

REPORT ON MALAYSIA
PLANTATION INDUSTRIES
AND
COMMODITIES
(2001 - 2005)

MINISTRY OF PLANTATION INDUSTRIES AND COMMODITIES

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Report On Malaysia Plantation Industries and Commodities

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FOREWORD



The plantation industries and commodities sector performed remarkably well during the period 2001-2005 with export earnings increasing to RM63 billion in 2004, from RM42 billion in 2001. This figure is estimated to reach RM65 billion in 2005, constituting 18 to 20 per cent of the country's total export earnings. It contributes an average of 5 per cent to the GDP and provides employment to more than 1.5 million people.

The total planted areas of primary commodities increased to 5.3 million hectares in 2005 from 4.9 million hectares in 2001. The expanded area contributed to the increased production of commodities, in particular crude palm oil which was recorded at 13.98 millions tonnes and rubber, at 1.17 millions tonnes, respectively in 2004.

Smallholders continue to dominate upstream activities in the primary commodities sector, particularly in rubber, cocoa, pepper and tobacco. They constituted more than 85% of the total planted areas. This reflects the importance of the primary commodities in contributing to the social-economic development of the rural population as commodities provide a major source of income for the smallholders. The improved prices of commodities, in particular SMR rubber, which had increased to RM6 per kg in 2005 from RM2 per kg in 2001, have contributed towards a more lucrative income for the rubber smallholders.

Rapid development of the sector and the global economic changes, however, have brought about several issues and challenges the sector has to face, notably increased competition from other producing countries. The Government has adopted appropriate policies, programmes and strategies for the sector to remain competitive. The main thrusts are to increase productivity of the value chain of the commodities and further diversification of the commodities to higher value-added products. In this respect, high-yielding clones have been introduced for new planting and replanting of primary commodities to increase yields and R&D programmes are being intensified in the upstream and downstream activities. In addition, new sources of growth will continue to be identified to ensure the viability of the sector in the future. In this respect, efforts have been undertaken to develop forest plantations, palm diesel.

As commodities and commodity-based products are produced, mainly for the export market, it is important that the market base be broadened further. The Government will continue to strengthen international, regional and bilateral relationships to enhance market access for Malaysian commodity products.

In line with the Malaysia Incorporated concept, the Ministry of Plantation Industries and Commodities, together with its agencies, will continue to work closely with the private sector to ensure that the viability and competitiveness of the plantation and commodities sector is sustained. It is my earnest hope that through the active participation and interaction of all the parties concerned, issues affecting the sector will be resolved. Together, we will ensure the sector continues to develop and contribute significantly to the national economy and help to reduce poverty among the smallholders.

A handwritten signature in black ink, consisting of a series of loops and a final flourish.

Datuk Peter Chin Fah Kui
Minister of Plantation Industries and Commodities
Malaysia

VISION

To make Malaysia a centre of excellence and a world leader in commodity-based industries.

MISSION

To ensure Malaysia's export competitiveness and leadership in the commodity-based industries, thus remaining a major contributor to national development.

OBJECTIVES

- To maximise the contribution of commodity-based industries to the national income, including GDP and foreign exchange earnings;
- To make Malaysia a centre of excellence in R&D, technology and services in commodity-based industries;
- To increase the efficiency, productivity, quality and sustainability of commodity-based industries; and
- To enhance marketing capabilities to become a major player and to develop niche markets.

MESSAGE

The publication of this Report on Malaysia's Plantation Industries and Commodities (2001-2005) is the first edition published by the new Ministry of Plantation Industries and Commodities, which was established in 2004. The Ministry is responsible for overseeing the development of the primary commodities comprising oil palm, rubber, timber, cocoa, pepper, tobacco and the related industries.

This publication is a review and assessment of the performance of the plantation industries and commodities sector covering the period 2001 to 2005. It also outlines the future prospects of the sector. Prepared with illustrations, descriptive data and photographs, this report will be a useful reference for those keen to learn more about Malaysia's primary commodities and the related industries. Malaysians and others should make use of this publication for knowledge as well as research purposes.

I would like to take this opportunity to thank all officers and staff of the Ministry its Agencies who have contributed in one way or another towards the successful publication of this Report.



Datu Dr. Michael Dosim Lunjew
Secretary-General
Ministry of Plantation Industries and Commodities
Malaysia

OVERVIEW



OVERVIEW

INTRODUCTION

Under the 9th Malaysian Plan (RMK 9, 2006-2010), the agricultural sector will be the third engine of growth for the economy, after the manufacturing and services sector. The agriculture sector is targeted to grow at five to six per cent during RMK 9 with significant contribution from oil palm, rubber, cocoa, timber, and pepper.

Plantation industries and commodities remain an important sub-sector of the agricultural sector contributing five per cent to the GDP and providing employment opportunities to 1.5 million people. Its contribution to the country's export earnings averaged RM60 billion per year during the period under review (2001 to January-June 2005). The development of the plantation industries and commodities sector will continue to be given emphasis in other national development plans such as the Outline Perspective Plan 3 (OPP3, 2001-2010), National Agricultural Policy (NAP), and Third Industrial Master Plan (IMP3, 2006-2015).

Performance of the Plantation Industries and Commodities Sector (2001-2005)

The prices of primary commodities in the world market have been on an upward trend for the past three years, after a prolonged decline in the late 1990s and early 2001. The performance of Malaysia's commodities and commodity-based products improved over the past five years, in tandem with the increase in commodity prices.

Export Earnings

Export earnings for the commodities and commodity-based products had improved significantly since 2002 with a total export value of RM49.8 billion. The figure reached RM59.5 billion in 2003 and RM62.8 billion in 2004. Export earnings continued the upward trend in the first half of 2005 with a value of RM32.2 billion, an increase of 8.1 per cent compared with RM29.8 billion during the corresponding period in 2004.

Oil Palm

At present, Malaysia is not only the largest producer and exporter of palm oil, but also the biggest exporter of oils and fats in the world. The Malaysian oil palm industry continues to contribute significantly to the country's economic development.

In 2004, the exports of palm oil increased by 18.4 per cent to 12.58 million tonnes from 10.62 million tonnes in 2001, with export value increasing to RM22.2 billion from RM10.1 billion during the period under review. The People's Republic of China (PRC), emerged as the biggest market for Malaysian palm oil, followed by the European Union (EU) and Jordan.

The export of palm oil products, comprising palm oil, palm kernel oil, palm kernel cake, oleochemicals and finished products, increased to 17.36 million tonnes in 2004 from 14.63 million tonnes in 2001, with export values increasing by 114 per cent to RM30.4 billion in 2004 from RM14.2 billion in 2001. For the first half of 2005, the export value registered RM14.4 billion, despite strong competition from other palm oil producing countries.

The total area planted under oil palm increased by 8.6 per cent or 0.3 million hectares to 3.8 million hectares in 2004 from 3.5 million hectares in 2001. Sabah remained the state with the largest oil palm acreage of 1.16 million hectares. In 2005, the total acreage for oil palm is expected to increase by three per cent to 3.9 million hectares.

The production of crude palm oil (CPO) registered the highest level at 13.98 million tonnes in 2004, an increase of 18.5 per cent or 2.18 million tonnes from 11.80 million tonnes in 2001. The increase was mainly attributed to improvements in the yield of fresh fruit bunches (FFB) per hectare and Oil Extraction Rate (OER) as well as expansion in matured areas.

The average CPO price increased to RM1,610 per tonne in 2004 from RM894.50 per tonne in 2001 and it is expected to remain at the level of RM1,400 per tonne in 2005 because of sustained demand from the traditional consuming countries and the anticipated usage of palm oil for biodiesel.

Rubber

The rubber industry performed remarkably well from 2001 to 2004, with total export earnings from the industry, including heveawood products, increased to RM19.5 billion in 2004 from RM11.8 billion in 2001. The export of natural rubber increased by 35.7 per cent to 1,114,163 tonnes in 2004 from 820,854 tonnes in 2001. This ranked Malaysia as the world's third largest exporter of natural rubber. The demand for natural rubber is projected to increase with the growth of the motor vehicle industry worldwide, particularly in the fast growing consumer economies of PRC, India and Eastern Europe.

The total acreage of smallholdings and estates, under rubber declined by 7.7 per cent to 1.29 million hectares in 2004 from 1.39 million hectares in 2001. During the 2001 to 2004 period, smallholdings under rubber decreased by 5.3 per cent from 1.22 million hectares to 1.16 million hectares, while estate sizes contracted by 25 per cent from 168,700 hectares to 126,500 hectares. In 2005, the acreage planted is expected to decline slightly to 1.25 million hectares.

Malaysia continues to be the world's third largest producer of natural rubber, with production increasing by 32.5 per cent to 1,168,730 tonnes in 2004 from 882,070 tonnes in 2001. The increase in production was due to the recovery in rubber prices and the wider adoption of the Low Intensity Tapping System (LITS) by smallholders who contributed 94 per cent of the total NR production in 2004.

The average price of SMR 20 improved substantially to RM4,460.48 per tonne in 2004, from RM2,050.56 per tonne in 2001. The price of natural rubber is expected to be on the upward trend in the coming years in anticipation of increasing oil prices which will increase the cost of producing synthetic rubber.

Cocoa

Cocoa is the third important industrial crop after oil palm and rubber. The export earnings for cocoa and cocoa products have been rising for the past five years. Export earnings from cocoa beans and cocoa products increased to RM1,612.6 million in 2004 from RM 659.7 million in 2001, with an average annual growth of 23 per cent per year as a result of increased demand from expanded downstream activities. For the first half of 2005, the export earning was RM 923.9 million.

However the area cultivated with cocoa recorded a reduction, due to conversion to other more remunerative crops. The area under cocoa declined to 41,612 hectares in 2004 from 57,963 hectares in 2001. It is expected to further decline to 33,500 hectares in 2005. Sabah remained the major cocoa growing area, accounting for 64.5 per cent of the total area planted with cocoa.

The shrinkage in the planted areas had resulted in the decline of cocoa bean production to 33,423 tonnes in 2004 from 57,708 tonnes in 2001. It is expected to decline further to 30,000 tonnes in 2005. The volume of local grindings, however, increased to 229,649 tonnes in 2004 from 138,616 tonnes in 2001. This ranked Malaysia as the fifth largest processor in the world, accounting for 6.5 per cent of global grindings. In 2005, the volume of grindings is expected to increase further to 240,000 tonnes.

Timber

The timber industry has been a major source of foreign exchange earnings and continues to contribute significantly to Malaysia's economic growth through revenue earnings and employment.

The export of timber and timber products increased to RM19.8 billion in 2004 from RM14.3 billion in 2001. Furniture, being the main timber product, accounted for an export value of RM6.6 billion in 2004. The performance of the wood-based industry is expected to register further improvement in 2005.

The total production of major timber products was 32.8 million cubic metres in 2004, an increase of two per cent over 2003. The production of logs also increased by two per cent to 22 million cubic metres from 2003, with sawntimber output increasing by one

per cent to 4.8 million cubic metres, plywood to 4.9 million cubic metres, and mouldings to 533,000 cubic metres. However, veneer production registered a decline from 643,000 cubic metres to 485,000 cubic metres during the same period.

Timber production from natural forests is not expected to increase as the country moves towards Sustainable Forest Management (SFM). Timber supply for downstream activities, especially the furniture industry, will be addressed through the establishment of more forest plantations now being initiated by the Ministry of Plantation Industries and Commodities (MPIC). The forest plantation programme will involve the planting of various timber species on an identified 375,000 hectares of land throughout the country, in the next 15 years.

Pepper

The main pepper producing state is Sarawak, which accounts for 98 per cent of total production. The other states where pepper is cultivated are Johor and Sabah. The total area under pepper cultivation declined to 13,854 hectares in 2004 from 13,862 hectares in 2001. It is expected to further decrease to 13,745 hectares in 2005. The decrease in planted areas during 2001-2004 was due to prolonged low pepper prices and higher cost of inputs, which discouraged pepper farmers from planting new vines or replacing old ones.

Malaysian pepper production comprises 82 per cent black pepper and 18 per cent white pepper. Production declined to 20,111 tonnes in 2004 from 27,099 tonnes in 2001 and it is expected to remain the same in 2005. The increasing cost of farm maintenance and low prices are discouraging farmers from maintaining their farms for optimum output.

Traditionally, 98 per cent of Malaysia's pepper production has been exported. However, increased production of high value-added pepper products for domestic consumption has reduced exports significantly. Export earnings from pepper over the past four years have been on a declining trend, from RM120.2 million in 2004 to RM187.3 million in 2001. Export earnings for the first half of 2005. (registered RM63.3 million)

Tobacco

In 2004, the total area under tobacco cultivation decreased to 12,148 hectares from 15,972 hectares in 2001. It is expected to further decrease in the coming years as a result of challenges under the ASEAN Free Trade Area (AFTA) in 2010.

Tobacco production increased to 12.86 million kg in 2004 from 8.30 million kg in 2001. However, the production in 2005 is expected to decrease to 10.11 million kg because of a reduction in the planted areas and lower quota allocation.

The number of registered farmers and grower-curiers is expected to decrease to 10,870 in 2005 from 14,494 in 2004, in tandem with the restructuring of the industry and the anticipated migration of farmers to other crops.

The average gross income under the Individual Grower Curier System (IGCS) and Curier System (CS) during the 2001-2004 period has been on the upward trend, reaching a maximum of RM35,000 and RM110,000 per year respectively.

INTERNATIONAL CO-OPERATION

In the era of increased globalisation in trade, it is imperative that the Malaysian plantation industries and commodities remains competitive to sustain and enhance its market share of commodities. Malaysia, were continue to build on relationships and strategic alliances with commodity industries in other countries and actively participating in international fora to improve market access for its commodities.

Malaysia participates actively in international and regional bodies, among others the World Trade Organisation (WTO), World Health Organisation (WHO), codex Alimentarius Commission (CAC), Food and Agriculture Organisation (FAO), International Cocoa Organisation (ICCO), International Pepper Community (IPC), International Rubber Association (IRA), Association of Natural Rubber Producing Countries (ANRPC), ASEAN Vegetable Oil Club (AVOC), and the ASEAN Cocoa Club.

ISSUES AND CHALLENGES

Enhancing Productivity and Competitiveness

Malaysia, as a major exporter of palm oil, rubber, cocoa, pepper, timber and their products, must continue to enhance competitiveness under the progressive trade liberalisation policies of WTO and AFTA. Malaysian plantation industries and commodities must continually increase productivity to reduce the cost of production and remain competitive.

The Government will intensify measures under the Ninth Malaysian Plan (RMK9) to enhance competitiveness of the industry through increased productivity. These include:

- introducing high-yielding clones for new planting reneurs;
- implementing integrated farming to increase land productivity;
- intensifying R&D in upstream and downstream activities;
- diversifying into higher value-added products such as palm-diesel and oleochemicals; and
- establishing forest plantations to provide sustainable supply of timber and rubber wood for furniture and wood-based industry.

In the oil palm industry, focus will be on increasing the yield of FFB to 35 tonnes per hectare and OER by 25 per cent (Vision 35:25). This will increase the yield of CPO to more than 8 tonnes per hectare per year. For rubber, the Low Intensity Tapping System (LITS) will be widely adopted to overcome the labour shortage and increase latex production to the targetted yield of 1,800 kg per hectare. The latex timber clones (LTCs) will be introduced for planting and replanting to increase latex yield as well as the supply of rubber wood for the wood-based industries. As for cocoa, the implementation of the smallholders' rehabilitation programmes through the consolidation of cocoa planting areas and the use of high-yielding planting materials is expected to increase productivity to 1.5 tonnes per hectare. Increased productivity by the pepper industry will be through the enhancement of the pepper maintenance scheme to raise yields from 1.5 tonnes per hectare to 2.4 tonnes per hectare.

Market Access

The continued practice of discriminatory tariffs on palm oil vis-à-vis competing oils by importing countries has impeded its accessibility in certain markets. The process of dismantling tariffs under WTO is expected to give rise to countries adopting non-tariff barriers to regulate imports.

The imposition of non-tariff barriers such as requiring products to meet health and phyto-sanitary standards and demands that timber-based products be from sustainably managed forest areas will hinder Malaysian exports of commodities and products. Malaysian cocoa powder exported to Iran and Turkey is subjected to the fulfilment of standard requirements and specifications. These requirements incur additional costs to exporters as well as unnecessary delay in

shipments. In the case of timber, restrictions on the use of tropical timber and labelling requirements have impeded market access to a number of major importing countries.

Malaysia needs to leverage on its well-developed technologies and R&D to diversify into higher value-added products for niche markets. Constant upgrading of the quality of Malaysian commodity products will enable the nation to become a price setter in the commodity market. It is imperative that Malaysia's active participation in the WTO and Free Trade Agreements (FTA) negotiations, as well as regional cooperation be continued for better market access to importing countries.

Sustainable Development

Environment

Market developments in certain countries require that palm oil be produced from sustainable sources. To promote the growth and use of sustainable palm oil, Malaysian palm oil companies have been participating actively in the Roundtable on Sustainable Palm Oil (RSPO). Seven Malaysian companies have agreed to adopt the Principles and Criteria (P&C) for sustainable palm oil production within a two-year trial period starting November 2005. The trial period is to enable field-testing of the P&C for future improvements.

With regards to timber, Malaysia is committed to the International Timber Trade Organisation's (ITTO) objective requiring all timber traded in the international market which are harvested from SFM areas only. In compliance with the ITTO's criteria for SFM, Malaysia has initiated the Malaysian Criteria, Indicators, Activities and Standard of Performance for Forest Management Certification (MC&I 2001) to ensure that forest development and management activities are carried out in a sustainable manner. The Malaysian Timber Certification Council (MTCC) has carried out timber certification using the MC&I since 2001.

Food Safety

Developed countries have increasingly imposed stringent food safety regulations and traceability of food production to ensure food safety. These form of non-tariff barriers to the Malaysian export of commodities-based food resembled a products to these countries. This has encouraged Malaysia to participate actively in the Codex Alimentarius Commission which was created in 1963 by FAO and WHO to develop food standards and guidelines for fair practices in the international trade of food and agriculture products. The MPIC has been assisting the

industries in preparing food production for export in accordance to the Codex Standards.

Price Fluctuations

Plantation commodities are susceptible to extreme price fluctuations due to uncertainties of the global supply and demand situation. Low prices of primary commodities could be prolonged by poor demand from major markets, besides over supply. This will lead to unsatisfactory remunerative returns to the producers, who may move to or convert their plantations to other economic activities, resulting in a decrease of planted areas for primary commodities. Prolonged low prices of rubber and cocoa in the past have resulted in the shrinkage of rubber planted areas to 1.28 million hectares in 2004 from 1.8 million hectares in 1990 and cocoa to 41,612 hectares in 2004 from 393,000 hectares in 1990.

Pepper price fluctuation has prompted the Pepper Marketing Board (PMB) to set up and promote the usage of marketing options such as the Physical Forward Market and Pepper Storage and Ownership Schemes to assist farmers during times of low prices. The Physical Forward Market enables farmers to make forward sales and minimise the effects of the fluctuating market whereas the Pepper Storage and Ownership Scheme enables farmers to obtain cash requirements quickly without having to part with stocks while waiting for prices to rise.

The volatility of commodity prices affects the income of smallholders who depend on commodities for their livelihood. The Government has introduced several measures to assist smallholders in time of depressed prices, such as promoting integrated farming to diversify risks and providing grants for replanting with other remunerative crops. In the case of rubber, Malaysia, Thailand and Indonesia have through the International Rubber Consortium Limited (IRCo) helped to stabilise rubber prices.

Transfer of Technology

Agencies under the MPIC have successfully carried out R&D activities in the palm oil, rubber and cocoa industries. However the adoption of technology by smallholders is generally slow, despite intensive campaigns undertaken by the relevant agencies to transfer technology to farmers through extension services.

The Ministry has drawn up various strategies to ensure that R&D findings are successfully commercialised and adopted by the industry. These include collaborating with the Ministry of Science, Technology and Innovation (MOSTI) to procure more R&D funding for

the commodity industries under the Intensification of Research in Priority Areas (IRPA) Scheme. Closer collaboration were continue to be forged with the private sector, universities and research institutions in R&D activities for the plantation industries and commodities. MPIC, through MPOB, MRB, MCB and PMB, has conducted regular seminars, workshops and training programmes for the industries and smallholders to facilitate the transfer of technology.

Technology transfer to the industries will focus on raising productivity through the utilisation of high yielding planting materials, good agronomic practices and adoption of labour-saving techniques in planting and harvesting. In the oil palm industry, the technologies developed by MPOB include harvesting poles, grabber, loose-fruit collector, wakfoot, crabbie, mechanical cutter, mobile ramp and the Oil Palm Efficient Nutrient System (OPENS). In the case of rubber, industry, the development of the Low Intensity Tapping System (LITS) were enable workers to tap rubber trees once in three, four or six days to increase latex yields. The developed modular kiln-drying system for the drying of timber and wood products has been generally adopted by the industry to increase drying efficiency.

Public sector agencies, in collaborating with reputable local and overseas research institutions, have made advancements in the area of R&D in biotechnology. These include high-quality planting materials as well as high value-added products.

Human Resource Development

The shortage of both knowledge and skilled labour remains a major problem faced by the plantation industries and commodities sector. Lack of knowledge workers, including R&D scientists, engineers, agronomists, planters, plantation managers and ICT personnel have impeded the progress of the sector towards higher productivity and product diversification. Overdependence on foreign workers for their skills in both upstream and downstream activities will place Malaysia in a vulnerable position of losing its competitive edge should these workers are no longer available.

The recruitment of foreign workers for the plantation industries and commodities sector is no longer a choice but a necessity, in view of the non-availability of local workers who prefer to work in the other economic sectors or in urban areas. The slow adoption of mechanisation in farming activities and automation in processing has further exacerbated the dependence on foreign labour by the sector.

The Government has adopted a liberal foreign labour policy and has simplified procedures to facilitate the

recruitment of foreign labour by the plantation industry, especially for planting and harvesting. The policy has been further improved to allow skilled foreign workers to work for more than five years in the country. As a long-term measure to increase knowledge workers and to reduce foreign worker dependency, the Government is considering the setting up of a dedicated commodities university to produce the required number of knowledge workers for the industry. The present incentive system for adopting farm mechanisation and automation will be maintained and reviewed from time to time to encourage the industry to utilise high technology for farm activities and processing.

Logistics Development

Malaysian commodities exports, especially palm oil, are highly dependent on foreign-owned vessels which control the space, schedule, destinations and preference of goods to be transported. Shipping companies will usually give preference to the transport of chemicals and petrochemical products, which fetch higher freight charges. These have limited the volume of exports of Malaysia's commodities in particular palm oil. Higher compared with Peninsular Malaysia due to lower volume of exports and lack of ships calling at the ports of Sabah and Sarawak.

The cost of production of commodities in Sabah and Sarawak is also higher due to the lack of an efficient transportation system which results in delays and storage problems. This has contributed to extra costs to the industry. Inadequate supply of electricity and water has further compounded the problem.

FUTURE PROSPECTS

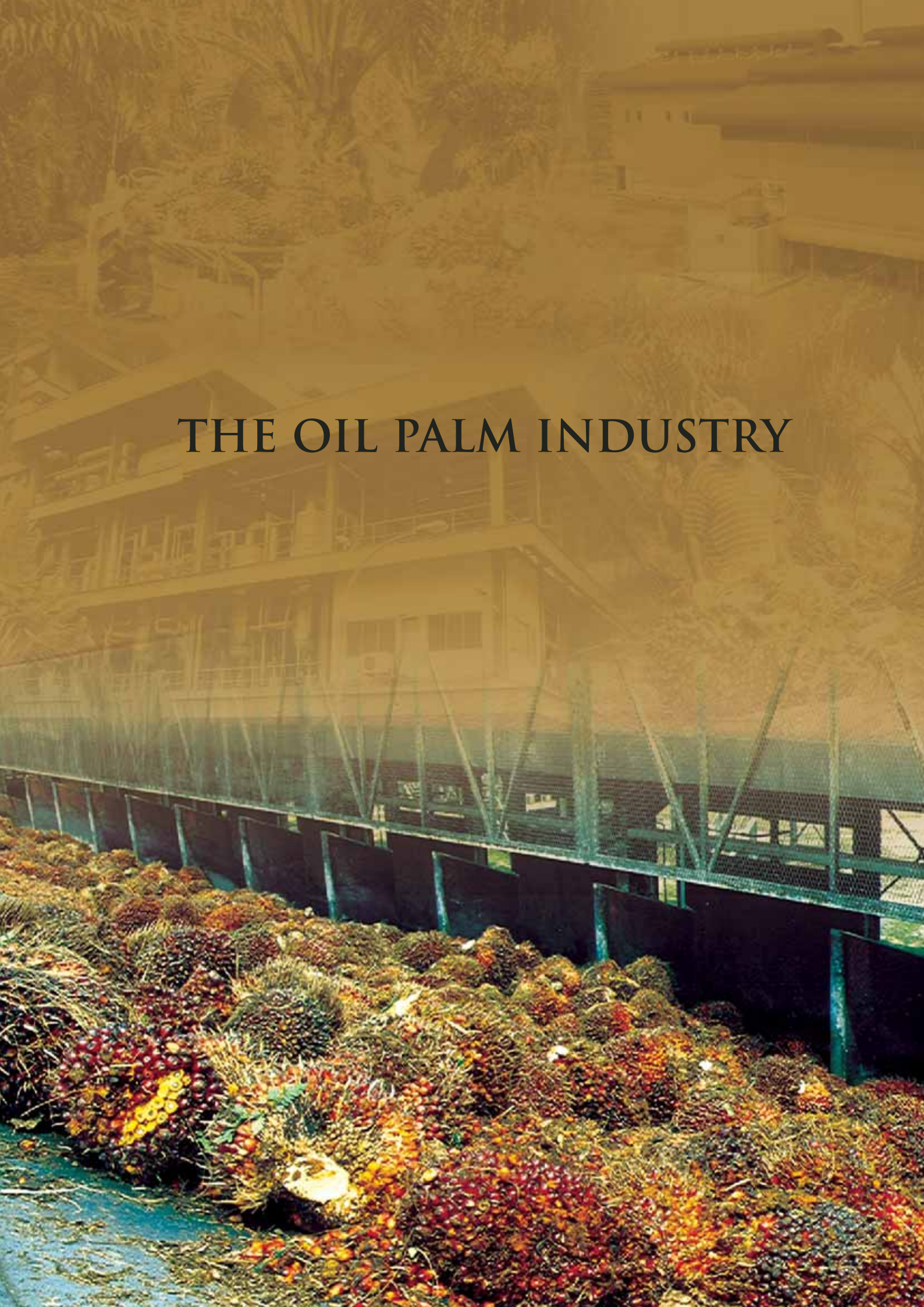
The future development of the upstream sector would be constrained by the limited land available for new planting as well as competing land use for other economic activities. The growth of this sector will have to depend on improved productivity and efficient agronomic management. Downstream activities should focus on R&D, particularly in biotechnology, to develop more value-added commodity-based products for niche markets.

Malaysian plantation companies are expected to increase investments overseas for upstream and downstream activities. These will include investment in countries which have more land for the planting of commodity crops and expanding downstream industries in countries which are market to these products.

New sources of growth will continue to be explored for the development of the plantation industries and commodities sector. These include:

- production of biofuel for local consumption and export;
- establishment of forest plantations to provide sustainable supply of timber for the wood-based industry;
- production of biomass products; and
- promotion of kenaf and sago as industrial crops.

THE OIL PALM INDUSTRY



THE OIL PALM INDUSTRY

INTRODUCTION

Malaysia is not only the largest producer and exporter of palm oil, but also the world's biggest exporter of oils and fats. The oil palm industry continues to be an important foreign exchange earner for the country, with export earnings amounting to RM30.4 billion in 2004. The Malaysian palm oil industry continues to remain as the largest export revenue earner among the primary commodities.

The industry provides employment to 380,000 workers in the oil palm plantations, Government land schemes and independent smallholders, thus becoming an increasingly important industry in generating income for the rural population. A substantial number of people are also employed in both the downstream and supporting industries, such as milling, processing, manufacturing and trading.

Malaysia has invested heavily in R&D as well as marketing and promotion of palm oil worldwide and it has now gained acceptance in more than 140 countries as a nutritious and cost-efficient vegetable oil.

PERFORMANCE

World Oils and Fats

The supply of 17 major oils and fats in 2004 increased by 10.9 per cent to 190.2 million tonnes from 171.6 million tonnes in 2001, while demand rose by 12.8 per cent to 176.8 million tonnes from 156.1 million tonnes in 2001. This has resulted in ending stocks declining by 1.44 million tonnes to 14.07 million tonnes in 2004, (Table 2.1).

The opening stock in 2004 declined by 9.5 per cent to 14.2 million tonnes from 15.7 million tonnes in 2001, with palm and soyabean oil decreasing marginally by 0.8 per cent and 0.7 per cent respectively. Palm oil registered the highest level with four million tonnes, followed by soyabean oil at 3.2 million tonnes.

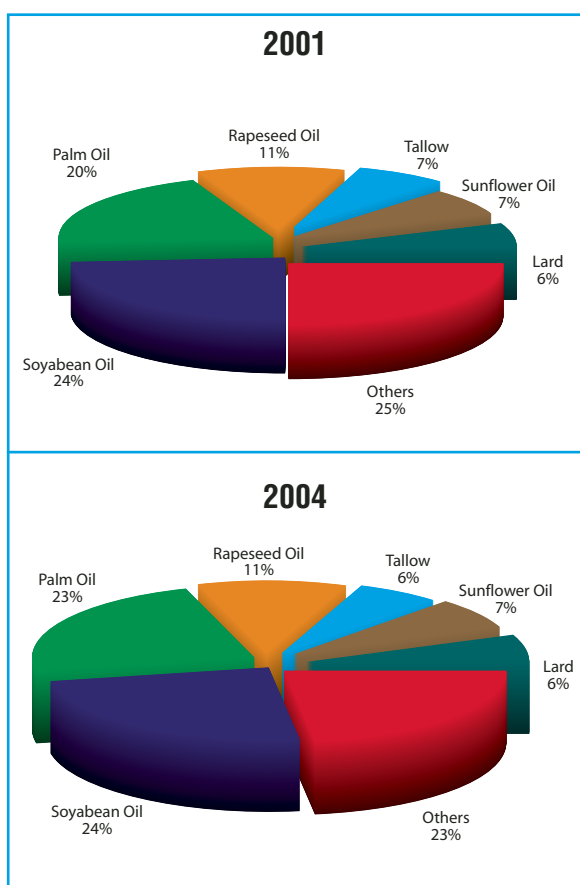
Global oils and fats production in 2004 increased by 10.6 per cent to 130.1 million tonnes from 117.6 million tonnes in 2001. Soyabean oil remained the largest oil produced, with 30.7 million tonnes or 24 per cent of world production, followed by palm oil with 30.6 million tonnes or 23.5 per cent and rapeseed oil at 14.9 million tonnes or 11.4 per cent (Chart 2.1).

**Table 2.1: WORLD BALANCE OF OILS AND FATS,
2001-2004 ('000 Tonnes)**

	2001	2002	2003	2004	2005 (e)	2004/2001	
						+/- Tonnes	+/-%
Opening Stock	15,724	15,511	14,642	14,231	14,073	-1,493	-9.5
Production	117,628	120,564	126,300	130,078	132,146	12,450	10.6
Imports	38,218	40,947	44,146	45,907	45,523	7,689	20.1
Supply	171,570	177,022	185,088	190,216	191,742	18,646	10.9
Exports	38,195	40,720	44,358	46,012	50,004	7,817	20.5
Disappearance	117,864	121,660	126,499	130,063	126,787	12,199	10.4
Demand	156,059	162,380	170,857	176,075	176,791	20,016	12.8
Ending Stock	15,511	14,642	14,231	14,073	14,951	-1,438	-9.3

Source: Oil World,
MPOB: For data on Malaysian palm oil & palm kernel oil
e: estimate

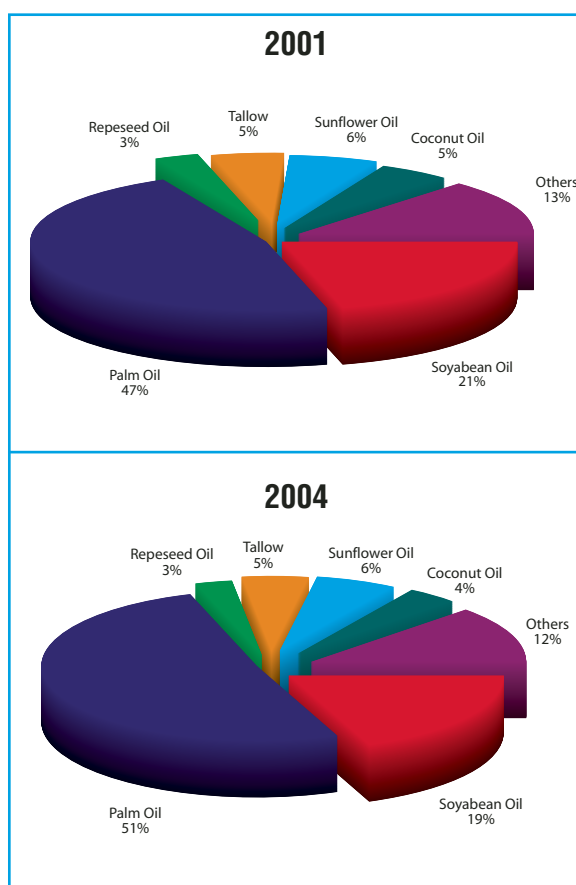
Chart 2.1 WORLD PRODUCTION OF MAJOR OILS AND FATS, 2001 AND 2004



Source: Oil World

MPOB : For data on Malaysian palm oil and palm kernel oil

Chart 2.2: WORLD EXPORTS OF MAJOR OILS AND FATS, 2001 AND 2004



Source: Oil World

MPOB : For data on Malaysian palm oil and palm kernel oil

World exports of oils and fats increased by 20.5 per cent to 46 million tonnes from 38.2 million tonnes in 2001. The export of palm oil rose by 36.2 per cent to 24.1 million tonnes from 17.7 million tonnes in 2001 and soyabean oil, 16.7 per cent to 9.1 million tonnes from 7.8 million tonnes in 2001.

Palm oil continued to dominate the global oils and fats trade in 2004, accounting for 51.2 per cent or 24.1 million tonnes of total exports (**Chart 2.2**). Malaysia remained the largest exporter, accounting for 52.3 per cent, followed by Indonesia at 36.1 per cent. The share of soyabean oil and sunflower oil was 19.7 per cent and six per cent respectively.

World disappearance (consumption) of oils and fats in 2004 increased by 10.4 per cent to 130.1 million tonnes from 117.9 million tonnes in 2001. The major oils consumed were soyabean oil at 31.2 million tonnes or 24 per cent of total consumption, followed by palm oil at 29.9 million tonnes or 23 per cent and rapeseed oil at 14.8 million tonnes or 11.4 per cent.

World ending stock of oils and fats declined by 9.3 per cent to 14.1 million tonnes from 15.5 million tonnes in 2001. Palm oil stock was highest at 4.6 million tonnes or 32.6 per cent of ending stock, followed by soyabean oil at 2.7 million tonnes or 19.1 per cent, and rapeseed oil at one million tonnes or seven per cent.

The world production of oils and fats in 2005 is expected to increase by 1.6 per cent to 132.1 million tonnes from 130.1 million tonnes in 2004, contributed by an expected increase in palm oil and rapeseed oil production by 9.5 per cent and 11.8 per cent respectively. Soyabean oil output is also expected to recover by 5.5 per cent. World exports, are projected to increase by 8.7 per cent to 50 million tonnes from 46 million tonnes in 2004. The lower export growth is due largely to lower sunflower oil exports, which is forecast to decline by 10.2 per cent to 2.5 million tonnes due to decline in production. The higher production of oils and fats vis-a-vis consumption will result in the build-up of ending stock by 6.2 per cent to 14.9 million tonnes. The ending stock level in 2005 is expected to increase by 0.9 million tonnes to 14.9 million tonnes.

The price performance of oils and fats in the world market improved sharply during the 2001 to 2004 period amid steady demand growth and tightness in global supply. The price of crude palm oil (CPO) increased by 64.7 per cent to USD471 in 2004 from USD286 in 2001, with soyabean oil and rapeseed oil gaining by 74 per cent and 70.4 per cent to USD616 and USD685 respectively. Hence, the price discount for CPO vis-à-vis soyabean oil widened further to USD145 in 2004 from USD68 in 2001.

MALAYSIA

Planted Area

The total area planted with oil palm in 2004 increased by 8.6 per cent or 0.3 million hectares to 3.8 million hectares from 3.5 million hectares in 2001. This was due mainly to the oil palm acreage expansion in Sabah, which registered the highest increase of 13.4 per cent or 138,084 hectares to 1.16 million hectares in 2004. The matured area constituted 89 per cent of the total planted area, with the highest increase recorded in Sabah and Sarawak, which increased by 27.7 per cent or 322,521 hectares to 1.5 million hectares. In 2005, total acreage under oil palm is expected to increase by three per cent to 3.9 million hectares.

Oil palm cultivation in Malaysia is based largely on the plantation management system and Government-organised smallholders' schemes. Private plantations accounted for 60 per cent of the total oil palm acreage, followed by the Federal Land Development Authority

(FELDA) 16 per cent, other Federal and State Agencies 15 per cent and independent smallholders nine per cent.

Replanting

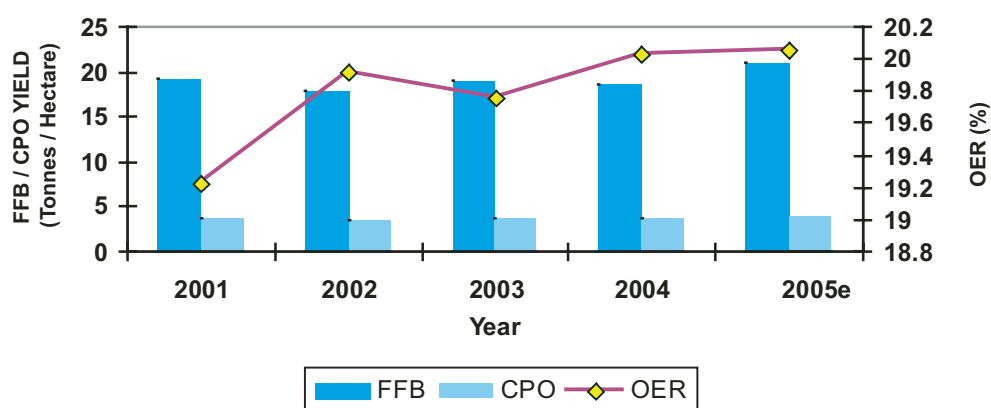
In 2004, the oil palm area replanted totalled 46,954 hectares, representing only 1.2 per cent of the total planted area. Large areas of aging palms, 25 years and above, are due for replanting, estimated at 300,000 hectares or eight per cent (as at the beginning 2005) of the planted area in Malaysia. Replanting will be carried out in accordance with the replanting schedule to increase the productivity of the planted areas and oil yields.

Yield

The average yield of oil palm fresh fruit bunches (FFB) per hectare recorded a decrease of 2.8 per cent to 18.6 tonnes from 19.14 tonnes in 2001 (**Chart 2.3**). The average CPO yield per hectare recorded an increase of 1.9 per cent to 3.73 tonnes from 3.66 tonnes in 2001 while the Oil Extraction Rate (OER) increased by 4.2 per cent to 20 per cent in 2004 from 19.2 per cent in 2001.

In 2005, the yields are expected to improve due to the increase in matured areas and palms reaching peak production in Sabah and Sarawak. The FFB and CPO yield per hectare are estimated at 21 tonnes and four tonnes respectively, while the performance of OER is also expected to remain slightly above 20 per cent at 20.05 per cent.

Chart 2.3: YIELD OF FFB, CPO AND OER IN MALAYSIA, 2001 - 2005



Source : MPOB
e : estimate

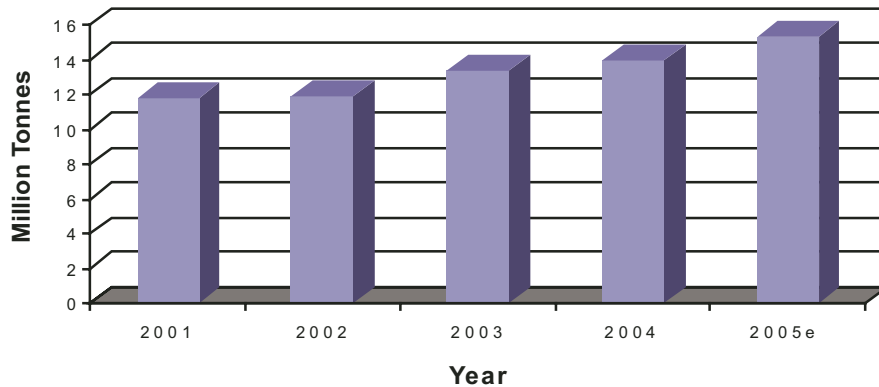
Production

In 2004, the production of CPO reached 13.98 million tonnes, an increase of 4.7 per cent or 0.63 million tonnes over that of 2003 and an increase of 18.5 per cent or 2.18 million tonnes from 2001. Improvements in the FFB yield during September to December and the large expansion in matured areas, especially in Sabah and Sarawak, as well as the improvement of OER from

19.75 per cent in 2003 to 20 per cent in 2004 were factors that contributed to the increase in CPO production (**Chart 2.4**).

Crude Palm Oil production in 2005 is expected to increase by 9.4 per cent to 15.3 million tonnes as a result of more matured palms in the plantations of Sabah and Sarawak..

Chart 2.4: MALAYSIAN PRODUCTION OF CRUDE PALM OIL, 2001 - 2005



Source: MPOB
e: estimate

Fresh fruit bunches



Processing

Processing, especially the milling of oil palm expanded during the 2001 to 2004 period. The number of operating mills increased to 381 in 2004 from 352 mills in 2001. The mills processed 79.74 million tonnes of FFB in 2004, an increase of 13.7 per cent from 2001. The milling capacity utilization rate in 2004, declined to 87.7 per cent despite the increased capacity of existing mills and new mills which started their operations.



Oil Palm Mill

Table 2.2: STATUS OF OIL PALM PROCESSING, 2001-2004

Sector	No.	2001 Capacity (tonnes/ year)	No.	2004 Capacity (tonnes/ year)	No.	2005e Capacity (tonnes/ year)	Difference +/- 04/01	
							No.	Capacity (tonnes/ year)
Mills	352	67,556,720	381	79,740,600	387	80,500,000	29	12,183,880
Refineries	47	15,549,400	48	16,661,900	52	18,140,000	1	1,112,500
Kernel Crushers	38	4,312,100	40	5,041,100	40	5,041,100	2	729,000
Oleochemicals	17	1,957,509	17	1,822,766	17	1,822,766	0	-134,743

Source: MPOB
e : estimate

There were 48 refineries in operation with a total annual capacity of 16.66 million tonnes at the end of 2004, an increase of 1.11 million tonnes from 2001. A total of 13.98 million tonnes of CPO and crude palm kernel oil (CPKO) were processed, an increase of 20 per cent as compared with 2001. The refining utilisation rate increased to 85.3 per cent from 74.6 per cent in the same period.



Palm Oil Refinery

At the end of 2004, the total number of palm kernel crushers in operation rose to 40 units with a total capacity of 5.04 million tonnes, an increase from 38 units with a total capacity of 4.31 million tonnes in 2001. A total of 3.65 million tonnes of palm kernel were crushed in 2004, up by 6.1 per cent compared with 3.43 million tonnes in 2001. However, the crushing utilisation rate declined to 65.9 per cent during the same period despite the increased crushing capacity.

The total number of oleochemical plants in operation remained unchanged at 17 in 2004. However, total production capacity declined by 0.13 million tonnes to 1.82 million tonnes compared with 2001. A total of 1.7 million tonnes of palm oil products was processed, an increase of 28.9 per cent compared with 2001. The utilisation rate rose by to 93.5 per cent during the period.

In 2005, the number of mills in operation is expected to increase to 387, with total capacities increasing by one per cent or 0.8 million tonnes to 80.5 million tonnes. The number of refineries in operation is expected to increase to 52, with a total capacity of

18.14 million tonnes, an increase of nine per cent or 1.5 million tonnes. The capacity utilisation rates of oleochemical plants is expected to be in the range of 90 to 95 per cent, provided the palm kernel oil (PKO) price remains favourable.

Storage Capacity

In 2004, the total palm oil storage capacity for all activities in oil palm processing was 4.28 million tonnes, an increase of 12.3 per cent from 3.81 million tonnes in 2001. The total storage capacity at the mills during the period increased by 16.9 per cent to 1.59 million tonnes from 1.36 million tonnes; while that at refineries increased by 8.2 per cent to 1.32 million tonnes from 1.22 million tonnes; bulking installation by 15.6 per cent to 1.11 million tonnes from 0.96 million tonnes and kernel crusher by 10 per cent to 0.11 million tonnes from 0.1 million tonnes. However, the storage capacity at oleochemical plants declined to 0.15 million tonnes in 2004, decreasing by 11.8 per cent from 0.17 million tonnes in 2001 (**Table 2.3**).

Exports

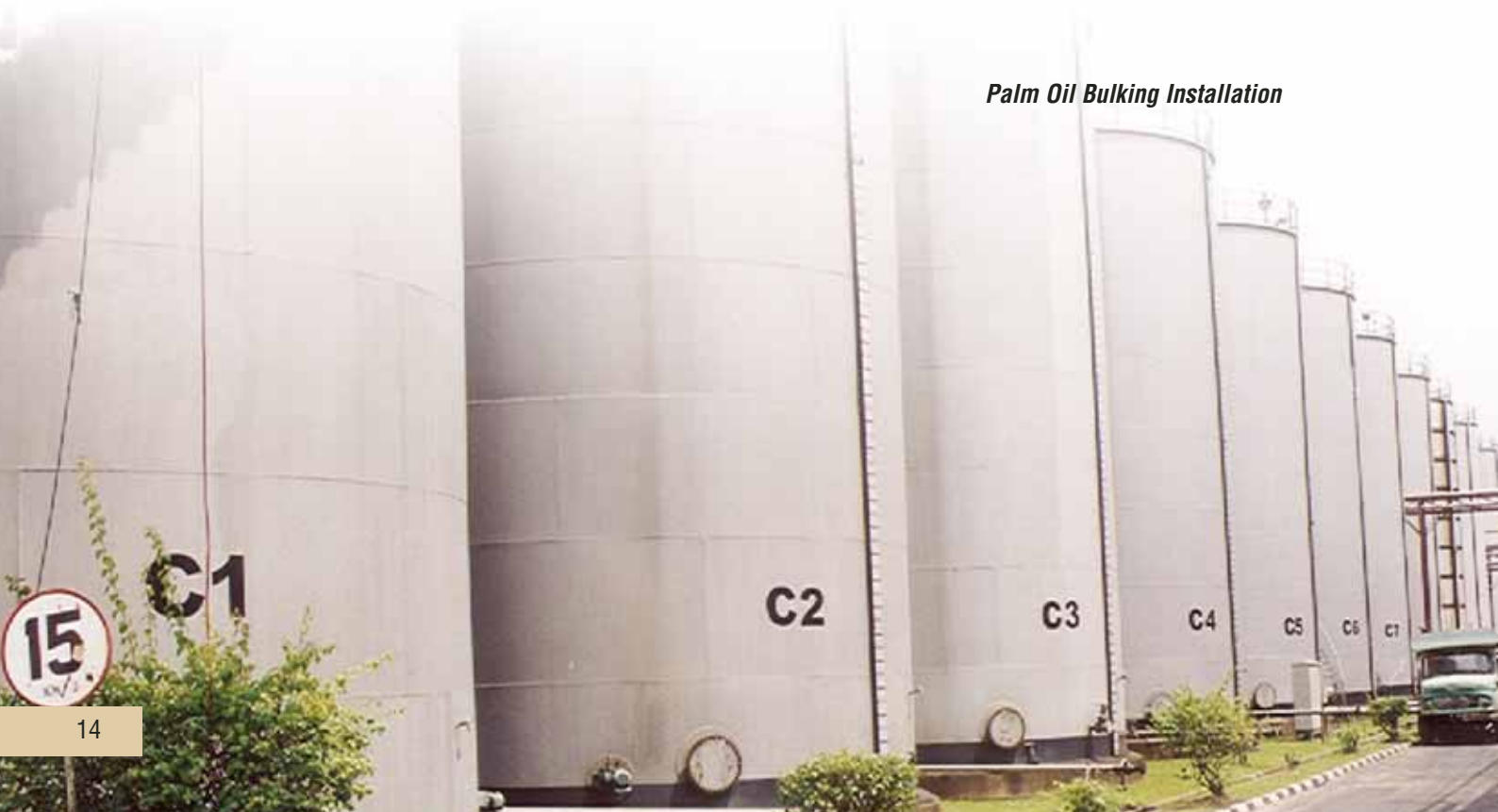
Total exports of all oil palm products in 2004 increased by 18.7 per cent to 17.36 million tonnes from 14.63 million tonnes in 2001. Export value increased by 114 per cent to RM30.4 billion in 2004, from RM14.2 billion in 2001, due primarily to higher prices for all oil palm products, especially during the first half of 2004. Palm oil alone contributed to 12.6 million tonnes or 72.5 per cent of total export volume. Other products that have shown favourable growth are oleochemicals and finished products (**Table 2.4**).

