

## **B-25: Use of prawn waste in poultry feed**

L L S K de Silva

*(Sri Lanka Standards Institution, Colombo 3)*

Utilisation of prawn waste is of interest due to its protein content and the environmental problems caused by the waste. Using cooked and dried waste in livestock or fish feed has limitations due to additional costs of cooking and drying.

Shrimp waste preserved using lactic acid fermentation technique (with hydrolysis by enzymes naturally present in the waste to digest the proteins) yielded a liquid product with 64.1% liquor and was evaluated as an animal feed. This technique has advantages due to its low cost together with the antimicrobial agents generated, thus suppressing spoilage/pathogenic organisms in the medium.

Cassava was used as a source of fermentable sugars and an inoculum of lactic acid bacteria (specially *L. plantarum*) which causes a natural lactic acid fermentation to produce a pH level of 4.3 in 5 days. The fermentation also helps in the removal of cyanide compound from cassava.

The poultry feed with fishmeal replaced with 20% shrimp waste was found to be comparable in weight gain, dressed weight and had a higher feed conversion ratio compared to the poultry feed with 100% fish meal. However fishmeal substituted with 40% shrimp waste showed a decrease in the above aspects possibly due to high chitin and low protein levels associated with shrimp waste taking predominance over other factors.

**Gut analysis indicate a reduction in E.coli and Coliforms with increased lactic acid bacteria levels. Organoleptic qualities in the meat of broiler fed with this feed were also improved.**

**Financial assistance from NARESA (RG/9/B/1) and ODA, U.K. is acknowledged.**