

Abstract:

Two *Lactobacillus* strains, *Lactobacillus plantarum* BFE 6710 and *Lactobacillus fermentum* BFE 6620, were used to start cassava fermentations in a pilot study under field production conditions in Kenya, to determine their potential to establish themselves as predominant lactobacilli during the fermentation. Predominant strains from three fermentations were isolated throughout the 48 h fermentation period. The use of these strains in high numbers clearly resulted in 1 to 2 log higher lactic acid bacteria (LAB) counts over the course of the fermentation when compared to the uninoculated control. 178 predominant LAB isolates were grouped based on their phenotypic characteristics, and were characterised to strain level by RAPD-PCR, followed by PFGE strain typing. Overall, *L. plantarum* strains represented the majority of the isolates, followed by *Weissella confusa* and *Lactococcus garvieae* strains. The results of RAPD-PCR and PFGE strain typing techniques indicated that *L. plantarum* BFE 6710 was successful in asserting itself as a predominant strain. In contrast, *L. fermentum* BFE 6620 failed to establish itself as a predominant organism in the fermentation. The success of the *L. plantarum* strains to predominate in the cassava fermentation demonstrates the potential for development of *Lactobacillus* starter cultures to industrialise the Gari production process