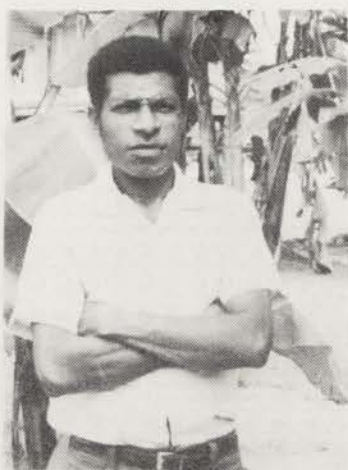


WEST SEPIK PROVINCE

By Lawrence Daur, Provincial Rural Development Officer

Lawrence Daur comes from Yaunyai village in the Saidor district of the Madang Province. He attended primary school at Saidor, then went to Tusbab high school, and later to Sogeri senior high school. He attended Vudal Agricultural College from 1968 to 1970. His first posting was to Omuru in the Madang Province, and then on to Saidor and Josephstaal in the same province. He went to Maprik in the East Sepik Province in 1973, where he was posted for ten months as officer-in-charge of the Dreikikir subdistrict. In November he was transferred to Vanimo as associate Provincial Rural Development Officer, and was appointed PRDO for the West Sepik Province in January, 1974. He and his wife Albina, who is also from the Madang Province, have four children.



Mr Lawrence Daur.

The climate of the West Sepik Province has a "wet" season from October to April and a "dry" from May to September. The rainfall averages 2 500 mm per annum. Inland areas experience higher rainfall and lower temperatures. The highest rainfall is at Telefomin with 3 527 mm. The wettest months are December, January and February.

Temperatures in coastal areas are between 25 °C and 33 °C. In higher altitudes such as Telefomin temperatures are between 18 °C and 26 °C.

The strongest winds and rough seas occur during the north-west season (October to April).

The terrain consists of small strips of coastal plains, and the rest is mainly mountainous and swamps. Aitape is flat to rolling with mountains rising to 1 829 m. Telefomin station is roughly 2 500 m above sea level. There are approximately 2 600 km² of flood plains east of Green River and Amanab stations.

The soils vary from well-drained low-fertility soils in coastal areas to patches of fertile clay loam in the foothills. Large areas near Lumi are shallow clay to clay loams and leached sandy soils of low fertility. In high mountain areas and at Green River there are soils of poor fertility, mainly limestone clay with some patches of loam topsoil.

The vegetation is mainly thick rainforest,

with sago swamps bordering the rivers. The flood plains of natural grass and the forest are the dominant features. There is good forest timber consisting of kwila, taun and garamut in the foothills of the Torricelli and Bewani mountains.

