

135



2nd SEMESTER 2017/2018

PAGE 1 OF 3

UNIVERSITY OF SWAZILAND

MAIN EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR 4

COURSE CODE: CP 405

TITLE OF PAPER: CEREALS/GRAIN LEGUME CROPS PRODUCTION

TIME ALLOWED: TWO (2) HOURS

INSTRUCTION: ANSWER ALL QUESTIONS

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

QUESTION 1

(a) What is a crop budget?

(3 Marks)

(b) What is a crop calendar?

(3 Marks)

Draw a crop calendar for a maize-dry bean relay intercropping system for a farmer in the Highveld agro-ecological zone of Swaziland

(14 Marks)

[20Marks]

QUESTION 2

(a) Soil tests results reveal that a maize farmer requires 80 kg/ha of nitrogen for his crop. The farmer applied 400 kg/ha of 2-3-2(37) fertiliser as basal dressing. Calculate how many kg of urea the farmer will apply to meet the balance of the nitrogen recommended for his maize crop?

(15 Marks)

(b) What method of application will the farmer use for his crop?

(3 Marks)

(c) Give reasons for your choice of method.

(2 Marks)

[20 Marks]

QUESTION 3

(a) What is the difference between Type I and Type IV dry beans

(5 Marks)

(b) Explain why staked Type IV dry beans generally have higher seed yields, higher quality seed and seedling vigour than unstaked Type IV dry beans?

(15 Marks)

[20 Marks]

QUESTION 4

(a) With the aid of diagrams, list the factors that limit sorghum production and consumption in Swaziland.

(8 Marks)

(b) From your diagram, list five immediate factors, which should be addressed through research to improve sorghum yield and consumption in Swaziland.

(12 Marks)

[20 Marks]

QUESTION 5

Wheat production and wheat products are likely to decrease because of climate change.

(a) List the biotic and the abiotic factors that will contribute to wheat production and wheat products.

(8 Marks)

(b) Suggest how these factors can be addressed.

(12 Marks)

[20 Marks]