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LIST OF ABBREVIATION AND SYMBOLS USED

|  |  |
| --- | --- |
| **Abbreviation/Symbol** | **Elaboration** |
| AOAC | Association of Official Analytical Chemist |
| DM | Dry Matter |
| OM | Organic Matter |
| RG | Rice Gruel |
| UMS | Urea Molasses treated Straw |
| URS | Urea Rice gruel treated Straw |
| ANOVA | Analysis of Variance |
| CVASU | Chittagong Veterinary and Animal Sciences University |
| SRL | Strain Rumen Liquor |
| % | Percent |
| Kg | Kilogram |
| ml  GDP | Milliliter  gross domestic products |
| FAO | Food and Agricultural Organization of United Nation |
| ME | Metabolizable Energy |
| CP | Crude Protein |
| EE | Ether Extract |
| NFE | Nitrogen Free Extract |
| CVASU | Chittagong Veterinary and Animal Sciences University |
| RFC | Readily Fermentable Carbohydrate |

**PLAGIARISM CERTIFICATE**

I, Tridip Das, would like to strongly assure that I have performed all the works furnished here in this report. The information has been collected from books, national and international journals, websites and other references. All references have been acknowledged duly.

Therefore, I hold entire responsibility of collection, complication, preservation and publication of all data accumulation here in this report.

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The Author

November, 2016

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# The Author,

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ABSTRACT

In comparison with molasses rice gruel may be the substitute as a source of readily fermentable energy for the effectiveness on the physiology of the rumen and the growth performance of growing lamb with mean age of 7 months and mean body weight of 5.9 Kg. At the end of the 60 days feeding trial, no significant differences could be found between the three groups in achieving body weight. The PH of the rumen liquor peaked 8 h post feeding among three groups receiving rice gruel, molasses or concentrate; while lowest PH value was attained at 4 h among the groups. The bacterial population (cell x1010) ranged from 4.9 to 5.8 in the rice gruel group, 4.9 to 6.1 in the concentrate group and was higher (range between 4.7 to 6.3) in the group consuming molasses. The rumen protozoal count behaved in a similar manner to that of rumen bacteria. In conclusion, similar effectiveness of rice gruel and molasses as fermentable energy source. Rice gruel can act as the substitute of molasses as energy source under situation when molasses are not available.

**Key words:** Rice gruel, Molasses, Concentrate, Weight gain, Rumen metabolites, Sheep