

# The Marketing of Abattoir Offal

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*During the slaughtering of animals, all parts removed except the skin are considered to be offal. This offal is classified as edible or inedible. In Papua New Guinea until recently the only offal considered edible was the liver, heart, kidneys, tail, tongue and in some cases the cheek meat. The rest was burnt, buried or used for pig food. Now at Goroka the lungs, spleen, fat and cheek meat are being sold through the local market to the people for food. It contains high grade protein which is in such short supply in the Highlands, and a thriving and profitable business has been established. This article describes the establishment of the marketing scheme and gives facts which will help people in other areas to start similar schemes to use offal as food for people.*

THE visit in 1969 of Mr Dorman, an F.A.O. Consulting Specialist on the use of animal by-products, stimulated interest in the efficient use of edible offal. He recommended in his report that all offal which could be safely eaten by the people should be made available for direct sale, rather than fed to animals. He suggested marketing through commercial firms or local markets with the assistance of Local Government Councils.

## PLANNING AND ORGANIZATION

The Administration through the Animal Industry Division of D.A.S.F., operates abattoirs throughout the country as a service to the developing cattle industry. Cattle and pigs are slaughtered for a set killing fee and the price paid to the producer is generally set on a cold carcass weight basis. When the butcher pays the killing fee, as is generally the case, the heart, kidneys, liver, tail and tongue are considered to be the property of the butcher and the cheeks and brain if requested. The remainder of the offal is the property of the abattoir.

The Kamaliki slaughterhouse just out of Goroka was chosen to see if the sale of offal could become an established industry. At this slaughterhouse the main slaughtering is of cattle. Until 1971, the offal apart from the liver, heart, kidneys and tail, was burnt except on occasions when an animal was slaughtered for a traditional feast and the owner insisted on taking every part of the animal to eat, just as is the custom with pigs.

Thus in the region there were no sociological or aesthetic barriers to the general acceptance of all parts of the offal as food. Indeed, indigenous cattle owners and members of the Local Government Council were concerned at the waste of protein food.

A plan to incorporate a tripery at Kamaliki with special cleaning, cooking and bleaching equipment so that the stomach and intestines could be processed, was accepted. There was however a delay of two years before the buildings could be completed and the equipment in operation. Local established meat retailers were approached about selling offal other than tripe but there was no interest. However, members of the Local Government Council, who were still concerned at the waste of offal, held discussions with D.A.S.F. and Department of Public Health officers. They decided on action to organize the sale of edible offal through the local market. The Council undertook to erect a fly-proof stall with display counters and facilities for keeping the stall clean. Refrigeration was not considered necessary as one of the conditions was that all offal had to be sold on the morning of collection.



Plate I.—The proprietor, Auwo, at his stall at Goroka market. He is holding one of the plastic bags in which all offal is pre-packaged for sale at the market

The Administration advertised tenders for the purchase of the offal in the *Government Gazette*. The tender specified that the offal must be sold for human consumption and that the tender price included packaging at the abattoir.

The local Business Advisory Officer made sure that all the prominent local businessmen in Goroka knew about the tender notice, yet it attracted surprisingly little interest, even amongst members of the Council who had been most vociferous in condemning the burning of offal. The tender was let to an established entrepreneur, Auwo of Masikalaiyufa village at five cents per pound.

### BUSINESS OPERATIONS

Although the Council had not completed the stall, Auwo started selling cheek meat, dripping, spleens and lungs (known in the trade as "lights"). The approximate weight of each product, its preparation, packing and cost are shown in Table 1. All offal is cleaned on the day of slaughter, stored in the chiller at 32°F overnight, and packaged the next day. Collections are made on Wednesday and Saturday, the main market days.

Table 1.—Offal preparation and costs

Product and Total Weight Per Animal	Preparation	Packaging	Cost Price Per Pound
Lungs 8 lb	Inspected and washed	Pieces 1 to 2 lb packed in plastic bags	5 cents
Spleens 1½ lb	Inspected and washed	One per plastic bag	5 cents
Cheeks 4 lb	Removed from head	1 cheek (2 lb) per plastic bag	10 cents
Dripping 3 lb	Omental fat heated	½ lb per plastic bag	12 cents

To prepare the dripping, the fat is minced and heated in a container with a small amount of water. When the surface crackling begins to turn brown, the molten fat is strained through muslin into a large tray. After solidification the dripping is cut into blocks. This work adds another seven cents to the cost of the dripping. Its cost price is therefore 12 cents per pound and it is sold at the market for 20 cents per

pound. Similarly, the cheek meat has to be cut off from the bones of the head. This raises costs to 10 cents per pound.



