CROP SEED PRODUCTION IN THE SOUTHERN HIGHLANDS

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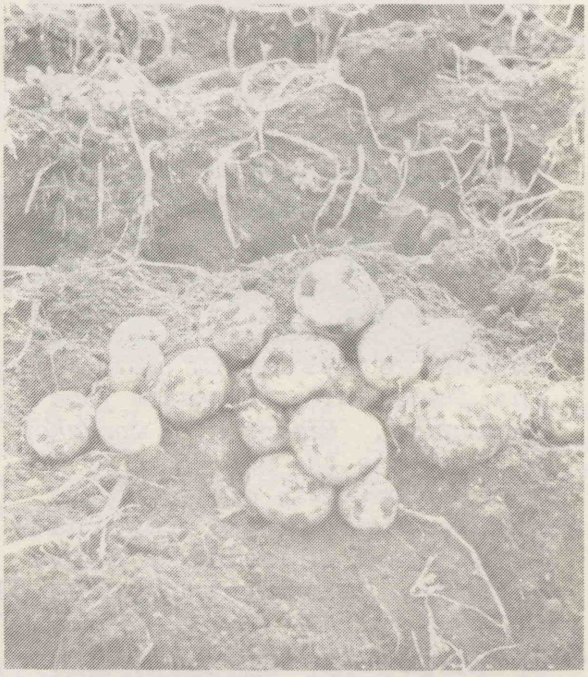
INTRODUCTION

Malnutrition is a serious problem in some parts of the Southern Highlands Province. This could be overcome by growing more nutritious food crops in the gardens of this area. Unfortunately, the difficulty of obtaining seed and other planting materials in some parts of the Province, is preventing this simple measure from being put into effect.

Two D.P.I. seed production projects have recently been started in the Southern Highlands to try to make planting materials more readily accessible to the gardeners. These projects are based at Kagua and Mendi. The seeds of vegetables grown on the projects are collected and distributed to local community schools, health centres, villages and individuals. Although the projects have been running for little more than a year, seeds have already been produced and distributed.

KAGUA SEED PRODUCTION PROGRAMME

This programme is based on a main project at Kagua itself and three subsidiary projects at Sumbra, Kuare, and Sumi. Each project is responsible for supplying seed to gardeners in the area around it, and Kagua also supplies seed to the other projects.



Seed potatoes grown at Kuk Agricultural Research Station

To start the programme off, seeds were obtained from other agricultural projects at Kagua, from trade stores and from Kuk Agricultural Research Station. Later, seeds may also be obtained from the Highlands Agricultural Experiment Station at Aiyura, Eastern Highlands Province and the Lowlands Agricultural Experiment Station at Keravat, East New Britain.

The soil was treated with a commercial complete fertilizer at planting and again later in the crops' growth. The plots

were weeded by hand as soon as the weeds emerged and routine pesticide spraying was carried out against pests and plant diseases.

Winged bean, peanut, soyabean, butterbean, mungbean, broadbean, dwarf bean, corn, pea, aibika, Chinese cabbage, English cabbage, lettuce and white potato were all grown in the first season. Some of the seeds which were produced by these crops have been planted again to ensure a continuing supply. Others, including over 1000 maize ears, 3 kg of soyabeans, 1.7 kg of Chinese cabbage seed and 0.4 kg of lettuce seed has either been distributed or is in storage awaiting distribution.

Winged beans

A glasshouse has been built on the Kagua project so that seedlings, as well as seeds, can be produced. These were sold at K1 per box to local gardeners but were given free to aid-posts and schools. The income from the sale of seedlings was used to buy more seeds for the project.

The types of seedlings grown included English cabbage, lettuce, Chinese cabbage, silver beet, tomato, eggplant and capsicum. The demand for these seedlings is very high, and the project has produced several batches to date.

