



2ND SEMESTER 2007/2008

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UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMMES: BACHELOR OF SCIENCE IN AGRONOMY, YEAR 4

COURSE CODE: CP 407

TITLE OF PAPER: GRAIN LEGUME CROP PRODUCTION

TIME ALLOWED: TWO (2) HOURS

INSTRUCTION: ANSWER A TOTAL OF FOUR [4] QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

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

INSTRUCTIONS: ANSWER ANY FOUR [4] QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

QUESTION 1

- a. Why are grain legumes important in cropping systems? (5 marks)
- b. Explain the importance of grain legumes in Swazi cuisine (5 marks)
- c. What are the soil conditions for producing groundnut in Swaziland? (5 marks)
- d. What is the inter-row spacing for groundnut in Swaziland? (2 marks)
- e. What is the intra-row spacing for groundnut in Swaziland? (2 marks)
- f. Calculate the plant population per hectare of groundnut at the given spacing stated in 1(d) and 1(e). Show detailed working. (6 marks)

[Total marks for Question 1 = 25 marks]

QUESTION 2

Write short notes on the following:

- a. Legume inoculation (5 marks)
- b. Shelling (5 marks)
- c. Winnowing (5 marks)
- d. Three field pests of grain legumes. (3 marks)
- e. Three storage pests of grain legumes. (3 marks)
- f. Names and causal organisms of two diseases of groundnut (2 x 2 = 4 marks)

[Total marks for Question 2 = 25 marks]

INSTRUCTIONS: ANSWER ANY FOUR [4] QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

QUESTION 3

Write an essay on the production practices for groundnut, based on:

- a. Land preparation (5 marks)
- b. Ecological requirements (5 marks)
- c. Fertilizer requirements (5 marks)
- d. Harvesting (5 marks)
- e. Storage (5 marks).

[Total marks for Question 3 = 25 marks]

QUESTION 4

- a. Explain why some farmers prefer planting sugar beans to groundnut. (5 marks)
- b. Explain the low yield of sugar beans from small-scale farmers' plots. (5 marks)
- c. What do you understand by "pegging" in grain legume production? (5 marks)
- d. Explain an appropriate position of grain legumes in a cropping system. (5 marks)
- e. What is aflatoxin? (5 marks)

[Total marks for Question 4 = 25 marks]

QUESTION 5

- a. Discuss five recent advances in grain legume production. (20 marks)
- b. What has been the role of the African continent in these advances in grain legume production? Justify your answer. (5 marks)

[Total marks for Question 5 = 25 marks]