Policies and Measures leading toward greater diversification of the Agricultural Economy of the Federation of Malaya

REPORT
submitted to the
Government of the Federation of Malaya

by the

SURVEY TEAM PROVIDED BY THE FORD FOUNDATION

Dr Karl Brandt
Dr J. Norman Efferson
Dr Don Paarlberg, Chairman

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Harga: $2

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DI-CHETAK DI-JABATAN CHETAK KERAJAAN
OLEH THOR BENG CHONG, A.M.N., PENCHETAK KERAJAAN
PERSEKUTUAN TANAH MELAYU
1963

STATEMENT BY THE GOVERNMENT OF THE FEDERATION OF MALAYA

At the request of the Federation Government a team was provided by the Ford Foundation to undertake a study of agricultural diversification of the Malayan economy and to report and make recommendations thereon. The team, composed of three agricultural economists led by Dr Don Paarlberg, submitted its Report to the Government in March of this year.

2. The Report considers and makes recommendations for action programmes by the Government to meet the challenge of the decline in the price of rubber, the role of the private sector, and the importance of expanding agricultural research, education and training. It contains ten major recommendations on policies and measures to achieve greater agricultural diversification. These recommendations are receiving the urgent attention of the Government and arrangements are being made to implement these recommendations as and when they are adopted by the Government.

3. In publishing the Report the Federation Government wishes to record its appreciation of the valuable assistance of the Ford Foundation and members of the survey team for undertaking the assignment.

THE FORD FOUNDATION
P.O. Box 2255
Kuala Lumpur
Federation of Malaya

March 12, 1963

The Honourable
Tun Haji Abdul Razak bin Dato' Hussain, S.M.N.
Deputy Prime Minister
Federation of Malaya
Kuala Lumpur

MY DEAR MR DEPUTY PRIME MINISTER:

In mid-1962, your Government requested the Ford Foundation to provide a survey team to undertake a study of agricultural diversification in Malaya. The Foundation was glad to respond to this request and arranged for the advisory services of a group composed of Dr Karl Brandt, Director of the Food Research Institute, Stanford University, Dr J. Norman Efferson, Dean of Louisiana State College of Agriculture, and Dr Don Paarlberg, Professor of Agricultural Economics at Purdue University.

The advisors have completed their study and prepared the enclosed report. They have asked me, in transmitting it to you, to express their appreciation of the courtesies and assistance extended to them in Malaya by the many officials of your Government with whom they consulted.

Sincerely yours,
WALTER A. RUDLIN
Representative

ENCLOSURE

MEASURES, WEIGHTS AND CURRENCIES

Data in this report are expressed in terms of acres, long tons, pounds, and Malayan dollars, except where different measures, weights or currencies are specifically mentioned.

TABLE OF CONTENTS

PART A

CHAPTER I

INTRODUCTION

Rubber is the lifeblood of Malaya. In 1961 nearly 800,000 tons of rubber was exported, yielding almost 1.5 billion dollars in foreign exchange. These returns accounted for roughly 55 per cent of total export income and represented almost one-third of the total Gross National Product. Rubber is planted on more than 60 per cent of the 5.5 million acres of agricultural land and is the most important source of income for the approximately two-thirds of Malaya's working population who depend on agriculture for their livelihood. Malaya supplies world markets with more than one-third of the annual consumption of 2.5 million tons of natural rubber and is the world's largest producer.

THE CHALLENGE TO NATURAL RUBBER

Natural rubber is being challenged in the world's markets. In recent years there has been a continued trend toward increased use of synthetic rubber. In 1961, synthetic rubber accounted for almost 54 per cent of the total consumption of new rubber in the non-communist world as compared with less than 52 per cent in 1960. The trend toward a larger proportion of the world's rubber consumption as synthetic rubber is expected to continue.