Exports of palm oil in 2004 increased by 18.4 per cent or by 1.96 million tonnes to 12.6 million tonnes from 10.6 million tonnes in 2001. The highest export demand came from major markets such as the PRC, the EU and Bangladesh. Competitive prices of palm oil vis-à-vis other oils and fats contributed to the increase in the export performance during the year. Higher palm oil prices especially during the first quarter of 2004, contributed to the increase of 118.9 per cent in total export value of palm oil to RM22.2 billion in 2004 from RM10.1 billion recorded in 2001.

**Table 2.3: STATUS OF BULKING INSTALLATION, 2001-2004
(Million Tonnes)**

Sector	2001	2004	Difference	
			+/- Tonnes	+/- %
Mills	1.36	1.59	0.23	16.9
Refineries	1.22	1.32	0.10	8.2
Kernel Crushers	0.10	0.11	0.01	10.0
Oleochemicals	0.17	0.15	-0.02	-11.8
Bulking Installation	0.96	1.11	0.15	15.6
Total	3.81	4.28	0.47	12.3

Source: MPOB



Palm Oil Bulking Installation

Table 2.4: EXPORT VOLUME AND VALUE OF OIL PALM PRODUCTS, 2001 - 2005

	2001	2002	2003	2004	2005e	Difference 04/01	
						Quantity/ value	%
Quantity (Tonnes)							
Palm Oil	10,624,830	10,886,259	12,266,064	12,581,792	13,300,000	1,956,962	18.4
Palm Kernel Oil	668,606	698,445	868,658	780,375	900,000	111,769	16.7
Palm Kernel Cake	1,807,429	1,543,311	1,809,957	1,795,918	1,900,000	-11,511	-0.6
Oleochemicals	1,199,467	1,267,942	1,568,239	1,770,220	1,800,000	570,753	47.6
Finished Products	289,331	259,950	259,472	374,601	350,000	85,270	29.5
Others	40,373	35,806	48,945	57,639	70,000	17,266	42.8
TOTAL	14,630,035	14,691,713	16,821,334	17,360,546	18,320,000	2,730,511	18.7
Value (RM Million)							
Palm Oil	10,132.5	14,999.3	19,883.5	22,175.6	19,950.0	12,043	118.9
Palm Kernel Oil	864.9	1,107.4	1,583.3	1,972.4	2,205.0	1,108	128.0
Palm Kernel Cake	224.5	285.5	337.9	351.3	300.0	127	56.5
Oleochemicals	2,558.9	2,739.2	3,846.8	5,040.0	4,850.0	2,481	97.0
Finished Products	426.2	485.4	535.7	850.2	700.0	424	99.5
Others	20.3	25.0	39.1	54.0	55.0	34	166.0
TOTAL	14,227.4	19,641.8	26,226.4	30,443.0	28,060.0	16,216	114.0

Source: MPOB
e: estimate

The major palm oil products exported were RBD palm olein (48.8 per cent of total palm oil exports), followed by RBD palm oil (13.4 per cent), RBD palm stearin (12.3 per cent), crude palm oil (10.5 per cent), crude palm olein (4.3 per cent) and palm fatty acid distillate (four per cent).

The exports of palm oil in 2005 is expected to increase by 4.2 per cent to 13.3 million tonnes, from 12.6 million tonnes in 2004, in line with the expected increase in production of crude palm oil and competitive palm oil prices. The export value is forecast to reduce to RM20 billion due to lower prices expected in 2005.

In terms of export market performance in 2004, the PRC was the leading export market for Malaysian palm oil with 2.8 million tonnes, accounting for 22.3 per cent of total palm oil exports. This was followed by the EU at two million tonnes (15.6 per cent), Pakistan 0.95 million tonnes (7.6 per cent), India 0.94 million tonnes

(7.5 per cent), Japan 0.48 million tonnes (3.8 per cent), Jordan 0.45 million tonnes (3.6 per cent), Bangladesh 0.36 million tonnes (2.9 per cent), the USA 0.35 million tonnes (2.8 per cent), Egypt 0.34 million tonnes (2.7 per cent) and UAE 0.32 million tonnes (2.5 per cent). Together these countries accounted for nine million tonnes or 71.3 per cent of total Malaysian palm oil exports in 2004. Re-exports through Singapore amounted to 0.4 million tonnes.

Malaysian palm oil exports to several major countries recorded significant increases in 2004, compared with the year 2001. These include the PRC (1.52 million tonnes), the EU (0.36 million tonnes), Jordan (0.32 million tonnes), Bangladesh (0.19 million tonnes), UAE (0.14 million tonnes) and the USA (0.13 million tonnes). Major markets that recorded declines in their imports of Malaysian palm oil were India (1.09 million tonnes), Pakistan (0.19 million tonnes) and Egypt (0.12 million tonnes) (Table 2.5).

Exports of PKO in 2004 increased by 0.11 million tonnes or 16.7 per cent to 0.78 million tonnes compared with 0.67 million tonnes in 2001. The export value increased by 128 per cent to RM2 billion from RM0.9 billion in 2001.

Major PKO export markets in 2004 were the USA which accounted for 0.18 million tonnes (or 23 per cent of total palm kernel oil exports), the EU 0.1 million tonnes (12.7 per cent), Japan 0.06 million tonnes (7.7 per cent) and the PRC 0.06 million tonnes (7.7 per cent).

Exports of palm kernel cake (PKC) in 2004 decreased marginally by 0.6 per cent to 1.8 million tonnes, from 1.81 million tonnes recorded in 2001, due mainly to lower off-take by the EU (imports amounting to 1.49 million tonnes or 83 per cent).

The major markets for PKC in 2004, apart from the EU were the Republic of Korea (ROK) which accounted for 0.14 million tonnes or eight per cent, and New Zealand 0.08 million tonnes or 4.7 per cent..

Table 2.5 :EXPORT OF PALM OIL TO SELECTED DESTINATIONS, 2001 – 2005 (Tonnes)

Country	2001	2002	2003	2004	2005e	Difference 04/01	
						Quantity	%
PRC	1,281,726	1,838,710	2,533,170	2,805,898	3,000,000	1,524,172	118.9
EU*	1,606,134	1,497,466	1,696,015	1,966,107	2,200,000	359,973	22.4
Pakistan	1,132,020	1,084,718	1,102,679	953,772	1,000,000	-178,248	-15.7
India	2,028,319	1,676,580	1,597,951	941,871	700,000	-1,086,448	-53.6
Japan	400,073	427,208	447,346	480,231	470,000	80,158	20.0
Jordan	133,906	97,272	53,950	454,953	60,000	321,047	239.8
Singapore	400,826	432,774	471,614	396,291	350,000	-4,535	-1.1
Bangladesh	174,657	231,243	290,611	364,752	540,000	190,095	108.8
USA	213,822	262,969	263,906	343,052	550,000	129,230	60.4
Egypt	453,261	526,949	564,850	335,225	600,000	-118,036	-26.0
UAE	180,113	206,144	264,631	318,871	240,000	138,758	77.0
Hong Kong	348,670	348,253	214,292	293,398	130,000	-55,272	-15.0
South Africa	163,607	179,483	184,219	244,208	240,000	80,601	49.3
ROK	275,330	200,724	217,619	223,974	240,000	-51,356	-18.7
Russia	113,684	135,181	139,646	181,727	265,000	68,043	59.9
Saudi Arabia	175,774	250,493	214,851	172,622	170,000	-3,152	-1.8
Iran	69,439	95,787	148,195	169,012	222,000	99,573	143.4
Vietnam	212,362	117,023	114,148	146,486	140,000	-65,876	-31.0
Myanmar	123,251	107,677	151,722	140,755	190,000	17,504	14.2
Taiwan	80,264	85,046	104,542	131,251	140,000	50,987	63.5
Algeria	82,045	67,805	119,659	124,780	33,000	42,735	52.1
Philippines	45,578	45,304	42,562	110,712	213,000	65,134	142.9
Australia	104,857	120,688	105,264	105,802	120,000	945	0.9
Others	825,112	850,762	1,222,623	1,176,042	1,287,000	250,930	42.5
TOTAL	10,624,830	10,886,259	12,266,064	12,581,792	13,300,000	1,956,962	18.4

Source: MPOB

e: estimate

* EU 2001 – 2003, 15 countries

EU 2004 – 2005, 25 countries

Exports of oleochemical products in 2004 increased by 47.6 per cent to 1.77 million tonnes from 1.2 million tonnes recorded in 2001, with export value increasing by 97 per cent to RM5 billion. The main oleochemical products exported were fatty acids (43.4 per cent of total oleochemicals exported), followed by fatty alcohol (18.6 per cent), soap noodles (15.3 per cent), methyl ester (11.3 per cent) and glycerine (11.3 per cent). The major markets for Malaysian oleochemical products were the EU accounting for 0.51 million tonnes or 28.8 per cent of total oleochemical exports, followed by the PRC 0.25 million tonnes (14.4 per cent), Japan 0.21 million tonnes (11.9 per cent), and the USA 0.21 million tonnes (11.8 per cent).

In 2004, the export of soap noodles declined to 0.13 million tonnes from 0.19 million tonnes in 2001 with the PRC, the Philippines, UAE, India and the EU being the major markets with off-takes amounting to 27,031 tonnes, 26,624 tonnes, 26,340 tonnes, 25,573 tonnes and 22,658 tonnes respectively.

Exports of palm oil finished products in 2004 increased by 29.5 per cent to 0.37 million tonnes with export value increasing substantially by 99.5 per cent to RM0.9 billion compared with the year 2001. The major finished products exported were shortening, 190,082 tonnes, vegetable ghee/vanaspati 134,018 tonnes, dough fats 19,942 tonnes, specialty fats (cocoa butter substitute/replacer/equivalent) 11,451 tonnes and margarine 9,780 tonnes. The major markets for Malaysian palm oil finished products were Pakistan 44,556 tonnes, Syria 37,209 tonnes, Russia 35,328 tonnes, Iraq 25,033 tonnes, India 24,138 tonnes, Iran 21,735 tonnes and Saudi Arabia 18,627 tonnes.

Domestic Prices

The prices of oil palm products in the domestic market recovered sharply in 2002 after experiencing low prices in 2001 and sustained the upward trend in 2003 and 2004. The average CPO price per tonne rose by 52.4 per cent to RM1,363.50 in 2002 from RM894.50 in 2001 supported by the marginal increase in CPO production and draw-down in stock levels. The average CPO price strengthened further to RM1,544 and RM1,610 in 2003 and 2004 respectively as a result of the tightness in supply and higher vegetable oil prices in the world market.

The average price of PK also posted gains, which rose by 137.5 per cent to RM1,063 in 2004, from RM447.50 in 2001 while CPKO increased by 128.4 per cent to RM 2,306 from RM1,009.50 during the same period. The relatively tight supply situation coupled with higher lauric oil prices in the world market, supported the firm prices of both products in the domestic market.

The increase in CPO and PK prices during this period also led to higher FFB prices in the domestic market. The average FFB price at one per cent OER rose by 112.8 per cent to RM17.26 in 2004, as against RM8.11 in 2001.

The strong export growth, coupled with the tightness of supply, also supported export prices of processed palm oil products to trend higher during this period. In addition, export prices were also boosted by higher soyabean oil prices in the world market. In 2004, the export prices of RBD palm olein, RBD palm oil and RBD palm stearin rose by 81 per cent to RM1,752, 79 per cent to RM1,676 and 96.6 per cent to RM1,541 respectively compared with the 2001 prices.

The domestic price outlook for CPO is expected to be lower in 2005 due to higher opening stock and continued increase in production. However, the export demand is expected to increase due to better off-take by major markets and its favourable price discounts vis-a-vis other competing oils. In addition, optimism over the consumption of palm oil for biodiesel production is also expected to support prices. On the whole, the domestic CPO price is expected to average about RM1,400 in 2005.

The CPO Futures Market

The Crude Palm Oil Futures (FCPO) contract, traded on Bursa Malaysia Derivatives, continues to serve the palm oil industry by fulfilling its role in providing an effective price determination mechanism as well as an efficient price risk management tool. The market, recognised globally as the pricing benchmark for palm oil and its related products, looks set to grow further as the industry expands to new markets worldwide.

In 2004, a total of 1.38 million FCPO contracts were traded, equal to a transaction in 34.46 million tonnes of CPO. For the 10 months ended 31 October 2005, total volume was one million contracts. In the presence of bearish fundamentals and long periods of low volatility, the year-on-year volume declined by 15.9 per cent as compared with 2004, which had a total of 1.19 million contracts. Average daily trading volume for the first 10 months of 2004 and 2005 were 5,756 and 4,840 contracts respectively. The FCPO year-end open positions for 2004 was 28,314 contracts, while the open position ending October 2005 was 23,928 contracts, which was lower by 15.5 per cent.

Local institutions and retailers continue to be the most active trade users of the FCPO, contributing to 45 per cent of the total turnover in 2005. Local and foreign participants contributed to 35 per cent and 20 per cent of the total volume respectively.

Research and Development

Research and Development (R&D) efforts undertaken by both the public and private sectors have contributed significantly to the impressive development of Malaysia's palm oil industry. The R&D activities of both the Malaysian Palm Oil Board (MPOB) and other research institutions include production, quality improvement and consumption of palm oil. Such efforts will continue to increase the use of palm oil, which will generate added value to oil palm products.

The private sector in the oil palm industry plays an equally important complementary role, particularly in implementing R&D and technical findings in various aspects, from training and transfer of technology to development of expertise.

The MPOB will in particular, continue to aggressively promote its R&D findings for commercialisation. New technologies have been introduced in farm mechanisation to increase productivity and efficiency in the plantation sector. The technologies developed by MPOB include a harvesting pole, the grabber, loose fruit collector, wakfoot, crabber, mechanical cutter and mobile ramp.

MPOB has also successfully developed a system known as the Oil Palm Efficient Nutrient System (OPENS) to determine the status of nutrients in the oil palm environment, so that plantations can apply the right type of fertilisers in the correct quantity.

The commitment to environment conservation has led to the introduction of environmental-friendly oil palm biomass.

In downstream research, various food and non-food products have been formulated. These include trans-free margarine, shortenings, ice-cream powder, salad dressing, cheese, chocolate, fat spreads, non-dairy ice-cream and palm-based santan. In non food applications, research has focused on the development of value-added oleochemical products, including detergents, personal care, agricultural and industrial products.



Palm oil-based cosmetics



Palm oil-based skincare product



Oil palm fibre composite car door trim



Palm-based furniture



Branded oil palm product

In the area of biotechnology, continuous R&D efforts are being undertaken to enhance the productivity of the oil palm industry with the ultimate objective of producing higher value-added products.

INSTITUTIONAL SUPPORT

In order to promote the continuous growth of the industry, close co-operation between the Ministry of Plantation Industries and Commodities (MPIC) and its agencies such as MPOB and the Malaysian Palm Oil Promotion Council (MPOPC) will continue to be maintained. Other related associations and organisations include the Malaysia Palm Oil Association (MPOA), East Malaysia Planters Association (EMPA), Palm Oil Millers Association (POMA), Palm Oil Refiners Association (PORAM), Malaysia Edible Oil Manufacturers Association (MEOMA), National Association of Smallholders (NASH), and Malaysia Oleochemical Manufacturers Group (MOMG).

ISSUES AND CHALLENGES

Production Costs

In 2004, the cost of palm oil production averaged RM600 per tonne of CPO and RM120 per tonne for FFB, based on the productivity of four tonnes CPO per hectare. The production cost of Malaysian palm oil has to be maintained, if not lowered, to compete with other low-cost producing countries. This has to be achieved through increased productivity and Government policies to keep the production costs in the country low.

Integrated Operations

There are various sub-sectors and entities within the oil palm industry, such as integrated plantations with mills and refineries as well as independent smallholders, plantations, mills, refineries, kernel crushers and oleochemical plants. The concept of integration has not been fully implemented, wherein profit centres are still separated and compete with one another. Thus, the industrial structure needs to be reviewed to include complete integration by establishing a single profit centre. This would enable the industry to enjoy the full benefits of integration and the internalisation of strengths, and at the same time reduce costs.

Farm Mechanisation

Farm mechanisation has not been adopted widely due to high investment costs. This has led to continued dependence on foreign labour. The technologies introduced in farm mechanisation need to be expanded to suit various types of terrain, slopes and soil conditions. The new technologies should also be easy to handle and affordable to small estates and smallholders.

Commercialisation of R&D Findings

Market-driven R&D for increasing productivity, improving production and quality as well as the development of new products is crucial for the Malaysian palm oil industry. During the 1986-2004 period, MPOB developed 253 new technologies, out of which 78 (31 per cent) have been commercialised. The technically viable palm biofuel and oil palm biomass technologies need to be further improved in terms of economics of scale and investment opportunities in order to increase oil palm/palm oil usage in non-food and biomass applications.

Skilled Labour

Lack of interest in plantation work due to unattractive working environment and conditions have led to a scarcity in skilled planters and managers as well as researchers in areas such as biotechnology, oleochemical and oil palm biomass. Attractive offers from neighbouring producer countries have resulted in an exodus of skilled planters, including technicians at all levels and fields. Labour shortage continues to be a major problem, while continued dependence on unskilled foreign labour has affected the effectiveness of plantation management, productivity level, quality of FFB harvested and OER.

The MPIC is considering the setting up of a University of Plantation Technology and Entrepreneurship (UPTEN) to complement existing education institutions in producing skilled manpower for the plantation sector.

Market Access

Competition in the world market is increasing in tandem with the rise in palm oil production. This situation is being fully exploited by some of the major palm oil importing countries by way of tariff preferential treatments for CPO (tariff escalation between crude and processed). Malaysia is not able to enjoy fully the tariff preferential treatments offered by importing countries as export of CPO is not fully encouraged in order to promote greater value added within the country.

Developing New Markets

In an era of increased competition among oils and fats globally, the need for strengthening networking among producers of palm and oilseeds as well as exporting countries is becoming increasingly important. With such shared information and cooperation, the industry will be able to initiate quick responses to market changes and competitors' actions.

Malaysia has to take full advantage of trans-fatty acids to further expand its palm oil-based semi and solid products such as margarine, shortening and vanaspati as well as bakery, confectionery and frying fats in temperate markets. Programmes to promote palm oil as non-trans oil has to be intensified and special incentives must be provided for Malaysian companies to set up processing plants to produce these products for new markets.

Higher value-added products

Malaysia's palm oil and oleochemical exports are in the form of basic products and they compete directly with those from competitively-priced neighbouring countries. This has affected Malaysia's palm oil market share in countries such as India, the EU, Bangladesh and the PRC. Malaysia needs to continue to diversify into higher value-added intermediate oleochemical products such as alcohol exotylate and fatty amide as well as finished products to enhance its image as an exporter of high quality products for the world market. In order to maintain Malaysia's position as the leading producer and exporter of high quality palm oil products, there is a need to formulate a national brand to project the sustainability and high quality standards of Malaysian palm oil.

Shipping and Freight

Shipping and freight rates are major factors in determining the growth of palm oil exports as well as its competitiveness. The Malaysian shipping industry is highly dependent on foreign-owned vessels, resulting in a loss of control in terms of freight, space, schedule and destination of vessels. The problem is further compounded by new international rulings on oils and fats shipping, for example MARPOL, NIOP and FOSFA, which restrict the availability of ship-space to carry palm oil.

The shipping needs of the palm oil industry have to be further addressed through the provision of incentives to Malaysian shipping lines to acquire more ships to carry palm oil. In addition, a consortium of palm oil exporters could enter into long-term shipping contracts in order to ensure a minimum volume of palm oil freight for the shipping companies.

Infrastructure

The development of infrastructure, such as ports, roads and utilities (electricity and water supply) needs to be further enhanced to meet the expansion of the industry. Palm oil refiners, particularly in Sabah are experiencing problems such as port and road congestion, as well as inadequate supply of water and electricity. This will affect the development of Sabah as a Palm Oil Industrial Cluster (POIC) in the country.

Food Regulations

Developed countries are enforcing stringent food safety regulations to prevent contaminated food items from being imported. These measures may pose as non-tariff barriers that restrict access of palm oil into importing countries. Hence, there is a need to institute supporting infrastructure as well as to undertake more quality control and better documentation of product movements to ensure that the industry adheres to these constantly changing dynamic food standards.

GOVERNMENT POLICIES AND INITIATIVES

The main thrust of the future development of the oil palm industry is to become a modern, dynamic and competitive industry by 2020. The industry is expected to experience growth in production and export of palm oil in tandem with the expected increase in demand of the world oils and fats market, which by then will be fully liberalised. The competition between Malaysia and other palm oil as well as oilseeds producing countries in the global oils and fats market, is expected to become more intense with regards to price competitiveness and quality.

Vision 35:25

The Government's target is to increase FFB production to 35 tonnes per hectare from the current 20 tonnes per hectare; the OER to increase to 25 per cent from the current 20 per cent. This will in turn increase the CPO production target to nine tonnes per hectare from the existing four tonnes per hectare. The Vision will be realised through the usage of high-yielding planting materials, good agronomic management practices, ban on sale of unripe FFB and full automation of mill operations as well as the use of continuous sterilisation process. The Productivity and Enhancing Competitiveness Committee under the National Task

Force on Raising Productivity will ensure that the target will be met.

Malaysia as a Palm Oil Hub

The Government has established a Cabinet Committee on Palm Oil Competitiveness (CCPO) to develop Malaysia as the region's Palm Oil Hub as well as to increase the competitiveness of Malaysian palm oil. The CCPO will formulate policies and resolve issues affecting the industry. The development of POIC in Sabah marked the first step in developing Malaysia as a Palm Oil Hub.

Commercialisation of Research and Development

The commercialisation of R&D findings will be accelerated through the establishment of specific capital funds to assist local entrepreneurs investing in the palm oil industry to participate in equity ownership of joint-venture companies.

MPOB will continue to forge strategic research collaborations with major global manufacturers of petroleum and petroleum-based products, as well as rubber and rubber-based products to expedite the utilisation of palm oil or palm-based oleochemicals. The Advanced Oleochemical Technology Division's (AOTD) Incubation Centre under MPOB will undertake such collaborative studies with international R&D centres and multinational companies (MNCs), service laboratories, testing and certification centres in order to make Malaysia as an International Research Centre for Oils and Fats.

Improvements in Planting Techniques and Management Practices

MPOB has introduced programmes such as crop and livestock integration and good agronomic practices (GAP) to increase the productivity of smallholdings through advisory services programme on oil palm (TUNAS) to smallholders.

A group farming system has been introduced to consolidate smallholders' oil palm holdings into larger estates/plantations to reap the benefits of economies of scale. Mergers and consolidations of plantations owned by Government linked companies as well as industry associations are being encouraged in order that they be efficient and competitive.

Cross Border Investments

Malaysian plantation companies are encouraged to invest overseas so as to be more competitive and gain better market access. Investment opportunities in countries such as the PRC, India, Pakistan, Iran and the Middle Eastern nations have been explored for the setting up of Malaysia's global production, processing and marketing of products centres in those countries. Malaysian companies have invested in countries such as Indonesia and Papua New Guinea.

Biodiesel

The Government has decided that palm diesel be introduced to replace petroleum diesel as a new source of biofuel for transportation and industry usage. Palm diesel has been well researched by MPOB and is recognised as an environmental-friendly and viable fuel for automotive vehicles. The utilisation of palm diesel will increase the demand for palm oil and help to reduce its stock level and thereby stabilising its price. The National Biofuel Policy has been formulated to encourage the production and usage of palm diesel B5 (blending of five percent olein with diesel) as an alternative, environment friendly, and renewable energy source for transportation and industry. The Biofuels Act is in the process of being enacted and it will require palm diesel B5 to be used by diesel-driven vehicles in the country.

Utilisation of Oil Palm Wastes

The fibrous biomass of oil palm, including the oil palm trunk, is a source of renewable energy as well as raw material for the manufacture of industrial products such as pulp and paper, particleboard, medium density fibreboard (MDF), plywood and furniture. It is estimated that 30 million tonnes of fibrous biomass can be generated from empty fruit bunches (EFB), palm press fibre, fronds and trunks. The use of biomass in these areas will not only provide additional revenue to the industry but will also help in achieving the long term zero waste strategy adopted by the industry. The Government will continue to provide incentives such as pioneer status and investment tax allowance for investments in this area.

The EFB shell and fibre derived from the palm oil mills can also be used to fuel biomass power plants for steam and power requirements. In 2001, the Government through the Ministry of Energy, Communications and Multimedia launched the small renewable energy power programme (SREP) to

provide incentives for the exploitation of biomass as a source of renewable energy for the country.

Biotechnology

MPOB has been actively involved in carrying out R&D in oil palm biotechnology to transform oil palm from a commodity-based crop to an industry-based crop. The areas of biotechnology focused for the development of the plantation industries will include bio-informatics, genetic engineering, metabolic engineering, genomic and DNA chip technology.

Oleochemicals

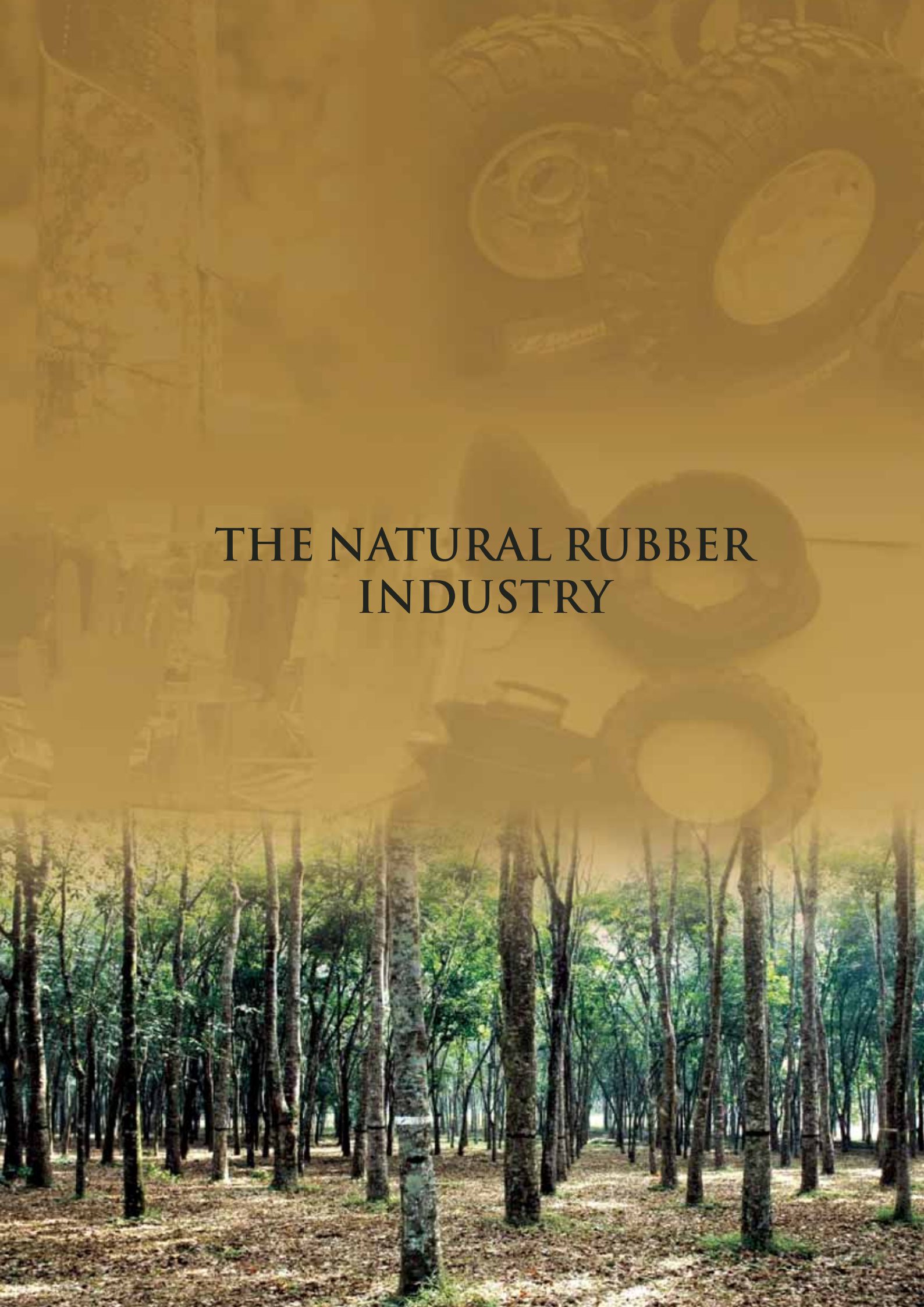
Oleochemicals will be the main thrust of the palm oil industry in the years to come, particularly in new growth areas. The industry is progressively shifting its focus from producing basic oleochemical products to higher value-added products, such as soaps, pharmaceuticals, nutraceuticals, cosmetics, food supplements and other oleochemical products such as polyols. Among the by products for example carotenoids, Vitamin E (tocopherol and tocotrienols), sterols and squalene, only carotenes and Vitamin E are currently produced commercially in Malaysia. For industrial applications, polyols is used to make polyurethane. This has created opportunities for new applications and partial replacement of petrochemical-based polyols, reinforcing its (palm oil) position as the dominant base material for the non-food sector.

Sabah and Sarawak. The growth of CPO production, however, will have to come from increased productivity from the planted areas as environmental concerns will restrict the opening up of new lands for oil palm cultivation.

PROSPECTS

The demand for palm oil and its products is expected to increase due to competitive prices, strong demand for palm biodiesel in the export markets, its techno-economic advantages in edible/non-edible applications, increasing world population and further trade liberalisation under the WTO agreements. The export of Malaysian palm oil is expected to increase to 12.8 million tonnes in the 2006-2010 period in tandem with the growth of global demand. However, increased environmental concerns of large-scale planting of oil palm, competition from competing oils and products as well as the emergence of low-cost producing countries will continually to challenge the Malaysian oil palm industry.

The Malaysian oil palm industry is expected to spearhead the development of the agricultural sector. The planted areas target of 4.6 million hectares by 2010 is achievable given the availability of land in



THE NATURAL RUBBER INDUSTRY

THE NATURAL RUBBER INDUSTRY

INTRODUCTION

The natural rubber (NR) industry performed remarkably well during the 2001-2004 period despite facing immense challenges, both globally and domestically. The rubber market strengthened in 2002, signaling a reversal of the downward trend in prices and performance of the rubber industry since 1998. Between 2001 and 2004, total export earnings of the industry increased to record a 51.3 per cent growth. Export earnings, which amounted to RM12.9 billion in 2002, an increase of 9.2 per cent from 2001, surged to RM15 billion in 2003. The industry's contribution further improved to reach RM19.5 billion in 2004, representing an increase of RM4.5 billion or 30.1 per cent from 2003.

The average price of SMR 20 surged to 446.48 sen/kg in 2004 from 205.56 sen/kg in 2001, an increase of

240.92 sen/kg or 117.20 per cent. This followed the recovery of the global economy, especially in the Asia Pacific region, and closer co-operation between the three major rubber producing countries. Favourable prices during the period have encouraged increased tapping activities, including in the abandoned areas. Smallholders have also renewed their interest in replanting rubber as the priority crop as a source of income.

PERFORMANCE

World Supply and Demand

World NR production increased to 8.6 million tonnes in 2004 from 7.2 million tonnes in 2001, registering an annual average growth of six per cent during the period.

Table 1 : NR PRODUCTION IN MAJOR PRODUCING COUNTRIES, 2001– 2005
(‘000 Tonnes)

Year	Malaysia	Indonesia	Thailand	India	Sri Lanka	Others	Total
2001	882.1	1,607.3	2,319.6	632.0	86.2	1,722.8	7,250
2002	889.8	1,630.0	2,615.1	640.8	90.5	1,473.8	7,340
2003	985.6	1,792.2	2,876.0	707.1	92.1	1,537.0	7,990
2004	1,168.7	2,066.2	2,959.4	742.6	94.1	1,579.0	8,620
2005(Jan-June)	519.3	1,092.8	1,475.0	308.3	47.4	797.2	4,240

Source: IRSG – Monthly Statistical Bulletin

Thailand's production increased 21.9 per cent to 2.96 million tonnes in 2004 from 2.32 million tonnes in 2001, while Indonesia recorded an increase of 24.1 per cent from 1.61 million tonnes to 2.07 million tonnes during the same period. Malaysia's NR production showed a significant improvement, despite a reduction in hectareage, due to increased tapping as well as wider adoption of better exploitation techniques following the improved prices. Production increased 32.5 per cent to 1.17 million tonnes in 2004 from 882,100 tonnes in 2001.

World production of synthetic rubber (SR) showed an upward trend from 2001 to 2004. Production increased 13.9 per cent to 11.95 million tonnes in 2004 from 10.49 million tonnes in 2001. Thus, total world elastomer production surged from 17.74 million tonnes in 2001 to 20.57 million tonnes in 2004, an increase of 16 per cent. Total world elastomer consumption also increased 14.9 per cent in tandem with production to reach 20.03 million tonnes from 17.44 million tonnes during the same period.

Table 2 : WORLD SYNTHETIC RUBBER PRODUCTION, 2001-2005
(‘000 Tonnes)

Year	Production
2001	10,490
2002	10,900
2003	11,450
2004	11,950
2005 ^e	12,000

Source: IRSG
e: estimate

Table 3 : WORLD RUBBER CONSUMPTION, 2001-2005
(‘000 Tonnes)

Year	Natural Rubber	Synthetic Rubber	Total
2001	7,190	10,250	17,440
2002	7,540	10,740	18,280
2003	7,950	11,380	19,330
2004	8,280	11,750	20,030
2005 ^e	8,620	11,870	20,490

Source: IRSG
e: estimate

International Co-operation

Malaysia played an active role, together with Thailand and Indonesia, to establish the International Tripartite Rubber Council (ITRC). The main objective of the tripartite cooperation is to jointly undertake measures that will improve and sustain NR prices, that are remunerative to producers and fair to consumers. Several mechanisms have been formulated to achieve this objective, such as the Supply Management Scheme (SMS) and the Agreed Export Tonnage Scheme (AETS), as well as the establishment of the International Rubber Consortium Limited (IRCo).

Malaysia continues to participate in other international and regional bodies, such as the meetings of the International Rubber Study Group (IRSG), the Association of Natural Rubber Producing Countries (ANRPC), the United Nations Framework Convention on Climate Change, the International Rubber Association (IRA), the International Rubber Research and Development Board (IRRDB) and the ASEAN Rubber Business Council (ARBC).

MALAYSIA

Planted Area

Total area under rubber declined by 7.7 per cent or 1.29 million hectares in 2004 from 1.39 million hectares in 2001. The decline has been in both the smallholdings and estate sectors. Between 2001 and 2004, rubber smallholdings decreased by 5.3 per cent from 1.22 million hectares to 1.16 million hectares, while the estate sector contracted by 25 per cent from 168,700 hectares to 126,500 hectares. In 2005, the area under rubber is expected to decline slightly to 1.25 million hectares.

Table 4 : PLANTED AND REPLANTED HECTARAGE OF NATURAL RUBBER IN MALAYSIA, 2001 – 2005

Year	Planted Area (ha) (‘000 hectares)	Replanted Area (ha)
2001	1,389.30	7,233
2002	1,348.40	19,029
2003	1,315.00	19,043
2004	1,282.00	19,388
2005 ^e	1,250.00	20,000

Source: Department of Statistics, Malaysia;
e: estimate

Replanting and new planting

Replanting has increased substantially following the Government's policy to replant at least 20,000 hectares of rubber annually. The replanted area has increased 168 per cent to 19,388 hectares in 2004 from 7,233 hectares in 2001. Meanwhile, new planting of rubber for latex was almost negligible, as this was carried out only by certain Government agencies due to the lack of available land in the country.

Production

Rubber production increased 32.5 per cent to 1,168,730 tonnes in 2004 from 882,070 tonnes in 2001. A surge in production has been evident since 2002 as a result of the recovery of the price of rubber and wider adoption of better exploitation systems by the smallholding sector that contributed 94 per cent of the country's total NR production in 2004.

Remunerative rubber prices have encouraged smallholders to increase tapping activities, particularly in abandoned rubber areas. Production by the smallholding sector rose 40.3 per cent to 1,097,500 tonnes from 782,530 tonnes during the 2001-2004 period. In the estate sector, production declined 28.4 per cent to 71,230 tonnes in 2004 from 99,530 tonnes in 2001 due to the conversion of areas under rubber to other economic activities.

Table 5 : MALAYSIAN NATURAL RUBBER PRODUCTION, 2001-2005
(‘000 Tonnes)

Year	Estate	Smallholding	Total
2001	99.53	782.54	882.07
2002	84.88	804.95	889.83
2003	76.36	909.28	985.64
2004	71.23	1,097.50	1,168.73
2005 (Jan-June)	29.59	489.83	519.42

Source: Department of Statistics, Malaysia

Yield and Productivity

The national average yield per hectare, which is based on matured tappable rubber areas, has reversed its declining trend of below 1,000 kg/ha/year at the end of 2000 to 1,300 kg/ha/year during the period 2001 to 2005. The improvement in yield over the period was attributed to increased tapping activities as well as improved exploitation techniques brought about by better rubber prices and financial incentives provided by the Government.

Rubber plantation



Table 6 : YIELD AND PRODUCTION OF THE MALAYSIAN RUBBER INDUSTRY, 2001-2005

Year	Yield (kg/ha/year)
2001	1,211
2002	1,237
2003	1,280
2004	1300
2005 ^e	1,330

Source: Malaysian Rubber Board
e: estimate

Price

In 2001, rubber prices were depressed due to the absence of strong demand coupled with an excess supply in the world market. Prices were further pressured by the weakening of the Rupiah, which made Indonesian rubber cheaper and more attractive to buyers. To ensure that smallholders obtain a reasonable income, the Malaysian Government implemented the Rubber Smallholders Income Supplement Scheme from July 2001 to June 2002 by providing an incentive of 30 sen/kg for the production of latex and 15 sen/kg for scrap and cup lumps. The USA-Afghanistan crisis raised concerns about the uncertainty of the world economy, which in turn had a dampening effect on rubber market activities. Reports of high stocks in certain producing countries and disposal of stocks at a discount on market prices put further pressure on the market. However, the rubber market ended the year 2001 on a positive note following the joint ministerial declaration signed by Thailand, Indonesia and Malaysia in Bali, Indonesia on 12 December that year, to reduce production by four per cent and exports by 10 per cent in 2002. The average price of SMR 20 in 2001 was 205.56 sen/kg.

The price improved substantially in 2002 with the average price of SMR 20 surging by 39.1 per cent to reach 285.98 sen/kg. Among the factors that contributed to the positive reversal of the rubber market were the establishment of ITRC, protracted wintering season, particularly in Sumatra, as well as booming car sales in the PRC.

The market continued to ride on the positive trend set in 2002 on account of supply shortage due to continuous rain in the rubber growing areas of producing countries and strong demand from the PRC as well as the tyre manufacturers in Europe. The average price of SMR 20 surged by another 32.5 per cent to 378.97 sen/kg in 2003.

The market remained bullish throughout 2004, as price stayed within the higher range. Tight supply of raw material as a result of political instability in Southern Thailand and continued demand from the PRC to meet its expanding economy were the major contributors to the upsurge in price. Escalation of crude oil prices further impinged on the rubber market. The average price of SMR 20 was 446.48 sen/kg, an increase of 17.8 per cent compared with 2003.

Employment

The number of persons employed in the rubber estates continued to decline in tandem with waning interest of plantation companies in rubber cultivation. The number of employees decreased 32 per cent to 12,812 in 2004 from 18,898 persons in 2001. The rate of decline in estate sector employment has been significant at 26.8 per cent from 2000-2001, due to prolonged low prices. Nevertheless, the declining trend in estate employment slowed down following the recovery of rubber prices between 2002 and 2004. It registered a 9.3 per cent drop between 2002 and 2003 and a 12.1 per cent decrease between 2003 and 2004.

The same scenario was observed in the smallholding sector, where the number of smallholders involved in rubber production also declined. According to the Rubber Industry Smallholders Development Authority's (RISDA) 2002 census, there were about 235,000 rubber smallholder families, compared with 375,000 in 1998.

Table 7 : NUMBER OF PERSONS EMPLOYED IN RUBBER ESTATES, 2001-2005

Year	Number of person employed
2001	18,889
2002	16,063
2003	14,569
2004	12,812
2005 (Jan-June)	11,810

Source: Department of Statistics, Malaysia

Profile of Rubber-based Industries

The Malaysian rubber-based industry continued to grow during the period 2002-2004 after a slight decline in 2001. The rubber-based industry produces a wide range of products covering all the five main sectors defined as tyres and tubes, latex-based products, footwear, industrial rubber goods (IRG) and general rubber goods (GRG). Malaysia has excelled in latex-based products and maintained its position as the major supplier of gloves, latex thread and catheters. Consequently, Malaysia is the leading consumer of latex and the fifth largest consumer of natural rubber. The sustained growth was achieved through several measures aimed at enhancing quality, upgrading manufacturing processes, continuous R&D support and aggressive market promotions.

The number of manufacturers increased to 345 in 2004 from 330 in 2001, with investments amounting to

more than RM3.3 billion. Of this total, 138 or 40 per cent are latex products manufacturers followed by 133 (38.6 per cent) GRG, 57 (16.5 per cent) IRG, 14 footwear and components and 3 tyre companies. Being a leading supplier of latex-based products, the majority of Malaysian rubber manufacturers are in the latex sub-sector, producing rubber gloves.

During the three-year period from 2002 to 2004, the industry experienced major changes in the ownership of tyre and glove industries, such as the taking over of majority equity in Sime Darby's tyre operations by Continental AG of Germany. Meanwhile, two major local glove manufacturers aggressively pursued their capacity expansion drives by increasing production capacities at existing plants, building new factories locally as well as abroad and acquiring shares in other local glove manufacturing companies.

Table 8 : PROFILE OF THE RUBBER-BASED PRODUCTS INDUSTRY, 2001-2005

Year	Number of manufacturers	Employment	Rubber Consumption (tonnes)	Output (RM Million)	Exports (RM Million)
2001	330	31,920	458,284	6,857.46	5,711.25
2002	333	59,202	471,034	6,998.84	5,525.17
2003	344	60,975	488,233	7,773.92	6,064.56
2004	345	62,118	512,076	9,201.4	7,876.61
2005 (Jan-June)	350	62,462	244,908	4,842.1	3,897.00

Source: Malaysia Industrial Development Authority (MIDA); Malaysian Rubber Board (MRB); Department of Statistics, Malaysia (DOS)

Table 9 : NUMBER OF MANUFACTURERS BY PRODUCTS, 2000-2004

Product		Number Of Manufacturers				
Sector	Sub-sector	2000	2001	2002	2003	2004
Latex Products	Gloves	94	100	102	104	104
	Condom	10	5	12	12	12
	Catheters	6	6	6	7	7
	Latex Thread	4	11	5	4	4
	Others	10	10	10	11	11
	Total Latex Products	125	132	135	138	138
General rubber goods		122	125	124	131	133
Industrial rubber goods		54	56	56	57	57
Footwear and components		14	13	14	14	14
Pneumatic tyres		4	4	4	4	3
Total		319	330	333	344	345

Source: Malaysian Industrial Development Authority (MIDA); Malaysian Rubber Board (MRB)

TRADE PERFORMANCE

Exports

The export of rubber and rubber-based products increased by 80.6 per cent to RM13.1 billion in 2004 from RM7.2 billion in 2001. Total export earnings of the rubber industry, including heveawood products, rose to RM19.5 billion in 2004 from RM11.8 billion in 2001, contributing 4.1 per cent to the national export earnings in 2004.



Rubber Latex

Table 10: EXPORT VALUE OF RUBBER, RUBBER PRODUCTS AND HEVEAWOOD PRODUCTS, 2001 – 2005
(RM '000)

Year	Natural Rubber (a)	Rubber Products (b)	Total (a+b)	Heveawood Products (c)	Total (a+b+c)
2001	1,880	5,711.25	7,591.25	4,585	12,176.25
2002	2,492	5,525.17	8,017.17	4,903	12,920.17
2003	3,581	6,064.56	9,645.56	5,366	15,011.56
2004	5,210	7,876.61	13,086.61	6,472	19,558.61
2005 (Jan-June)	2,587	3,897.35	6,484.35	1,690	9,968.35

Source: Department of Statistics, Malaysia

Chart 1: EXPORT VALUE OF RUBBER, RUBBER PRODUCTS AND HEVEAWOOD PRODUCTS (2004)

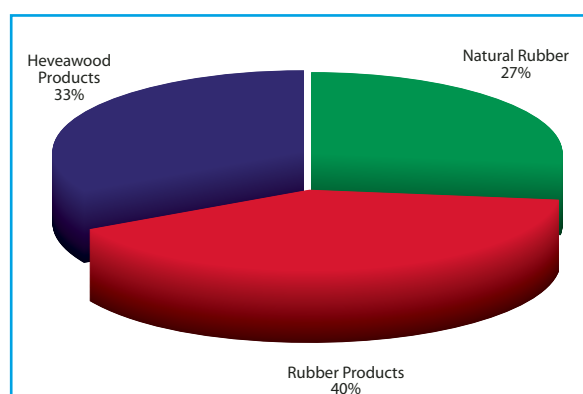
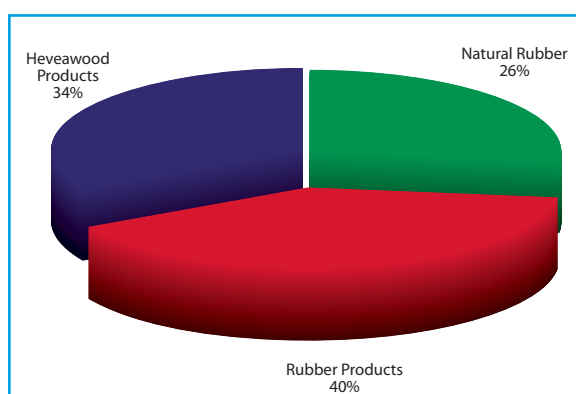


Chart 2: EXPORT VALUE OF RUBBER, RUBBER PRODUCTS AND HEVEAWOOD PRODUCTS (JAN - JUNE 2005)



The exports of NR increased by 35.7 per cent to 1,114,163 tonnes in 2004 from 820,854 tonnes in 2001. In terms of export value, NR export revenue surged 175.5 per cent to RM5.2 billion in 2004 from RM1.9 billion in 2001 due to higher rubber prices and increased export volume. The major type of rubber exported was SMR, which accounted for 90 per cent of the total export during the period 2001 - 2004. The other types of rubber exported were latex concentrate, RSS and other specific rubbers.

