

Beyond visual classification: The nutritional value of frost-damaged lentil flour in baked and extruded products

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Lentil (*L. culinaris* Medik.) is a highly nutritious pulse that has long been a traditional food staple throughout the Indian subcontinent and the Mediterranean. Traditionally lentil are prepared through minimal processing and commonly consumed as whole or split. In Australia lentil has become a high-value rotational crop however, unpredictable environmental conditions such as frost events can devalue crops by affecting either the visual appearance of the seed or the seed-size which in severe cases may result in a down-grade to stock-feed value. Today's consumers are well informed and continue to seek food choices based on health outcomes. Consumer choice continues to drive the development of novel food production and pulse flours are being utilised in the manufacture of snack foods, breakfast cereals and pasta products.

This research investigated the potential of using flour derived from frost-affected lentil in the production of composite wheat-lentil bread, cookies and extruded products. Our findings showed that bread, cookies and extruded product made using flour from frost-damaged lentil seed had elevated levels of protein and fibre when compared to wheat only products. No significant difference was observed in the proximal analysis of flour from either premium or frost damaged lentil and confirms the potential application of frost-damaged lentil as a milled flour. [\[JFP\(1\)\]](#)

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