

## THE PINEAPPLE CANNING INDUSTRY IN MALAYA\*

*General.*—The Malayan pineapple canning industry took its rise somewhere about 1904. Up to the present it has been maintained practically exclusively as a means of handling pineapples grown as a catch-crop between young rubber, and has been carried on almost entirely by Chinese. It will thus be seen that the origin of the pineapple industry is contemporaneous with that of the rubber industry and in its present form it may be described as a by-product of the rubber industry.

The industry began in Singapore and was until about 1921 practically entirely confined to that Island, the produce being known as Singapore pineapples. The very considerable extensions of rubber planting which took place in South Johore about that time, however, brought about a corresponding increase in the planting of pineapples as a catch-crop in that State; this was the outcome of the fact that much of the development in Johore was effected by Chinese planting interests in Singapore which naturally tended to make use of methods similar to those which had been already employed successfully in Singapore in a similar connection. Up to the present, the only other area in Malaya in which pineapple growing has become established is in Selangor; elsewhere in Malaya the crop is not at present grown for export.

It is obvious that under these conditions the industry has no great amount of stability, while the setback which the rubber industry has lately suffered owing to the slump seems in due course bound to have its repercussion on the pineapple industry; the situation is accentuated by the fact that the Malayan Governments have decided that until further notice no lands should be alienated for rubber planting. In existing circumstances it would seem that during the next few years the area under catch-crop pineapples will in all probability decrease considerably, inasmuch as the planting of new areas under rubber is in the circumstances bound to decrease also. It is true that in Johore considerable areas still exist which have been alienated for rubber but not yet planted and that on these pineapple cultivation may be undertaken for some time to come, but on the whole, it seems probable that the general tendency will be towards the decrease in the area planted in pineapple as a catch-crop, inasmuch as when the rubber matures the pineapple crop must be removed and unless the new restriction on fresh alienation of land for rubber cultivation is rescinded, there seems little possibility of continuing the existing system on the present scale for any lengthy period.

The prospects of the industry are still further adversely affected by the price at present ruling for canned pineapples, which are lower than any recorded since 1915. While the price for rubber continued to be high, and large new areas were being opened up for rubber planting, the cultivation of pineapples as a catch-crop could be undertaken profitably inasmuch as the return, even at very low prices for pineapples, constituted a distinct saving in respect of weeding and cultivation charges which would in any event have to be faced, while not infrequently rubber plantations established

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in this way changed hands at very profitable figures once they came into tapping. Now, however, the only possibility for the indefinite continuation of the industry would appear to lie either in its development as a main crop or as a catch-crop between some other form of permanent plantation. It is impossible to say in the present disturbed state of the world's markets what the prospects in this latter direction are: they may be appreciable, but in any event on purely a catch-crop basis it seems unlikely that the industry can ever have any real permanent stability.

At present prices there would not seem to be great possibilities of establishing the industry on a permanently paying basis as a main crop: nevertheless, the industry is a valuable one: the total exports of Malayan canned pineapples during the year 1929 amounted 58,692 tons valued at \$9,233,732, while those for 1930 were 57,959 tons valued at \$7,859,026. A definite market and demand exists for the product in the United Kingdom and it is certain that whatever else may happen, that demand will continue if the price to the consumer is not materially increased. This demand will keep pace with the strongly increasing demand for canned fruit of all descriptions. It is obvious especially at the present juncture, that an industry with an established and certain demand for its products in the United Kingdom is an asset of great potential value. In consequence, a critical examination of the position having for its object the ascertaining of the cause of the weakness of the industry, together with possible remedies, is of importance.

*Quantity and Value of Exports of Malayan Pineapples.*—Between the years 1904 and 1921 the annual export from Malaya ranged between 100,000 and 850,000 cases with corresponding wide fluctuations in price; in 1919 the price underwent a sudden rise probably due to the post-war boom and shortage of supply which had occurred as the result of war conditions. Thereafter the production has steadily augmented, while prices have steadily declined. Compared with other years the average price for the year 1930 is lower than for any corresponding period since 1915, while during the month of September, 1930, the market price of \$3.30 per case is almost the lowest ever recorded.

If these figures are taken at their face value it would appear that they present an example of the operation of the ordinary law of supply and demand, that if the natural course of events is allowed to operate the present low market value is bound to result in a shortage of supplies which will in due course bring in its train a rise in price. To an extent this is undoubtedly true; on the other hand there is also no doubt that there are a number of other factors operating which tend to make the position worse than it should be.

This is more clearly seen when it is stated that at the present time stocks of canned pineapples are lower than they have been for many years, both in Singapore and London; that the demand is steadily increasing; that the reputation which the fruit enjoys in the English market has considerably improved of recent years; and that on evidence presented to us from a number of sources, there is definitely no over-production at present.

*The Position of Malayan Canned Pineapples in the World's Market.*—The world's production of canned pineapples at the present time is principally divided between two countries, viz. Hawaii and British Malaya: there is also a small export from South Africa and Australia, while in Formosa there is also a steadily increasing production, which, at the present time, is actually consumed in Japan and China.

The average annual export from Hawaii would appear to be about 425,000,000 lb. valued at about \$40,000,000 gold. The Malayan trade comes second in importance. Hitherto, Hawaiian canned pines have hardly entered into competition with the Malayan product, as the aim of the Hawaiian producer has always been to produce an article of first class quality selling at a relatively high price. Malayan pineapples have, on the other hand, always ranked as a comparatively inexpensive article and have come to occupy the place of the cheapest canned fruit on the market.