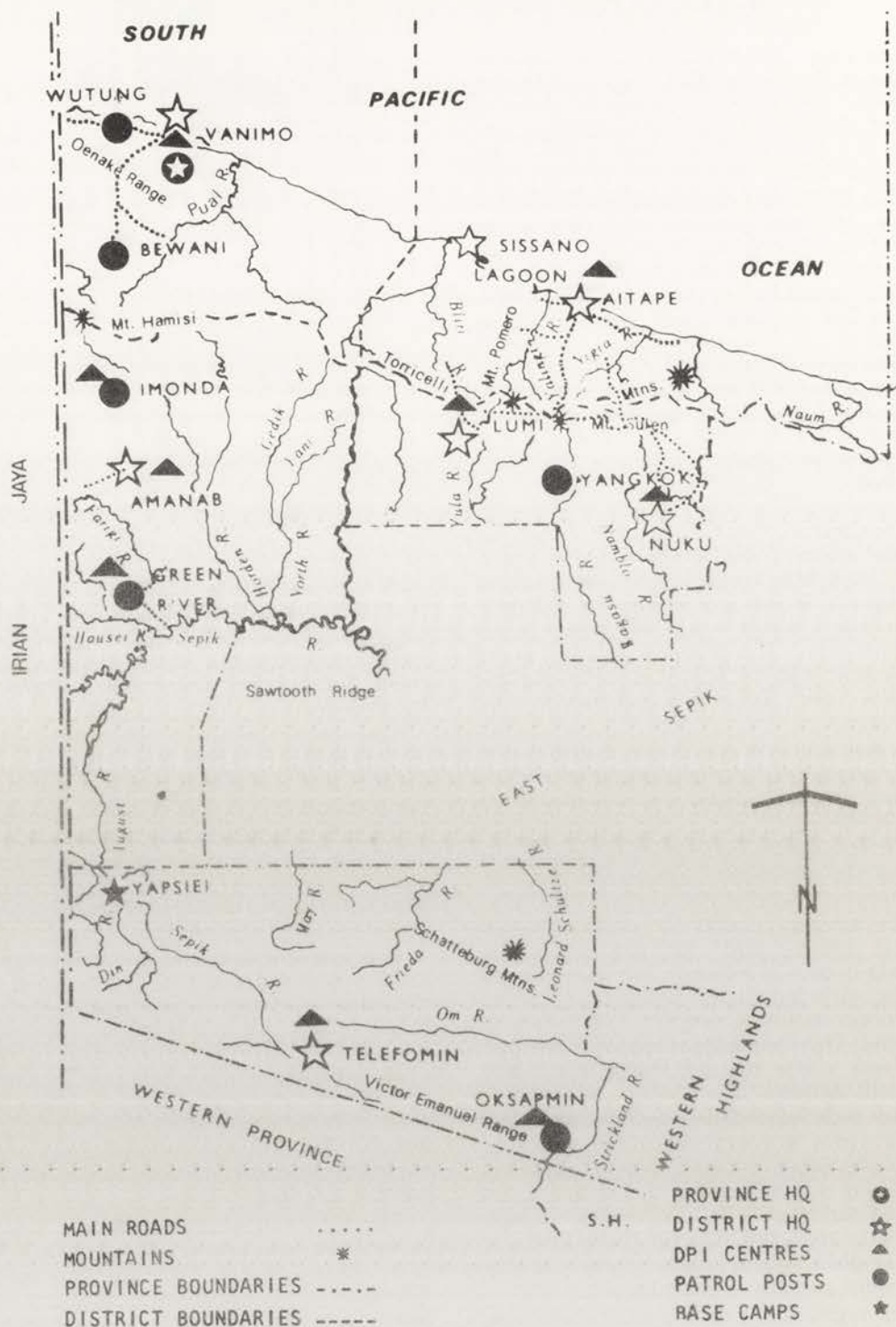
The total area of the province is approximately 31 000 km², consisting of 10 360 km² nonarable, 12 950 km² very marginal and 7 770 km² of arable patches.

There are approximately 7 770 km² in the 32.18 km (20 miles) wide quarantine zone along the border with Irian Jaya, which also limits agricultural development as no cattle or coffee industry is permitted.

Communications in the province are poor. There is no road access between Vanimo and the other districts. Lumi and Nuku are connected by road to Wewak. Aitape is in the process of linking up with Wewak, a road connection with Lumi is being slowly pushed through, and the first 64 km of the all weather road is being constructed from Vanimo to Bewani. The Vanimo to Sepik road is not however expected to be completed for another ten years.

There is an all weather road from Vanimo to the Irian Jaya border (42 km) and 27 km from Aitape to the Torricelli Mountains. There are short roads feeding out from most district centres. Due to the poor road systems

WEST SEPIK PROVINCE



most villages are accessible only by walking and motorbike tracks.

The main airfields are at Vanimo, Telefomin and Tadjai (Aitape) which cater for DC3 and other small planes. There are 18 other airstrips all over the province. All district and subdistrict centres have airstrips. Air Niugini operates between Vanimo and main centres in other provinces and other operators (Douglas and Talair) operate regular and efficient services to outstations when weather permits.

Vanimo is connected by telephone to outside centres with STD, and Aitape is due to be connected soon. The rest of the outstations are connected with radio.

There is regular fortnightly shipping to Vanimo from Madang and Wewak. Low tides at Aitape restrict anchorage at times. General shipping restrictions are in force during the wet season because of rough seas.

People

The total population is 120 000 though approximately 20% of these are absentees. The most densely populated area is Lumi with seven people per km².

Spoken language varies from district to district. Malay is common along the border stations of Bewani, Imonda, Green River and Amanab. Pidgin is widespread in all areas except in the Oksapmin and Telefomin areas. Here only educated young people or those who have spent time on the coast can speak it.

Generally the nutritional level throughout the province is low. Apart from the subsistence gardeners of the Oksapmin and Telefomin areas, the remainder of the people are hunters and gatherers. Starch intake of these people is thus high as sago is the staple food. Lumi and Amanab districts are the worst affected areas. Coastal people supplement their food with fish which is abundant.

There are 78 community schools, 3 high schools and 8 vocational centres. Villagers generally show lack of interest in sending children to school and as a result there are very few educated people in villages, and most who go to school get jobs away from home.

