



UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER

PROGRAMS

BACHELOR OF SCIENCE IN AGRONOMY YEAR 2

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION
YEAR 2

BACHELOR OF SCIENCE IN HORTICULTURE YEAR 2

COURSE CODE: CPR 201

TITLE OF PAPER: CROP PEST AND MANAGEMENT

TIME ALLOWED: TWO (2) HOURS

INSTRUCTION: ANSWER ANY FIVE QUESTIONS

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Question 1 (20 Marks)

- a) "Where there is a pest attack there is a yield loss" (8Marks)
i. Do you think the above statement is correct? Answer Yes or No (2 Mark)
ii. Give your reasons for your answer to question 1A(i) (6 Marks)
b) List four reasons why yield loss assessment is conducted (12 Marks)

Question 2 (20 Marks)

- a) Calculate the EIL for an aphid in sorghum where: (10 Marks)
i. Management cost for a hectare of land is = E2,700
ii. Sorghum is sold at a market price of E1,000/tonne
iii. A single aphid per plant is causing 5% defoliation
iv. 1% defoliation resulted in a 0.02 tonne yield loss
v. Proportionate reduction in injury by pesticide application is 50%
- b) Describe the procedure that is followed in field experiments to obtain Economic Threshold Level (10 Marks)

Question 3 (20 Marks)

- a) Discuss the difference between pest control and pest management (8 Marks)
b) Explain the objectives of pest management (12 Marks)

Question 4 (20 Marks)

Discuss the similarities and differences between parasitoids and parasites (20 Marks)

Question 5 (20 Marks)

- a) Briefly discuss three farm level cultural practices and two community level cultural practices that can be used in pest management (10 Marks)
b) Outline the advantages and disadvantages of cultural control (10 Marks)

Question 6 (20 Marks)

- a) Discuss the difference between ecological resistance and genetic resistance (12 Marks)
b) List the advantages and disadvantages of host plant resistance in pest management (8 Marks)

Question 7 (20 Marks)

- a) Discuss the role of insecticides in pest management (7 Marks)
b) Outline the information that a pesticide label should contain (7 Marks)
c) Describe the four basic principles of IPM (6 Marks)

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UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER

2nd SEMESTER 2016-2017

PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR 2

COURSE CODE: CPR202

TITLE OF PAPER: ANNUAL CROPS

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER QUESTIONS 1 & 2 AND ANY OTHER TWO QUESTIONS.

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COURSE CODE: CPR202 (F) 2016 - 2017

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QUESTION 1 - COMPULSORY

Describe the cultivation of the Irish potato under each of the following headings:

- a) Climatic and soil requirements (5 marks)
- b) Seed-bed preparation and planting (5 marks)
- c) Fertiliser requirements (5 marks)
- d) Insect pest and disease control (5 marks)
- e) Yield per hectare (5 marks)

[25 Marks]**QUESTION 2 - COMPULSORY**

- a) Describe the factors that determine the most suitable planting date for dry beans. (5 marks)
- b) Explain the relationship between nodulation and dry matter and grain yield (5 Marks)
- c) Describe two diseases and two pests commonly associated with beans (*Phaseolus vulgaris* L.) and give their symptoms and control. (10 Marks)
- d) Explain the horticultural maturity in beans. (5 Marks)

[25 Marks]**QUESTION 3**

- a) Explain five factors that make maize an important crop in Swaziland. (5 marks)
- b) Explain the advantages of planting hybrid seeds over the local seeds. (5 marks)
- c) Describe how you would control witch weed (*Striga asiatica* L. Kuntze) in cereal production. (5 marks)
- d) Compare and contrast the performance of sorghum to maize in terms of yield in all production areas in Swaziland. (5 marks)
- e) List and describe the different products for human consumption that are produced from sorghum. (5 marks)

[25 Marks]**QUESTION 4**

- a) Explain the advantages of ridging in potato production. (10 marks)
- b) Why are the vine cuttings in sweet potatoes preferred to roots as planting material in propagation? (5 marks)
- c) Explain why nitrogen fertilizers are not a requirement in root crops. (5 marks)

[25 Marks]

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QUESTION 5

- a) Explain what the harvest index is and indicate how it is calculated (5 marks)
- b) Give reasons why the harvest index is low in some crops (10 marks)
- c) How could the harvest index be improved? (10 marks)

[25 Marks]