Title Effect of heat processing on milling of black gram and its end product quality

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Abstract

Pulses play a vital role in human nutrition. Black gram (*Phaseolus mungo Roxb*) is used in many Indian dishes. Application of oil and subsequent heating of black gram is followed as a premilling treatment. In this investigation, effect of different concentrations of oil viz. 0.0, 0.2, 0.4, 0.6, 0.8 and 1.0% and different drying temperatures of 40, 50, 60, 70 and 90 °C on the removal of husk was studied. It was observed that 85.25% and 85.5% of dehusking were obtained at 0.4% and 0.8% oil and at drying temperature of 90 °C, respectively, and the powdering loss was 7.15% and 6.98%, respectively. Further studies were conducted to examine the batter volume of above treated samples and it was found that the unfermented batter volume was 1120 ml and 825 ml at 40 and 90 °C, respectively; after fermentation period of 24 h, the increase in the batter volume was found to decrease from 69.84% to 26.66%, i.e. the unfermented batter and fermented batter volume decrease as drying temperature increases. Decrease in batter volume and fermentation level at elevated temperature may be due to the denaturation of heat labile muco-protein and inactivation of enzymes, which are responsible for fermentation.