the scheme they must be assured of at least one outlet where they can obtain the minimum price for their fibre.

- (5) Kenaf bought by the Government's buying agents will be under Government control and will only be sold with Government permission. Subject to this provision, however, there is no reason why stocks purchased on behalf of the Government should not be released to the market normally as required. It is suggested, therefore that when the Government agents send in their returns stating how much kenaf they have bought on Government account they should state at the same time whether they are prepared to dispose of all these purchases privately or whether they wish to leave all or a proportion to be sold by the Government. If they adopt the first alternative, all charges for buying, storage, etc., will be for their account in the usual way. Where, however, they do not wish to sell

on their own account fibre bought on Government account, the Government will pay suitable storage charges while the fibre remains in the agent's go-down.

It should be stressed that there is no intention at this stage that the Government should build up and retain a buffer stock. There is the possibility, however, that should there be a year when very large quantities of grade "A" fibre were produced, the Government might have to hold stocks for a longer period than normal.

In order to cut down the costs of running the scheme and to avoid the necessity for the Government to hold large stocks for any length of time, the mills should be required, if necessary, to buy an agreed monthly quota of kenaf from the Government buying agencies based on their annual consumption during the period when the guaranteed minimum price scheme is in operation.

(2) Since the minimum price guarantee will only apply to grade "A" fibre, the maximum quantities which the Government will be required to buy will not be too large. Only about 25% of the crop at present is grade "A" or about 45,000 tons out of a total crop of, say, 300,000 tons so that if the Government were forced to buy, say, 20% of all the grade "A" fibre produced its total financial liabilities would not exceed Bht. 34.5 million. (It is hoped, however, that the percentage of grade "A" will rise if the proposed scheme is adopted.) However, the demand for export is mainly for grade "A" and since the

mills are also anxious to obtain more raw material and should in fact be a quick sale for the Government. It should be borne in mind, too, that the Government will wish to continue buying in the future and should consider they are prepared to pay a higher price. Although it is difficult to estimate the price in advance, the actual Government price is likely to be until the scheme has been fully implemented. It is reasonable to expect that there will be a significant increase in the price of jute.

The advantages of the scheme are that it will enable farmers to harvest their crop at the right time and to store it in a way which will encourage them to form themselves into groups and to improve retting facilities in the off-season when they are not busy with their work; give them some incentive to carry their crop to the nearest retting area where better retting facilities are available; and to grade their fibre before sale.

It should be pointed out here that if farmers are unable to make any improvements themselves they will be dependent on the Government to provide ^{retting} better facilities so as to give them the opportunity to produce grade "A" fibre. It is essential, therefore, that the Government plans for providing retting facilities for the farmers should be enlarged and proceeded with urgently.

-
- (*) It is of interest to note that in 1969 - 1970, the Government in Pakistan had to buy 250,000 bales of jute, or only 4% of the total crop of 6,500,000 bales to maintain the minimum price.

4

Development of Jute Milling in

India and the Jute Industry in Pakistan

The jute industry in Pakistan is as follows... opportunities for establishing a jute... were... had... was... (1949) the... the first... government... by... further... by the... and;... the... then... (1950...),... and... is a... suitable for... which... required in...

In the meantime the number of mills has grown to ten and the loomage has risen to 1,463 and 11,000 workers.

Spinning T'ai kenaf poses problems which do not have to be faced when working with jute, owing to the fact that kenaf fibre is coarser and harsher.

At the present time the mill is producing a greater quantity of
 the 25's and 30's than ever before. The reason for this is that
 the quality of the fibre is better. The machinery is better
 kept up and the men are better trained. The mill is producing
 25's and 30's in greater quantities than ever before. The
 reason for this is that the quality of the fibre is better.
 The machinery is better kept up and the men are better trained.
 The mill is producing 25's and 30's in greater quantities than
 ever before. The reason for this is that the quality of the
 fibre is better. The machinery is better kept up and the men
 are better trained.

Manufacturing Department

The manufacturing department is the largest department in the
 mill. It is responsible for the production of the goods.
 The department is divided into several sections. The largest
 section is the weaving section. It is responsible for the
 production of the cloth. The other sections are the spinning
 section, the finishing section, and the packing section.

The weaving section is the largest section in the manufacturing
 department. It is responsible for the production of the cloth.
 The section is divided into several sections. The largest
 section is the power loom section. It is responsible for the
 production of the cloth. The other sections are the hand loom
 section, the finishing section, and the packing section.

The consumption of the mill is calculated as follows. The
 goods produced are of an excellent quality. The mill works
 two shifts, one worker to four looms. In all the mill is
 producing goods.

The Mill consists of:

- 170 - 24 Ounce Weaving Machines
- 50 - 20 Weaving Machines for the
 manufacture of goods.

