

## CHAPTER XVI

# Agriculture, Animal Husbandry, Fisheries and Forestry

### I. INTRODUCTION

886. The accelerated development of agriculture, the dominant sector of the economy, is essential for the attainment of the objectives of the New Economic Policy (NEP). This sector which contributed 45.5% of foreign exchange earnings, 29.8% of the Gross Domestic Product (GDP) and employed about 1.9 million workers or 49.3% of the total work force in 1975, accounts for the highest incidence of poverty. In 1975, about 69% of all households in poverty were in the agricultural sector, with the majority located in the less developed States. The Third Malaysia Plan (TMP) will therefore emphasize the implementation of programmes and projects in this sector with the aim of redressing poverty and regional disparities.

887. This Chapter reviews briefly the progress achieved during the Second Malaysia Plan (SMP) and explains the policies and strategies underlying the programmes for the TMP.

### II. PROGRESS, 1971-75

888. Value added or net output in the agricultural sector grew by 5.9% per annum during 1971-75 exceeding the SMP target of 5.5%. This growth was largely due to acreage and productivity increases supplemented by the expansion of infrastructural facilities, extension, credit, marketing and research services.

889. The production of palm oil and kernels grew by 24.3% per annum whereas the contribution of a number of crops (including sugarcane, fruits, vegetables and starchy roots) though minor at present, increased by 5.8% per annum indicating progressive diversification of the agricultural base. Agriculture maintained its strategic position in the economy, although its share of GDP decreased slightly from 32.1% in 1970 to 29.8% in 1975. The growth of agricultural production is shown in Table 16-1.

TABLE 16-1

MALAYSIA: GROWTH OF AGRICULTURAL OUTPUT, 1971-80  
(1970 = 100)

	1971	1972	1973	1974	1975	1980 (Projected)	Average annual growth rate (%)	
							1971-75	1976-80
Rubber .. .. .	104.4	104.3	123.5	122.0	116.3	155.6	3.1	6.0
Palm oil and kernels .. .. .	136.7	167.7	187.0	237.1	296.8	634.2	24.3	16.4
Sawlogs .. .. .	103.4	117.9	132.4	132.9	108.2	149.6	1.6	6.7
Padi .. .. .	108.6	110.4	118.0	126.1	120.2	143.5	3.7	3.6
Coconut and copra .. .. .	99.8	101.6	103.2	105.4	106.5	114.7	1.3	1.5
Pineapple .. .. .	95.2	90.9	86.3	87.9	81.7	92.4	-4.0	2.5
Pepper .. .. .	109.7	105.4	92.2	113.1	124.0	174.7	4.4	7.1
Tea .. .. .	120.0	87.5	80.0	77.5	72.5	59.1	-6.2	-4.0
Fish .. .. .	107.9	104.4	131.8	152.2	159.5	192.2	9.8	3.8
Livestock <sup>1</sup> .. .. .	103.9	112.0	109.0	116.8	125.1	164.3	4.6	5.6
Miscellaneous <sup>2</sup> .. .. .	104.7	115.2	118.4	123.1	132.5	190.2	5.8	7.5
Aggregate production index	106.8	112.6	126.2	132.5	131.2	186.5	5.6	7.3

<sup>1</sup> Includes beef from buffalo and oxen, mutton, pork and poultry meat and eggs.

<sup>2</sup> Includes sago, tapioca, cocoa, coffee, sugarcane, groundnuts, maize, fresh fruits, tobacco, spices, food crops and other minor crops.

890. The number of jobs created during the SMP was 150,000 or 25.5% of total jobs created. Although this raised employment in the sector to 1.9 million in 1975, the share of agriculture in total employment declined from 53.5% in 1970 to 49.3% in 1975 due to the more rapid growth of other sectors.

891. A total of \$2.1 billion was expended for agricultural development during the SMP. New land development accounted for 53.5%, *in situ* development 45.1% with the remaining 1.4% by other agricultural activities.

#### In situ development

892. There was significant progress in the improvement of agriculture in existing areas. During the SMP, a total of \$959.1 million was expended for *in situ* development of which \$531.2 million was for drainage and irrigation, replanting and livestock and fisheries programmes with a view to increasing productivity.

893. *Drainage and irrigation* Under the SMP, about 324,000 acres of padi land in Peninsular Malaysia were improved through irrigation facilities. Of this, 272,000 acres were provided with double-cropping facilities. The Muda Irrigation Scheme was completed in 1974 and provided for 152,000 acres to be double-cropped (in addition to 83,000 acres under the First Malaysia Plan, FMP). Similarly, the 47,000-acre Kemubu Irrigation Scheme was completed in 1975. However, only 4,000 acres out of the 12,000 acres within the Besut project were double-cropped in the same year. The remaining

69,000 acres suitable for double-cropping were provided by other schemes including Krian and Trans-Perak. In Sabah and Sarawak, about 8,000 acres and 2,800 acres respectively were provided with improved irrigation facilities of which 7,000 acres and 2,000 acres were provided with double-cropping facilities.

894. Under the SMP, some 247,000 acres of swamp and existing agricultural land, mainly in Peninsular Malaysia, were improved through drainage facilities for the cultivation of crops other than padi including coconut, rubber and cocoa. During the latter part of the SMP, work on the Western Johor Agricultural Development Project (Phase I) covering some 330,000 acres of agricultural land was initiated.

895. *Replanting* A total of 418,000 acres was replanted with rubber and pineapple—412,000 for rubber and 6,000 for pineapple. In addition, 52,440 acres of coconut were replanted or rehabilitated and 46,000 acres of rubber were newplanted in areas contiguous to existing smallholdings. This accounted for 93.7% of the targets set for the SMP.

896. *Livestock* A significant feature in the development of the livestock industry was the establishment of the National Livestock Development Authority (MAJUTERNAK) in 1972 responsible for the development and commercialization of the beef and dairy industries. During the period, seven beef/dairy farms were established in Johor, Negri Sembilan, Pahang, Perak, Sarawak, Selangor and Trengganu. Approximately 12,000 acres were cleared with about 10,000 head of cattle stocked and 640 people employed on the farms. Under its abattoir reorganization and modernization programme, MAJUTERNAK completed the Shah Alam abattoir in 1973 which is now fully operational while that in Johor Bahru is in the process of being implemented.

897. The Division of Veterinary Services in the Ministry of Agriculture continued to provide improved veterinary health services and promote smallholders' livestock production. To encourage smallholders to participate in livestock production, a number of *pawah* schemes for buffaloes and oxen were implemented. Under the SMP, \$3.8 million was expended for these schemes and 8,700 buffaloes and oxen distributed to the farmers. In addition, the successful establishment of milk collecting centres not only stimulated the local production of fresh milk but provided supplementary income to smallholders. Advisory and training services were also extended for poultry rearing. In the endeavour to diversify main crop incomes, day-old chicks were also distributed to initiate the establishment of small poultry projects.

898. *Fisheries* Several infrastructural facilities approved under the SMP were completed. These included the fishing harbour complexes at Kuala Kedah, Lumut, Kuala Trengganu and Kuching. In addition, the Government provided other facilities such as landing jetties, guiding lights, packing sheds and cold rooms.