Self-help groups have not developed much as yet. The formation of the Village Development Fund Committee in September, 1976, may generate more interest. The Catholic Mission has an organization called Young Christians, but it only started in 1974 and has had only a small influence in

agriculture so far. The Wapei Industry Society have a timber mill at Lumi.

Missions have a great influence in the area on development and changing of the way of life. The main missions are the Catholic and CMML.

Land disputes are generally only minor disputes which are settled locally. Land is generally communally owned and of low value for agriculture and therefore unimportant.

Local Vanimo people received a large sum of money for timber rights in 1972. This is now invested at 10%, bringing K 12 000 every six months, so there is little incentive among this group for cash cropping.

Nuku, Oksapmin and some parts of Aitape and Lumi are the only areas where people are keen on economic development.

Political

There are currently two levels of government within the province—local government and central government. Provincial government would appear at this stage to be a long way off.

Local government councils operate at Vanimo, Aitape, Lumi, Nuku, Bewani, Imonda, Amanab, Green River and Telefomin. Council tax varies between K5 and K10.

Members of the National Parliament are Paul Langro (Regional), Brere Awol MBE (West Sepik Coastal), Bewa Tou (Bewani), Yacob Talis (Wapei-Nuku), Anskar Karmel (Upper Sepik). Mr Langro is the deputy leader of the Opposition.

Other community leaders include the following: Stephan Holland (Aitape), Vegra Kenu (Vanimo) and Patrick Nehu (leader of the Mopi Association and member of the second House of Assembly for Telefomin).

Economy

There are five major cash crops grown in the province.

Coconut is grown along the coastal areas.

Coffee is scattered in coastal and inland areas. The major producing area is Lumi, closely followed by Aitape and Nuku. Arabica coffee was recently introduced into the Telefomin district.

Rice is grown in Nuku, Yankok and Lumi. It has been encouraged recently in Vanimo, Aitape and Green River.



(Left to right) Village leader Mr Patrick Nehu, rural development assistant Mr Gerald Guire, village farmer Mr Peter Lalley and president of the Vanimo local government council Cr Vincent Mohe visiting a fishing village near Vanimo.



In the produce storage shed at Lumi, (left to right) Cr Wanalap Salake of Lumi local government council, Cr Offi Walaku, president of Wapei council and Mr Alos Sorum, officer-in-charge of DPI, Lumi.



Rural development officer Aloa Sorum looking at coffee growing in the Lumi area.

Chillies are grown in most districts.

Rubber is being introduced on a large scale in the **Amanab** district.

Other crops include vegetables, which are expanding in Oksapmin, and copal gum, which is mainly limited to the Lumi district.

Livestock are mainly cattle, with a few pig and poultry projects.

Fishing in the West Sepik is excellent, but few people fish commercially.

Forestry is the main industry in the province, although the Goldore Timber Company has closed down after eight years of operation.

Development of the larger Vanimo timber resource in association with private enterprise has been delayed, and there are no immediate prospects of full-scale development for some years. Alternative smaller scale exploitation in association with agricultural developments is now consideration at both Provincial and Headquarters level.

There is a cane furniture industry at Pes village in the Aitape district.

A rich copper deposit at Telefomin is not yet exploited. Small-scale goldmining is carried out in the Lumi and Amanab areas.

A 1 000 ha land settlement scheme is now operating at Pes near Aitape.

Vanimo has branches of the PNG Banking Corporation and the PNG Development Bank. Steamships is the agency for the Bank of NSW.

AGRICULTURAL DEVELOPMENT PROGRAMME

Coffee

Robusta

Robusta coffee is the main crop. There are 488 ha of Robusta coffee, with about 3 900 growers. Production of parchment coffee last year was approximately 271 tonnes.

The 1976-77 aim is to increase plantings by 29 ha, and establish 21 nurseries to plant a further 28 ha.

Rejuvenation of 145 gardens will be carried out at Nuku, Lumi, Aitape and Vanimo.

At present coffee pulpers are very expensive and therefore not many people can afford to buy them. Vocational centres will be encouraged to make DPI-designed pulpers for resale to farmers.

Plantings will be increased annually by 8 ha, over the following four years. Rejuvenation of 100 gardens will be carried out each year.

Local government councils and trade store owners will be encouraged to obtain tools for resale.

Arabica

Arabica coffee has been introduced recently to the Telefomin area and the high-altitude area of the Lumi district. The area planted is 33 ha, and there are 203 growers.

