# PRIANGON SHEEP IN THE PAPUA NEW GUINEA LOWLANDS

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## INTRODUCTION

Sheep were among the first grazing animals brought into East New Britain by German colonists. Some sheep were imported into Morobe Province before the Second World War. The Priangon from Java was the most successful breed. Some Australian breeds have also been imported, including Romney Marsh and Corriedale, both before and after the Second World War. These have been crossbred to Priangons, which remain more common in the lowlands. Since 1975, nearly 2,000 sheep of three different breeds have been imported from New Zealand, as a result of a major New Zealand foreign aid project. With good management, these sheep have done well in the Highlands. They did not do so well at Erap, in the lowlands of Morobe Province. A group of New Zealand crossbreds and Priangon x New Zealand crossbreds were kept at Erap for a year, but they did not breed well and many died.

In 1979, 130 Border-Leicester x Merino females (ewes) were sent from Australia to Erap. Nearly 60% of these lambed when bred to Priangon rams, but ewes and lambs did not do well under the conditions of heat and middle-quality pasture at Erap.

In this way, we can see that temperate zone sheep, and even temperate zone x Priangon crossbreds cannot adapt to the hot lowlands of P.N.G.

In contrast, flocks of Priangon and crossbreds which are mainly Priangon, have been kept for a number of years in lowlands environments. They are at Popondetta Agricultural College in Northern Province, Vudal Agricultural College, East New Britain, The University Farm, Lae, Morobe Province and also the Veterinary Laboratory, Port Moresby. There are privately-owned flocks in the Markham Valley and at Wau. Breeding and growth is claimed to be adequate at all these places.

Several experimental flocks have been established in Morobe Province and one in East Sepik. Information has been collected from these and from some of the privately owned flocks.

*A group of Priangon sheep at Erap*

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## FIRST STUDIES

Trials were carried out on two privately owned flocks on the foothill country above Erap. In each case, the sheep grazed out each day over a wide area, so were able to select a varied diet of grasses and legumes. These included Kangaroo grass (*Themeda australis*), Siratro (*Macroptilium atropurpureum*), Kunai (*Imperata cyclindrica*), Dicanthium, Leucaena, and others.

The average growth rate of lambs with their mothers was 0.52 kg per week. Weaners grew 0.45 kg per week, giving a live weight of 28 kg at 12 months, and slaughter weight of 42 kg at 19-20 months. The breeding rate was very good. Ewes weighing less than 18 kg rarely bred in the next year, but ewes over 18 kg at the start of the year had a lambing rate of 177%, with 18% triplets and 17% twin births. However, survival of triplets was only 39%, while 80% of twins and 95% of singles lived till weaning. Overall weaning was 122%. This is a very high reproductive rate. After allowing for herd replacements, this gives an average 'turn off' of nearly one sale animal per ewe, each year.

## SECOND STUDIES

One of the major problems of sheep kept at high stocking rates in P.N.G. is heavy infestation with stomach and intestinal worms. This did not seem to be a problem in those flocks of sheep which grazed over large areas near Erap. Flocks of castrated males (wethers) were placed at Urimo, in the Sepik Plains, and at Bugandi High School in Lae. Both places have very wet, hot climates and a great deal of grass, mainly Para grass, where the sheep grazed. Some of the sheep were drenched for worms every month, some every two months, some every 4 months and others not at all.

Sheep which were drenched grew faster and had fewer worm eggs in the faeces, but there was no difference between the sheep drenched every month or those which were drenched every two or four months. So one drench every four months was enough for Priangon sheep under these conditions. The drenched sheep grew 0.47 kg per week, about the same as in the previous trial. This seems to be the maximum growth rate for Priangons in the lowlands.

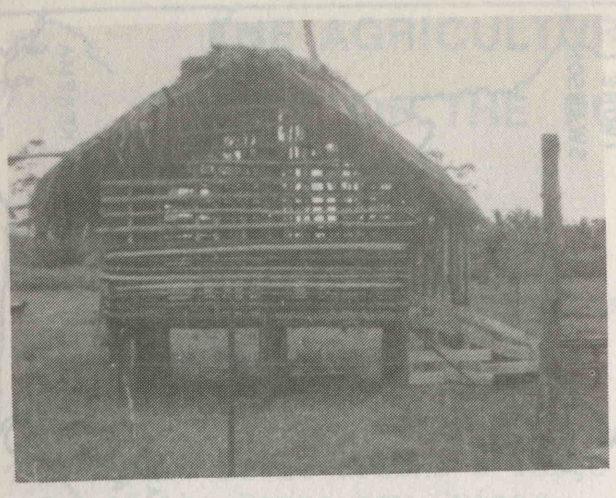
The biggest effect of drenching was with the smallest lambs, so a lot of drench can be saved by drenching only small or sick-looking sheep. If no drench was used, the sheep grew only a little more slowly (0.40 kg per week), provided they had a large grazing area.

