Screening and isolation of bacteria for improving nutritive values of fermented soybean meal
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Abstract: Nutritional value of soybean meal is limited by the presence of several anti-nutritional factors (ANFs) such as allergenic protein and polysaccharides which limit its application in animal feed. Bacterial fermentation of soybean meal is expected to increase nutritional value and also eliminate the ANFs. The aim of this research was to screen and isolate microorganisms with high protein and digest polysaccharides (raffinose) from soybean meal (SBM) samples for improving nutritive values of SBM. A total of 14 isolates showed high proteolytic activity which was indicated by clear zone formation on skim milk agar plate. The wider clear zone was assumed to be the higher proteolytic activity production. Among these isolates, only 3 isolates namely, F12, F16 and N5 can be digest polysaccharides. Bacteria isolated from SBM samples are very interesting as an alternative fermentative microorganism for improving nutritive value of SMB.

Keywords: Anti-nutritional factors; Nutritional value; Protease activity; Screening; Soybean meal