Rubber prices may be expected to decline as a result of expansion in the capacity of synthetic rubber production. The price of number 1 ribbed smoked sheet in Singapore averaged $1.08 per pound in 1960, declined to 84 cents in 1961, has ranged from 75 to 80 cents in most of 1962, and is expected to decline still further in 1963. With the increased production of synthetic rubber and additional world supplies of natural rubber from recently-expanded plantings and higher yields per acre, it is possible that within the next few years the price of natural rubber may decline and find a new range perhaps 20 to 30 per cent below 1962 levels.

Over a longer period of time, the future is less certain. Malaya should be prepared for the possibility that within the next five to ten years foreign exchange earnings from natural rubber may be seriously reduced below current levels. Malaya should therefore develop an insurance plan for its economy with the assumption that a substantial decline in rubber earnings is one of the possibilities.

Even with prospective increased competition from synthetic rubber, production of natural rubber remains a reliable basic industry for Malaya. In spite of possible price difficulties, the confidence of the entire country in a good future for rubber is indicated by the increased rate of new plantings and replanting as accomplished by estates, smallholdings, and the various land development programs. Total new plantings and replanting amounted to almost 200,000 acres in 1960 as compared with only slightly more than 100,000 acres in 1955. During the same period the yield per acre on estates increased from 490 to 677 pounds, and a further increase in yields is expected from both estates and small-holders as higher-yielding trees reach maturity. Facing

possible future price problems for rubber Malaya has chosen the economically sound approach of expanding production and increasing efficiency.

THE ASSIGNMENT OF THE DIVERSIFICATION TEAM

Although rubber is by far the nation's most important farm product, Malaya produces other agricultural products for export including palm oil, coconut oil and copra, timber, canned pineapple, tapioca flour, and other minor items. The country also produces large volumes of rice, fruits and vegetables, and some livestock and livestock products for domestic consumption. Recognizing the need for other approaches as well as the rubber planting and higher-yield programs the government is now operating various programs to stimulate the production of these other export and home-consumption products.

Recently the Government of the Federation of Malaya has considered it wise to intensify its efforts to seek possible means to diversify its farming activities. To check on the soundness of this approach, the National Development Planning Committee in February 1962 requested the Economic Planning Unit of the Prime Minister's Office to seek the services of available specialists to make a brief appraisal of the feasibility of developing a detailed study of agricultural diversification potentials. The Economic Planning Unit obtained the services of Dr Clifton R. Wharton, economist, and Dr Ralph Allee, Agronomist, of the Council on Economic and Cultural Affairs, to make a brief summary analysis of the problem. This report was submitted in March 1962.

Based on this preliminary appraisal, which clearly indicated the feasibility of the approach and the possibilities for diversification, it was felt desirable to obtain a comprehensive picture of the situation. The Ford Foundation was approached and agreed to recruit a team of specialists to conduct this study. The present team was organized in August 1962 and proceeded to make preliminary library studies and interviews on international issues related to the assignment, such as developments in synthetic rubber, prior to their arrival in Malaya in early October 1962. They remained in Malaya through October and November and after further study in the United States, completed the report in early 1963.

The specific assignment of the team was to make a detailed study in depth of the need, possibilities, opportunities, and definite approaches for a broad agricultural diversification program in Malaya. They were assigned to the Prime Minister's office and given spontaneous and effective cooperation by all government agencies.

THE CONCEPT OF DIVERSIFICATION

In the narrow sense, diversification might be considered the process of putting one's eggs in many baskets. In the broad sense, it includes the possibility of adding baskets, changing the form of the basket, rearranging the eggs in the basket, or just leaving the basket alone if the possibilities for additional safety or expanded income are not improved with any proposed change. Diversification for its own sake is not sound.

The team has considered its assignment of studying and making recommendations concerning agricultural diversification in Malaya in the broadest meaning of the term. It has not considered its assignment as simply that of making suggestions for replacing rubber with some other agricultural enterprise. This could be part of the result but only if it is economically feasible and fits into the general pattern of higher standards of living and economic stability for the nation as a whole. The team has considered its assignment as that of appraising the over-all structure of Malayan agriculture and suggesting approaches that will offer promise of improving standards of living primarily of rural people, but also that will reflect progress in the over-all national economy.