1940

1941

1942

1943

1944

1945

1946

1947

1948

The mill is a large industrial plant
 located in the town of ...
 It was built in 1940 and has since
 been expanded several times. The
 mill produces a large amount of
 paper and is one of the largest
 in the area. It employs about
 1,000 workers and is a major
 employer in the town. The mill
 is owned by the ... and is
 operated by a manager who
 reports to the board of directors.
 The mill has a long history and
 has been a part of the town's
 economy for many years. It has
 played a significant role in the
 development of the town and has
 provided many jobs for the
 residents. The mill is a source
 of pride for the town and is
 an important part of its identity.

... about leaving business

The following is a list of the items which were examined and the results of the examination are given in the table below. The items were examined on the 14th and 15th of the month and the results are given in the table below. The items were examined on the 14th and 15th of the month and the results are given in the table below.

- 20 - 2" x 2" Flat Irons
- 30 - 3" x 3" Flat Irons
- 40 - General Heating Appliances.

The efficiency is not as good as could be expected. The spinning machines do not spin the yarn very well (not all these machines could be seen), and their rate of production is not good. The number of the broken ends is too high in spite of the fact that two workers are employed on each side of the frame. It is not possible to find out the reason for this kind of work in the comparatively small time span of the mill.

...bags having been made of a good raw
...the good material which is used by
...the machines should be better.

INDUSTRIAL DIVISION, AT

...person and is also situated at the
...of Pakchany. Mixed grade jute, being
...amounts, is used, amounting to 9,000 tons per year,
... This mill uses a spreader batching system.

...workers and has:

...Looms

...Machines.

...manufactured in Taiwan and do not have the
...from which they are copied
...The capacity of the Himach looms is not
...The final product is what may be expected
...which is used.

INDUSTRIAL DIVISION - NCINTABUNI

...Ministry of Industry. It is the oldest
...into operation in 1951/1952. The Mill is situated
...near the Don Luang Airport, in the middle of the rice-
... The raw material used is bought from balers, like for example: "B"
... The machines vary in age; some of the
... 18 years old, some 13 and some 6 years.

The firm employs 1,200 workers and has:

...Gremack Weaving Machines and

186 Fully Automatic Flat Looms.

The Mill employs 1,200 people in one shift. At the present they only
work one shift. At the spinning-machines two persons work on one side. On

the flat looms there is one person working per loom.

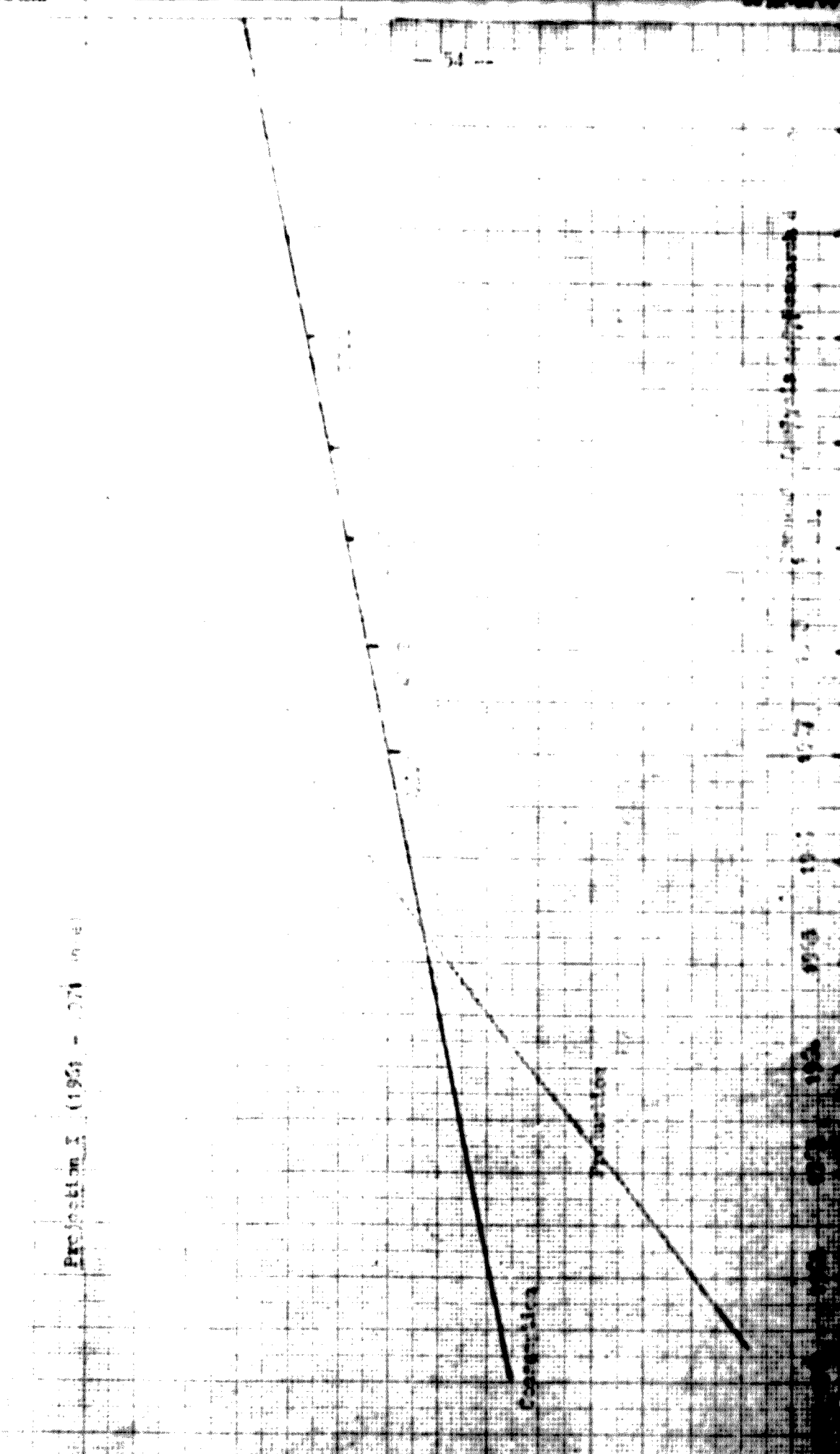
When it is worked in one shift 15,000 bags can be manufactured. Working in two shifts, they are able to produce 25,000 bags. In this mill they work five days a week.

