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## Volume 6 (1); 25 January 2016

**Research Paper****Hilly grasses and leaves: a promising unconventional feed resource for livestock.**

Hossain M.E., Karim M.H., Ahmed M.I. and Sultana S.A.

Online J. Anim. Feed Res., 6(1): 01-07, 2016; pii:

S222877011600001-6

**Abstract**

The study was undertaken to find out the chemical composition of different hilly grasses and leaves available in Bandarban areas of Bangladesh. Total 10 different hilly grasses and leaves such as Bottle gourd leaf (*Lagenaria siceraria*), Castor bean leaf (*Ricinus communis*), Cogon grass (*Imperata cylindrica*), Dhol kolmi (*Ipomoea carnea*), Giant reed leaf (*Arundo donax*), Hilly grass (*Cynodon dactylon*), Pithraj leaf (*Aphanamixis polystachya*), Sal leaf (*Shorea robusta*), Shegun leaf (*Tectona grandis*) and Tiger's claw (*Erythrina variegata*) leaf were collected from study areas. Samples were collected, chopped and tested immediately for moisture content and remaining samples were sun-dried and processed using standard procedure. Chemical analyses of the samples were carried out in triplicate for Dry matter (DM), Crude protein (CP), Crude fiber (CF), Nitrogen free extract (NFE), Ether extract (EE) and Ash. Metabolizable energy (ME) was calculated mathematically for all samples by using standard formula. Results indicated that, crude protein content in Bottle gourd leaf was 33.6 g/100g, Castor bean leaf 21.0 g/100g, Cogon grass 8.4 g/100g, Dhol kolmi 26.3 g/100g, Giant reed leaf 8.6 g/100g, Hilly grass 6.8 g/100g, Pithraj leaf 15.3 g/100g, Sal leaf 16.3 g/100g, Shegun leaf 11.9 g/100g and Tiger's claw leaf 18.4 g/100g. In addition to crude protein, all samples contained substantial amount of crude fibre, nitrogen free extracts, ether extracts and ash. It could therefore, be inferred that, the hilly grasses and leaves might be used as an alternative to conventional feeds for livestock particularly during scarcity period.

**Keywords:** Hilly Grasses And Leaves, Metabolizable Energy, Moisture, Dry Matter, Crude Protein, Crude Fiber, Nitrogen Free Extracts, Ether Extracts, Ash.

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**Research Paper****The effect of ground-nut (*Arachis hypogaea*, L.) seed cake supplementation on performance of desert sheep under dry land conditions in North Kordofan, Sudan.**

Fadul B.A., Abdalla M.Kh., Mohamed A-EL, Nour I, Idris A\* and Eltaher H.

Online J. Anim. Feed Res., 6(1): 08-13, 2016; pii: S222877011600002-6

**Abstract**

This study was conducted in north Kordofan state-Sudan to evaluate the effects of feeding ground-nut cake supplement on lambs body weight changes and body measurements as an alternative to ground-nut hay plus natural grazing. Twenty four heads of lambs were used (16 males and 8 females) with 6 animals in each group (4 males and 2 females). All the groups were left to graze on natural pasture, and then supplemented by ground-nut hay and ground-nut cakes. Experimental animals allowed drinking water every two days. Groups (1 and 3) were supplemented with ground-nut cake at the rate of 150 g per head /day. The body weights and body measurements were recorded weekly. Range grasses were sampled and analyzed for proximate chemical analysis and for in vitro digestibility trials. The results indicated that the body weight, height at withers, heart girth and body length in males were higher, also the animals supplemented with ground nut cake during autumn season recorded higher values. In vitro digestibility coefficient for ground-nut seed cake was 65.7% and 62.7% for range grasses which were significantly ( $P < 0.05$ ) higher than the ground-nut hay (49.8%) at 72 hrs. It was recommended that the supplementary feeding is the best strategy to improve lambs performance on the natural pastures during the dry season.

**Keywords:** Supplementary Ground-Nut Cake, Lambs, Body Measurements, Sudan

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**Research Paper****Nutritive value of fish meal.**

Hossain M.E., Akter K. and Das G.B.

Online J. Anim. Feed Res., 6(1): 14-19, 2016; pii: S222877011600003-6

**Abstract**

The study was undertaken to find out the variations in the chemical composition of different types of fish meal available in the metropolitan areas of Chittagong, Bangladesh. Fifteen different types of fish meal samples were collected from study areas. Chemical analyses of the samples were carried out in triplicate for dry matter (DM), crude protein (CP), crude fiber (CF), nitrogen free extract (NFE), ether extract (EE) and total ash (TA) in the animal nutrition and poultry research and training centre (PRTC) laboratory, Chittagong Veterinary and Animal Sciences University, Chittagong, Bangladesh. Metabolizable energy (ME) was estimated mathematically for all samples by using standard formula. Results indicated that, DM, CP, NFE, EE, TA and ME content significantly differed ( $P < 0.01$ ) from one sample to another. However, no significant ( $P > 0.05$ ) variation was found in the CF contents of the samples. DM content varied from 86.7 to 96.7%, CP content varied from 31.3 to 61.2%, EE content varied from 0.8 to 23.5%, NFE content varied from 0.6 to 14.6%, Ash content varied from 13.3 to 36.7% and ME content varied from 1788.4 to 3478.8 kcal/kg. It could therefore be inferred that, the chemical composition of fish meal available in the local market are widely variable. Therefore, every sample

needs to be analyzed before use for ration formulation.

**Keywords:** Chemical Composition, Fish Meal, Metabolizable Energy, Nutritive Value.

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## Research Paper

### Nutritive value of Helencha (*Enhydra Fluctuans*).

H Hossain M.E., Sarma S.M., Sikder H. and Kabir M.H.

Online J. Anim. Feed Res., 6(1): 20-23, 2016; pii: S222877011600004-6

#### Abstract

The study was undertaken to find out the chemical composition and nutritive value of Helencha (*Enhydra fluctuans*) available in Chittagong, Bangladesh. *Enhydra fluctuans* were collected from three different remote places of the study area. Chemical analyses of the samples were carried out in triplicate for dry matter (DM), crude protein (CP), crude fiber (CF), nitrogen free extracts (NFE), ether extracts (EE) and total ash (TA) in the animal nutrition and poultry research and training centre (PRTC) laboratory, Chittagong Veterinary and Animal Sciences University, Chittagong, Bangladesh. Results indicated that, there were no significant variations ( $P > 0.05$ ) in the DM, CP, CF, NFE, EE and TA and ME contents of the samples collected from different places. DM content varied from 86.5 to 87.4%, CP content varied from 20.7 to 23.8%, CF content varied from 20.1 to 21.6%, EE content varied from 0.1 to 0.2%, NFE content varied from 28.3 to 34.4% and TA content varied from 10.4 to 13.5%. Similar to proximate components, metabolizable energy (ME) content also varied from 1991.9 to 2073.4 Kcal/kg DM. It could therefore be inferred that, the nutrient contents of *Enhydra fluctuans* does not vary due to variation in places. Results also indicated that, the nutritive value of *Enhydra fluctuans* is comparable with other available grasses in Bangladesh. Therefore, *Enhydra fluctuans* could be a promising unconventional feed resource for livestock.

**Keywords:** Chemical Composition, Enhydra Fluctuans, Helencha, Metabolizable Energy, Nutritive Value.

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