The team feels that agriculture cannot be separated from the remainder of the national economy. Thus, in considering possible opportunities for diversification, the non-farm economy must be examined. This involves appraisals of areas in which the different members of the team are not specialists but in which they have a broad general background as economic analysts. For an individual rubber smallholder, effective diversification might be obtaining a part-time job on a road-building project and tapping his rubber only when prices are high rather than shifting his rubber acreage to cocoa. For a community or nation, effective diversification could be an expansion of industrial opportunities rather than changing from one crop to another.

The team has looked at agricultural diversification in the vertical as well as the horizontal sense. Horizontal diversification consists of shifting from production of one product to several products. Vertical diversification includes the opportunities for producing added value from a given product by further processing, handling, and marketing. Processing raw rubber into shoes is just as surely diversification as planting oil palm to partly replace rubber acreage.

PROCEDURE AND SCOPE

The procedure used by the team in making the over-all study and collecting the needed facts and observations on which the recommendations are based included five major steps: (1) pre-trip study, (2) appraisal of published data in Malaya, (3) interviews in Malaya, (4) observations in Malaya, and (5) post-trip analysis.

Prior to their arrival in Malaya, each member of the team was supplied with certain basic documents, including the First and Second Five-Year Plans, bibliography of recent publications dealing with the economics and agriculture of Malaya, and published research reports. After individual study of these materials, the team met as a group in New York City in September 1962 to discuss this basic material and complete the travel plans for the study.

On arrival in Malaya the team divided its two-month visit into three major parts. These included:

(1) a study of various published and unpublished reports on many phases of Malaya's agriculture and of its economy which were made available to the team by the Prime Minister's Office, the Ministry of Agriculture, the University of Malaya, and other offices in Kuala Lumpur,

(2) Interviews with smallholders, major government officials, educators, business leaders, industrialists and estate managers in Kuala Lumpur and throughout the Federation and Singapore, and

(3) Personal visits and observations of major agricultural regions, irrigation and drainage programs, federal and state rural development projects, agricultural processing plants, village industries, farm research centers, crop-testing stations, fisheries research, preservation and training centers, university, college, secondary, and vocational educational centers, estates and smallholders producing all the major crops and livestock, and governmental administration offices in nine of the eleven states and in Singapore.

After the completion of the first-hand study in Malaya, each member of the team undertook preparation of a preliminary statement within a specific area of work. The team then had two lengthy meetings in the United States, reconciled differences of opinion, discussed and amended these statements, and prepared the over-all final report.

During their study in Malaya, the team interviewed more than 75 different individuals, held 13 major group conferences, attended more than 15 major receptions and dinners providing the opportunity for informal discussions, visited 12 research and crop-testing stations in 5 different states, observed 8 major drainage and irrigation projects in 4 states, studied 5 major federal land development projects in 4 states, and observed processing and manufacturing in one or more factories handling about 15 different agricultural products. Detailed summaries of the interviews and visits are presented in Appendix B. The team also made a major appraisal of published research pertaining to their assignment. Some of the reports studied are presented in Appendix C.

THE LAND AND THE PEOPLE

Malaya, as seen in the fall of 1962, impressed the diversification team as a prospering country, perhaps most prominently so in Southeast Asia. Malaya has a warm, humid, frost-free, monsoon climate. Its people are well-adapted to the natural environment and cooperate peacefully in association with a government which is functioning well at federal, state and local levels. The country is served by a good system of railroads, highways, international harbors and up-to-date airports. Advanced systems of sanitation and public health are in being and great progress has been made in education. These are all factors which contribute to the favorable economic situation.

The economy has approximately 61 per cent of the total active labor force employed in agriculture, forestry, fisheries, mining, and quarrying. Thirteen per cent are employed in transportation and commerce, and more than 10 per cent in manufacturing, building and construction jobs. The remaining 16 per cent are employed in a multitude of services.