899. The Fisheries Development Authority of Malaysia (MAJUIKAN) established in 1971, constructed 135 boats under its trawler scheme of which 98 were launched during the SMP mainly in the States of Johor, Kedah, Kelantan, Pahang and Trengganu providing employment for over 1,000 fishermen in off-shore operations as well as in the associated industries. In addition, a fish/prawn processing plant in Kuala Kedah and one ice plant in Kuala Perlis were also established.

#### **Land and forestry development**

900. Over one million acres of land were opened up during 1971-75 or 83.3% of the revised SMP target of 1.2 million acres. The Federal Land Development Authority (FELDA) which accounted for 412,000 acres exceeded the SMP Mid-Term Review target of 403,000 acres. The new schemes were largely located in Pahang (49.3%), Johor (22.4%) and Negri Sembilan (15.2%). Of the total new acreage, 288,000 were planted with oil palm and 112,000 with rubber. The balance of over 12,000 acres was developed with sugarcane and cocoa as part of the FELDA diversification programme. During the same period, over 13,700 families were settled in FELDA schemes.

901. A total of 461,100 acres was developed by other Federal and State agencies during the SMP. The Federal Land Consolidation and Rehabilitation Authority (FELCRA) developed 19,000 acres of youth schemes and 39,300 acres of fringe schemes and rehabilitated 9,100 acres during 1971-75. A further 47,300 acres of block newplanting were undertaken by the Rubber Industry Smallholders Development Authority (RISDA).

902. The State agencies in Peninsular Malaysia developed a total of 151,100 acres exceeding the SMP target of 87,500 acres. In Sabah and Sarawak, the State agencies together developed 204,400 acres of which 50,500 acres were undertaken by the State Land Development Boards.

903. The private sector developed about 115,900 acres and a further 21,300 acres as joint-venture projects representing 67.2% and 42.6% of the targets respectively. The shortfall was partly due to the emphasis given by the private sector to the consolidation rather than expansion of existing estates through replanting of old rubber trees and conversion to oil palm. The private sector programme included projects developed by Government-sponsored agencies such as the *Lembaga Urusan dan Tabung Haji*. A significant feature of private sector development was the increasing emphasis on new crops such as cocoa and sugarcane.

904. *Forestry* The Forest Industries Development Projects for Peninsular Malaysia and Sarawak were completed during the SMP period. These projects quantified the perspective for forestry development up to 1990 and identified programmes to be implemented to promote maximum sustained exploitation of forest resources. For Sabah, a forest inventory project was completed in 1973.

905. In addition, the State Forest Departments carried out forest regeneration programmes, including the establishment of 6,000 acres of pine plantations mainly in Johor, Negri Sembilan and Pahang.

#### **Institutional development**

906. Institutional improvements were made during the SMP to develop a more effective machinery for providing agricultural supportive services. These included extension, training, credit, subsidies, research, marketing and processing. Several new institutions such as the National Padi and Rice Authority (LPN), the Food Industries of Malaysia Sdn. Bhd. (FIMA), MAJUIKAN, MAJUTERNAK, RISDA, the National Tobacco Board (NTB) and the Farmers' Organization Authority (FOA) were established in the earlier period of the SMP. Following the establishment of this range of institutions, increasing emphasis was given in the latter part of the SMP to the effective consolidation of work among these agencies.

907. *Training and extension* During 1971-75, about \$57.6 million was spent on agricultural education and training at the professional, supervisory and operative levels. *Universiti Pertanian Malaysia* (UPM), formerly the College of Agriculture, commenced degree courses in forestry, veterinary science and agriculture in 1972. It also continued to provide diploma courses in veterinary science and agriculture. In addition, UPM conducted courses in fisheries and agri-business. Total enrolment in 1975 was 695 at the degree level and 1,858 at the diploma level.

908. The training of operative level personnel was conducted at five agricultural institutes in Johor, Pahang, Penang, Perak and Selangor while a sixth is under construction in Trengganu. The five institutes had a total training capacity of 1,200 per year. A total of 841 Junior Agricultural Assistants was trained during the SMP. In Sabah, an agricultural vocational school at Timbang Menggaris was completed in 1973 to provide training in crop cultivation, animal husbandry and mechanization. To date, 140 students have graduated from this school. During the SMP, two Agricultural Training Centres were established in Sarawak bringing the total to 11. The Centres, each with a capacity to train 60 youth per course, have since 1971 produced 3,100 graduates.

909. The Division of Fisheries in the Ministry of Agriculture launched a number of training schemes for fishermen. The Marine Fisheries Training Centres in Penang and Kuala Trengganu provided short-term courses for lower level operatives in basic navigation and engine maintenance while the Fishermen's Training Institute in Penang conducted one-year advanced technical training courses to produce skippers and enginemen. In addition, the Inland Fisheries Training Centre at Bukit Tinggi, Pahang provided short courses in fish culture to the rural people.

910. In order to make available qualified personnel for the livestock industry and training institutions, the Division of Veterinary Services provided in-service training for Veterinary Assistants, Inseminators, Laboratory Assistants and Meat Inspectors at its Veterinary Research Institute, Ipoh, *Institusi Haiwan*, Kluang and at Shah Alam Abattoir. Training facilities at the Ayer Kroh and Cheras training centres were greatly expanded to accommodate increasing numbers of in-service personnel as well as farmers from the rural areas. During the SMP, 330 in-service personnel and 2,750 farmers were trained by these training centres and institutes.

911. To enable greater participation of the Malays and other indigenous people in the timber industry, two logging training centres were established in Pahang and Trengganu. These two centres trained 202 loggers during 1971-75. In addition, four forestry training schools were constructed in Pahang, Sabah, Sarawak and Selangor to provide in-service training for the operative staff. These schools trained a total of 1,030 staff during the SMP. To meet the need for trained personnel at the sub-professional level, the *Institusi Teknologi MARA* and subsequently the Forestry College at Kepong established in 1972, produced 72 diplomates by 1975.

912. In addition to formal training, extension services were provided by a number of organizations. The main agencies responsible for extension are the State Departments of Agriculture and Veterinary Services supported by the Federal Departments which supply funds, key personnel, supervision and technical support. Other agencies involved in extension services to specific sub-sectors are RISDA for rubber smallholders and the Malaysian Pineapple Industry Board (MPIB) for pineapple growers. During 1971-75, three additional rural agricultural training centres and five farm mechanization training centres were established, increasing the totals to 25 and 10 respectively in Peninsular Malaysia.

913. *Agricultural credit and subsidies* Total loans approved during the SMP by *Bank Pertanian Malaysia* (BPM) amounted to \$159 million. The bulk of the loans was for padi production amounting to 41.2%; agro-based industries, 23.6%; estate development, 15.3%; and tobacco production and marketing, 10.3%. Credit was provided either directly by BPM or through established local credit centres, comprising mainly Farmers' Organizations (FOs). In addition, BPM established 14 branches throughout the country.

