

CHIMBU PROVINCE

By Alan Iorive, Provincial Rural Development Officer, and John Van Amstal

Alan Iorive was born in Kanosia, Kairuku District of the National Capital Province, in 1947.

He attended Primary School at St Pauls, Bomana, then to Marist Brothers College, Campbelltown, Australia, 1960-1962 for his secondary school.

He went to Popondetta Agricultural College 1963-1964.

His first posting was to the Lowland Livestock Station at Erap in the Morobe Province.



Alan Iorive

Then he went to Kila Kila Quarantine Station and to Sogeri as a Livestock Inspector.

In 1972 he was transferred to Kerema and assumed the role of Provincial Livestock Officer until 1974. Then to Rabaul in 1974 as Provincial Livestock Officer for the East New Britain Province until June 1975. He was then transferred to Kundiawa where he became PRDO.

Mr Iorive is married with 3 children. His wife Hehure, used to work as a clerk with the Public Works Department in many of the places they have been.

There are two main seasons in the Chimbu Province: the north-west season and the south-west season. The north-west season lasts from December to March and brings high rainfall. The south-east season lasts from May to November, and brings mainly dry easterly winds.

Because of the rugged terrain of the province, the weather is very variable, and unpredictable.

The general trend is that rainfall gradually decreases from east to west.

The mean annual rainfall at Kundiawa is 1 753 mm, at Gumiini it is 2 311 mm, at Kerowagi it is 2 337 mm and at Kegsugl it is 1 852 mm.

During the dry season only occasional showers occur.

Mountain ridges and peaks rise to between 3 000 and 4 510 m. There is little flat or undulating land. Most areas towards the north and towards Chuave are limestone country.

The main rivers are the Wahgi River and the Chimbu River. Other rivers of less importance are the Tua, the May and the Eravi Rivers.

Soils range from alpine peat and humus soils, found mainly in the Mount Wilhelm and Kegsugl areas, to humic brown clay soils in the Elimbari Area, humic brown and red latosols in the Wandi area, and meadow soils in the Mengendi area.

In most of the valleys and hilly uplands the forest vegetation has largely disappeared as a result of clearing for shifting cultivation and subsequent burning and also as a result of increases in population. The vegetation of the lower areas forms a mosaic of grassland, gardens, groves of planted trees, especially casuarina and gum trees, secondary forest and mixed vegetation of trees, shrubs and pit-pit along the streams.

A very dense and extensive road system has been developed, of which the Highlands Highway is the main feature. The Highway links the Chimbu Province with Goroka and Lae to the east and Mount Hagen and Mendi to the west. The stretch running through the Chimbu Province seems to run through very unstable land resulting in landslides that may make the road impassable after wet weather. Other roads are frequently impassable.



Subsistence agriculture on slopes

The Karamui area due to its isolated geography has no road link with the rest of the province. The area is serviced by regular air-services. A road is under construction to open up the area and is expected to go as far as Bomai in 1976-77.

There are ten airstrips, 6 government and 4 mission. Kerowagi, Gembogl, Gumini, Chuave, Karamui, Kup and Kilau Kantai can be contacted from Kundiawa by VHF radio via Goroka — reception is often unclear.

Kundiawa is linked to the rest of the country through the STD telephone system. The limited number of lines available sometimes makes it difficult to contact other places.

PEOPLE

It is estimated that the population is close to 200 000.

Apart from Pidgin, Kumon is the most commonly spoken language and is used over the greater part of the province. In the Nambyufa area most people speak Siasi. The Karamui area has developed its own main languages, Darabe and Tudawe.

There are five high schools, 74 primary schools, 2 vocational centres — one at Kundiawa and one at Gui, Kerowagi.

There are a number of self-help groups.

The Yangpela didiman movement is now fairly influential among the people and has clubs throughout the province. The club centre is now being built at Kup.

The Elambari Development Corporation aims to improve the economy of the Chuave District, and to establish a cement factory and business enterprises for local people. In this area there are also the Tarver group and a piggery established by John Kaupa, MP.

The Segowagi Youth Club is mainly interested in development of social activities in the Kundiawa area.

The Kamagu Development Corporation is involved with trucking, picture theatres and selling of fuel, and plans to set up a broiler chicken project, and later to expand with a cattle and pig project.

