MEASURING POSTHARVEST LOSSES OF FRUITS IN MALAYSIA: INITIAL STEPS TOWARDS THE FOOD LOSS INDEX UNDER SDG 12.3.1.A

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Under SDG 12.3, all nations are encouraged to develop their own Food Loss Index to quantify food losses within their borders. The SDG 12.3 target aims to halve per capita global food waste at the retail and consumer levels by 2030 and reduce food losses along production and supply chains, including postharvest losses. This index should cover five commodity groups: 1) Fruits and vegetables, 2) Cereals and pulses, 3) Roots and tubers, 4) Animal and fish products, and 5) Other crops. Unfortunately, many countries have overlooked this crucial step, resulting in limited data on food losses for individual crops. Malaysia has recognized this gap and collaborated with the FAO on the "Pilot Data Collection and Measurement of Fruit and Vegetable Losses under SDG 12.3.1.A in Select Regions of Malaysia" project. This initiative aims to develop robust data collection procedures and gather specific data on fruit and vegetable losses, creating a model that can later be applied to other commodity groups. Led by the Malaysian Agricultural Research and Development Institute (MARDI), the project focused on pineapples, watermelons, tomatoes, and mustard greens, concluding in December 2023. The findings revealed significant postharvest losses within the fruit and vegetable commodity group, with losses reaching up to 14%. This figure was based on quantitative losses, measuring produce that ended up in landfills and was eliminated from the food supply chain. The measurement followed the FAO's definition of food loss, which encompasses the removal of food from the supply chain from harvest up to, but not including, the retail stage. This paper discusses the project's findings, focusing on pineapples and watermelons. Critical loss points for pineapples were identified during harvesting, while for watermelons, the highest losses occurred at the wholesale stage. The study found that increased handling after harvest and longer periods in the supply chain led to higher losses. The main reason for watermelon discards was pest and disease, while physical damage was the primary cause of pineapple losses. With the procedural guidelines provided by the FAO, Malaysia is now positioned to develop a comprehensive Food Loss Index that can be extended to all commodity groups. This will serve as a key indicator for SDG 12.3 and help guide decision-makers in crafting effective food loss reduction strategies.

Keywords: Pineapple, Watermelon, Harvesting, Wholesale, Supply Chain