914. Complementing the credit schemes of BPM, FOA also provided credit to its members, mainly for agricultural inputs, rice milling operations, expansion of agricultural production, processing and marketing. The total credit provided by the FOA during the SMP amounted to \$3.6 million.

915. RISDA made available credit for rubber smallholders participating in replanting and newplanting programmes. Credit was provided to assist smallholders to cultivate short-term cash crops to ensure uninterrupted

income while the trees were immature. Credit for fertilizer and weedicide was also provided to ensure proper management and maintenance of their holdings. RISDA extended credit amounting to \$3.3 million during the SMP.

916. Various subsidy schemes were implemented during the SMP to promote crop diversification and cushion the effects of rising costs of inputs. The subsidies given were in the form of planting materials, fertilizer and pesticide. A sum of \$158.4 million was expended for rubber replanting and newplanting throughout the country. The subsidies for coconut replanting and rehabilitation and pineapple replanting in Peninsular Malaysia amounted to \$15 million and \$4.8 million respectively. In addition, a total of \$15 million was provided for other permanent crops, food crops and lime. A significant feature of the subsidies programme in Sarawak was the Pepper Subsidy Scheme for which a total of \$11.1 million was allocated. The Urea Subsidy Scheme for padi farmers was introduced during the second half of 1974 to meet the sharp increase in the price of urea. A total of \$60 million was provided under this Scheme.

917. During the SMP, a capital subsidy scheme was implemented for inshore fishermen. The main aim of the subsidy scheme was to increase the productivity and income of fishermen and enable them to increase their participation in the marketing of their produce. In 1974, the previous system of grants was modified to a subsidy scheme which provided an 80% subsidy on nets with a maximum of \$1,000 and 33% on engines with a maximum of \$2,500 to permit greater coverage. Over \$1.5 million was given as capital assistance to fishermen to modernize their fishing operations both in Peninsular Malaysia and Sarawak.

918. *Agricultural research* Agricultural research activities by Government agencies were undertaken to raise the income of small farmers, increase the production of export crops, promote agricultural diversification and stimulate import substitution. The research activities of the Malaysian Agricultural Research and Development Institute (MARDI), the principal agency undertaking agricultural research, progressed during the SMP. Four new rice varieties and two *pulut* varieties were released. For further breeding work in oil palm improvement, seeds of diverse types of oil palm were obtained from Nigeria. Significant progress was also achieved in research on field crops for pasture and fruits.

919. The Fish Research Institute undertook marine and brackishwater research while research on freshwater fish culture was undertaken by MARDI. The focus of the applied research programme was the demersal fish resources in national and international waters. The data processed provided information on the catch rate of commercial and trash fish, fish density distribution and the extent of exploitable fish resources. Research was also undertaken on aquaculture.

920. During the SMP, the Veterinary Research Institute in Ipoh was enlarged to include a unit for isolation of experimental animals and a swine fever vaccine production unit. In addition, two regional laboratories were constructed at Petaling Jaya and Penang to serve as diagnostic and disease control centres.

921. Research on all aspects of rubber continued to be conducted by the Malaysian Rubber Research and Development Board (MRRDB) as well as its component units, the Rubber Research Institute of Malaysia (RRIM) and the Malaysian Rubber Producers Research Association (MRPRA). The achievements during the SMP included RRIM's new high-yielding planting material with a yield potential of over 3,000 lbs. per acre per year, modernization of agro-economic management and the development of yield stimulants. New processing methods have been developed for Standard Malaysian Rubber (SMR) and special purpose rubbers. Research on the diversification of end-uses will result in the greater use of natural rubber for the production of winter tyres, engineering components and automobile bumpers.

922. The Forest Research Institute (FRI) at Kepong, the main agency undertaking research in forest development and timber utilization, devoted considerable effort to the investigation of timber properties and processing characteristics for the fuller utilization of forest resources. At the same time, market research and promotion of exports were undertaken by the Malaysian Timber Industries Board (MTIB).

923. *Agricultural processing and marketing* During the SMP, the involvement of the Government in processing and marketing was for assisting the small-scale producers and the Malay and other indigenous traders to play a greater role in the marketing process. This was undertaken by various agencies for specific agricultural activities.

924. The Malaysian Rubber Development Corporation (MARDEC) established 14 SMR factories with a total capacity of 145,300 tons per year for the production of SMR from latex and scrap rubber purchased from smallholders. In addition, three SMR factories with a combined yearly capacity of 120 tons were established by FELDA. RISDA also established 1,049 units of Group Processing Centres, now called Smallholders Development Centres, to improve the processing of smallholder rubber. During the same period, FELDA established nine palm oil mills increasing the total capacity to 401 tons of fresh fruit bunches (ffb) per hour.

925. The LPN established six integrated complexes and the Federal Agricultural Marketing Authority (FAMA) nine drying complexes to meet drying and milling requirements resulting from the expansion of padi double-cropping. In addition, another six integrated complexes are under construction.

926. The establishment of the FOA in 1973 was for the objective of establishing FOs through the merger of existing agro-based co-operatives and Farmers' Associations. During the SMP, the main activities of FOs were channelled through the Farmers' Development Centres (FDCs)



in specific development areas. These FOs have provided *inter alia* facilities for the rehabilitation of rice mills, tobacco curing, trading of agricultural inputs and consumer goods and agricultural marketing.

927. During the SMP, FAMA implemented a number of marketing improvement schemes for pepper, coconut, coffee, groundnuts and vegetables. These marketing improvement schemes involved both regulatory activities and the establishment of processing centres. As part of its marketing improvement programme, FAMA also participated in direct trading in order to provide additional market outlets. FAMA initiated the establishment of three pepper grading and processing centres in Johor and Sarawak. In addition, two processing centres for copra, one each for coffee and groundnuts and one coffee powder mill were also established. Work on another four copra processing centres was also initiated during the SMP.

#### **Agricultural production**

928. The principal source of agricultural growth came from exports, Agricultural production expanded by 5.6% per annum during the SMP. The value added in the sector grew by 5.9% per annum compared to 8% during the FMP. The slower growth resulted from the decline in commodity prices especially during the early years of the SMP. To protect incomes from commodity price fluctuations, efforts were intensified for the promotion of agricultural diversification. The Green Book campaign for the cultivation of commercially viable short-term crops on existing land was introduced in December, 1974 with Phase I of the campaign emphasizing production of food for domestic needs and supplementing income to smallholders.

929. *Rubber* In Peninsular Malaysia, rubber production from the estate sector grew steadily during 1971-74, rising from about 611,000 tons in 1970 to 673,000 tons in 1974, an increase of 2.5% per annum. This was achieved despite a 12.5% decline in the rubber acreage from about 1.6 million in 1970 to 1.4 million in 1975, caused by the subdivision of estates and conversion to other crops mainly oil palm. However, production in 1975 declined to about 588,000 tons due to restrictions imposed by the Government under the national price stabilization scheme. Although sensitive to price changes, smallholder production continued to increase by 37.5% from about 585,000 tons in 1970 to 805,000 tons in 1975. The increase was mainly due to the sizeable production from FELDA schemes amounting to 53,900 tons in 1975 and higher yields in replanted areas. The acreage under smallholdings also increased by 5.5% from about 2.7 million in 1970 to 2.8 million in 1975.