Major export destinations for NR in 2004 were the PRC (288,732 tonnes), Germany (147,242 tonnes) and the USA (74,228 tonnes), which collectively constituted 45 per cent of Malaysia's NR exports. The PRC has overtaken the USA as Malaysia's largest NR market with an import volume of 129,387 tonnes in 2002 compared with the USA's 80,676 tonnes. The other major export destinations were the Republic of Korea (ROK), Islamic Republic of Iran and France.

Export earnings from rubber products registered an increase of 47.3 per cent to RM7.9 billion in 2004 from RM5.3 billion in 2001. Footwear products posted a growth of 285.6 per cent to RM857 million in 2004 from RM222 million in 2001. During the same period, IRG registered a growth of 41 per cent to RM188.9 million from RM134 million. Export of latex-based products rose 37 per cent to RM5.8 billion from RM4.3 billion while GRG surged by 19.6 per cent to RM580 million from RM485 million. The significant increase in the export growth of footwear and IRG resulted in the share of latex-based products to export earnings reduced from 79.4 per cent to 73.9 per cent. The share of export earnings of footwear, GRG, tyres and IRG were 11.3 per cent, 7.4 per cent, 5.3 per cent and 2.4 per cent respectively.

During 2001-2004, the direction of trade changed with the focus on new emerging markets such as the PRC and non-traditional markets for example Turkey, Mexico and Spain. Export of rubber products to the PRC rose to RM136 million in 2004 from RM58 million in 2001. Exports to Mexico and Turkey increased to RM89 million and RM147 million from RM35 million and RM29 million respectively. In tandem with the market diversification, the US market, which has been the major single market for Malaysia's rubber products, especially examination gloves experienced a decline of export share to 27 per cent in 2004 from 33 per cent in 2001. Meanwhile, Japan replaced Germany as the second largest market for Malaysia's exports of rubber products, contributing 9.6 per cent and 5.8 per cent respectively.



Rubber Glove

The export of heveawood products, which was the second largest contributor to export earnings by the rubber industry, grew at an average rate of 12.3 per cent annually. The export revenue rose to RM6.5 billion in 2004 from RM4.6 billion in 2001 despite stiff competition from low-cost producing countries such as the PRC and Viet Nam and a shortage in supply of heveawood. The market for heveawood products

remained unchanged during the period, with the USA as the single largest market, importing 28.5 per cent of the value of heveawood products exported, followed by the European Union (EU), Japan and the UK.

Export revenue from NR is expected to continue to grow further in the light of expected high NR prices brought about by encouraging demand and high crude oil prices. At the same time, exports of rubber-based and heveawood products are expected to remain firm and encouraging. The overall export earnings from the rubber industry are estimated to touch RM21 billion in 2005.

Imports

The import value of rubber and rubber-based products inclusive of cost, insurance and freight (CIF) during the 2001-2004 period increased by 60.4 per cent to RM3.5 billion from RM2.2 billion. The surge in import value was partly due to higher rubber prices during the last three years, resulting in higher price of imported raw rubber and rubber goods. Raw rubber constituted 39 per cent to 46.6 per cent of the total imports.

Table 11: MALAYSIA'S IMPORTS OF NR

Year	Tonnes	Value (RM million)
2001	475,675	959
2002	456,870	1,064
2003	436,190	1,291
2004	426,156	1,442
2005 (Jan-June)	114,789	392.4

Source: Department of Statistics, Malaysia

Natural rubber imports declined by 10.4 per cent to 426,156 tonnes in 2004 from 475,675 tonnes in 2001. Despite shrinking in volume, the value rose by 50.4 per cent to RM1.4 billion from RM1 billion during this period because of higher rubber prices. Thailand remained the supplier of NR, accounting for 74.2 per cent to 81.5 per cent of the total imports, followed by the Philippines, Indonesia and Viet Nam.

The import of rubber products into Malaysia increased by 41.6 per cent to RM2.1 billion in 2004 from RM1.5 billion in 2001. The demand for footwear products surged to RM545.4 million or 221 per cent in 2004 from RM169.7 million in 2001. During the same period, tyres registered an increase of 13.7 per cent to RM436.6 million from RM384 million; GRG increased

22.0 per cent to RM525.2 million from RM430.7 million; IRG surged 52.9 per cent to RM315.6 million from RM206.3 million but latex products declined by 3.6 per cent to RM252.6 million from RM262.1 million.

In 2004, the main sources of rubber product imports were the PRC, Japan and Thailand, which collectively accounted for 60 per cent of the total import bill of RM2.1 billion. Japan and the PRC were the major sources for GRG while the PRC continued to be the largest supplier of footwear, constituting over 72 per cent of the total import value of this product. Thailand, Japan and Indonesia were the main sources for tyres. Imports from traditional sources, namely the USA, Hong Kong, Germany and the UK, declined.

Trade with Major Trading Partners in Rubber Products

The USA was the largest trading partner for rubber products, with a total trade volume of RM2.4 billion in 2004, for which Malaysia registered a trade surplus of RM2 billion as against RM1.7 billion in 2001. Among the 10 major trading partners, the PRC and Thailand were the two countries that Malaysia recorded a trade deficit with during the period. Trade deficits with the PRC and Thailand widened to RM457 million and RM181 million respectively in 2004 from RM107 million and RM23 million in 2001.

During the period 2001 to June 2005, Malaysia recorded a trade surplus of RM8.1 billion with the USA, followed by Germany at RM1.7 billion and the UK, RM1.5 billion. During the same period, Malaysia is trade deficit with the PRC amounted to RM1 billion and Thailand, RM0.6 billion.

**Table 12 : MALAYSIA'S IMPORTS OF RUBBER PRODUCTS
BY PRODUCT GROUPS, 2001-2005
(RM Million)**

Year	Tyre	Inner tubes	Footwear	Latex Products	IRG	GRG	Total
2001	166.95	16.68	169.69	262.07	206.38	430.65	1,469.50
2002	478.13	10.90	207.44	162.81	168.28	442.58	1,470.15
2003	296.22	6.92	304.50	217.13	240.14	417.00	1,481.90
2004	436.56	7.77	545.43	252.60	315.58	525.23	2,083.17
2005 (Jan-June)	239.17	4.54	110.65	148.56	163.00	272.52	938.44

Source: Department of Statistics, Malaysia

**Table 13 : MAJOR TRADING PARTNERS OF MALAYSIA
ON RUBBER PRODUCTS, 2001-2005
(RM Million)**

Country	2001			2004			Total [2001 – June 2005]		
	Exports	Imports	Surplus/ Deficit	Exports	Imports	Surplus/ Deficit	Exports	Imports	Surplus/ Deficit
USA	1,790	135	1,655	2,126	148	1,978	8,659	605	8,054
Japan	395	242	153	756	331	425	2,232	1,304	928
PRC	58	165	-107	137	594	-457	446	1,455	-1,009
Germany	404	32	372	460	54	406	1,896	218	1,678
Italy	203	17	186	434	25	409	1,261	69	1,192
UK	319	15	305	387	18	369	1,571	85	1,487
Australia	185	5	180	287	6	281	1,125	25	1,100
Netherlands	106	12	94	195	10	185	672	49	623
Singapore	264	117	147	289	90	199	1,270	526	744
Thailand	90	113	-23	132	313	-181	478	1,055	-577

Source: Department of Statistics, Malaysia

Trade Practices that Impact Malaysia's Exports

The export of rubber products continued to face non-tariff barriers from importing countries, particularly the USA, EU and Japan. The USA has imposed a labelling requirement for NR latex gloves and a mandatory condition that imports of all gloves to be made through local agents. Certain states in the USA have instituted legislation banning the use of natural latex gloves. Exports of certain types of rubber products to the EU have to be CE marked and meet health, safety and environmental requirements. The PRC and Japan have imposed compulsory labelling requirements on the importation of certain products such as tyres, condoms and rubber insulated power cables. The latex protein allergy of Malaysia NR latex gloves has been exploited as an issue to deter wider usage of the product. These practices have restricted market access and increased the production cost of Malaysian rubber products.

The Malaysian rubber industry has adopted strategies to enhance the capacity of the industries to meet international technical standards and develop mutual recognition in testing requirements with trade partners to increase market access for rubber products. The industry has adopted measures to improve the treatment of wastes from rubber product manufacturing activities to meet international standards on the environment. Efforts are being made to reduce the extractable protein to a level acceptable to international standards to counter the protein allergy issue.

TECHNICAL SUPPORT AND EXTENSION SERVICES

Technical Support

The MRB provides technical advice/information, offers testing facilities and services as well as R&D support to the industry, including smallholders. Material characterisations and chemical analytical services continue to be provided for dry rubber content determination, extractable protein content analysis from latex glove samples, nutrient analysis of soil and plant samples for fertiliser recommendation. Physical testing for rubber products, including tyres, is provided. The analytical and testing facilities are constantly improved and upgraded in tandem with advancements in technology.

The quality and standards of NR and rubber products have been assured through the adoption of the SMR Quality Control and Standard Malaysia Glove (SMG) Quality Control Programmes. In 2004, the total number of certified SMG producers was 29, compared with 22 in 2001. To date, 40 SMG certificates (18 for powdered gloves and 22 for powder-free gloves) have been issued compared with 29 SMG certificates (13 for powdered gloves and 16 for powder-free gloves) in 2001.

MRB as the Standard Writing Organisation for Rubber Products has written 51 standards to assist the industry in maintaining the quality of export products. MRB is actively involved in the Technical Committee of ISO 45 for rubber and rubber products.

Automotive Components



Testing and Analytical Services

The Rubber Testing Centre (RTC) has been supporting a wide range of testing requirements of the rubber industry. The RTC is equipped with the only independent tyre-testing laboratory in the Asia-Pacific region to test tyres and tyre related products. RTC's laboratories of Physical Testing Laboratory (PTL), the Standard Malaysian Rubber (SMR) Laboratory, the Latex Testing Laboratory and the Effluent Testing Laboratory have been accorded accreditation under the "*Skim Akreditasi Makmal Malaysia*" (SAMM) or Malaysian Laboratory Accreditation Scheme.

The Rubber Products Testing Unit has enhanced its testing facilities for industrial and engineering rubber products. The group has dynamic testing facilities, which serve the needs of the PROTON and PERODUA vendors. These facilities are also used for development and testing of original equipment manufacturer (OEM) components for export purposes. The Unit also provides microscopic services using the Scanning Electron Microscopic (SEM) technique.

The Rubber Research Institute of Malaysia (RRIM) provides a wide range of material characterisation and analytical services to the rubber industry. The analytical services provided are broadly divided into three categories:

- Routine analysis for quality control purposes;
- Specialised analytical services for troubleshooting; and
- Method development.

Rubber Training and Consultancy

MRB conducts training and courses related to rubber processing activities for the industry as well as for the staff of MRB. MRB, through the RRIM - Consult Corporation, provides consultancy services to entrepreneurs venturing into rubber related businesses.



R & D Centre

The Malaysian Rubber Exchange (MRE)

Since its inception in 1962, the MRB's Malaysian Rubber Exchange (MRE) has assumed an important role in regulating the rubber trade. It continues to provide official rubber prices daily, and arbitrates in disputes and awards. A review of the MRE is being undertaken to meet the challenges of new developments in the global market and structural changes in the domestic rubber industry. This will cover the establishment of a physical exchange for trading in natural rubber; restructuring of MRE into an independent entity; widening of its membership base; improving the services and facilities for members; and strengthening the existing MRE arbitration system and price reporting mechanism.

Licensing and Registration

During the period under review, measures were taken to liberalise the rubber licensing policy, including simplifying and shortening the processing time for application of rubber licences. In line with the policy changes, certain restrictions pertaining to distances between licensed premises, issue of licences relative to the size of smallholdings and the freeze on new SMR and latex factories were abolished. These changes are expected to reduce costs and contribute to the profit of smallholders who sell the raw materials. Liberalisation of the issuance of licences to rubber dealers is expected to create greater competition among local dealers. Since January 2004, the MRB issued EE Certificates for the export of rubber gloves with more stringent specifications on reduced extractable protein content (not exceeding 400 mg/g) in order to safeguard the credibility of the Malaysian glove industry.

Transfer of Technology (TOT)

The MRB has been implementing Projek Kampung Teknologi Getah (PROKAM) since 2002 to improve productivity and entrepreneurial skills among smallholders through technical and good agronomic practices. PROKAM, funded under the Government's stimulus package, provides modern rubber technologies such as LITS and integrated farming to maximise land use. During the period, projects were implemented in 16 villages nationwide involving 429 participants and covering a total area of 1,058 hectares. The projects are located in Kedah, Negeri Sembilan, Malacca, Johor, Kelantan, Terengganu, Perlis, Kedah, Sarawak and Sabah.

During the same period, MRB successfully transferred technology for the manufacturing of flexible road dividers to the industry. The fabrication of mobile rubberised asphalt (bitumen) plants to encourage the

use of the product for road surfaces has also been transferred to the industry. Rubberised asphalt improves the durability of roads, thus reducing maintenance costs and environmental pollution.

Research and Development (R&D)

R&D for upstream activities focused on increasing productivity of rubber and optimising land use through research into the breeding of new clones with high yield potential. These efforts will be supported by the development of modern molecular techniques in the area of biotechnology.

R&D in rubber forest plantation was intensified to ensure continuous supply of heveawood in the country. It is projected that 25,000 hectares/year of rubber forest plantation need to be established to ensure adequate supply for the industry. During the period, MRB established rubber forest plantations in Similajau, Sarawak. MRB will continue to give priority to R&D and promotion of rubber forest plantations in the country.

MRB is currently intensifying R&D activities to improve efficiency and productivity in the manufacture of high value-added products such as automotive rubber components, development of NR for use as shock absorbers in a weaponry test rig, rubber tank track pad and rolling ball isolators. Research into the utilisation of hevea serum for the production of biochemicals was conducted as an alternative treatment for serum, which is currently disposed of by rubber processing factories as an effluent. The bioprocess of hevea serum produces several biochemicals and other marketable products.

Commercialisation of R&D Findings

In 2004, two new exploitation systems known as MORTX and G-FLEX were introduced to enhance latex production. The RRIM 2000 series clones will continue to be promoted for replanting and new planting of rubber to increase yield and timber productivity. In downstream activities, epoxidised natural rubber 50 (ENR 50) has been found to have good physical properties as the sole of combat boots suitable for urban and rural areas. The application of ENR 50 by the shoe industry has the potential for commercial production of soles. MRB has further diversified rubber-based products by using rubber serum powder in the production of animal feed supplements and culture growth media. These products were made available through biotechnology and bioprocess techniques and evaluation is being carried out in collaboration with a local university. An inter-agency committee has been set up to identify specific rubber products to be promoted in the construction sector as well as to undertake standardisation of rubber products

to meet users' requirements. MRB will continue to provide R&D support and technical advice to the industry for downstream activities.

Financial Assistance

During the depressed rubber price in 2002, the Government introduced income augmentation scheme to help the smallholders. The Government allocated RM100 million under the *Skim Bantuan Pendapatan Pekebun Kecil Getah (SBPPKG)* to assist smallholders in the production of latex and cup lumps. The scheme was terminated in 2003 when rubber prices improved. A total of 204,524 smallholders benefitted from the scheme.

As an incentive to encourage the adoption of recommended tapping technologies, the Government provided RM100 million to smallholders owning land sizes of less than two hectares to use the Low Intensity Tapping System (LITS). Smallholders owning plots of more than four hectares were given soft loans to adopt the same technology.

Marketing and Promotion

Efforts are continuing to build the market for Malaysian rubber products overseas through seminars, exhibitions and trade missions with emphasis on greater uptake of Deproteinized Natural Rubber (DPNR) in rubber product manufacturing. The Tun Abdul Razak Research Centre (TARRC) in London will continue to conduct R&D into rubber products and forge business relationships between Malaysian suppliers and European customers by providing required technical assistance.

INSTITUTIONAL SUPPORT

The Ministry of Plantation Industries and Commodities, in collaboration with and support from various ministries and agencies such as Ministry of Finance (MOF), Economic Planning Unit (EPU), Ministry of International Trade and Industry (MITI), Ministry of Rural and Regional Development (KKLW), Malaysian Industrial Development Authority (MIDA), Rubber Industry Smallholders Development Authority (RISDA), Federal Land Development Authority (FELDA), Federal Land Consolidation Rehabilitation Authority Berhad (FELCRA Bhd), Malaysian Agriculture Research and Development Institute (MARDI), Forest Research Institute of Malaysia (FRIM) and Forestry Department of Peninsular Malaysia (FDPM) is spearheading the development of the rubber industry. Project Steering Committees (PSCs) comprising MRB and representatives from rubber industry organisations monitor the implementation of action

plans for the development of the rubber industry. PSCs have been established for rubber forest development, implementation of LITS, rubber replanting through land consolidation, and value-added product development.

Research Advisory Panels (RAPs) comprising experts and scientists from the public and private sectors have been established for the upstream and downstream activities to ensure that R&D carried out are market-driven. The R&D findings are commercialised and transferred to implementing agencies such as RISDA, FELDA and FELCRA Bhd.

The Cabinet Committee on Enhancing Smallholders' Incomes comprising MPIC, Ministry of Agriculture and Agro-Based Industry, Ministry of Natural Resources and Environmental and Ministry of Rural and Regional Development was set up to formulate policies and address issues of the agriculture and commodity sector, including rubber, to enhance the social-economic development of smallholders.

ISSUES AND CHALLENGES

High Cost of Production

The cost of producing NR in Malaysia is relatively higher than that in other major producing countries, mainly due to the higher cost of labour, which forms 60 per cent of the total cost of production. The scarcity of labour currently experienced in upstream and downstream activities will further increase the cost of production. In downstream activities, the cost of producing gloves and engine mountings is seven per cent and 13 per cent higher respectively compared with neighbouring countries.

Shortage of latex supply

Dry rubber production is preferred by the smallholders and this has resulted in the shortage of latex supply for downstream activities. The shortfall was met by imports, which has increased to 293,888 tonnes in 2003 from 113,660 tonnes in 1996. Over-dependence on imports will put Malaysia in a vulnerable position in the event exporting countries fail to supply sufficient latex for the industries. There is a need to have a fair balance of latex and dry rubber production to sustain the growth of latex-based industries.

Rubber Industry Structure

Smallholders continue to dominate the rubber industry in terms of planting acreage and production. The existing unfavourable structural characteristics of the traditional smallholders' sector constraints the growth

of the industry. Structural and organisational changes in smallholdings are expected to take place during the Ninth Malaysia Plan period, when land and management consolidation by the private and public sectors will be emphasised to achieve economies of scale and efficiency. Integrated farming with other crops or animals is being introduced for smallholders to achieve remunerative incomes.

Low Adoption of Technologies in Upstream Activities

There is generally low adoption of technologies introduced by MRB, due to the advanced age of many smallholders, uneconomical land sizes and high investment costs. In the case of Low Intensity Tapping System (LITS) introduced since early the 1990s, the technology has not been widely adopted by smallholders because of prolonged low prices of rubber, which has affected the affordability of the technology. With the establishment of the estate-sized rubber industry under land and management consolidation, technologies would be more effectively transferred direct to recipients by research institutes, compared with the current practices of TOT through implementing agencies. However, this can only happen if production units are bigger, lesser in numbers and more efficient.

Competition

Malaysian rubber industries are currently facing increased competition from other producing countries such as Thailand, VietNam and the PRC. The sustainability of the industry depends on its ability to design customised products that are competitive by priced and of high quality. Diversification into high-tech or high value-added products for engineering, marine, automotive, aeronautical and military use will be encouraged to maintain and increase the market share of latex-based products. Malaysia will continue to explore niche markets for rubber products.

Increasing Environmental Concerns

The growing concern about the environment has resulted in the introduction of stringent international standards for environmental protection, which constitute non-tariff barriers imposed by importing countries, especially the EU. The EU has introduced regulations requiring 80 per cent of the materials used in automobiles to be recyclable. The Malaysian rubber-based products industry must be able to meet this requirement by using advanced materials such as thermoplastic vulcanisates. The adoption of these regulations will incur extra cost to the manufacturers.

Shortage of Labour

The industry is facing labour shortage in upstream and downstream activities and has to depend on foreign workers. Manufacturers have to incur additional costs in recruiting and training new foreign workers from time to time. This has adversely affected the competitiveness of the industry.

The shortage of skilled labour, particularly in design, production technology and advanced processing, has affected the adoption of advanced manufacturing technologies and Malaysia's competitiveness. The National College of Rubber Technology (NCRT), which used to provide skilled workforce, is no longer in existence and this has aggravated the shortage of local skilled labour for the industry.

GOVERNMENT POLICY INITIATIVES AND STRATEGIES

MRB has formulated a Plan of Action to ensure R&D activities undertaken are market driven to meet global challenges and to provide the necessary support services for the development of the Malaysian rubber industry. Policies have been introduced to restructure the industry through consolidation of smallholdings into economically viable units for the effective adoption of technologies as well as management efficiency.

The rubber-replanting programme has been reviewed to ensure at least 50 per cent of the annual target of 40,000 hectares will be replanted with rubber to maintain the minimum target of 800,000 hectares of land under rubber in the country. Efforts are being undertaken to earmark certain areas as rubber zones to ensure adequate supply of rubber and rubber wood for the local industries.

The G++ rubber replanting system, which integrates on-farm rubber and off-farm alternative activities, mainly food production, was introduced as a measure to supplement the incomes of the smallholders. Smallholders are encouraged to adopt LITS for matured trees above 15 years whereby a special allocation has been provided.

PROSPECTS

The world elastomer industry is expected to grow at four per cent to 22.3 million tonnes in 2006 and the NR output is forecast to rise at a slower pace. Prices are projected to remain attractive in the light of higher crude petroleum prices. The plan by the Indonesian Government to replant 400,000 hectares of smallholdings during the period 2005-2010 is expected to impact global rubber production and price. Global NR production is expected to increase to 9.09 million tonnes in 2006 from 8.62 million tonnes in 2004 and synthetic rubber to 13 million tonnes from 11.95 million tonnes.

World elastomer demand is forecast to expand by 4.5 per cent during the same period, in line with higher economic growth in the Asia Pacific region with the PRC as the leading consumer and increasing consumption in the EU countries.

Malaysian rubber consumption is estimated to be 550,000 tonnes and the future growth of the industry will be driven by the industrial rubber goods (IRG) and general rubber goods (GRG) sub-sectors, with the latex sub-sector to grow at slower rate in view of stiff competition from other producing countries.

In 2006, exports of Malaysian NR are expected to reach 1.05 million tonnes, contributing about RM5 billion to foreign exchange earnings. Production is expected to reduce marginally, compared with the 2005 level, and imports to remain at 400,000 tonnes to meet domestic demand for processing and re-export.

The rubber-based products industry is projected to expand in tandem with the development in the global economy. The establishment of regional and bilateral FTAs, such as ASEAN-PRC, Malaysia-Japan, Malaysia-India, Malaysia-New Zealand and Malaysia-Australia will provide greater market access for the rubber-based products industry. The industry is expected to grow at 10 per cent annually in the next two years and generate export earnings of RM8.6 billion and RM9.5 billion in 2005 and 2006 respectively.

Export of heveawood products is projected to be positive due to increased demand from the furniture industry. The export earnings of heveawood and heveawood products are anticipated to increase to RM7 billion in 2005 and RM7.5 billion in 2006.

THE COCOA INDUSTRY



THE COCOA INDUSTRY

INTRODUCTION

Cocoa is the third important industrial crop after oil palm and rubber. Continued progress in the cocoa industry has changed the structure of the industry from merely producing and exporting raw cocoa beans to processing and manufacturing high quality cocoa products to meet the growing world demand. In addition, the growth in the grinding activity has increased local consumption and import of cocoa beans.

The increasing demand for cocoa beans from the local processing industry has encouraged Malaysia to increase cocoa production. Concerted efforts are being directed to rehabilitate idle cocoa farms through side-grafting with higher yielding and pest resistant cocoa seeds; adoption of good agronomic practices; transfer of technology and commercialisation of R&D findings to improve productivity; and to reduce the cost of production and minimise crop losses due to pest and disease infestations.

The local production of cocoa beans declined to 33,423 tonnes in 2004 from 57,708 tonnes in 2001 as the area under cocoa cultivation decreased progressively during the period. It is estimated that the production will decline further to 30,000 tonnes in 2005. The volume of grindings has however, increased to

229,649 tonnes in 2004 from 138,616 tonnes in 2001. This ranked Malaysia as the world's fifth largest cocoa processor, accounting for 6.5 per cent of the world grindings. Malaysia is also the largest cocoa processor in Asia and the second largest origin processor after Cote d'Ivoire. In 2005, the volume of grindings is estimated to increase to 240,000 tonnes.

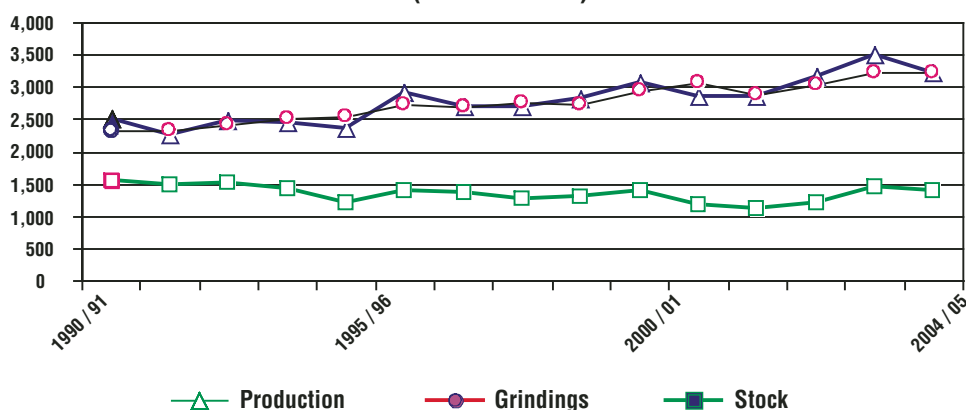
The export earnings of cocoa and cocoa products have been increasing during the last five years. In 2004, the export earnings was RM1.6 billion, constituting two per cent of the country's foreign exchange earnings. The industry is a source of livelihood for 15,416 smallholder families and provides employment to 4,553 workers in the plantation sector. In addition, more than 7,000 workers are employed in downstream activities such as processing, grinding and manufacturing.

PERFORMANCE

World Production

The world cocoa beans production continued its upward trend to 3.49 million tonnes in 2003/04 from 2.87 million tonnes in 2000/01. However, in 2004/05 the production declined marginally by 7.9 per cent to 3.22 million tonnes (**Chart 1**).

Chart 1: WORLD COCOA PRODUCTION, GRINDINGS AND STOCKS
(‘000 Tonnes)



Source: ICCO, Volume XXXI No. 2, 2004/05

The increase in production was largely attributed to higher output in all cocoa growing regions for the past three seasons. From 2000/01 to 2003/04, the African region contributed to 70.4 per cent of the world production, followed by Asia and Oceania, 16.4 per cent and the Americas, 13.2 per cent. In 2004/05, production declined due to lower output in the African and American regions. For the past four seasons, Cote d'Ivoire remained the largest producer, with an average production of 1.34 million tonnes, followed by Ghana, 0.52 million tonnes and Indonesia, 0.43 million tonnes. Other major producers included Nigeria, 0.18 million tonnes, Cameroon, 0.15 million tonnes and Brazil, 0.15 million tonnes.

In 2004/05, production in Cote d'Ivoire is estimated at 1.27 million tonnes, a decrease of 9.8 per cent or 137,200 tonnes compared with the previous season. Ghana recorded a decrease of 18.6 per cent or 136,900 tonnes to 600,000 tonnes while Indonesia's production increased by 3.6 per cent or 15,000 tonnes to 430,000 tonnes.

World Consumption

The world cocoa consumption as measured by grindings has maintained an upward trend during the last four seasons. In 2004/05, cocoa consumption is estimated to increase to 3.23 million tonnes from 3.06 million tonnes in 2000/01. The increased consumption is due mainly to demand from increased grindings activities in all regions (**Chart 1**).

During the 2001/02 to 2004/05 seasons, Europe was the major consumer accounting for 1.20 million tonnes or 43 per cent of the total world consumption, followed by the Americas, at 26.2 per cent, Asia and Oceania, 16.4 per cent and Africa, 14.4 per cent.

In 2004/05, the Netherlands was the largest cocoa grinder in the world contributing 13.9 per cent of the

total world grindings, followed by the United States of America (USA) with 12.9 per cent and Cote d'Ivoire, 9.6 per cent. The other major cocoa grinders were Germany, 7.1 per cent and Brazil, 6.3 per cent. Malaysia ranked fifth in the world, contributing to 6.5 per cent of the total world grindings.

World Stocks

The world cocoa stocks, as a percentage of total grindings, increased to 1.4 million tonnes in 2004/05 from 1.13 million tonnes in 2001/02 due to increased production. Stocks reached a peak of 1.44 million tonnes in 2003/04 (**Chart 1**). Three consecutive years of production surplus beginning 2001/02 to 2003/04 contributed to a high world cocoa stock. In 2004/05, the stock level is expected to decline by 44,000 tonnes due to the increase in world cocoa consumption, which is expected to exceed world production.

MALAYSIA

Planted Area

The total area under cocoa cultivation declined to 41,612 hectares in 2004 from 57,963 hectares in 2001. It is expected to further decline to 33,500 hectares in 2005 (**Table 1**). The reduction in the area under cocoa cultivation occurred both in the estate and smallholding sectors. This is due to the conversion to other more remunerative crops or other economic activities.

The percentage of the cocoa smallholding acreage increased to 72.2 per cent of total planted area in 2005 from 66.2 per cent in 2001. Sabah remains the major cocoa-growing state, accounting for 64.5 per cent in 2005, followed by Peninsular Malaysia at 26.3 per cent and Sarawak 9.2 per cent (**Table 1**).

Cocoa Growing Area

Table 1 : MALAYSIA-COCOA CULTIVATED AREA BY REGION, 2001-2005
(Hectares)

Year	Peninsular Malaysia	Sabah	Sarawak	MALAYSIA		
				Estate	Smallholding	Total
2001	10,509	38,640	8,814	19,605	38,358	57,963
2002	9,805	29,416	8,814	16,201	31,834	48,035
2003	9,568	26,515	8,814	14,946	29,951	44,897
2004e	8,869	23,929	8,814	11,661	29,951	41,612
2005f	8,800	21,600	3,100	9,300	24,200	33,500

Source: Malaysian Cocoa Board

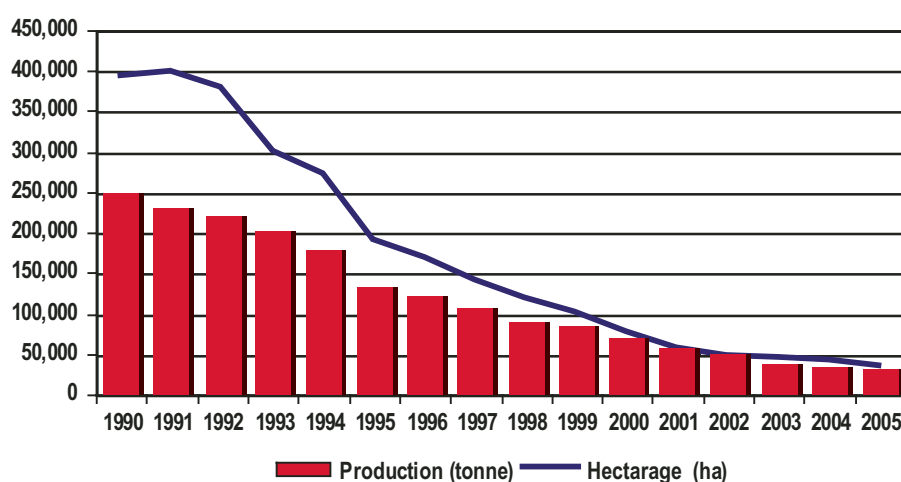
e: estimate

f: forecast

The production of cocoa beans declined over the years in tandem with the reduction in cocoa hectareage as farmers continued to shift to other crops as well as less application of inputs to their crops (Chart 2).

Production of cocoa beans dropped to 33,423 tonnes in 2004 from 57,708 tonnes in 2001. In 2005, production is estimated to decrease further to 30,000 tonnes (Table 2).

Chart 2: MALAYSIA COCOA HECTARAGE AND PRODUCTION, 1990-2005



Source: Malaysia Cocoa Board

Table 2: MALAYSIA-PRODUCTION AND GRINDINGS, 2001-2005
(Tonnes)

Year	PRODUCTION				Grindings
	Peninsular Malaysia	Sabah	Sarawak	Malaysia	
2001	12,663	43,462	1,583	57,708	138,616
2002	14,806	30,422	2,433	47,661	117,586
2003	14,071	19,707	2,458	36,236	167,595
2004e	11,495	19,548	2,380	33,423	229,649
2005f	9,680	17,280	3,040	30,000	240,000

Source: Malaysian Cocoa Board

e: estimate

f: forecast

Yield and Productivity

Productivity as measured by the average yield per hectare, dropped to 803 kg per hectare in 2004 from 996 kg per hectare in 2001. However, it is expected to increase to 896 kg per hectare in 2005. The lower productivity was attributed to poor management and less inputs application as some farmers neglected their cocoa areas.

In order to improve productivity, the Malaysian Cocoa Board (MCB) continues to implement the smallholders' rehabilitation programme, using high yielding planting materials as well as consolidating areas for cocoa cultivation. This programme, which was mainly concentrated in Sabah, covered 48.8 per cent of the rehabilitated area in 2004, has shown some progress. A total of 512 hectares was rehabilitated in 2004. This on-going rehabilitation programme will eventually help to boost the existing yield to an estimated 1,000 kg per hectare and thus lead to increased production in the coming years.

Grindings

The downstream activities of the cocoa industry have shown remarkable progress in terms of grindings and the manufacture of cocoa products. The grinding capacity of the existing 10 grinders increased to 260,000 tonnes in 2004 from 160,000 tonnes in 2001, due to the expansion of grinding facilities as well as efficiency in processing. Local grindings increased to 229,649 tonnes in 2004 from 138,616 tonnes in 2001. In 2005, local grindings is expected to increase further to 240,000 tonnes (**Chart 3**).

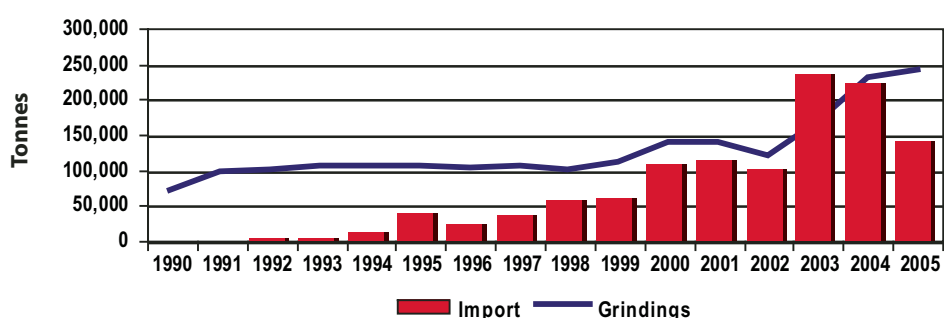


Dry Cocoa Beans

Chocolate and Cocoa Confectionery Manufacturing

Cocoa products manufacturing comprise two activities, namely chocolate and cocoa confectionery production. Currently, there are five big chocolate manufacturers and more than 40 cocoa confectioneries in Malaysia. Most of the cocoa confectioneries also manufacture other types of food products. The production of chocolate confectionery increased to 9,610 tonnes in 2004 from 9,140 tonnes in 2001. In 2005, the production of chocolate confectionery is estimated to increase to 9,760 tonnes. Sales of chocolate and cocoa confectionery have shown satisfactory progress, increasing to 24,563 tonnes valued at RM457.2 million in 2004 from 18,377 tonnes valued at RM373.5 million in 2001. In 2005, the sales of chocolate and cocoa confectionery are estimated to increase to 25,000 tonnes valued at RM442 million.

Chart 3: MALAYSIA-GRINDINGS AND IMPORT OF COCOA BEANS, 1990-2005



Source: Malaysia Cocoa Board

Malaysia produces semi-processed cocoa products such as cocoa paste not defatted (cocoa liquor), cocoa butter, cocoa paste wholly or partly defatted (cocoa cake) and cocoa powder. In 2004, total production of cocoa liquor was 11,326 tonnes, cocoa butter 72,570 tonnes, cocoa cake 27,455 tonnes and cocoa powder 70,355 tonnes. The increase in grinding was attributed largely to the strong demand for cocoa products particularly cocoa butter.

The per capita consumption of chocolate and cocoa confectionery is still low at 0.6 kg compared with developed nations at 5kg. to 10kg. The low consumption of chocolate and cocoa confectionery is attributable to the Malaysian climatic conditions, which require special storage and retailing facilities as chocolate is considered a luxury item and is restricted to those in the higher income bracket.

Export Earnings

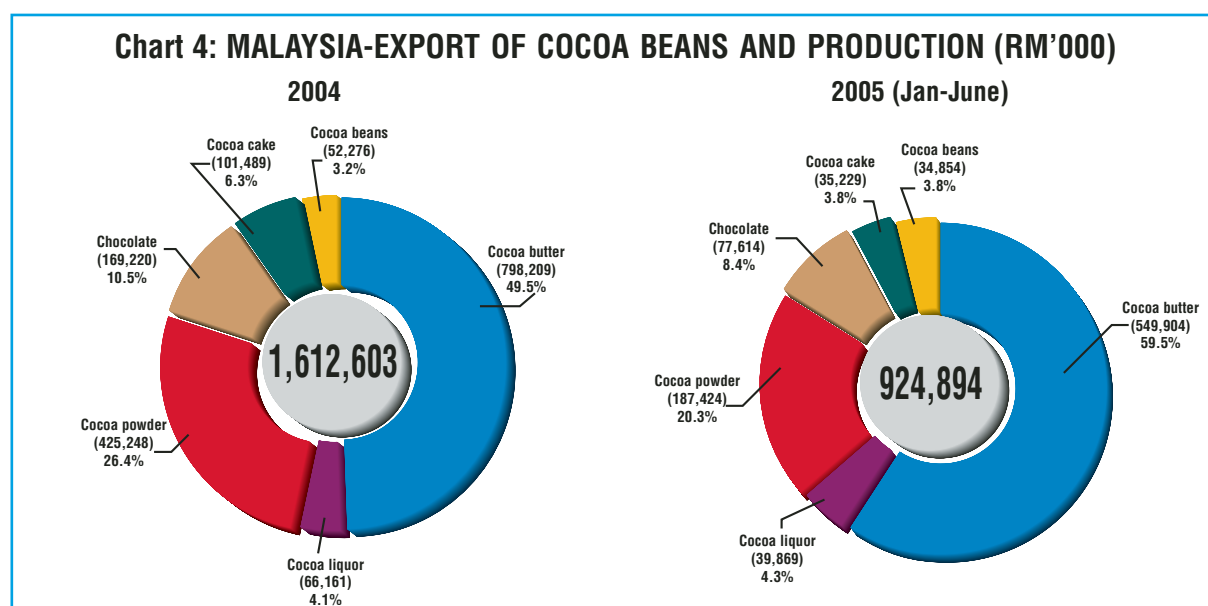
Export earnings of cocoa beans and products increased to RM1,612.6 million in 2004 from RM659.7 million in 2001, with an average annual growth of 23 per cent per year. For the first half of 2005, export earnings were RM924.9 million (Table 3). The increase in export earnings was attributed to the expansion of downstream activities and increasing export volume of cocoa products.

In 2004, the export of semi-finished products accounted for 86.3 per cent of total export earnings followed by

chocolate and chocolate confectionery, at 10.5 per cent and cocoa beans, 3.2 per cent. Cocoa butter was the largest contributor to total export earnings, accounting for 49.5 per cent. Other contributors were cocoa powder (26.4 per cent), chocolate (10.5 per cent), cocoa paste wholly or partly defatted (6.3 per cent), cocoa paste not defatted (4.1 per cent) and cocoa beans (3.2 per cent) (Chart 4). Malaysian cocoa and cocoa products were exported worldwide mainly, to the American region (27 per cent), followed by Asia and Oceania (20.1 per cent) and Western Europe (19.7 per cent).

Table 3 : EXPORT OF COCOA BEANS AND PRODUCTS, 2001-2005

PRODUCTS	2001	2002	2003	2004	JAN-JUN 2005
	Quantity (Tonnes) Value (RM'000)	Quantity (Tonnes) Value (RM'000)	Quantity (Tonnes) Value (RM'000)	Quantity (Tonnes) Value (RM'000)	Quantity (Tonnes) Value (RM'000)
Cocoa Beans	16,244 56,733	21,109 110,239	13,061 82,458	9,377 52,276	6,479 34,854
Cocoa Butter	43,031 319,481	36,067 356,084	49,763 561,665	72,706 798,209	39,776 549,904
Cocoa Liquor	4,358 28,949	4,547 43,117	5,722 52,322	7,820 66,161	5,619 39,869
Cocoa Cake	14,344 40,412	11,656 76,287	15,629 135,583	13,010 101,489	6,751 35,229
Unsweetened Cocoa Powder	31,348 111,438	30,991 189,456	30,517 241,036	54,984 366,791	33,060 170,007
Sweetened Cocoa Powder	1,515 10,706	2,352 17,435	5,784 32,586	11,570 58,458	3,878 17,417
Chocolate	9,237 91,942	11,050 110,543	15,300 154,260	14,953 169,220	8,128 77,614
TOTAL VALUE	659,661	903,161	1,259,909	1,612,603	923,894



Source: Department of Statistics, Malaysia



Chocolate Packaging



Dry Cocoa Beans

For the first half of 2005, export earnings from cocoa and cocoa products are estimated at RM924.9 million. Major products exported included cocoa butter (59.5 per cent), cocoa powder (20.3 per cent), chocolate (8.4 per cent), cocoa paste not defatted (4.3 per cent), cocoa paste wholly or partly defatted (3.8 per cent) and cocoa beans (3.8 per cent) (**Chart 4**).

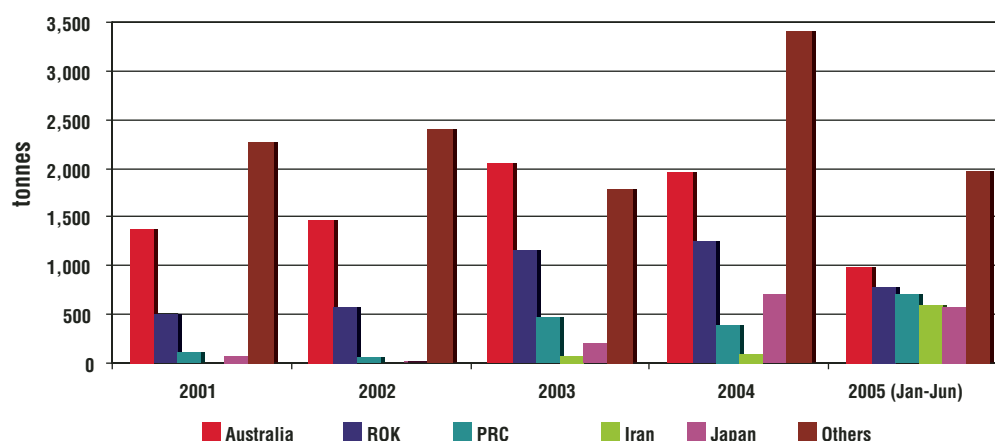
Export of Cocoa Beans and Cocoa Products

The export of cocoa beans dropped to 9,377 tonnes in 2004 from 16,244 tonnes in 2001 due to declining local production (**Table 3**). In 2004, Malaysia exported 28.1 per cent of its cocoa beans to six countries, with the majority being exported to Singapore. In the first half of 2005, the export of cocoa beans was 6,479 tonnes valued at RM34.9 million. The major export destinations for Malaysian cocoa beans were Singapore (85.7 per cent), Japan (10 per cent) and Thailand (3.1 per cent) (**Chart 5**).

The export of cocoa paste not defatted (cocoa liquor) increased to 7,820 tonnes in 2004 from 4,358 tonnes in 2001. The increase was attributed to the well acceptance of the products due to improved quality. Australia, the Republic of Korea (ROK), Singapore, Japan and Thailand were the major buyers of cocoa paste not defatted in 2004, accounting for 72 per cent of the total export of this product. Mexico, Spain and Lithuania were the new markets for Malaysian cocoa paste not defatted. In the first half of 2005, export of cocoa paste not defatted was 5,619 tonnes valued at RM39.9 million. Australia was the major export destination, accounting for 17.6 per cent, followed by the ROK (14 per cent), the People's Republic of China (PRC) (12.5 per cent), Iran (10.7 per cent) and Japan (10.1 per cent) (**Chart 5**).

The export of cocoa paste wholly or partly defatted (cocoa cake) decreased to 13,010 tonnes in 2004 from 14,344 tonnes in 2001. Spain, the Philippines, Thailand, the USA

Chart 5: MALAYSIA-EXPORT DESTINATION OF COCOA PASTE, NOT DEFATTED, 2001-2005

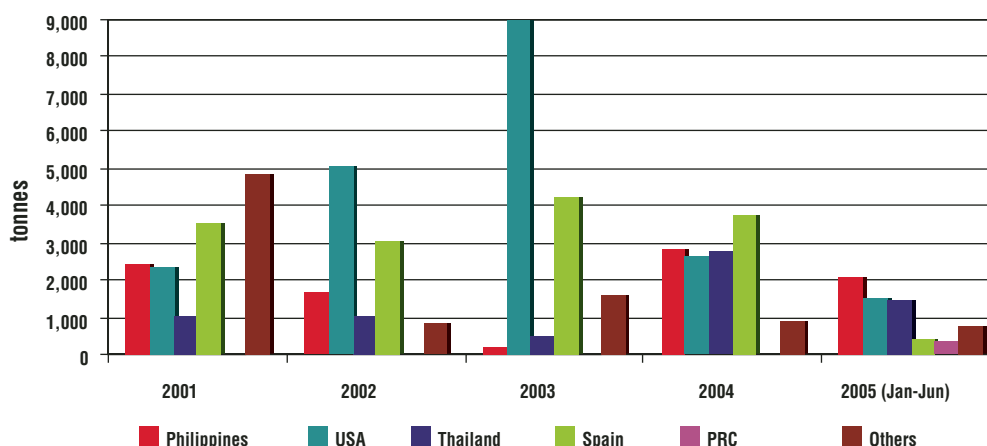


Source: Department of Statistics, Malaysia

and the Netherlands were the major buyers for this product in 2004 accounting for 95.8 per cent of the total export. The ROK and Sri Lanka were the new markets for Malaysian cocoa paste wholly or partly defatted. In the first half of 2005, the export of cocoa cake was 6,751 tonnes valued at RM35.2 million. The major export destinations were the Philippines (30.6 per cent), followed by the USA (22.9 per cent), Thailand (21.5 per cent), Spain (6.9 per cent) and the PRC (5.9 per cent) (Chart 6).