The bags are calendered and are consequently excellent in appearance. The workmen at this Mill mostly consist of people working in the field of agriculture. During the period of cultivation and harvesting of rice a rather high percentage of the workmen do not come to the mill. The normal, daily fluctuation in labour amounts to around 20 per cent, even though buses are sent around to collect the workmen. Consequently full capacity cannot be achieved. The reasons are the machines which are over-aged as well as the high labour turnover. It is understood, that the management has to face a lot of trouble.

The Thai Jute Industry has a consumption of about 80,000 to 100,000 tons jute per year. From the bags produced, about 80 per cent are used in Thailand itself. Considering the world's production on the whole, the jute produced in Thailand is only a small part of the world's production. Therefore there should exist no difficulties whatsoever in selling the surplus of bags, which cannot be used in Thailand. In the latter case, the jute has, of course, to be sold for the prices, ruling on the world-markets. Table IV shows the planned development of bag production and consumption. The manufacturing of cable yarns, felt as well as carpets should be considered.

The profitability of export depends entirely upon the prices of the raw materials.

Projection I (1961 - 1970) (m.e.)



Annual Consumption

1970

1961

1962

1963

1964

1965

In most of the mills a too good quality of jute is being used for the same mills, and the number of the workers employed is, even at the far east, much too high. On these both facts savings could easily be made, and the mills could work more competitively. Furthermore, it has to be stated, that the capacity of most of the mills cannot be reached because the local market is not large enough.

Some mills produce some types of hessian but the quantity produced is unimportant because the mills have only a few looms suitable for this purpose. Production is also limited owing to a lack of power and water and because of this the production of yarn and thread for export could be increased. If the quality of the raw material were improved, more could be produced but finance would be required for the purchase of water, power, looms, sizing machines, etc.

The Thai workmen are good, clean and different from the Bengalis more or less unknown to them, and most of them work as farmers, more, as farmers themselves. The problem the management has to solve is that the farming work could partly be solved by building excellent living quarters within the mill's site for them. Furthermore, as a positive step in solving this problem, they should get free or rather cheap means of transport. It seems to be very difficult, however, to accustom a person, brought as a farmer, within a short time to work in the industrial field where conditions are so different.

On the whole, the Thai workmen can be considered as satisfactory. There is no doubt that they are far better than those in Pakistan or in India. The best way to describe the Thai worker is to say that he can be placed between the Indian and the Japanese worker.

... could produce heavy sacks in competition
... the right people are employed. The reasons

1) At present, the rice-lands, not being planted on the rice-lands.

2) Shortage of working staff, and

3) Lack of management, particularly on the part of the management.

... of the production of the polypropylene bags
...

APPENDIX 'D'

KHORAT

Pak Chong (Patana Utasakha) Development Industries

Mr. T. Curran
Sikew Jute Mill Ltd.

Ta Phra North Eastern Agricultural Centre

Laem Thong Jute Mill

Non Sun Agricultural Experiment Centre

Mr. Nicholson
North East Jute Mill Ltd.