During the past two years efforts have, however, been made to improve the quality of Malayan pineapples, and as a result the opinion has been expressed that the best brands of Malayan fruit can now compete on level terms with the product of Hawaii. This, however, only applies to a small fraction of the pack; in general the quality still falls decidedly below the highest standard. The principal defects at present encountered appear to be:

- (a) Irregularity of cutting and slicing;
- (b) Lack of uniformity in the number of slices or cubes packed per unit tin;
- (c) Lack of care in the preparation of the syrup.

The Malayan product at the present time has by far the largest share of the English market. It is estimated that 86 per cent of the canned pineapples consumed in the United Kingdom are the produce of the British Empire and of this Malaya's share represents 80 per cent of the total. The latest available figures show that for 1929 Malayan pineapples constituted 84 per cent of the total exports from all countries into the United Kingdom.

The reputation and popularity of Malayan pineapples in Great Britain has been considerably enhanced during the past two years by the systematic advertising campaign which has been carried out by the Malayan information Agency acting in collaboration with the Empire Marketing Board. There is also reason to believe that a large untapped market may exist for the produce on the continent of Europe.

Another important factor which influences the position at the present time is the prevalence of a disease among pineapple plantations in Hawaii, known as pineapple wilt. This disease is reported to have severely affected the output of many of the Hawaiian plantations, while so far no satisfactory remedy has been found for it, so much so that certain of the Hawaiian companies are reported to be opening up plantations in the Philippines, while one of the most important, namely Messrs. Libby & Co. have recently acquired a large block of land in Kenya for the purpose of embarking on pineapple cultivation on a large scale in that colony.

*Soils and conditions suitable for Pineapple Cultivation.*—Pineapples grow best on fairly open sandy soils as the plants require free drainage; for this reason also gently sloping lands are to be preferred. These conditions are to be met with on the majority of the inland areas, wherever topography lends itself to free natural drainage. In particular the quartzite soils and the granite soils are known to produce the crop very satisfactorily. Considerable areas of this type of soil exist. Pineapples can also be grown on other soil types and also, in particular, are frequently grown in Malaya on peat soils, although under the latter conditions the fruit is not of such good quality, nor does it ripen so readily.

Equatorial conditions such as are encountered in Malaya are particularly favourable for the crop, inasmuch as thereunder the fruit is harvested in two crops of about three months' duration each, viz., May, June and

July, and October, November and December respectively, of which the May-July crop is somewhat heavier and of slightly longer duration than the October-December crop, instead of one big crop and one small crop as occurs in latitudes further north and south of the Equator. Conditions such as these make possible the employment of smaller factory units, and, make for economy in labour inasmuch as they enable a smaller labour force to be employed for a longer period and tend to minimise the necessity for having a large labour force deal with a harvest covering a short period of time.

*The Marked suitability of Malaya for Pineapple Cultivation.*—From what has been said it is clear that Malaya is peculiarly favourably situated for the cultivation of pineapples; added to its considerable natural advantages it possesses an established market for the produce, combined with a steadily increasing demand. Against this must be set the fact that at present the industry is in considerable difficulties and is certainly not remunerative to growers. Until recently the industry has always been regarded locally as a mere incident in the development of the rubber industry and as such of little real or permanent importance. No attempts have been made to improve the cultural methods or to assist the growers. The inception and development of the industry is entirely the outcome of the initiative and enterprise of members of the Chinese community and to them credit is exclusively due for having endowed Malaya with an industry of considerable importance, the produce of which is valued at upwards of £1,000,000 annually, coming fifth in this respect in the exports of Malaya. The fact should not, however, be overlooked that other countries are becoming alive to the opportunities presented by this form of cultivation. Mention has already been made of developments likely to take place in Kenya, and of the growing trade in Formosa, in Mauritius also the Government has recently heavily subsidised an experimental factory with the object of endeavouring to develop a pineapple industry.

*Areas Under Cultivation in Pineapples in Malaya.*—The Malayan pineapple industry is confined to three administrative areas, namely Singapore, Johore, and Selangor. The approximate total areas under the crop are estimated as follows: Johore 40,000 acres, Singapore 8,000 acres, Selangor 4,000 acres. As stated, practically the entire area is interplanted as a catch-crop between young rubber and although various proposals have been put forward for planting pineapple as a main crop, none of these so far have materialised. In Singapore land has been given out for cultivation in small areas of 2 to 5 acres each but in practice they have tended to become combined into blocks of approximately 200 acres each under the control of one individual and worked by the lessor by contract and day labour. In Johore areas have been given out in large blocks and are subdivided by the owners and worked either on contract or on the "squatter" basis. There is, however, an area of approximately 10,000 acres in Senai District, Johore, which is entirely worked by smallholders. In Selangor there is only one large area worked by a Chinese planter; the remaining areas under cultivation in that State consist of small holdings.

*Methods and Cost of Cultivating Pineapples in Malaya.*—Figures for the cost of cultivating pineapples are to some extent conjectural. From information gathered by the Department of Agriculture the following is an estimate of the probable cost per acre of cultivating the crop: Rent, say \$3/-, Clearing the land \$30-\$40, Purchase of suckers \$3-\$5, Planting suckers \$3, Weeding and cultivation 1st year about \$24. The subsequent upkeep would amount \$2-\$5 per mensem.

As the crop is at present grown entirely as a catch-crop on virgin lands or reclaimed secondary jungle, the question of manuring does not come in to the calculation, but if the crop is to be grown as a main crop, manuring must in due course become essential. No information is at present available concerning the manurial requirements of the crop in Malaya.

