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How Well Mechanized Harvesting Fits into the Present-Day Context

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ABSTRACT

Sri Lankan tea plantations are facing several challenges in the current context. High production costs and a severe worker shortage (WS) are among the key issues affecting the industry. Common strategies adopted in the corporate sector to address these challenges include contract farming, revenue-sharing approaches, and mechanization. Of these, mechanical harvesting has received the most attention from large estates. Professionals in the tea sector highlight mechanized harvesting (MH) as a potential strategy to address worker shortages. Accordingly, this cross-sectional multiple case study, conducted in the Up-Country and Uva regions in 2025, aims to explore the adaptability of mechanized harvesting in the context of labour scarcity, preferences for decent work, and its impact on production. Practitioners of MH in the corporate sector at present were the target group of this study. The findings highlight several practically important and updated key indicators, including the daily norm, average daily harvest, plucking interval, cost of harvesting, and average monthly earnings of MH operators. The results confirm that battery-powered machines (BPM) are used by the majority of the study sample, regardless of the type of vegetation in existing fields. The findings indicate that harvesting costs are significantly lower compared to manual harvesting. Continuous monitoring of machine operations, daily assessment of operator performance, the ability to operate BPM in a partially selective manner leaving *arimbu* (small shoots), the ability to manage BPM even in steep terrain, and operators' positive attitudes toward mechanized harvesting are key areas highlighted by the study. These factors should be carefully considered when implementing MH. The findings provide practical guidance for planters who prefer to implement mechanized harvesting to mitigate labour shortages, while making maximum efforts to manage manual harvesting with the existing workforce.

Keywords: Harvesting, Innovation, Mechanization, Tea, Technology