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Full Length Research Paper

The effect of processing method of cassava chips on the development of *Prostephanus truncatus* (Horn) (Coleoptera: Bostrichidae)

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Abstract

Susceptibility of processed cassava chips to infestation by the Larger Grain Borer, *Prostephanus truncatus* (Horn) was investigated in the laboratory (25 - 34^{o}C, 61 - 92% r. h and 12 h: 12 h light: dark regime). Chips of two varieties were variously processed by fermentation, parboiling and sun-drying and stored for different periods. About 150, 200 and 300 g of processed cassava chips in Kilner jars were artificially infested with 15 pairs of *P. truncatus* adults and stored for 49, 59 and 69 days respectively. Significant differences ($P < 0.05$) were observed in the mean numbers of adults recorded on the processed chips after 49 days of storage. Across varieties, fermented chips recorded the highest number of adults (407.0 ± 53.9), followed by 395.9 ± 34.5 and 351.0 ± 42.1 adults found on plain and sun-dried chips, respectively. Parboiled chips however supported the lowest number of adults (89.0 ± 16.4). The number of *P. truncatus* adults increased with increasing storage period on all chips. The overall mean weight loss recorded on plain, sun-dried and

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fermented chips were 71.5 ± 7.7, 71.2, 6.7 and 71.7± 8.8% respectively after 69 days of storage by which time most of the chips had disintegrated completely. The lowest amount of loss, 20.9 ± 5.0%, was recorded on parboiled chips. The study showed that the practice of parboiling confers greater protection to cassava chips against infestation and losses due to *P. truncatus* than the other traditional fermentation and sun-drying methods.

Key words: *Prostephanus truncatus*, cassava chips, processing, susceptibility, Ghana.