The variety of pine principally cultivated is that locally known as the Queen pine. A number of other varieties are also cultivated on a small scale, but are not locally considered as suitable for canning. The Queen pines give a fruit which when ripe possesses flesh of a golden yellow colour and excellent flavour. The smooth Cayenne pine which is the standard variety grown in Hawaii is not, so far as is known, grown at present. Planting is usually performed at a distance of 5 feet by  $2\frac{1}{2}$  feet with a six foot path at about every 100 feet. This spacing gives from 3,000 to 3,400 plants per acre. No information is available regarding optimum planting distances. Cultivation consists in weeding between the rows and in mounding up the pines.

The Department of Agriculture is now undertaking the organisation of a Pineapple Experiment Station in Singapore which will be devoted to obtaining information on all these points; an experimental programme has been laid down which is being duplicated at the Experimental Plantation, Serdang. We think that information on these points is of vital importance if the industry is to be established on the basis of cultivation as a main crop and we would here emphasise that the cultivation of pineapples as a sole crop constitutes the most promising development for the permanent existence of the industry. Though the industry has now been carried on successfully for about 26 years with pineapples as a catch-crop, it seems improbable, though not impossible, that opportunities for cultivation on these lines will continue to occur.

The first crop is generally harvested 18 months after planting, from 1,200 to 1,500 fruits per acre being obtained, thereafter, for a further  $3\frac{1}{2}$  years to 4 years, two main crops are reaped annually, namely in May, June and July, and in October, November and December, although small amounts of fruits are coming in all the year round. After the crop is in full bearing the first four crops give 4,000 to 5,000 fairly large fruits per acre per annum followed by three or more crops smaller in number and poorer in quality. One witness stated that cropping could be maintained up to ten years, but it is considered doubtful whether this is an economic procedure.

*Disposal of the Fruit by Growers.*—The fruit is either sold by the growers to the canneries at the factory doors or on the road-side, and is also purchased by passing lorries at road-side for re-sale to the factories. Prices vary according to the market value for canned produce and also according to the supply and the quality of the fruit. At present the average price in Johore ranges from 70 to 85 cents per hundred fruit delivered at the factory, although for first-class fruit prices have ranged as high as \$1.50.

When the market is low it is apparently the practice to endeavour to pass on to the grower the whole of any fall in price which takes place, though it is not clear that the grower obtains the full advantage of any rise that may occur.

In Singapore prices are slightly higher than in Johore. This is apparently due to the fact that an export duty on both fresh and canned fruit is levied by the Johore Government, viz.  $12\frac{1}{2}$  cents per 100 on fresh and 4 cents per case on canned fruit and also to the cost of transporting fruit from Johore to Singapore. A certain proportion of the Johore crop goes to the Singapore canneries which are unable to operate full time on the produce of Singapore Island alone.

At existing prices, viz. 80 cents per 100, the return apparently does little more than pay for the cost of collection and transport and yields practically no profit. Various witnesses informed us that it was considered that a fair price for pines would be about \$2 per hundred and that at this figure a reasonable margin of profit to the grower would be assured. To enable such price to be paid we were informed that a minimum of \$4.50 per case f.o.b. Singapore would be required. It is to be observed that this price is considerably below the values which have ruled for a number of years past with the exception of 1930.

No system of advances to assist small growers exists; frequently growers are not paid for their produce on delivery and have to wait for payment until the factory has realised an advance on a delivery for shipment. A small growers' co-operative society, if and when possible, might provide a remedy. At present it does not appear to be feasible.

*Conditions in Relation to Manufacture.*—There are at present 18 canning factories in Malaya. Of these 5 are situated in Singapore, 12 in Johore and 1 in Selangor. These are for the most part primitive and consist of temporary buildings constructed of wood and galvanised iron. It is stated that some of these were not built as pineapple factories but as godowns. This form of construction was adopted owing to the conditions under which the industry existed; the cultivation being in the shape of a catch-crop between young rubber was fugitive, and was bound to be displaced as soon as the rubber approached maturity. Consequently the type of factory evolved was such as required comparatively little capital for its erection and at the same time could readily be dismantled and re-erected elsewhere as soon as the area which it was originally intended to serve had become converted into mature rubber plantations.

For the same reason there has been little or no expenditure on expensive or heavy machinery; the whole of the operations of peeling, coring and slicing the fruit as well as the syruling and sterilising of the cans being performed by hand. In Hawaii all of these operations are performed by highly ingenious machinery, but none of these machines have so far been imported into Malaya. The only machinery which forms part of the equipment of the ordinary Malayan pineapple factory is that required for the making of cans. All factories at present working in Johore have now introduced tile-topped tables, but in some of these factories the water supply is still defective. In particular one factory has erected a modern building, installed a satisfactory water supply and more modern plant for can making. In Singapore all factories are situated within the Municipal limits and as such are subject to Municipal regulations and in consequence have the advantage of a pure water supply from the Municipal areas. All factories in Singapore employ white tiled trimming tables.

Lately, the Health Authorities in Johore have become active in this connection and have insisted on the maintenance of a better standard in relation to pineapple factories than formerly existed. Their activities have been regulated by the new Food and Drugs Enactment of Johore. It is to be remarked that the improvement in conditions thereby effected is an asset and that the attainment of a satisfactory standard of hygiene in these factories is of considerable importance. The Health Officer at Johore, Dr. Gross, who gave evidence before the conference, stated that he proposes to undertake a series of tests of the bacteriological purity of the products from different factories. It may be remarked that the Canadian Government has recently taken an interest in this question and the Canadian Trade Commissioner visited all the pineapple factories in Johore and Singapore

for the purpose of preparing a list of products which would be admitted to Canada by reason of the fact that the factories in which they were produced had obtained a satisfactory standard of hygienic production.

