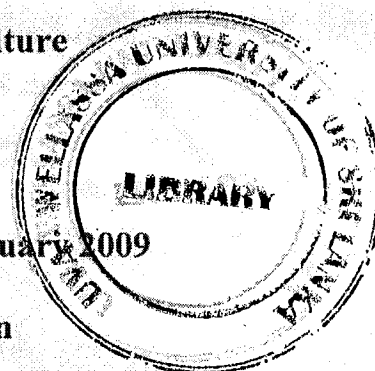


Uva Wellassa
University

Faculty of Animal Science & Export Agriculture
Uva Wellassa University of Sri Lanka

B.ASc. Degree Program
Year II Semester I

End Semester Examination - December 2008/ January 2009



ANS 221-2 Forage Science & Conservation

Essay Questions (Section II)

Instructions:

Answer all questions in Section II in booklets provided.

No. of questions : Two (02)

No. of pages : Two (02)

Time : One hour (1 hr)

Total marks allocated : 60%

Index No:

01. Write an essay on different phases describing what occurs during ensiling, storage and feed-out of fermented-forage or silage.

(100 marks)

02. I. Write a brief account on "Impact of defoliation frequency on quality & quantity of the herbage produced" during different growth phases of forage.

(50 marks)

- II. A tropical grass; *Brachiaria brizantha* (Palisade grass) was fertilized at a rate of 100kg N - fertilizer / ha / year at split doses for 8 months while having another plot of *Brachiaria brizantha* with no N - fertilizer. No nitrogen was applied when conditions were too cold and / or dry for pasture growth. Both plots had the same size of 3 ha.

Growth patterns of all grasses were similar, with a warm season peak and cool season trough. Nitrogen treatments did not greatly alter the growth pattern, although it showed a high yield response to the application of nitrogen. Cumulative dry matter yield of *Brachiaria brizantha* (with fertilizer) was 18 t / ha/year and with no fertilizer was 8.4 t / ha/year.

Both plots were grazed at the same time by two herds of milking cows at same maturity & production level for 8 months, while having a grazing loss of 10%. The average body weight of each cow was 450 kg and their dry matter intake was 2% of body weight. The herd was totally dependant on grazing and the average milk production was 15 l / cow / day. The average price of milk was Rs.24 per liter and the cost of fertilizer was Rs. 25 / kg.

Calculate the **additional profit** that could be earned from the *Brachiaria brizantha* cultivation, when it was fertilized.

(1 tonne = 1000 kg)

(1 month = 30 days)

(50 marks)

[End of Section II]