

## Aspects of Postharvest Quality Required by Papua New Guinea Sweet Potato Consumers in the Main Port Moresby Markets

Donald Irving<sup>1,\*</sup>, Hui-Shung Christie Chang<sup>1</sup>, and John Lark Kewa<sup>2</sup>

<sup>1</sup> University of New England, Australia

<sup>2</sup> Fresh Produce Development Agency, Papua New Guinea

### \*Correspondence

Institute for Rural Futures  
University of New England  
Armidale, NSW 2351,  
Australia

E donald.irving.nsw@gmail.com

### Keywords

consumers, marketers,  
postharvest quality, sellers,  
supply chain, sweet potato

### Abstract

Sweet potato (known locally as *kaukau*) is a major subsistence crop grown in the highlands of Papua New Guinea (PNG) and sold in local and coastal cities such as Lae and Port Moresby (POM). As farmers transition from subsistence to commercial farming, it is very important for them to know what quality the market (consumers) require. With this knowledge, farmers can prepare their produce for the appropriate market (local or coastal city). This paper reports on the sizes that POM consumers require of fresh sweet potato based on samples purchased from 3 to 5 open markets in POM on 3 sample dates. Within each market, we randomly selected sweet potato from 2, 5, and 10 kina (PNG currency) heaps that sellers had constructed, approximately 3–5 heaps per market. The sweet potatoes were bagged, labeled, and brought to the laboratory in POM for measurements of the minimum diameter, maximum diameter, length, counts of root number per heap, and weight of the heaps. Calculations were made of price per kg and mean root weight in each heap. Results showed the K5 and K10 heaps contained larger sweet potato (diameter, length, and weight) than the K2 heaps and suggests in POM, the fresh sweet potato market prefers a medium-sized sweet potato (165–187 mm, 282–464 g). The smaller roots were sold in the K2 heaps. Although all sizes of sweet potato are marketable, for highland farmers to make a sustainable business from sending sweet potato to POM, it is the medium-sized sweet potato they should be grading and packing on farm and shipping without delay.