930. In Sabah and Sarawak, rubber production increased from 53,000 tons in 1970 to 60,000 tons in 1975. The decline in rubber prices was responsible for the slow growth as many tappers chose to find other remunerative employment. The total acreage increased from 732,000 in 1970 to 748,000 in 1975.

931. In view of the wide fluctuations of rubber prices and their impact on smallholder incomes and foreign exchange earnings, the Government took several steps on the domestic and international fronts. On the domestic front, the national price stabilization scheme was initiated in November, 1974 when the rubber price was less than \$1.00 per kilo. The programme involved production restrictions through increased stockholding by dealers/packers/remillers, suspension in the use of stimulants, enforcement of tapping holidays, acceleration of replanting and stock purchases by the Government to rationalize the supply of rubber. Following the implementation of the programme, the price rose to 160.47 cents per kilo in December, 1975. At the same time, efforts were made to promote the establishment of the International Rubber Price Stabilization Scheme in association with other members of the Association of Natural Rubber Producing Countries (ANRPC). The scheme will enhance the competitive strength of natural rubber in the world market as well as achieve price stability at levels which would be remunerative to producers and fair to consumers.

932. *Palm oil and kernels* Production of palm oil increased three-fold from 424,000 tons in 1970 to 1,276,000 tons in 1975 while kernel production increased from 91,000 tons to 252,000 tons. The acreage under oil palm in Peninsular Malaysia increased by 115.2% during 1971-75 from about 667,400 to 1,436,000. Smallholdings accounted for about 43% of the total acreage while the remaining 57% was under estates. In Sabah, the area under oil palm increased by about 49% to 142,400 acres and in Sarawak, from 2,400 acres to 37,600 acres.

933. A Task Force, with representatives from the public and private sectors, reviewed the marketing arrangements for Malaysian palm oil in 1974. The recommendations which include, *inter alia*, the establishment of a Palm Oil Registration and Licensing Authority are under consideration by the Government. To further facilitate the marketing of palm oil, the Government together with the private sector initiated a study for the establishment of a Palm Oil Commodity Exchange. The study has now been completed and is also under consideration.

934. *Padi* With the world food crisis in 1972-73, the Government reviewed the target of 90% self-sufficiency and subsequently increased it to 100%. Several measures were adopted including the provision and improvement of irrigation facilities both for single and double-cropping, the increase of yields through varietal improvement and the provision of incentives such as the Guaranteed Minimum Price and the Urea Subsidy Schemes.

935. Domestic production of padi increased from 1.6 million tons in 1970 to about two million tons in 1975. It accounted for about 87% of domestic requirements of 1.5 million tons of rice for the latter year. The increase in

production was mainly due to increases in yields and acreage under double-cropping. Average yields increased from 430 *gantangs*<sup>3</sup> per acre in 1970 to 470 *gantangs* in 1975 in Peninsular Malaysia and from 200 to 300 *gantangs* in Sabah and Sarawak.

936. In Peninsular Malaysia, the cultivated acreage decreased from 992,000 in 1970 to 944,000 in 1975 due to the decline in dry padi acreage. The area under off-season cropping, however, increased at a rapid rate from 326,000 acres to 527,000 acres, an increase of 61.7% over the five-year period. The increase was largely due to the availability of irrigation facilities in the Muda, Kemubu and Besut areas. In Sabah and Sarawak, the acreage under padi remained small due to the limited availability of suitable areas for padi cultivation. In 1975, 118,000 acres were planted with padi in Sabah and 336,000 acres in Sarawak. Double-cropping acreage in Sabah, however, increased from 4,500 in 1970 to 9,000 in 1975.

937. *Coconuts* Copra production increased by only 1.3% per annum during 1971-75, rising from 209,000 tons in 1970 to 223,000 tons in 1975. This was due to the larger acreage of 795,000 acres in 1975, compared to 767,000 acres in 1970 and to increased production in smallholdings following replanting and rehabilitation. To cushion the adverse effects of declining copra prices, FAMA established copra processing centres and initiated regulatory measures and trading programmes.

938. *Pepper* The acreage under pepper expanded from 22,000 acres in 1970 to 23,200 acres in 1975, with Sarawak accounting for about 90% of the total. Similarly, exports which accounted for nearly 95% of production rose slightly from 25,800 tons to 32,000 tons during the same period.

939. In order to promote the efficient growth of the pepper industry through improved marketing and expanded markets for Malaysian pepper, the Pepper Marketing Board was established in December 1971. During the SMP, the Board initiated the establishment of three pepper grading and processing centres in Sarawak and Johor. These centres are to ensure quality control and will be equipped with facilities for storage, cleaning, drying, grading and packing.

940. *Timber* The production of sawlogs increased steadily from 508.7 million cu. ft. in 1970 to reach a peak of 675.9 million cu. ft. in 1974 following the 1973/74 economic boom. However, with the recession in 1975, production dropped to 550 million cu. ft.

941. *Minor crops* The cultivation of minor crops was encouraged during the SMP with the objective of diversifying the agricultural base and providing supplementary incomes to smallholders. Various subsidies and marketing incentives were provided for the expanded production of cocoa, tobacco, sugarcane, groundnuts, pineapple, fruits and vegetables.

---

<sup>3</sup> 1 *gantang* of padi = 1.65 kilos.

942. Cocoa continued to be planted by smallholders and estates either as a single crop or as an intercrop. The total acreage increased from 19,100 in 1970 to 79,000 in 1975 with production increasing from 4,300 tons in 1970 to 17,600 tons in 1975. Cocoa has proved to be a promising intercrop with coconut. By 1975, 52,000 acres of coconut in Selangor and Perak had been intercropped with cocoa.

943. The production of tobacco increased almost five-fold from 4.2 million lbs. in 1970 to 20.0 million lbs. in 1975. By 1975, 120,000 farmers were involved in tobacco cultivation on 30,550 acres.

944. Sugarcane cultivation, particularly on estates also expanded. The total acreage increased from 17,800 in 1970 to 54,700 in 1975 while production grew by 25.3% per annum to 1.6 million tons in 1975. The acreage under groundnut cultivation, largely undertaken on small and scattered holdings as an off-season crop with padi, in Kedah, Kelantan, Perak, Pahang and Trengganu, also expanded from 8,000 in 1970 to 20,500 in 1975.

945. With the provision of farm crop subsidies as well as market protection, the acreage under fruits grew from 118,700 in 1970 to 141,800 in 1975 of which 60% was under bananas. Fruit production rose from 556,400 tons in 1970 to 733,900 tons in 1975. Vegetable acreage under both subsistence and commercial growers also increased from 59,500 in 1970 to 67,500 in 1975, while production increased from 370,400 tons in 1970 to 523,100 tons in 1975.

946. *Fisheries and livestock* Fish landings increased by 9.8% per annum from 335,000 tons in 1970 to 535,000 tons in 1975. The fishing fleet was expanded from 20,300 vessels in 1970 to 22,400 in 1975. Despite the increase in total landings, the average catch per unit of fishing gear, however, declined due largely to the depletion of resources within the present range of operation.