In the first half of 2005, the export of unsweetened cocoa powder was 33,060 tonnes valued at RM170 million. The USA was the major export destination, accounting for 24 per cent, followed by the PRC (nine per cent), Australia (8.8 per cent), the Russian Federation (5.6 per cent) and Indonesia (4.4 per cent) (Chart 7). The new export destinations included Denmark, El Salvador, Sao Tome and Principe, Qatar, Guatemala, Barbados, Azerbaijan and Austria.

Chart 6: MALAYSIA-EXPORT DESTINATION OF COCOA PASTE, WHOLLY OR PARTLY DEFATTED, 2001-2005

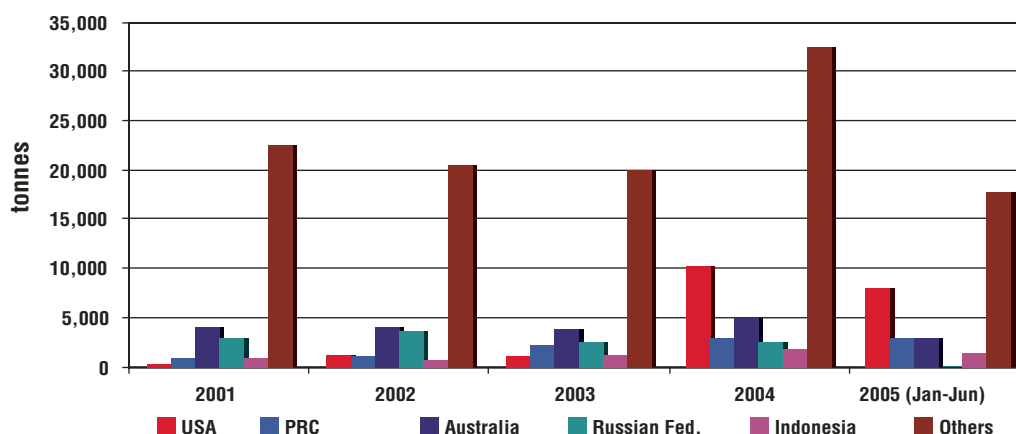


Source: Department of Statistics, Malaysia

The export of cocoa powder not containing added sugar or other sweetening matter (unsweetened cocoa powder) increased to 54,984 tonnes in 2004 from 31,348 tonnes in 2001. Unsweetened cocoa powder from Malaysia was exported to more than 75 countries in 2004, with the USA, Australia, Egypt, Estonia and the PRC as the major importers, accounting for 45.2 percent of the total exports. In 2004, Malaysia managed to penetrate new markets in Kazakhstan, Virgin Island (USA), Guyana, Sierra Leone, Cambodia, Tokelau, Papua New Guinea and Iceland.

The export of cocoa powder containing added sugar or other sweetening matter (sweetened cocoa powder) increased significantly to 11,570 tonnes in 2004 from 1,515 tonnes in 2001. Indonesia was the major importer in 2004 accounting for 42.5 per cent of total exports, followed by Japan (41.4 per cent) and the PRC (3.7 per cent). The other major importers were India (2.9 per cent) and UAE (1.6 per cent). The new export destinations were New Zealand, Ghana, Hungary, Suriname and Iran.

Chart 7: MALAYSIA-EXPORT DESTINATION OF COCOA POWDER, NOT CONTAINING ADDED SUGAR, 2001-2005



Source: Department of Statistics, Malaysia



Cocoa Products

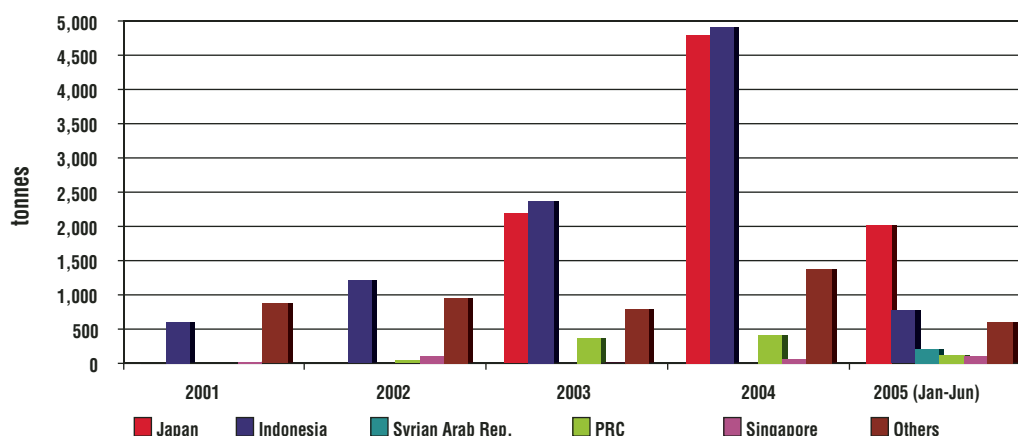
In the first half of 2005, the export of sweetened cocoa powder was 3,878 tonnes valued at RM17.4 million. Japan was the major export destination for Malaysian sweetened cocoa powder accounting for 52 per cent, followed by Indonesia (20.2 per cent), Syrian Arab Republic (5.5 per cent), the PRC (3.7 per cent) and Singapore (2.8 per cent) (**Chart 8**). The new export destinations were Syrian Arab Republic, Spain, Finland and Austria.

Malaysia's cocoa butter continued to attract strong demand overseas. Export of this product increased to 72,706 tonnes in 2004 from 43,031 tonnes in 2001. In 2004, Malaysian cocoa butter was exported to 44 countries, and the major importers were the USA, the Netherlands, Australia, France and Japan. These countries collectively contributed to 75.5 per cent of the total export of cocoa butter. In 2004, Malaysia managed to penetrate new markets in Afghanistan, Croatia, Papua New Guinea, Ukraine and Lebanon.

In the first half of 2005, Malaysia exported 39,776 tonnes of cocoa butter valued at RM549.9 million. The USA was the major export destination, accounting for 32.1 per cent, followed by the Netherlands (13 per cent), Japan (9.3 per cent), France (8.8 per cent) and Australia (6.9 per cent) (**Chart 9**). Venezuela, Mexico, Slovenia and British Virgin Islands were the new export destinations for Malaysian cocoa butter.

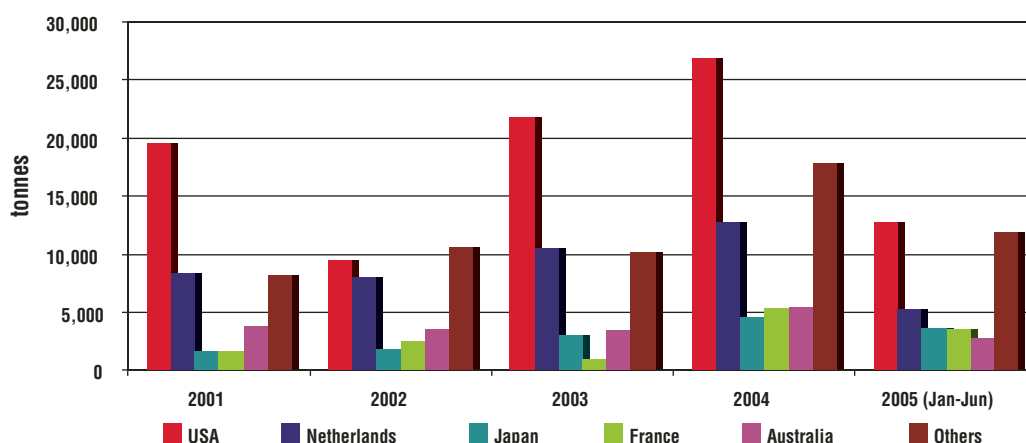
Export of Malaysian chocolate increased to 14,953 tonnes in 2004 from 9,237 tonnes in 2001. Malaysian chocolate was exported to more than 68 countries, with the Philippines, Indonesia, Yemen Arab Republic, Singapore

Chart 8: MALAYSIA-EXPORT DESTINATION OF COCOA POWDER, CONTAINING ADDED SUGAR, 2001-2005



Source: Department of Statistics, Malaysia

Chart 9: MALAYSIA-EXPORT DESTINATION OF COCOA BUTTER, 2001-2005



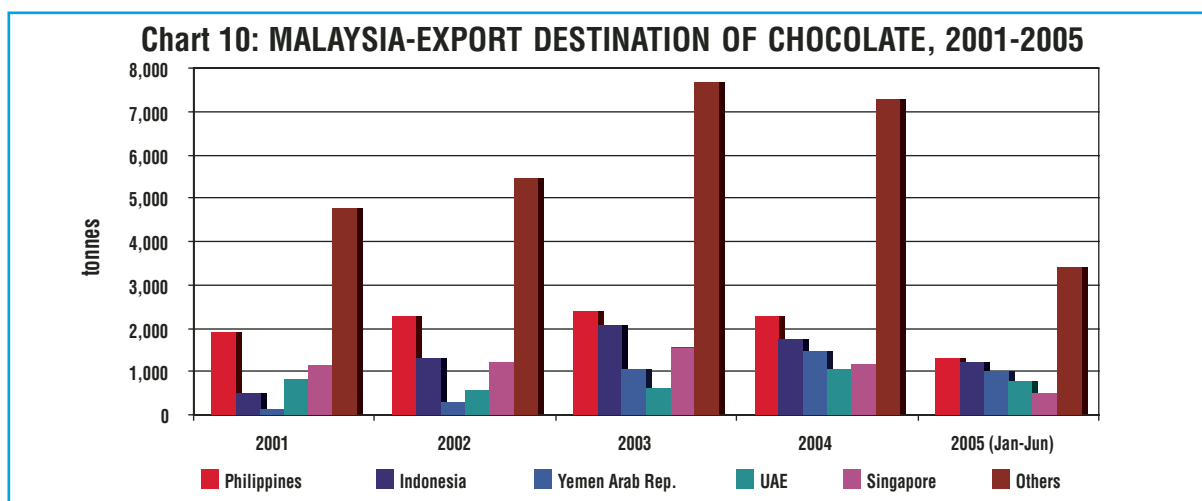
Source: Department of Statistics, Malaysia

and Hong Kong as the main markets. These countries collectively contributed to 51.5 per cent of the total exports. Malaysian chocolate was also exported to Iraq, Cote d'Ivoire, Kiribati, Cameroon, Armenia, Christmas Island, Vanuatu, Somalia and Namibia as the new export destinations in 2004.

In the first half of 2005, Malaysia exported 8,128 tonnes of chocolate valued at RM77.6 million. The major export



Chocolate



Source: Department of Statistics, Malaysia

destinations were the Philippines accounting for 15.9 per cent, followed by Indonesia (14.8 per cent), Yemen Arab Republic (12.3 per cent), UAE (9.6 per cent) and Singapore (5.8 per cent) (**Chart 10**). Panama and Northern Mariana Island were the new export destinations for Malaysian cocoa butter during the review period.

Import of cocoa beans and Cocoa products

The import value of cocoa beans and cocoa products increased to RM1.44 billion in 2004 from RM456.07 million in 2001 due to the higher import of cocoa beans. In the first half of 2005, the total value of cocoa beans and cocoa products imported was RM750.02 million (**Table 4**).

Table 4 : IMPORT OF COCOA BEANS AND PRODUCTS, 2001-2005

PRODUCTS	2001	2002	2003	2004	(Jan-June) 2005
	Quantity (Tonnes) Value (RM'000)	Quantity (Tonnes) Value (RM'000)	Quantity (Tonnes) Value (RM'000)	Quantity (Tonnes) Value (RM'000)	Quantity (Tonnes) Value (RM'000)
Cocoa Beans	114,475 356,600	99,192 545,424	234,773 1,076,554	244,216 1,292,229	140,530 673,358
Cocoa Butter	967 7,860	52 468	705 6,084	365 4,937	644 9,627
Cocoa Liquor	183 1,213	309 2,011	338 2,806	256 2,788	416 2,799
Cocoa Cake	0 0	40 388	105 685	0 0	0 0
Unsweetened Cocoa Powder	2,475 7,434	2,599 13,860	2,900 18,470	1,763 13,266	842 4,879
Sweetened Cocoa Powder	4 145	12 180	48 365	67 710	27 284
Chocolate	6,283 82,821	9,087 97,636	7,194 112,727	6,520 125,373	3,031 59,069
TOTAL VALUE (RM'000)	456,072	659,968	1,217,691	1,439,302	750,016

Source: Department of Statistics, Malaysia

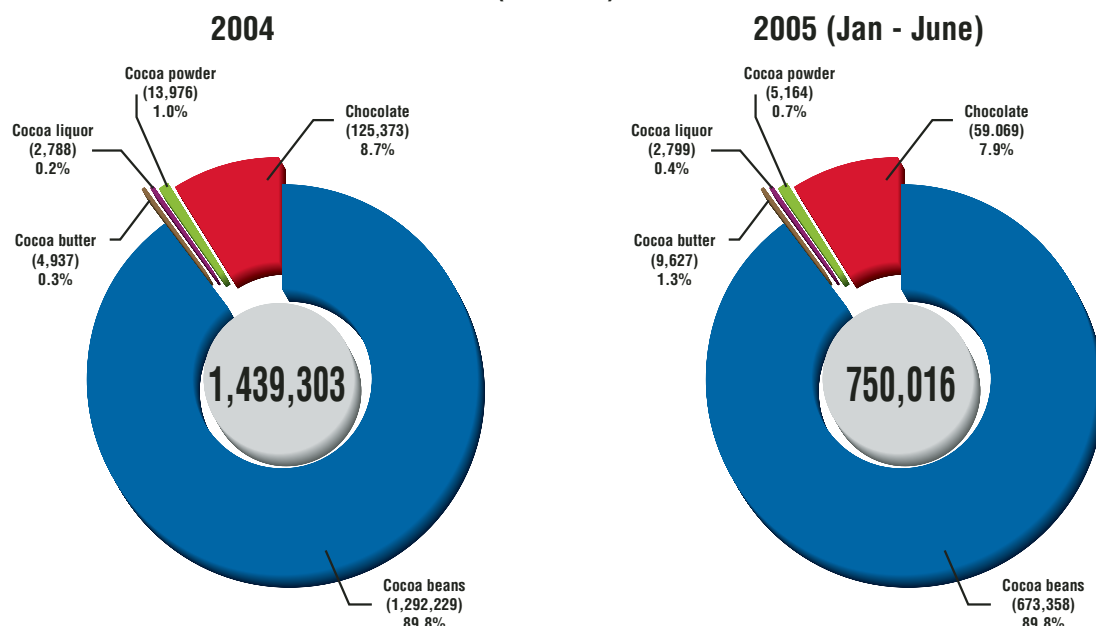
The products imported include cocoa beans (89.8 per cent), chocolate (7.9 per cent), cocoa butter (1.3 per cent), cocoa powder (0.7 per cent) and cocoa paste not defatted (0.4 per cent) (**Chart 11**).

The import of cocoa beans increased to 244,216 tonnes in 2004 from 114,475 tonnes in 2001, due to declining local production and increasing local grindings. In 2004, the main sources of import were Indonesia accounting for 76.4 per cent of total imports, followed by Cote d'Ivoire (10.5 per cent) and Ghana (5.8 per cent).



Chocolate

Chart 11: MALAYSIA-EXPORT OF COCOA BEANS AND PRODUCTION, 2001-2005 (RM'000)



Source: Department of Statistics, Malaysia

The import of chocolate increased to 6,520 tonnes in 2004 from 6,283 tonnes in 2001, with Thailand, Australia, the USA, Italy and Switzerland being the main sources. In 2004, Malaysia imported 1,830 tonnes of unsweetened and sweetened cocoa powder; 365 tonnes of cocoa butter; and 256 tonnes of cocoa paste not defatted. Import of unsweetened cocoa powder was mainly from Indonesia, Thailand and Singapore, while the Netherlands, the USA and the PRC were the main sources for sweetened cocoa powder. The import of cocoa butter was mainly from the PRC, while cocoa paste not defatted came from Singapore.

In the first half of 2005, Malaysia imported 140,530 tonnes of cocoa beans valued at RM673.4 million and 3,031 tonnes of chocolate valued at RM59.1 million (**Table 4**). Indonesia, Ghana and Cote d'Ivoire were the main sources of import for cocoa beans. Malaysia imported chocolate mostly from Thailand, Australia and the USA. During the same period, Malaysia imported 644 tonnes of cocoa butter, 416 tonnes of cocoa paste not defatted and 869 tonnes of cocoa powder containing and not containing added sugar or other sweetening matter (**Table 4**).

Prices

Cocoa bean prices recovered significantly in 2001, with the November spot price at the London International Financial and Future Options Exchange (LIFFE) reaching a three-year high at £938 per tonne. The upward trend was largely attributed to a production deficit due to deteriorating supplies in major producing countries and a substantial global supply deficit, exceeding 200,000 tonnes, for the second consecutive year. The average cocoa price at LIFFE in 2001 was £786 per tonne, which was 32.5 per cent higher compared with 2000. This uptrend caused the increase in local cocoa prices of SMC 1B in Tawau by 29.1 per cent to RM3,629 per tonne and in Bagan Datoh by 31.4 per cent to RM3,475 per tonne in 2001.

Cocoa bean prices in 2002 remained in the uptrend due to global supply deficit of 130,000 tonnes and supply disruption from leading cocoa producing countries especially, Cote d'Ivoire because of continuous political and social turmoil. The average price at LIFFE was £1,261, which was 60.4 per cent higher compared with £786 in 2001. In the same year, Tawau's average price increased by 62.4 per cent to RM5,893 and Bagan Datoh's by 58.5 per cent to RM5,509.

In 2003, prices weakened to a low of £1,000 in May and £925 in June due to production surplus over grindings for the 2003/04 season as well as the stabilised political situation in Cote d'Ivoire, which facilitated the movement of cocoa beans. The average LIFFE price dropped by 13.3 per cent to £1,093 from £1,261. However, the average price of dry cocoa beans (SMC 1B) for 2003 in Tawau increased by 4.9 per cent to RM6,179 and Bagan Datoh's by 8.1 per cent to RM5,956 due to the Ringgit Malaysia weakening against the Pound Sterling.

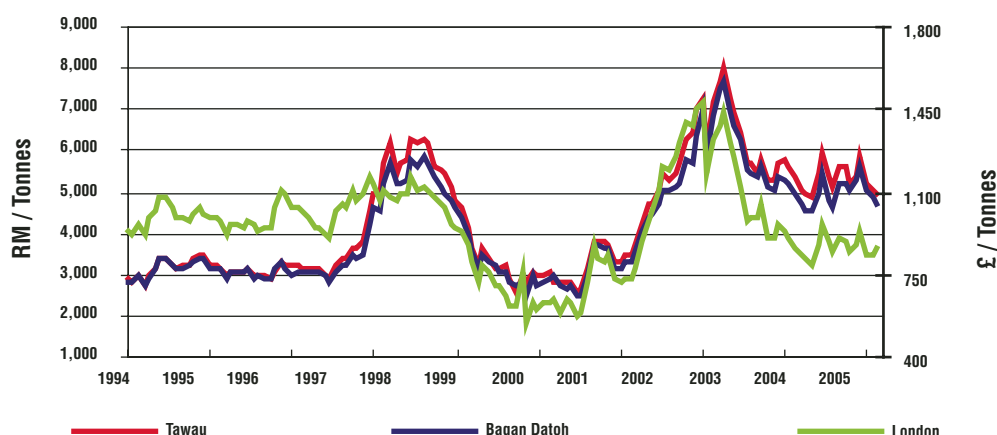
In 2004, cocoa prices at LIFFE continued moving downward to an average of £859 per tonne, which was 21.5 per cent lower compared with £1,094 per tonne in 2003. This is due to higher global production of 3.473 million tonnes in the 2003/04 season, exceeding the 3.147 million tonnes in 2002/03. The average local cocoa prices of SMC 1B in Tawau and Bagan Datoh also dropped by 14 per cent and 17.9 per cent accordingly to an average price of RM5,314 per tonne and RM4,887 per tonne respectively (**Chart 12**).



Cocoa Research and Development Station

Currently, there are six Cocoa Research and Development Stations in Malaysia. The stations are functioning as a centre for research, extension and transfer of technology as well as supplying seedlings to participants of the cocoa smallholders' rehabilitation programme. The stations conducted research on germplasm conservation, planting material development, intercropping cocoa with other economic crops, pest and disease management, mechanisation, biotechnology, cocoa processing technology, cocoa product development, quality improvement and new uses of cocoa. The stations to date, have produced about one million cocoa seedlings that can increase the productivity of cocoa cultivation.

Chart 12: PRICES OF COCOA BEANS IN TAWAU, BAGAN DATOH AND LONDON, 1994-2005



Source: Department of Statistics, Malaysia
2005: Jan-June

The average spot month price at LIFFE in the first half 2005 was £853 per tonne, which was 1.5 per cent higher than the corresponding period in the previous year. This was due to uncertainty in Cote d'Ivoire's political situation that disrupted supply as well as unfavourable weather conditions in the West African region, particularly in Cote d'Ivoire and Ghana. Local cocoa prices in Tawau and Bagan Datoh increased by 0.7 per cent and 4.8 per cent accordingly to RM5,221 per tonne and RM5,046 per tonne respectively.

TECHNICAL SUPPORT AND EXTENSION SERVICES

Infrastructure and Logistics

The provision of infrastructure and logistics to both upstream and downstream industries continues to improve and enhance all aspects of the industry, including technical, promotional, extension and technology transfer.

Technical Support

MCB provides technical advisory services to target groups in both cocoa upstream and downstream activities. The advisory and technical services provided, include planting materials, agronomic practices, pest and disease management and integration of cocoa with other crops and economics activities related to cocoa production. For the downstream activities, MCB provides technical support for chemical analysis, product testing facilities, advisory and other technical services, cocoa processing technology, and product formulation. The Cocoa Downstream Research Centre provides technical services and facilities for cocoa processing technologies and cocoa products formulation. The analytical services for cocoa beans and cocoa products received the ISO/IEC 17025 certification in 2004.

Transfer of Technology

Technology transfer in the cocoa industry continued to be implemented in both upstream and downstream activities. In upstream activities, training the trainers/farmers,

advisory services, visitation, in-situ and ex-situ training are among the programmes carried out for the cocoa growers. Demonstration plots and participatory research and activities are also undertaken.

The group farming system in selected areas with economic farm sizes of 40 hectares have been established and continues to be enhanced. The group farming system enables technology transfer to be channelled effectively and efficiently using existing logistics facilities. In addition to the group farming system, MCB also continues to monitor and evaluate the progress and implementation of the Mini Estate Concept of cocoa farm management. For the estates/plantations, MCB conducts dialogues, workshops and scheduled visits to enhance close rapport with the estate/plantation owners. For downstream activities, courses on chocolate making, workshops, seminars and others modes of technology transfers are carried out and continued. Advisory services in commercialisation of cocoa products are also provided.

As part of the transfer of technology programmes, MCB had built eight Cocoa Fermentation and Drying Centres within group farming schemes to assist farmers to produce higher quality dry cocoa beans, thus generating better incomes.

There was an average of 10 Cocoa Technology courses and seminars conducted per year, which attracted about 2,000 participants from extension agents, estate employees and cocoa farmers. Five sets of cocoa technology brochures were published to improve the knowledge of cocoa farmers, cocoa processors and also to educate the public.



Chocolate Packaging

Marketing and Promotional Activities

The MCB conducts extensive marketing and promotional activities to increase consumption of cocoa in the domestic market and increase Malaysia's market share in the world market.

Domestic promotional activities include educating Malaysian consumers on the health benefits and nutritional value of cocoa and cocoa products; correcting and enhancing the image of cocoa and cocoa products through promotional activities in schools, organizing cocoa fairs as well as participating in various relevant exhibitions either locally or overseas.

The expansion of the existing market and penetration into new markets for Malaysian cocoa and cocoa products have been undertaken through economic and technical missions as well as fact-finding missions to existing and potential importing countries. Cocoa trade and technical awareness programmes have been undertaken to create awareness of Malaysian cocoa and cocoa products in various selected countries in different regions. MCB has also organised international cocoa fairs; and participated in international exhibitions and expositions such as the International Sweets and Biscuits Fair, Food Ingredients Fair, to enhance its networking.

INSTITUTIONAL SUPPORT

The development of the cocoa industry led by the MCB has been well supported by the relevant Government agencies, industry and smallholders' associations. The relevant Government agencies, both at the State and Federal levels, include the Ministry of Agriculture and Agro-based Industries (MOA), Department of Agriculture

Cocoa Fermentation and Drying



(DOA), Ministry of Science, Technology and Innovations (MOSTI), Ministry of International Trade and Industry (MITI), Malaysian Industrial Development Authority (MIDA), Economic Planning Unit (EPU), Malaysian External Trade Development Corporation (MATRADE), Ministry of Education (MOE) and institutions of higher learning.

Under the Malaysia Incorporated concept, MCB has been working closely with the private sector, which is represented by the various industry associations such as the Incorporated Society of Planters (ISP), East Malaysia Planters Association (EMPA), National Smallholder Association (NASH), Cocoa Manufacturer Group (CMG) and Malaysian Hand-made Chocolate Association.

ISSUES AND CHALLENGES

Fluctuation of Cocoa Prices

The volatility of cocoa prices has created uncertainty, thus affecting investment and in the expansion of cocoa cultivation. This has contributed, among others, to the low production of cocoa beans in recent years. In order to sustain the cocoa industry, there is a need to initiate policies and strategies to improve prices to a remunerative level for farmers/producers.

Dependence on Imported Cocoa Beans

Imports of cocoa beans continue to increase to RM1,292,220 in 2004 from RM356,600 in 2001. This has increased the country's import bill and placed Malaysia in a vulnerable position of not being able to obtain supplies of cocoa beans from the world market in the event of global supply disruption. This will also affect the capacity of grinding activities, which Malaysia has built up. Strategies that have been put in place to increase

production include, new planting of cocoa in designated agricultural zones and neglected lands which are suitable for cultivation and rehabilitation of old and unproductive cocoa areas with high yielding clones.

Competing Land Use

Suitable land for new cocoa planting is becoming scarce and facing stiff competition from other commodity crops, industrialisation and other economic activities. The conversion of cocoa areas to other commodity crops especially oil palm, has reduced drastically areas planted with cocoa to 41,612 hectare in 2004 from 420,000 hectare in 1990. Strategies to be adopted to address this issue include zoning for the cultivation of cocoa.

Low Productivity

The average national annual cocoa productivity is estimated at between 0.8 and one tonne/hectare in recent years. This national production average is far lower than the attainable yield of between two to five tonnes/ha. There is much room for yield improvement through the appropriate adoption and utilisation of available planting technologies developed by R&D, coupled with a high standard of farm management.

Pest and Diseases

Cocoa crops attract a number of pest and diseases, among them, the cocoa pod borer (CPB), black pod (BP) and vascular streak dieback disease (VSD) being the most important and causing considerable economic loss to the industry. Fortunately, control measures are available for effective management of these and other cocoa pests and diseases. The cost of pest and disease management accounts for about 10 to 20 per cent of the total production cost.

Cocoa R&D Centre

Cocoa Tree



With the development and adoption of VSD and BP resistant cocoa planting materials, the labour requirement and the cost of management of these diseases can be substantially reduced. Development of CPB resistant clones and more cost-effective environmental friendly technology for CPB management are being undertaken and making good progress.

Shortage of Labour

Availability of labour is not only a crucial issue in the cocoa industry but also in other commodity crops but to a different extent. Upstream activities in the cocoa industry is relatively labour intensive, constituting 33 per cent of the total cost of production. In 2004, about 4,553 workers were employed in cocoa plantations where 80.8 per cent were foreign workers. The issues of concern are availability of labour, abscondment, skilled labour and the lengthy recruitment process. There is also increasing competition for labour supply within the plantation sub-sectors and between sectors especially from the construction, manufacturing, business and services sectors. Furthermore, the generally younger workforce prefer to work in sectors other than the agriculture sector.



Dehusking of Cocoa Pods

The issue of labour can be tackled by the development and adoption of labour saving technologies such as maintenance of low tree height, in-field transport, mechanisation, less labour intensive pest and disease control measures and better field management practices. The adoption of labour saving technology can be further enhanced through more effective transfer of technology. The on-going R&D into the development of pest and disease-resistant planting materials, mechanisation and advance planting technology will lead to the development of technology for labour saving and enhancement in labour productivity.

Lack of Technology Utilisation and Inefficient Farm Management

It is proven that with appropriate adoption of good planting materials, using the latest planting technology and proper pest and disease control management, productivity can be increased to no less than two tonnes/ha/year. On other hand, lack of technology

utilisation and inefficient farm management can result in low productivity, thus resulting in a higher cost of production. The awareness and adoption of available technology and a higher standard of farm management can be further strengthened through extended activities of transfer of technology.

Product Range and Use of Cocoa Products

Cocoa can be processed into various food and non-food finished products. Although it is relatively easy to market Malaysian cocoa semi-finished products, it is important for Malaysia to produce her own brand of finished products to increase market segments and to be more competitive in terms of product quality and value. The non-food cocoa-based products are yet to be fully exploited in Malaysia, since a wide range of such non-food cocoa-based products with increasing value of millions of Ringgit are being imported annually. Therefore there is sufficient economic sense to produce such products locally. MCB has conducted research on the development of a wide range of cocoa-based non-food products such as cocoa butter-based cosmetics, pharmaceuticals and toiletries. Some of these non-food cocoa-based products are waiting to be commercialised. Progress has also been made in extracting phenolic and chemical compounds from cocoa for further exploitation of their medicinal and nutritive uses. Research in these areas will open up new dimensions for the cocoa-based industry and thus its competitiveness.

Infrastructure for the Development of the Cocoa Processing Industry

Most of the cocoa grinding industries are located in Peninsular Malaysia. Out of the 11 cocoa grinding factories, only two are located in Sabah. The major factors that limited the development of the cocoa grinding industry in Sabah are high utility tariff and lack of port facilities. The relevant Ministries and State agencies need to hold consultations/dialogues with the affected parties to address these issues.

Low Domestic Consumption of Cocoa

The per capita consumption of cocoa in Malaysia is estimated to be 0.6 kg per person, which is considered low compared with the developed countries. The per capita cocoa consumption in the developed countries ranges between two kg to six kg per person.

As such strategies to increase the local consumption of cocoa should be undertaken to include among others conducting educational programmes to refute the untruths and misconceptions of cocoa and promote goodness and nutritiousness of cocoa. This can be achieved through campaigns in the media, schools, seminars, road shows. Strengthening linkages with the private sector and Government agencies in implementing generic promotion of cocoa would enhance these campaigns.



Cocoa Pods

Market Access

Market is one of the key factors in the expansion of the sale of particular cocoa products. The increase in export of cocoa beans and products in many cases were not sustainable and the quantity of exports fluctuated. There were situations where Malaysia was able to sustain its exports for one or two years and then lose the market. Besides that, the export markets for Malaysian cocoa products are still confined to a few major markets. For example, Malaysian cocoa butter was exported to more than 44 countries in 2004, however, five major importing countries, the USA, the Netherlands, Japan, France and Australia accounted for about 74.3 per cent of total exports.

To address this issue, it is crucial to undertake continued market promotional activities to target markets. These include conducting market promotional activities, market research and surveillance, and disseminating timely market information, actively participating in bilateral and multilateral negotiations to gain better market access and establishing and strengthening networking with the relevant people and organisations in targeted markets. However, funds are required to undertake these promotional activities. Limited or insufficient allocation given to undertake certain promotional activities would be a hindrance in further strengthening the Malaysian cocoa market share in the targeted markets.

Trade Barriers

Tariff and non-tariff barriers limit cocoa products access into certain markets and become another obstacle to the expansion into these markets. Imports of cocoa products are subjected to import tariffs and taxes regime imposed by importing countries. Some countries impose discriminatory duties on cocoa products. Exports of cocoa beans and cocoa products from the African and Caribbean and Pacific (ACP) countries to the EU are exempted from import duties. However, non-ACP countries like Malaysia are subjected to import duties of

three per cent to 12 per cent, thus affecting the competitiveness of Malaysian cocoa and cocoa products. Taxes are also applied to other essential ingredients for chocolate, especially nuts and raisins.

Non Tariff Barriers (NTBs) such as irrelevant documents and certificates (radioactive certificate) and other NTBs are another form of trade control measure that hinder the export of cocoa products from Malaysia. For example, the importation of cocoa powder to the Middle Eastern countries such as Iran and Turkey is subjected to the fulfilment of standard requirements and specifications. These requirements incur additional costs to exporters as well as unnecessary delay in shipments. The cumbersome procedures should be removed or simplified to facilitate the export and expansion of the cocoa market in these countries.

As such, Malaysia needs to participate actively in bilateral and multilateral negotiations to gain better market access. The establishment of market linkages with the relevant people and organisations in targeted markets and sourcing of market information are also essential for further market development.

GOVERNMENT POLICY INITIATIVES AND STRATEGIES

Imbalance between the local dry beans supply and the grinding need is a major concern, to both the Government and the cocoa industry. Thus, there is a need to increase the supply of local beans not only to a level of self-sufficiency, but also to supply 40 to 50 per cent of the local grinding capacity. The supply of local beans will have to be increased gradually from the present production of 33,000 tonnes to 100,000 tonnes in the next 5 to 10 years. Aside from rehabilitation of unproductive cocoa areas with superior planting materials and sound management practices, new plantings of cocoa have to be increased to boost the supply of local beans.

In order to boost cocoa productivity, technology transfer in terms of supplying superior planting materials and imparting good agronomic practices continue to play an important role. Since smallholders play a major role in cocoa upstream activities, there is a need to further strengthen transfer of technology activities with the objective of increasing productivity, which would in turn raise the incomes of smallholders. Integration of cocoa with other economic crops (cocoa-coconut, cocoa-fruit trees, cocoa-short term crops and others) and other economic generating activities (confined rearing of poultry and ruminant animals in cocoa areas, introducing the use of cocoa in farmers' diets and others) will be encouraged as other means of increasing the income of farmers.

In line with Government policy, a number of R&D activities in biotechnology have been implemented with the objective of creating new value-added products in the area related to industrial products, health and agricultural technology.

Efforts will be undertaken to encourage the plantation sector to maintain and increase their cocoa areas by providing technology and management information. Dialogues will be organised to tackle issues concerning labour, price and pest and disease management.

PROSPECTS

Although the interest expressed in cocoa cultivation is weak, it is expected that the cultivated cocoa area will stabilise at 33,500 ha in 2005. Currently, with optimum inputs and sound management, the availability of planting

materials and proper utilisation of planting technology, productivity can increase to the targeted level of no less than 1.5 tonnes/ha. However, there is a need to review the current commodity mix and appropriate policy measures to encourage new planting of cocoa so as to accelerate the increase in production of dry cocoa beans, because increasing the productivity on existing areas alone is not enough to increase production to a level that can supply the demand of the grinding industry.

Downstream activities especially cocoa grindings is progressing well. Malaysia is currently ranked the world's fifth largest cocoa processor and the third largest origin processor after Cote d'Ivoire and Brazil. Despite the shortfall in domestic supplies, local grindings is expected to record a growth of about 4.5 per cent to 240,000 tonnes in 2005. The increase in grindings activities in 2005 is largely attributed to the strong demand for cocoa products. However, to sustain the growth of the cocoa grinding industry, the issue of declining local dry cocoa bean production needs to be addressed in ensuring adequate supply of raw materials. The shortfall in production is currently estimated at about 200,000 tonnes. The present hectarage, expected to stabilise at around 33,500 ha, is insufficient to produce the needs of the processing industry.

The future development of the cocoa industry depends on the supply and demand for cocoa and cocoa products in the world market and on the returns that can be obtained from other commodities being produced in Malaysia. Nevertheless, cocoa will remain an important crop in Malaysia and will continue to play a major role in the socio-economic development of the nation in the years to come. Therefore, for Malaysia to remain competitive and continue to be in the cocoa business, global information on the trends and development of cocoa should be continuously gathered and economic issues addressed. Research and development has to be continuously carried out and all resources in the country, both from the public and private sectors that can be utilised to formulate and implement strategies and activities must be harnessed. This is necessary for the continued development of the cocoa industry and to ensure that Malaysia remains competitive.



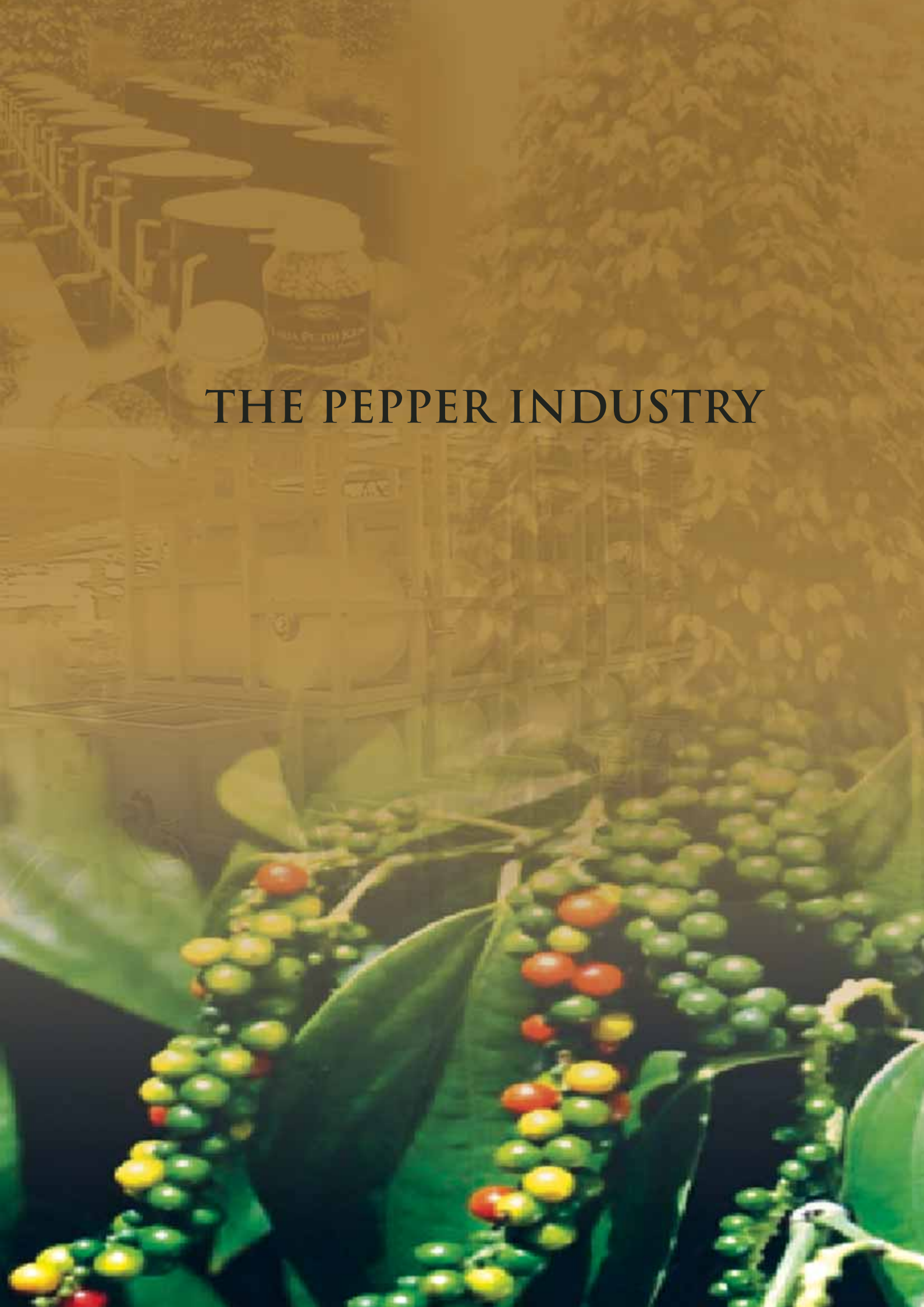
Cocoa Fruits



Cocoa Fruits



Cocoa Fruits



THE PEPPER INDUSTRY

THE PEPPER INDUSTRY

INTRODUCTION

Pepper is grown mainly in Sarawak, which accounts for 98 per cent of Malaysia's total production. The other states where pepper is cultivated are Johor and Sabah. Traditionally, 98 per cent of Malaysia's pepper production is for export. However increased production of high value-added pepper products for domestic consumption has significantly reduced exports.

Pepper is grown largely by smallholders with farms averaging 0.2 hectares (400 vines). Currently, *Kuching* is still the most widely cultivated variety, followed by *Semonggok Emas*, *Semonggok Perak* and *Uthirancotta*. About 65,000 – 70,000 farm families spread throughout Sarawak, mostly in the rural interior, are involved in pepper cultivation. Due to the lack of proper infrastructure and rugged terrain, pepper has become the most important cash crop for Sarawak, economically and socially. Economically, it ranks second in terms of agricultural earnings for the State from 2001 to 2003, but dropped to third place in 2004, behind palm oil and rubber. Socially, pepper is the main cash crop for a vast majority of the rural population of Sarawak.

PERFORMANCE

World Production

World pepper production increased slightly to 306,200 tonnes in 2004 from 305,700 tonnes in 2001. However, the increase in production was significant in 2002 and 2003 totalling, 341,300 tonnes and 321,800 tonnes respectively. The increase was due to new plantings coming into production in all existing producing countries, brought about by the price boom during the 1996 to 2000 period.

Cambodia, a relative newcomer to pepper growing, produced 1,200 tonnes in 2004. Ecuador, a non-traditional pepper producing country, produced an initial quantity of 3,500 tonnes in 2004. In 2005, world pepper production is estimated to increase slightly to 309,300 tonnes, with Vietnam remaining as the world's leading pepper producer, followed by India, Brazil, the PRC and Indonesia. Malaysia, currently ranked sixth in the world production of pepper, is followed by Sri Lanka, Thailand, Madagascar, Ecuador and Cambodia (**Table 1**). While production of pepper in other major producing countries remained relatively unchanged or have declined, production in India increased by 8,000 tonnes to 70,000 tonnes in 2005 from 62,000 tonnes in 2004.

**Table 1: WORLD PEPPER PRODUCTION,
2001 – 2005
(‘000 Tonnes)**

	2001	2002	2003	2004	2005 ^e
Brazil	43	45	35	45	40
India	79	80	65	62	70
Indonesia	59	66	62	30.5	29
Malaysia	27	24	21	20	20
Sri Lanka	7.8	12.6	11.3	12	13.5
Vietnam	56	75	85	85	85
PRC	21.7	23	27	35	35
Thailand	8.8	10	9.5	9.5	9.5
Madagascar	3.4	2.5	2.5	2.5	2.5
Cambodia	-	3.2	3.5	1.2	1.3
Ecuador	-	-	-	3.5	3.5
Total	305.7	341.3	321.8	306.2	309.3

Source: International Pepper Community (IPC), Jakarta
e: estimate

World Consumption

World pepper consumption is growing at a steady rate of four to six per cent annually, from 237,780 tonnes in 2001 to 272,610 tonnes in 2004. In 2005, it is expected to increase to 288,970 tonnes. During the period 2001 to 2004, supply exceeded demand, which resulted in the low price levels in the world pepper market (**Table 2**). The supply overhang is projected to drop significantly to 20,330 tonnes in 2005 from a high of 94,010 tonnes in 2002.



Pepper

Table 2 : WORLD PEPPER SUPPLY AND CONSUMPTION, 2001-2005 (Tonnes)

Year	Production	Consumption
2001	305,700	237,780
2002	341,312	247,290
2003	321,800	257,180
2004	306,200	272,610
2005e	309,300	288,970

Source: Pepper Marketing Board
e: estimate

World Exports

Global pepper exports increased to 218,700 tonnes in 2004 from 202,500 tonnes in 2001, because of increased production. However, in 2002 the increase in world pepper exports was significant, amounting to 241,800 tonnes. The decline in world exports experienced in 2003 and 2004 was mainly due to the reduction in production in all producing countries, except Vietnam and the PRC. The significant increase in exports by Vietnam, Brazil and India in 2004 contributed to the sustained level of world pepper exports. In 2005, the total world pepper export is estimated to decline by 22,700 tonnes or 10.4 per cent to 196,000 tonnes from 218,700 tonnes in 2004. The five major world pepper exporters in 2005 are expected to be led by Vietnam followed by Brazil, India, Indonesia and Malaysia (**Table 3**). Although India is the second largest producer of pepper in the world, in terms of exports, however it ranked fourth in 2004 as the major portion of its production was for domestic consumption.

Table 3 : WORLD PEPPER EXPORTS, 2001 – 2005 ('000 Tonnes)

Country	2001	2002	2003	2004	2005 ^e
Brazil	36.6	37.5	37.9	40.0	35.0
India	23.7	24.9	17.8	24.8	20.3
Indonesia	53.3	63.2	52.5	32.0	20.0
Malaysia	26.4	23.0	19.3	19.7	18.0
Vietnam	56.5	78.2	74.6	85.0	84.0
Sri Lanka	3.2	8.2	8.2	8.0	8.0
Thailand	0.7	0.7	0.5	0.5	0.5
PRC	0.6	4.8	3.8	4.0	4.5
Madagascar	1.5	1.3	1.0	1.0	1.0
Cambodia	-	-	-	0.2	1.2
Ecuador	-	-	3.3	3.5	3.5
Jumlah	202.5	241.8	218.9	218.7	196.0

Source: International Pepper Community
e: estimate

World Imports

In 2003, world pepper imports decreased by 24,842 tonnes or 8.6 per cent to 265,058 tonnes from 289,900 tonnes in 2002 (**Table 4**). The largest importers for the year were Europe and the USA, which accounted for 95,421 tonnes or 36 per cent and 60,963 tonnes or 23 per cent of the world pepper imports respectively.

**Table 4: WORLD PEPPER IMPORT,
2001-2003
(Tonnes)**

Year	Quantity
2001	274,527
2002	289,900
2003	265,058

Source: IPC, Jakarta

World Prices

Black Pepper

The world black pepper price fell from US\$2,426/tonne Cost and Freight (C&F) New York in January 2001 to US\$1,880/tonne at the end of the year. However, it picked up in 2002 to reach US\$2,232/tonne at the end of that year. By the end of 2003, the market had weakened again to US\$1,720/tonne C&F New York. The weakening trend continued in 2004 to close the year at US\$1,610/tonne. The year 2005 showed some activity, with black pepper prices picking up slightly to reach US\$1,638/tonne C&F New York at the end of July 2005.

