

# THE DEVELOPMENT OF THE OIL PALM INDUSTRY IN PAPUA NEW GUINEA: PAST, PRESENT AND FUTURE

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## INTRODUCTION

The oil palm industry is relatively new in Papua New Guinea. The first development started in 1967 at Hoskins, West New Britain Province, following a World Bank recommendation.

By Independence, in 1975, the industry still consisted of only the original project at Hoskins, plus a newer project at Bialla. However, work on the Bialla project had stopped because of a disagreement with the nucleus estate operator. Since then, over the last 10 years, the Hoskins project has been expanded. The Bialla project has a new partner and is now fully developed. A project at Popondetta has started production. During 1985 new agreements were negotiated for projects at Kapiuru (West New Britain Province) and Milne Bay.

## THE NUCLEUS ESTATE SYSTEM

The oil palm industry in Papua New Guinea has developed successfully under the 'nucleus estate' system. Under this system the projects are divided into 2 parts:

1. The nucleus estate. This is a large central estate, run as a joint venture between the government and a private organisation. The estate has its own processing mill and exporting arrangements.
2. The smallholder scheme. Around the nucleus estate, smallholders are encouraged to grow oil palm on small blocks. The smallholders are either villagers living in the area, or settlers brought in from other areas. They set up their blocks by borrowing money



*Freshly harvested fruit from the oil palm. The oil and kernels obtained from the fruit are together one of Papua New Guinea's most important agricultural exports.*

from the Development Bank or an International Agency. The smallholders repay the loans from money earned by selling their crop to the nucleus estate.

The idea of the nucleus estate system is therefore that the nucleus estate is a stable business growing, processing and exporting palm oil. At the same time the estate provides the smallholders with services such as: planting material; technical and management advice; marketing, processing and export facilities.

## HOSKINS PROJECT

The nucleus estate operator of the Hoskins Oil Palm Project is New Britain Palm Oil Pty Ltd, a joint venture between the Government and Harrisons and Crossfield.

At Independence the project consisted of 2500 hectares of estate plantings, and 6200 hectares of smallholder plantings on 1560 settler blocks and 200 village blocks. Most of these plantings were not yet producing.

New Britain Palm Oil has obtained more land and more oil palm has been planted. The total area planted on the nucleus estate is now 6400 hectares. Further plantings are planned.

At the start of the original scheme, the company built an oil palm processing mill at Bebere which could process 30 tonnes of oil palm fresh fruit bunch (usually called FFB) per hour. This mill has been expanded to process 60 tonnes per hour. In 1981, work began on a second new mill at Kumbungo. The mill is now finished and can process 30 tonnes of FFB per hour. The export bulk terminal at Kimbe has been expanded to cope with the rising production.

In May 1985, the company decided to build a palm kernel mill to extract oil from the oil palm kernels. At present the kernels are exported.

The company has developed its production of high yielding hybrid oil palm seed and now supplies all of Papua New Guinea's requirements. It has also developed a large export trade to Central and South America, the Philippines, China, Thailand and other Asian countries. Research work on clonal oil palm has now started.

### Smallholder development at Hoskins

Since Independence almost all of the original smallholders on the Hoskins scheme have repaid their loans in full. On the blocks planted earliest a major replanting campaign is in progress, to replace the palms which are too old to produce well.

An extra 70 new settler blocks (280 hectares of oil palm), and 300 village blocks

(700 hectares of oil palm) have been established. A further 60 more settler blocks and 220 more village oil palm blocks are planned, with technical assistance from the Asian Development Bank. These will be developed from 1986 onwards.