947. During the SMP, Malaysia was self-sufficient in the production of eggs, poultry meat and pork and produced 85% of its beef requirements. However, 95% of its milk and milk product requirements continue to be imported. The total value of livestock production increased by 84.3% from \$434 million in 1970 to \$800 million in 1975.

### **III. OBJECTIVES AND TARGETS OF AGRICULTURAL DEVELOPMENT, 1976-80**

948. Under the TMP, agricultural production is targetted to grow by 7.3% per annum compared to the growth of 5.6% during the SMP. Export demand will continue to be the major determinant of growth although the influence of exports relative to domestic demand will decline as private consumption and the use of agricultural products for further processing in the country increases.

949. The agricultural sector is expected to remain the largest contributor to the GDP, though its share is projected to decline from 29.8% in 1975 to 26.5% in 1980. Agriculture will continue to be the largest source of employment providing about 125,900 new jobs or 17% of total new employment in the country, raising total employment in the sector to about two million in 1980. The bulk of the jobs created will be in new land development schemes.

950. With the expected recovery of the world economy, the prospects for an increase in agricultural prices are bright. This would provide an impetus to agricultural production resulting in a greater volume of exports and increased foreign exchange earnings.

#### **Policy objectives**

951. The thrust of policies, programmes and projects within the agricultural sector will be to contribute to the eradication of poverty. This will be accomplished by raising income levels and increasing employment opportunities in the sector through programmes aimed at productivity increases in existing holdings; new land development; and the provision of a wide range of social services to raise the living standards of low income groups.

#### **Issues and strategies**

952. As shown in Table 9-3 and discussed in Chapter IX, the agricultural sector has the highest incidence of poverty. In 1970, nearly 70% of the total of 853,000 agricultural households were estimated to be in poverty in Peninsular Malaysia. The incidence was high among padi farmers, fishermen, rubber smallholders, forestry workers, coconut smallholders, estate workers and oil palm smallholders. While the causes of poverty were many and varied from one poverty group to another, the common causes remain uneconomic-sized holdings, low productivity, inadequate returns to farmers and socio-political factors, including land tenancy. The agricultural programmes are designed to deal with these problems through improvements to existing agricultural areas; the transfer of farmers in traditional agriculture to modern agriculture in public and private land development schemes; and the enforcement and improvement of tenancy regulations.

953. An integrated approach to accelerating agricultural development will be an important strategy of the Plan. This will include the provision of a selected package of inputs by agricultural agencies through FDCs to a large number of small farmers to generate yield, production and income increases. The agricultural package will comprise extension services, credit, improved planting materials and other subsidies and processing and marketing facilities. Productivity improvements will also be facilitated with the implementation of irrigation, drainage and other infrastructure schemes including rural roads, bridges and flood control. The agricultural census and

local area surveys to be carried out by the Department of Statistics and the Department of Agriculture respectively will identify the areas requiring specific attention. These areas include those with great potential but which lack the necessary infrastructural facilities and supporting services.

954. In view of the importance of rubber to the rural economy and the close and positive correlation between agricultural growth and rubber export prices, steps will continue to be taken to promote greater price stability through the International Rubber Price Stabilization Scheme in co-operation with other producing and consuming countries. Measures will also be taken to widen market outlets for Malaysia's agricultural produce through international, regional and bilateral co-operation. On the domestic front, crop diversification and local processing programmes will be intensified to cushion the effects of transient price slumps in any particular commodity.

955. During the TMP, the Government will continue to give high priority to increasing rice production to achieve self-sufficiency. Efforts will also be made to increase import substitution in respect of commodities where it would be economical to do so. Possibilities in this regard are wide and include beef, milk and animal feed. With respect to rice, the self-sufficiency target will take into account the need to improve farm income levels as well as protect consumer interests. The target will be attained through increased double-cropping supported by the provision of credit, subsidies, extension and other measures to increase yields. Recognizing that Malaysia is a high cost producer and that during the Plan period it may prove possible to import rice at prices lower than domestic prices, the Government will adopt a flexible approach in padi production. This will permit the nation to benefit from price falls in the world market and at the same time assure reliable supply.

956. The availability of a sufficient number of trained personnel at all levels is a prerequisite for the effective planning and implementation of agricultural programmes. During the SMP, agricultural development was constrained by serious shortages of personnel at all levels, particularly at the operative level. In view of this, continuing efforts will be made to expand training facilities during the TMP.

957. The shortage of trained and qualified personnel has been exacerbated by the establishment of numerous organizations with almost similar functions placing heavy demands on the currently limited number of trained agricultural personnel. In land development programmes alone, agencies such as FELDA, FELCRA, RISDA and State organizations, namely State Land Development Boards, State Economic Development Corporations (SEDCs) and State Agriculture Development Corporations (SADCs), undertook almost similar projects. In the field of extension services, the Department of Agriculture, the main agency responsible, as well as other agencies such as the FOA and RISDA, provided extension services. To bring about more efficient utilization of limited skilled manpower resources, efforts will

be made under the TMP to streamline the administrative machinery for agricultural development. The strategy for integrated area development through the FDCs, formulated during the Mid-Term Review of the SMP, to meet the needs for proper co-ordination of inter-departmental activities at the ground level, will be emphasized wherever appropriate.

958. The rapid rate of logging and forest clearing resulting from various development programmes, especially land development, could have adverse effects on the future supply of timber, water resources as well as ecological and soil conservation. In view of this, increasing attention will be given to the management of the permanent forest reserves for sustained yield of timber, minimization of soil erosion as well as maintenance of protective forest areas for watershed protection and ecological conservation.

959. The exploitation of inshore fishing grounds coupled with traditional methods of fishing have resulted in poor catch and contributed to the high incidence of poverty among inshore fishermen. During the TMP, the fishing potential of off-shore and distant waters will be increasingly tapped.

960. Land development, the major source of new employment in the agricultural sector, will complement the *in situ* programmes in the rural poverty redressal efforts of the Government. During the TMP, settler selection criteria will give more weight to the landless and those with uneconomic holdings irrespective of their present location. For the poor States of Kedah, Kelantan and Perlis where areas suitable for new land schemes are limited, the agricultural poor will be encouraged to move to schemes developed in the land-rich States of Johor, Pahang, Sabah and Sarawak.

961. To reach a greater number of the agricultural poor, concerted efforts will be made to introduce new types of land development schemes in addition to those currently carried out by FELDA which are relatively high cost. The new approach will emphasize greater settler participation in FELDA projects as well as the implementation of farm-enterprise schemes providing for a greater measure of self-help in the development and maintenance of these schemes. Pilot projects for the purpose will be implemented in the course of the TMP.

962. Considering the availability of land in relation to the number of landless and the number of rural families under poverty, the size of holdings for new public land development schemes will be kept under review to ensure that the programme will benefit a larger number of the landless and those with uneconomic holdings. The objective will be to provide settlers with economic-sized holdings which together with the development of supplementary sources of farm incomes and the provision of basic social services will enable an adequate standard of living to be maintained.

