Teaching of Agriculture in Primary Schools

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As a result of representations from members of the Primary Curriculum Seminar, the Director of Education has agreed in principle to the teaching of Agiculture in primary schools. At a meeting of the Agriculture syllabus sub-committee held in Madang in March, members produced a programme of suggested activities, and copies of the programme were subsequently forwarded to 30 *developmental schools.*

The suggested programme is divided into two sections. The first section sets out some general activities and the second section deals with the project approach to the teaching of Agriculture. The programme is not a detailed one. However, it will be extended and modified during the year as a result of suggestions received from developmental schools. It may be possible to design a number of programmes, or alternatively, a single broad programme which will enable many more schools to teach Agriculture during the 1973 school year.

The Department of Agriculture, Stock and Fisheries is giving its full support to the programme and has already assigned Rural Development Officers to act as advisers to developmental schools. Teachers are responsible for putting the programme into operation and Rural Development Officers will be available to give advice and other assistance (but not classroom teaching!).

The objectives of the Primary Agriculture teaching programme are as follows:—

1. To show children that they can have a satisfying life in the rural areas through involvement in the life of the community.

2. To help children to appreciate and understand traditional agriculture so that they will come to value this as a part of their own culture.

3. To help children to appreciate and understand the important role that their parents and other traditional agriculuralists play in the development of the country and thus to foster greater respect for traditional farmers and their rural way of life.

4. To show children that a study of traditional agriculture can help them to grow other crops.

5. To teach children how animals and plants work and of the balance of nature. To show how plants are affected by weather, soil, insects, diseases and other plants.

6. To show children that they can improve their diet by introducing better and/or different plant varieties and farm animals.

7. To teach children how to look after and feed farm animals.

8. To teach children to appreciate the beauty of much of their fauna and flora and hence the value of conservation including soil conservation.

SUGGESTED ACTIVITIES

Class I and Standard I

A. Build up a vocabulary of words about farming and markets—words such as banana, taro, dig, plant, pick, carry, sell, market, cost, price.

Oral and written composition lessons about visits to gardens and markets.

B. Visits to gardens and markets. Activities based on these visits "What I saw", "What I did", map of garden or market, drawing of the people doing things.

Keep a class diary of the weather and what is happening in the gardens.

C. Each child will look after a very small garden and help to keep a class diary of the life cycle of a plant.

Standard II

In Standard II there should be a constant theme of helping parents. Teachers should encourage pupils to help their parents in the garden or markets during the weekends. Then on Monday the teacher will ask the children to tell how they helped their parents and devise language drills and oral and written composition exercises on this theme.

Children in Standard II should be encouraged to keep an individual agriculture diary. This will be a record in drawing and sentences about what each child observed and did with

parents and villagers in the gardens, e.g. weeding, harvesting, clearing, planting, fencing and marketing. Each child should be able to write two to four sentences.

The diary can be written in a long sentence book or in a book made of scribble pad pages. The teacher should help the children to use sentence patterns from language drills lessons.

Parents could be asked to visit the school and talk about current agriculture activities and the reasons for them.

Pupils could visit gardens and gradually build up a list of what the farmer does about these things—weather, soil, the different types of plants and weeds, plant diseases, insects, livestock and fish ponds.

Pupils could keep a rough record of whether it rained heavily, lightly or not at all, whether it was windy or not, whether it was hot or cold, where winds came from and whether there was a high tide.

Standards III and IV

Pupils should be encouraged to collect different plants and seeds in the garden and to collect all animals living on the plants and in the soil.

They should try to see the relationships between living things in the gardens, and find out what eats what. These observations could be recorded by drawings and using arrows.

(Photo: D.I.E.S)

Plate I.—An agricultural project at Balupwine Primary School, East Sepik District.

(Photo: D.I.E.S)

Plate II.—At Balupwine School all boys and girls are involved in the agricultural projects.

Each standard looks after its own garden and its own farm animals. The children would also take part in school projects.

Pupils should visit people working in the gardens and, back in the classroom, discuss the life of the farmer and how useful he is in the community.

Pupils should find out how a farmer earns his money and what he spends it on. They should also find out what happens to commercial crops in the area, e.g. coconuts, coffee, rubber, pyrethrum, fish and cocoa.

Standards V and VI

Pupils should study how animals work and the types of food they need, how a plant works and how it makes its food.

Get pupils to study different soils and see what kinds of plants grow in the different types of soil. Point out that there is a need for fertilizers for certain types of crops.

Pupils should visit a lot of farms and see management, good and bad. They should learn costs of various objects such as farm tools and fertilizers, together with the prices of produce such as sweet potato, coffee, etc. They should come to understand the use of credit facilities such as those offered by the Development Bank.

In Standard VI it is very important for children to draw the conclusion that crops can be grown for a profit.

Reference books for Standards V and VI is "Introduction to Tropical Agriculture"—Sutherland. "Basic Science Series".

Throughout the 6-year primary course there will be many opportunities for teachers to correlate the teaching of Agriculture with teaching in other subject areas. In the programme we have included a number of suggestions where this correlation could be attempted in

vocabulary, oral and written composition, mathematics and measurement, and Social Studies.

For the schools that wish to adopt a project approach to the teaching of Agriculture a number of suggestions have been given with regard to size, length, siting and correlation with other subject areas. This section stresses the need to involve the community in all stages of the planning of school projects.

Developing countries such as Papua New Guinea normally depend on the improvement of Agriculture for their future progress. Our programme of Agriculture teaching will therefore attempt to create an interest, a knowledge and an awareness to school children of rural activities and possibilities and give future growers of subsistence and cash crops some basic knowledge of Agriculture practice.

Members of the Primary Curriculum Seminar stressed that there was a need for our schools to become more involved with the communities around them. The suggested programme in Agriculture should give primary teachers many opportunities for worthwhile interaction between school and community.

Dwarf Coffee Seems Promising

A. E. CHARLES, Chief Agronomist.

Much interest has been shown in trial plantings of recently introduced dwarf varieties of coffee at the Highlands Agricultural Experiment Station, Aiyura (see *Harvest* Vol. 1 No. 1, pp. 10-11). As the trees are only four years old it is too early to make any definite statement about yields. However, in the first year of bearing the best dwarf variety gave yields per tree which were as high as the yields from many of the normal varieties. As all varieties were planted at the same spacing, the full potential of the dwarf trees was not being realized and it is possible that at a closer spacing the dwarf trees could give high yields per acre. It is of interest that the dwarf San Ramon variety (which was introduced to New Guinea pre-war) in a trial at Aiyura, when planted at 5 ft x 5 ft spacing has given yields almost as high as Arusha planted at 8 ft x 4½ ft.

While the variety is not recommended for large-scale planting, limited quantities of Caturra Dwarf (red fruit) will be made available to growers who would like to establish small plots for observation. Such plots would serve as a source of seed if later results show the variety to be worth planting on a larger scale.

The dwarf varieties have short internodes and form much more compact bushes than normal varieties. However, they do continue to grow and eventually become quite large bushes.

Requests for Caturra seed should be addressed to:

Agronomist-in-Charge,
Highlands Agricultural Experiment Station,
Aiyura, via Kainantu,
Eastern Highlands District.