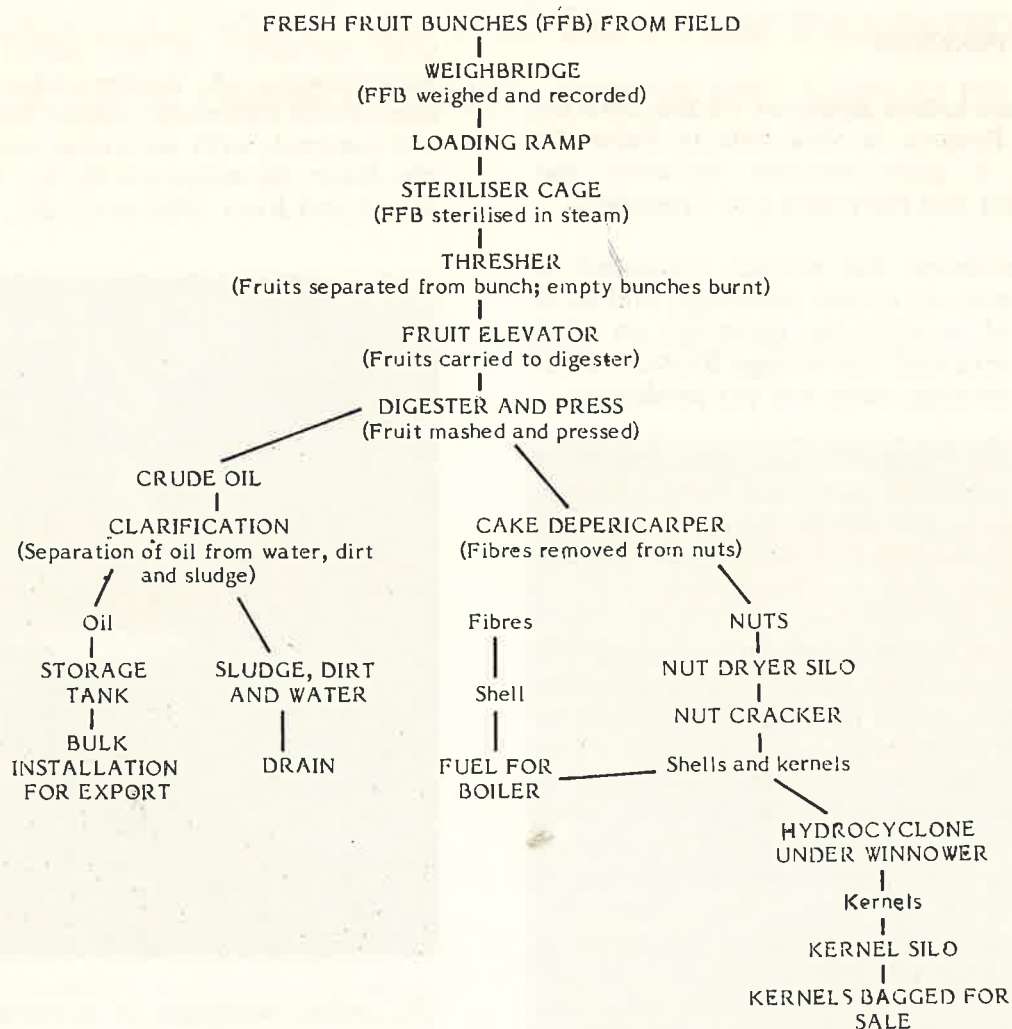


*Oil palm seedlings in a nursery. All of Papua New Guinea's requirements for oil palm seed are supplied from Hoskins.*