Invitation (Mr. J. P. Ditty only)

Guests

Mr. N. Senya	Jute Development Officer Ministry of Agriculture
Mr. S. Choudhury	Jute Agricultural Research Institute, Barrackpore
Mr. L. Ranji	" " " " "
Mr. S. M. Manna	General Manager State Trading Corporation
Mr. N. Dutt Roy	" " "
Mr. D. C. Sen	Indian Jute Industries Research Association
Mr. S. S. Rao	" " " "
Mr. S. Halit	" " " "
Mr. A. Mukherjee	Jute Commissioner
Mr. F. Brown	Secretary Indian Jute Mills Association

UNITED KINGDOM (Dr. R.H. Kirby only)

LONDON

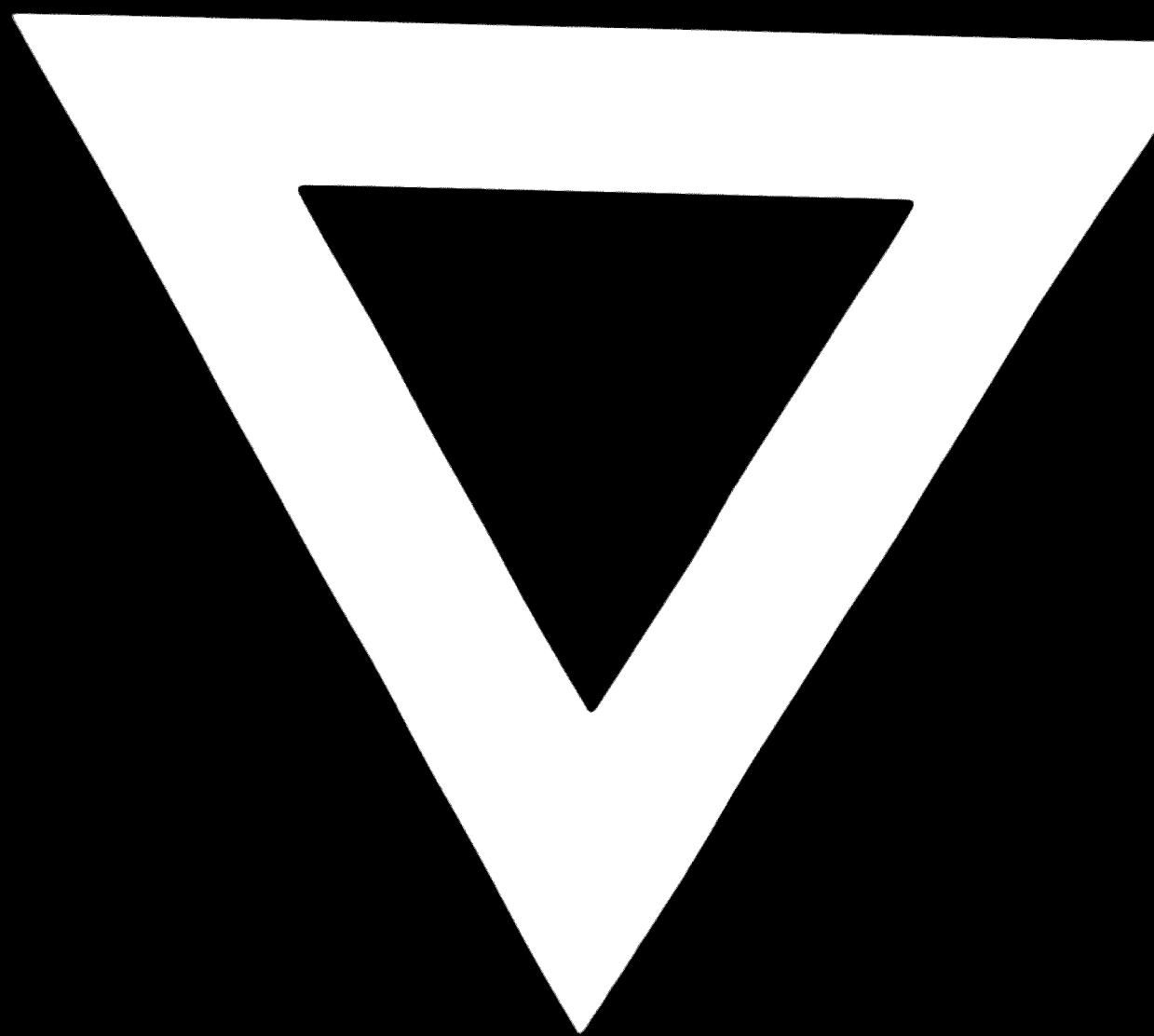
Dr. H. Stout	Director Scottish Textile Research Association
Dr. S.R. Mather	" " " "
Mr. Duncan	Jute Industries Ltd.
Mr. Castle	" "
Mr. McConochie	J.C. Duffus Ltd.
Mr. B. Smith	Mackenzie, Stewart & Co., Ltd.
Mr. F. Stewart	" " "
Mr. T. Herry	" " "

LONDON

Mr. E.J. Shelton	Checchi & Co.
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