

## FEDERATED MALAY STATES.

### ANNUAL REPORT OF DIRECTOR OF FOOD PRODUCTION FOR THE YEAR 1923.

1. Mr. A. S. Haynes, Secretary for Agriculture, Straits Settlements and Federated Malay States, was Acting Director of Food Production throughout the year.

#### FOOD PRODUCTION COMMITTEE.

2. During the year a Food Production Committee was appointed consisting of the following officers:

The Acting Director of Food Production (Secretary for Agriculture);

The Chief Agricultural Inspector;

The Economic Botanist;

The Agricultural Instructor;

The Agriculturist;

The Agriculturist (Government Plantations).

The object of appointing this committee, composed of officers of the Department of Agriculture, was to get their help to frame a policy for food production and to secure continuity in carrying it out.

3. The problem is being considered under the headings of:

Rice;

Other cereals;

Pulses;

Roots.

To ensure continuity and the accomplishment of definite aims it has been considered essential not to undertake more than the present authorised staff can adequately carry through.

#### RICE.

4. The rice debt incurred by the Governments of the Federated Malay States, the Straits Settlements and Johore during the period of food control amounted to some \$42 million.

It is appropriate to keep this fact in mind when considering what expenditure from Government funds can properly be allocated towards food production, and in particular towards encouraging rice cultivation.

5. The valuable experimental work being carried on under the direction of the Economic Botanist of the Department of Agriculture at the Rice Experiment Station at Titi Serong in the Krian district of the State of Perak is recorded in the Special Bulletin entitled "Rice in Malaya," published during 1923 by that department.

Appended to this report is diagram A\* taken from that Bulletin, showing the ratio between consumption and production of rice in each State of British Malaya.

A large copy of this diagram was exhibited at the Malayan Agri-Horticultural Show held at Kuala Lumpur in June and July; His Highness the Sultan of Selangor showed very particular interest in it, and it was much studied by the public.

6. Put briefly, the work at Titi Serong has so far resulted in the isolation of pure strains which are capable of giving an increased yield of up to 25 per cent., and seed of these strains is being distributed both by the department and by Malays who have proved the superior worth of this seed on their own lands.

Testing stations and demonstration plots have been established at various places throughout the Federated Malay States.

7. The Governments of the Federated Malay States and of the Straits Settlements decided not to renew their undertaking, which will expire on 30th April, 1924, to buy padi at a minimum price of \$3.25 a pikul or 13 cents a gantang.

\* Not printed.

8. Competition in buying padi in places where there is an annual surplus such as Krian and Province Wellesley is increasing; the efforts of the Department of Agriculture to encourage the use of small mills on estates are bearing fruit and other small mills are being started. This competition in the buying of padi is tending to keep the price up to a fair level with benefit to the cultivators and consequent stimulus to padi cultivation.

9. A further programme of work based on "Rice in Malaya" has been submitted to the Government with the request that a special officer of the department be stationed at Titi Serong to secure the continuity in execution which is vital to success; and it has been decided to station the Assistant Agricultural Inspector, Pahang East, at Pekan instead of Kuantan to enable better concentration on padi work for Pahang.

10. Proposals were made to the Selangor Government for the appointment of a committee for investigation of and preliminary works in the large area of undeveloped land between the Selangor and Bernam rivers, mainly with a view to the possible suitability of the land for rice cultivation.

#### "TENGGALA" OR "PLOUGH" PADI.

11. The cultivation of "tenggala" or "plough" padi on dry as opposed to wet land has been gone into by the Department of Agriculture to some extent, and the position was recorded in an article entitled "The Cultivation of Tenggala Padi" in the *Agricultural Bulletin*, vol. IX, No. 1, page 5 (1921). The conclusion was that improvements in "tenggala" padi cultivation in Pahang, the only State of the Federation in which this form of cultivation is undertaken, must proceed along three lines:

- (a) Improvement of the varieties of padi cultivated;
- (b) Manuring or other means for the rejuvenation of the land;
- (c) Improvements in cultural implements, in cost of production, and in the effectiveness of the cultivation.

12. It has now been decided that the Economic Botanist will work on the improvement of varieties of "tenggala" padi at the Government Experimental Plantation at Serdang (Selangor) with a view to the isolation of pure strains of high yielding capacity.

#### PADI INSPECTORS.

13. Three padi inspectors are under training at the Rice Experiment Station at Titi Serong, two for the State of Perak and one for the State of Negri Sembilan (district of Kuala Pilah).

14. The position as regards rice cultivation is distinctly encouraging, as recorded in greater detail in paras. 34-39 of the Annual Report of the Secretary for Agriculture for 1922.

#### OTHER CEREALS.

##### MAIZE.

15. After a full consideration of this subject, the Food Production Committee decided that maize was the most suitable crop on which to concentrate work as it is commonly grown and consumed throughout the Peninsula.

It was decided that the work to be done in the near future was:

- (a) Improvement of local strains. The Agriculturist (Government Plantation) is already working on this at Serdang, both as regards local and imported strains;
- (b) Consideration, in conjunction with the Education Department, of the question of the best methods of cooking maize and of instruction in such methods;
- (c) Publication in the *Malay Bulletin* (Warta Perusahaan Tanah) of a general article on maize;
- (d) Probable publication at a later date of an article in the Malay language on cooking maize.

