



2nd SEM. 2009/2010

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UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER

PROGRAMME: BS.c. ANIMAL SCIENCE YEAR 3
BS.c. AGRONOMY YEAR 3

TITLE OF PAPER: PASTURE AND FODDER MANAGEMENT

COURSE CODE: APH 305

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER QUESTION ONE (1) AND ANY OTHER THREE (3)
QUESTIONS

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QUESTION 1

A local dairy farmer wants to establish pastures for his cows but is not sure which grass species to plant. Discuss briefly the factors he needs to consider in selecting a pasture species to plant under:

- (i) Adaptation (5 marks)
- (ii) Intended use (5 marks)
- (iii) Species or cultivar characteristics (15 marks)

QUESTION 2

- (a) Discuss the role of sown pastures under the headline “Providing more reliable feed”. (15 marks)
- (b) Give an outline on the use of dolomitic lime in planted pastures. (10 marks)

QUESTION 3

- (a) Explain clearly and briefly to a dairy farmer who wants to establish a stand of Kikuyu grass (*Pennisetum clandestinum*) how he can successfully do it using the vegetative propagation method. (10 marks)
- (b) Winter feeding may present problems if proper planning is not done. Assume you are a ranch manager in charge of 100 herd of dairy cattle. The cattle need supplementary feeding in the form of hay for 160 days in winter. Given that the animals are fed at a rate of 8 kg dry matter hay per head per day, calculate:
 - (i) the total feed needs (hay) during the winter period. (3 marks)
 - (ii) barn capacity in bales required to store the hay assuming each bale weighs 25 kg. (2 marks)
 - (iii) the total area to be reserved for hay assuming a pasture yield of 4 tonnes per/ha. (5 marks)
 - (iv) Adjust the values for (i) hay needs, (ii) barn capacity and (iii) area to be reserved for hay assuming 10% loss in hay making. (5 marks)

QUESTION 4

- (a) Name five factors that influence optimum stocking rate. (5 marks)
- (b) Strip rotational grazing is one of the mostly commonly used grazing methods in planted pastures. Describe this method to someone aspiring to be a dairy farmer. (20 marks)

QUESTION 5

- (a) Your neighbour who has been planting only Rhodes grass in his planted pastures wants to adopt your practice whereby in your planted pastures you have combined Rhodes grass, Guinea grass, Buffel grass and Lucerne. Highlight five benefits farmers are likely to get from pasture mixtures as opposed to pure pasture stands. (15 marks)
- (b) Explain briefly how you could improve the quality and utilisation of hay fed to your dairy cows during the dry season. (10 marks)