Land disputes occur from time to time and lead to fighting, particularly in the Kup area and to a certain extent in the Dom and Gumine areas. There are 47 recorded land disputes and it is suspected that there are also a number of unrecorded ones.

There are nine local government councils: Kerowagi, Mount Wilhelm, Sina-Sina, Kundiawa, Elimbari, Nambyufa, Kilau, Gumine and Karamui.

Some Councils have adopted plant hygiene rules but have not been able to police them. Some councils are in a poor financial position. In general the influence of the councils has waned somewhat since the establishment of the Area Authority.

The Area Authority has allocated Rural Improvement Programme funds in a number of agricultural development projects.

ECONOMY

Coffee and vegetables are the main crops. There is a small amount of pyrethrum, cardamom, chillie and tobacco.

There are four plantations, one is owned by the Chimbu Coffee Co-operative, one by Buka Stores, and two are for sale. An area of 242 ha has been surveyed for a cardamom plantation for the Chimbu Coffee Co-operative.

Cattle are very popular in the province. They are regarded as a symbol of wealth and are generally killed at singsings. However, there is not a great potential for development of the industry due to land shortage.

Tribal fights have held up many development programmes during the past year.

Kumul Bakery delivers bread throughout the province. Other light industries are motor repair shops and a coffee factory at Wandi.

The PNG Development Bank has opened an office in Kundiawa.

AGRICULTURAL DEVELOPMENT PROGRAMME

COFFEE

There are about 3 977 ha planted to coffee, with 41 312 growers. The total number of trees is approximately 108 617 000. Production last year was about 8 000 tonnes.

Most gardens are in poor condition. However, a new coffee improvement programme begun last year is going well in most districts, and is helping to reduce the number of gardens that are not attended to. Patrols emphasise maximum production, fencing to keep out pigs, proper processing facilities and drying. Coffee teams are established in each district and are co-ordinated by the Provincial Coffee Co-ordinator.

Tribal fights and staff shortage interfered with plans for expansion of production and plantings last year.

The Chimbu Coffee-Co-operative and Yomba Co. have now taken over coffee-buying in the remaining remote areas, as the Department is no longer involved in coffee-buying.

Plans for 1977-78 include establishment of nurseries to plant 30 ha by June 1978, and patrols every two months to encourage proper picking, processing, shade control and weeding. It is hoped that patrols will encourage farmers to prune 80 ha of coffee during the year. Two courses on servicing coffee pulpers will be held for coffee teams and farmers.

During the next four years patrols to encourage proper management and maximum production will be continued.

In 1979, 6.4 ha will be planted at Gume, 12.8 at Karamui and Bomai, 4 ha at Kundiawa, 16 ha at Chuave and Sina Sina and 4 ha at Gembogl. Seeds of a new variety will be obtained from the Highlands Agricultural Experiment Station at Aiyura. A new spacing of 2.5 x 1.5 m will be used for new plantings. Extension officers will encourage pruning of 24 ha.

In 1980, 40 ha will be established, if farmers are interested. Twenty-four ha will be pruned.

In 1981 and 1982, 60 ha will be established each year, mainly in the Bomai area. Twenty-four ha will be pruned each year.

VEGETABLES SUBSISTENCE AND NUTRITION

This programme has two aims: to encourage people to plant high-protein food crops to alleviate the malnutrition problem, and to establish a new cash crop — vegetables for sale.

Forty-six per cent of the population of 200 000 are believed to be affected by malnutrition. A provincial nutrition committee was formed in 1975, with the PRDO as chairman. The committee meets every month although not enough interest is shown in the programme by some government departments. Two nutrition demonstration gardens have been established, and five will be established at schools or health centres in 1977-78.

In 1976 the planned programme to begin peanut and bean planting projects at schools was only partially successful, due to lack of interest in some cases.

Last year DPI began selling small packets of vegetable seeds, using Rural Improvement Programme or Council funds. This was very successful. The amount of seed distributed was 1 355 kg in one year.

Two seed production gardens have been established. These gardens produce seeds of mostly introduced vegetables, with some traditional pods as well.

The vegetables produced for sale come mainly from surplus subsistence gardens. Twelve vegetable projects were established last year.

