

EFFECT OF BUNCH TRIMMING ON POSTHARVEST FRUIT QUALITY OF *AMBUL* BANANA (*Musa* spp.)

H.M.N.S. Herath¹, M.M. Herath², C.A.K. Dissanayake¹ and W.M.C.B. Wasala²

¹*Department of Animal and Food Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.*

²*National Institute of Post Harvest Management, Anuradhapura, Sri Lanka.*

Banana is one of the major fruits in Sri Lanka. However, it undergoes high postharvest losses and quality deterioration. This study aimed to investigate the effect of bunch trimming on the physicochemical properties and quality of the *Ambul* banana variety. Accordingly, distal hands were removed in three different intensities: removal of one hand (T1), two hands (T2), three hands (T3) and non-removal of hands (T4) all within one week after opening of the last hands. Data were collected from the top, middle and bottom hands of each bunch, assessing physicochemical parameters such as bunch weight, hand weight, finger weight, peel weight, pulp weight, finger length, finger diameter, peel thickness, total soluble solids (TSS), color values, and fruit firmness. Additionally, peel color, pulp color, TSS, firmness, and physiological weight loss (PLW) were assessed over a 12-day storage period at 2-day intervals. The results indicated that whole bunch weight and total hands weight did not change significantly with bunch trimming ($p>0.05$). There were no significant differences with related to all these parameters between T2 and T3. Removal of two distal hands (T2) was identified as more advantageous over removal of three distal hands (T3). The average bunch weight, hand weight, finger weight, peel weight, pulp weight, finger length, finger diameter, peel thickness and total hands weight were significantly higher in T2 (16.55 ± 1.43 kg, 1.56 ± 0.1 kg, 92.16 ± 0.98 g, 26.81 ± 1.55 g, 65.34 ± 1.51 g, 11.56 ± 1.34 cm, 37.23 ± 0.86 mm, 3.15 ± 0.33 mm, 15.17 ± 1.28 kg), respectively than T1 and T4. In both T2 and T3, peel color, pulp color, TSS, firmness and PLW changed earlier than in T1 and T4 indicating faster ripening. Therefore, bunch trimming facilitates early harvesting. In conclusion, these findings highlight that bunch trimming has a significant impact on the quality of bananas by enhancing their size and hand weight, which in turn increases overall profitability and reduces postharvest losses.

Keywords: Distal hands, Postharvest losses, Quality of banana