Sri Lankan Vegetable Supply Chain Mapping and Comparison with International Best Practices

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The Sri Lankan vegetable supply chain is based on a hub and spoke system. Fourteen economic centres perform as hubs for the major traditional vegetable supply chains. There are however many other minor supply chains connecting vegetable producers to consumers. In this research, the different supply chains are mapped, including for economic centres, receiving and delivering chains, supermarket vegetable supply chains, large consumers' and low-volume consumer supply chains. Based on information collected using field visits and discussions with stakeholders, a composite map is developed by combining individual maps.

Best practices in vegetable supply chain management from around the world have been reviewed for comparison with Sri Lanka and to identify how supply chain issues could be resolved, especially by using information technology including artificial intelligence, internet of things, data analytics and blockchain systems. It is found that more efficient and reliable supply chains can be designed using information technology, minimizing system implementation cost and maintenance cost, optimizing required supply chain conditions and conducting benefits analysis to provide more efficient vegetable supply chain solutions for the Sri Lankan context.

Since Sri Lanka has a gradually increasing digital literacy rate, conditions for implementing digital solutions are improving. However, Sri Lanka's internet accessibility is currently below the world average. Therefore, more infrastructure & facilities development is required to facilitate digital solutions that serve entire vegetable supply chains. This can be achieved using different technologies available at present that can help create a more robust and inclusive vegetable supply chain solution for Sri Lanka.

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