Of the 18 factories one owner controls four. It is stated that this represents about 40 per cent of the total output. A London firm now controls the output of two of the largest factories in Johore; this represents a further 30 per cent, so that 70 per cent of the total output may now be said to rest in the hands of two producers. At the time of writing, of the remaining 12 factories, 5 are not operating owing to the fact that the proprietors have become finally embarrassed as a result of the general slump conditions at present prevailing which have affected their financial interests in other directions.

*Forms of Packing Adopted.*—The fruit is generally packed in tins, each containing 1½ lb. of fruit. The 1½ lb. tins are packed in standard cases containing 48 tins. The fruit is packed in slices or cubes or whole pines; three grades are recognised viz. "Golden Yellow", "Good Average Quality", and lower grades. The "Golden Yellow" and "Good Average Quality" (G.A.Q.) grades are shipped to England and the lower grade to China. The percentage of "Golden Yellow" quality to "Good Average Quality" has been variously stated to range from 10 to 40 per cent. of the pack of individual factories, it is estimated to contribute 10-15 per cent of the total output of Malaya. It is considered that with more intelligent cultivation and greater attention to the selection of fruit for canning, the percentage could be raised to 60 per cent of the entire crop. A small amount of produce is shipped in the shape of pulp; at the present time the market for this article is better than for either cubes or slices. Up to the present it has not been possible to extend its production greatly on account of the fact that a larger size of tin containers is required which cannot be conveniently made by the existing can making machinery, while sterilisation of the product presents special difficulties with the existing sterilising plants. We understand that one firm is considering the introduction of special machinery for producing grated pineapple. The pines are packed in syrup of 11 per cent strength, the cane sugar for making which is imported from Java.

Until recently complaints were very numerous concerning the quality of the packing especially in relation to the grading of the fruit, it being quite usual to find that fruit shipped as "Golden Yellow" contained an appreciable quantity of slices or cubes of a lower grade. The differentiation is practically entirely on colour: the "Golden Yellow" quality consists of fully ripe fruit, "G.A.Q." and lower grades being obtained from less ripe fruit.

*By-Products of the Industry.*—The present methods of pineapple canning necessitate the rejection of about one-third of the fruit received in the factory, in the form of peeling, cores, and bad fruit. The disposal of this waste has frequently been a source of considerable embarrassment to canners who have had the alternative of accumulating a considerable heap of this waste in close proximity to the factory or of incurring expense in its disposal at a distance from the factory.

The utilisation of this waste has been a subject of investigation by the Department of Agriculture, S.S. and F.M.S., and by the Hawaiian canners. It has been shown that for economic disposal of the waste matter, removal of the juice by expression is essential. The fermentation and distillation of the fresh juice for the production of potable alcoholic liquor similar to brandy or "Samsu" is a simple process.

More recently, Hawaiian canners have commercialised the preparation of "Pineapple Bran" from the solid portion of the waste, and the export of pineapple juice obtained from the fresh peelings and cores. The former

is employed for cattle feeding, while the latter finds a ready market in America, and a developing market in the United Kingdom. The general adoption of similar methods of disposing of the pineapple waste from the Malayan factories is obviously desirable, both on hygienic and economic grounds.

*Economic and Financial Position of the Canneries.*—The industry is characterised by the fact that it has always suffered from insufficient capitalisation. The small expense that has hitherto been involved in starting a factory, the transient nature of the cultivation, and the fact that the industry has in the past been largely regarded as a means to the end of inauguration of rubber plantations which were intended to be sold as soon as they reached maturity has tended to attract thereto people of little or no financial stability but with a strongly developed speculative bent; as a result the whole industry is under-financed and is distinctly in the nature of a gamble. The present method of financing can only be described as hand to mouth; packers frequently depend on obtaining advances from merchants on deliveries of packed pineapples as they are effected to enable them to meet their obligations to growers for deliveries of fruit and to pay for the operation of the factories. No system of financing canneries by shippers or by merchants at Home is generally practised, although certain firms gave credit to factories for purchases of tin plate and other supplies, and also handle the produce of the factories, the two transactions to an extent mutually offsetting one another, although they are treated as being separate and independent.

The only exception to this consists in the two factories in Johore which are being operated by an English firm. It seems possible that this may prove the first step towards the greater stabilisation of the industry, but it is as yet too early to pronounce an opinion on this point.

*Marketing Methods current in relation to the Industry.*—The speculative character of the industry is reflected and continued in the marketing methods employed. As stated above, the produce is delivered by the factories to various firms of merchants in Singapore who in turn dispose of the product to distributors.

Practically all the exporters are branch offices of London general merchant houses and the majority of these firms receive orders from England only through their own offices there. The Singapore Branch of one firm is an exception as it ships to its Export Department in London which in turn sells to its own Canned Provision Department. Another exception is the London firm which has assumed control of two Johore Factories and which market their own products in the United Kingdom and Canada and sells to export firms in Singapore.

Fully reliable information as to the London position is not obtainable in Singapore, but many London firms sell most if not all of their imports to brokers, and it is probable that the majority of the trade passes through their hands. One firm has an organisation of travellers and sells part of its stock direct to wholesale or retail grocers, but a part is also sold through brokers. The brokers sell to, or rather buy on behalf of, wholesale and retail grocers.