In 1977-78 plantings will be increased by 17 ha—10 ha at Telefomin and 7 ha at Lumi. Fifteen nurseries will be established, and in

1978-79 10 ha will be planted at Telefomin and 5 ha at Lumi.

Market facilities will be provided in 1979-80 and processing facilities and maintenance tools will be obtained.

No further expansion is planned at this stage.

Rice

The area planted to rice is approximately 205 ha, with about 7 000 growers. Production for 1975-76 was 288 tonnes of paddy rice—250 tonnes from Nuku and 30 tonnes from Lumi.

Great interest in rice-growing is shown in Nuku, Yankok and Lumi. Little rice is grown in Aitape and Amanab.

The new variety 6637 has been introduced and is quite acceptable to the people.

The Sepik Producers' Co-operative Society buys much of the paddy rice from the people and resells it to Primary Industry. The marketing outlet provided by the SPCA will be maintained.



Mr Petrus Nambalam on his cattle project near Aitape.

In 1977-78 an increase to 250 ha is planned, as follows: Nuku 144 ha, Lumi 75 ha, Amanab 20 ha, Aitape 10 ha, and expected production will be 296 tonnes.

Current rice-processing and storage facilities are inadequate for this expanding industry.

Three new mills will be installed, at Amanab, Aitape and a large one at Nuku.

In 1978-79 planting in each area will be increased by 6 ha. A paddy rice storage shed will be built.

Cattle

There are 792 head of cattle on 139 projects, and 42 projects not yet stocked.

There are 290 head on plantations.

Most projects are small and require more advice on management and improvement of pastures. Their average area is 6 ha. People are interested in establishing new projects but lack funds and land suitable for projects.



Carrying sago to the river to wash.



Selling sago by the roadside.

In 1977-78 37 new projects are planned, and the 42 projects established in 1976-77 will be stocked with 65 head. Three hundred head will be obtained ready to stock 37 projects in 1978-79.

Improved pasture will be established on 117 ha in 1978-79, increasing the total area of improved pasture to 281 ha.

Two cattle crates will be built, through rural improvement programme funds.

In 1978-79 32 new projects will be established and stock obtained for these projects. One slaughter slab will be built. Farmer training will be arranged.

Pasture improvement will be maintained until all projects have improved pasture.

In 1979-80 the 32 new projects will be stocked. No more new projects are planned.

Subsistence

The aim of this programme is to improve nutrition. There are areas where most people are hunters and gatherers and therefore their nutrition is poor. An extension programme to



Aitape—sago-making by the traditional method.

introduce them to subsistence gardening has been started. The area most affected by malnutrition is Amanab.

In 1976-77 123 gardens were set up, mainly in villages—120 at Amanab, 1 at Nuku and 2 at Telefomin. High protein bean seeds and starch-based cereals have been distributed. However, due to traditional taboos some people tend not to accept some introduced food crops.

In 1977-78 40 new gardens are planned including 10 demonstration gardens and 30 village gardens.

Better planting materials are required. Cuttings of early-maturing sweet potatoes will be distributed. Taro and banana suckers will be obtained for distribution. More corn, soya bean and peanut seeds will be distributed.

DPI will advise the community development officers on the varieties of crops introduced, and they will teach ways of cooking these foods.

In 1978-79 DPI officers will continue encouraging subsistence gardening with better methods of farming and good planting materials.

In future years advice and assistance will be maintained. As people improve their health in areas where malnutrition is a problem, cash cropping will be encouraged.

Vegetables

Most vegetables for sale are produced in the Telefomin district. People in Telefomin and Vanimo districts are interested in vegetable-growing, but there are problems with transport and seed supplies. The industry is also facing some insect problems.

Four local government councils have begun obtaining vegetable seeds for resale. A coolroom and freezer have been established at Vanimo market centre.

In 1977-78 the Department will encourage the establishment of 7 ha of new gardens in the Vanimo district and 4 ha in the Telefomin

district, where transport is reasonably good.

All local government councils and local firms will be encouraged to purchase seeds for resale to farmers, so that local markets can be supplied.

In future years expansion will be encouraged in areas with a market outlet.

Coconut

There are 9 200 growers with 11 400 ha. The total estimated production is 400 tonnes of copra. There are 132 driers.

There are also two plantations of about 243 ha each. Their estimated production is 165 tonnes.

There are large numbers of trees in the province, but there are many nuts available which are not harvested due to low price, transport difficulties and lack of driers.

Farmers will be encouraged to build more bush material copra driers, each clan having at least one. Twenty-six new driers are planned for 1977-78—10 at Vanimo and 16 at Aitape.

