

Title Postharvest cracking and testa removal methods for *Canarium indicum* nuts in the Pacific
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Abstract

The genus *Canarium* (*Burseraceae*) contains approximately 100 species, mostly found in tropical Asia and the Pacific. In the Pacific, *C. indicum* is widely utilized for its edible nuts. Nuts are mostly traded fresh in roadside and village markets, in Papua New Guinea, the Solomon Islands and Vanuatu either as nut-in-shell or as kernels. The *Canarium* industry, based on processed kernels, is in its infancy and has huge potential to improve the livelihood of the rural poor in these countries. We are investigating postharvest processing methods for *C. indicum* that are appropriate to Pacific Island countries. Our research is examining depulping, drying, cracking, testa removal, roasting and packaging methods. We have found that a 90 s hot water dip removes the testa on 85.8% of nuts without loss of whole kernels or increase in discolouration. We are also evaluating technology adapted from the macadamia industry for processing *C. indicum* and have found that a modified TJ's™ nutcracker has potential for efficient cracking of nuts. The cracker is portable, hand operated and suitable for use in Pacific Island countries for both small scale and commercial processing. Further research will examine processing technologies for larger scale processing such as mechanical depulpers, dryers and vacuum packaging.