



1ST SEM 2010/2011

PAGE 1 OF 3

**UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER**

**PROGRAMME: B.Sc. IN AGRICULTURAL ECONOMICS AND
AGRIBUSINESS MANAGEMENT 4 AND B.Sc. IN LAND AND
WATER MANAGEMENT 4.**

COURSE CODE: CP 402

TITLE OF PAPER: FIELD CROPS

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS.

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

QUESTION 1

- (a) Sorghum plants have an ability to yield even under severe drought conditions. Discuss. (10 marks)
- (b) Sorghum yield in Swaziland is relatively lower than that of maize despite the fact that it is more drought tolerant than maize. Discuss at-least three aspects of research that needs to be investigated to improve the total yield of sorghum crop. (10 marks)
- (c) Name at-least three pests that may attack sorghum at a seed and seedling stage. (5 marks)

QUESTION 2

- (a) Define seed dormancy and discuss any three treatments undertaken to break it. (10 marks)
- (b) Define leaf senescence and its role in the leaf area index (LAI). (5 marks)
- (c) In seed development, the growth of a fertilized grain can be divided into three phases, discuss these phases. (10 marks)

QUESTION 3

- (a) Tobacco is one of the cash crops that brought profit to Swazi farmers until the country was hit by frequent droughts and hiking input prices. The crop was mostly produced in the southern part of the country, the Shiselweni region. This crop has since been abandoned by many producers and those still in production have problems in acquiring planting material. Suppose you were given a tender by the Ministry of Agriculture to produce tobacco seedlings, how would you go about with that assignment? (15 marks)
- (b) Tobacco curing is the process whereby the harvested leaf is made ready for the market. Discuss four (4) methods used to cure tobacco. (10 marks)

QUESTION 4

Discuss the advantages and disadvantages of growing sugarcane in Swaziland.

(25 marks)

QUESTION 5

- (a) Sweet potato is the most nutritious crop such that it provides almost all the nutrients and mineral salts needed by the body. It adapts in almost all soil types and will give yield no matter what. Farmers in the Highveld of Swaziland are unable to preserve planting material due to frosty winters. Give a detailed explanation on how these farmers can go about preserving their planting material during the winter season.

(20 marks)

- (b) Why is it important to use the youngest part of the sweet potato vine as planting material?

(5 marks)