#### IV. PROGRAMMES, 1976-80

963. The agricultural programmes for the TMP will be specifically geared towards increasing the incomes of the agricultural poor in the rural areas by raising their productivity and reducing underemployment. These objectives will be achieved through *in situ* development, new land development and the provision of adequate supporting services.

##### **In situ development**

964. *Drainage and irrigation* As part of the overall programme to increase rice production in the country, substantial investment will continue to be made for the provision of drainage and irrigation facilities. The provision of improved irrigation facilities in existing major irrigation schemes will constitute an important part of the programme. About 240,000 acres of padi land will be provided with new or improved irrigation facilities under the TMP. The Trans-Perak Stage IV and a number of smaller irrigation schemes will be brought into operation. The acreage capable of being double-cropped is expected to increase from 591,300 to 686,300. In Peninsular Malaysia, the acreage under double-cropping will be increased from 572,000 to 650,000. In Sabah, double-cropped acreage will be expanded from 17,000 to 27,000, while in Sarawak, double-cropped acreage will be increased from 2,000 to 9,000.

965. In addition, 559,000 acres will be provided with new or improved drainage facilities for crops other than padi such as coconut intercropped with cocoa and coffee, oil palm and pineapple. The Western Johor Agricultural Development Project Phase I and smaller drainage schemes are expected to be operational during the Plan period. With these new schemes, the total area will be increased from 830,300 acres to 998,000 acres in Peninsular Malaysia and in Sabah from 16,400 acres to 25,400 acres at the end of the TMP. In Sarawak, drainage facilities will be improved to enhance the productivity of 23,000 acres of existing land and to develop 3,300 acres of new land.

966. *Replanting* The rubber replanting, coconut replanting and rehabilitation and pineapple replanting programmes will be accelerated. Under the Plan, rubber replanting will continue to be undertaken on a substantial scale with assistance provided to smallholders to plant rubber in new land contiguous to existing holdings. Priority will be given to smallholders with holdings of five acres or less. Seedlings will be provided by RISDA nurseries working closely with the RRIM to ensure usage of high-yielding varieties. The provision of extension services and agricultural input credit will also contribute to higher yields. A target of 500,000 acres for replanting and newplanting has been set for Peninsular Malaysia, 35,000 acres for Sabah and 62,500 acres for Sarawak.



967. During the Plan period, 100,000 acres of coconut smallholdings will be replanted or rehabilitated. Of the total, 22,800 acres will be intercropped with cocoa and other approved crops such as pineapple, coffee, banana and cashew nuts. Livestock will also be introduced into coconut smallholdings. About 26,300 acres of pineapple smallholdings will be replanted with high-yielding varieties under the Plan.

968. *Crop diversification* Agricultural diversification will be intensified through the provision of crop subsidies. In this effort, commercial mixed farming will be encouraged under Phase II of the Green Book campaign. Horticulture as a means of improving the nutrition and income of smallholders will also be promoted. To this end, research and extension programmes in vegetable and fruit production and varietal improvement will be expanded by MARDI and the Department of Agriculture.

969. The NTB will gear its activities to meet the demands of the cigarette industry, estimated at 172 million lbs. of cured tobacco leaves. For this purpose, the NTB will develop 6,000 acres of tobacco per annum. The Department of Agriculture will also promote the cultivation of spices and develop the silk industry by implementing pilot projects for spice cultivation in Kedah and Trengganu and one sericulture project in Trengganu.

970. *Livestock* During 1976-80, it is projected that livestock production will grow at the rate of 5.6% per annum compared to the SMP growth of 4.6%. Since Malaysia is already producing sufficient poultry meat, eggs and pork, emphasis will be given to the development of the beef and dairy industry during the Plan period.

971. The commercially-oriented projects of MAJUTERNAK will include the establishment of five more beef/dairy farms in Johor, Kelantan, Trengganu, Sabah and Sarawak. These farms will provide steers to be sold for slaughter and heifers for improving breeding stock. In addition, MAJUTERNAK will undertake the construction and re-organization of six abattoirs to improve facilities for the hygienic slaughter of animals.

972. Complementary to MAJUTERNAK'S activities, the Division of Veterinary Services will focus on the improvement of basic services for the development of animal husbandry. This will include training and extension and health services for livestock smallholders.

973. *Fisheries* With a view to improving the income and welfare of poor fishermen and increasing fish landings, efforts of both the Division of Fisheries and MAJUIKAN will be intensified and effectively co-ordinated during the Plan period. Five fishing harbours will be constructed at Geting, Chendering, Kuala Keluang, Kuantan and Kuala Sedili, mainly for trawlers. In addition, several jetties will be built in fishing villages throughout the country. At all major fishing harbours, shore facilities such as cold rooms, auction halls and sorting and packing facilities will be provided. These will facilitate improvements for the handling and marketing of fish.

974. MAJUIKAN's investment programme for the period will involve the expansion of fishing fleet, ice plants, fishmeal plants and fish processing plants. A total of 240 trawlers will be constructed. In addition, a fleet of 20 purse seiners to exploit the pelagic resources of off-shore waters will be launched.

975. Emphasis will also be given to the development of aquaculture to supplement sources of fish production with a view to increasing protein intake and creating employment opportunities. Subsidies will be provided for this purpose.

#### Land and forestry development

976. Land development aimed at providing land for the landless and those with uneconomic holdings will continue to be emphasized. The target for new land development during the Plan period is about one million acres. As shown in Table 16-2, the targets for FELDA, FELCRA, RISDA, the State land development agencies, the private sector as well as joint-venture projects between the public and private sectors will all form important components of the new land development effort.

TABLE 16-2

#### MALAYSIA: PROGRESS IN LAND DEVELOPMENT, 1971-75 AND TARGET ACREAGE, 1976-80

<i>Agency/Programme</i>	<i>Target, 1971-75</i>	<i>Achievement, 1971-75</i>	<i>Target, 1976-80</i>
FELDA .. .. .	403,000	412,375	350,000
FELCRA .. .. .	100,000	58,255	50,000
RISDA .. .. .	150,000	47,251	100,000
State programmes: .. .. .	337,300	355,544	240,000
<i>Peninsular Malaysia</i> .. .. .	87,500	151,108	100,000
<i>Sabah</i> .. .. .	97,000	73,698	70,000
<i>Sarawak</i> .. .. .	152,800	130,738	70,000
Joint-venture/private sector: .. .. .	222,500	137,144	260,000
<i>Peninsular Malaysia</i> .. .. .	222,500	130,644	100,000
<i>Sabah</i> .. .. .		—	80,000
<i>Sarawak</i> .. .. .		6,500	80,000
TOTAL .. .. .	1,212,800	1,010,569	1,000,000

977. FELDA is targetted to develop 350,000 acres during the Plan. In addition to the planting of rubber and oil palm, the agency will carry out the additional responsibility of introducing diversification crops on a large scale, such as sugarcane and cocoa and promoting supplementary farm activities. It will also step up social and infrastructural development. The rate of settler-intake will be increased with the establishment of special units from the Public Works Department for land development to enable prompt provision of infrastructural facilities.

