

Review of Germination and Fermentation on Calcium Content of RAGI Foods

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Abstract: Ragi (finger millet, *Eleusine coracana*) is recognized as a nutrient-dense cereal, particularly rich in calcium, making it a potential dietary solution to combat calcium deficiency. Traditional processing techniques such as germination (malting) and fermentation have been widely explored to enhance the bioavailability of minerals in cereals. Germination activates endogenous enzymes that degrade anti-nutritional factors like phytates, while fermentation involves microbial activity that further reduces mineral-binding compounds and improves digestibility. This review synthesizes current research on the effect of germination and fermentation on the calcium content and bioavailability in ragi-based foods. Evidence suggests that both processes significantly increase calcium availability, making ragi more effective in addressing nutritional deficiencies. A comparative analysis table of recent studies is presented to highlight trends, processing conditions, and outcomes. Understanding these effects is crucial for the development of functional ragi-based foods with enhanced nutritional value.

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