

1ST SEM. 2013/2014 (M)

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR 4

COURSE CODE: CP 403

TITLE OF PAPER: FIBRE, TOBACCO AND TUBER CROPS.

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

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QUESTION 1

- (a) Give the main advantages of planting tuber crops on mounds and ridges (7 marks)
- (b) What are the limitations of planting the tuber crops on ridges? (3 marks)
- (c) Give reasons why seedbeds should be prepared early? (5 marks)
- (d) In some crops organs that are 'sources' of photoassimilates change with crop growth and development. Discuss this observation with specific examples (10 marks)

QUESTION 2

- (a) Explain erectophiles and planophiles (5 marks)
- (b) Outline the main differences between erectophiles and planophiles (10 marks)
- (c) Why is the efficiency of using solar energy in photosynthesis often very low (10 marks)

QUESTION 3

- (a) Describe with the aid of diagrams the different methods of planting cassava stem cuttings indicating the unique features of each method including suitability (10 marks)
- (b) How is 'chitting' done in potato production? (5 marks)
- (c) Give reasons why late blight of potato is difficult to control. (10 marks)

QUESTION 4

- (a) Describe how cotton is harvested by small-scale farmers (5 marks)
- (b) Describe in detail nursery practices in raising tobacco seedlings from seedbed preparation up to transplanting (10 marks)
- (c) Explain harvest index and indicate how it is calculated (5 marks)
- (d) Give examples as to why harvest index is low in some crops (5 marks)

QUESTION 5

- (a) Briefly describe the two most important constraints in sweetpotato production (10 marks)
- (b) Outline the ecological requirements of the potato (*Solanum tuberosum*) crop (10 marks)
- (c) Distinguish with examples, the two major types of competition in crop production (5 marks)