The major part of the crop is disposed of in England, but of recent years there has been also a steadily increasing export to Canada and New Zealand while there is also a certain amount of trade with China.

For the most part the tins as they leave the factory have no distinguishing mark. A certain canner informed us that some time ago he had installed an embossing plant in his factories for the purpose of stamping the name of his firm on the tin lids, but that he was unable to find a market for produce stamped in this way in the United Kingdom and at present the only market for it is in China. Another firm has recently adopted an embossed design for the tops of tins produced from the two factories controlled

by them. It is understood that the firm adopted this course for their own protection, but that they met opposition to the course from their clients in the United Kingdom. We have recently been informed by the Malayan Information Agency, who at our request have instituted enquiry in London as to the reception in London that was likely to be given to a proposal for embossing tins with the name of the canner, that it was undesirable to stamp tins with the name of Chinese factories. We are also informed that one exporting firm has received instructions from their London office to accept no tins whatever that are embossed.

Malayan pineapples are thus largely a more or less standard trade article and the wholesale and retail buyers in the United Kingdom have no means of identifying the factories from which the produce which they handle emanates, the only link being the Singapore mercantile firms which handle the produce at this end.

The produce is sold under the label of the English wholesale distributor, which usually contains no reference to the factory where the products are made. Labels are affixed either before shipment in Singapore or after arrival in the country of distribution. The tendency has been of recent years for the proportion of tins labelled prior to shipment steadily to increase, and at present it is stated that 70-75 per cent of the exports are labelled in Malaya. The reason underlying this would appear to be mainly that labelling can be carried out more cheaply in Malaya than in the country of destination. Formerly labels when affixed in Malaya were supplied entirely from abroad, but recently some have been printed in Singapore.

In some cases the name of the exporting firm is printed on the labels. For instance, one firm of exporters receive labels printed with the name of their London house or that of a wholesale grocer, while another firm receives them printed with the name of their London house or without a name. Probably each label without a name is reserved for some large grocer of the chain store type. It may be mentioned here to show the complicated character which the industry has assumed that while at the present time there are only 13 factories operating in Malaya and 70 per cent of the crop is handled by two canneries, Malayan pineapples are sold under at least 70 different trade labels.

The state of affairs has led to a vast amount of speculation and Malayan pineapples have been not inaptly described as a speculative counter in the market. Speculative forward buying is largely practised, while the lack of financial resources on the part of many of the canners and the consequent inability to hold stocks has further favoured destructive competitive buying and selling. In this connection may be quoted the following remarks from a memorandum supplied by the Malayan Information Agency :

“The destructive competition in the English Market . . . . . is undoubtedly a serious contributory factor making for low prices which arises from :

- (1) Canneries offering through more than one source here, thus creating competition in selling ;
- (2) English export houses in Singapore selling pines short through their London offices.

“In regard to (1) and (2) canners have the remedy in their own hands, as to (2) while the existence of this factor and of the important part it plays is known, it is not an easy matter to convince canners that it is not ultimately to their interests to encourage trade with English Singapore Exporting Houses who are known to speculate in Singapore pines. For example, on May 1st canners' price is, say 3/3 for 1½ cubes May-June

shipment. On the same date an English Exporting House will be offering firm May-June shipment at  $3/1\frac{1}{2}$ —he takes the business—the canners then drop to  $3/1\frac{1}{2}$ , but provided there is no firmer tendency in the market and with the English exporting house still offering freely at 3/-, this goes on and the English exporting house chooses the right moment for buying in their requirements in Singapore. Assuming the market has dropped to 3/-, buyers here have had their requirements filled or have withdrawn in anticipation of still lower prices and the exporting house, being the only buyer in Singapore, appears to the canner as a very useful ally. It is difficult to persuade the canner that had it not been for the activities of the particular exporting house the price would never have dropped from 3/3d. When it is obvious that certain houses are selling short and London representatives suggest buying for joint account the canners suggest that their London representatives buy for their own account. When this is done the canners almost immediately drop their prices, involving the London representative at a loss. It appears obvious that if it is not good enough for canners to support their own market it is not good enough for the London representative to undertake it. There is reason to believe that certain firms have frequently sold short during the past nine months”.

We desire to add that all local interests whom we have consulted agree that the above is a fair and accurate statement of the position. We also desire again to point out that the present low prices are not the result of overproduction, inasmuch as stocks at the present time are lower than they have been for many years. We have been assured also that the London market would probably have no objection to paying somewhat higher prices, but in view of the fact that pineapples are offering at very low rates, wholesalers naturally see no point in paying prices higher than those which are asked. In consequence, the conclusion is arrived at that while the present position is no doubt in part to be attributed to the present world-wide depressed trade conditions, the greater part of it is due to lack of financial resources and inability to combine on the part of the growers or canners.

*Measures which have been taken to improve the demand for Malayan Pineapples.*—It is convenient at this point to refer to the work done by the Malayan Information Agency and the Empire Marketing Board with a view to popularising Malayan pineapples by means of systematic displays at various trade and other exhibitions. The work commenced during the year 1928 when the Empire Marketing Board suggested to the Malayan Government participation in the Colonial Fruit Show in that year with a view to advertising Malayan pineapples. The suggestion was accepted by the Malayan Government and a very successful display was made. Thereafter the Malayan Information Agency commenced a systematic campaign with the object both of popularising the fruit by means of displays at exhibitions and also of showing new uses to which the fruit might be put by means of cooking demonstrations. Up to the present displays have been made at several exhibitions and as a result the demand for Malayan pineapples has been considerably stimulated, while the reputation of the product with the trade has been decidedly enhanced, this being clearly shown by the readiness with which all important firms are now joining in and assisting the work.