While agriculture in its broadest sense is the source of income for the majority of the people, a very substantial part of the kampong farm population has been able to find additional off-the-farm employment. This bespeaks substantial economic development. Improved roads and bus service together with the growing use of bicycles, motorcycles and automobiles have made this

rural labor force more mobile and off-the-farm employment more accessible.

With the rate of population growth in excess of three per cent per year and likely to be that high or higher during the next decade, the economy will have a rapidly-increasing labor force. Much of the nation's land area is still covered by jungle, with great but as yet indeterminate economic potential. In view of the remarkable combination of natural and man-made resources, population growth may be considered as desirable, provided the necessary adjustments in the institutional framework are made and appropriate policies prevail.

Even with a high rate of expansion in the non-farm part of the economy, a large share of the growing population will continue to live on farms. One of the nation's primary concerns must be to develop the skills and the productive potential of the rural labor force and to assist the farm families in their individual initiative, enterprise, and self-reliance.

A rising level of per capita real income is a primary and proper objective of economic policy. To achieve this advance, the real social product of the economy must grow more rapidly than the population, that is, more rapidly than three per cent per year. With abundant natural resources, good health and nutrition and with a basically good system of broad general and vocational education, there is good reason to expect this objective to be achieved.

PRESENT STATUS OF MALAYAN AGRICULTURE

The diversification team has been given the assignment of appraising the agricultural resources of Malaya and making suggestions for more efficient uses for these resources. This is a difficult task. It is especially difficult because the general level of productivity of Malayan agriculture is already relatively high and because most agricultural operations are efficient.

Recent government efforts to expand productivity and lift standards of living in rural areas have been effective. These efforts have taken the form of extensive land development programs at both the state and national levels, improved irrigation and drainage, distribution of higher-quality and higher-producing seeds, plants, and animals, construction of rural roads, stimulation of cooperatives, educational and financial assistance to rural people, the well-coordinated, over-all rural development program, and similar programs. Specific evidence of this success is found in the rapid increase in rubber yields and the expansion of double-cropping of rice as well as the increase in the rice yields.

Within the private economy and with the assistance of government efforts, progress has also been generally good. Evidence is the initiative with which estates have replanted rubber to higher-yielding types, experimented with different types of tapping systems and cover crops, planted oil palm, tried on their own such new crops as cocoa, manila hemp, tobacco, coffee, tea and others, and greatly improved facilities and services for estate workers. The rate at which smallholders have established self-help co-operative societies, participated in farmers-club educational activities, and played an active part in community rural development programs reveals the same vigor.

With these advances, the country is in the fortunate position of being strong enough to make any adjustments that are needed to meet changing economic conditions with pride and with confidence.

CHAPTER II

ACTION PROGRAMS TO MEET THE CHALLENGE

The challenge to natural rubber must be met by four kinds of action:

(1) Action programs launched by government,

(2) Private enterprise and initiative,

(3) Programs of research, and

(4) Educational advances.

The first of these, action programs, will be considered in the present chapter.

RUBBER: THE NECESSITY OF BEING COMPETITIVE

With a production in 1961 of 738,000 long tons of natural rubber out of 2,102,000 long tons world total production, Malaya is the world's leading producer and in all probability will remain so. Malaya's rubber estates rank in efficiency with the most advanced in the world.

Hard and indisputable experience gained from the history of many generations has proven that when the market of a commodity is under attack by a substitutable product, the producers who are being challenged must fight aggressively, making their product more competitive. In the case of rubber, this means the following:

(1) The supply of natural rubber must be expanded as the world's aggregate demand for natural plus synthetic rubber increases. Thus the users of natural rubber can gain confidence that neither fortuitous shortage nor artificial restraint of supply is in the offing. The rapid further motorization of Western Europe, Japan and other industrializing parts of the world, a chief market for natural rubber, makes this even more advisable. Hence the allocation of public investment to rubber replanting provided for in the Second Five-Year Plan should definitely be retained. The greatest need for replanting exists on the smallholders' mature tree acreage. Ways and means should be found to make replanting more attractive to smallholders. The fact that in 1961 the smallholders produced about 40 per cent of the total rubber output of Malaya emphasizes the importance of replanting these acres.

