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UNIVERSITY OF ESWATINI

1st SEM. 2018/2019

FINAL EXAMINATION PAPER

PROGRAMMES: B.Sc. ANIMAL SCIENCE YEAR 3 AND B.Sc. ANIMAL SCIENCE (DAIRY OPTION) YEAR 3

COURSE CODE: ASC301

TITLE OF PAPER: PASTURE AND FODDER MANAGEMENT

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY FOUR QUESTIONS

DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE CHIEF INVIGILATOR

QUESTION 1

(a) Discuss the role of sown pastures in providing reliable feed supply. **(15 Marks)**

(b) Write short notes on adaptation to soil and environmental conditions as an important factor to be considered when selecting a pasture species. **(10 Marks)**

QUESTION 2

(a) Discuss the role of forage legumes in planted pastures. **(20 Marks)**

(b) What are the problems associated with forage legumes? **(5 Marks)**

QUESTION 3

Give an outline of the factors that influence optimum stocking rate under the headlines:

(a) Rate of pasture growth. **(7 Marks)**

(b) Seasonal variation. **(18 Marks)**

QUESTION 4

(a) Why is it important to consider seed treatment when establishing planted pastures? **(10 Marks)**

(b) Silage is one of the fodders fed to dairy cows throughout the year. Assume you are in charge of a dairy farm at Luyengo. The farm has 86 cows which require supplementary feeding with silage year-round.

Given that the cows are fed at a rate of 4 kg silage (on dry matter basis) per cow per day, calculate:

(i) Total silage needs for the herd. **(3 Marks)**

(ii) Total area required for silage production if the yield of maize is 20 tonnes/ha fresh material, with 24% dry matter. **(3 Marks)**

(iii) The number of pit silos required assuming each silo is 5.5 m long, 3 m wide and 1.5 m deep, and each cubic metre can take 120 kg of silage on dry matter basis. **(6 Marks)**

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(iv) Calculate the adjusted values for total silage needs, area required to produce the maize and the number of pit silos assuming a 15% loss in silage production. **(3 Marks)**

QUESTION 5

What is the significance of harrowing planted pastures? **(25 Marks)**