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UNIVERSITY OF SWAZILAND

1st SEM. 2017/2018

RE-SIT/ SUPPLEMENTARY EXAMINATION PAPER

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

COURSE CODE: ASC 301/ AS 305

TITLE OF PAPER: PASTURE AND FODDER MANAGEMENT

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

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CHIEF INVIGILATOR**

QUESTION 1

For larger areas, pasture establishment is faster with the broadcasting method. Beginning with initial ploughing until seedling emergence, describe fully and in the correct sequence all the steps followed in pasture establishment. **(25 Marks)**

QUESTION 2

(a) What stage of plant growth is considered the best for cutting Rhodes grass for hay making and why? **(5 Marks)**

(b) With an aid of a diagram, define and illustrate deferred rotational grazing in a four-year rotation system for use during both the summer and winter seasons. **(20 Marks)**

QUESTION 3

Discuss five factors that influence optimum stocking rate under the underlines:

(a) Seasonal variations. **(15 Marks)**

(b) The nature of animal product. **(10 Marks)**

QUESTION 4

(a) This semester we discussed, planted and maintained some pasture/fodder species dairy farmers can plant. Name three grasses and two forage legumes farmers can use. For each species give both the common and scientific names. **(15 Marks)**

(b) Differentiate between Kikuyu grass and Lucerne. **(10 Marks)**

QUESTION 5

(a) Describe the characteristics of a properly prepared seedbed for planting pasture seeds. **(10 Marks)**

(b) Assume you are in charge of 117 dairy cows at the Gege Farm. These cows require year-long strategic feeding of silage.

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

(i) the total silage needs. **(3 Marks)**

(ii) the total area required for silage production if the yield of maize is 22 tonnes/ha fresh material, with 24% dry matter. **(4 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 meter can take 150 kg of silage on dry matter basis. **(5 Marks)**

(iv) adjust the values for total silage needs, area required to produce the maize and the number of pit silos assuming a 20% loss in silage making. **(3 Marks)**