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Optimizing the Value Chains for Underutilized Fruits: A Comprehensive Approach to Promote Sustainable Production and Consumption

Jayasinghe, M.A.E.K.*, Dehideniya, K.M.S.A.K., De Silva, D.A.M.

*Department of Agribusiness Management, Sabaragamuwa University of Sri Lanka,
Belihuloya, Sri Lanka*

**erandijayasinghe404@gmail.com*

Abstract

Tropical underutilized fruits, predominantly found in forested and rural areas, are abundant and accessible seasonal availability. Most remain limited to local markets, despite the rich biodiversity and countless edible fruit species, currently opening up new avenues to the processing and food service industry. The objectives of this study were to explore potential underutilized fruit varieties and its traditional value addition options, to identify the barriers in establishing the value chains and to propose new value-added products for the value chain upgradation. Market ethnography was conducted in the main fruit markets; Nuwara Eliya, Kandy, Ampara, Rathnapura, Colombo and Galle with the participation of experienced researchers. Field visits and case analysis were instrumented through photographs and in-depth interviews were conducted with key market actors. Market inventory recorded 41 underutilized fruit crops, seasonally available across various locations. Most of the varieties were available in fresh form, poor post-harvest management badly affected on quality and limited the shelf life. Underutilized seasonal fruits were transformed into dehydrated, pickled, fermented, canned, and sugared products and natural colorants were used to enhance their value and extend the shelf life. Value added products were mostly unavailable in the market but value addition using traditional preservation methods were identified at the household level. Traditional and indigenous knowledge on preservation of underutilized fruits were recorded limitedly and the technologies may disappear with the loss of knowledge bearers. Samples of various fruit species were collected to develop market-oriented value addition and recipes were developed to cater the needs of specialty market segments who search for natural ingredients and different tastes.

Keywords: Underutilized fruits, Value addition, Value creation