Integrated approach for post-harvest quality of red lentil

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SPG Contributions	Project Status	Duration/Timeline of Project (Year to Year)	Total Project Cost
$242,650.00	Completed	August 2007 – August 2009	$242,650.00

Project Description

To determine the effects of post-harvest operations (mimicked by storage pre-treatments) including moisture tempering, drying, rewetting cycles, and freezing-thawing cycles on red lentil quality; to determine the effect of storage environment and duration on dehulling and cooking qualities of red lentils; to measure quality attributes (seed wrinkling and seed staining) of red lentils using AcurumTM imaging technology in determining the effect of post harvest treatments.

Outcome

The cultivar and storage pre-treatment strongly affected the dehulling and textural parameters obtained for cooked red lentils tested after 12 months of storage at 5oC. Storage time did not affect the cooking time of the lentil varieties but decreased the dehulling efficiency.

Research Objective

OBJECTIVE 1
To determine the effects of post-harvest operations (mimicked by storage pre-treatments) including moisture tempering, drying, rewetting cycles, and freezing-thawing cycles on red lentil quality.

OBJECTIVE 2
To determine the effect of storage environment and duration on dehulling and cooking qualities of red lentils.

OBJECTIVE 3
To measure quality attributes (seed wrinkling and seed staining) of red lentils using AcurumTM imaging technology in determining the effect of post harvest treatments.