Subsistence planting of coconuts will be encouraged.

Production will be increased over the next four years by construction of more driers. No increase in area planted is planned.

Chillies

Chillies are grown in most districts especially the border stations of Bewani, Amanab and Green River.

People are interested in chillies for it is an easy crop to manage and also has a very attractive market price. It is an important crop in the quarantine area.

Last year 87 growers produced 8 tonnes of dried chillies. The area planted is estimated at 5.8 ha.

In 1977-78 planting will be encouraged as follows: Vanimo 4 ha, Lumi 4 ha, Nuku 4 ha, Aitape 10 ha, Telefomin 1 ha and Amanab 4 ha.

Farmers will be advised on better management and processing methods, and on the right type of chillies to be planted. Four farmer training programmes for 20 farmers each will be arranged. In future years the Department will continue encouraging the crop and providing a better market outlet.

Pigs

There are 5 Development Bank projects and 25 semi-commercial projects. Most pigs are raised for subsistence.

Most farmers lack managerial ability. Imported feed is very expensive; however local farmers are not keen on producing their own stock feed (corn, peanut, soya bean, sweet potato etc.). The coastal people do not really make use of the coconuts available.

A pig farmers' association has been started in Vanimo.

Stock movement is under control in most areas.

Existing projects will be encouraged to improve on a semi-intensive basis. Local meat production for sale will be encouraged.

In 1977-78 extension services will concentrate on people who are willing to work hard to produce local feed to minimize the costs of imported feed.

In-service training on pig husbandry will be conducted for field staff.

In 1978-79 pig fattening projects will be encouraged close to the main centres of Vanimo and Aitape. In the following years, successful breeding projects will be encouraged to supply piglets to meet the demand from fattening projects.

Fisheries

The coastal people are beginning to show some interest in catching fish, maybe due to the setting up of a proper market outlet for fish in Vanimo. There are freezers and ice-makers at Aitape and Vanimo.

Ponds have been dug at Pasi and Green River, for breeding tilapia and goramy. In 1977-78 these ponds will be completed and stocked.

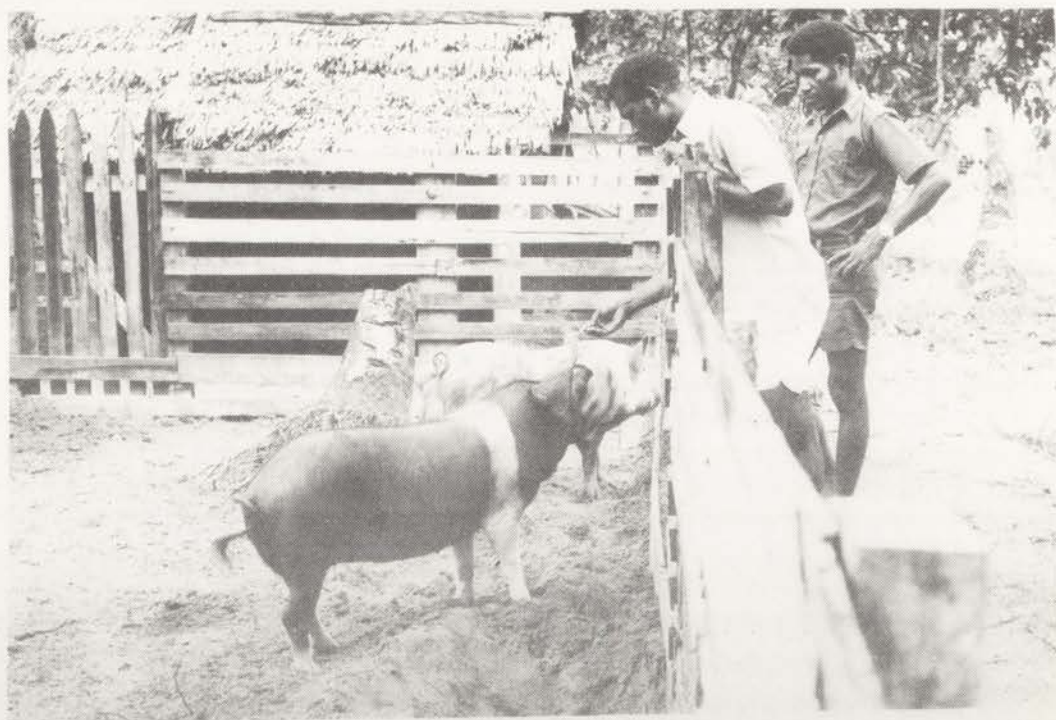
Four thousand trout fingerlings will be introduced to rivers in the Telefomin district.