Plate II.—The packaging of offal and dripping at Kamaliki abattoir

Table 2 shows the turnover during March 1971 when 50 cattle were slaughtered and all offal was collected and sold. Additional expenses were the cost of running a light vehicle to Kamaliki twice a week, payment of a salesman approximately \$10 per month and gate fees of \$4. Thus, for the month, the business showed a profit of about \$150. The throughput of the slaughterhouse is expected to increase rapidly to 30 to 40 cattle a week, so assuming that the increased supply does not cause a lowering of profits, the business could be very substantial. When tripe becomes available, this will increase the amount of offal per animal by 15 to 20 pounds.

Table 2.—Turnover and profit for 50 cattle

	Total Purchase Price	Total Sale Price*	Profit
Lungs 400 lb	\$20.00 (5c/lb)	\$100.00 (25c/lb)	\$80.00
Spleens 75 lb (1½ lb each)	\$3.75 (5c/lb)	\$25.00 (50c each)	\$21.25
Dripping 160 lb	\$19.20 (12c/lb)	\$32.00 (20c/lb)	\$12.80
Cheeks 200 lb	\$20.00 (10c/lb)	\$70.00 (35c/lb)	\$50.00
Total			\$164.05

\* Sale price based on the minimum prices charged on a number of market days.



The main problems which arose were an initial reluctance to buy dripping and the maintenance of hygiene between collection and sale. Dripping is now readily sought. The offal is packaged in twist-closed plastic bags to prevent fingering by prospective purchasers and



Plate III.—The new stalls at Goroka market almost completed

easily cleaned drums have been made available for transporting the offal from the slaughterhouse to the market. With the completion of the stall, hygiene will be excellent.

### EXPANSION

During the last six months, 3,000 cattle and 1,200 pigs were slaughtered through slaughterhouses in Papua New Guinea. Except at Goroka, the offal has been destroyed or fed to pigs. Much of it is obviously valuable human food and the way is open for other centres to organize marketing to ensure efficient utilization.

### ACKNOWLEDGEMENTS

Mr T. Gleeson, Goroka Council Clerk, gave his enthusiastic support in the Council, and Mr C. Schafer, Manager of the Kamaliki slaughterhouse, assisted in packaging of the products and generally encouraged the project. The co-operation of officers of the Department of Public Health also has been greatly appreciated.

## Auction of Stud Brahman Cattle

AT the cattle auction held in conjunction with the 1971 Port Moresby Show on Monday, 14th June, the Department of Agriculture, Stock and Fisheries offered 17 high grade, purebred and full blood Brahman cattle for sale from its "Konedobu" stud. These cattle were bred at two of the Department's Livestock Stations, Bisianumu and Moitaka, near Port Moresby.

The sale, conducted by New Guinea Pastoral Supplies, was well attended by buyers from many parts of Papua New Guinea and the demand for both bulls and cows was high.

Four purebred bulls, sired by bulls imported from Cherokee and Burnside studs in Australia and out of the progeny of full blood Brahmans originally imported from the U.S.A., sold for an average price of \$1,750. Top price of \$2,200 was paid by Mr D. Ottley of Jimi River Cattle Company for a two-year-old bull sired by Burnside Baron.

Three  $\frac{7}{8}$  Brahman bulls sired by top full-blood bulls from Bisianumu sold for an average

of \$1,270, with top price of \$1,420 being paid by Mr T. Leahy of Maralumie Estates, Lae.

A fullblood cow, judged Champion cow at this year's Port Moresby Show and in calf to the Champion bull at last year's Show, attracted spirited bidding before being sold to Gusap Downs, Lae, for \$1,600. Three purebred cows were also in high demand, with an average price of just over \$1,000 being obtained. Six Appendix B registered cows, all but one of which was in calf to fullblood bulls, realised an average price of \$350.

The Ministerial Member for Agriculture, Mr Tei Abal, said after the sale that he was pleased with the results, particularly in view of the valuable contribution the Department's Brahman stud was able to make to the developing cattle industry of the country. He said that it was gratifying to know that the larger graziers, on whom the smallholder cattle industry was so dependent, were anxious to make use of such top quality animals in their breeding programmes.