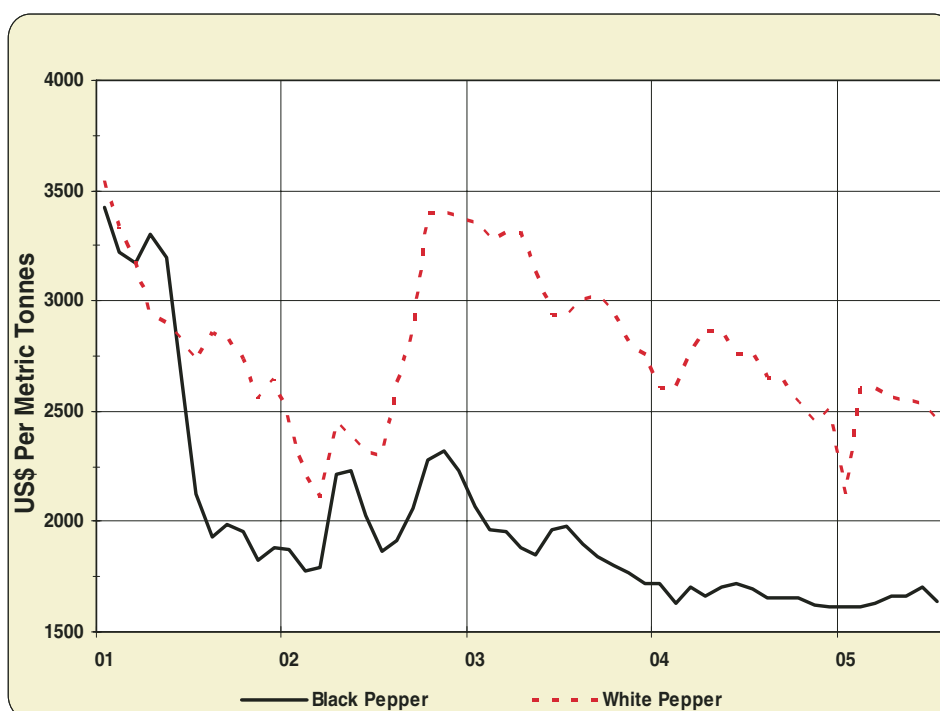
White Pepper

The white pepper market was also weak in 2001, with the price falling from US\$3,548/tonne C&F New York at the beginning of the year to close at US\$2,645/tonne at end of the year. In 2002, prices trended upwards, to close the year at US\$3,384/tonne at the year-end, before weakening again to US\$2,755/tonne at the end of 2003. The falling trend continued, with the price softening to US\$2,504/tonne C&F New York at the end of 2004. The year 2005 started on a low note as the falling trend continued with the price at the end of July weakening to US\$2,459/tonne C&F New York.

Developments in International Cooperation

As a pioneer member of the International Pepper Community (IPC), Malaysia plays an active role in the activities and programmes of the IPC, which has its headquarters in Jakarta. It is an intergovernmental organisation comprising Brazil, India, Indonesia, Malaysia, and Sri Lanka as members, with Vietnam joining as a new member in 2005. The IPC provides a forum for member countries to discuss among them, as well as to interact through dialogues with related international agencies or trade associations from importing countries, on issues and strategies of common interest. Programmes such as joint market promotion, quality standardisation, technical exchange, information sharing as well as trade and non-trade barriers are some of the matters that IPC addresses.

MONTHLY PEPPER PRICES IN NEW YORK, 2001 - 2005



2005 (Jan-June)

Malaysia maintains close relations with other related international organisations through the Pepper Marketing Board (PMB), which itself is member of the American Spice Trade Association (ASTA), the European Spice Association (ESA) and All Nippon Spice Association (ANSA). The PMB's laboratory is accredited by the Ministry of Health for the requirements of the Australian Quarantine Inspection Services (AQIS), where laboratory results issued by PMB are recognised by AQIS, thus allowing minimal quality inspection at the port of entry. Through its direct trading network, PMB keeps in close communication with major buyers or users of pepper on the latest developments in the market.

MALAYSIA

Planted Area

The total area under pepper cultivation declined slightly to 13,854 hectares in 2004 from 13,862 hectares in 2001. It is expected to decrease further to 13,745 hectares in 2005 (**Table 5**). This is due to prolonged low pepper prices and higher cost of inputs, which discouraged pepper farmers from planting new vines or replacing old vines. Sarawak is the main pepper growing area, accounting for 99.3 per cent of total planted hectareage in 2004.

Table 5: TOTAL AREA UNDER PEPPER CULTIVATION, 2001-2005 (Hectares)

Year	Peninsular Malaysia	Sabah	Sarawak	Total
2001	44	41	13,597	13,862
2002	44	24	13,862	13,930
2003	60	24	13,809	13,893
2004	70	24	13,760	13,854
2005 ^e	n.a	n.a	n.a	13,745

Source: Pepper Marketing Board

e: estimate

Production

Malaysia's pepper production has been declining since 2001, in tandem with the fall in prices in the late nineties. Production declined to 20,111 tonnes in 2004 from 27,099 tonnes in 2001. Of the total pepper production, 82 per cent comprised black pepper and the remaining 18 per cent, white pepper. In 2005, production is estimated to remain at the 2004 levels. Rising cost of farm maintenance, amidst low prices has dampened farmers' interest in maintaining their farms at optimal level (**Table 6**).

Pepper Growing Area



**Table 6 : MALAYSIA PEPPER PRODUCTION,
2001-2005
(Tonnes)**

Year	Black Pepper	White Pepper	Quantity
2001	20,278	6,821	27,099
2002	21,604	2,502	24,106
2003	18,933	2,217	21,150
2004	16,511	3,600	20,111
2005 ^e	16,507	3,624	20,131

Source: Pepper Marketing Board
e: estimate

Yield and Productivity

The average yield decreased to 1.52 kg/vine/year in 2004 from 2.1 kg/vine/year in 2001, but it is estimated to increase to 1.54 kg/vine/year in 2005. The low productivity was due to lower application of fertilisers, lack of farm maintenance as well as farmers neglecting their farms.

Black Pepper

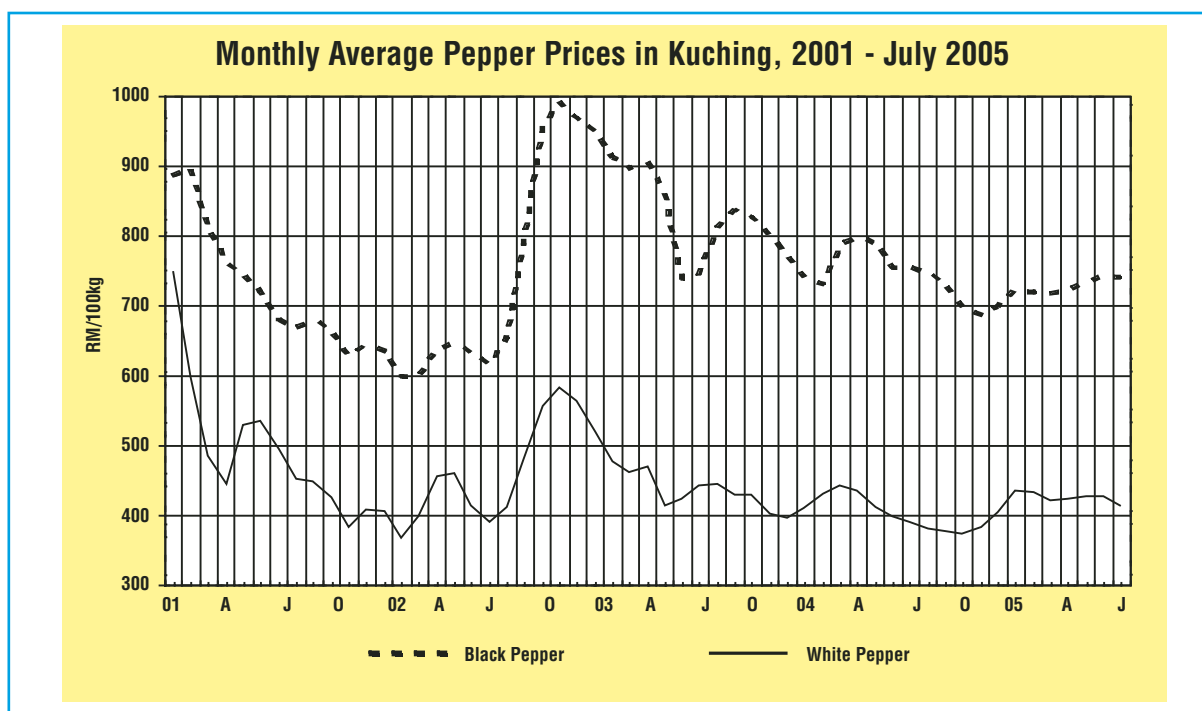
The local black pepper price fell from RM749/100kg in January 2001 to RM407/100kg at the end of the year. It picked up in March 2002 to reach RM564/100kg at the end of the year. It then weakened to RM397/100kg by the end of 2003. The year 2004 saw some activities in the local black pepper market, in line with the world black pepper market, and it ended the year higher at RM404/100kg. Strong market sentiments continued into 2005, but prices started to fall beginning March as the harvesting season approached, to reach RM414/100kg at the end of July 2005.

White Pepper

The local white pepper market was also weak in 2001 with the price falling from RM749/100kg at the beginning of the year to close at RM642/100kg at the end of the year. In 2002, prices trended downwards from the beginning of the year to reach RM616/100kg in July, before picking up to close at RM967/100kg at year-end, before weakening again to RM769/100kg at the end of 2003. However, the local white pepper price picked up at the beginning of 2004 to touch RM799/100kg in April and softened to end the year at RM699/100kg. The local white pepper market was mixed in the first seven months of 2005, reaching RM717/100kg in July 2005.

Employment

Being a smallholders' crop, pepper is cultivated mainly with family labour, except during the harvesting season when some smallholders employ workers from the surrounding villages on a daily basis. In 2001, a total of about 69,000 families were involved in the cultivation of pepper. This dropped to about 65,500 families in 2002 due to farmers abandoning farms as a result of a prolonged period of low prices. However, interest picked up again in 2003, with 66,300 families involved in pepper growing when the Government provided support and assistance to help farmers to maintain or replenish their farms with new vines. The interest to grow pepper continued to increase and by 2005, it is estimated that 68,000 families will be involved in growing pepper.



Investment in Processing Activities

Investment in downstream activities in the primary pepper producing State of Sarawak is minimal as almost all pepper exporters are family-owned businesses with limited capital. However, there is growing interest in spice grinding, blending and value-added activities in Peninsular Malaysia. There is a small number of family-owned spice millers and blenders, that use pepper for the local market. In Sarawak, most local pepper exporters are equipped with basic cleaning facilities that are able to process pepper up to the Special grade. PMB has facilities to process pepper to the highest grade and operate grinding, sterilising and extraction plants to cater to the growing interest of overseas importers in finished or semi-finished products.



Steam Treatment Plant

There are 70 spice blenders throughout Malaysia, involved in the manufacturing or processing of spice blends, spice mixes, snack foods and other pepper-based products for the local market as well as for export.

Trade Performance

Exports

The export earnings from pepper have been on a declining trend for the past four years. Export earnings declined to RM145.8 million in 2002 from RM187.3 million in 2001. In 2004, the earnings further declined to RM120.2 million from RM123.1 million in 2003. Until May 2005, the export earnings amounted to RM52.9 million (**Table 7**).

Table 7: MALAYSIA PEPPER EXPORTS, 2001-2005

Year	Quantity (Tonnes)	Value (RM Million)
2001	25,508	187.34
2002	22,784	145.75
2003	19,406	123.11
2004	19,682	120.23
2005 (Jan-May)	7,818	52.88

Source: Department of Statistics, Malaysia

In 2004, about 92 per cent of the pepper exported was in the form of whole black and white pepper corns. Other pepper products produced and exported were green pepper in brine and ground pepper. Malaysian pepper was exported to 48 nations worldwide. The major export destinations were Japan (20.4 per cent), followed by Singapore (16.4 per cent), Taiwan (11.2 per cent), the Republic of Korea (ROK) (8.2 per cent), Germany (6.1 per cent) and Spain (six per cent).



Black Pepper Corns



White Pepper Corns

Imports

During the period 2001 to 2004, the total import of pepper increased to 4,394 tonnes valued at RM25.3 million in 2004 from 2,481 tonnes valued at RM17.5 million in 2001. For the period Jan-May 2005, Malaysia's pepper import recorded 2,287 tonnes valued at RM14.7 million (**Table 8**).

Table 8: MALAYSIA PEPPER IMPORTS, 2001-2005

Year	Quantity (Tonnes)	Value (RM Million)
2001	2,481	17.5
2002	2,722	16.4
2003	2,912	18.5
2004	4,394	25.3
2005 (Jan-May)	2,287	14.7

Source: Department of Statistics, Malaysia

Indonesia was the main source for whole pepper, providing 1,958 tonnes or 53.8 per cent of the total import. For ground and green pepper, the PRC was the main supplier, at 101 tonnes in 2001 and 253 tonnes in 2004.

Domestic Consumption

Domestic consumption increased steadily over the past three years. Consumption increased to 2,400 tonnes in 2004 from 1,550 tonnes in 2001. For 2005, it is estimated that the local pepper consumption will be around 2,900 tonnes.

Market Share

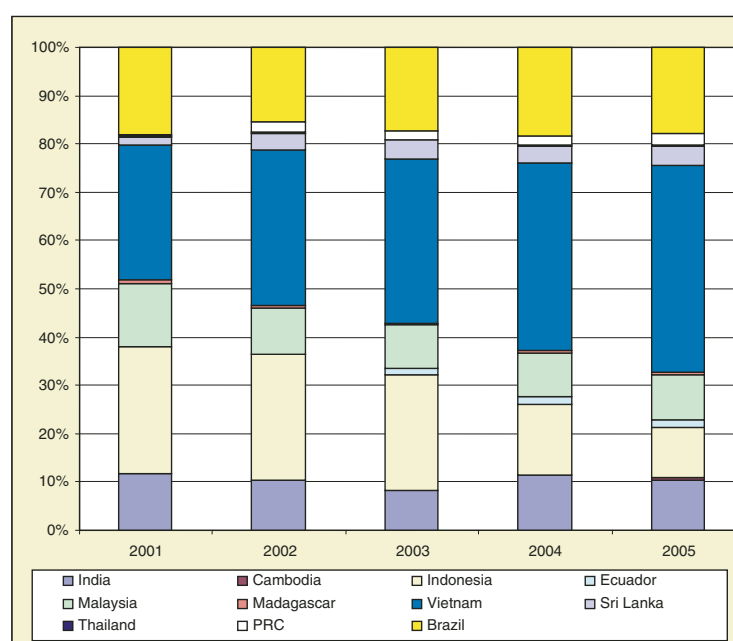
Malaysia's share in the international pepper market has reduced to nine per cent or 19,682 tonnes in 2004 from 13 per cent or 25,508 tonnes in 2001. In 2005, it is estimated that Malaysia's share will be maintained at 9.2 per cent or 18,000 tonnes.

Trade Practices that Impact Malaysia's Exports

Malaysia continues to face new challenges in the form of trade barriers from importing countries as well as competition from lower cost producers and newly emerging pepper producing countries. India imposes a 70 per cent tariff while countries such as the PRC, the ROK and Pakistan impose 20 per cent, eight per cent and 20 per cent import tariffs, in addition to value-added tax of 17 per cent, 10 per cent and 15 per cent respectively.

Developed countries such as the USA, Japan and European Union impose more stringent import procedures and requirements, though their tariffs have been removed or reduced to four per cent. The

Graph 7 : World Pepper Market Share, 2001 - 2005



imposition of the Public Health Security and Bio-terrorism Preparedness and Response Act of 2002 by the USA, which requires the registration of factories and producers, is a case in point. In addition, effective 16 September 2005, all packaging materials must be either heat-treated or fumigated with methyl bromide. Japan has been imposing stringent food safety and health regulations, including traceability for pesticide residues and social standards, which are costly and difficult to implement. Social and Trade movements such as EurepGap and Fair Trade have begun to pervade trade in Europe, demanding technical and social standards, that are costly and often not practical to implement. These non-tariff measures have increased export costs and are difficult to comply with pepper smallholders who lack the technology and financial resources to meet such requirements.

Middle Eastern countries such as Saudi Arabia, Kuwait, Syria, United Arab Emirates (UAE), Egypt and Qatar require shipping documents to be endorsed by their respective embassies before any importation is allowed. As most of the pepper exporters are located in Sarawak and the embassies are all situated in Kuala Lumpur, handling costs have increased considerably and is also time consuming to comply with the documentation requirements.

Malaysian pepper exporters are cautious of commercial risks when entering new markets, and sometimes have to forgo selling in these markets even though they may obtain better prices.

However, to reduce the effect of trade barriers, constructive engagement either on a Government to Government basis or through trade associations of the importing countries will continue to be pursued. MPIC and MITI have undertaken various bilateral, regional and multilateral negotiations such as the Malaysia-Japan Economic Partnership Agreement (EPA), Malaysia-Australia Free Trade Agreement (FTA), and Malaysia-India FTA. From these negotiations, it is hoped that tariff and non-tariff barriers will be reduced and encourage more pepper exports into these countries.

TECHNICAL SUPPORT AND EXTENSION SERVICES

Infrastructure and Logistics

The PMB has branches throughout Sarawak and Johor to provide support services, including extension services, technical advice and support to farmers. The processing facilities in the three centres in Kuching, Sibu and Sarikei are capable of processing pepper to the highest grade.

The Department of Agriculture (DOA), Sarawak, also has offices at every administrative district in the State to provide technical support and extension services to farmers.

Research and Development

At the upstream level, R&D activities carried out by the Agriculture Research Centre of the DOA, Sarawak, are focused on improving productivity and developing improved genotypes for high yielding and disease resistant plants.

At the mid-stream level, efforts are continuously being undertaken to transform pepper berries into products that can be directly used by the industrial market segment, such as food processes.

At the downstream level, PMB has a Product Development Unit that undertakes product formulation, sensory evaluation, product-stability studies and pilot scale trials. The products that have been developed and market-tested include Garlic Pepper, Five Seasons Pepper, Lemon Pepper, Lemon Grass Pepper, Green Pepper Pickles, Green Pepper Sauce, Black Pepper Pickles, Pepper Candy, Pepper Sweets, Pepper Perfume, Green Pepper *Sambal*, Pepper Cookies and Pepper Chocolates. Some of these products have been commercialised and marketed locally.



**Pepper
Research
Centre**

Black Pepper and White Pepper



Green Pepper Pickles



Pepper Perfume



Pepper Candy



Pepper Sweets



Technology Development

PMB, in collaboration with the DOA, Sarawak, has successfully developed simple farm processing machinery such as blowers, threshers, spiral separators and soaking tanks. These machinery have been distributed to qualified pepper farmers to enable them to do farm-level processing in order to upgrade the quality of pepper produced.

In addition, PMB also undertakes process development, such as rapid retting, to shorten the soaking time for processing quality white pepper.



Soaking Tanks



Spiral Separator



Blowers

Financial assistance

The Government, through the DOA, Sarawak, has introduced farm augmentation programmes that include the provision of extension services and supply of selected farm inputs to farmers. PMB provides basic farm facilities such as blowers, threshers, spiral separators and soaking tanks to farmers to increase productivity and improve production. In addition, extension services are also rendered to the farmers on the use of the latest technologies in the pepper industry.

Marketing

On the marketing front, the pepper industry has been successful in penetrating new markets such as Lebanon, Slovenia, Papua New Guinea, Djibouti, Lithuania and Kazakhstan, besides continuing to be a market leader in the Far East region, covering Japan, the ROK and Taiwan.

To further increase the competitiveness of Malaysian pepper, PMB will continue with its efforts in promoting niche products such as the Naturally Clean Black Pepper (NCP) and Creamy White Pepper (CWP) to markets that are able to pay premium prices. These two products have proved to be in high demand in Japan, Europe and the USA.



Black Pepper Sauce



White Pepper Corns

In response to the Government's effort to make Malaysia the *Halal* Food Hub of the ASEAN region, PMB, being the leader in the pepper industry, will endeavour to obtain the *halal* certification and thereafter use it as a selling point for the pepper produced.



Black Pepper Corns

INSTITUTIONAL SUPPORT

DOA, Sarawak assists farmers in the development of upstream activities in the pepper industry, while PMB assists in the development of downstream activities. Both agencies work very closely in the development of the industry, especially in the areas relating to R&D, extension services and activities to enhance the development of the pepper industry. In addition *Bank Pertanian Malaysia* (Agriculture Bank of Malaysia) provides credit facilities to eligible farmers.

Prior to 2004, the development of the pepper industry was under the purview of the Ministry of Agriculture (MOA). However, following the Cabinet reshuffle of April 2004, this function has been transferred to MPIC which now oversees the operations of the PMB.

The pepper industry also receives the support of the Area Farmers' Organisation (AFO), whose offices are located throughout Sarawak. The AFO provides alternative and complementary market outlets for pepper in the rural areas. It also sells fertilisers and other farm inputs to pepper farmers, relieving them from having to travel long distances to sell their pepper or buy inputs for their farms.

ISSUES AND CHALLENGES

High Cost of Production

Continuous increases in the prices of fertilisers, insecticides and pesticides have increased the cost of production of pepper. Malaysia's cost of production is relatively high compared with that of Vietnam and Indonesia. The challenge faced by the Malaysian pepper industry is to maintain its competitive position against low-cost producers. The current low prices of pepper deter farmers from maintaining their farms well, while the good prices of other crops, such as cocoa and rubber, are encouraging farmers to diversify into these crops for better returns. The lack of maintenance has also resulted in low yields of less than two kg per vine per year for black pepper.

Lack of basic facilities and infrastructure

Pepper farms are widely dispersed throughout Sarawak, with the majority located in the interior where infrastructure and facilities are lacking. As pepper is a storable crop, it is the most suitable crop to be cultivated therefore, the challenge is to move these pepper farmers up the value chain.

Vulnerability to Diseases

Pepper vines are highly susceptible to diseases such as *Phytophthora* foot rot, black berry, *Fusarium*, root-knot (caused by *Meloidogyne* spp.), wrinkled leaf (caused by viruses) and pests (weevil, green pepper bug, tinged bug). The challenge is how to overcome the problems posed by these diseases and pests.

Uneconomic farm size

Pepper is a smallholders' crop, with average farm sizes being 0.2 hectares, therefore relatively uneconomic for adoption of new technologies. In addition, the rugged terrain that is suitable for pepper planting is not suitable for mechanisation. These account for the low yield and productivity experienced by the pepper farms.

Low Private Investment

In the primary pepper producing state of Sarawak, there is minimal private investment in the pepper industry, especially in processing for export. Local pepper exporters are mostly family-owned businesses with limited capital resources, thus capital investment for new technology to cater to the changing requirements of importers especially, in the area of safety and health issues, is limited. Furthermore, the pepper industry is also faced with a lack of supporting industries such as packaging, food processing and advertising. Shipping facilities, although currently adequate, are yet to offer competitive rates.

Trade Barriers

With the advent of globalisation and trade liberalisation, the pepper industry is confronted with more challenges in the international front. Although generally there is minimal tariff imposed on pepper, the Malaysian pepper industry continues to face stringent import regulations on food safety and health, import procedures or other social and trade-related restrictions.

Pepper Planted Area



Pepper Vines





Black and White Pepper Seeds

GOVERNMENT POLICY INITIATIVES AND STRATEGIES

In order to overcome stiff competition from lower cost producers, Malaysia is preparing for increasing domestic consumption and production of specialty and value-added products, and increasingly directing sales and exports to industrial end-users. At the upstream level, efforts to increase productivity at farm level, aimed at increasing yield as well as product quality, are on-going. PMB in collaboration with DOA, Sarawak will ensure that these new policy initiatives and strategies are fully implemented.

Sarawak Pepper is well-known worldwide as a high quality product and to preserve its standing, PMB has registered 'Sarawak Pepper' with the Intellectual Property Corporation Malaysia. PMB's grading procedure and laboratory testing facilities have been accredited with ISO 9001:2000 and ISO/IEC 17025 respectively.

The Government, through MPIC and its agencies, and PMB in collaboration with the Sarawak State Ministry

of Modernisation of Agriculture, will continue to provide technical assistance to pepper farmers. In this regard, the cluster farming concept has been introduced, with technical support and assistance as well as processing facilities provided at a central location. Through these efforts, farmers participating in the project can move up the value-chain and thereby increase their income. In 2005, the first cluster-farming project was initiated at the Sg. Asap, Bakun Resettlement Area.

PMB will continue to carry out R&D in downstream activities, including product and process development. In product development, PMB aims to diversify the use of pepper to include both food and non-food sectors, while process development will concentrate on improving the processes to increase the quality of products. In upstream activities, DOA, Sarawak, will continue with its R & D to increase yield and productivity, supported by its extension programmes.

PROSPECTS

There is currently an excess supply of pepper in the world market, causing prices to be depressed. With the Government's support, through the implementation of various programmes to help farmers produce high quality specialty pepper, the Malaysian pepper industry will be able to move away from competing directly with other lower cost producers in the raw material segment of the market to a higher-end market.

DOA, Sarawak, has developed a low cost production package to include aspects of good agricultural practices (GAP) that is able to meet the requirements imposed by importing countries and at the same time reduce the cost of production. These measures will improve the competitiveness of Sarawak Pepper in the world market.

Through the efforts of PMB, premium quality value-added products such as Creamy White Pepper (CWP), Sterilised Pepper (Mikrokleen) and ground pepper are enjoying wide acceptance in the international market. The demand for these products has exceeded the capacity of PMB's processing facilities. New installations are planned in the near future to increase the capacity in an effort towards transforming the export structure from one primarily of raw materials to more value-added or finished products.

Domestic pepper consumption is only about 2,000 tonnes currently, which is very low compared with other producing countries such as India. Programmes have been planned and implemented to increase domestic pepper consumption to 5,000 tonnes by the year 2010. This includes participation in trade fairs, exhibitions and food promotions in collaboration with hotels and restaurants.

The *halal* food market is growing in importance and demand for *halal* food has been on the increase. The Government's efforts to make Malaysia the *Halal* Food Hub of the ASEAN region provides further impetus for the pepper industry, as pepper is naturally a *halal* product.

Economic advancement in the PRC especially in the food processing industry, will provide great potential to the Malaysian pepper industry as demand for pepper and pepper products are expected to increase. The proximity of Malaysia and its traditional trade ties with the PRC is an opportunity yet to be fully tapped. Malaysia is well placed to become a value added and downstream processing centre using home grown inputs and supplemented by imported raw materials.

THE TOBACCO INDUSTRY



THE TOBACCO INDUSTRY

INTRODUCTION

The development of the tobacco industry in Malaysia is regulated and spearheaded by the National Tobacco Board (NTB) through the National Tobacco Board Act 1973. The provision of development and regulatory supporting services, has enabled NTB to successfully develop the tobacco industry into a relatively efficient organised smallholder and socio-economic crop. This has enabled the industry to play an important role in the agricultural and rural development of the country in particular poverty eradication, especially in sandy soil (Bris) or marginal lands that are less suitable for other economic activities.

The main type of tobacco grown in Peninsular Malaysia is Flue Cured tobacco while the Burley tobacco is mainly planted in Sabah. In 2004, the industry contributed about one percent to Malaysia's Gross Domestic Product (GDP).

PERFORMANCE

World Production and Consumption

The main tobacco producing countries are the PRC, which produced 2.4 million tonnes in 2004, followed by Brazil with 0.93 million tonnes, India 0.6 million tonnes, the USA 0.4 million tonnes and Zimbabwe 0.18 million tonnes (**Table 1**).

**Table 1: MAJOR TOBACCO PRODUCING COUNTRIES, 2001-2005
(Tonnes)**

Country	2001	2002	2003	2004e	2005f
PRC	2,349,627	2,446,527	2,257,000	2,400,000	2,200,000
Brazil	568,505	670,309	656,112	928,332	900,000
India	490,000	385,000	595,000	595,000	500,000
USA	449,760	398,520	364,080	400,600	300,000
Zimbabwe	195,905	178,408	180,000	180,000	100,000
Turkey	144,786	152,856	151,860	151,860	100,000
Indonesia	134,379	143,173	135,000	135,000	100,000
Greece	136,490	127,000	121,000	121,000	100,000
Argentina	98,110	125,431	117,779	118,000	90,000
Italy	130,487	122,231	106,250	102,765	90,000

Source: Food and Agricultural Organization (FAO)

e: estimate

f: forecast

In 2004, the major tobacco consuming countries were the PRC with a consumption of 2.22 million tonnes, India 0.49 million tonnes, the USA 0.45 million tonnes, Russia 0.28 million tonnes and Japan 0.14 million tonnes (**Table 2**).

Research Relative to Tobacco (CORESTA) in matters relating to Good Agriculture Practice (GAP), traceability, crop integration, chemical safety and residues, sustainability and other environmental issues.

**Table 2 : TOBACCO CONSUMPTION BY MAJOR CONSUMING COUNTRIES, 2001 – 2005
(Tonnes Dry Weight)**

Country	2001	2002	2003	2004e	2005f
PRC	2,601,350	2,172,206	2,232,047	2,220,320	2,000,000
India	471,947	481,130	488,130	486,230	450,000
USA	473,909	463,190	444,190	450,000	400,000
Russia	308,510	309,300	293,615	280,917	250,000
Japan	152,000	168,950	146,500	144,000	110,000
Indonesia	146,237	137,742	125,930	141,569	120,000

Source: United States Department of Agriculture (USDA)

e: estimate

f: forecast

Development in International Cooperation

Malaysia's commitment to the Framework Convention on Tobacco Control (FCTC) requires that the National Tobacco Board (NTB) work closely with the relevant agencies and organisations for the implementation of tobacco control. This is to ensure the legitimate interests of tobacco growers are adequately protected by national and international policy makers while recognising the socio-economic importance of tobacco in terms of employment, agricultural development and national economic benefits. NTB continues to collaborate with the Cooperation Centre for Scientific

MALAYSIA

The total planted area under tobacco in Malaysia decreased to 12,148 hectares in 2004 from 15,972 hectares in 2001. It is expected to further decrease to 8,500 hectares in 2005 as a result of the restructuring of the tobacco industry in anticipation of the challenges of the ASEAN Free Trade Area (AFTA) Agreement in 2010, which will make the Malaysian tobacco industry relatively uncompetitive, compared with other producing countries.

Tobacco farm



Tobacco production increased to 12.9 million kg in 2004 from 8.3 million kg in 2001. However, in 2005, production is expected to decrease to 9 million kg because of the reduction in planted areas and lower quota allocation.

The yield per hectare for the Individual Grower Curer (IGC) System increased to 1,360 kg/ha in 2004 from 1,102 kg/ha in 2001. However, in 2005, the yield is expected to decrease slightly to 1,290 kg/ha. The yield per hectare for the Curer System (CS) increased to 1,000 kg/ha in 2004 from 763 kg/ha in 2001. It is expected to increase further to 1,171 kg/ha in 2005.

The number of registered farmers and grower curers is expected to reduce to 11,148 families in 2005 from 14,494 families in 2004 as a result of the rationalisation

of the industry, which is expected to see inefficient farmers migrate to other crops or to more remunerative economic activities.

During the 2001-2004 period, the average gross income of IGCS was between RM21, 000 and RM35, 000 per year while that for CS was RM90,000 and RM190,000 per year.

Planted Area

Tobacco is mainly planted in the state of Kelantan, Terengganu, Kedah and Perlis. The expansion of the planted area under tobacco in 2001 and 2002 was due to the additional hectareage planted to replace damaged crops caused by flash floods in the East Coast of Peninsular Malaysia during the period 1997 to 1999

Table 3: MAJOR ACHIEVEMENTS IN UPSTREAM ACTIVITIES, 2001 – 2005

ITEMS	2001	2002	2003	2004	2005e
Planted Area Under Tobacco (hectareage)	15,972	14,390	13,037	12,148	8,520
Production (Million kg.)	8.3	11.	11.7	12.9	9.4
Productivity: Yield per Hectare (kg/hectare)					
• Individual Grower Curer System	1,102	1,152	1,259	1,360	1,290
• Curer System	763	853	960	1,000	1,171
Cost of Production (RM/kg)					
• Individual Grower Curer System	7.93	7.63	7.32	7.26	7.10
• Curer System	13.08	13.00	12.54	12.51	12.45
Registered Farmers and Grower Curer (families)	20,870	18,481	16,912	14,494	11,148
Average Gross Income (RM/year)					
• Individual Grower Curer System	22,660	27,200	30,800	35,000	21,000
• Curer System	99,292	102,800	129,000	190,000	135,000

Source: NTB
e: estimate

**Table 4 : MALAYSIAN FLUE CURED TOBACCO (MFCT) BY STATE, 2001 – 2005
(Hactares)**

Year	Kelantan	Terengganu	Pahang	Kedah/Perlis	Melaka/Negeri Sembilan/ Johor/ Perak	Total
2001	11,479	3,184	69	1,121	119	15,972
2002	9,843	2,883	122	1,384	159	14,390
2003	8,806	2,478	100	1,570	125	13,037
2004	7,977	2,337	126	1,544	164	12,148
2005e	5,580	1,752	87	1,024	77	8,520

Source: NTB
e: estimate

(Table 4).

There are three major manufacturers, under the supervision of NTB involved in the growing of Burley tobacco in Sabah. The planted area under Burley tobacco had decreased to 1,132 hectares in 2004 from 1,888 hectares in 2002. It is expected to decrease further to 1,155 hectares in 2005 (Table 5).

Table 5: BURLEY TOBACCO IN SABAH, 2001 - 2005
(Hectares)

State	2001	2002	2003	2004	2005e
Sabah	832	1,888	1,308	1,132	1,155

Source: NTB
e: estimate

Production

The production of tobacco in the country is mainly geared to meet the demand of multinational cigarette manufacturers. The production of cured leaf increased to 12.86 million kg in 2004 from 11.69 million kg in 2003, the highest level achieved in the last 15 years as a result of the systematic consolidation programme and the implementation GAP in tobacco growing. In 2005, demand and production are expected to decline because of tobacco taxes and price hikes that affect the cigarette market.

Table 6: MFCT QUOTA AND PRODUCTION, 2001 - 2005
(Million Kg)

Year	Quota	Production
2001	15.10	8.30
2002	15.10	11.30
2003	13.00	11.69
2004	13.25	12.86
2005e	10.19	9.40

Source: NTB
e: estimate

Yield and Quality of Leaf

The yield per hectare improved to 1,168 kg/ha in 2004 from 936 kg/ha in 2001. The quality of leaf has been maintained consistently high during the period. This reflects good agricultural practices, aided by good



Burley Tobacco in Sabah

weather conditions (Table 7).

Table 7: YIELD AND QUALITY OF LEAF, 2001 - 2005

Year	Yield (Kg./ha)	Quality (%)		
		High	Medium	Low
2001	936	63.61	19.53	16.86
2002	947	66.22	19.04	14.74
2003	1,075	64.12	18.56	17.32
2004	1,168	69.42	15.64	14.94
2005e	1,207	73.00	14.00	13.00

Source: NTB
e: estimate

Market and Price

The market for tobacco leaf is guaranteed as production is based on demand specified by cigarette manufacturers. The prices are fixed, based on the grade structure agreed to by the cigarette manufacturers. Uncured tobacco prices ranged from RM0.25 per kg to RM0.90 per kg and for cured tobacco, RM4 per kg to RM16.80 per kg. The average price for uncured tobacco in 2004 was RM0.79 per kg and for cured tobacco, RM14.02 per kg. The average price of uncured and cured tobacco for the 2001-2005 period is shown in Table 8.



Curing Tobacco Leaves

Table 8: AVERAGE PRICE OF UNCURED AND CURED LEAF, 2001 – 2005 (RM-Kg)

Year	Average Price	
	Uncured Leaf	Cured Leaf
2001	0.82	13.79
2002	0.81	13.87
2003	0.81	13.69
2004	0.79	14.02
2005e	0.82	14.18

Source: NTB
e: estimate

Employment

The industry provides employment to more than 150,000 people, comprising farmers, workers in curing stations, in upstream and downstream activities and related activities. In 2004, the total employment in the industry increased to 188,575 from 167,899 in 2001. The number of IGC grew significantly to 13,930 in 2004 from 5,904 in 2001 and is expected to grow further to accelerate the restructuring plan of the tobacco industry (Table 9).

Employment in the tobacco industry is expected to decrease as unproductive farmers and curers leave the



Harvesting Tobacco Leafs

industry as a result of restructuring plans and Government commitments to FCTC. The number employed is small, compared with employment in other industries, such as oil palm and rubber, but the tobacco industry has a disproportionate effect on the local economy since the flow of the money is direct to the local population.

Profile of the Tobacco – Based Industry

Cigarette manufacturing in Malaysia started in the 1920s. As production increased, demand for local leaves grew and encouraged foreign investors to establish cigarette-manufacturing factories in Malaysia. To date, there are three major cigarette manufacturing companies, namely British American

Table 9: EMPLOYMENT IN TOBACCO INDUSTRY, 2001 – 2005

Item	2001	2002	2003	2004	2005e
Number of Workers in Upstream Activities					
Farmers	56,718	48,603	72,899	66,310	40,000
Curing Station Workers	17,632	16,201	12,076	10,175	8,000
Individual Grower Curers (IGC)	5,904	11,400	11,545	13,930	14,000
Curers	1,735	1,740	1,500	1,460	1,400
Pesticide/Fertilizer Suppliers	380	500	500	500	500
Total	82,369	78,444	98,520	92,375	63,900
Number of Workers in Downstream Activities					
Cigarette Distributors	130	130	160	200	200
Factory Workers	3,000	3,000	3,163	3,000	3,000
Retailers	78,400	78,400	93,000	90,000	90,000
Management & Administration	4,000	4,000	2,245	3,000	3,000
Total	85,530	85,530	98,538	96,200	96,200
Total Employment	167,899	163,937	197,058	188,575	160,100

Source: Confederation of Malaysian Tobacco Manufacturers (CMTM)/ NTB
e: estimate

Tobacco (BAT), JT International (JTI) and Phillip Morris Malaysia (PMM). Together, they form the Confederation of Malaysian Tobacco Manufacturers (CMTM), which was established in 1980 as the Advisory Council of Malaysian Tobacco Manufacturers. Most of the local leaf produced is purchased by the CMTM members for use in the manufacture of cigarettes. The manufacturers also use imported tobacco to cater to the specific quality and flavour requirement of the different cigarette brands.

Trade Performance

During the 2001-2005 period, an average of 20 billion sticks of cigarettes per year were sold to two million consumers nationwide at an average retail value of RM2.8 billion a year (Table 10).

Table 10: SALES OF CIGARETTES, 2001 – 2005

Year	Sales (billion sticks)	Value (RM Billion)
2001	19.9	2.43
2002	19.9	2.44
2003	21.1	2.52
2004	21.3	2.54
2005e	20.0	4.00

Source: Confederation of Malaysian Tobacco Manufacturers (CMTM)/ Small Cigarette Manufacturers/NTB
e: estimate

Import and export

Malaysia imports 30 per cent of its tobacco needs annually. The imported tobacco is blended with the local tobacco to make cigarettes that are sold in the local market. During the 2001-2005 period, the average volume of imported tobacco for local blending was 5.54 million kg/year (Table 11).

Table 11: VOLUME OF IMPORTED TOBACCO FOR LOCAL BLENDING, 2001 - 2005 (Million Kg)

Year	Volume
2001	6.83
2002	6.49
2003	5.35
2004	5.01
2005e	4.02

Source: CMTM/Department of Statistics (DOS)
e: estimate

Malaysia exports a substantial amount of cigarettes and tobacco products to various regions of the world. The export value of tobacco products for the past five years amounted to RM4.2 billion (Table 12).



Tobacco curing process



Cured leaves



Curing Barn

**Table 12: EXPORT VALUE OF TOBACCO PRODUCTS, 2001 – 2005
(RM Million)**

Year	RM Million
2001	749.02
2002	946.59
2003	850.23
2004	819.05
2005e	800.00

Source: Department of Statistics (DOS)
e: estimate

New Policies and Developments Affecting Trade

The full implementation of AFTA in 2010 will affect local tobacco production as companies source raw materials from neighbouring low-cost producing countries. This will be the main threat to the development of Malaysia's tobacco industry.

The Government's commitment to FCTC has resulted in stricter tobacco control regulations and anti-smoking campaigns such as "Tak Nak". In helping the Government to meet this commitment, NTB has been progressively reducing the production quota for the coming years. This will result in declining trade in Malaysian tobacco in the future.

TECHNICAL SUPPORT AND EXTENSION SERVICES

NTB has been providing and coordinating technical support in areas of R & D, mechanisation, adoption of GAP and marketing to the farmers as well as IGC and curers. In areas affected by annual floods, extension services are provided to identify new areas for planting, improve the drainage system as well as provide financial assistance to the affected farmers. NTB, in collaboration with other the ministries and agencies, encourages the development of Large Scale Grower Curer (LSGC) through consolidating and merging of independent curers.

Transfer of Technology

The development of IGC and LSGC requires adoption of the most efficient, cost-saving and modern farming and curing technology to enhance the competitiveness of the target groups.

The Loose Leaf Barn was introduced in 2001 and is well accepted by curers, LSGC and IGC. NTB in collaboration with the Malaysian Agricultural Research and Development Institute (MARDI) and cigarette manufacturers has introduced a new barn model known as the Tobacco Oil Procom Block (TOPB), the model adopted from the Republic of Korea (ROK). The barn has been tested and is being used at the Tobacco Training Centre in Kelantan.





***Tobacco
Barn***



Boiler System for curing leaf



Mechanisation

High labour cost and the shortage of labour for the tobacco industry are among the future challenges of the industry. The current labour requirement of 1,600 man-hours to manage one hectare of tobacco can be reduced to less than 1,000 man-hours through mechanisation. NTB has taken the initiative to modify a number of agricultural tools and machinery such as the backhoe loader, multipurpose tractor, pesticide sprayer, power tiller, topping and de-suckering machine, bulk curer and harvester. The existing irrigation system has also been improved.

Agronomic Practices

NTB has upgraded its agronomic services to undertake local adaptation and large-scale verification trials,

together with cigarette manufacturers, to shorten the development and adoption process for new technology.

Tobacco farmers have been given the necessary assistance to adopt GAP, which include the introduction of the float bed technique for seedlings, utilisation of new varieties, fertiliser formulation and use of chemicals for pest and disease management.

Seedlings Programme

NTB has been conducting a seedling production programme since 1978 to provide higher quality seeds to farmers. During the 2001 – 2005 period, NTB produced 1,942.6kg of tobacco seeds, comprising local and foreign hybrid varieties. The seedling programme will continue to ensure sufficient supply of seeds to farmers for the continuous improvement and development of the tobacco industry.

**Table 13: PRODUCTION OF SEEDS,
2001 – 2005**

Year	Seed Variety	Production (kg)
2001	TAPM 26	609.00
2002	TAPM 26	493.00
	TAPM 36	151.60
2003	TAPM 26	127.40
	TAPM 13	51.00
2004	TAPM 26	390.60
2005	TAPM 26	121.00
TOTAL		1,942.60

Source: NTB

Research and Development

NTB has been collaborating with MARDI and the private sector to carry out R&D activities, mainly into the production of seedlings, production cycle, planting and curing technologies. These have resulted in the production of better quality and healthy seedlings as well as shorter production cycles.



Tobacco seedlings

Marketing

The marketing of cured tobacco is carried out solely by the 22 marketing centres managed by NTB. These centres provide the outlet for curers and IGCs to market their products to designated manufacturers and NTB's staff are stationed as classifiers and to act as arbitrators in the event of any dispute. Controls on suspicious (smuggled) products have been adopted to ensure the smooth flow of the marketing process.



Leafs ready for sale

INSTITUTIONAL SUPPORT

Labour Training and Development

NTB, together with MARDI and institutions from the private sector, conduct training programmes to improve the technical skills and knowledge of farmers, IGCs and curers. Between 2001 and 2005, NTB conducted 89 courses involving 7,481 farmers, IGCs and curers.

Crop Integration Joint Committees

A Crop Integration Joint Committee comprising representatives from MARDI, the Agriculture Department and the Federal Agricultural Marketing Authority (FAMA) has been established to assist farmers, curers and grower curers in generating new income from other cash crops. The Committee has identified suitable crops to be planted or integrated with tobacco, provides training, and financial support and also develops technical guidelines.

NTB is also involved in the Special Cabinet Committee which focuses on income and productivity improvement for tobacco smallholders. The committee makes policy decisions and allocates funds to assist tobacco smallholders to improve productivity and income.

ISSUES AND CHALLENGES

Cost of Production

The production cost of tobacco in Malaysia is relatively high compared with ASEAN and other tobacco producing countries. This is due to the predominantly curer system of production that involves the buying of uncured tobacco for curing and subsequently selling the cured tobacco to the manufacturers. The curer production system is not cost-effective, as it involves two tiers of producers, each expecting profits for labour, input and management and have different expectations and perception of quality. The IGC system is more efficient, where the farmers grow and cure their own tobacco and are responsible for the quality of the final product.

Planted Areas

The current small and scattered planted areas lack economies of scale, low productivity and high cost of production. There is a need for small tobacco growing areas to be consolidated for economies of scale, increased productivity and to facilitate the provision of adequate and efficient infrastructure. These measures will lower the cost of production and make tobacco farming more competitive.

Quality and Yield

The quality of local tobacco is still considered “filler” and at best semi-flavoured because of climatic conditions. The target is to produce semi- flavoured tobacco. The current yield of semi-flavoured tobacco is 1,500 kg/ha from the grower curer system which uses high yielding varieties such as TAPM 26 and other hybrids. In selected suitable areas, which are equipped with proper infrastructure, the TAPM 26 variety can yield more than 2,000kg/ha. The challenges will be in choosing the best seeds, efficient land management and supporting services to increase the production of semi- flavoured tobacco.

GOVERNMENT POLICY INITIATIVES AND STRATEGIES

Malaysia is a signatory to FCTC. Stricter control measures that have since been introduced have boosted the ‘Tak Nak’ anti-smoking campaign and



*R&D for
Tobacco
seedlings*

Tobacco farm



brought about the implementation of new tobacco control regulations. In adhering to this commitment, NTB has reduced the production quota for the years to come. The reduction in the production quota has consequently affected local farmers, IGCs and curers who are totally dependent on tobacco for their livelihood.

The tobacco integration programme has been introduced to provide alternative income for tobacco farmers, IGCs and curers who have been displaced as result of the quota reduction. This is in line with the Government's efforts to replace tobacco with alternative crops. However, tobacco will be planted until a sustainable crop that provides equivalent income, provides market stability and allows for a similar planting scale can be found.

The Government's commitment to AFTA and globalisation make it necessary for the tobacco industry to restructure for efficiency and competitiveness. Hence, efforts to enhance its competitive edge are now being seriously taken by NTB with the introduction of a Tobacco Industry



Tobacco farm visit

Restructuring Plan (TIRP). Through TIRP, there is the transformation of the production system from the current less efficient two-tiered curer production system to the more efficient integrated grower curer production has been implemented.

Tobacco Industry Restructuring Plan

The survival of the tobacco industry is heavily dependent on its ability to compete in the more liberal open market. As a result of this, TIRP has been developed and executed in two phases. Under the first phase, the tobacco production structure is being changed from the traditional curer system to a more competitive system. This system could be the saviour for Bumiputera smallholders in the rural areas, particularly those in Kelantan, Terengganu, Kedah, and Perlis, as they will face a greater threat when the tobacco market is liberalised. Nine other programmes

were also implemented during the first phase of TIRP, namely Development of Smallholder Grower Curers, Development of Big Grower Curers, Transfer of Technology, Research and Development, Drainage and Irrigation, Mechanisation, Soil Improvement, Large Scale Tobacco Growing and Crop Integration.

The second phase of TIRP began in 2004, with improvements and the introduction of new elements. The Crop Integration Joint Committee was established to assist tobacco curers and smallholders displaced as a consequence of the restructuring policy and the Government's commitment to FCTC.

