

Optimization of Process Parameters for Extruded Sorghum Products

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ABSTRACT

Sorghum (*Sorghum bicolor*) is an important staple crop in semi-arid regions of India and Africa because of its drought tolerance. This research work was focused on developing sorghum-based extruded snacks and their storage studies. Processing parameters of feed including moisture contents (12%, 14% and 16%), different blend ratios of sorghum, broken rice and green gram flours (7:2:1, 6:3:1 and 5:4:1), operational parameters of the extruder like barrel temperature (110, 120 and 140°C) and screw speed (150, 200 and 250 rpm) were optimized for physical and sensory properties of sorghum based extruded products. The maximum value of expansion ratio and minimum bulk density was observed for the sample prepared from sorghum, broken rice and green gram flour in the ratio of 5:4:1 at 110°C barrel temperature and 150 rpm of screw. The sensory evaluation of the extrudates showed that products prepared from 5:4:1 blend ratio were more acceptable.

Key words : Bulk density, Extruded snack, Expansion ratio, Sorghum.