**NUTRITIVE VALUE AND DIGESTIBILITY OF LIMPOGRASS (BAKSHA GRASS)**



**A Report**

**By**

**Intern ID : D-32**

**Roll No. : 2008/49**

**Reg. No. : 391**

**Session : 2007-2008**

**Submitted in partial of requirement for the fulfillment of the degree of**

**DOCTOR OF VETERINARY MEDICINE (DVM)**

**Faculty of Veterinary Medicine,**

**Chittagong Veterinary and Animal Sciences University**

**Khulshi, Chittagong - 4225.**

**January 2014**

**NUTRITIVE VALUE AND DIGESTIBILITY OF LIMPOGRASS (BAKSHA GRASS)**



**A Report**

**By**

**Intern ID : D-32**

**Roll No. : 2008/49**

**Reg. No. : 391**

**Session : 2007-2008**

**Approved as to style and content by**

**Signature of Supervisor**

**Dr. MD. HASANUZZAMAN**

**Associate Professor and Head**

**Dept. of Animal Science & Nutrition**

**Chittagong Veterinary and Animal Sciences University**

**Khulshi, Chittagong - 4225.**

**January 2014**

**ACKNOWLEDGEMENT**

All praises are due to Almighty Allah, the creator & supreme authority of the universe; who enabled me to complete this work successfully.

It is deemed as a proud privilege and extra terrestrial pleasure to express author ever indebtedness, deepest sense of gratitude, sincere appreciations, profound regards to reverend and beloved teacher and supervisor **Associate Professor Dr. Md. Hasanuzzaman,** Dept. of **Animal Science & Nutrition** , Chittagong Veterinary and Animal Sciences University for his scholastic guidance , sympathetic supervision, valuable advice, constant inspiration, affectionate feeling, radical investigation and constructive criticism in all phases of this study.

I would like to give special thank to **DR. Amir Hossan Shaikat, Lecturer.** Dept. of Physiology Biochemistry and Pharmacology, Chittagong Veterinary and Animal Sciences Universityfor helping me data analysis and giving valuable advice about report writing. I would like to express my deep sense of gratitude and thanks to **Vice Chancellor, Dr. A S Mahfuzul Bari and Dr. Md. Kobirul Islam Khan,** Dean, Faculty of veterinary medicine, Chittagong Veterinary and Animal Sciences University.

Supervisors’ help and co-operation have been received from many persons during the tenure of this place of report. The author is immensely grateful to all of them, although it is not possible to mention every one by name.

January 2014

**The Author**

i

**ABSTRACT**

The present study was undertaken to observe the chemical composition and digestibility of Limpograss (*Hemarthria altissima*) available in low land area in Bangladesh. Chemical analyses of the samples were carried out in triplicate for moisture, dry matter (DM), crude protein (CP), crude fiber (CF), ether extracts (EE) and total ash in the animal nutrition laboratory, Chittagong Veterinary and Animal Sciences University, Chittagong, Bangladesh. Data was calculated for all samples by using standard formula. The nutritive value of Limpograss was analyzed and found as DM (30.00%), moisture (70.00%), CP (8.75%), CF (31.75%), EE (2.04%) and Ash (11.30%). The nutritive value of Limpograss after digestion was also analyzed and found as DM (14.25%), moisture (85.75%), CP (4.67%), CF (20.85%), EE (0.61%) and Ash (8.58%). The results showed that digestibility of dry matter, crude protein, crude fiber, ether extract and Ash in Limpograss were 52.50, 46.63, 34.33, 69.90 and 23.84 per cent, respectively. Results indicated that, the digestibility of Limpograss was higher than any other available grasses in Bangladesh, except the crude protein content. However, Limpograss nutritionally was in standard condition, hence, it could be used as a promising feed resource for ruminant.

**Key words:** Limpograss, Proximate component, Digestibility.

ii

**CONTENTS**

|  |  |  |
| --- | --- | --- |
| **Chapter** | **Topics** | **Page No.** |
|  | Acknowledgement | i |
|  | Abstract | ii |
| I | Introduction | 1-2 |
| II | Review of literature | 3-10 |
| III | Materials and methodology | 11-15 |
| IV | Result and discussion | 16-20 |
| V | Conclusion | 21 |
| VI | References | 22-24 |

**LIST OF THE TABLES**

|  |  |  |
| --- | --- | --- |
| **Table no.** | **Title** | **Page no.** |
| 1 | Nutritional composition of Limpograss | 17 |
| 2 | Digestibility percentage of Limpograss | 17 |

**LIST OF THE GRAPHS**

|  |  |  |
| --- | --- | --- |
| **Graph no.** | **Title** | **Page no.** |
| 1 | Dry matter content of Limpograss (%) | 18 |
| 2 | Crude protein content Limpograss (%) | 18 |
| 3 | Crude fiber content of Limpograss (%) | 19 |
| 4 | Ash content of Limpograss (%) | 19 |
| 5 | Ether extracts content of Limpograss (%) | 20 |

**LIST OF THE IMAGES**

|  |  |  |
| --- | --- | --- |
| **Figure no.** | **Title** | **Page no.** |
| 1 | World distribution map | 5 |
| 2 | Country (Bangladesh) distribution map | 6 |
| 3 | Preparation of soil | 14 |
| 4 | Mixing of fertilizer and soil | 14 |
| 5 | Plantation of stem of Limpograss | 14 |
| 6 | Daily watering the growing grass | **14** |
| 7 | Growing of grass | 14 |
| 8 | Mature grass | **14** |
| 9 | Sample preparation | **15** |
| 10 | DM estimation | **15** |
| 11 | Estimation of CP | **15** |
| 12 | Estimation of EE | **15** |