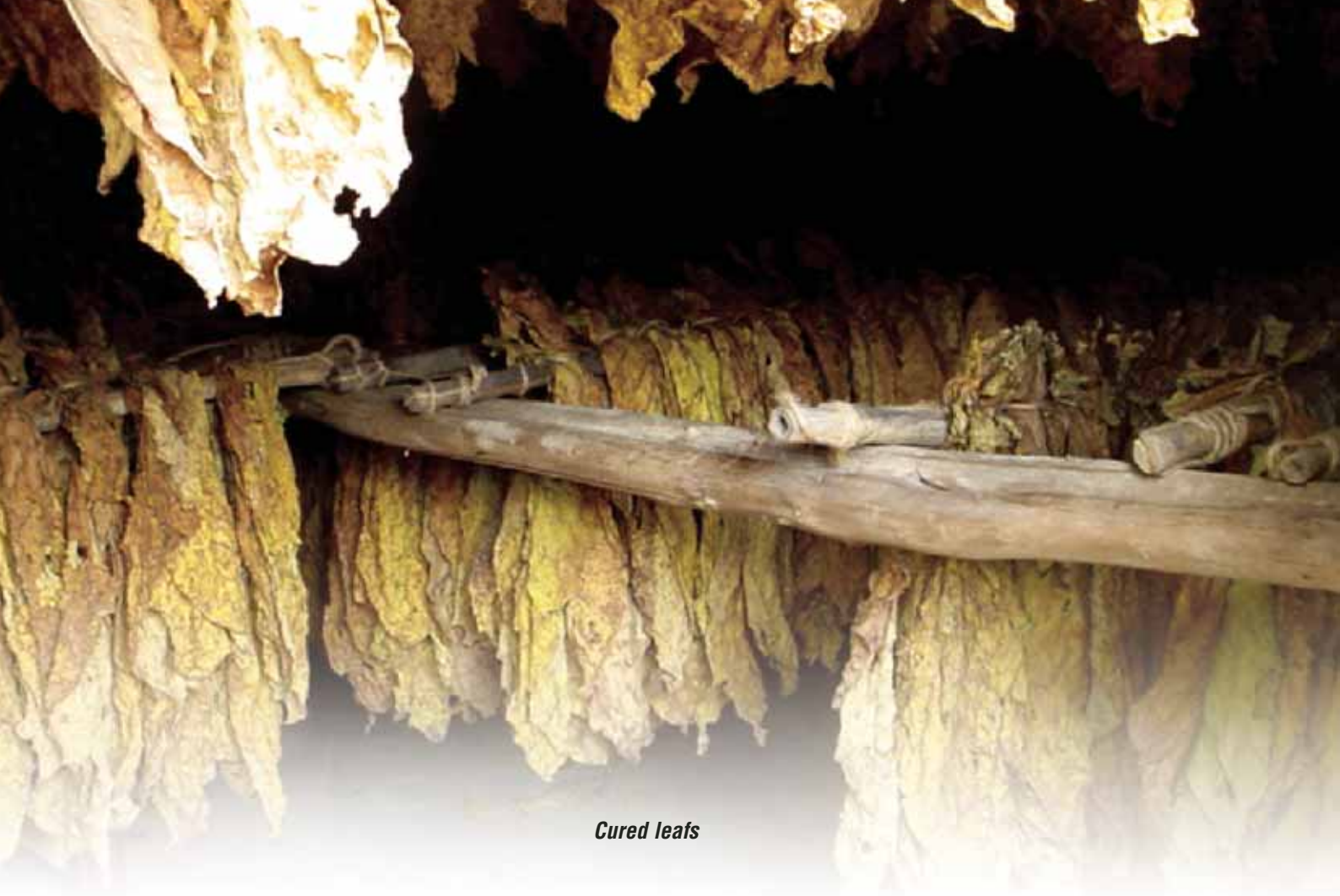
The restructuring plan encountered problems with curers and small holders, who were unable to sustain and preferred to withdraw from the industry due to various reasons such as lack of production resources and management problems. The plan would also need to take cognisance of the Bumiputera equity element, which would have social, economic as well as political implications. Thus, the Curers Restructuring Promotion Scheme (CRPS) was formulated during the second phase of TIRP to facilitate the exit of the less-efficient curers, with new entrants encouraged to use the vacated curing facilities at lower entry cost. Incentives have been given in the form of soft loans, infrastructure and other financial packages to ensure the sustainability of the industry

Individual Grower Curer Programme

NTB plans to develop at least 3,000 Individual Grower Curers (IGCs). To date, 2,800 IGCs have been developed. The number of IGCs could be increased through a modification of the programme, either by group or in-situ farming in areas where LSGC is absent. IGCs can be allowed to have bigger production quotas in view of their efficiency and economies of scale, as this would enable them to increase their production and yields.



Pest control



Cured leaves

Development of Grower Curers System

The existing curers and LSGC have to be integrated backwards to develop and manage their own tobacco estates in the Grower Curer (GC) system with a potential reduction in cost to around RM7/kg. The GC system is a newly structured model that provides options to establish joint ventures with commercial growers based on profit-sharing or 'toll curer', where curers provide curing facilities to farmers. If it is more efficient, the selling of cured leaves can be done by the farmers themselves or by the curers.

Integration of Tobacco with Other Crops

In line with the principles of crop diversification and rotation in agricultural development, tobacco growing must not be seen as a single crop in terms of cost, income and activity. It should be grown as one of the crops in which the IGC, LSGC and GC have to diversify and rotate with other crops or integrate other viable economic crops with tobacco growing to supplement their income. Optimisation and full utilisation of capital equipment and labour force will help to reduce cost. Income could be obtained from two or more crops, of

which at least one would be tobacco and the others preferably cereal crops. Recently, NTB launched the crop integration programme, which involves potential crops like kenaf, sweet corn and paddy. Further research will be conducted in determining the cost and benefits of these crops as well as value-added processing activities.

Agro – Forestry Programme

As the supply of rubber wood (which is widely used in the curing process) is expected to become more acute in the future, the industry should pursue the possibility of using wood from sustainable agro-forestry projects, especially undersized wood or varieties unsuitable for other purposes. NTB has successfully planted wood fuel species, for example the acacia tree, in specific areas of the Agricultural Industrial Park Project in Setiu, Terengganu, and the Air Tawar Project in Kelantan. This project could provide an income source where the wood produced could be used as a sustainable fuel to replace rubber wood and be replicated elsewhere. In addition, these parks have been fully utilised for other projects to provide additional sources of income for tobacco farmers, including herb growing.

Mixed Farming Programme

In addition to crop rotation, NTB has also developed mixed farming, together with training programmes for farmers to rear goats, cattle and fish. This plan is crucial in determining future additional income for tobacco farmers and the market for it, needs to be identified. Prospects for this plan are seen as profitable and it could penetrate the local farm products market as well.

Framework Convention on Tobacco Control, Trade, Environmental, Genetically-Modified Organisms and Other Issues

As tobacco is a sensitive crop, the tobacco industry must take cognisance of FCTC requirements, environmental concerns, GMO, traceability, safety and other issues raised domestically or internationally. These will be reflected through controlling and monitoring the flow of tobacco and tobacco products, use of good agricultural chemicals and fertilisers, efficient use of renewable sources of energy for curing, selection of tobacco varieties that are not genetically modified and, related issues. These issues would be coordinated with other trade practices, which are AFTA and WTO-consistent, while at the same time safeguarding domestic socio-economic interests.



Kenaf Planting



Cattle rearing

PROSPECTS AND FUTURE DIRECTION

Taking cognisance of the Government's policies towards smoking and its commitment with FCTC that will reduce the tobacco quota allocation, the thrust for the future must be consolidation for efficiency and competitiveness. Crop integration should be encouraged to diversify and maximise farm income until a sustainable equivalent crop, with respect to income, market, scale and price stability, is identified. Collaboration with agricultural agencies and businesses will be established to provide sustainable incomes to the farmers, IGCs and curers through crop integration programmes.

Implementation of the integrated grower curers production system will be the main priority, as this system will allow for cooperation among farmers, curers and IGCs to achieve production targets.

The second phase of TIRP is also the main focus for NTB in coping with the challenges of globalization. It is hoped that the Curers Restructuring Promotion Scheme will benefit curers in solving their financial problems and assist them in developing into more competitive entrepreneurs.



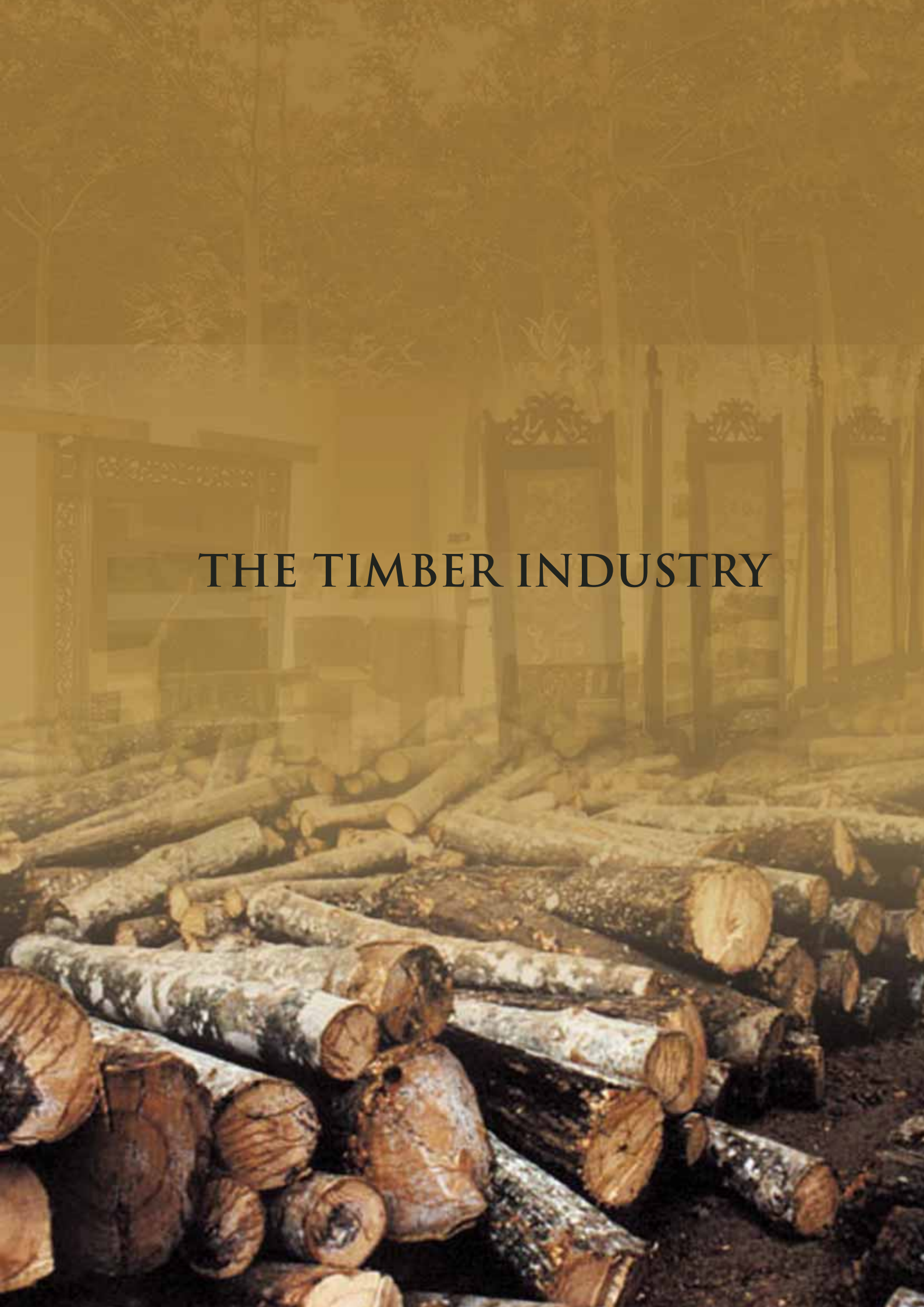
Kenaf as rotation crops

Crop integration activities will be widened to more economically viable crops such as kenaf, sweet corn, sweet potato and paddy. Research into the viability and competitiveness of these crops will be enhanced to find suitable crops for tobacco farmers, IGCs and curers. As for the progress of the crop integration programme, NTB has worked closely with few companies that are keen to invest in large scale production of fibre and animal feed from kenaf. In addition, based on the crop integration programmes, NTB will also identify secure markets for products from crop integration activities and develop more cash crop projects.

The challenge for the years to come is to lower the cost of production for tobacco and increase the tobacco leaf quality in order to compete with other lower-cost producers from ASEAN as well as to find suitable, profitable and sustainable crops that can be integrated with tobacco. Rapid progress will have to be made as the restrictions against tobacco imports in the AFTA region take full effect in 2010.

Green leaf



A sepia-toned photograph of a lumber mill. In the foreground, a large pile of cut logs is stacked haphazardly. The logs show various wood grain patterns and some bark. In the background, several tall, ornate wooden structures, likely part of the mill's machinery, rise up. The entire image has a warm, brownish-gold tint, giving it a historical or vintage feel.

THE TIMBER INDUSTRY

TIMBER INDUSTRY

INTRODUCTION

The Malaysian timber industry continues to contribute significantly to the nation's economic growth through revenue earning and employment. In 2004, the forestry sector, together with the fishing, and livestock sectors, contributed about 8.3 per cent to the GDP and provided employment to about 300,000 people.

The export performance of the timber industry recorded high growth during the 2001 to 2004 period. The export of timber and timber products increased to RM19.8 billion in 2004 from RM14.3 billion in 2001, with an average annual growth of 12 per cent. The plywood and furniture industries recorded the highest performance in 2004.

Being export-oriented, the timber industry is constantly subjected to the dynamics of the international market. The industry is now facing mounting challenges of declining raw material supply, labour shortage, escalating costs of production and intense competition from low-cost producers such as the PRC and Vietnam. Trade liberalisation, meanwhile, has brought about new challenges and opportunities to the timber industry. The increasing demand for Sustainable Forest Management (SFM), proof of legality of timber supply and environmental protection has added to the growing requirements to the timber trade in world markets.

PERFORMANCE

World Timber Supply

Global industrial log production in 2004 was 1.6 billion cubic metres, which rose 6.7 per cent from 1.5 billion cubic metres in 2001. Coniferous logs constituted 63 per cent while non-coniferous logs contributed 37 per cent of production. North and Central America, the largest log producing region, supplied almost 39 per cent of global production. The USA produced about 26 per cent while the Canadian output amounted to 12 per cent.

Currently, supply from plantation production is estimated to be around 12 per cent of the world's total supply of logs. In the Oceania region, 80 per cent of industrial logs is grown in plantations. Other regions such as Africa (35 per cent), South America (27 per cent) and Asia (23 per cent) also have sizeable proportions of industrial logs produced from plantations. Production from plantations in several countries such as Australia, New Zealand, Chile, the PRC, Japan and South Africa has grown substantially.

In 2004, world sawntimber output increased to 409 million cubic metres, an increase of 7.9 per cent from 379 million cubic metres in 2001. The USA, the biggest producer, supplied 21 per cent while Canada and Russia together accounted for 20 per cent of the world's production.

Global production of veneer increased by 36 per cent to 11.4 million cubic metres in 2004 compared with 8.4 million cubic metres in 2001. The PRC, the largest producer of veneer, contributed about 26 per cent or three million cubic metres of total production.

In 2004, production of plywood was about 68.8 million cubic metres, which is an increase of 27 per cent compared with 2001. Both the PRC and the USA were the biggest plywood producers, contributing 21.8 million cubic metres (32 per cent) and 14.9 million cubic metres (22 per cent) to total production, respectively.

Production of major tropical timber products by the International Tropical Timber Organisation (ITTO) member countries totalled 197 million cubic metres in 2004, an increase of one per cent from 195 million cubic metres in 2001.

Production of tropical industrial logs in 2004 by ITTO member countries totalled 135 million cubic metres, of which Indonesia and Brazil contributed 30 million cubic metres (22.2 per cent) and 29.7 million cubic metres (22 per cent) respectively.

Production of tropical sawntimber totalled 44 million cubic metres in 2004, an increase of 3.3 per cent from 42 million cubic metres in 2001. Brazil, the largest producer, contributed 15 million cubic metres or 34 per cent of global production.

The production of tropical veneer in 2004 totalled 2.7 million cubic metres, an increase of 17 per cent from 2001. Malaysia, the largest producer, contributed 25 per cent or 0.68 million cubic metres.

Production of tropical plywood in 2004 totalled 15.4 million cubic metres, registering a slight increase of 1.9 per cent from 2001. Indonesia, the largest producer, contributed 6.4 million cubic metres or 42 per cent followed by Malaysia with 4.7 million cubic metres (31 per cent).

World Demand For Timber

The global consumption of timber in 2004 totalled 250 million cubic metres. The bulk of the timber consumed was sawntimber, which accounted for 127 million cubic metres or 51 per cent of global consumption, followed by logs which amounted to 123 million cubic metres or 49 per cent of world consumption. Wood-based panels constituted the remaining share at 72 million cubic metres.

The global export of industrial logs in 2004 totalled 119 million cubic metres, an increase of 7.2 per cent from 2001. Russia, the largest exporter, contributed 41.5 million cubic metres or 35 per cent, followed by the USA with 10.4 million cubic metres.

Exports of global sawntimber increased by 14 per cent in 2004 with a total volume of 127 million cubic metres compared with 2001. Canada, the largest exporter, contributed 32 per cent or 41 million cubic metres.

In 2004, according to the Food and Agriculture Organisation (FAO), total veneer exported was 4.9 million cubic metres, recording an increase of 26 per cent over 2001. The USA, the biggest exporter, contributed 1.2 million cubic metres or 24 per cent of total exports.

The global export of plywood in 2004 totalled 21.8 million cubic metres, an increase of 12 per cent from 19.5 million cubic metres in 2001. Most of the exports came from the Asia-Pacific region, with Indonesia as the biggest exporter contributing five million cubic metres (23 per cent) followed by Malaysia with 3.9 million cubic metres (18 per cent) of the total.

ITTO member countries exported 12.3 million cubic metres of tropical logs in 2004, a decline of 25 per cent from 16.3 million cubic metres in 2001. Malaysia, the biggest exporter, contributed 5.2 million cubic metres or 42 per cent of the ITTO total.

Tropical sawntimber exports decreased by 7.9 per cent to 8.1 million cubic metres in 2004, from 8.8 million cubic metres in 2001. Malaysia contributed three million cubic metres while Indonesia exported 0.1 million cubic metres of the total exported, before the ban on exports of sawntimber was imposed in September 2004.

Tropical veneer exports declined by 28 per cent in 2004 to 0.87 million cubic metres compared with 1.2 million cubic metres in 2001. The Asia-Pacific region, the biggest exporter, contributed 0.41 million cubic metres (47 per cent) followed by Malaysia with 0.38 million cubic metres and Africa 0.36 million cubic metres.

Tropical plywood exports in 2004 increased by 7.5 per cent to 11.4 million cubic metres compared with 10.6 million cubic metres in 2001. Indonesia, the largest exporter, in 2004, contributed 5.5 million cubic metres followed by the PRC with 4.4 million cubic metres an increase from the four million cubic metres supplied in 2003. Malaysia's exports totalled 4.3 million cubic metres.

MALAYSIA

The timber industry has expanded towards the manufacture of higher value-added products such as mouldings, joinery and furniture in tandem with the growing global demand for these products. This expansion meets the objectives of the Second Industrial Master Plan (IMP II), which emphasised

further industrialisation through the development of downstream value-added products.

In 2004, the number of processing mills in the timber sector totalled 4,468. The industry is dominated by furniture and woodworking mills (2,321), followed by sawmills (1,081), moulding mills (356) and kiln drying plants (246) (**Table 7.1**).

Production of Timber

Total production of major timber products reached 32.8 million cubic metres in 2004, registering an increase of 13 per cent from 29 million cubic metres in 2001. Of this, production of logs totalled 22 million cubic metres, sawntimber 4.8 million cubic metres, plywood 4.9 million cubic metres, mouldings 533,000 cubic metres and veneer 485,000 cubic metres (**Table 7.2**). (Refer Table 7.2)

Table 7.1 : MALAYSIA-NUMBER OF WOOD – BASED MILLS IN 2004

Mills	Peninsular Malaysia	Sabah	Sarawak	Total
Total	2,982	726	760	4,468
Sawn Timber	657	178	246	1,081
Plywood/Veneer	52	67	55	174
Mouldings	173	157	26	356
Chipboard	12	3	1	16
Pulp & Paper	0	1	0	1
Furniture & Wood-working Mills	1,756	200	365	2,321
Laminated Board	34	0	12	46
Woodchips	6	5	4	15
Parquet	26	0	1	27
Prefabricated Houses	10	0	0	10
Matches	2	1	0	3
Pencils	3	0	0	3
Kiln Drying	125	74	47	246
Wood Preservation	118	39	0	157
MDF	8	1	3	12

Sources: Forestry Department, Peninsular Malaysia,
Forestry Department, Sabah,
Forestry Department, Sarawak,
Sarawak Timber Industry Development Corporation

INVESTMENT

In terms of resource-based investment, wood and wood products including furniture and fixtures contributed 14 per cent of the total investment of RM1.2 billion in 2004. A total of 100 wood-based manufacturing projects were approved by the Malaysian Industrial Development Authority (MIDA) under the Industrial Coordination Act (ICA) 1976 Act involving proposed capital investments of RM1.2 billion. Foreign investments amounted to RM338 million while domestic investment totalled RM903

million. These investments are expected to generate employment for 12,618 people.

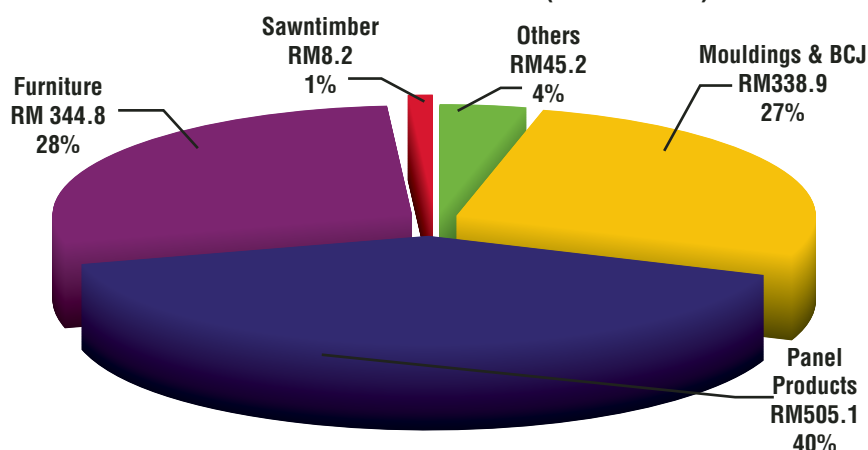
In 2004, 44 projects were approved for the wood and wood products industry with total investments of RM897.5 million, registering a decline of 17 per cent from RM1.1 billion in 2003. A total of 22 were new projects, while the remainder were for expansion/diversification. Domestic investments amounted to RM661.4 million (73.6 per cent), while foreign investments totalled RM236 million. There were 14 projects involving Malaysian majority-owned companies.

Table 7.2: MALAYSIA-PRODUCTION OF MAJOR TIMBER PRODUCTS, 2001-2004
(' 000 Cubic Meters)

Products	2001	2002	2003	2004
Logs	19,172	20,649	21,531	22,040
Peninsular Malaysia	4,155	4,358	4,419	4,573
Sarawak	12,179	11,855	12,153	12,051
Sabah	2,838	4,436	4,959	5,416
Sawntimber	4,696	4,722	4,769	4,832
Peninsular Malaysia	2,996	2,938	2,928	3,200
Sarawak	1,140	1,218	1,291	1,011
Sabah	560	566	550	621
Plywood	4,298	4,517	4,751	4,943
Peninsular Malaysia	534	523	504	516
Sarawak	2,689	2,877	3,066	3,062
Sabah	1,075	1,117	1,181	1,365
Veneer	649	763	643	485
Peninsular Malaysia	147	150	128	117
Sarawak	303	403	308	169
Sabah	199	210	207	199
Moulding	238	439	442	533
Peninsular Malaysia	0	148	133	218
Sarawak	35	23	25	21
Sabah	203	268	284	294
TOTAL	29,053	31,090	32,136	32,833

Source: Forestry Department, Peninsular Malaysia,
Forestry Department, Sabah,
Forestry Department, Sarawak,
Sarawak Timber Industry Development Corporation

Chart 7.1: MALAYSIA-PROJECTS APPROVED FOR WOOD AND WOOD PRODUCTS IN 2004 (RM Million)



Source: MIDA

The biggest investments approved were in the panel products sub-sector (RM505.1 million), followed by mouldings and Builders' Carpentry and Joinery (BCJ) (RM38.9 million). Twelve companies were approved for expansion/diversification to produce panel products for export. These projects reflect a move towards higher value-added and engineered wood products.

For the furniture and fixtures sub-sector, 56 projects were approved with investments totalling RM344.8 million in 2004 compared with 49 projects (RM312.5 million) in 2003. Domestic investments contributed to RM241.3 million or 70 per cent of the total. Of this, 31 were new projects, with investments of RM199.3 million and 25 expansion/diversification projects amounting to RM145.5 million. Foreign investments accounted for RM103.5 million.

DOMESTIC MARKET

Higher demand in the domestic market coupled with investments by the private sector led to higher domestic consumption. The high growth in the construction industry together with higher levels of building in the residential sub-sector bolstered domestic demand for timber and timber products. There was an overall increase in property transactions arising from a strong pick-up in housing sales, as well as a higher level of transactions for the industrial and commercial sub-sectors and increased foreign ownership of properties. Low interest rates, attractive loan packages and favourable interest rate framework, led to higher property purchases and growth of businesses. In 2005, the construction industry is expected to register a 0.5 per cent growth on account of higher residential activity and on-going infrastructure projects.

Consumption of timber by sawmills in Peninsular Malaysia showed an increasing trend during the period 2001 to 2004. Consumption of logs increased to 6.08 million cubic metres in 2004, compared with 4.64 million cubic metres in 2001. Consumption of timber by plywood mills dropped slightly to 0.78 million cubic metres in 2004, from 0.8 million cubic metres in 2001. Input of timber into mouldings mills decreased in 2004 to 0.27 million cubic metres from 1.53 million cubic metres in 2001 (Table 7.3).

**Table 7.3: PENINSULAR MALAYSIA-TIMBER CONSUMPTION, 2001-2004
(Million Cubic Metres)**

Mills	2001	2002	2003	2004
Total	6.98	5.65	6.50	7.14
Sawmill	4.65	4.63	5.52	6.08
Plywood	0.80	0.80	0.76	0.78
Moulding	1.54	0.22	0.22	0.27

Source: Forest Department, Peninsular Malaysia

IMPORTS

Import of timber increased in 2004 to fill the short-fall in domestic supply. Sawntimber imports increased to 1.1 million cubic metres, rising by 73.6 per cent from 0.65 million cubic metres in 2001. This was due mainly to the need to supplement domestic supply of sawntimber for manufacturing, particularly in Peninsular Malaysia and Sabah.

Veneer imports also registered an increase of 16 per cent to 61,131 cubic metres in 2004 from 53,030 cubic metres in 2001. However, imports of plywood decreased by 50 per cent to 14,348 cubic metres from 28,889 cubic metres in 2001. Similarly, log imports decreased by 87.7 per cent, to 94,153 cubic metres in 2004 from 766,078 cubic metres in 2001 (Table 7.4).

**Table 7.4: MALAYSIA-IMPORT OF MAJOR
TIMBER PRODUCTS, 2001-2004
(‘000 cubic metre)**

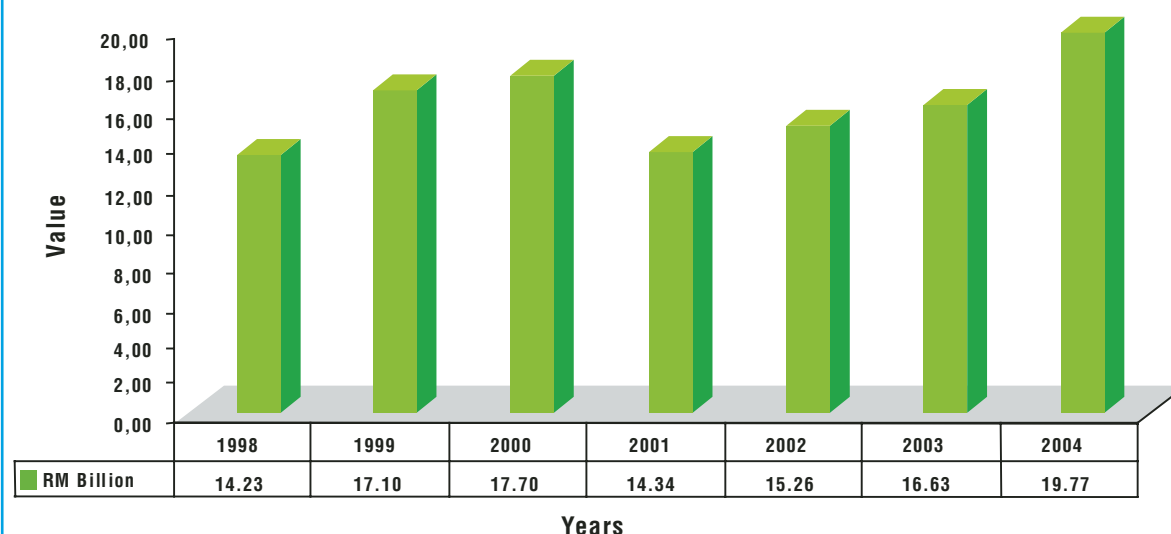
Product	2001	2002	2003	2004
Logs	766	4292	109	94
Sawntimber	651	700	830	1,130
Plywood	29	17	10	14
Veneer	53	161	54	61

Source: Statistics Department of Malaysia

EXPORTS

The demand and also prices for timber and timber products improved in 2004 as most major markets such as the USA, the PRC, the EU and Japan recording positive economic growth. The strong growth in the housing sector, particularly in the USA, boosted demand for tropical wood products and furniture, thus increasing Malaysia's export to this market. Environmental concerns prompted many tropical

**Chart 7.2: MALAYSIA-EXPORT OF MAJOR TIMBER PRODUCTS, 1998-2004
(RM Billion)**

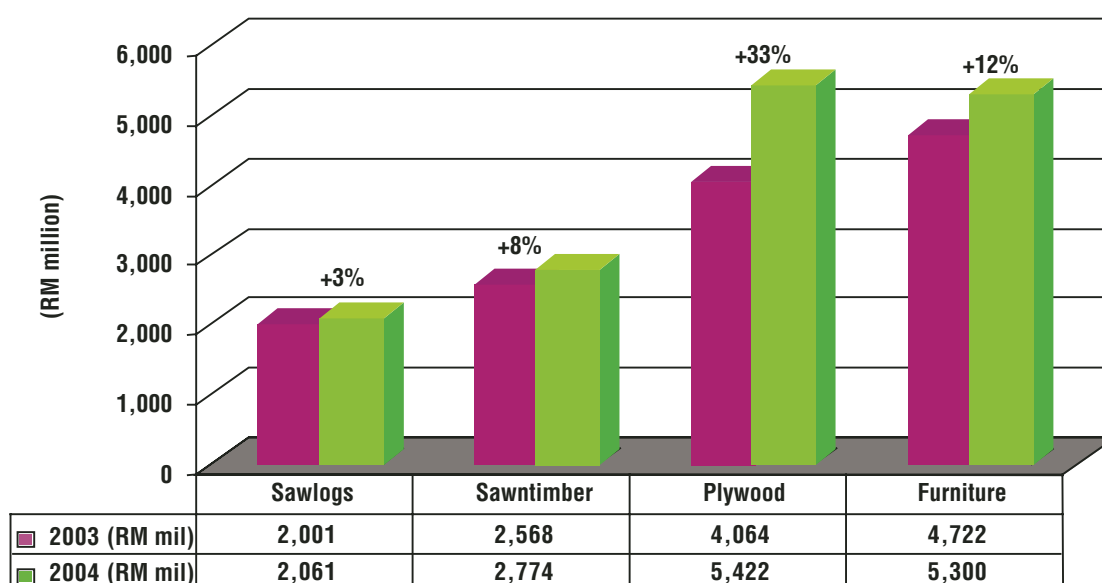


Source: MTIB

timber producing countries to aggressively pursue SFM and curb indiscriminate logging. This has led to a lower supply of tropical timber to the world market and an increase in timber prices. Demand from ASEAN countries, in 2004, improved following the implementation of the ASEAN Free Trade Area (AFTA) and higher economic growth in these nations (**Chart 7.2**)

Exports of timber and timber products reached RM19.8 billion in 2004, an increase of 38 per cent from RM14.3 billion in 2001. Export of logs recorded an increase of 40 per cent to RM2.1 billion from RM 1.5 billion in 2001. Japan remains the largest market for Malaysia's logs, although demand from India is expected to increase significantly. Export of sawntimber increased by 27 per cent to RM2.8 billion from 2001. Exports of plywood registered an increase of 60 per cent to RM5.6 billion from 2001 due to improved prices. Furniture of wood and rattan

Chart 7.3: MALAYSIA – EXPORTS OF TIMBER MAJOR PRODUCTS, 2003 and 2004



Source: MTIB

remained a major export item worth RM5.5 billion in 2004, an increase of 22 per cent from RM4.5 billion in 2001. The USA remains as Malaysia's major market for wooden furniture, followed by Japan (**Chart 7.3.**).

In 2005, the export of timber products is expected to exceed RM20 billion in view of the continued favourable demand in major markets.

Logs

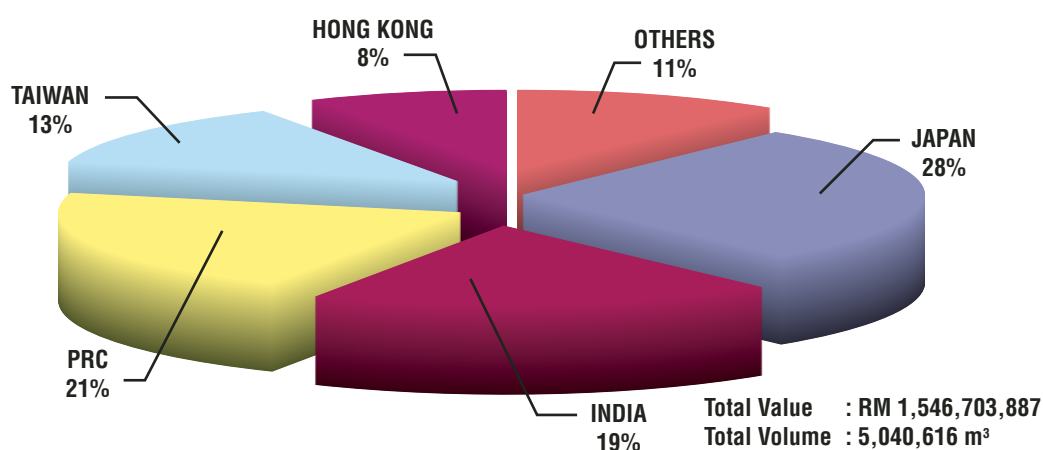
Log exports recorded a 40 percent increase, due to improved prices, to reach RM2.1 billion in 2004 from RM1.5 billion in 2001. In terms of volume, log exports increased slightly by two per cent to 5.1 million cubic metres in 2004 from five million cubic metres in 2001 (**Chart 7.4(a).**).

India and Japan remained the largest markets, even though in terms of volume, exports registered lower levels. In 2004, exports to these two markets amounted to 1.18 million cubic metres and 1.19 million cubic metres respectively (**Chart 7.4(b).**).

With the recovery of Asia from the economic recession, the demand for logs remained buoyant in 2004. The recovery in demand and a relatively tight supply resulted in the steady recovery of the market. Malaysia's export of logs to the PRC, in 2004 surged due to the reduction in import tariffs and the implementation of the National Natural Forest Protection Programme in that country.

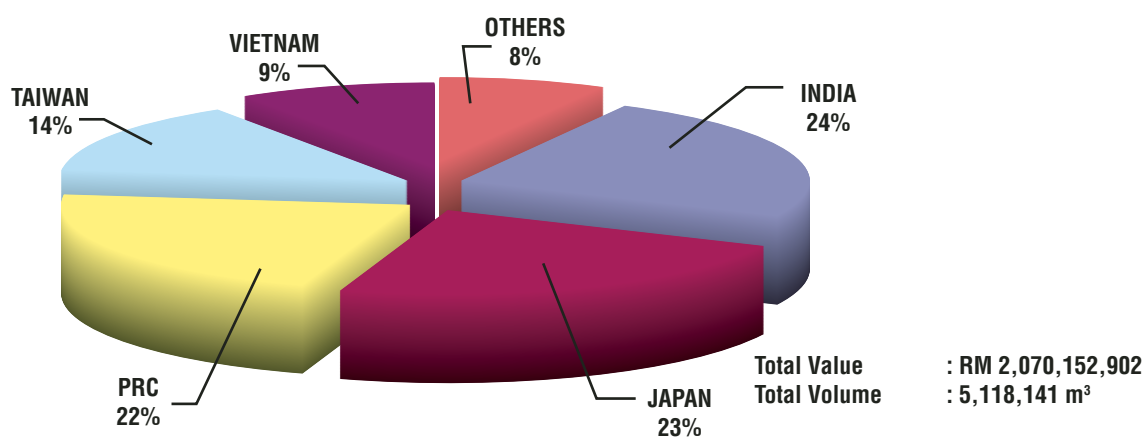
Japan and India were the largest markets, importing 2.37 million cubic metres in 2004. However, this represented an increase of 20.4 per cent compared

Chart 7.4 (a): MALAYSIA- MAJOR LOG EXPORT MARKETS, 2001



Source: MTIB

Chart 7.4 (b): MALAYSIA-MAJOR LOG EXPORT MARKETS, 2004



Source: MTIB

with 2001. Imports by the PRC registered an increase of 7.5 per cent to 1.2 million cubic metres compared with 2001. The Republic of Korea (ROK) imported 125,451 cubic metres, while Taiwan registered an increase of 11.5 per cent with a purchase of 736,042 cubic metres compared with 2001.

Export of logs for 2005 is expected to decline in view of the stricter control on the harvest of natural forests, in line with the conservation policy and the need for SFM.

Sawntimber

Export of sawntimber in 2004 increased 17 per cent in terms of volume to 2.8 billion cubic metres and 27 per cent in value to RM2.8 billion compared with 2001. Active buying, particularly from the major markets, contributed to the positive export performance.

Exports to the EU declined by 12 per cent to 420,852 cubic metres with a value of RM860 million compared with 2001. Exports to the Netherlands and the UK registered a decreasing trend, and declined by two per cent (199,769 cubic metres) and 9.8 per cent (46,822 cubic metres) respectively. However, Belgium registered an increase of 30 per cent (68,952 cubic metres) compared with 2001.

In 2004, Thailand remained the largest market for sawntimber. Exports to this market increased by 43 per cent to 780,514 cubic metres. The PRC imported 203,248 cubic metres, while Taiwan and Singapore imported 227,076 cubic metres and 164,999 cubic metres respectively. Demand from Japan, the Philippines and the ROK were at 149,738 cubic metres, 113,725 cubic metres and 86,512 cubic metres respectively (Chart 7.5).

Exports to West Asia, in 2004, increased by 23 per cent to 265,229 cubic metres in terms of volume and by 40 per cent in terms of value to RM229 million compared with 2001. Yemen imported 106,395 cubic metres, increasing by 28 per cent from 2001. Buying from UAE totalled 79,172 cubic metres, registering an increase of 22 per cent while Saudi Arabia also increased its import by 28 per cent to 46,238 cubic metres compared with 2001. Australia, which is a small market for Malaysian sawntimber, increased its import by 159 per cent to 44,817 cubic metres compared with 2001. Meanwhile, buying from the USA decreased by 96 per cent to 25,623 cubic metres compared to 2001 (Chart 7.5 b).

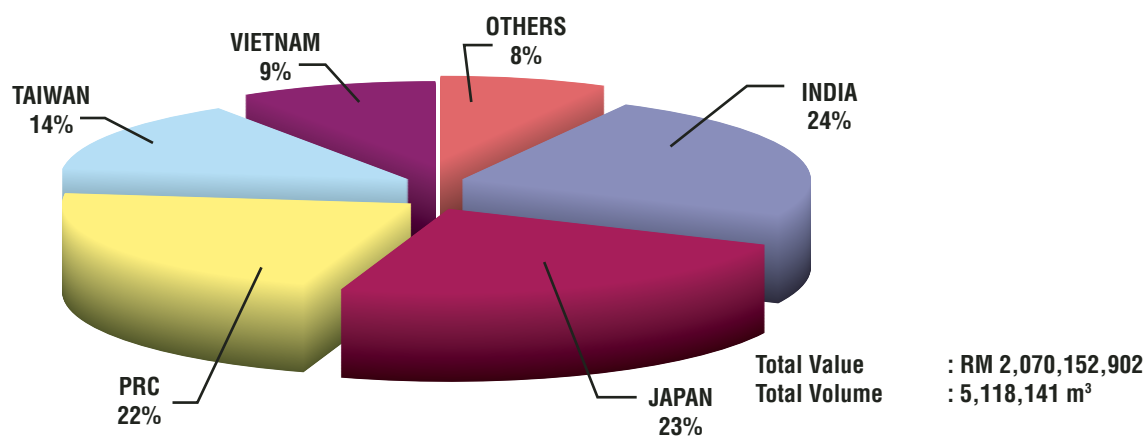
Exports of sawntimber in 2005 is expected to improve, arising from a sustained demand from major markets such as the USA, Japan, ASEAN and Australia, which are experiencing strong growth in housing and construction activities..

Plywood

Plywood exports recorded a strong increase of 60 per cent to reach RM5.6 billion in 2004. The export volume recorded a lower increase of 23 per cent to 4.3 million cubic metres compared with 2001. The stronger performance was, to a large extent, attributed to the higher exports to Japan, the USA and Europe, mainly the UK. Japan, the largest market, increased imports by 17 per cent to 2.1 million cubic metres followed by the USA and the UK with imports of 525,989 cubic metres and 172,430 cubic metres respectively.

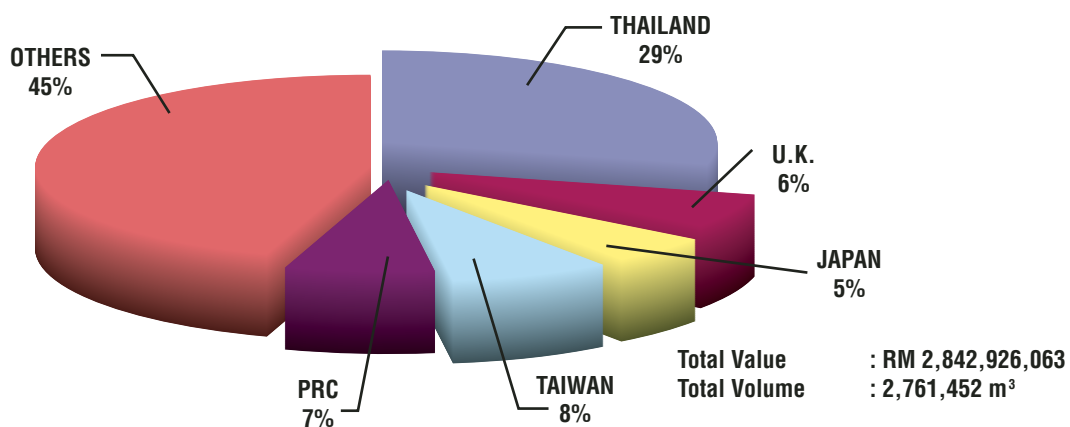
Among the major markets, the ROK registered an increase of 15 per cent to 416,579 cubic metres. Taiwan registered stronger buying with 323,546 million

Chart 7.5 (a): MALAYSIA-MAJOR SAWNTIMBER EXPORT MARKETS, 2001



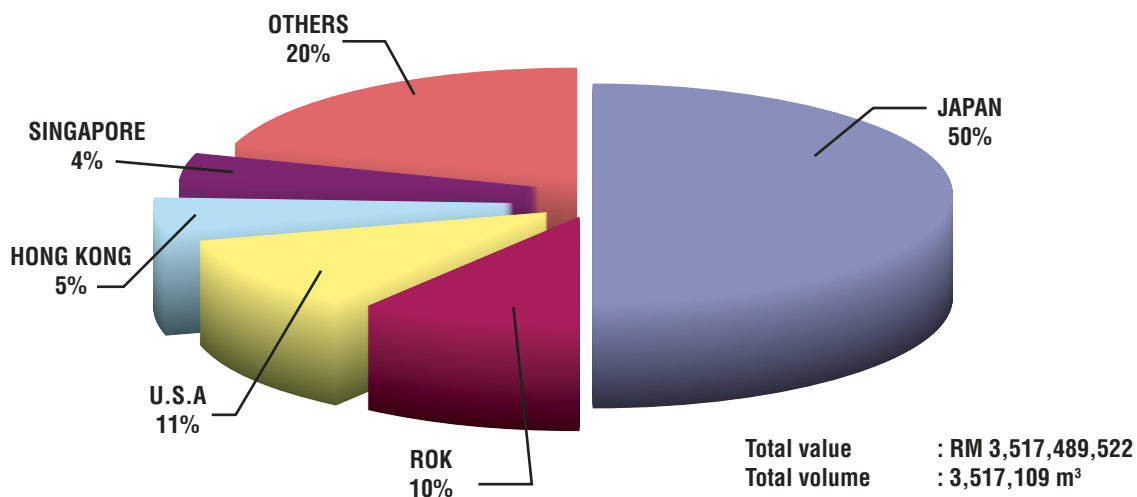
Source: MTIB

Chart 7.5 (b): MALAYSIA-MAJOR SAWNTIMBER EXPORT MARKETS, 2004



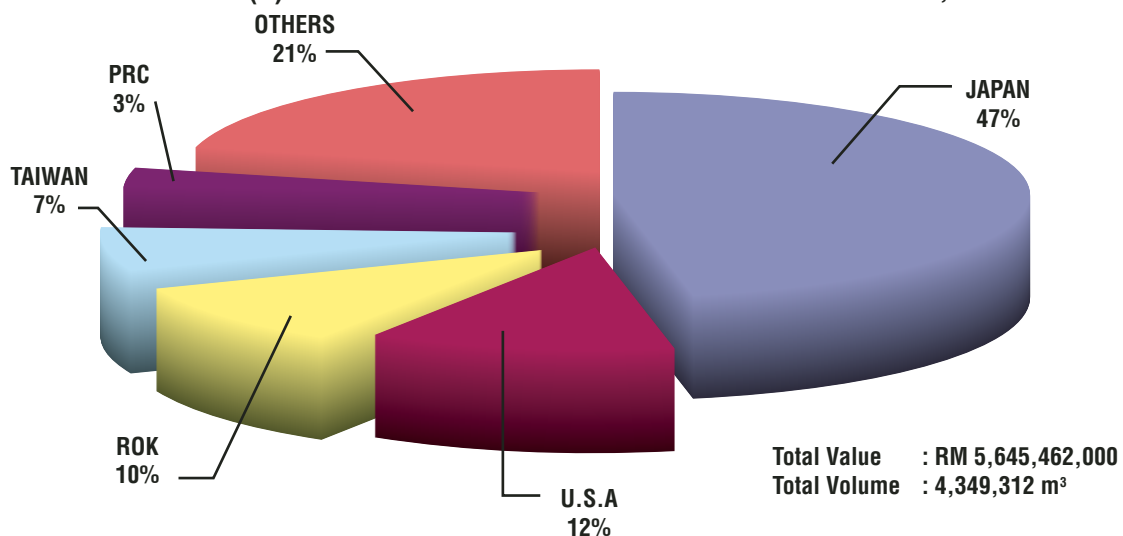
Source: MTIB

Chart 7.6 (a): MALAYSIA-MAJOR PLYWOOD EXPORT MARKETS, 2001



Source: MTIB

Chart 7.6 (b): MALAYSIA-MAJOR PLYWOOD EXPORT MARKETS, 2004



Source: MTIB

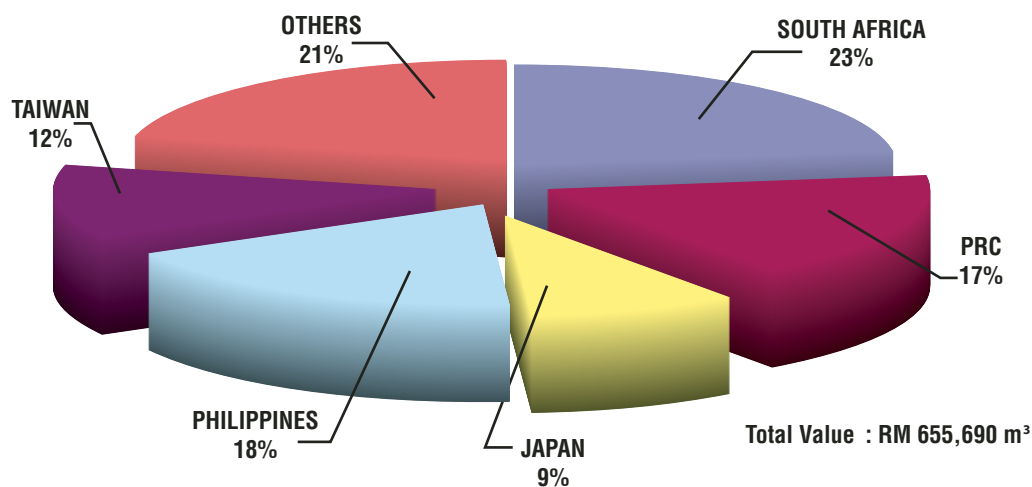
cubic metres, 130 per cent higher than in 2001. Exports to the PRC increased by 31 per cent to 114,832 million cubic metres as it was buying directly and not through agents in Hong Kong. Demand from Europe and West Asia remained strong and their imports of 197,707 million cubic metres and 182,249 million cubic metres respectively were higher by 25 per cent and 21 per cent in 2001 (**Chart 7.6(b)**).