Recently, the attempt has also been commenced to extend the market for the fruit for the Continent of Europe and a considerable display with this object in view was staged at the Colonial and Flemish Art Exhibition at Antwerp. The question is now under consideration of organising displays at other Continental shows, particularly Leipzig and Lyons Fairs: on the Continent, Malayan canned pineapples are at present almost

unknown and there does not seem to be much doubt that a large untapped market exists there. One result of this new move is to bring into evidence more the unsatisfactory condition in relation to marketing: as the result of the Antwerp Exhibition a demand for pineapples was created in Holland, but it was found impossible to arrange for shipment direct from Singapore to Holland on account of existing trade channels; the only possibility being to purchase pines in London for re-sale in Holland.

It seems reasonable to suppose from the effects of the only systematic effort so far made to improve the market for pineapples that similar efforts in other directions would probably be equally effective. It may here be mentioned that during the visit of Mr. Ormsby-Gore to Malaya in 1928, Mr. E. M. H. Loyd, Secretary to the Empire Marketing Board who accompanied Mr. Ormsby-Gore on his tour, held a conference with canners and exporters in Singapore with a view to ascertaining whether something could be done to improve the standing of the industry. The conference met under the chairmanship of Mr. F. W. South, then Acting Secretary for Agriculture, and suggested that pineapples should not be exported except in cans which have embossed on them the name of the maker. Otherwise the conference was unproductive of results.

It should further be stated that in 1926 the various canners endeavoured to form an Association to regulate the selling of the produce. The Association continued in existence till 1928 and then came to an end. The reason for the failure of the Association appears to have been that in the first instance the canners attempted to hold produce for too high prices, and that subsequently various members of the combine, under the pressure of economic conditions, went behind the arrangement and sold produce at prices below the minimum agreed on by the combine; as a result, the combine collapsed and we are informed that at present there are no prospects of being able to revive it.

*Possible means of improving the conditions of the Industry.*— From what has been said it appears that the main causes for the present condition of the pineapple industry are:

- (1) Instability owing to the fact that cultivation has always been carried on as a catch-crop, and as such has no permanent basis;
- (2) Insufficient financial resources of both growers and canners;
- (3) Inability on the part of the growers and of the canners to control stocks and sales;
- (4) Lack of uniformity in packing and grading which has tended to give the produce a bad name;
- (5) Lack of organisation in marketing which has led to pineapples being sold through a number of different channels and hence to destructive competition;
- (6) Lack of incentive to maintain an adequate standard for produce and lack of means of tracing shipments back to the factories whence they originated;
- (7) Speculative forward selling combined on occasions with short deliveries;
- (8) General lack of confidence in the industry.

The matter may perhaps be summed up by saying that the industry suffers from lack of funds, lack of organisation, and lack of confidence. Consequently, any step calculated to inspire greater confidence may be regarded as likely to bring about some improvement.

It seems not improbable that the existing conditions, comprising a very low price, an increasing demand, low stocks and a tendency for supplies to shorten may at some time in the near future bring about a very rapid firming up of the market. If and when this occurs it seems probable that the immediate results will be:

- (a) A further impetus to speculative buying;
- (b) A sharp move towards further planting;
- (c) A deterioration of quality.

The last event will probably be brought about by growers endeavouring to dispose of large quantities of immature fruits in order to take immediate advantage of the rise in price, while packers, in the absence of any scheme of control of quality, will also try to take advantage of the rise by forcing on to the market increased quantities of badly graded fruits; the results of this will probably be that conditions will become more precarious than ever and confidence will be further shaken.

One might be tempted to urge that the direct remedies for the existing situation should follow those which have been successfully adopted in not dissimilar conditions in other places, viz., the organisation of both growers and canners on a co-operative basis for buying and selling, the elimination of middlemen and direct sales to one or two selected distributing agents in the United Kingdom combined with some form of inspection and grading of produce which will afford the necessary guarantee of quality. These are the methods which are understood to have been employed with outstanding success, for example, in the Californian fruit market where formerly production was in a condition somewhat resembling to that prevailing in Malaya and where during the past 20 years, as the result of systematised work done on co-operative lines, the position of growers and packers has been very greatly strengthened and the industry placed on a firm basis.

Unfortunately, the adoption of these methods does not appear to be feasible at present among the bulk of the producers in Malaya. Many of the individuals concerned have numerous other interests, the interlocking of which precludes combination, while the view is also held that the personnel of the industry, owing to its racial admixture, is unsuited to combination. We cannot help feeling that the chief hope for the future of the industry in all probability lies in the development of large scale undertakings with modernised factories which will grow a proportion of their pines and will also purchase produce from small growers on a fair basis.

It seems possible that the taking over of two of the best factories in Johore by an English firm may perhaps be the prelude to developments in this direction, but it is as yet too early to express an opinion on this point. At the present moment, many of the canneries are not satisfactory economic units, and they are so weak financially that they are very largely dependent upon exporters; without the financial support of the latter the industry would collapse as it is unable to obtain funds from any other source. Moreover, it is doubtful whether any individual factory is strong enough to keep the important retail distributors in the United Kingdom of the chain store type supplied with stocks of fruit which can be relied on for regularity in delivery and uniformity of quality. Consequently, the United Kingdom distributors find that the only way they can handle Malayan pineapples is to depend on Singapore shippers who are provided with their supplies by various factories. If it were possible for the canners to form a selling combine on the lines established in Hawaii, which fixes a price each season according to the demand and of which each member is free to ship under his own factory label, it might provide a solution of the case, but unfortunately there is little doubt that under present conditions such a scheme has small prospects of success.

