4.1: Commercial Production and Packaging of Traditional Beverages

This chapter examines how several of these beverages have moved into commercial production and packaged retail formats, along with the specific processing and packaging technologies involved.

4.2 Commercial Production of Tender Coconut Water

Tender coconut water (introduced in Unit III, Chapter 4) has become a significant commercial beverage category, both domestically and for export.

Processing considerations:

- Fresh tender coconut water is highly perishable and prone to microbial spoilage and enzymatic browning once extracted from the coconut, requiring rapid processing.

- Commercial processing typically involves extraction under hygienic conditions, followed by a preservation step — commonly thermal processing (pasteurization) or, in some premium product lines, high-pressure processing (HPP), a non-thermal preservation technology that can better retain the beverage's natural flavour compared to heat-based methods.

- Packaged in aseptic cartons, cans, or bottles designed to maintain product stability at ambient or refrigerated temperature, depending on the processing method and product positioning.

4.3 Commercial Production of Neera

Neera (the fresh, unfermented palm sap introduced in Unit III, Chapter 4) presents a particular commercial processing challenge due to its tendency to begin natural fermentation very rapidly after extraction.

Processing considerations:

- Requires immediate chilling or rapid processing/preservation after tapping to prevent unwanted natural fermentation from occurring before the product reaches the consumer as a non-alcoholic beverage.

- Commercial neera products are typically pasteurized shortly after collection and may be packaged in chilled or shelf-stable formats depending on the specific processing approach used.

- Neera has been promoted in various government and cooperative initiatives as a nutrient-rich, non-alcoholic alternative use of palm sap (as opposed to allowing it to ferment into toddy), supporting palm-tapping communities with a value-added, non-alcoholic commercial product.

4.4 Commercial Production of Lassi

Lassi (introduced in Unit III, Chapters 3 and 4 as a traditional yogurt-based beverage) is now widely commercially produced and distributed in packaged form.

Processing considerations:

- Commercial lassi production begins with standardized, pasteurized curd/yogurt as a base (connecting to broader dairy processing principles), which is then blended with sugar, water, and flavourings (in sweetened varieties) or salt and spices (in salted varieties).

- Packaged typically in sealed plastic cups, bottles, or tetra-pak style cartons, requiring refrigerated storage and distribution (cold chain) due to the perishable dairy base, though some formulations achieve extended shelf life through specific processing and packaging technology.

- Product variations (flavoured lassi, low-fat lassi, and others) have been developed to appeal to different consumer segments.

4.5 Commercial Production of Buttermilk (Chaas)

Commercial buttermilk/chaas production similarly builds on traditional preparation principles but adapted for large-scale, standardized production.

Processing considerations:

- Commercial buttermilk is typically produced from standardized, pasteurized milk/curd bases rather than as a traditional by-product of household butter churning, allowing for more predictable composition and quality.

- Seasoned with standardized formulations of salt, roasted cumin, and other traditional flavourings, replicating the flavour profile of traditional chaas while ensuring consistency across production batches.

- Packaged similarly to lassi, generally requiring refrigerated distribution due to its dairy base.

4.6 General Packaging Technologies for Traditional Beverages

- **Aseptic packaging (e.g., tetra-pak cartons):** allows shelf-stable storage at ambient temperature by combining sterilized product with sterilized packaging material under aseptic conditions, widely used for beverages such as processed tender coconut water and some packaged dairy beverages.

- **Retail bottles and cups (PET, plastic):** commonly used for both ambient-stable and refrigerated beverage products, depending on the processing method applied.

- **Cold-chain-dependent packaging:** for beverages retaining more "fresh" characteristics (e.g., certain lassi and buttermilk products) without extensive thermal processing, requiring refrigerated storage and distribution throughout the supply chain.

4.7 Balancing Authenticity, Safety, and Shelf Life

As with other commercially produced traditional foods discussed in this unit, beverage producers face the recurring challenge of balancing:

- Food safety requirements (necessitating processing steps such as pasteurization or other preservation technologies).

- Shelf-life and distribution requirements (necessitating appropriate packaging and, in some cases, cold-chain logistics).

- Consumer expectations of authentic flavour and "fresh" characteristics associated with the traditional, home-prepared version of these beverages.

4.8 Market Significance

The commercial packaged beverage segment for traditional Indian drinks has grown considerably, driven by:

- Urban consumer demand for convenient, ready-to-drink versions of familiar traditional beverages.

- Growing health and wellness-oriented marketing around beverages such as tender coconut water and neera, which are positioned as natural, functional hydration beverages.

- Increased organized retail and cold-chain infrastructure enabling wider distribution of both ambient-stable and refrigerated traditional beverage products.