##### RAGI.

16. As regards ragi it was considered that it was unlikely to achieve popularity except at the time of a food crisis, as although Indians were familiar with its use they would not eat it so long as rice was obtainable. It was decided, however, that a good strain of ragi should be kept at Serdang in case of special need.

##### PULSES.

17. There is a large import of dried peas and beans into this country, and they may be seen in the usual small provision shops all over the country. Many of them are valuable foods, and consideration is being given to the problem of how to get our supplies of these articles grown to a greater extent in the country itself.

18. On the Experimental Plantation at Serdang a certain amount of planting material has been collected from different sources and countries and preliminary experiments carried out on the following crops:

- Soya bean (*Glycine Laspida*);
- Lima bean (*Phaseolos lunatus*);
- Pigeon pea (*Cajanus indicus*), three varieties;
- Cow pea (*Vigna catjang*), seven varieties.

#### SOYA BEAN.

19. This bean has been found growing successfully at Manchis, in the Bentong district of Pahang, where it is cultivated with assiduity by Chinese.

This is of great importance: the bean is a particularly valuable food and is largely consumed in this country, and success has not so far attended the attempts to grow it on Government Plantations.

20. A visit was paid to Manchis by the Agriculturist and a good quantity of the beans grown there has been obtained for planting at Serdang and other Government Plantations, and ultimate distribution. A report has been written for publication in the *Malayan Agricultural Journal*.

#### LIMA BEANS.

21. Lima beans have been grown successfully, particularly by Mr. Mathieu, at the Kuala Kangsar Plantation. Between January and the middle of November thirty-seven persons had been supplied with seed for planting, and some very good results were recorded.

In addition to this some were planted by Mr. Mathieu in the Astana Grounds of His Highness the Sultan of Perak at Kuala Kangsar, and Penghulus in the district were given seed.

22. The prussic acid content of these beans has been investigated by the Agricultural Chemist and a report on the toxicity of the bean is being prepared for publication in the *Malayan Agricultural Journal*. The amount of prussic acid is so small as to be harmless.

#### STORING DIFFICULTY.

23. There is difficulty in storing the pulses grown in this country owing to the attacks of insects, the eggs of some of which are already deposited in the seeds before harvesting. Proper sun-drying, fumigation with carbon bisulphide and keeping in air-tight tins are recommended; but it is doubtful if more than sun-drying is likely to be practicable in most cases.

24. Particular efforts have been made to get the various pulses grown by Asiatics, particularly Chinese, in this country. It is desired to get the co-operation of the Chinese themselves in the matter, and proposals have been made for a Chinese Advisory Committee and for the engagement of one or two Chinese officers.

#### ROOTS.

25. Yams form a considerable part of the food supply of the peoples of many humid tropical regions. The true yam belongs to the genus *Dioscorea*.

A useful Bulletin (No. 1167) was published by the United States Department of Agriculture in August, 1923, entitled "Cultivation of the True Yams in the Gulf Region"; amongst other things the economic importance of the yams is emphasised.

Mr. I. H. Burkill, Director of Gardens, Straits Settlements, who has made a special study of yams and collected varieties from all over the world, has arranged to transfer all his collection for planting at Serdang in view of the closing of the Economic Gardens in Singapore.

#### GROUNDNUTS.

26. Nineteen varieties of groundnuts are being grown at Serdang; more information on yields is required before anything can be published.

#### CATTLE AND POULTRY FOODS.

27. The question of working out balanced rations for our local cattle and poultry from foods grown in this country is an important one: at present the best imported stock are fed on imported foods which makes the cost of keep very high, while local cattle are fed on anything available without regard to proper food value or balanced ration. The Agricultural Chemist is arranging to investigate this subject and to analyse locally grown foods; and it is hoped that reports may eventually be published containing tables of food values (locally grown) and recommending definite rations for cattle and for poultry.

## TANJONG RAMBUTAN.

28. The importance of the Central Mental Hospital at Tanjong Rambutan for working on food crops is recognised. It has been arranged that the Agriculturist shall pay regular visits and that improved seed shall be supplied as available.

29. Two Poland China boars from Manila have been imported by the Department of Agriculture for stud purposes at Tanjong Rambutan.

## PUBLICITY.

30. The question of better publicity by means of lantern lectures and the publication of local agricultural matter in the Chinese language is recognised as important, and is having attention.

## WEEKLY FAIRS.

31. Many Malays are discouraged from food production owing to the difficulty of selling their produce. For this purpose weekly fairs are useful.

They have been very successful in the Krian district of Perak and it is proposed to start them elsewhere. The Agricultural Instructor is making enquiry into the matter.

32. In food production work the great need is continuity of work on a definite programme. It is hoped that this will be attained by the appointment of the Food Production Committee.

KUALA LUMPUR,  
29th January, 1924.

A. S. HAYNES,  
*Acting Director of Food Production,*  
S.S. & F.M.S.