D.P.I. SEED DISTRIBUTION

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INTRODUCTION

Rapid development in PNG, as in many other countries, has led to an increased demand for food. This is because the population is growing and because many people now live in cities such as Lae and Port Moresby where they cannot grow their own food. As well as more food, we also need better food as more and more people learn about nutrition and how much healthier some foods are for us than others.

The National Sectoral Programme for Food and Nutrition was set up under the National Public Expenditure Plan to help to improve the quality and quantity of food grown in Papua New Guinea. Part of this Programme involves helping growers to obtain seeds of the crops which grow best in their area. This part of the Programme is called 'seed distribution' but it includes distribution of all types of planting material such as seedlings, buddings, tubers, bulbs and runners as well as seed.

PRELIMINARY WORK

Distribution of seeds may sound like an easy thing to organise but, in fact, a lot of very hard work will be needed if it is to be done successfully. Some of the work which will have to be done is described in this article.

The first job will be to choose the plants which will be used to produce seeds for distribution. Only the best plants of each crop will be used for this.

Some plants will be chosen from those growing locally in P.N.G. gardens and others may be imported from overseas. Special care will be taken when bringing plants from other countries or moving them into a new area of P.N.G. to make sure that no insect pests or disease organisms are brought in or moved around with them.

Some of the things which the D.P.I. officers will be looking for when they choose plants for the programme are: production of good yields under poor conditions; resistance to insect pests and diseases, and high food value, good taste and long storage life of the product.

Once the plants have been selected, they will be used to produce more good plants and these will eventually by used to provide the seeds. By careful breeding, it will also be possible to improve the selected plants, combining the good qualities of several into one really good variety.

The selected plants will have to be tested in several parts of the country to find out which conditions they do best in and to make sure that they are better than the local varieties. It will also be important to

make sure that the local people will find them good to eat.

For this part of the work, it will be necessary to set up a number of new observation plots in addition to those at agricultural stations.

ORGANISATION

Due to limits on the amount of time and funds available, it will not be possible for D.P.I. to handle the distribution of all crops and some growers will still have to rely on commercial outlets for part of their supply. D.P.I. will concentrate on supplying seed of subsistence crops.

Those crops which are considered most important in the D.P.I. programme are listed below.

D.P.I. SEED DISTRIBUTION - PRIORITY CROPS

Traditional Staples

Sweet potato	*Ipomoea batatas*
Yam	*Dioscorea* spp.
Taro	*Colocasia* spp.
Cassava	*Manihot esculenta*
Sago	*Metroxylon* spp.

Traditional Greens

Wing bean	*Psophocarpus tetragonolobus*
Aibika	*Abelmoschus manihot*

Introduced Crops

White potato	*Solanum tuberosum*
Rice	*Oryza sativa*
Maize	*Zea mays*
Mung bean	*Phaseolus aureus*
Soya bean	*Glycine max*
Snake bean	*Vigna unguiculata var. sesqupedalis*
Cowpea	*Vigna unguiculata*
Peanuts	*Arachis hypogaea*
Tomato	*Lycopersicon esculentum*
Capsicum	*Capsicum grossum*
Egg plant	*Solanum* spp.
Onion	*Allium* spp.
Cabbage	*Brassica oleracea*
Lettuce	*Lactuca sativa*
Silver beet	*Beta vulgaris*
Spinach	*Beta vulgaris var. Cicla*
Carrots	*Daucus carota*
Cucumber	*Cucumis sativus*
Marrow	*Cucurbita* spp.
Rock melon	*Cucumis* spp.

Fruits

Lemon, lime orange	*Citrus* spp.
Pineapple	*Ananas comosus*
Banana	*Musa* sp.
Avocado	*Persea gratissima*
Pawpaw	*Carica papaya*
Passion fruit	*Passiflora edulis*
Guava	*Psidium guajava*
Mango	*Mangifera indica*
Custard apple	*Annona squamosa*
Five corner	*Averrhoa carambola*
Strawberries	*Frageria* sp.
Durian	*Durio gibethinus*
Rambutan	*Nephalium lappaceum*
Mangosteen	*Garcinia mangostana*
Jak fruit	*Artocarpus integrifolia*
Granadilla	*Passiflora quadrangularis*
Langsat	*Lancium domesticum*
Pulassan	*Nephelium mutabile*
Malay apple	*Eugenia megacarpa*
Kiwi fruit	*Actinidia chinensis*

Nuts

Okari	*Terminalia okari*
Macademia	*Macademia integrifolia*
Cashew	*Anacardium occidentale*
Pandanus	*Pandanus* sp.
Galip	*Cannarium indicum*

Trials will still be carried out on other crops such as cabbages and onions but seed will not be supplied by D.P.I. while commercial supplies are available.

Distribution will be organised through the Horticulture Section Headquarters in Konedobu. All requests for supplies and estimates of quantities needed for particular areas will be sent to the staff there.

Headquarters will then let the national agriculture stations know how much seed to produce of each crop. Requests for seed will be passed to the station which can best supply the seed at the time. Seed storage and packaging equipment will be installed at the agricultural stations to help make sure that the seed is supplied fresh.

ROLE OF PROVINCIAL SEED GARDENS

The main task of the provincial seed gardens such as those described in HARVEST 6(1) and in another article in this issue, will be to multiply up stocks of seed from small quantities sent to them by the national agriculture stations. They will also run observation plots to test selected plant types in their area and grow seedlings for local distribution. National D.P.I. will be able to help the provincial offices with this work.

Another important job for the provincial staff will be helping growers to remove any inferior plants from their crops. This is especially important for cash crops. For example, a grower may have some trees which produce bitter oranges growing with his sweet orange trees. The bitter oranges will then get mixed in with the sweet ones and people will soon refuse to buy from him.

In the past, there has been some difficulty in explaining to growers why specially grown seed costs more than the ordinary produce of the same crop. This is because of all the extra work involved in growing seed. It is important to the success of this programme that growers understand this point and do not just carry on growing their own varieties. Provincial officer will be able to help here by explaining to the growers the advantages of buying improved seed.

CAN YOU HELP?

Building up a successful seed distribution system will be expensive both in time and money. The Horticulture Section will need as much help as possible. They would be pleased to hear people's ideas about the proposed system described here. Any information about where especially good plants of any of the crops in the list above can be found would also be very welcome.

Comments or information should be sent to the Chief Horticulturalist, Horticulture Section, D.P.I., P.O. Box 2417, Konedobu.