

ABSTRACT

Extrusion cooking impacts positively on the nutritional status of a food when compared to their raw form. The objective of this study was to determine the effect of ingredient variables: Feed Rate, Water Addition Rate, and Mixture Composition on the extent of nutritional changes to rice flour enriched with sorghum (*Sorghum bicolor*) and bamboo (*Yushania alpina*) shoots on extrusion processing. A $5 \times 3 \times 2$ factorial experimental set up for feed blending, water addition rate, and feed rate in single screw dry type extruder with a constant set barrel temperature of 250°C and screw speed of 1,480 rpm was used. All ingredient variables showed a varying effect on the extent of loss in proteins, condensed tannins, and dietary fiber while increasing carbohydrates, protein digestibility, and total phenolic content. These alterations are due to magnitude of mixing and shear impact, mass moisture, and specific mechanical energy that influence the degree of bio-reactions.