(2) Such ample supply and simultaneous reduction in the cost of production must reduce the price of natural rubber so as to diminish the incentive for producers of synthetic rubber to expand their output. The expected 10 per cent increase in the output of natural rubber above the 1961 level, to be reached by 1965, seems well within the capacity of the market to assimilate.

(3) The average quality of natural rubber must be raised as much as possible.

(4) Methods to improve the versatility of the product must be explored by research.

(5) The rubber growers of Malaya should participate strongly in an effective international educational campaign on behalf of their product, informing legislators, processors, and ultimate consumers about the cost-reducing progress of natural rubber production, the specific qualities of the end products made entirely or partly of natural rubber, the prospective supply, and all other pertinent facts. This would counteract the erroneous silent assumption that the natural rubber industry is moribund.

Such competitive policy would have to turn its back resolutely on any idea of "stabilizing" the price of natural rubber by national or international efforts. Experience points to the wisdom of a competitive price policy. The early Stevenson scheme of 1922 to 1928 and the subsequent International Rubber Regulation Agreements of 1934 to 1938 and from 1939 to 1942 have had the unforeseen result of giving aid and comfort to the competitors of Malaya's natural rubber industry. These competitors were other countries which produced natural rubber and researchers who laid the basis for the synthetic product. This statement is made with due awareness of the fact that what ultimately drew strongly on the body of research knowledge and expanded the synthetic rubber industry in the United States was World War II.

New international price stabilization arrangements could not avoid limiting the market outlet for Malaya's natural rubber by quota. Any quota would be historically-based, chaining Malaya to earlier marketing volume, negating the effect of the replanting scheme and forcing a rapid rate of retrenchment in the rubber industry. Furthermore, international price stabilization would subject foreign exchange earnings to actions by a supranational body.

OIL PALM: THE OPPORTUNITY FOR EXPANSION

All evidence points to the economic soundness of oil palm as another tropical tree crop which Malaya should expand. The area under oil palm has already increased within a period of 10 years from 100,000 to 150,000 acres. Compared with 3,500,000 acres under rubber trees, this is a relatively small industry. Chief exports of palm oil were divided in 1961 between all African areas with 368,000 long tons, Indonesia with 152,000 long tons and Malaya with 94,000 long tons. The value of palm oil produced in 1961 was estimated at $58 million and of the kernels at $8 million. Nearly all of this production yielded foreign exchange. Next to rubber trees, no other tropical tree crop fits as well into the agricultural geography of Malaya. The oil palm has been grown successfully on Malayan estates for more than two decades. Yields obtained per acre from the best planting stock rank among the highest in the world.

The production and export of a high-quality palm oil (with a low free fatty acid content) requires well-organized and supervised maintenance, harvesting, transportation, and processing at the oil

mills. If family farmers are to participate successfully in the production of oil palm, technically up-to-date palm oil mills must be established, having firm contractual relations with small growers. The necessary technical advisory service must be provided on the farm as well as up to the time of delivery at the factory. This could best be achieved by an institutional innovation which combines oil palm estates, small oil palm growers and an oil mill. A prototype of this arrangement has already been drawn up in Malaya. Such a plan provides necessary supervision, assured processing facilities and flexibility of operation within an enterprise environment.

The long-term world market prospects for palm oil, palm kernels, palm kernel oil, and palm kernel cake and meal are good. While oil palms and the oil mills combined require a higher investment per acre than do rubber plantations, the prospective returns on adapted soils are in keeping with this heavier outlay.

For smallholders, some grazing may be done under palm oil trees while this opportunity is not available in connection with rubber production.

