

PORIM - In Brief

Palm Oil Research and Development Act 1979

An Act to establish the Malaysian Palm Oil Research and Development Board and for the establishment and administration of a Fund for the purpose of financing research and to provide for matters connected therewith, was passed by the Malaysian Parliament and became known as the Laws of Malaysia Act 218.

The Royal Assent was given to this Act on 19th February, 1979 and came into force by notification in the gazette by the Ministry of Primary Industries on 22nd February, 1979.

The Palm Oil Research Institute of Malaysia (PORIM) was legally established as a statutory body on 15th May, 1979. However, the Institute was unofficially formed 12 months earlier in May, 1978 to enable preliminary work to be carried out.

Early Research in Oil Palm

For many years Malaysia has depended for its wealth and its prosperity upon rubber and tin. Fully realising the danger to the economy of the country of being dependent on merely two commodities the Government decided in earnest to embark on a policy of agricultural diversification. Thus, research in oil palm was done by the Department of Agriculture and the large plantation agencies in this country since the early fifties.

With the establishment of the Malaysian Agricultural Research and Development Institute (MARDI), research in this particular crop was carried out by the Oil Palm Research Branch of MARDI since 1973 and up to the establishment of PORIM.

Both MARDI and the Department of Agriculture concentrated their efforts mainly in agronomic research and in the selection and breeding with little emphasis on oils and fats chemistry

and technology. These Institutions carried out their research work at three stations, i.e. at Serdang, Selangor; Jerangau, Trengganu; and Kluang, Johore. Some work on agronomy was also done on peat soil at the Jalan Kebun Research Station, Selangor.

The need for the establishment of PORIM

With the very rapid development of the oil palm industry during the last 15 to 20 years both the Government and the industry felt that a separate research organisation dealing solely with oil palm/palm oil should be established on the same line as the Rubber Research Institute of Malaysia. Hence PORIM was established to carry out research work on all aspect of oil palm/palm oil i.e. from breeding, selection, agronomic studies, right up to end-use research. Emphasis is given to the chemistry, technology and end-use research.

The importance of such a research Institute to the country is reflected by the size of the industry itself. In 1979, approximately 912,000 hectares have been planted with oil palm. Out of these 821,000 hectares in Peninsular Malaysia and 91,000 hectares in Sabah and Sarawak.

In 1979 2,188,000 tonnes of crude palm oil (CPO) and 475,000 tonnes of palm kernel oil (PKO) have been produced in Malaysia. 2,032,800 tonnes of CPO and 441,000 tonnes of PKO were produced in Peninsular Malaysia and 155,200 tonnes of CPO and 34,000 tonnes of PKO in Sabah and Sarawak.

Almost all the CPO is refined locally at the moment as compared to 87% in 1979, 67% in 1978 and 57% in 1977. Malaysia is now the biggest producer as well as exporter of palm oil amounting to 49% of the world production and approximately 79% of the total world export, in 1979.

Malaysia's palm oil production is increasing yearly and her projected CPO production in 1981 is approximately 2.7 million tons and expected to increase to 4.0 million tonnes by 1985/86. In 1979 palm oil (and its products) is the fourth largest foreign exchange earner after rubber, petroleum and timber.

The Board Of The Institute

The Institute as given under the Act of Parliament is controlled by the Palm Oil Research and Development Board whose members come from both the Government side and the industry. The Board meets at least four times a year and deals with policy matters as well as approving annual budget, appointments and financial disbursements. There are two important Committees of the Board — the Establishment Committee and the Tender and Development Committee.

Functions :

The main functions of the Board, as presented by the Act are:

- (a) to conduct and promote research into the production, extraction, processing, storage, transportation, marketing, consumption and uses of palm oil and oil palm products;
- (b) to secure, where the public interest or the interest of the oil palm industry so requires, the development and exploitation of any result of research, as to which it appears to the Board that it is not being developed and exploited or sufficiently developed or exploited;
- (c) to collect, collate and disseminate information relating to oil palm, palm oil, oil palm products and other vegetable and animal oils and fats, and to promote the use of palm oil and oil palm products in competition with other materials or as complementary thereto;

PORIM is the Board's main instrument for exercising the functions mentioned above.