There is no government vegetable market and vegetables are generally not exported outside the province. At present fresh food quotas available to the Chimbu Province are too low to warrant setting up a vegetable buying market.

Last year growers in the Upper Chimbu area were encouraged to grow onions and cauliflower for sale, although the planned target was not achieved because of shortage of seed and staff.

In 1977-78, 5 village vegetable projects will be established at Gumine, 10 at Gembogl, 2 at Karamui and 2 at Kundiawa. The seed production programme will include gardens at Kundiawa, Kerowagi, Kilau and Gembogl. Farmers will be assisted with marketing of vegetables. A storage shed will be built at Gembogl for potatoes, onions and other root crops.

DPI will endeavour to obtain closer co-operation between departments for the malnutrition programme. Legume seeds will be distributed to all areas from seed produced at the Kundiawa and Kerowagi gardens. Five more demonstration nutrition gardens will be established, and villagers will be advised on storage of legume seeds for eating during periods of shortage of food.

In the second half of 1978 more village vegetable projects will be established, and two storage sheds will be built at Gembogl and Kilau.

In following years the fight against the malnutrition problem will be continued, with more school projects, and publicity to create an awareness of the malnutrition problems and advice on ways to improve nutrition. Distribution of seed will be maintained.

In 1979 the department will assist in the marketing of vegetables. Advice will be given to farmers on improved cultural practices for both introduced and traditional foods.

In 1980 village greenhouses for production of vegetable seedlings will be set up where required. Rice pilot projects will also be set up.



Winged bean seeds from Kuk



Kundiawa vegetable seed nursery. Filipino Emmanuel Cena is in charge.

PYRETHRUM

There are now approximately only 18 ha of pyrethrum in production. Farmers have lost interest due to the static prices. Shortage of extension staff is also a contributory factor to the decline in production.

Some farmers who have shown interest have been introduced to the use of fertilizer to improve production. Three nurseries of improved seed have been established, but due to lack of interest no plants have been planted out yet from these nurseries.

If sufficient interest is shown, two nurseries will be established with improved seed in the Mondia and Pompomeri areas in the Gembogl district. In other areas 2 ha will be planted out from the existing nurseries if interest is shown. Farmers will be encouraged to increase production from the existing gardens.

A survey of farmer's attitudes will be conducted in mid-1978, to help determine the future of the industry.

If interest still exists, 8 ha will be planted from the nurseries. If enthusiasm warrants the effort, all present pyrethrum gardens, a total of 28 ha will be replanted with improvised plants from the new nurseries.

In following years, existing plantings will be maintained with no further expansion planned at this stage.



Politicians looking at pyrethrum with meri working in garden



Provincial Government Councillor Hasuve Kawage (left) with PRDO Alan Iorive (centre) and another leader inspecting a cattle yard

CATTLE

There are a total of 254 village cattle projects, with an average area of 8 to 24 ha, and a total of 2 493 head. The calving rate is now 60%. The turn-off last year was 20 at Gumine, 40 at Kundiawa and Sina Sina and 40 at Karamui. Cattle were killed for singsings only. The area of semi-improved pastures is now 24 ha.

Pig and cattle farmers have formed a Cattleman Association in order to set up their own pastoral supplies and other needs.

Management of projects is not as effective as it should be. People are still killing breeders for singsings.

In 1977-78 new fattening projects with at least 8 ha each will be established as follows: Gembogl 2, Gumine 6, Kundiawa and Sina Sina 12, Karimui 2, Chuave 3 and Kerowagi 10. Stocking on established projects will be completed. Improved pastures will be established on existing projects — Gembogl 1.6 ha, Karamui 0.8 ha, Gumine 20 ha, Chuave 12.8 ha and Kundiawa and Sina Sina 20 ha. Pasture trials will also be established, at Gembogl, Chuave, Karamui and Kerowagi.

Two training courses a month long on pasture improvement and management will be held at Baiyer River in the Western Highlands Province for 85 farmers.

The Kumgi abattoir will be completed in 1977 and is expected to slaughter 450 head per year.

In 1978 and 1979 slaughter slabs will be built at Gumine and Sina Sina.

With the establishment of the abattoir and slaughter slabs, DPI officers will attempt to regulate killing of cattle for singsings.