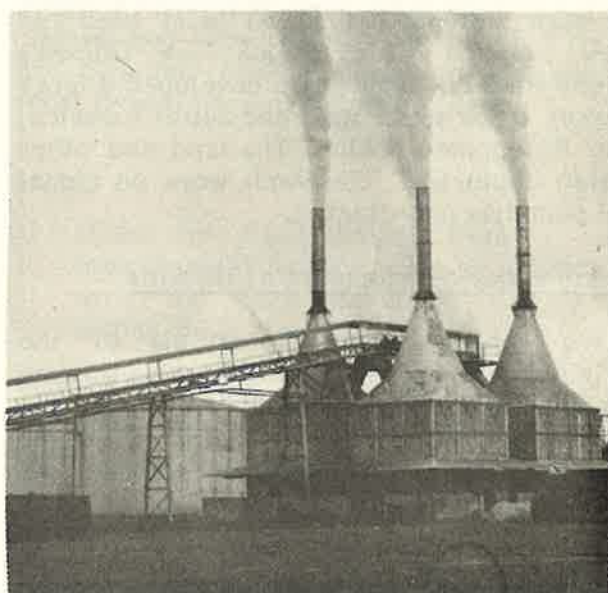
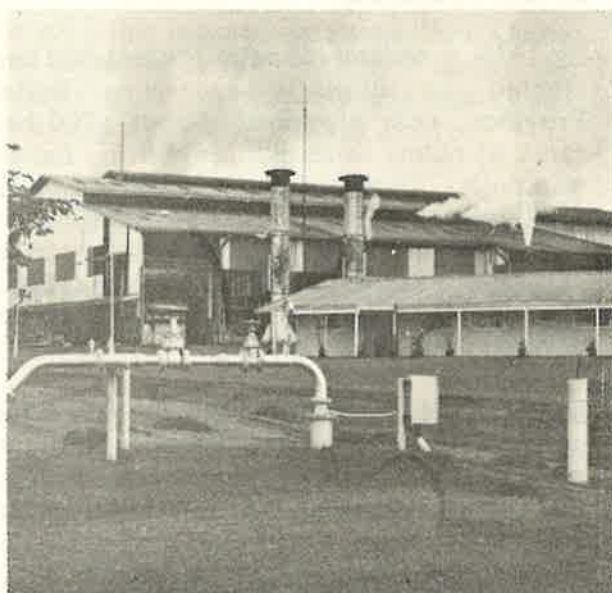
## BIALLA SCHEME

By 1975, a second oil palm project had been started at Bialla, West New Britain Province, near Hoskins. About 1700 hectares of palms were planted, but no factory was built. Development had started on the smallholder scheme, but no smallholders had taken up blocks. A dispute between the Japanese estate company, and the Papua New Guinea Government stopped further development of the scheme.

In 1977 a new project agreement was signed with SIPEF, a Belgian company which owns plantations in other countries such as Indonesia and Brazil. A new joint venture company, Hargy Oil Palms, was formed. Since then Hargy has redeveloped the plantings and built a palm oil mill.



*This diagram shows the stages in the production of palm oil and palm kernels in the mill.*



*The oil palm processing mill at Popondetta. Two views of the outside.*



In 1983, the company began a major expansion programme for the estate. It aims to plant another 2000 hectares of palms by 1987. The factory is at present being expanded to process 60 tonnes of FFB per hour. The company is considering building a second factory.

#### Smallholder development at Bialla

The Bialla scheme now has 900 settler blocks and 110 village oil palm blocks - a total of 4200 hectares of oil palms. All necessary social and physical facilities, such as roads, schools, health centres and markets, have been provided for these blocks. Most blocks are now in production and many have fully repaid their loans.

A major expansion, involving 450 settlement blocks and 90 village blocks is being planned with the help of Asian Development Bank technical assistance. Work on this will start in 1987.

#### **POPONDETTA PROJECT**

Planning of this project began in 1972. However, the project agreements with the Commonwealth Development Corporation to establish the nucleus estate, and with the World Bank for financing for the smallholder scheme were not signed until 1976.

Since 1976 the estate has planted 4500 hectares of palms, built a 60 tonne per hour palm oil mill at Higaturu, and an export bulk terminal at Oro Bay. The estate is now in full production.

A proposal to build a second oil palm mill for the Popondetta project is being considered. Expansion plans for the whole project will depend on whether it is decided to build the mill, or not.

#### The smallholder scheme at Popondetta

1400 individual smallholder blocks have been developed to oil palm as part of the Popondetta project. A total of 5500 hectares of palms has been planted on them. The blocks are a mix of old cocoa settler blocks, new settler blocks, new village blocks, and old land tenure conversion. By land tenure conversion' we mean customary land which has been registered, and the formal freehold title (ownership) issued to the original owner.

All the necessary roads and social facilities have been provided for the smallholder blocks, as part of the World Bank agreement. Most blocks are now in production and many have paid their loans back in full.



*A house on one of the smallholder blocks of the Popondetta oil palm project.*

## KAPIURU OIL PALM PROJECT

In February 1985, an agreement was signed with Harrisons and Crossfield for the development of a 600 hectare oil palm estate at Kapiuru between Kimbe and Bialla. Harrisons and Crossfield will take up 70% of the shares. The other 30% will be held by the public, and the disciplined forces (as a superannuation fund).