Export performance of plywood in 2005 is expected to decline due to lower demand from Japan and the EU. However, purchase by the USA is likely to remain firm.

Veneer

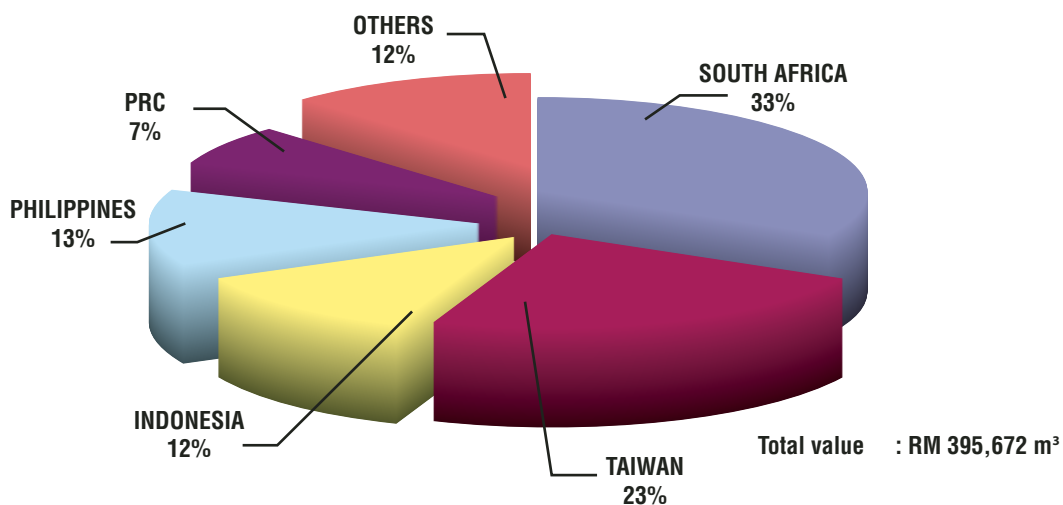
Veneer exports declined in 2004 by 40 per cent in volume to 395,672 cubic metres and a 23 per cent decline in value to RM70 million compared with 2001. Most of the major buyers, namely the PRC and Japan, reduced imports. Shipments to the PRC declined 76 per cent in volume to 26,667 cubic metres and 58 per cent in value to RM31 million while Japan also showed a decline of 18 per cent to 48,162 cubic metres with a value of RM62.7 million. Both markets constituted 19 per cent of Malaysia's veneer exports in 2004. Exports

Chart 7.7 (a): MALAYSIA-MAJOR VENEER EXPORT MARKETS, 2001



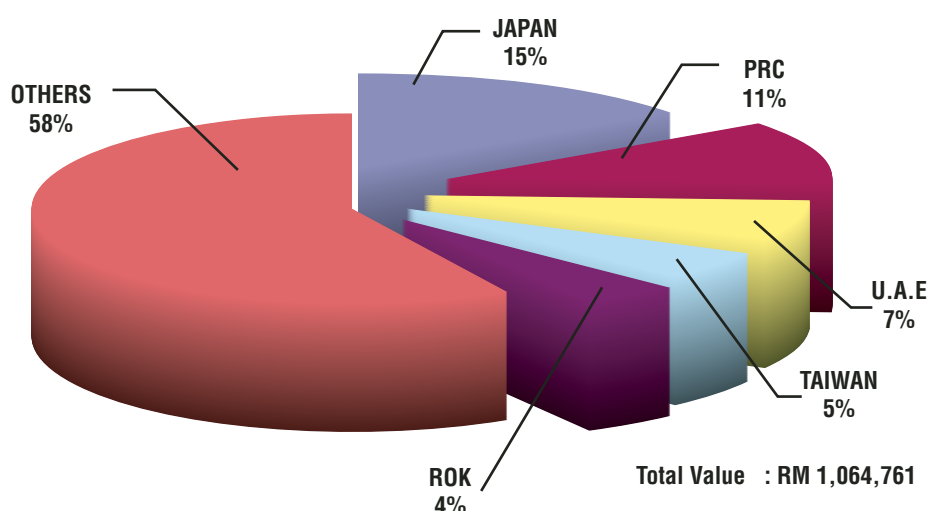
Source: MTIB

Chart 7.7 (b): MALAYSIA-MAJOR VENEER EXPORT MARKETS, 2004



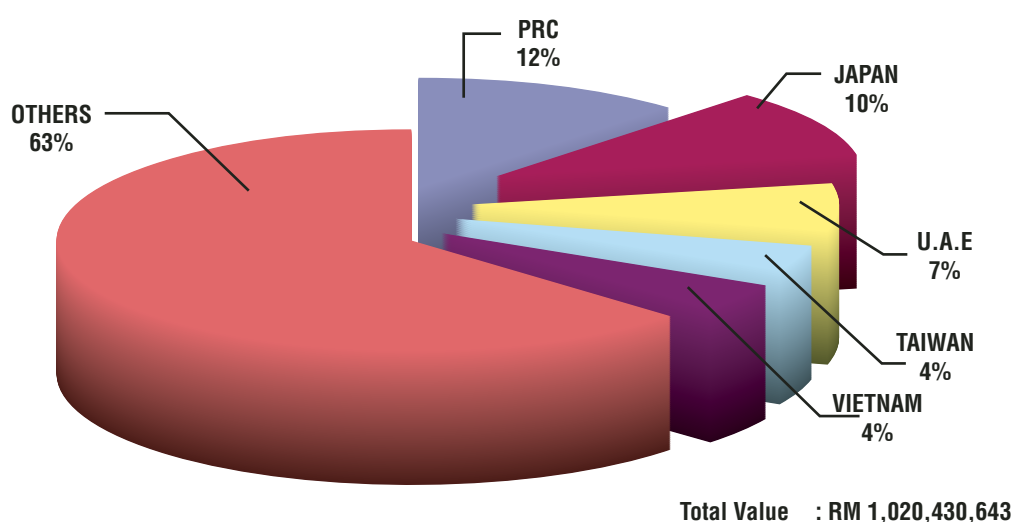
Source: MTIB

Chart 7.8 (a): MALAYSIA-MAJOR FIBREBOARD MARKETS, 2001



Source: MTIB

Chart 7.8 (b): MALAYSIA-MAJOR FIBREBOARD MARKETS, 2004



Source: MTIB

to the ROK, the largest buyer, increased marginally by 19 per cent to 127,014 cubic metres compared with 2001. Taiwan's imports increased to 92,020 million cubic metres from 77,667 million cubic metres in 2001. Exports to Indonesia also increased substantially in 2004, with a total of 16,242 million cubic metres compared with 2001 (0.15 million cubic metres) (Chart 7.7(a) and Chart 7.7(b)).

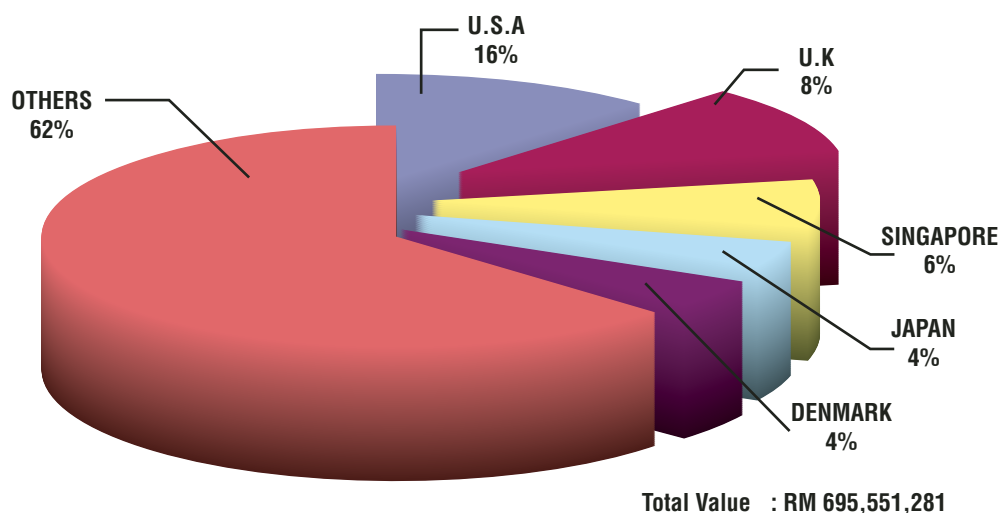
Veneer exports are not expected to improve significantly in 2005 as demand from the major buyers such as the PRC and Taiwan will continue to remain weak.

Fibreboard

Fibreboard exports experienced rapid growth reaching a high of 1.26 million cubic metres in 2004, an increase of 18.9 per cent from 2001. Export value increased 16.8 per cent to RM one billion in 2004 (Chart 7.8(a) and Chart 7.8 (b)).

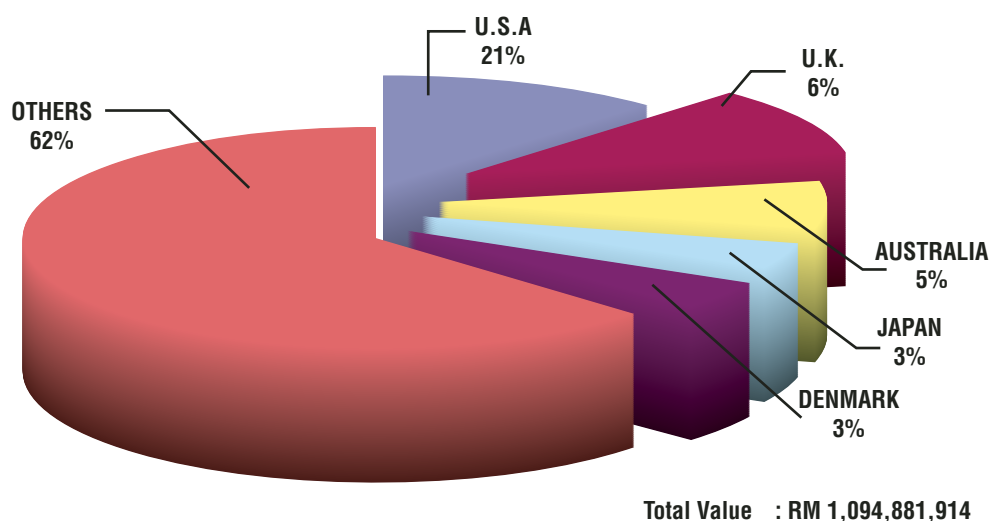
East Asia was the major buying region, with exports to this region totalling 0.7 cubic metres with a value of RM515 million, representing 55.6 per cent of total exports in 2004. The PRC, was the largest market, with

Chart 7.9 (a): MALAYSIA-MAJOR BUILDERS' CARPENTRY AND JOINERY MARKETS, 2001



Source: MTIB

Chart 7.9 (b): MALAYSIA-MAJOR BUILDERS' CARPENTRY AND JOINERY MARKETS, 2004



Source: MTIB

imports of 19.9 per cent, followed by Japan at 12 per cent and UAE with 8.7 per cent.

In 2005, fibreboard exports will experience a marginal decline of three per cent to reach 1.1 million cubic metres due to lower demand from major markets, particularly the PRC.

Mouldings

Mouldings exports recorded an increase of one per cent to RM646.5 million in 2004 from RM640.7 million in 2001. Active buying particularly from the major markets contributed to the positive export performance (Chart 7.9(a)).

Exports to the EU increased by 60 per cent to RM191 million in 2004 compared with 2001. The Netherlands registered an increase of 119 per cent to RM92 million while the UK recorded 6.7 per cent to RM98 million. Exports to Belgium also registered an increase of 1.7 per cent to RM23 million compared with 2001 (Chart 7.9(b)).

Builders' Carpentry and Joinery

USA remained the largest market for Builders' Carpentry and Joinery (BCJ) in 2004. Exports to this market increased by 96 per cent to RM367 million. The PRC imported RM15 million, while exports to Taiwan registered an increase of 5.5 per cent to RM11.8

million. On the contrary, Singapore recorded a decrease of 26.7 per cent compared with 2001. The export values to Japan, the Philippines and the ROK were RM57.7 million, RM4.2 million and RM16.2 million respectively.

The USA is the largest market for Malaysia's mouldings and BCJ components, valued at over RM300 million per year.

Particleboard

The export of particleboard in 2004 increased by 46 per cent in value to reach RM195.7 million compared with 2001. Asia as the major destination registered an increase of 42 per cent to RM186 million compared with 2001. Imports by the PRC and Vietnam in 2004

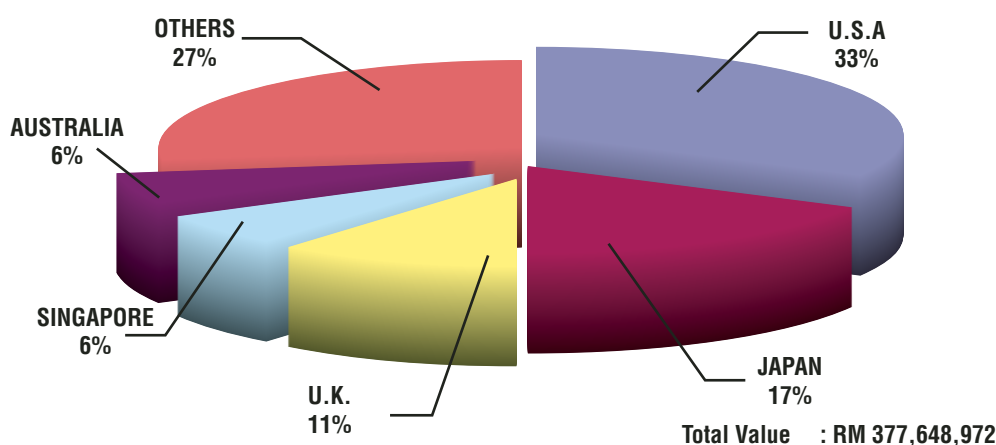
compared with 2001 increased by 68 per cent to RM47 million and 80 per cent to RM46 million respectively.

Furniture

Currently, Malaysian furniture is exported to more than 160 countries. In 2004, Malaysia was ranked the 10th largest furniture exporter in the world from 12th place in 2003 (**Table 7.6**). In the Asian region, Malaysia ranked third after the PRC and Indonesia.

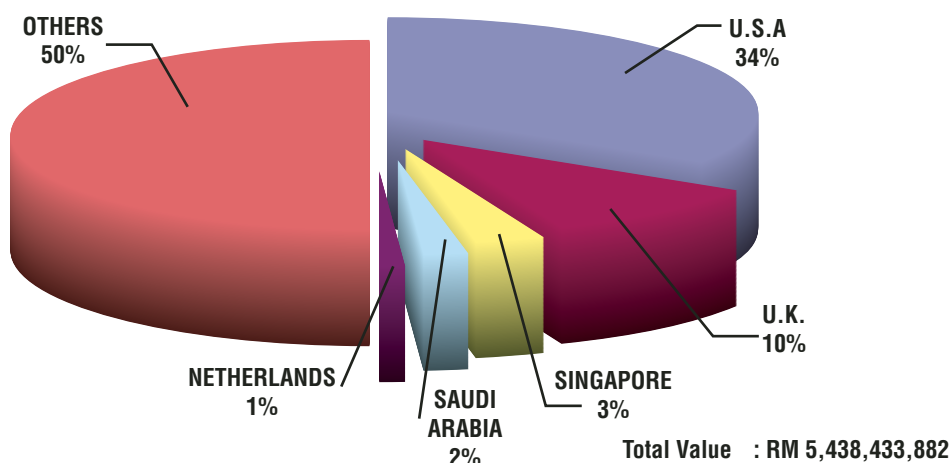
Total furniture export amounted to RM6.6 billion in 2004, of which wooden and rattan furniture amounted to RM5.4 billion and RM48 million respectively. Malaysia's major markets such as the USA and the UK increased buying of wooden furniture by 50 per cent

Chart 8.1 (a): MALAYSIA-MAJOR WOODEN FURNITURE MARKETS, 2001



Source: MTIB

Chart 8.1 (b): MALAYSIA-MAJOR WOODEN FURNITURE MARKETS, 2004



Source: MTIB

Table 7.6: FURNITURE EXPORT (GLOBAL RANKING), 1998-2004
(US\$ Billion)

	1998	1999	2000	2001	2002	2003	2004	
1	Italy	8,748	Italy	8,321	Italy	8,078	Italy	10,496
2	USA	4,762	Canada	4,465	PRC	4,217	PRC	10,133
3	Germany	4,490	Germany	4,237	Germany	4,068	Germany	6,239
4	Canada	3,683	PRC	3,560	Canada	3,953	Canada	4,722
5	PRC	2,488	Mexico	2,826	Poland	2,403	Poland	4,268
6	France	2,199	Poland	2,086	USA	2,369	USA	2,648
7	Denmark	2,022	France	2,056	France	1,865	Denmark	2,568
8	Mexico	1,770	Poland	1,728	Denmark	1,653	France	2,362
9	Poland	1,708	Denmark	1,699	Indonesia	1,414	Austria	1,936
10	Taiwan	1,669	Taiwan	1,554	Belgium	1,361	Indonesia	1,851
11	U.K	1,636	Belgium	1,508	Malaysia	1,344	Belgium	1,716
12	Belgium	1,595	Malaysia	1,361	Austria	1,229	Malaysia	1,651
13	Sweden	1,332	Spain	1,318	Spain	1,191	Spain	1,558
14	Spain	1,319	Indonesia	1,240	U.K	1,075	Sweden	1,516
15	MALAYSIA	1,128	U.K	1,213	Mexico	1,073	Czech Rep.	1,487

Source: World Furniture Outlook 2004 CSIL, Milan

and 32 per cent to RM1.8 billion and RM556 million respectively in 2004 compared with 2001.

Japan's furniture imports decreased by 11.6 per cent to RM578 million in 2004 compared with RM654million in 2001. Higher demand from Australia, Singapore and UAE contributed to the better export performance due to the active housing sector and greater consumer spending in these countries (**Chart 8.1(a)** and **Chart 8.1(b)**).

PROSPECTS, 2006

Domestic Market

The Malaysian economy is expected to grow in tandem with the moderation in the growth of the world economy. Domestic demand for timber and timber products is projected to increase due to strong private consumption and steadily rising private investment coupled with a prudent monetary policy which continues to support domestic growth and consumption. With increased economic resilience in the domestic economy and rising consumer confidence, together with favourable export demand for timber, domestic consumption for all timber products, particularly for furniture and value-added products will continue to be positive.

Exports

Export earnings from the timber industry is expected to sustain in 2006. Although economic growth in the USA and PRC is expected to slowdown, demand, however, will be sustained due to an active housing sector. Prices are also expected to sustain at the current level as the supply of tropical timbers in the international market is expected to be further restricted. Increased construction activities in West Asia will provide opportunities for the export of Malaysia's timber products. Further, trade liberalisation initiatives undertaken under the various free trade agreements, for example with the PRC and India, augurs well for higher trade with such partners.

Logs

It is expected that there will not be any significant upturn in the export of logs. Supply will gradually approach a sustainable level, striking a balance between domestic and export demands. Domestic sawmills are expected to absorb most of the log supply, thus reducing availability for export. Markets in Japan and the PRC will be offered a cheaper supply of

softwood logs from Russia, Europe and North America. Plantation species such as pine from Chile and New Zealand will increasingly dominate the market. With growing competition, log export from Malaysia will display a declining trend.

Plywood

Plywood export is expected to improve in 2006. With the economic recovery programmes undertaken in most Asian countries such as the Philippines, the ROK and Thailand, demand is expected to rise as income and employment opportunities in these countries improve. Demand in Japan and Europe is also expected to remain stable. Buying by the USA will improve as no severe economic recession is predicted. Despite the marginal slowdown its economy, imports into the USA is expected to improve.



Sawntimber for export

Veneer

Veneer exports will revive and remain low in volume but improve in term of value . Higher demand is expected from Taiwan, the ROK and Vietnam. Import demand from PRC will be sustained, as domestic supply is still inadequate to meet domestic requirements.

Sawntimber

Taking cognizance that the European Union (EU) public policy for using approved certified timber in public construction and housing will continue to remain, timber exporters will need to follow the certification requirement in order to penetrate and establish market share in Europe. Thailand, Japan, the PRC, Singapore and West Asia, will continue to be the main destinations for sawntimber. Despite the competition from softwood species, Malaysian sawntimber will maintain its market share especially for the high-end markets due to its quality and superior reliability with the buyers.

Furniture

The next stage of development will be focused more on the adoption of Original Design Manufacturing (ODM) and Original Brand Manufacturing (OBM) so that the



Wooden separator

value-added products will be of original and creative designs rather than selling on volume and price. The future growth is very promising for the medium and high-end markets.

The Government's efforts in promoting furniture made from Rubberwood or Malaysian Oak have been successful as such furniture has gained popularity in export markets worldwide. The major markets are the USA, Japan, Singapore and the U.K. During the Third Industrial Master Plan (IMP3) period, Lesser-Promoted species such as Sentang will be promoted to furniture manufacturers to diversify the raw material supply. The export of Malaysian Furniture will still be strongly targeted to the existing markets but with different selling approaches.

INSTITUTIONAL SUPPORT

The wood-based industry is one of the major resource-based industries. It has assumed a significant role in Malaysia's industrialisation programme, through its primary and value-added processing activities. Conscious of the contribution of the industry, the Government has identified it as a priority industry



Wooden furnitures



Wooden frame

targeted for further development. The main development objectives of the Industrial Master Plans (IMP) are to transform the wood-based industry into a major resource-based industry, maximise value-added products from forest resources as well as to make Malaysia a reputable centre for high quality wood products such as furniture, joinery and mouldings.

From 1996 to 2000, Forest Research Institute Malaysia (FRIM) had undertaken more than 100 studies through the Intensified Research in Priority Areas (IRPA) mechanism under the purview of the Ministry of Science, Technology and Innovation (MOSTI). The studies undertaken were over broad spectrum of activities pertaining to forestry (upstream) and wood-based product and technology development and enhancement (downstream).

Realising that wood resources from natural forest are becoming scarce, studies into optimising output from the forest plantations by increasing their efficiency throughout its value chain; from species determination, tree improvement, planting stock production right through to the wood quality determination were undertaken. Studies into product development from some of these planted species were also initiated.

To supplement and complement the expected decrease in raw wood material, waste materials from the oil palm industry (especially stems and empty fruit bunches) were seen as possible substitutes. Studies to utilize them for fibre based products such as particleboard, medium density fibreboards and even pulp and paper were initiated.

The Government has established the Wood Industry Skills Development Centre (WISDEC) to provide industry-oriented skills training and to assist the value-added processing sector in overcoming problems of shortage in skilled manpower as well as to help increase workers' productivity. Among the courses conducted by WISDEC are short term courses

(scheduled and customised/in-house) and competency-based training (Wood-Based Industry Apprenticeship Scheme in Furniture with MTIB / HRDC / NVTC). Since its establishment, a total of 221 courses have been conducted with 4,430 participants attending the courses. Currently, WISDEC has been established in Olak Lempit, Selangor and Kota Kinabalu, Sabah.

ISSUES AND CHALLENGES

Certification

Certification for timber products sourced from sustainably managed forests is a growing requirement in international trade of timber products. Europe is the leading market for certified wood products, particularly in the UK, Germany, the Netherlands and Belgium. Demand for certified timber products is not only from the consumers but also from environment-based Non-Governmental Organisation (NGOs), importing and distributing companies as well as local governments.

The Malaysian Timber Certification Council (MTCC) has issued two documents under timber certification scheme namely, Certificate for Forest Management (to provide an assurance of a legal and sustainable source of logs) and Certificate for Chain-of-Custody (COC) (to provide assurance of timber products sourced from legal and sustainable sources). As at 2004, only 65 companies have been awarded the COC certification. The challenge for Malaysia is to gain international recognition for its certification scheme at par with the Forest Stewardship Certification (FSC).

Competitive Market Environment

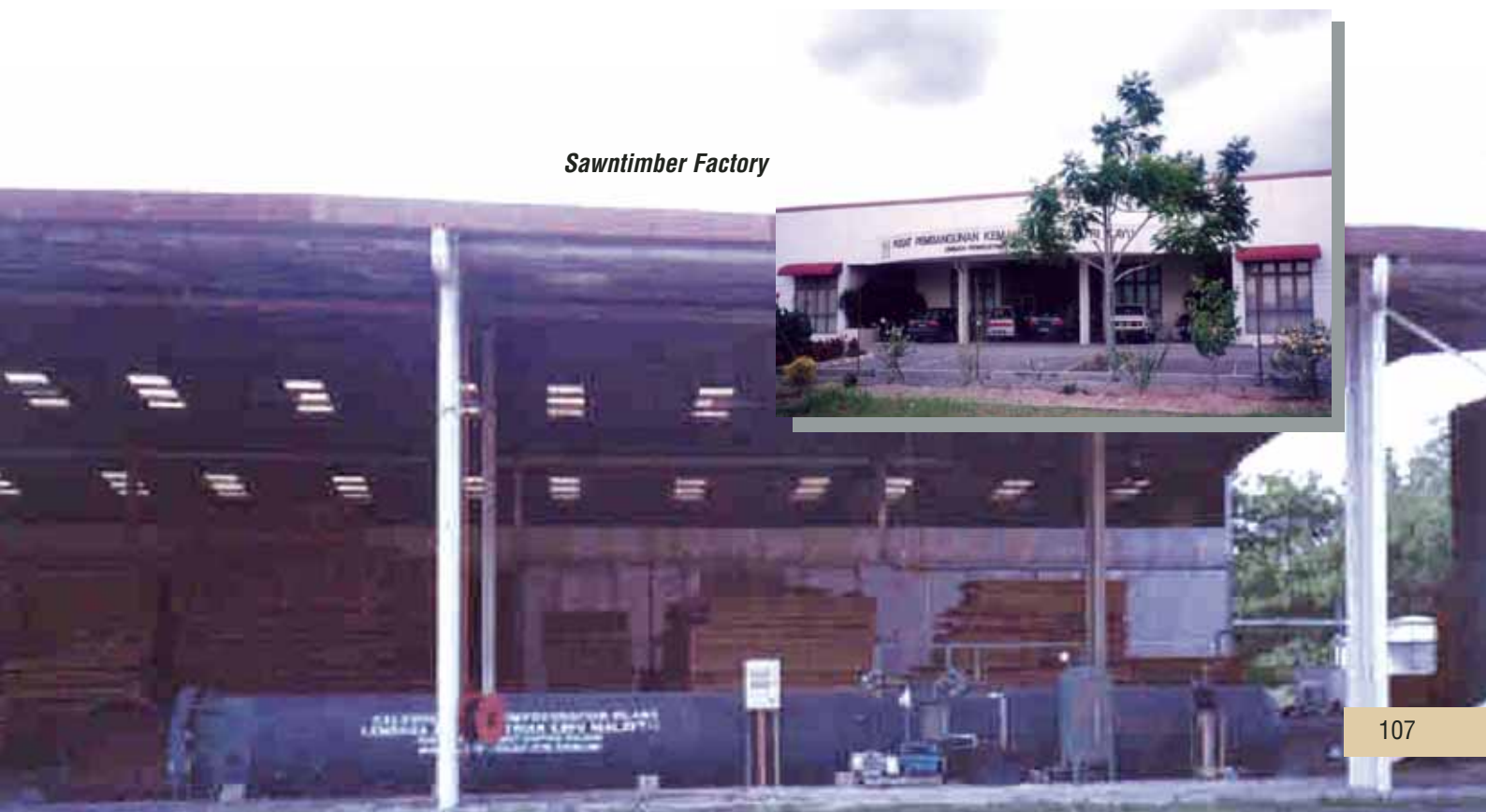
Malaysia's timber and timber products are facing increasing market competition due to globalisation and trade liberalization requirements. These include:

- Discriminatory trade measures and protectionism in the guise of environmental and social concerns;
- Economic cycles and their effects on interest rates, building and construction activities, and demand for timber;
- Competition from softwood/temperate wood as well as synthetics and substitutes such as steel, concrete, aluminium and plastic which impede the applications of tropical wood/products;
- Emergence of new competitive producer countries such as Vietnam, the PRC and Brazil.

Price Fluctuation

International prices for tropical logs are expected to remain firm in the next few years. Restrictions on log harvesting practised in many log-producing countries will reduce supply. The abundant supply of logs from Russia and other softwood log producers at a very competitive price affects the level of log prices including tropical logs. Japan as the major consumer of logs has temporarily slowed down its import due to reduced demand for plywood in its market.

Sawntimber Factory



Enhancing Market Access

Promotion and marketing of Malaysian timber products is undertaken through MTIB and Malaysian Timber Council (MTC), which has regional marketing offices in London, Shanghai and Dubai. The Malaysian Furniture Promotion Council (MFPC) was established in 2004 to lead in promoting and marketing of Malaysian furniture. Promotional activities undertaken include participations in local and international trade fairs and organizing marketing missions and market visits to enhance Malaysia's share in the traditional markets and penetrating new markets.

Among the major international trade fairs participated by the industry includes Malaysian International Furniture Fair (MIFF) in Kuala Lumpur, Malaysia; DONOTEX in Germany, INTERZUM in Germany, IBS in Atlanta, USA; CARREFOUR in Nantes, France; INTERFURN in Mumbai, India ; IMM in Cologne, Germany; San Francisco Market in USA and INDEX in Dubai, UAE. To promote the trade of timber products as well as to identify new business opportunities for Malaysian timber companies, marketing missions to various countries have also been organized. In essence, the future direction of the timber industry will be guided by the need to create a sustainable, viable and profitable sector that can continue to play a major economic role.

Shortage of Skill Labour and Industrial training

Shortage of skilled labour has been a problem to the timber industry. WISDEC was established among other institutions to provide training to workers to supply the skilled labour required by the industry.

In order to remain competitive as well as to cope with the shortage of skilled labour, manufacturers need to accelerate the automation of their manufacturing facilities. As such, transfer of appropriate technology needs to be enhanced and training in automation technology should be undertaken.

Development of Standards

MTIB has been appointed as the Standards Writing Organisation (SWO) for the drafting of standards for the timber and timber products. In addition, MTIB has prepared various standards and specifications such as quality assurance manuals, technical guidelines on timber for building construction, grading rules for Malaysian Oak (*hevea brasiliensis*) and visual strength grading for timber. The preparation of standards on the structural uses of timber is undertaken by Construction Industry Development Board (CIDB).

Currently there are more than 45 Malaysian Standards on timber and its related activities. To date, MTIB has completed the development of 20 standards related to wood products and processes. A total of 83 wood-based companies had succeeded in obtaining

Training Centre



standards certifications in quality system certification (MS ISO 9001: 2000), product certification and environmental certification (MS ISO 14000). Currently MTIB is in the process to be the Registered Certification Organisation (RCO) and Registered Grading Organisation (RGO) so that all construction materials including plywood follows the Japanese Certification Scheme (JAS/JIS). Under this new regulation, the Japanese Government aims to restrict the level of emission of formaldehyde from products used in building construction and for interior usage.

Research and Development

MTIB has been collaborating with the FRIM, research institutions and universities in carrying out R&D activities in timber and timber products. These activities include discovery of new timber species, high yielding timber clones as well as downstream activities of wood processing, composite materials, furniture design and developing higher value wood-based products.

R&D on new products and uses of wood and wood wastes will be further enhanced to diversify into new applications such as composite boards, glued beams and laminated scantling as construction materials. R&D efforts will also be intensified to improve productivity and efficiency of the furniture industry by adopting advanced technologies in sawing, drying and seasoning. Initiatives are also undertaken to improve furniture designs to enhance its value as well as acceptability in international market.

GOVERNMENT POLICY INITIATIVES AND STRATEGIES

Forest Plantations

The MPIC has embarked on a forest plantation programme as a strategy to ensure sustainable supply of timber for the industry. The timber species to be planted in the forest plantation will include among others *Hevea brasiliensis*, *Acacia mangium*, teak, sentang and African Mahogany (*Khaya ivorensis*). A total area of 375,000 hectares will be planted in selected states.

Bio-Composite and Fibre Development Centre

MTIB has established a Bio-Composite and Fibre Development Centre (BDC) to spearhead the commercialisation and coordination of R&D in bio-composite materials for industrial uses. Kenaf has been identified as a main source of fibre for pulp and paper as well as fibreboard production.

PROSPECTS

The prospects for the timber industry is promising as the world consumption of sawntimber is expected to double to 745 million cubic metres in 2010 from 456 million cubic metre in 1991. The wood-based panels' consumption will also increase to 313 million cubic metre in 2010 from 122 million cubic metre in 1992.

To remain as a competitive and resilient global player, the Malaysian timber industry needs to strategise and reinforce its strengths and competency. The strategy should be to move away from competing on price to that of product differentiation and niche market. The future strengths lie in the efficiency of the industry to produce specialized, quality downstream products to serve the upper market segments, and in its image of reliability in all aspects of trade.

INTERNATIONAL COOPERATION



INTERNATIONAL COOPERATION

INTRODUCTION

The September 11th tragedy of 2001 in the United States, terrorist attacks in major cities of the world, the December 2004 tsunami disaster in South and Southeast Asia and the continuing increase in crude oil prices have had an adverse effect on the global economic situation. Despite these unfavourable events, prices of commodities such as palm oil, rubber, timber and cocoa have risen significantly, largely due to increased demand from major markets, particularly the PRC. Notwithstanding the global economic situation, the importance of multilateral, regional and bilateral fora in building a freer global trading regime should not be overlooked. The Government is committed to continuing with its active participation in various multilateral, regional and bilateral fora to ensure the market share for Malaysian primary commodities in the world market is sustain.

Global trade expanded by 6.8 per cent in 2004, contributing to the growth of global output at 4.6 per cent. These encouraging developments were driven by better economic performance of developed countries as well as the robust growth of the PRC and India. A favourable external environment was among the factors that propelled Malaysia's economic growth to 7.6 per cent in the first quarter of 2004, and 8 per cent in the second quarter.

REGIONAL COOPERATION ASEAN

Malaysia's foreign policy accords priority to regional cooperation within ASEAN, as well as between ASEAN and other countries. ASEAN, comprising 10 countries in South East Asia, is committed to social-economic development as well as promoting regional peace and stability among members and enhancing cooperative relationship with Dialogue Partners. Emphasis will continue to be given to cooperation within the ASEAN+3 framework.

Implementation of Decisions of the ASEAN Summits

In 2004, the ASEAN Summit in Hanoi adopted the Hanoi Plan of Action (HPA) to achieve 'ASEAN Vision 2020' to create a united ASEAN, where the people can live in peace, stability and prosperity. For the agriculture and commodity sector, the HPA stipulated that ASEAN countries enhance food security and global competitiveness of the region's food, agriculture and forestry products. In 2004, the HPA was replaced with the Vientiane Action Programme (VAP), which focused on increasing productivity and promoting greater private sector investment in the food, agriculture and forestry sectors.

Malaysia is taking a leading role in implementing the measures enshrined in the VAP roadmap to ensure its oil palm; rubber and timber industry will achieve the objectives of economic integration and greater development for the mutual benefit of ASEAN and Malaysia. The Ministry of Plantation Industries and Commodities (MPIC) has been elected leader of the Joint Committee on ASEAN Cooperation in Agriculture and Forest Products Promotion Scheme; Chairman of the ASEAN Consultative Committee on Standards and Quality (ACCSQ) for Rubber-based Product Working Group; and Co-Chairman of the ACCSQ Wood-based Product Working Group. The MPIC has regularly attended meetings of the ASEAN Ministers on Agriculture and Forestry (AMAF) to discuss and resolve issues pertaining to commodity prices, market access and the development of the commodities sector in ASEAN member countries.

As a private sector-driven panel, the Joint Committee meetings bring together captains of industries in agriculture and commodities to discuss issues of mutual concern and the strategic development goals of various industry clubs and working groups covering areas that include palm oil, rubber, pepper, forest products and cocoa.

Under the meetings of the Joint Committee of ASEAN Cooperation in Agriculture and Forest Products Promotion Scheme, the Malaysian private sector in commodity-based industries have participated actively in ASEAN industry clubs, namely the ASEAN Vegetable Oils Club (AVOC), ASEAN Forest Products Industry Club (AFPIC), ASEAN Rubber Business Club (ARBC), and the National Focal Points Working Groups on Pepper Cocoa, and Forest Products. The National Focal Point Working Group meetings on Pepper, Cocoa and Forest Products are still being led by the public sector. The MPIC will ensure that the respective three National Focal Point Working Groups will in future be steered by the private sector.

While market access issues are important, investment and industrial cooperation are pertinent to ASEAN countries. In this regard, MPIC through its various agencies will continue to participate actively in the various regional fora to ensure a better investment climate within the ASEAN region.

ASEAN Free Trade Area

The ASEAN Free Trade Area (AFTA) has been established since 2003. Malaysia has made significant progress in the lowering of intra-regional tariffs through the Common Effective Preferential Tariff (CEPT) Scheme under AFTA. More than 90 per cent of the products in the CEPT Inclusion List (IL) of Malaysia, as well as those of Brunei Darussalam, Indonesia, the Philippines, Singapore and Thailand,

have been brought down to the zero to five per cent tariff range since 2003.

Except for tobacco and tobacco products, for which tariffs are in the process of being reduced from zero to five per cent by 2010, tariffs for all other commodity products have been in the range of zero to five per cent since 2003.

Regional Free Trade Agreements

The adoption of AFTA in 2003 will lead to an eventual free trade regime for ASEAN in 2010. The Ministry has been actively participating in the negotiations of the current Free Trade Agreement (FTA) of ASEAN-PRC, ASEAN-India FTA, ASEAN-ROK FTA and the upcoming ASEAN-Japan and the ASEAN-New Zealand/Australia FTAs.

The MPIC will be actively involved in negotiations to ensure better market access for Malaysian commodities, in particular palm oil, rubber and forest products, as well as seek cooperative projects that will improve technologies for the country's products.

ASEAN Integrated System of Preference

To assist in and to narrow the development gap between the established and the new members of ASEAN such as Cambodia, Laos, Myanmar and Vietnam (CLMV) and to grant them tariff free access earlier than the AFTA target date of 2010, ASEAN has implemented the ASEAN Integrated Special Products (AISP), where the ASEAN six senior members will accelerate tariff reduction on some of the products requested by the CLMV since 2002. Malaysia has agreed to eliminate tariffs on local products such as palm oil, rubber and timber to aid the CLMV towards faster economic integration with ASEAN in general and Malaysia in particular.

Sub-Regional Growth Areas

ASEAN continues to support the implementation and further development of growth areas - Brunei Darussalam-Indonesia-Malaysia-the Philippines East ASEAN Growth Area (BIMP-EAGA), Indonesia-Malaysia-Singapore Growth Triangle (IMS-GT), Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT), and inter-state areas along the West-East Corridor (WEC) of the Mekong Basin in Vietnam, Laos, Cambodia and Northeastern Thailand within the ASEAN Mekong Basin Development Cooperation scheme in order to narrow the gap in the level of development among member states and to reduce poverty and socio-economic disparities in the region.

The MPIC has participated in sub-regional growth area meetings such as BIMP-EAGA, IMS-GT and IMT-GT to enhance cooperation in commodities such as palm oil, forestry, timber, cocoa and pepper.

BILATERAL COOPERATION

Malaysia has taken and will continue to take a proactive role in cementing bilateral relations. MPIC plays an active role at various bilateral meetings, including Joint Commission Meetings (JCM), Joint Economic and Trade Committee (JETC) meetings and the bilateral Free Trade Area (FTA) meetings as well as in the bilateral summits.

Joint Commission Meetings (JCM) and the Joint Economic and Trade Commission Meetings (JETC)

The MPIC participates in most of the Joint Commission (JC) meetings and Joint Economic and Trade Commission (JETC) meetings. The JC is a bilateral meeting led by the Minister of Foreign Affairs, which discusses a wide range of projects for cooperation and issues on a broader scope, including trade, investment, commodities, security, information, land boundaries, health, culture and education.

The JETC, Joint Trade and Investment Commission (JTIC) and the Joint Trade Commission (JTC) or Joint Economic Commission (JEC) are bilateral meetings led by the Ministry of International Trade and Industry (MITI). Compared with the JC, JETC discusses issues and matters of cooperation relating to economics, trade and investment.

Since 2001, MPIC has participated in JCs with South Africa, Bangladesh, Cuba, Iraq, Indonesia, Saudi Arabia, the Philippines, Cambodia, Pakistan, Yemen, Thailand and Sudan, as well as in JTC/JETC/JITC meetings with Australia, Thailand, the PRC, Taiwan, Turkey, Germany, and Kazakhstan, and in the US Trade and Investment Framework Agreement (TIFA) meetings.

At both JCM and JETC meetings, MPIC was able to pursue commodity trade issues faced by Malaysia in importing countries, such as high tariffs and non-trade barriers, in particular on palm oil, rubber, timber and timber products as well as cocoa.

Bilateral Free Trade Agreements

To complement the multilateral and regional liberalisation approach of FTAs, Malaysia has also chosen to pursue bilateral FTAs. These FTAs are more comprehensive in nature, covering areas such as investment and economic cooperation, besides trade in

goods and services. Bilateral FTAs are sometimes known as Economic Partnership Agreements (EPAs), such as the Malaysia-Japan EPA, or Comprehensive Economic and Cooperation Agreements (CECAs) as in the Malaysia-India CECA or Trade Investment Facilitation Agreement (TIFA) as in the Malaysia-US TIFA.

Malaysia is supportive of the country's active engagement in bilateral FTAs as they offer higher and speedier opportunities in gaining better market access. Currently, MPIC is involved in Malaysia's negotiating teams for the Malaysia-Japan EPA, Malaysia-Australia FTA, Malaysia-New Zealand FTA and Malaysia-Pakistan FTA, which are in various stages of progress. The Malaysia-India CECA is currently at the Joint Study Group stage, while the Malaysia-US FTA is in the pipeline.

The MPIC is actively involved in bilateral FTA negotiations, especially in the areas of Trade in Goods, Sanitary and Phyto-sanitary (SPS), Rules of Origin (ROO) and Technical Barriers to Trade (TBT), besides issues in economic cooperation.

MULTILATERAL COOPERATION

The MPIC continues to pursue efforts towards better market access for commodities through multilateral fora such as the World Trade Organisation (WTO), Common Fund for Commodities (CFCs) as well as the multilateral FTAs with Islamic countries under the Trade Preference System of the OIC (TPSOIC) and the D-8 countries.

World Trade Organisation

In 2001, MPIC was involved in the launching of the Doha Round or the Doha Development Agenda after the 4th World Trade Organisation (WTO) Ministerial Conference held in Doha, Qatar, where 142 member countries adopted a Ministerial Declaration on 14th November 2001. This was the ninth trade round of negotiations in the WTO's history, which was expected to be concluded by 2005. One of the most important outcomes of the Doha Declaration is that *"the conduct, conclusion and entry into force of the outcome of the negotiations shall be treated as parts of a single undertaking"*.

The new Declaration has given members the mandate to engage in negotiations on various issues, including agriculture and industrial tariffs, where Malaysian commodities including palm oil and timber are strategically placed. A key gain for developing countries is the promise that negotiations shall aim to reduce or eliminate not only tariffs, but also tariff

peaks, tariff escalation and non-tariff barriers, in particular products from developing countries that face such problems in the developed markets.

The MPIC will continue to participate actively in the WTO negotiations to safeguard the interests of the Malaysian commodities sector, through participation in the Committee on Agriculture Special Session (COASS) and the Non-Agricultural Market Access (NAMA) Committee.

Common Fund for Commodities

The Common Fund for Commodities (CFC) is an inter-governmental financial institution, a partnership of 106 developed and developing nations plus the European Union (EU), the Organisation of African Unity (OAU) and the Common Market for Eastern and Southern Africa (COMESA). It was officially established in 1989 within the framework of the United Nations Conference on Trade and Development (UNCTAD). Projects financed by CFC are intended to improve structural conditions in markets, enhance long-term competitiveness and prospects for particular commodities. CFC also well as provides assistance to countries to enable them to function effectively in a liberalised global economy through research and development, productivity and quality improvement, transfer of technology, diversification, facilitation of private sector initiatives and commodity price risk management.

Malaysia became a member of the CFC on 22nd September 1983. MPIC became an active member of CFC in 1997 when the position of Governor which Malaysia occupied, was transferred from the Malaysian Ambassador in Geneva to the Secretary-General of the Ministry of Primary Industries. During the periods, 1998-1999 and 2003-2004, Malaysia held the position of Executive Director for the Malaysia-Indonesia-Papua New Guinea-Singapore region alternately with Indonesia. Malaysia will assume the position of the Executive Director again in 2006-2007.

The MPIC's involvement in the CFC is to ensure that opportunities and prospects for commodity producers will be further improved, as it is responsible for financing commodity development projects and acting as a catalyst in mobilising trade and investment resources in the commodities sector.