Extension services to fishermen on fishing techniques will be continued. Private firms will be asked to stock fishing nets for sale.

In 1978-79 coastal fishing will continue to be encouraged. Fingerlings of tilapia and goramy will be distributed to existing ponds.

In 1979-80 ice will be sold to fishermen, to encourage more fishing.

The extension service will continue to give advice on fishing techniques and preserving methods.



Village pig project.



Fishermen's canoes drawn up on the beach near Vanimo.

Poultry

Most poultry are grown for subsistence. Two layer projects have been started at Lumi. High quality feed crops (corn, soya bean etc.) have been introduced there.

In 1977-78 400 day-old chickens will be obtained from Lae. They will be raised to eight weeks old at Pasi extension centre and then distributed to villages. Thirty ducks will also be distributed.

One more layer project at Vanimo and two at Lumi will be established, and these will be encouraged to plant stock feed.

In 1978-79 advice to existing projects will be maintained, and more chickens will be obtained for resale to villages.

In 1979-80 stock feed projects to sell feed to poultry farmers will be encouraged. Training will be arranged for interested poultry and stock feed farmers.

Wildlife

Four demonstration crocodile farms have been established. There is interest in crocodile-farming; however the big problem is lack of food which is mainly fish.

In 1977-78 four projects will be established at Lumi, three at Edwaki, two at Au East and West and three at Aitape. Crocodile farming will be encouraged in future years wherever there is feed potential.

An officer will be trained in butterfly farming and will encourage butterfly farming in the Amanab and Vanimo districts in 1977-79.

Wildlife laws will be enforced, and wildlife management areas will be encouraged.



Mr Peter Lalley, poultry project owner.

Rubber

Apart from one ten-year-old block of 0.5 ha at Amanab, rubber is a newly introduced crop to the area. It is most suited to the area along the border, where it is not a restricted crop, in places where the soil is not suitable for other cash crops. People are showing interest.

Eight trials have been established in the border stations.

There are 33 689 seedlings available for distribution to projects and also 800 budded stumps.

The 0.5 ha of ten-year-old rubber trees are ready for trial tapping.

In 1977-78 a processing factory will be constructed at Amanab, and the old trees will be tapped as a demonstration.

Seedlings will be transplanted to five villages which have started clearing sites.

Farmer training will be arranged. Influential leaders will visit established rubber projects in other provinces.

More seeds will be planted in nurseries.

In 1978-79 five more villages will be encouraged to start planting and the area planted will be increased from 10 ha to 20 ha. Six more farmers will be trained each year, and the area planted will be increased by 10 ha each year between 1979 and 1982.

Cocoa

This is a new crop for the province. One expatriate is involved but not many local people as yet.

Three trials have already been established, at Pes, Bewani and Vanimo.

Planting of 60 ha at Pes was begun last year, but problems of shortage of planting material and lack of farmer understanding of this new crop have delayed progress.

In 1977-78 it is planned to continue with the planting at Pes. Four nurseries will be established at Aitape. Five hundred clonal cuttings will be obtained from the Lowlands Agricultural Experiment Station, for demonstration at Bewani. Planting at Vanimo will be increased from 10 to 12 ha. Training will be provided for all farmers now involved in cocoa.

In 1978-79 planting of 60 ha at Pes will be completed, and the areas around Pes will be encouraged to take an interest. Assistance for the development of the projects will be requested from the Development Bank.

Photography by Linda Cavanagh.

LOCUST EXPERTS IN PNG

The Department of Primary Industry has secured the services of two experts on locust control. They are Mr J. Roffey and Mr J. Tunstall, both from the Centre for Overseas Pest Research in London.

The Minister for Primary Industry, Mr Boyamo Sali said the two experts on locust survey and control would train a Locust Patrol Unit newly established in the Department to maintain constant lookout for any future threats by locusts.

Mr Sali said the two experts have been made available by the British Government at the request of the Papua New Guinea Government for assistance in controlling the locust plague in the Morobe Province.

The Minister said at present the locust plague, which had been causing problems in the Markham and Ramu valleys periodically since 1973, appeared to be under control due to an intensive survey and aerial spray programme carried out by the Department of Primary Industry last year.

He said it was too early to predict a complete eradication of the pest and his Department was working on a long term plan for any future swarms.

Mr Sali said Mr Roffey and Mr Tunstall would train the new established Locust Patrol Unit for a period of four to six weeks.