Extension staff from the project make sure that the people plant the seedlings out at the correct spacing and know how they should be looked after. Pesticide spraying against insects attacking the seedlings in the garden is carried out by extension staff free of charge and fertiliser is supplied at a reasonable price for those crops, especially English cabbage, which require it. Because the seedlings have proved very popular, it has been proposed that glasshouses should also be built on the three subsidiary projects at Sumbra, Kuare and Sumi.

The project at Sumbra is already doing well. Over 500 maize ears have been distributed to local villages and a number of other crops have been grown successfully. Several scarce banana varieties and some citrus trees have also been planted there for reproduction by bud grafting in the future.

Tomatoes growing in a glasshouse

It is expected that the other two subsidiary projects at Kuare and Sumi will also become productive soon.

MENDI SEED PRODUCTION PROGRAMME

The seed production project at Kibura Extension Centre, Mendi started in September 1979. It covers an area of 28 hectares. The land was in poor condition at the beginning of the programme but was improved during the first six months by mulching and the use of artificial fertilizer. The first crops were planted in early 1978.

A field of maize

Weeds are kept under control by hand weeding carried out by D.P.I. labourers and the pesticide malathion is sprayed every week up to two weeks before harvest for control of insect pests. The most serious of these pests are the ladybirds *Henosepilachna* spp. which eat the young leaves of the bean plants, and a species of cutworm which destroys the growing points of germinating seeds. Except for potato wilt disease on the white potatoes, no serious disease problems were encountered on the project.

The vegetables grown in this programme include maize, peanuts, soyabeans, winged bean, rice bean, snake bean, pigeon pea and white potato. Over 350 kg of grain seed and 200 kg of seed potatoes have been produced in the past 18 months.

CONCLUSION

These two seed production programmes are a very practical attempt to help the people of the Southern Highlands to overcome some of the difficulties they experience in improving the crops in their gardens. This, in turn should lead to some local improvements in the nutritional status of the diet.

EDITOR'S NOTE

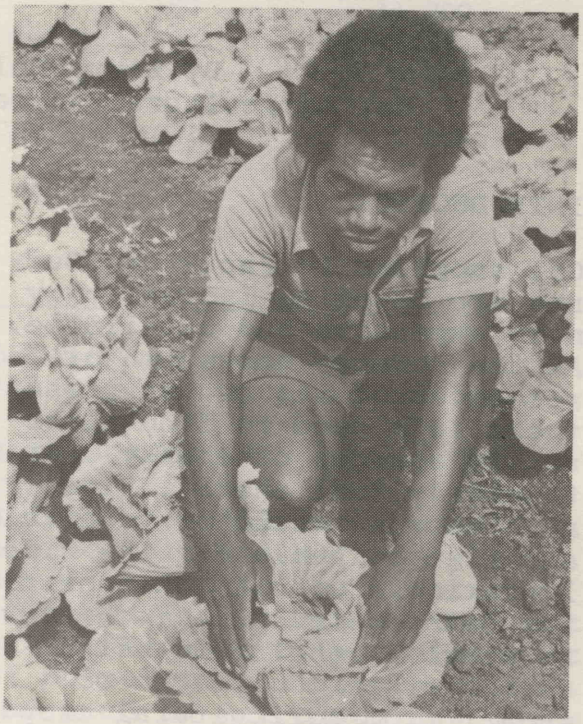
Mr Ken Newton, Chief Horticulturalist has made the following comments.

In some cases commercially available seed is both better and cheaper than that which is produced locally in small quantities (particularly in the case of hybrids). Disease control can also be a problem in local seed production and the potato wilt reported here (presumably Bacterial Wilt *Pseudomonas solanacearum)* could well rule out any future distribution of planting material.

These types of multiplication project will in future be supplied with seed from national DPI stations and the projects will concentrate on improved

strains of staple crops, introduced staples such as potatoes and maize, and local greens and legumes. Production of seed of most introduced species (unless nutritionally important to the area) will be left to commercial sources.

A capsicum plant



English cabbages

Eggplants

Photos on this page: N. Birge