The MPIC constantly pursues a policy of fostering close relationships with consumers as well as commodity producers. MPIC is an active member of several International Commodity Bodies (ICBs) and signatory to international conventions and agreements such as the Common Fund for Commodities (CFC), International Cocoa Organisation (ICCO), Cocoa Producers Alliance (COPAL), Association of Natural

Rubber Producing Countries (ANRPC), International Rubber Study Group (IRSG), International Pepper Community (IPC), International Tropical Timber Organisation (ITTO), Convention on the International Trade in Endangered Species (CITES) and the Asia Pacific Coconut Community (APCC).

The Malaysian Cocoa Board (MCB) participated in two projects on cocoa funded by the CFC. The projects are the CFC/ICCO/IPGRI International Cocoa Project on Germplasm Utilisation and Conservation and CFC/ICCO/IPGRI International Cocoa Project on Cocoa Productivity and Quality Improvement.

In 2004, MPIC hosted a CFC Regional Roundtable Conference on Commodities in the Asia and Pacific Region, held from 23rd to 26th November 2004 in Kuala Lumpur to discuss commodities trade issues and projects. Malaysia presented a paper on 'Transformation of the Commodity Sector in Malaysia', which outlined the development of the commodities sector in Malaysia from mere producers of raw materials to a major exporters of high quality value-added downstream products.

The 16th and the 17th Governing Council meetings held on 6 to 7 December 2004 and 29th November to 1st December 2005 respectively in Amsterdam had elected Malaysia as Governor for CFC to chair the meetings of CFC Governing Council meetings for 2005-2006.

United Nations Conference on Trade and Development

The MPIC participated in the United Nations Conference on Trade and Development's (UNCTAD) Experts Group Meeting of Eminent Persons on Commodities in Geneva, which was held from 22 to 23 September 2005. The objective of the meeting was to address commodity issues, including the volatility of commodity prices, declining terms of trade and the impact on the development of commodity-dependent countries. Issues discussed included market access for commodities; export diversification, establishment of export funds and measures to deal with oversupply.

Malaysia also participated in the CFC/UNCTAD session on *Commodities, Poverty Alleviation and Sustainable Development* on 15th June 2004 in Sao Paulo to review trends, prospects and actionable measures in commodities markets and assessed their impact on development and poverty alleviation in the context of the Millennium Development Goals.

MULTILATERAL Free Trade Agreements

Trade Preference System of the Organisation of Islamic Countries

Malaysia signed the Trade Preference System of the Organisation of Islamic Countries (TPSOIC) on 30th June 2004 which aimed to strengthen the economic partnership of the OIC countries to bring economic and special benefits to improve the standard of living in TPSOIC member countries. These countries are Bangladesh, Burkina Faso, Cameroon, Chad, Egypt, Gambia, Guinea, Indonesia, Iran, Iraq, Jordan, Lebanon, Libya, Malaysia, Morocco, Nigeria, Pakistan, Palestine, Sudan, Senegal, Tunisia, Turkey and Uganda. TPSOIC is expected to open up new markets and improve existing market access for Malaysia.

Besides fostering the spirit of solidarity among Islamic countries, TPSOIC can be seen as an opportunity for Malaysia to address issues of high bound tariffs on commodity products in the OIC countries (bound tariffs are not addressed under the preferential trading system). Bound tariffs also exist in developing countries – which form the bulk of Malaysia's commodity markets. Currently, even though import tariffs for primary commodities in these countries are generally high, Malaysia is still competitive enough to expand trade in the OIC markets, especially for furniture, palm oil, cocoa, timber and rubber products.

Malaysia mooted the D-8 Preferential Trade Agreement Initiative, with Bangladesh, Egypt, Indonesia, Iran, Nigeria, Pakistan and Turkey as members. The aim is to foster, support and boost mutual trade based on common principles and to reinforce economic cooperation among the parties through the elimination of non-tariff barriers, reduction of tariffs and exchange of concessions. Meanwhile, four Member Countries signed the Protocol on the Preferential Tariff Scheme (PRETAS) for TPSOIC, which aims to achieve a higher degree of economic cooperation, expansion of production and investment opportunities as well as promote welfare among OIC members. Malaysia is studying the 191 selected tariff lines to be offered to the participating countries. It is envisaged that commodity products, especially palm oil, rubber and timber, will be able to penetrate markets in the OIC countries with the implementation of both these initiatives.

Global System of Trade Preference

The Global System of Trade Preference (GSTP) was initiated by the G77 grouping with the objective of promoting and sustaining mutual trade and the development of economic cooperation among developing countries through the exchange of concessions. This arrangement was to serve as a

platform for market access for the products of member countries. Members are required to grant tariff preferences on a reciprocal basis to meet their commitments to foster trade among developing countries, with the exception of the least developed countries. Additionally, the agreement also provides for non-tariff preferences to be negotiated.

The GSTP Agreement took effect on 19th April 1989 and to date, 41 countries have ratified it, including Malaysia, which did so on 31st August 1989. A total of 24 of these countries - Bangladesh, Colombia, Cuba, South Korea, Ecuador, Egypt, Ghana, India, Indonesia, Iran, Iraq, Libya, Malaysia, the Mercosur countries (Argentina, Brazil, Paraguay and Uruguay), Morocco, Nigeria, Pakistan, Peru, the Philippines, North Korea, Romania, Sri Lanka, Sudan and Thailand - exchanged tariff concessions during the Second Round of negotiations in 1991, which were concluded in 1998. However, the concessions offered were not significant enough for the agreement to meet its objective.

Malaysia will tap into the GSTP market to increase its market share for commodity product. Since Malaysia's tariffs on agriculture and industrial products are already low, the GSTP Agreement favours. It is envisaged that a more aggressive approach to the GSTP will also pave the way for Malaysia's commodity products to penetrate markets of developing countries with tariff peaks.

South-South Cooperation

Under the Malaysian Technical Cooperation Programme (MTCP), initiated by the South-South Cooperation, MPOB has conducted two training programmes, the Palm Oil Familiarisation Programme and the Oil Palm Plantation Management Course to a total of 943 participants from 116 countries.

Malaysia has agreed to contribute to the purchase and delivery of oil palm seeds for the rehabilitation of oil palm plantations in Sierra Leone as part of Malaysia's capacity building initiative for OIC countries.

FUTURE PROSPECTS



FUTURE PROSPECTS

INTRODUCTION

The limitation of land for agricultural development as well as competing use from other economic activities will constrain the expansion of areas planted with primary commodities. Production by the plantation industries and commodities sector will have to come from increased productivity through the adoption of high yielding, pest-resistant planting materials, good agronomic practices, skilled human resources and utilisation of Information and Communications Technology (ICT), biotechnology and advanced technology. Greater efforts to further diversify higher value-added commodity-based products need to be undertaken, and new sources of growth identified for the sector to remain competitive. It is expected that competition from other commodity producing countries will become more intense with the full implementation of the WTO and AFTA agreements.

Other major challenges the plantation commodities sector will face include the adoption of sustainable development of the commodities industry in terms of safeguarding the environment; traceability and food safety; and quality aspects demanded by consumers. These will affect market access of Malaysian commodities and commodity-based products. Appropriate marketing strategies based on these challenges have to be adopted to sustain existing markets as well as to penetrate new markets.

PROSPECTS FOR COMMODITIES

Oil Palm

In 2005, world oils and fats production is expected to increase marginally by 1.6 per cent, from 2004, contributed by increases in palm oil and rapeseed oil.

Soyabean oil remained the largest oil produced at 30.7 million tonnes or 24 per cent of world production, followed by palm oil with 30.6 million tonnes or 23.5 per cent and rapeseed oil at 14.9 million tonnes or 11.4 per cent.

World consumption of oils and fats in 2004 increased by 10.4 per cent to 130.1 million tonnes from 117.9 million tonnes in 2001. The major oils consumed were soyabean oil at 31.2 million tonnes or 24 per cent of total consumption, followed by palm oil at 29.9 million tonnes or 23 per cent and rapeseed oil at 14.8 million tonnes or 11.4 per cent.

World exports are projected to increase by 8.7 per cent in 2005 compared with 2004 but at a lower rate of growth. This is largely due to a decrease in production of sunflower oil, which is forecast to decline by 10.2 per cent.

The Malaysian oil palm industry will continue to be a significant component of the agricultural sector. The forecast is that planted areas will grow at a rate of 2.5 per cent per annum to reach 4.6 million hectares by 2010. The expansion in the planted area is expected to take place mainly in Sabah and Sarawak, where land is still abundant.

Crude palm oil production and export are forecast to increase at the rate of 2.6 per cent per annum to 15.1 million tonnes and 12.8 million tonnes respectively during the 2006 - 2010 period. The increase in production is attributed to new planting areas, conversion of other crops and improved productivity. Productivity improvement will come from higher production of FFB at 25 tonnes per hectare in 2010, compared with 21 tonnes per hectare in 2005, as well as improved oil extraction rate (OER) at 25 per cent compared with 20 per cent at present.

Table 1: OIL PALM PERFORMANCE, 2001 – 2010

	2001	2005e	2010f
Area (mil. ha)	3.50	3.80	4.60
<u>Production (mil. tonnes)</u>			
Crude Palm Oil	11.80	15.30	21.10
Palm Kernel	3.36	3.98	5.70
Crude Palm Kernel Oil	1.53	1.79	2.57
FFB Yield (tonnes/ha)	19.41	21.0	25.0
OER Yield (per cent)	19.22	20.50	22.50
Employment ('000)	310	380	350
Local Consumption ('000 tonnes)	1,577	1,890	2,400

Source: MPOB

e: estimated

f: forecast

Local consumption of palm oil is expected to increase to 2.4 million tonnes in 2010 from 1.89 million tonnes in 2005, due to uptake by the biofuel industry and downstream palm oil-based products industries (**Table 1**).

The oil palm industry as a modern, dynamic and competitive producer will be further strengthened through production and export of palm oil products. The strategic thrust of the palm oil downstream activities is to diversify into a wider range of higher value-added products for the international market. The targeted growth areas are oleochemical derivatives and

Table 2: EXPORT PERFORMANCE, 2001 – 2010

	2001	2005e	2010f
<u>Export Volume (mil. tonnes)</u>			
Palm Oil	10.62	13.30	19.80
Palm Kernel Oil	0.67	0.90	1.30
Palm Kernel Cake	1.81	1.90	2.70
Oleochemical	1.20	1.80	1.50
Finished Products & Others	0.33	0.42	0.54
Export Earnings (RM mil.)	15,076.75	27,530.00	34,658.00
Prices of CPO (RM/tonnes)	895.00	1,400.00	1,500.00

Source: MPOB

e: estimated

f: forecast

The export of palm oil is expected to increase to 19.8 million tonnes in 2010 from 13.3 million tonnes in 2005, with total export earnings rising to RM34.7 billion from RM27.5 billion in 2005. This reflects increased demand for palm oil at the higher price of RM1,500 per tonne in 2010 compared with RM1,400 per tonne in 2005 (**Table 2**).

preparations, biomass products, biofuel as renewable energy, nutritional foods and ingredients as well as biotechnology-based products.

Malaysia will promote the export of high value-added products to large and emerging markets such as the PRC, India, the EU and the Middle East. A comprehensive global market intelligence network will be established with the active participation of both the

private and public sectors. Malaysia will continue to negotiate for greater market access for palm oil products through the FTA negotiations at the bilateral, regional and multilateral levels.

More Malaysian companies will be encouraged to invest overseas in order to be more competitive and gain market access. Investment opportunities in countries such as India, Pakistan, Iran and the Middle East will be further explored. This effort will help ensure Malaysia's continued presence in global production and marketing of palm oil products.

Commercialisation of technology will be accelerated, particularly in new innovations such as alpha-SME, polyols, pulp and other oleochemical intermediates. The Government will consider establishing specific joint-venture capital funds for participation in the equity ownership of private companies. The MPOB will continue to undertake collaborative studies with international R&D centres and multinational companies (MNCs), service laboratories, as well as testing and certification centres to make Malaysia the International Research Centre for Oils and Fats.

Rubber

The world elastomer industry is expected to grow at a slower pace of four per cent to about 22.3 million tonnes in 2006. World natural rubber (NR) output is forecast to rise at a slower pace, though prices are projected to remain attractive in the light of higher crude petroleum price. The plan by the Indonesian Government to replant 400,000 hectares of smallholder rubber between 2005 and 2010 is expected to have some impact on overall global rubber production and price. World NR and synthetic rubber production is anticipated to increase to 9.09 million tonnes and 13 million tonnes in 2006 from 8.62 million tonnes and 11.95 million respectively in 2004.

World elastomer demand is forecast to expand by 4.5 per cent during the same period, in line with healthy economic growth in the Asia Pacific region. The PRC will remain the leading consumer while the EU countries are expected to show a relatively gradual increase compared with the other regions.

Rubber will remain a strategic crop, cultivated mainly by smallholders. The rubber planted area is expected to shrink to 1.1 million hectares in 2010 from 1.25 million hectares in 2005 due to conversion as well as competing land use from other economic activities. However, the Government has designated rubber zones, to maintain at least a minimum of 800,000 hectares under rubber.

The level of natural rubber production is expected to remain the same, at 1.16 million tonnes during the 2005-2010 period. However, the yield is expected to increase to 1.45 tonnes per hectare from 1.33 tonnes per hectare through the application of improved agronomic practices and new technology for latex exploitation, such as Low Intensity Tapping System (LITS). Total domestic rubber consumption is forecast to increase to 550,000 tonnes in 2010 from 400,000 tonnes in 2005.

In view of escalating petroleum prices, which affect the production of synthetic rubber, the demand for natural rubber and consequently its price, is expected to maintain at the present level of RM6,000 per tonne. This price is expected to remain firm for the next five years as the petroleum price is not expected to decrease sharply. Based on the projected price of RM6,000 per tonne, export revenue from natural rubber is expected to increase to RM4.5 billion in 2010 from RM2.8 billion in 2005 (**Table 3**).

Rubber cultivation in future will emphasise on improved productivity through the planting of high yielding clones, adoption of good agronomic practices,

Table 3: RUBBER PERFORMANCE, 2001-2010

	2001	2005e	2010f
Area (mil. ha)	1.38	1.25	1.10
Production ('000 tonnes)			
Natural Rubber	882	1,163	1,160
Rubber Yield (tonnes/ha)	1.21	1.33	1.45
Employment	18,889	13,100	19,000
Local Consumption ('000 tonnes)	344	400	550
Export Earnings (RM bil.)	1.88	2.80	4.50
Prices (RM/tonnes)	2,060	4,500	*6,000

Source: MRB

* assume current price of RM6 (2005-November/December) remains unchanged

e: estimated

f: forecast

utilisation of labour-saving exploitation technologies and management consolidation of smallholdings. It is expected that latex-timber clones (LTC) will be widely planted not only to increase the latex yield but also to provide a source of rubberwood for downstream activities. The utilisation of LITS technology will further enhance latex production, while the adoption of an integrated farming system will collectively improve the income of smallholders and downstream industries.

Diversification of rubber-based products will be further enhanced to include higher value-added products with high rubber content in non-latex products such as bridge bearings, engine mountings and rubber automotive components. R&D activities towards this end will be intensified through the development of human resources as well as collaboration with the private sector.

Cocoa

The world consumption of cocoa is expected to increase, especially in the Asia-Pacific region, and local consumption is expected to rise to 360,000 tonnes in 2010. However, the area under cocoa will decline to 33,313 hectares in 2005 from 57,963 hectares in 2001 but it is expected to increase to 41,000 hectares in 2010 as a result of MCB's rehabilitation of abandoned cocoa areas, encouraged by the expected increase in cocoa price to RM5,500 per tonne in 2010 from

RM3,629 per tonne in 2001. The intensification of technology transfer by MCB and the adoption of good management practices by growers will improve production of cocoa beans to the level of 57,000 tonnes, with a cocoa yield of 1.27 tonne/ha (**Table 4**).

Employment in the cocoa industry is expected to decrease to 30,000 in 2010 due to the non-expansion of the industry. The increase in cocoa prices will boost export earnings of cocoa and cocoa-based products from RM660 million in 2001 to RM1.4 billion in 2005 and RM2.3 billion in 2010.

The expansion of downstream activities of processing cocoa for the manufacture of chocolates, chocolate beverages and confectionery as well as other non-food cocoa-based products will increase the demand for cocoa beans from local grinders. The per capita consumption of cocoa products is expected to increase due to rising incomes and standard of living. New export markets, especially in the East Asian region such as the PRC, Japan, the ROK, ASEAN countries and India are, expected to be the additional sources of growth for Malaysian cocoa products. Trade liberalisation under the WTO and AFTA is providing new market opportunities for Malaysian cocoa and cocoa products.

Table 4: COCOA PERFORMANCE, 2001 – 2010

	2001	2005e	2010f
Area (ha)	57,963	33,313	41,000
<u>Production (tonnes)</u>			
Cocoa Beans	57,708	27,964	44,000
Cocoa Yield (tonnes/ha)	0.99	0.84	1.07
Employment	56,686	42,500	45,000
Local Consumption (tonnes)	138,616	258,647	360,000
Export Earnings (RM million)	660	1,956	2,530
Prices (TawauSMC 1B) (RM/tonnes)	3,629	4,991	5,500

Source: Malaysian Cocoa Board (MCB)

e: estimated

f: forecast

Pepper

World consumption of pepper is projected to grow at three to six per cent annually to reach 358,000 tonnes in 2010. Industrial and institutional users in consuming countries are increasingly sourcing supplies directly from producing countries to counter rising costs. Rising demand for processed and semi-processed products due to health and quality concerns gives rise to good prospects for producers to add value to their goods.

The area under pepper declined to 13,472 hectares in 2005 from 13,862 hectares in 2001 due to prolonged low prices for black pepper and rising cost of inputs causing production to decrease accordingly (**Table 5**). For the period 2006-2010, the areas under pepper cultivation is expected to slowly increase to around 13,800 hectares as prices are expected to pick up as the stock gap between supply and demand is expected to narrow.

Pepper prices declined during the period 2001-2005 due to global surplus. However, with the expected decrease in supply and increase in consumption, prices for black pepper could firm up to breach the RM5,000 level. The export earnings from pepper is

expected to remain at the level of RM140 - RM150 million. Added to this, the growth of the food industry and the Government's plan to make Malaysia a Halal Food Hub augurs well for the future of the pepper industry.

Tobacco

The area under tobacco, which is mainly confined to bris soil along the coast of Kelantan and Terengganu, will decrease to 8,500 hectares in 2005 from 15,972 hectares in 2001 due to conversion to alternative crops under the impending challenges of AFTA in 2010. Malaysia production of tobacco is expected to increase to 9.4 million kg in 2005 from 8.3 million kg in 2001. The increase in production can be attributed to productivity gains, through the increase in yield to 1.2 tonnes per hectare in 2005 from 0.9 tonnes per hectare in 2001 (**Table 6**).

The cost of production in the Malaysian tobacco industry is among the highest in the world and therefore the country cannot compete with other low-cost producers in ASEAN. The full liberalisation of AFTA by the year 2010 will make Malaysia's tobacco industry uncompetitive due to intense competition from the regional market.

Table 5: PEPPER PERFORMANCE, 2001 – 2010

	2001	2005e	2010f
Area (ha)	13,862	13,472	13,800
Production (tonnes) Pepper	25,700	20,000	30,000
Pepper Yield (tonnes/ha)	2.1	1.5	2.4
Employment	68,873	67,000	67,000
Local Consumption (tonnes)	1,550	2,700	5,000
Export Earnings (RM million)	185	144	150
Prices (RM/tonnes)			
White Pepper	7,310	7,600	7,600
Black Pepper	4,965	4,100	4,100

Source: PMB
e: estimated
f: forecast

Table 6: TOBACCO PERFORMANCE, 2001 – 2010

	2001	2005e	2010f
Area (ha)	15,972	8,500	8,000
Production (mil. kg) Tobacco (cured leaves)	8.30	9.40	9.00
Tobacco Yield (tonne/ha)	0.94	1.20	2.00
Employment	82,369	63,900	50,000
Local Consumption (mil. kg)	11.18	13.20	10.00
Export Earnings (RM mil.)	749	800	1,000
Prices (RM/kg)	13.79	14.18	8.00

Source: NTB
e: estimated
f: forecast

Table 7: TIMBER AND WOOD-BASED PRODUCTS PERFORMANCE, 2001 – 2010

	2001	2005e	2010f
<u>Production (mil. cubic metres)</u>			
Sawlogs	19.17	21.80	18.00
Sawntimber	4.70	2.00	2.00
Plywood	4.30	4.50	4.00
Veneer	0.65	0.43	0.50
Mouldings	0.24	0.50	0.60
Total	29.06	29.23	25.10
Employment	96,400	87,400	73,500
<u>Export Earnings (RM bil.)</u>			
Sawlogs	1.5	2.4	1.8
Sawn timber	2.3	3.5	4.0
Plywood	3.5	3.5	4.6
Veneer	0.7	0.8	0.9
Mouldings	0.9	1.2	1.5
Wooden Furniture	5.4	6.5	7.0
Total	14.3	20.1	19.8
<u>Prices (RM/cubic metres)</u>			
Sawlogs	306.9	412.0	450.0
Sawntimber	922.2	1,038	1,000

Source: MTIB
e: estimated
f: forecast

Timber and Wood-based Products

In view of the expected decline in forest resources vis-à-vis the continued expanding demand for raw materials by downstream timber-based industries, greater focus will be given to increasing the productivity of the limited resources. This will be undertaken through improved silvicultural treatment, forest rehabilitation, afforestation as well as more intensified R&D support services. In addition, the increased development of forest plantations to supplement raw material supplies as well as the development of non-timber forest products and services and agroforestry will be promoted to maximise returns to investors and to diversify the development of the forestry sector.

The total production of sawlogs, sawntimber, plywood and veneer is expected to decrease to 25.1 million cubic metres in 2010 from 29.06 million cubic metres in 2001 due to substitution of sawntimber by other wood and non-wood materials, including plywood, particleboard and medium-density fibreboard. Global sawntimber consumption over the next 10 years is expected to grow at a reduced rate (Table 7).

The prices of sawlogs and sawntimber are expected to remain in the range of RM400 – RM450 per cubic metre and RM900 – RM1,000 per cubic metre respectively. The export earnings from timber and wood-based products is expected to increase to RM19.8 billion in 2010 from RM14.3 billion in 2001

due to higher demand for timber which is forecast to increase by 34 per cent to 4.7 billion cubic metres during the same period. Based on demand prospects, Malaysia's export of wood-based products is expected to reach RM19.8 billion by the year 2010, consisting mainly of furniture, sawntimber, builder's, carpentry and joinery, mouldings, plywood and panel products.

The expansion of downstream activities resulting from the sustained growth of the domestic economy will increase domestic demand for timber-based raw materials, which is projected to rise to 26 million cubic metres in 2010 from 20 million cubic metres in 1995. Current incentives to encourage downstream processing and value added activities will be continually reviewed to meet the changing industry needs. The industry will focus on the improvement of management, production and logistics efficiency through the utilisation of precision machinery, ICT, reduction of waste and just-in-time management in the manufacturing process.

The issue of progressive shortage of raw material supply will be addressed through SFM and the development of forest plantations with the participation of the private sector. Procuring raw materials from offshore sources will continue to overcome supply constraints. The timber industry is expected to optimise the use of raw materials by converting mill and logging wastes into valuable innovative products such as solid and engineered products for construction and household usage.

MTIB will undertake R&D activities in areas such as improving the recovery rate of wood utilisation, alternative materials for bio-composites from oil palm fibres and kenaf, better waste management, and utilisation of less-known species of wood. MTIB, in collaboration with the industry, will continue to upgrade and introduce state-of-the-art technologies in milling as well as furniture making to enhance productivity and quality of products. MTIB's Online Core System (MCS), introduced in 2005, will be continually upgraded to disseminate data and information more efficiently on matters pertaining to the timber industry.

The promotion and marketing of Malaysian timber products undertaken by MTIB and MTC will include participation in international trade fairs and organised trade and technical missions to sustain existing markets and to expand to new markets. The major international trade fairs will include DONOTEX, IMM and INTERZUM in Germany, IBS in the USA, CARREFOUR in France, INTERFURN in India, and INDEX in UAE.

NEW SOURCES OF GROWTH

The Government has identified new sources of growth as a strategy to further diversify commodities to continue to contribute to economic growth and the socio-economic development of smallholders. The new sources of growth include palm diesel, forest plantations, biomass, and the planting of kenaf and sago as new industrial crops. The development of Malaysia as a Centre of Excellence for Furniture Design in the region will enhance further the development of the Malaysia furniture industry.

The Palm Diesel

Palm diesel refers to the blending of two per cent to five per cent of processed liquid palm oil with 98 per cent or 95 per cent of petroleum diesel. MPOB has established that palm diesel can be used as an alternative fuel for diesel engines and MPIC has undertaken measures to promote the use of palm diesel in the country as well as for export. A National Biofuel Policy is being drafted to provide an enabling framework for the use of palm diesel in the transportation industry. Government vehicles are expected to switch to the use of palm diesel in 2006 to pave the way for the adoption of biofuel by commercial and private vehicles on a big scale.

Forest Plantation

The need to establish forest plantations has been emphasised in the National Forestry Policy 1978

(Revised 1992), which encouraged the establishment of high quality timber forest plantations as a strategy to provide sufficient raw material for downstream activities. The Government has provided allocations for the first phase of implementation (2006-2010) for 40,000 hectares of forest plantations that have been identified, in Sabah (15,000 hectares), Sarawak (15,000 hectares), Johor (5,000 hectares), and Pahang (5,000 hectares). The forest plantations will be planted with several timber species such as rubber-wood and acacia spp, and will be carried out by an established special purpose vehicle.

Biomass

Biomass, which comprises wastes of commodities, is a potential source of raw material for the manufacture of many value-added products. The oil palm industry alone produces 90 million tonnes of lignocellulosic biomass yearly and 40 million tonnes in the form of EFB, OPT and OPF. However, the usage of biomass for energy, and in industrial products such as particleboard, pulp and paper, as well as automotive components, has not been fully exploited. Currently, only a few companies are involved in the manufacture of biomass-based products. The MPIC has established a BioComposite Centre under MTIB to develop composite materials from fibres and other wood wastes.

Kenaf

Kenaf, as a source of fibre for animal feeds and the manufacture of industrial products for the automotive as well as furniture industries, has been well researched and proven to be viable. A National Committee on Kenaf Development has been set up under the National Economic Action Council and the MPIC has been appointed to spearhead the development of the kenaf industry. Under the Ninth Malaysia Plan (9MP), the MPIC will be provided with an allocation for the planting and commercialisation of kenaf in collaboration with research institutions and the private sector.

Sago

Sago as a source of high quality starch has been planted for many years as an agricultural crop by smallholders in Sarawak. The starch is used for food and non-food industries and there is a great global demand for starch, which can fetch an export price of USD300 per metric tonne. Currently, the Sarawak State Government through Land Custody and Development Authority, Sarawak (PELITA) oversees 19,720 hectares of smallholders' sago farms, which are located mainly in areas along Batang Mukah (5,520 hectares), Batang

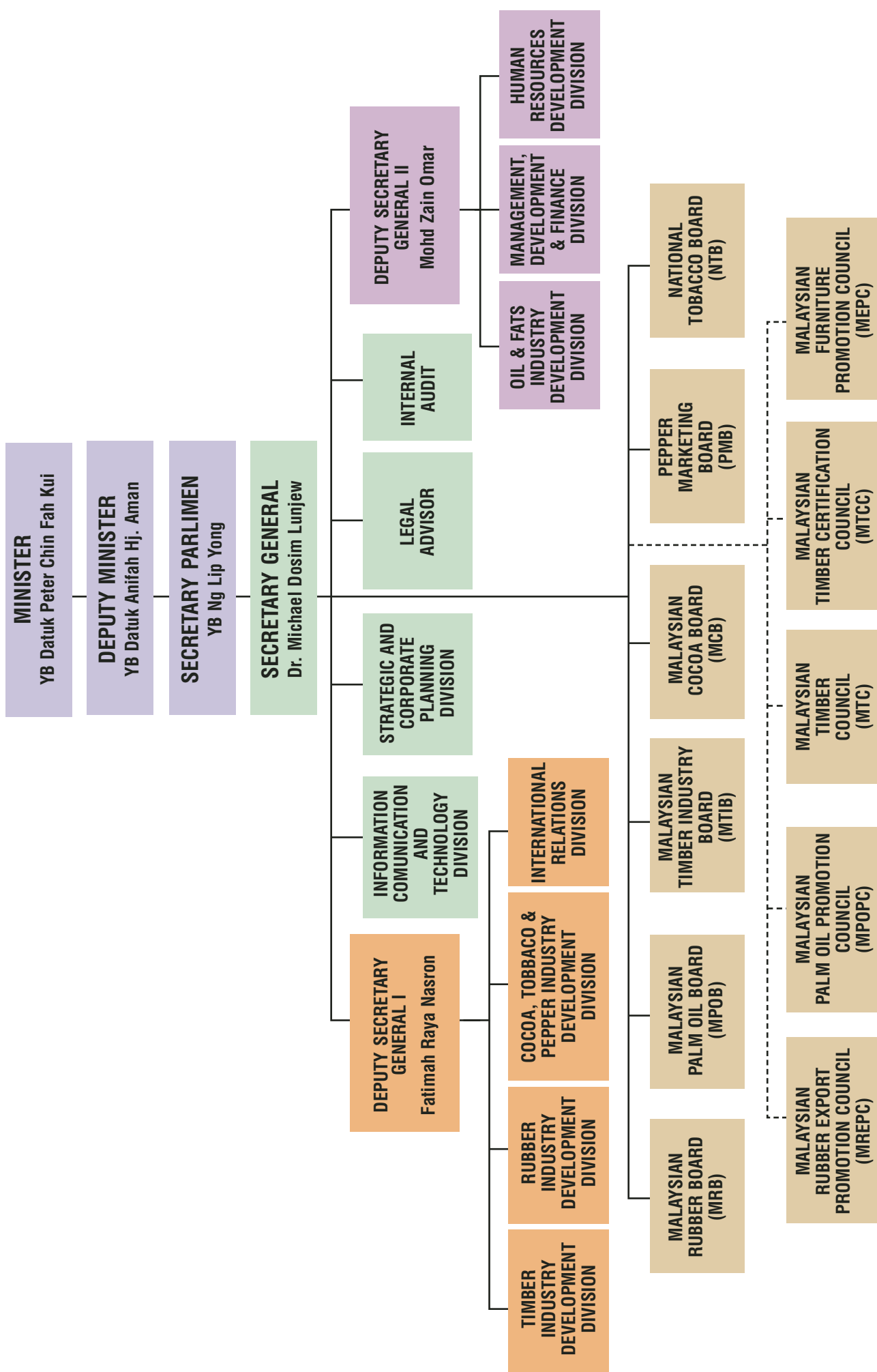
Oya (6,410 hectares), Batang Igan (1,570 hectares) and Batang Saribas (3,240 hectares). However, due to the lack of infrastructure development as well as lack of good agronomic practices, the yield of starch from sago has been limited to three to six metric tonnes per hectare per year, compared with a potential yield of six to eight metric tonnes per hectare per year.

The MPIC will collaborate with PELITA Sarawak under the 9MP to develop further the sago industry through the consolidation of smallholdings into integrated estates, as well as infrastructure development to facilitate the transportation of sago logs from the interior planted areas.

Malaysian Furniture Design Centre

Design enhancement has also been identified as the key factor that will give the furniture industry in Malaysia a greater competitive edge in the world market. In ensuring the sustainability and competitiveness of the furniture industry, the Government has decided that the Malaysian Furniture Design Centre (MFDC) be established to spearhead R&D in furniture design. MFDC will focus on the design of local-made furniture to enhance the quality and acceptability of Malaysian products in the international market. The R&D activities will include intellectual property rights, branding and promotion

ORGANISATION CHART



AGENCIES UNDER THE PURVIEW OF THE MINISTRY OF PLANTATION COMMODITIES AND INDUSTRIES

STATUTORY BODIES

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RRIM-CONSULT MALAYSIAN RUBBER BOARD

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National Tobacco Board (NTB)

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Web site: www.ltn.gov.my

Malaysian Palm Oil Board (MPOB)

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Malaysian Cocoa Board (MCB)

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Malaysian Timber Certification Council (MTCC)

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Fax : 03-42574724/42535262
E-mail : wq@mardec.com.my
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Sarawak Timber Industry Development Corporation (STIDC)

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ORGANISATIONS RELATED TO COMMODITIES SECTOR

Malaysian Rubber Producers' Council (MRPC)

3rd Floor, Bangunan Getah Asli,
148, Jalan Ampang,
P.O. Box 12688,
50 786 Kuala Lumpur.

Tel : 03-21632677/21611964
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E-mail : mrpc@tm.net.my

Malaysian Rubber Glove Manufacturers' Association (MARGMA)

24, Jalan Raja Mokhtar Dua,
42 200 Kapar, Klang,
elangor Darul Ehsan.

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E-mail : margma@po.jaring.my

Malaysian Palm Oil Association (MPOA)

Tingkat 12, Bangunan Getah Asli (Menara),
148, Jalan Ampang,
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E-mail : mpoa@mpoa.po.my
Web site: www.mpoa.org.my

National Association of Smallholders (NASH)

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Jalan Setiawangsa 11,
Taman Setiawangsa,
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Tel : 03-42566299, 42566376
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Malaysia Rubber Product Manufacturers Association (MRPMA)

1A Jln. USJ 11/1J, Subang Jaya,
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Selangor Darul Ehsan.

Tel : 03-7316150
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E-mail : mrpma@po.jaring.my

The Palm Oil Refiners Association of Malaysia (PORAM)

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E-mail : poram@po.jaring.my

The Malayan Edible Oil Manufacturers' Association (MEOMA)

No. 134-1, 1st Floor,
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Fax : 03-22736698
E-mail : meoma@tm.net.my

Palm Oil Refiners Association of Malaysia (POMA)

26-34, Jalan Istana,
41 000 Klang,
Selangor Darul Ehsan.

Tel : 03-33710611
Fax : 03-33713898, 33712886

The Malaysian Estate Owners' Association (MEOA)

C/o Symphony Incorporations Sdn Bhd,
Level 17, Menara Milenium, Jalan
Damanlela, Pusat Bandar Damansara,
50490 Kuala Lumpur.

Tel : 03-27181551
Fax : 03-27157655/03-27156630

Malaysian Oleochemical Manufacturers' Association Group (MOMG)

c/o Federation of Malaysian Manufacturers (FMM),
Wisma FMM, No. 3 Persiaran
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The Malaysian Panel-Products Manufacturers Association (MPMA)

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Tel : 03-92872152, 92872616
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Malaysian Wood Industries Association (MWIA)

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Tel : 03-92821778
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Persatuan Pengusaha Kayu-kayan & Perabot Bumiputera Malaysia (PEKA)

Galeri Produk Kayu Malaysia,
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Malaysian Timber Association (MTA)

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Malaysian Wood Moulding & Joinery Council (MWMJC)

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Timber Exporters' Association of Malaysia (TEAM)

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Malaysia Furniture Industry Council (MFIC)

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Sabah Timber Industries Association (STIA)

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E-mail : stia@tm.net.my
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Sarawak Timber Association (STA)

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The Timber Association of Malaysia (TAS)

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Sabah Forest Development Authority (SAFODA)

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The East Malaysia Planters' Association (EMPA)

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Confederation of Malaysia Tobacco Manufacturers (CMTM)

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ABBREVIATIONS FOR SOURCES OF DATA

Confederation of Malaysian Tobacco Manufacturers	-	CMTM
Confederation of Malaysian Tobacco Manufacturers	-	CMTM
Department of Statistics, Malaysia	-	DOS
Forestry Department Peninsular Malaysia	-	FDPM
Forestry Department Sabah	-	FD Sabah
Forestry Department Sarawak	-	FD Sarawak
International Cocoa Organisation	-	ICCO
International Pepper Community	-	IPC
International Rubber Study Group	-	IRSG
Malaysian Cocoa Board	-	MCB
Malaysian Industrial Development Authority	-	MIDA
Malaysian Palm Oil Board	-	MPOB
Malaysian Rubber Board	-	MRB
Malaysian Timber Industry Board	-	MTIB
National Tobacco Board	-	NTB
Oil World Statistics Update	-	OIL WORLD
Pepper Marketing Board, Sarawak	-	PMB
Sarawak Timber Industry Development Corporation	-	STIDC

GLOSSARY OF ACRONYMS

ACC	-	ASEAN Cocoa Club
ACCSQ	-	ASEAN Consultative Committee on Standards and Quality
ACFTA	-	ASEAN China Free Trade Agreement
ACP	-	African and Caribbean and Pacific
AETS	-	Agreed Export Tonnage Scheme
AFO	-	Area Farmers' Organisation
AFPIC	-	ASEAN Forest Products Industry Club
AFTA	-	ASEAN Free Trade Area
AISP	-	ASEAN Integrated Special Products
AMAF	-	ASEAN Ministers on Agriculture and Forestry
ARBC	-	ASEAN Rubber Business Council
ANRPC	-	Association of Natural Rubber Producing Countries
ANSA	-	All Nippon Spice Association
APCC	-	Asia Pacific Coconut Community
AQIS	-	Australian Quarantine Inspection Services
ARBC	-	ASEAN Rubber Business Council
ASA	-	American Soyabean Association
ASEAN	-	Association of South East Asian Nations
ASTA	-	American Spice Trade Association
ATL	-	Accelerated Tariff Liberalisation
AVOC	-	ASEAN Vegetable Oils Club
BAT	-	British American Tobacco
BCJ	-	Builder's Carpentry and Joinery
BDC	-	Bio-Composite and Fibre Development Centre
BIMP-EAGA	-	Brunei-Indonesia-Malaysia-Philippines East ASEAN Growth Area
BMD	-	Bursa Malaysia Derivatives
BP	-	Black Pod
CCPO	-	Cabinet Committee on Palm Oil Competitiveness
CECA	-	Comprehensive Economic and Cooperation Agreement
CEPT	-	Common Effective Preferential Tariff
CFC	-	Common Fund for Commodities
CIDB	-	Construction Industry Development Board

CIF	-	Cost, Insurance and Freight
CITES	-	Convention on International Trade in Endangered Species
CLMV	-	Cambodia, Laos, Myanmar and Vietnam
CMG	-	Cocoa Manufacturers' Group
CMTM	-	Confederation of Malaysian Tobacco Manufacturers
COASS	-	Committee on Agriculture Special Session
COC	-	Certificate for Chain-of-Custody
COMESA	-	Common Market for Eastern and Southern Africa
COPAL	-	Cocoa Producers Alliance
CORESTA	-	Cooperation Centre for Scientific Research Relative to Tobacco
CPB	-	Cocoa Pod Borer
CPKO	-	Crude Palm Kernel Oil
CPO	-	Crude Palm Oil
CRPS	-	Curers Restructuring Promotion Scheme
CS	-	Curer System
CWP	-	Creamy White Pepper
DOA	-	Department of Agriculture
DPNR	-	Deproteinised Natural Rubber
DSM	-	Department of Standards, Malaysia
EFB	-	Empty Fruit Bunches
EHP	-	Early Harvest Programme
EMPA	-	East Malaysia Planters Association
ENR	-	Epoxidised Natural Rubber
EPA	-	Economic Partnership Agreement
EPU	-	Economic Planning Unit
ESA	-	European Spice Association
EU	-	European Union
FAMA	-	Federal Agricultural Marketing Authority
FAO	-	Food and Agriculture Organisation
FCTC	-	Framework Convention on Tobacco Control
FCPO	-	Crude Palm Oil Futures
FDPM	-	Forestry Department of Peninsular Malaysia
FELCRA	-	Federal Land Consolidation and Rehabilitation Authority

FELDA	-	Federal Land Development Authority
FFB	-	Fresh Fruit Bunches
FIC	-	Foreign Investment Committee
FOSFA	-	Federation of Oils, Seeds and Fats Association
FRIM	-	Forest Research Institute of Malaysia
FSC	-	Forest Stewardship Certification
FTA	-	Free Trade Agreement
GALOP	-	Genome Analysis Laboratory for Oil Palm
GAP	-	Good Agronomic Practices
GDP	-	Gross Domestic Product
GISH	-	Genomics In-situ Hybridisation
GMO	-	Genetically Modified Organism
GRG	-	General Rubber Goods
GSTP	-	Global System of Trade Preference
HPA	-	Hanoi Plan of Action
IASC	-	International Association of Seed Crushers
IBS	-	Industrialised Building System
ICA	-	Industrial Coordination Act
ICB	-	International Commodity Bodies
ICCO	-	International Cocoa Organisation
IGC	-	Individual Grower Curers
IGCS	-	Individual Grower Curer System
IMO	-	International Maritime Organisation
IMP	-	Industrial Master Plan
IMS-GT	-	Indonesia-Malaysia-Singapore Growth Triangle
IMT-GT	-	Indonesia-Malaysia-Thailand Growth Triangle
IPC	-	International Pepper Community
IRA	-	International Rubber Association
IRCo	-	International Rubber Consortium Limited
IRG	-	Industrial Rubber Goods
IRPA	-	Intensified Research in Priority Areas
IRRDB	-	International Rubber Research and Development Board
IRSG	-	International Rubber Study Group
ISP	-	Incorporated Society of Planters

ITRC	-	International Tripartite Rubber Council
ITTO	-	International Tropical Timber Organization
JCM	-	Joint Commission Meetings
JEC	-	Joint Economic Committee
JETC	-	Joint Economic and Trade Committee
JMEPA	-	Japan-Malaysia Economic Partnership Agreement
JTC	-	Joint Trade Committee
JTI	-	JT International
JTIC	-	Joint Trade and Investment Committee
LCI	-	Livestock and Crop Integration
LIFFE	-	London International Financial and Future Options Exchange
LITS	-	Low Intensity Tapping System
LPS	-	Lesser-promoted Species
LSGC	-	Large Scale Grower Curer
LTCs	-	Latex-Timber Clones
LVB	-	Laminated Veneer Cross Band
LVL	-	Laminated Veneer Lumber
MARDI	-	Malaysian Agriculture Research and Development Institute
MATRADE	-	Malaysian External Trade Development Corporation
MCB	-	Malaysian Cocoa Board
MCS	-	MTIB Core System
MDF	-	Medium Density Fibreboard
MEOMA	-	Malaysia Edible Oil Manufacturers Association
MFDC	-	Malaysian Furniture Design Centre
MFCT	-	Malaysian Flue Cured Tobacco
MIDA	-	Malaysian Industrial Development Authority
MIFF	-	Malaysian International Furniture Fair
MITI	-	Ministry of International Trade and Industry
MOA	-	Ministry of Agriculture and Agro-based Industries
MOE	-	Ministry of Education
MOF	-	Ministry of Finance
MOSTI	-	Ministry of Science, Technology and Innovations
MOU	-	Memorandum of Understanding

MPIC	-	Ministry of Plantation Industries and Commodities
MPOA	-	Malaysian Palm Oil Association
MPOB	-	Malaysian Palm Oil Board
MPOPC	-	Malaysian Palm Oil Promotion Council
MOMG	-	Malaysia Oleochemical Manufacturers Group
MRB	-	Malaysian Rubber Board
MRE	-	Malaysian Rubber Exchange
MRELB	-	Malaysian Rubber Exchange and Licensing Board
MRRDB	-	Malaysian Rubber Research and Development Board
MTC	-	Malaysian Timber Council
MTCC	-	Malaysian Timber Certification Council
MTCP	-	Malaysian Technical Cooperation Program
MTIB	-	Malaysian Timber Industry Board
NAMA	-	Non-Agricultural Market Access
NAP	-	National Agricultural Policy
NASH	-	National Smallholders' Association
NCP	-	Naturally Clean Black Pepper
NCRT	-	National College of Rubber Technology
NEAC	-	National Economic Action Council
NGOs	-	Non-Governmental Organisations
NIOP	-	National Institute of Oilseeds Products
NR	-	Natural Rubber
NTB	-	National Tobacco Board
NTBs	-	Non Tariff Barriers
OAU	-	Organisation of African Unity
OBM	-	Original Brand Manufacturing
ODM	-	Original Design Manufacturing
OEM	-	Original Equipment Manufacturer
OER	-	Oil Extraction Rate
OIC	-	Organisation for Islamic Co-operation
OPENS	-	Oil Palm Efficient Nutrient System
OPF	-	Oil Palm Frond
OPMC	-	Oil Palm Plantation Management Course
OPP	-	Outline Perspective Plan

OPT	-	Oil Palm Trunk
PELITA	-	Land Custody and Development Authority, Sarawak
PKC	-	Palm Kernel Cake
PKO	-	Palm Kernel Oil
PMB	-	Pepper Marketing Board
PMM	-	Phillip Morris Malaysia
POA	-	Plan of Action
POFP	-	Palm Oil Familiarisation Programme
POIC	-	Palm Oil Industrial Cluster
POMA	-	Palm Oil Millers Association
PORAM	-	Palm Oil Refiners Association of Malaysia
PRC	-	People's Republic of China
PRETAS	-	Protocol on the Preferential Tariff Scheme
PRIM	-	Plastics and Rubber Institute of Malaysia
PROKAM	-	Projek Kampung Teknologi Getah
PSCs	-	Project Steering Committees
PTL	-	Physical Testing Laboratory
QAS	-	Quality Assurance Scheme
R&D	-	Research and Development
RAPs	-	Research Advisory Panels
RBD	-	Refined, Bleached, Deodorised
RCO	-	Registered Certification Organisation
RGD	-	Registered Grading Organisation
RISDA	-	Rubber Industry Smallholders Development Authority
RMK 9	-	9 th Malaysian Plan
ROK	-	Republic of Korea
ROO	-	Rules of Origin
RRIES	-	RRIM Experimental Station
RRIM	-	Rubber Research Institute of Malaysia
RSPO	-	Roundtable on Sustainable Palm Oil
RTC	-	Rubber Testing Centre
SBPPKG	-	Skim Bantuan Pendapatan Pekebun Kecil Getah
SDO	-	Standards Development Organisation

SEM	-	Scanning Electron Microscopic
SFM	-	Sustainable Forest Management
SMG	-	Standard Malaysia Glove
SMR	-	Standard Malaysian Rubber
SMS	-	Supply Management Scheme
SPS	-	Sanitary and Phyto Sanitary
SPV	-	Special Purpose Vehicle
SR	-	Synthetic Rubber
SREP	-	Small Renewable Energy Power
STIDC	-	Sarawak Timber Industry Development Corporation
SWO	-	Standards Writing Organisation
TARRC	-	Tun Abdul Razak Research Centre
TBT	-	Technical Barriers to Trade
TIFA	-	Trade and Investment Framework Agreement
TIG	-	Trade in Goods
TIRP	-	Tobacco Industry Restructuring Plan
TOPB	-	Tobacco Oil Procom Block
ToT	-	Transfer of Technology
TPSOIC	-	Trade Preference System of the OIC
TUNAS	-	Tunjuk Nasihat Sawit
UAE	-	United Arab Emirates
UK	-	United Kingdom
UNCTAD	-	United Nations Conference on Trade and Development
UPM	-	Universiti Putra Malaysia
UPTEN	-	University of Plantation Technology and Entrepreneurship
USA	-	United States of America
VAP	-	Vientiane Action Programme
VSD	-	Vascular Streak Dieback Disease
WISDEC	-	Wood Industry Skills Development Centre
WHO	-	World Health Organisation
WTO	-	World Trade Organisation