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Effect of de-hulling process on milling and nutritional quality of millets

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Statement of the Problem: Investigating the effect of de-hulling process on milling and nutritional quality of millets. Millet grain is highly nutritious with good quality protein, rich in minerals, dietary fiber, phyto-chemicals and vitamins. The milling characteristics and retention of nutrients in the de-hulled millets depends on the process of de-hulling and the type of machinery employed.

Methodology & Theoretical Orientation: De-hulled millets obtained from the abrasive type mill and centrifugal de-huller was analyzed for recovery, broken, nutritional quality and shelf life under ambient conditions.

Findings: The study reveals that the recovery of de-hulled millet was around 10% more in centrifugal type (where the bran is retained) with 95% de-hulling efficiency compared to abrasive mill. The breakage was 4-5% in centrifugal type and there was only 1-2% in abrasive type. The nutritional content (carbohydrate, protein, fat, ash, calcium, phosphorus, iron and fiber) of the all five de-hulled millets (little millet, proso millet, foxtail millet, barnyard millet and Kodo millet) tested were resulting in superior quality in centrifugal de-huller.

Conclusion & Significance: The shelf life of de-hulled millets obtained from the abrasive mill was four times more than that of centrifugal type due to lesser amount of fat presence

Biography

Varadharaju N, PhD, is having expertise in reducing the post-harvest losses in perishables, for which he has contributed and established a Food Processing Business Incubator at the Post Harvest Technology Centre, TNAU, Coimbatore. His contributions in the development of processing machinery are noteworthy to mention. He has operated three international and four national research projects. He was instrumental in design and development of double chamber centrifugal de-huller for millets, for which he was conferred with a national award. He has got three decades of teaching and research experience in the field of Food and Agricultural Process Engineering. He has published 25 international and 40 national research papers in reputed journals.

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