

Abstract Book for

6th International Conference HITASA-2024

"HOLISTIC INNOVATIONS AND TECHNOLOGICAL ADVANCES FOR SUSTAINABLE AGRICULTURE"

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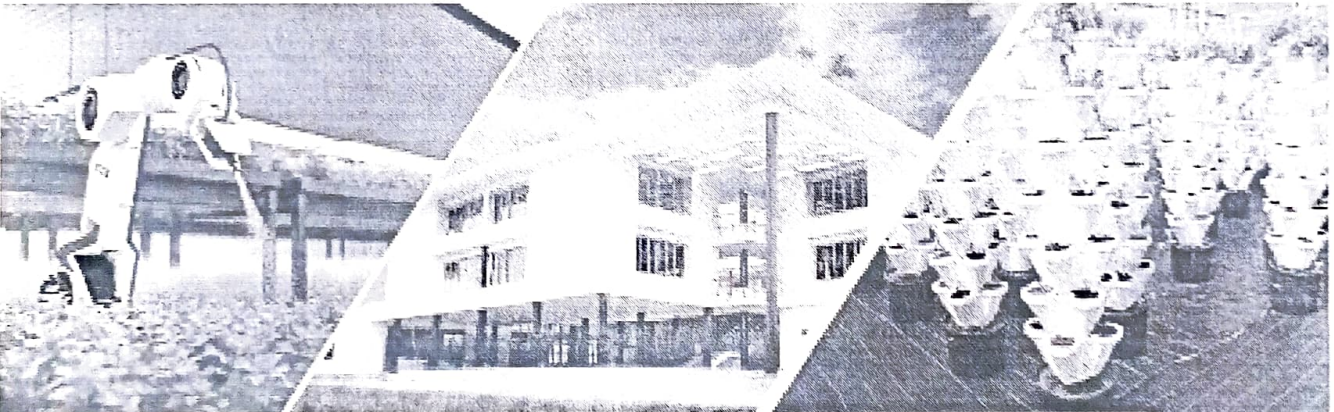
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chain. Despite India's prominent stature as the leading coconut producer globally, challenges persist, including price disparities and limited value addition. This study investigates the coconut value chain in Western Tamil Nadu, mapping its actors and activities to elucidate opportunities for enhancing efficiency and sustainability. Employing a multi-stage sampling technique, data were collected from 300 coconut farmers and various stakeholders. Six value chains were identified, encompassing domestic, processing, and export markets. Primary actors, including farmers, harvest contractors, commission agents, wholesalers, retailers, processors, farmer producer companies (FPCs), and exporters, were analyzed in terms of their roles and activities. Results highlight the significance of value chain mapping in understanding market dynamics and optimizing resource allocation. Channel III, facilitated by FPCs, emerged as a promising avenue for reducing costs and enhancing market efficiency. This study underscores the importance of informed decision-making and strategic interventions for fostering a sustainable and vibrant coconut industry in Western Tamil Nadu and beyond.

Key Words: Actors, Market Intermediaries, Mapping, Value Chain

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Utilization of Red Pumpkin (*Cucurbita pepo L*) for the preparation of *Burfi*

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The present investigation entitled "Utilization of Red Pumpkin (*Cucurbita Pepo L.*) for the preparation of *Burfi*" was undertaken with a view to standardize the levels of red pumpkin powder in the burfi and to study the shelf life of developed product.

Initially, preliminary trials were conducted to optimize the levels of red pumpkin powder in the burfi. The burfi samples were prepared with 0, 1, 3, 5, 7, 9, 11, 13, 15, 17 and 19 per cent red pumpkin powder with 30% sugar. Experiment was laid out in Completely Randomized Design

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(CRD). On the basis of the results of sensory evaluation of the preliminary trials, three levels of red pumpkin powder i. e. 15, 17 and 19 per cent were chosen for experimental trials.

The experimental treatments comprised, without red pumpkin powder i.e. control (T_0) and with red pumpkin powder @ 15% (T_1), 17% (T_2) and 19% (T_3). Experimental burfi samples were analyzed using standard methods for sensory, physico-chemical and microbiological qualities on day 0 (fresh), day 4, day 8, day 12 and day 16 at a temperature of $30 \pm 1^\circ\text{C}$. The burfi samples were evaluated for sensory attributes viz; colour and appearance, body & texture, flavour, and overall acceptability. The burfi samples were chemically analyzed for fat, protein, total solids (TS), reducing sugar, total sugar, total fibre, Free fatty acids (FFA), HMF, Water activity (a_w), Titratable acidity, pH and mineral content. The microbiological analysis comprised of Standard Plate Count (SPC), Yeast and Moulds Count (YMC) and coliform count.

The average chemical composition of fresh burfi prepared under different treatment combinations ranged from 17.94 to 19.40 per cent fat, 11.44 to 13.82 per cent protein, 75.96 to 79.37 per cent total solids, 14.66 to 19.82 per cent reducing sugar, 24.17 to 32.41 per cent total sugar, 0.00 to 3.11 per cent total fibre, 0.11 to 0.21 per cent free fatty acids, 29.75 to 42.85 $\mu\text{moles}/100\text{ gm}$ HMF, 0.84 to 0.89 Water activity, 0.27 to 0.32 per cent %LA and 6.10 to 6.49 pH.

The mean standard plate count (SPC) of fresh burfi samples ranged from $\log 0.40\text{ cfu/g}$ to $\log 0.80\text{ cfu/g}$. No YMC and coliform count detected in the fresh red pumpkin burfi.

The treatment T_2 remained more acceptable as compare to other treatments in the study. The chemical quality of burfi samples also significantly ($P < 0.05$) decreased during storage.

Out of 100 consumers, 60% consumers responded excellent and 26% responded very good.

The better quality burfi can be prepared by using 17% red pumpkin powder, 30% sugar with shelf life of 16th days at $30 \pm 1^\circ\text{C}$.

Keyword: Burfi, Red Pumpkin Powder, Physico-chemical quality, microbial count, consumer acceptability.