Development has started and the 6000 hectares will be planted over 3 years starting in 1986. A 60 tonnes per hour palm oil mill will be built. The project will cost about K40 million. A smallholder scheme involving 300 village blocks and 180 settlement blocks will be developed alongside the estate project.



*Fresh fruit bunches (FFB) being loaded onto a truck for transport to the factory.*

## MILNE BAY PROJECT

An agreement with the Commonwealth Development Corporation has been signed

for the development of a 4000 hectare oil palm and a 750 hectare cocoa nucleus estate at Alotau. Nursery development and clearing has already started and the planting will take place over 4 years. A 30 tonnes FFB per hour palm oil mill and an export bulk terminal will be built. The project should cost about K50 million. 1000 hectares of village oil palm will be planted on customary land to supply fruit to the nucleus estate factory.

## FURTHER PROJECTS

Discussions have taken place with investors regarding possible projects at Mamai (Central Province), Collingwood Bay (Oro Province), Numando and Volupai (West New Britain Province). These projects are all on Government land and can be considered promising. However, they have not yet reached the formal negotiation stage.

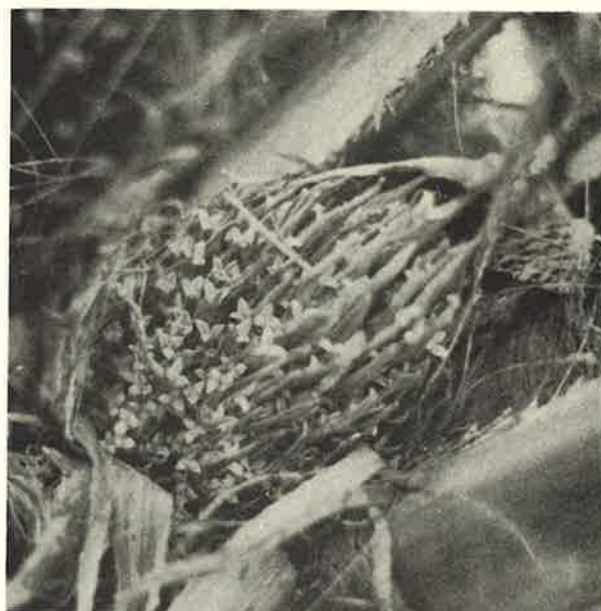
## EMPLOYMENT

The oil palm industry now provides direct employment for 5500 people and a livelihood for a further 4560 families. The two new projects and the expansion of the existing projects will provide a further 3000 direct jobs. Many different skills are used in the oil palm industry, so considerable training is provided in areas other than agriculture.

## RESEARCH

All research into oil palm production is carried out by the PNG Oil Palm Research Association. This organisation was founded in 1981, and is funded from the industry itself. This was the first such institute formed in Papua New Guinea. The outstanding achievement of this organisation has been the introduction of the pollinating weevil. This weevil has resulted in a yield increase in the order of 50% and a major reduction in the cost of production. For further details of the introduction of the pollinating weevil see *Harvest* 9(2) 1983. Research work is continuing into nutrition, spacing, and pest and disease control.





*Male (left) and female (right) flowers of oil palm*

*Before the introduction of the pollinating weevil, female oil palm flowers had to be pollinated by hand with the pollen from the male flowers, otherwise the fruit would not develop. Introduction of the weevil has meant lower labour costs, and higher production.*

## FOREIGN EXCHANGE EARNINGS

In 1984 the oil palm industry earned K78 million in foreign exchange. This made it the third most important agricultural export, behind coffee and only marginally behind copra. However, the other industries are stable, and oil palm products will probably overtake copra in export value within the next 2 years.

Oil palm production in Papua New Guinea is competitive with other producing countries. The amount of expansion in the industry is limited only by the amount of money companies are willing to invest in oil palm.

## CONCLUSION

Over the past 10 years the oil palm industry has developed into a dynamic outward looking industry which is technically efficient by world standards. During this period it has been the only agricultural industry in Papua New Guinea where there has been continued investment and re-investment into expansion and development.

## FURTHER READING

Prior, R.N.B. (1983). Introducing a weevil from Africa to pollinate oil palm in Papua New Guinea. *Harvest* 9(2): 53-57.