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"Solidarity in a competing world — fair use of resources"

Traditional Enset (*Ensete ventricosum*) Fermentation Process in Gamo Highlands of Ethiopia

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Abstract

Enset (*Ensete ventricosum* (Welw.) Cheesman, Musaceae) is one of the most important food security crops for about 20 million Ethiopian people. It is a multipurpose crop, used as human food, animal forage, fiber source and medical purposes. Enset is fermented to produce kocho, the main food product obtained by fermenting the mixture of the scraped pulp of the pseudostem and corm. The aim of this study was to investigate the traditional enset fermentation process in Gamo highlands of Ethiopia. A detailed survey and field observations were conducted to generate information on traditional enset fermentation practices, storage conditions, the use of a starter culture, length of fermentation time, sensory properties of the fermented enset and major tools used to process enset. The study revealed that enset processing practices are carried out in enset farms at the backyard of the farmer home. The traditional enset fermentation process is characterised by a wide variety of processing techniques and storage conditions across different districts. But in all cases, the first phase involves scrapping of the pseudostem with a sharp edged bamboo split to extract the long fibres. The scrapped pseudostem is squeezed using a clean cloth or sack. The squeezed liquid is decanted and the starch residue (bulla) is wrapped with enset leaves and kept inside a quantity of fermenting enset. The corm part is also scrapped and mixed with the squeezed pseudostem. In a first phase of the fermentation, the mixture is placed under wilted enset leaves and stored for fifteen to twenty one days. During the second phase, the mixture is transferred either into a fermentation pit or into a specially designed storage device (Erosa) or it is packed into small parts using wilted enset leaves. It was stored for a minimum of one month without disturbance. In the survey, the sensory quality of the fermented enset was found to be very poor. The survey also showed that the length of fermentation time varied greatly depending on the altitude of the district, the season and the volume of enset to be fermented. However, the majority of the respondents mentioned that a minimum of two month is required for complete fermentation. None of the respondents use any traditional or standard starter culture for enset fermentation. The survey further revealed that indicators like smell, colour change and elasticity were used to check the completion of the fermentation process. The enset fermentation process in Gamo highlands is an old-age technique. There is a need to optimise the fermentation process by developing a starter culture and by introducing appropriate modern processing technology.

Keywords: Corm, enset, fermentation, pseudostem, starter culture

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