

ZSA-01

SS 01 (1990)

Evaluation of digestibility of Neem meal and determination of optimum time for faeces collection for digestibility studies in *Oreochromis niloticus*.

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In commercial fish farming fish feeding is a major concern and it is an essential factor affecting the profit of the farm. In intensive farming systems especially formulated diets with high protein content should be provided. Such protein levels can be achieved by incorporating fishmeal. Since fishmeal is comparatively costly and not available readily, researchers are ought to investigate substitute for fishmeal, from by products of food processing and/or milling. It is also important to know the diurnal changes of food digestibility of fishes and that information can be used to improve husbandry practices. The present study was carried out basically to evaluate the feasibility of developing low cost diet for *Oreochromis niloticus* through investigation on the suitability of Neem meal powder as a substitute for fishmeal and to determine the digestibility time and the best time for faeces collection. Research was carried out with two size group of *O. niloticus* (body weight 7.00-9.00 g: group A and 10.00-14.00 g: group B). Fish were fed with a reference diet and two test diets incorporated with Neem meal of two qualities. Test diet incorporated with low protein level Neem meal known as TDN1 and test diet with high protein Neem meal known as TDN2. Fish were fed to satiation twice a day at 0800 and 1700 hr. Faeces were collected four times a day at 0800, 1100, 1400 and, 1700. Digestibility values for three diets were determined by the Cr_2O_3 method. Dry matter and protein digestibility of TDN2 is higher than that of reference diet and TDN1 for group B fishes. Similarly, protein digestibility of TDN2 in group B fish was higher than that of reference diet and TDN1. Faeces collected at 1700hrs showed significantly different ($P < 0.05$) higher level of dry matter and protein digestibility than other faeces collected time. It can be concluded that the Neem meal with high protein level is a better substitute ingredient for fish meal when compared to low protein level Neem meal. Furthermore, observation made during the present study on best digestibility times indicate that the best time for collecting faeces for digestibility studies in *O. niloticus* is between 1400-1700 hrs.