Two of the gentlemen who gave evidence before us orally, strongly held the view that in order to improve the market for the produce it was necessary that legislation should be enacted requiring that all pineapple products exported from Malaya should either be labelled with the name of the factory which produced it, or alternatively, that the lid of the tin should be embossed therewith.

It was pointed out by them that Malayan pineapples are being sold in England under a large number of labels practically none of which bear any reference to the factories in which they are produced, and that this militates against the produce of any particular factory becoming known for its quality and is a bar to attempts to improve the produce by individual concerns.

One witness stated that he had for some time past been attempting to introduce his own mark on to the English market, but so far had obtained practically no success, the only place where his produce marked in this way had obtained a market was in China. He believed that if compulsory labelling or stamping was required it would put an end to the existing state of affairs, whereby Malayan pineapples were sold as a trade article in bulk, would substitute for it a condition, whereby the produce of the individual factories would be sold on their own marks, and so would put an end to the existing speculative element.

At first sight the proposal seems attractive, but there are a number of points which militate against it. The first is that, as previously pointed out, it is doubtful whether any one factory could guarantee supplies of pineapples of sufficient quality and quantity to meet the demands of the largest retailing firms in England. The second and even more important, is that such a course will necessarily involve the elimination of a large number of brands which have already become known on the English market and their replacement by a smaller number of quite unknown brands. Such a process may be expected to be resisted vigorously by wholesale dealers in England who, it may be pointed out, have been responsible for building up the trade and by shippers in Malaya who are the only people at present who finance it. Between them they have popularised their own marks and at present hold the bulk of the trade in their own hands. The proposal, in fact, involves breaking down a trade that has become established along certain lines and replacing it on a different basis in the face of considerable opposition from financially powerful business organisations with established connections which, it should be observed, embrace not merely pineapples but a large range of other description of canned goods and other food products.

In the present disorganised state of the local industry there is no hope that it could surmount successfully difficulties of this description. The inability of the industry to form successfully a selling combine on the very simple lines previously attempted is, in our view, a clear index of its inability to face the much more difficult situation which legislation of the type proposed would create. It is also certain that any formal proposal for such legislation would be vigorously resisted by the Malayan exporters and by the English importers and wholesalers. Finally it may be pointed out, actual instances have occurred in the past where certain canners have acquired some reputation in the London market and have subsequently taken advantage of their brands being established in this way to ship grades far below market quality. In the circumstances it seems to us by no means improbable that if the Government acceded to this suggestion and enacted legislation on the lines desired, the next thing would be an urgent request for its repeal emanating from the very sources which had proposed it.

We do not wish it to be inferred that the building up of a trade based on canners' marks and labels on the lines of the Hawaiian system is an undesirable end in itself, but the weakness of the industry itself, in our view, rendered such method incapable of achievement at present. If the industry could attain a satisfactory standard of organisation with adequate financial backing and with properly controlled sales-distributing agencies in England, there seems to be no reason why, in due course, a trade on these lines should not evolve itself, but before this can happen greater stability must be sought by other less drastic methods.

A further point which affects the situation is that practically all the factories are either owned by Chinese or operated under Chinese names. Rightly or wrongly, at the present time, there is a decided popular prejudice against Chinese food in the United Kingdom; it may be misplaced, but it is a factor which must be allowed for; further, the Malayan pineapple industry has hitherto been systematically advertised as Empire produce in connection with the propaganda of the Empire Marketing Board; it might be very difficult to reconcile, in the eyes of the British consumer, the advertisement of goods bearing a characteristic Chinese name with their continued inclusion in a scheme for pushing sales of Empire produce. For all these reasons we consider that legislation on the lines advocated by two witnesses is inexpedient.

There is, however, another aspect of the case which, in our opinion, merits more favourable consideration. At the present time most of the produce comes forward in packages which bear no mark enabling them to be traced to their origin after they have left Malaya. This seems to be a distant source of weakness inasmuch as the fact that tins cannot be traced after they have left the country is a direct incentive to careless work in grading and packing. We, therefore, consider that legislation is desirable, requiring that each case and tin before it leaves the factory should be stamped or embossed with an identifying mark which would be registered by Government and would be known to shippers and wholesale buyers, but would be of such a nature as to disclose nothing to the retailer and the consumer.

This would in part meet the wishes of the producers as expressed above; it would be free from the objection which we have previously set out, and provided no opposition is offered to it by wholesalers in England, seems to us to be a reasonable and desirable provision.

We have already alluded to the dangers which exist in relation to the lack of standardisation and the probability of a fall of quality following on a rise in price. We think that a case may exist here in which Government assistance might be forthcoming by the introduction of systematic Government grading and inspection of produce before it leaves the factory and the enactment of legislation requiring that such grading should be done. Government produce inspection schemes have been successfully introduced in West, East, and South Africa in the case of various industries and have brought considerable benefit in their train. There appears to be good reason to believe that if the establishment of some form of Government grading could be effected a marked step towards the stabilisation of the pineapple industry would be achieved. There does not appear to be any insuperable obstacle in the way of the establishment of such a system of grading and it would certainly have according to the evidence that has been presented to us, a very appreciable stabilising effect on the market. Those representatives of the canners and exporters whom we have consulted stated that such a scheme would be welcome, while there does not appear to be any ground for supposing that it would be opposed by buying interests at Home; on the latter point the Chairman has recently caused enquiries to be made

through the Malayan Information Agency in England, and information has been received that such a proposal would be strongly supported by English firms.