## CONCLUSION

These trials showed that the Priangons can do very well in the hot wet lowlands of P.N.G. Further trials are going on or have been carried out at Situm, Wantoat, Mumeng, Menyamya, Kaiapit and other places in Morobe Province with the same result. If sheep are allowed enough green feed, especially if they can be herded out by day, they will grow and breed well. It is necessary to pen the sheep up at night for several reasons:

1. To protect them from theft and attacks by village dogs and wild dogs.

2. To inspect them frequently and to treat any disease, especially screw worm.



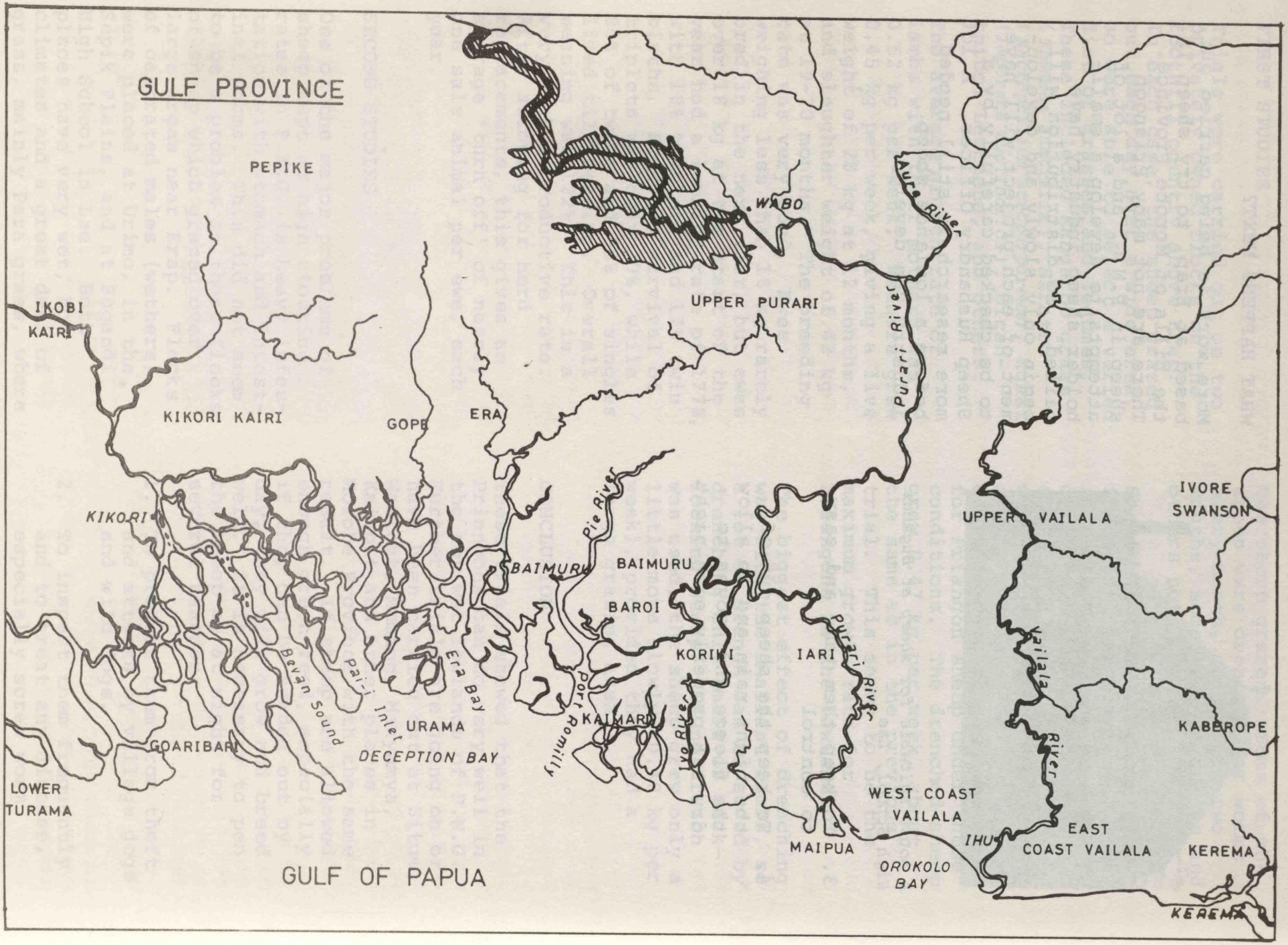
*A house suitable for sheep at Bugandi High School, Lae*

3. To keep them tame and easy to control

4. To keep the sheep out of the night rain and to allow the fleece and hooves to dry out properly each night.

## WHAT HAPPENS NEXT?

More work is being carried out, based at Erap, to try sheep in the hills of Morobe Province. There are not many Priangon sheep in P.N.G. and a lot of attempts to develop a small-holder sheep industry have failed. So distribution will begin only slowly and development of each project will have to be checked carefully by a Sheep Husbandry Officer. A lot more research is still needed before a lowlands sheep industry can develop.


GULF PROVINCE
PEPIKE
WABO
Auro River
UPPER PURARI
Purari River
IKOBI
KAIRI
KIKORI KAIRI
GOPE
ERA
KIKORI
Pie River
BAIMURU
BAIMURU
BAROI
IVORE
SWANSON
UPPER VAILALA
KORIKI
IARI
Purari River
Vailala River
KABEROPE
Bevan Sound
Pai-i Inlet
Era Bay
Port Romilly
KAIMARI
URAMA
GOARIBARI
DECEPTION BAY
Ivo Rivers
LOWER
TURAMA
WEST COAST
VAILALA
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EAST
COAST VAILALA
KEREMA
MAIPUA
OROKOLO
BAY
GULF OF PAPUA
KEREMA