978. *FELCRA* Government efforts in assisting farmers with their problems of uneconomic-sized holdings will be stepped up. The programmes of *FELCRA* will comprise the development of 25,000 acres as youth land schemes and another 25,000 acres as fringe alienation schemes. *FELCRA*'s efforts will also encompass the rehabilitation of 7,500 acres of unsuccessful State land schemes. In the endeavour to develop effective programmes for overcoming the problem of uneconomic-sized holdings, a socio-economic survey in the Kemubu area is being undertaken to assess the feasibility of the various alternatives involved.

979. *RISDA* will open up a total of 100,000 acres as block newplanting schemes. Wherever possible, the programme will be developed as settlement schemes with those entering these schemes required either to sell or lease their existing holdings so that block replanting or consolidation could be undertaken.

980. *State agencies*, such as the State Land Development Boards, *SEDCs* and *SADCs* will continue to undertake land development programmes to supplement the efforts of Federal agencies. A target of 240,000 acres has been set for this purpose during the Plan period. In the implementation of these programmes, emphasis will be given to the development of commercially-operated ventures.

981. *The private sector* A total of 260,000 acres is expected to be developed by the private sector. This will be largely undertaken on a joint-venture basis with public sector agencies including the *SEDCs*.

982. *Forestry* Priority in forestry development will be given to extending and consolidating permanent forest reserves in Peninsular Malaysia in line with land capability criteria. This will provide the basis for preparing detailed management plans for the Forest Management Units for the purpose of guiding forest exploitation and the establishment of wood processing industries. Priority will also be given to the development of viable systems for forest regeneration. In addition, the State Governments will continue with forest regeneration work, including the establishment of pine plantations in Johor, Negri Sembilan and Pahang for the pulp and paper industry.

#### **Institutional development**

983. *Training and extension* Training and extension service facilities to farmers will be stepped up during 1976-80. An additional Farm Mechanization Training Centre will be built at Ayer Itam, Johor to provide basic training to farmers. Four Regional Farm Mechanization Service Centres will be established in Johor, Kelantan, Pahang and Perak. The total enrolment of the Agricultural Institutes will be increased to 1,680 with an output of 560 per annum.

984. The Division of Fisheries will continue to train fishermen to achieve a modest level of technical proficiency at its Marine Fisheries Training Centres in Penang and Trengganu and the Fishermen's Training Institute in Penang. During 1976-80, the number of trained operatives to be produced will be 1,020 for the Training Centres and 300 for the Institute. In addition, the Division will also provide courses in fish culture to the rural people at its Inland Fisheries Training Centre at Bukit Tinggi and at its fish breeding stations. More than 5,000 people will be trained at these Centres during the Plan period.

985. The Division of Veterinary Services will provide improved facilities for the training of departmental personnel as well as the rural population. Training facilities at the *Institusi Haiwan* at Kluang, the Veterinary Research Institute at Ipoh and various poultry training centres will be expanded. It is estimated that 4,600 people will be trained during the Plan period.

986. Forestry training will continue to be emphasized with the *Universiti Pertanian Malaysia* (UPM) playing a major role. During the Plan period, UPM will produce 98 graduates in forestry. It will be the sole institution responsible for forestry training at diploma level. A total of 346 diplomates will be produced during the Plan period. A Regional Training Centre will be established in Trengganu to meet the needs for in-service training in the East Coast of Peninsular Malaysia. In addition, the training of Malay and other indigenous loggers will be accelerated with the establishment of another Logging Training Centre in Perak.

987. Apart from the expansion of its in-service training facilities, the Drainage and Irrigation Department (DID) will set up a water management training centre in Kelantan where irrigation extension personnel and farmers would be given appropriate training in irrigation and water management at the farm level. In this way, better water management and advanced agricultural practices can be promoted with a view to better exploiting the potential of increasing agricultural productivity in completed irrigation projects.

988. The construction of the Institute of Land Development at Trolak, Perak is in progress. The Institute will meet the needs of trained staff for land development and settlement schemes. It will commence operations in the early part of the Plan period with a capacity of 210 students per annum.

989. The Department of Agriculture will accelerate its extension programme during the Plan period. An Extension-Liaison Unit will be established in the Federal Department of Agriculture for the purpose of ensuring the effective transfer of research findings from MARDI to the State Departments of Agriculture and other Federal agencies for dissemination to the farming community. In addition, an Extension and Seed Project will be implemented to create effective extension service institutions at the State level.

990. *Agricultural credit and subsidies* BPM's activities will be expanded with the establishment of 16 additional branches. Although emphasis will be given to the provision of short-term credit, the Bank will continue to provide loans for medium-term projects. The Credit Guarantee Corporation in association with commercial banks is also expected to increase its scope of operations to cover the needs of agricultural smallholders. The role of FOs as local credit centres to BPM will be strengthened to facilitate the wider distribution of farm credit. In the provision of credit by RISDA to rubber smallholders, a new scheme will be introduced under which livestock could be secured for the promotion of mixed farming to supplement smallholder incomes.

991. Under the Plan, subsidies will be provided for farm mechanization and the use of transport services and agricultural inputs. Subsidies for farm mechanization and transport will be provided by FOA to FOs. Subsidies for agricultural inputs will continue to be given for permanent crops, food crops and other crops requiring replanting, such as rubber, coconut and pineapple.

992. Subsidy schemes for fishermen will continue to be provided to increase productivity and enable them to operate fishing boats with modern gear. In addition, subsidies will also cover the development of fish culture.

993. During the TMP, the oxen *pawah* scheme will be continued. The Division of Veterinary Services will also undertake the distribution of good quality bulls to farmers where artificial insemination is impracticable.

994. *Agricultural research* The research programmes of MARDI, emphasizing rural development objectives, will cover rice, field crops (maize, sorghum, groundnuts, soya-bean, mung beans, pastures, tapioca), coconut, cocoa, oil palm and sugarcane. Agricultural product utilization research and water management research will be extended and agricultural mechanization activities will be promoted. In its research on food and non-food crops, particular attention will be given to the maximum development of end-use possibilities for agricultural products as well as the reduction of losses during processing, handling, storage and transportation.

995. Under the TMP, fisheries research will concentrate on the assessment and evaluation of fish resources particularly in off-shore and deep sea areas. In addition, prawn resources will be evaluated. The development of aquaculture will be advanced. A new brackishwater research station will be established in Johor for research on culture techniques in the brackish and marine environment.

996. The research programmes of the MRRDB will focus on the technoeconomic work required for the planning and implementation of the International Rubber Price Stabilization Scheme. The Board will continue to promote and design programmes for and evaluate scientific and technical research in the fields of natural rubber production and consumption.

997. The FRI will focus its research efforts on the development of forest regeneration techniques. In addition, research work on timber utilization will continue with particular attention given to production-oriented research, pulping of mixed hardwoods and the utilization of lesser used and known species.