It is estimated that such a scheme could be financed by a small export cess on canned pineapples; to give an idea of the probable amount, we may point out that in Australia the cess charged for a similar service is 1d. per case. We recommend that the question should be fully investigated with a view to working out a scheme for the imposition of such a cess and the organisation of a system of inspection, and that, if and when a satisfactory scheme has been worked out, the necessary legislation should be imposed to bring it into force. The necessary legislation could probably be combined with the recommendation in the preceding paragraph to make an enactment which would be enacted in each of the territories concerned.

It is considered that probably the most satisfactory method of inaugurating such a system would be to make it voluntary during the initial stages—say during the first twelve months. Such a course would have the advantages:

- (a) That it would materially facilitate the organisation of the grading service, since all who adhered to it voluntarily may be expected to assist the grader to the utmost of their power, and this would greatly ease the overcoming of the inevitable initial difficulties.
- (b) It would afford a demonstration of the advantages following such a course and so would facilitate the adoption of the measure by all concerned when it is considered expedient to render it compulsory on all.

In relation to the organisation of growers on co-operative lines, the difficulties foreseen have been indicated. We think, however, in spite of these, some efforts might be made further to explore possibilities in this direction. We are informed that a Chinese Agricultural Inspector for Singapore has recently been appointed and we suggest that among the activities of this officer should be comprised an enquiry as to the possibility of bringing about some measure of co-operation amongst growers.

We have already pointed out that conditions for the cultivation of pineapples are probably more favourable in Malaya than in most other places and that considerable tracts of potential pineapple land still exist. It seems reasonable, in view of what has been said, to suppose that an opening exists for the further extension of the industry and also for the development of a higher class trade in pineapple, once a measure of rationalisation and confidence can be imparted to the industry. There is probably a considerable market for a better class of article than is at present produced in Malaya and if a reasonable standard of production is assured with a reasonable financial stability, consumption can further be extended.

It has been suggested that before attempts are made to develop pineapple growing as a main industry it is necessary to await the results of the experiments on the manuring and cultivation of pineapples in order to ascertain whether it would be an economical proposition to grow pines as a main crop, and that until this information is forthcoming, it might be unwise to take active steps to attempt to develop an industry on a main crop basis.

We think that this view may be ultra cautious and conservative. There is no doubt that experimental work on these points is desirable; there is, however, also no doubt that natural conditions on suitable lands in Malaya are more favourable to pineapple growing than is the case in the majority of countries, that the experience obtained in other countries is available as

a guide, and that in other places developments are beginning without any such preliminary investigations. We have already alluded to the initiative being taken in Mauritius and Kenya, and we would here also like to point out that a report very recently received from the Empire Marketing Board indicates that the Japanese Government is making very considerable efforts to foster the development of the pineapple industry in Formosa, and that a beginning has already been made with what appears to be a serious attempt under Government assistance and advice to capture a part of the English market. In connection with the industry, the Japanese Government has already established nurseries for the raising and distribution of plants, introduced a system of compulsory inspection and grading of produce, and given considerable money grants for the purpose of subsidising the creation of modern factories.

Malaya is better situated than Hawaii, Formosa, Mauritius, or East Africa, from the point of view of both climate and labour supply to retain and to extend the pineapple industry, and we think it would be unfortunate if it failed to retain the trade which it has built up, if this can be avoided by timely measures of assistance similar to those which are forthcoming to aid developments elsewhere.

We, therefore, think that Malayan Governments would be well advised to examine the possibilities of fostering and assisting developments by alienating land suitable for pineapple cultivation on favourable terms, e.g., comparable with those adopted for oil palms, provided that adequate guarantees are forthcoming both as to cultivation and also manufacture in order that the obvious advantages which Malaya presents in this direction should not be overlooked in favour of other countries. This suggestion has been strongly endorsed by the Malayan Information Agency.

We suggest that the desirability of providing facilities for assisting companies or undertakings that are desirous of establishing pineapple cultivation and canning on a sound basis, might be considered. Government assistance to agricultural undertakings in the Federated Malay States is by no means a new idea; in this connection we may draw attention to the work of the Planters' Loans Board during the past 17 years; elsewhere the principle has been adopted on a considerable scale in relation to other industries, notably in relation to erection of sugar factories in South Africa and in the West Indies, while recently the Mauritius Government has subsidised an experimental pineapple factory in that Island. We do not wish it to be inferred that we desire to advocate advances, except where fully adequate guarantees are forthcoming and there appears to be—on export investigation—satisfactory prospects of success.

In conclusion, we desire to emphasise once more that a trade of very considerable value has been built up in Malaya in canned pineapples, that the circumstances in which this trade has become evolved have tended to cause it to be regarded as an ephemeral thing with no great stability; that this view is almost certainly wrong and that the present condition of affairs is merely the outcome of the thoroughly unsound conditions on which the industry has been evolved and is maintained. It seems to us clear that if under these admittedly unsatisfactory conditions an industry of considerable value can become evolved, given rationalisation and a sound financial basis, it is capable of becoming an asset of great permanent value to Malaya at a time when additional resources are most urgently required.