RICE: THE NEED FOR PROGRAM IMPROVEMENT

Rice is second only to rubber in Malaya, and about one million acres are planted annually. Rice is also Malaya's most important food and although production is large, additional imports are necessary—mostly from Thailand to complete the domestic needs. It has long been recognized that one of the most promising areas of diversification in Malaya lies in the expansion of rice production. This will provide more employment and income for farmers and at the same time will reduce foreign exchange costs.

The Current Situation

Remarkable progress has been made in expanding rice production. According to the Statistical Bulletin, rice milled from padi grown in Malaya amounted to 605,000 tons in 1961 and represented more than a 25 per cent increase over the level 10 years earlier. To meet total domestic needs, Malaya has been importing around 300,000 tons of milled rice yearly and thus imports one-third while producing two-thirds of total consumption. In spite of the rapid increase in population, the proportion of total needs grown in Malaya has been increasing slightly in recent years.

The steady increase in rice production has been made possible by (1) a stable price support program, (2) drainage and irrigation projects that have opened up new lands, improved water supplies and water control on existing padi lands, and made possible double-cropping in some areas, and (3) special aids to padi farmers such as the fertilizer subsidy scheme, the seed production and exchange program, and educational efforts like training in the use of Japanese pedestrian-type tractors. The result has been more land in rice and higher yields per acre. Although yields vary widely from year to year, long-time trends show an increase of about 20 per cent in the last 10 years.

The price support level is $15 per picul of padi rice at the mill door, and this amounts to about $406 per long ton of milled rice. This support price has been maintained since the 1956-57 season.

Government costs for this program have been held to a minimum by import controls which require an importer to buy a given quantity of Malaya-produced government-stockpile rice for each unit of rice imported. In mid-1962, this requirement was one ton of local rice for each two tons imported. Most of the imported rice is the long-grain, non-glutinous type from Thailand. Malaya consumers prefer and will pay higher prices for this type of rice. Usually the importer must sell his local rice at a loss or at little profit but makes up the differences in the sale of imported rice. In November 1962, local rice was retailing for 26 cents per kati (about $425 per ton) as compared with 36 cents per kati (about $560 per ton) for imported Thailand rice.

In 1961, the total padi area receiving the benefits of irrigation and drainage programs in varying degree was 528,000 acres, of which more than 250,000 acres have been improved since 1955. The Second Five-Year Plan provides that an area of 322,000 acres will receive initial or further improvement, including 36,000 acres of new land not previously cultivated. This will include increasing the facilities for double-cropping from 70,000 acres in 1961 to 232,000 acres by 1965. The provisional program of expenditure for drainage and irrigation works to achieve these results calls for $135,000,000 during the five-year period.

The Second Five-Year Plan includes expenditures for the promotion and use of improved padi seed with the goal of establishing seed-growing farms sufficient to supply improved seed for planting more than 60 per cent of the total area under padi cultivation by 1965; much progress has already been made in this program. Along with the campaign to introduce improved seed, extension activities have been intensified to foster cultivation practices and more productive cropping patterns. One of the methods used is the fertilizer subsidy scheme in which, to the limits of available funds, up to 40 per cent of the cost of approved fertilizers are financed by government in order to stimulate increased fertilizer use. With these approaches better seed and more fertilizer are being used and yields are increasing. Evidence indicates that the use of fertilizer is a paying practise even without the subsidy. As awareness grows regarding the profitability of fertilizer use the subsidy should be reduced and eventually discontinued.

The Need for Program Improvement

With the possibility that at least 150,000 acres of additional land will be made available for double-cropping, 36,000 acres of new land opened up, and more than 100,000 acres of other padi land improved by drainage and more stable water supplies, along with higher yields from better seed and more fertilizer, the chances are good that Malaya will be producing a larger proportion of her total rice needs by 1965. However, there are two serious weak spots in the rice program which must be corrected or the expanded production of rice may create more problems than it solves. The price support program must be modified to encourage the production of quality rice and the padi research program must be intensified to produce long-grain, high-quality varieties with good yields that are suitable for double-cropping.