B-26: Use of prawn waste in poultry feed

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Utilisation of prawn waste is of interest due to the proteins found in the waste. The environmental problems caused by the waste is also of importance. Using cooked and dried waste in livestock or fish feeds has limitations due to additional cost of cooking and drying.

Shrimp waste preserved using lactic acid fermentation technique, due to enzymic hydrolysis naturally present in the waste, digest the proteins giving a liquid product with 64.1 % liquor from the initial 28.6, is used in animal feed. This technique has advantages due to low cost together with the antimicrobial agents generated suppressing spoilage, pathogenic organisms in the medium.

Cassava is used as a source of fermentable sugars and an innoculum of lactic acid bacteria specially L. plantarum, which undergo a natural lactic acid fermentation to produce a pH level of 4.3 in 5 days which also help in the removal of cyanide compound from cassava.

The poultry feed with 20% shrimps waste preserved by lactic acid fermentation was found to be comparable in weight gain, dressed weight and had a higher feed conversion ratio as compared to that with 100% fishmeal. With 40% shrimp wastes, a reduction in these aspects, possibly due to high chitin and low protein levels associated with shrimp waste, was reported.

Gut analysis indicates a reduction in E.coil and Coliforms with increased lactic acid bacteria levels. Improved organoleptic qualities in the meat of broiler fed with this feed was reported.