By mid 1979 new projects of 8 ha with 5 to 6 steers each will be established as follows: Gumine 4, Karamui 3, Kundiawa and Sina Sina 12 and Gembogl 2. In 1979 improved pasture will be established at Gumine (20 ha) and Karamui (4 ha). Courses at Baiyer River will be continued and field days to instruct farmers on simple management skills and pasture improvement will be held.

In 1980 12 new projects of 8 ha each will be established at Kundiawa and Sina Sina and stocked with 5 to 6 steers. Training courses and field days will be continued. The Cattleman Association will be encouraged to provide services to the farmer now provided by the government, including stock, veterinary materials, field and pasture seeds.

If land is available and interest continues, 12 more projects will be established at Kundiawa and Sina Sina and stocked with steers in 1981. The Department will find means of selling meat from abattoirs to butchers. Training for farmers will be continued to improve management skills.

FISHERIES

There are at present 15 carp ponds in the province. Although there is still interest shown in ponds the shortage of carp fingerlings supplies from Aiyura in the Eastern Highlands Province has slowed down further development of a number of ponds.

Due to the muddy nature and high rate of flash flooding, few rivers are suited to trout. The new trout hatchery at Kegsugl, financed by the Area Authority, will soon be completed. Twenty-five suitable rivers and creeks have been tested for distribution of trout from the hatchery which is expected to provide 45 000 fingerlings per year.

The first 10 000 trout fingerlings will be introduced to streams in the Gembogl area in 1977, and more rivers will be surveyed. A further 10 000 fingerlings will be introduced by December 1978. Assistance will be obtained from the Area Authority to build a fence around the trout hatchery to keep out pigs, and for purchasing feed for the hatchery. A DPI officer will train at Mendi for at least three months, to supervise the Kegsugl hatchery.

If carp fingerlings can be obtained, stocking of established ponds will be completed and new ponds will be built. New ponds will be at Gembogl (2) and Chuave (3), with 5 carp fingerlings per pond. Farmers with pig projects will be encouraged to establish carp ponds in conjunction with the pig project, to supply fish for pig feed.

In 1979 15 carp ponds will be established in the Kundiawa and Sina Sina areas if interest exists. Fingerlings will by then be supplied from viable existing ponds. Stocking of suitable rivers with trout fingerlings will be completed.

In 1980 the trout hatchery will supply fingerlings to other provinces. Extension officers will encourage people to eat trout at home and not sell it, in order to alleviate malnutrition problems.

PIGS

The province has 65 stocked projects (40 financed by Development Bank loans) with 339 pigs and 10 new Development Bank projects awaiting stock. The turn-off is 20 to 30 per year, mainly for sungsings.

There are also an estimated 1 000 crossbred pigs and 100 000 native pigs in villages in the province. Village pigs are being improved by crossbreeding with DPI stud boars.

As mentioned earlier, pig farmers have joined with cattle farmers to form the Cattleman Association for their supplies and other needs.

As pigs are always a means of prestige, extension officers have difficulties in convincing farmers to sell their pigs in order to maintain even feeding.

Litter size averages 1.5. A distribution centre is being built at Kumgi financed by the Area Authority. This will be completed and stocked in 1977-78.

The ten new projects at Kundiawa and Sina Sina will be stocked by June 1977. New projects will be established at Gumine (5), Kundiawa and Sina Sina (28), Gembogl (6) and Chuave (1), and each will be stocked with 1 boar and 3 sows. Farmers will be assisted with purchasing weaners and feed. Management of existing projects will be improved and short courses will be held for farmers. DPI staff will assist Development Bank officers to promote loans for piggeries.

Twenty-four fattening projects will be established at Kundiawa.

In 1979, 24 projects will be established at Kundiawa and Sina Sina, and at Gumine, and will be stocked with 1 boar and 3 sows. Farmers will be assisted with purchasing of weaners and feed. Training to improve management ability will be continued. Farmers will be encouraged to grow their own feed to substitute for bought feed.

In 1980 more Development Bank projects will be established at Kundiawa and Sina Sina (12) and Gumine (4), and each stocked with 1 boar and 3 sows. Marketing facilities will be arranged.