Finance :

Prior to January 1980, the institute was financed by the Malaysian Oil Palm Growers' Council (MOPGC) through voluntary contribution by its members. Since January this year PORIM is financed by cess at a rate of \$4.00 per tonne of CPO produced and collected from mills. The Minister of Primary Industries in consultation with the Minister of Finance is empowered to determine the quantum of cess that could be collected.

Objectives And Proposed Activities Of PORIM

In view of the rapid and continuing growth of Malaysia's palm oil industry, it is evident that her exports of palm oil will need to achieve a greater penetration of the markets in which it competes with a number of other oils and fats. Research should, therefore, have the broad objectives of, first, expanding existing uses of palm oil and finding new ones for it, and, secondly, increasing the efficiency of its production so as to strengthen or maintain its ability to compete with other oils and fats.

The activities planned in order to achieve the above objectives can be summarised as follows :

- i. Research on the chemistry and technology of palm oil aimed at improving the efficiency of extraction and refining, at ensuring high quality and at overcoming some factors (e.g. problems of oxidation, bleachability and crystallisation) which currently limit its use for certain edible purposes.
- ii. End-use research to increase the proportion and improve the performance of palm oil in existing uses, both for edible and inedible products, and to find new ones.
- iii. Provision of a technical advisory service to users of Malaysian palm oil in order to promote its greater use by gaining understanding of the markets, providing up-to-date information on palm oil and helping to solve processing and formulation problems.

- iv. Techno-economic studies involving the collection and analysis of information and data relating to the Malaysian palm oil industry and to the marketing of palm oil including relevant information on the supply and marketing of other oils and fats.
- v. Biological research aimed both at minimising costs of production by breeding for higher yield and improving agronomic practice and at favourably modifying the composition of the oil by the development of hybrid palms producing a more unsaturated, and more liquid oil. Such research will be concerned with genetics, breeding, propagation, physiology, agronomy, pests and diseases and with biological aspects of effluent disposal.
- vi. Provision of an advisory service to the smaller elements of the Malaysian industry.

PORIM Organisation

In order to make PORIM an effective organisation to meet the needs of the industry it was structured into specialised Divisions to enable the development and expansion of the particular area to be implemented as desired. At the moment PORIM has 5 Divisions and each is headed by a Director :-

1. Administration and Finance Division;
2. Biology Division;
3. Chemistry and Technology Division;
4. End-Use and Technical Advisory Service Division;
5. Techno-Economic and Information Division.

The important aspect in the function of the Technical Advisory Service is the service given locally and overseas. Besides providing technical information to the consumers of palm oil the technical service is also to assist in solving techni-

cal problems facing the manufacturers using palm oil to produce the end products as well as giving advice on the handling and transportation of the oil with the aim at preserving the quality of the commodity at the users end.

Progress with the establishment of PORIM

With the responsibility of research in oil palm being transferred from MARDI to PORIM some of the facilities used by the former Oil Palm Research Branch were also shifted to this Institute. Similarly quite a number of senior and supporting staff members opted to join PORIM.

At the moment this Institute does not have its permanent headquarters and laboratories. The present location is of a temporary outfit. These laboratories are located in two shophouses rented for the purpose. Similarly work on breeding, agronomic studies and biology in general is being carried out on MARDI stations i.e. at Serdang, Kluang and Jerangau. Negotiation is still going on to transfer the 1200 acres at Kluang, where valuable germplasm materials have been planted, from MARDI to PORIM.

However, this Institute is currently busy with the initial phase of the development of its permanent headquarters on a 25 acre site at Bangi. The architect and other consultants are actively preparing the preliminary plans. Steps have also been taken to obtain lands for the main and regional stations, one in the west coast and the other in the east coast of Peninsular Malaysia. It is hoped that if the lands were made available, the development could begin within the Fourth Malaysian Plan starting in 1981.

In addition to conducting research at the stations just mentioned, a certain amount of trials are also being carried out at private plantations on breeding, agronomic and effluent studies. The large plantation agencies in this country have their own research units to serve their own particular needs and PORIM has very close co-operations with them.