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A comprehensive overview of West African soft cheese processing and conservation

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Abstract

Dairy products are vital sources of nutrition and livelihood for millions of people around the world. Because of the highly perishable nature of milk, cheese-making is an effective method of preserving its essential nutrients. In West Africa, cheese production is mainly a traditional craft, generally made from cow's milk by Fulani women. This cheese is characterised as a soft, unripened cheese with a moisture content of 50–60%. This paper aims to provide a comprehensive review of articles focusing on West African soft cheese (WASC) processing to better appreciate research gains and gaps in the subject area. A thorough literature search was conducted in electronic databases such as Scopus, Web of Science, PubMed and other sources (Google Scholar, ResearchGate). The literature search included keywords such as common and traditional names associated with WASC. The articles found were examined according to pre-established exclusion and inclusion criteria. Of 512 articles found, 57 met the inclusion criteria and were therefore considered. The findings revealed a similar cheese-making process across the West African regions including key steps such as heating, and addition of coagulant, although lacking standardisation regarding factors such as heating temperature and quantity of coagulant used. While the *Calotropis procera* plant appears to be the best-known and most widely used coagulant, some studies have tested alternatives such as *Carica papaya* leaves, lemon juice (*Citrus limon*), *Moringa oleifera* extract, tamarind fruit (*Tamarindus indica*), cereal soaking water and calcium chloride. The yield potential of traditional West African soft cheese varies according to the type and quantity of coagulant used and can be as high as 30%. West African soft cheese has a short shelf-life of around 1–2 days without any conservation treatment, which poses marketing problems. To date, preservation techniques remain traditional and involve operations such as boiling in salted water, drying or smoking/roasting. Further research into improving production processes and preservation methods will not only improve the quality of WASC but also broaden their distribution and export potential, to the benefit of local communities and beyond.

Keywords: Milk, Peul/Foula/Fulani, preservation, processing