998. *Agricultural processing and marketing* MARDEC will establish 25 SMR factories with a daily capacity of 15-100 tons each in Peninsular Malaysia to produce SMR from smallholder latex. About 94,000 smallholders on about 282,000 acres of rubber will benefit from MARDEC's operations. FELDA will also establish a latex concentrate factory with a daily capacity of ten tons. In addition, RISDA will establish 1,200 units of Smallholders Development Centres at a rate of 240 units per year during the Plan period. Each unit will serve 20-50 smallholders depending on the size of the units.

999. FELDA will construct 16 palm oil mills with a combined capacity of 513 tons ffb per hour to cater for new areas coming into harvest. The seven mills constructed during the SMP will also be expanded to provide an additional capacity of 171 tons ffb per hour. With the completion of these projects, FELDA will have a total milling capacity of 1,085 tons ffb per hour by 1980. At the same time, FELDA will also establish a mill at the Tun Abdul Razak Agricultural Research Centre at Sungai Tekam with a capacity of ten tons ffb per hour for oil palm processing research.

1000. Farmers' Organizations will set up tobacco barns as well as provide facilities for cocoa, coconut and fruit processing. FAMA will provide facilities for the processing of copra, groundnuts, cocoa and bananas as well as establish 31 market centres throughout the country. These market centres will handle the marketing of agricultural products undertaken by both FOs and individual farmers, especially those produced under the Green Book campaign. FAMA will also extend its regulatory schemes for the marketing of cocoa, fruits and feedgrains and intensify and expand its trading programme to ensure adequate market outlets for smallholder produce. Market promotional activities to increase outlets for agricultural produce in both domestic and overseas markets will be emphasized.

1001. LPN will continue to carry out the objectives set out in its Enactment which are primarily to carry out a comprehensive and effective Guaranteed Minimum Price scheme for padi, promote the processing and marketing of padi and rice and maintain a rice stockpile for strategic and price stabilization purposes. The first year of the Plan period will see the completion of the 12 integrated complexes of LPN. Existing projects will be kept under close review while feasibility studies will be carried out on new projects for the modernization of the padi and rice industry.

TABLE 16-3

**MALAYSIA: PUBLIC DEVELOPMENT EXPENDITURE FOR  
AGRICULTURAL PROGRAMMES, 1971-80**  
(\$ million)

	Revised SMP allocation, 1971-75	Estimated expenditure, 1971-75	%	TMP allocation, 1976-80				Total
				Peninsular Malaysia	Sabah	Sarawak		
<i>Agriculture</i> .. .. .	202.49	212.23	104.8	345.22	49.02	102.50	496.74	
Pineapple replanting .. .. .	4.76	3.93	82.6	21.47	—	—	21.47	
Coconut replanting .. .. .	33.63	26.79	79.7	62.30	—	—	62.30	
Diversification of crops .. .. .	24.48	23.55	96.2	134.77	49.02	102.50	286.29	
Extension and services .. .. .	139.62	157.96	113.1	126.68	—	—	126.68	
<i>Rubber replanting</i> .. .. .	190.16	158.41	83.3	620.90	27.60	26.44	674.94	
<i>Land development</i> .. .. .	1,252.73	1,139.18	90.9	1,603.69	170.00	236.00	2,009.69	
FELDA .. .. .	679.27	645.14	95.0	985.02	—	—	985.02	
FELCRA .. .. .	51.69	49.43	95.6	77.50	—	8.00	85.50	
Youth land schemes .. .. .	18.00	17.83	99.1	50.78	—	—	50.78	
Public estates .. .. .	65.96	61.28	92.9	(47.00)	—	—	(47.00) <sup>4</sup>	
Land Development Boards .. .. .	188.48	164.83	87.5	99.12	170.00	228.00	497.12	
Jengka Triangle .. .. .	133.14	107.78	81.0	96.20	—	—	96.20	
Pahang Tenggara Development Authority .. .. .	68.75	47.25	68.7	142.15	—	—	142.15	
Johor Tenggara Development Authority .. .. .	40.33	40.10	99.4	89.43	—	—	89.43	
Trengganu Tenggara Development Authority .. .. .	7.11	5.54	77.9	63.49	—	—	63.49	

TABLE 16-3—(cont.)

**MALAYSIA: PUBLIC DEVELOPMENT EXPENDITURE FOR  
AGRICULTURAL PROGRAMMES, 1971-80**  
(\$ million)

	Revised SMP allocation, 1971-75	Estimated expenditure, 1971-75	%	TMP allocation, 1976-80				Total
				Peninsular Malaysia	Sabah	Sarawak		
<i>Drainage and irrigation</i> .. .. .	314.21	271.09	86.3	565.75	24.00	31.28	621.03	
<i>Forestry</i> .. .. .	40.18	30.77	76.6	46.45	2.64	6.38	55.47	
<i>Veterinary</i> .. .. .	81.14	69.72	85.9	132.65	32.65	13.71	179.01	
<i>Fisheries</i> .. .. .	42.01	31.98	76.1	253.84	6.35	15.54	275.73	
<i>Agricultural research</i> .. .. .	28.60	28.60	100.0	60.58	—	—	60.58	
<i>Credit and marketing</i> .. .. .	179.52	132.07	73.6	224.41	66.00	4.41	294.82	
<i>Bank Pertanian</i> .. .. .	50.00	50.00	100.0	75.77	—	—	75.77	
<i>Farmers' Organization Authority</i> .. .. .	22.00	17.60	80.0	95.30	—	—	95.30	
<i>Co-operatives</i> .. .. .	0.38	0.38	100.0	5.00	—	—	5.00	
<i>FAMA</i> .. .. .	10.00	4.88	48.8	18.94	3.50	4.41	26.85	
<i>National Padi and Rice Authority</i> .. .. .	70.00	56.62	80.9	29.40	—	—	29.40	
<i>Others</i> .. .. .	27.14	2.59	9.5	—	62.50	—	62.50	
<i>Others</i> .. .. .	37.92	55.04	145.5	48.41	10.77	8.35	67.53	
<b>TOTAL</b> .. .. .	<b>2,368.96</b>	<b>2,129.09</b>	<b>89.9</b>	<b>3,901.90</b>	<b>389.03</b>	<b>444.61</b>	<b>4,735.54</b>	

\* Not included in the total.



1002. Measures will be taken during the TMP to bring about effective co-ordination and integration of the multiple agencies involved in agricultural development. As part of the strategy for area development, FOA will establish 75 FDCs, one in each designated area. The FDCs will serve as focal points for all farmers to gain access to the necessary inputs, know-how and facilities required for improvements in farm practices.

1003. The Land Development Co-ordinating Committee established in 1971 will be strengthened to effectively service the National Land Council in the formulation of national land development policies as well as in identifying and resolving problems and bottlenecks experienced in the implementation of land development programmes.

#### **V. ALLOCATION FOR AGRICULTURAL DEVELOPMENT**

1004. The total allocations for agricultural development under the Plan amount to \$4.7 billion, an increase of 95.8% over the SMP allocation of \$2.4 billion, as shown in Table 16-3. The share of the agricultural sector out of the total allocation has also increased from 23.1% to 25.5%.