In 1981 4 Development Bank projects will be set up at Gumine and 12 self-financed projects at Kundiawa and Sina Sina. These will be stocked with 3 barrows and 1 sow. Two more stud boars to crossbreed with native pigs will be provided at Gumine.

In 1982 cross-bred boars will be supplied to the 16 new projects.

POULTRY

There are 16 broiler projects with about 493 birds. The turn-off is 100 birds per project annually.

There are also many village chickens. Improved stock are being introduced to village flocks to interbreed with village hens.

Management on present projects needs to be improved. Availability of feed is a problem, although the Kundiawa Vocational School and Kuman Holdings do provide some feed from time to time. Day-old chickens which have been ordered sometimes arrive on the wrong day, resulting in deaths. Egg and Breeder projects have still not been established in the province due to the lack of high management skills.

The Department will assist with the ordering of chickens and feed and ensure confirmation of delivery days with the suppliers of day-old chickens.

A five-year programme to improve management skills will be started, using the media, training courses and extension effort. In 1977-78 a two-month course for farmers and three DPI officers will be held at 3-Mile, Lae.

New broiler projects will be established at Gumine (8), Gembogl (6), Kundiawa and Sina Sina (18) and Chuave (3). Projects will range from 100 to 500 birds each. Two egg-producing projects are planned at Kundiawa and DPI will provide supervision for these projects.

Farmers will be encouraged to grow their own feed.

Village chickens will be improved through introduction of improved breeders. One semi-intensive project will be established at Gembogl for demonstration purposes.

Chicken brooders for production of day-old chickens will be established at DPI stations at Chuave, Gumeine, Gembogl and Karamui.

In 1979 semi-intensive broiler projects will be established at Gembogl (3), Gumeine (3), Kundiawa and Sina Sina (10.) Farmers will be assisted with marketing outlets.

In 1980 and 1981 if previous projects are successful, four new egg-producing projects will be established in the Kundiawa and Sina Sina area.

CARDAMOM

Cardamoms are planted in the Karamui area only. There are now 200 family plots with a total of 20 ha under production. Three village driers have been built. Last year 680 kg were produced, worth K270.

Due to the nomadic lifestyle of the people, harvesting and general maintenance of the established gardens are not as encouraging as expected.

Ten new cardamom projects each with an area of 0.25 ha will be established by December 1977, and a further 12 ha will be planted during 1978. The area of existing projects will be increased to a minimum area of 2 ha each. Planting will be completed on the Karamui Council block of 46 ha. The aim is to double production of 1 tonne by December 1977.

Three one-month training courses on harvesting and drying techniques will be held in 1977.

Three new cardamom driers, each capable of holding five drums will be established.

In 1978 and 1979 new high-yielding varieties will be introduced. It is hoped that a cardamom expert will be available to carry out trials for selection of improved varieties.

In 1979 plantings will be expanded both at Karamui and Bomai. Twenty ha will be planted. A drier will be built for the council plantation; and council plantings will be increased by 25 ha where required.

In 1980 the council plantings will be increased to 100 ha, and more drying ovens will be built where required.

In 1981 the council plantings will be expanded by 25 ha and village gardens will be expanded by 25 ha if interest still exists.

TOBACCO

There are now 28 ha of tobacco, in the Chimbu Province. All tobacco leaf is sold at local markets. Assistance hoped for from the tobacco companies did not eventuate last year, and in fact prices fetched by tobacco in the markets are better than prices paid by the companies, so no expansion is planned, unless the tobacco companies provide extension and buying assistance.

CHILLIES

There are 50 growers, with only 1 ha planted. Production last year was 100 kg worth K24. Although there are no nurseries at present due to seed shortage, there has been no actual extension effort put into chillies because of staff shortage.

If staff is available two new nurseries will be established at Bomai and 2 ha of chilli gardens will be planted during 1977-78. Amount of production will be increased to 100 kg. Farmers will be instructed on proper harvesting and drying and demonstration or field days will be conducted every four months on drying facilities and processing.

In 1979 one nursery will be established at Karamui and one at Bomai. Buying centres will be established and the Department will assist further with buying of the crop.

Another 1 ha will be planted each year at both Karamui and Bomai in 1980 and 1981. Training for farmers will be continued.