

**UTILIZING MILK UREA NITROGEN TO
EVALUATE DAIRY COW DIETS IN AMBEWELA
FARM**

A dissertation submitted to the
Faculty of Animal Science and Export Agriculture
Uva Wellassa University
in partial fulfillment of the requirement of
the degree of
Bachelor of Animal Science

by

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**Animal Science Degree Programme
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2014

Abstract

Dairy farming has many success factors and one of the main factors that affect a profitable dairy farming is the feeding management in the farm, especially during the lactation. Frequent evaluation of milking cow feed rations will be beneficial for optimum production in the farm. Milk Urea Nitrogen (MUN) is a tool that measures the efficiency of protein and carbohydrate feeding to milking cows. It is extensively used in many European and other countries with many research studies on the baselines of MUN values for particular region or country. However Sri Lankan dairy herds had not been evaluated for the mean MUN values. Since the MUN values are affected by environment, feed composition, animal variations, genetics, management practices and many other factors, it is important to carry out research studies on MUN values for a particular region or area. This study had taken an initial step to evaluate the MUN values in one of the best commercial dairy farm in Sri Lanka. The MUN values of the farm had a range between 12 mg dL⁻¹ to 20 mg dL⁻¹, which are higher than the recommended range of 8 mg dL⁻¹ to 12 mg dL⁻¹. According to the proximate evaluation of the feed given to dairy herds in the farm, only slight deviations from the standard NRC recommendations were found. The highest producing group of cows had the highest MUN mean values. The MUN values showed strong relationship with crude protein levels of the feed (at $\alpha=0.05$) and a weak relationship with dry matter intake (at $\alpha=0.1$). There was less evidence to find out any significant relationship between other feed compositional matters with MUN. Further, the milk fat, protein, Solid nonfat (SNF) and total solids (TS) did not show any significant relationships with MUN. The higher MUN values of the dairy herd in the farm were interpreted using the available information of the study. However, further research is needed to confirm the baseline MUN values and the relationship between MUN and animal factors or environmental factors in Sri Lanka.