



76

**UNIVERSITY OF SWAZILAND**  
**SUPPLEMENTARY EXAMINATION PAPER**

**1<sup>ST</sup> SEMESTER 2016/2017**

**PROGRAMME:** B.Sc. AGRICULTURAL & BIOSYSTEMS ENGINEERING  
YEAR 4  
B.Sc. AGRIC. ECON. & AgBMgt YEAR 4  
B.Sc. AGRICULTURAL EDUCATION YEAR 4

**COURSE CODE:** CPR210

**TITLE OF PAPER:** FIELD CROPS

**TIME ALLOWED:** TWO (2) HOURS

**INSTRUCTIONS:** ANSWER QUESTION 1 AND 2 AND ANY OTHER TWO  
QUESTIONS

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

**COURSE CODE: CPR210 (S) 2016/2017**

**QUESTION 1**

- a) What are heat units and how are they determined. (8 marks)
  - b) Discuss the practical implications of heat units and the optimum planting date of a maize crop. (9 marks)
  - c) How is the growth class of hybrids determined? (8 marks)
- [25 Marks]**

**QUESTION 2**

- (a) Discuss the effects of rotating sorghum with cotton and indicate the benefits that would accrue to farmers in the cotton growing regions from exercising this option. (15 marks)
  - (b) Sorghum plants have an ability to yield even under severe drought conditions. Discuss. (10 marks)
- [25 Marks]**

**QUESTION 3**

Discuss the agronomic aspects of sorghum (*Sorghum bicolor*) production in Swaziland, under the following headings:

- a) Tillage (5 marks)
  - b) Time of planting (5 marks)
  - c) Plant population on yield (5 marks)
  - d) Fertilizer response, water requirement and management (5 marks)
  - e) Crop sanitation – weed, pest and disease control (5 marks)
- [25 Marks]**

**QUESTION 4**

Discuss the major reasons why soya bean is not grown on a large scale in Swaziland and suggest how production could be increased.

**[25 Marks]**

**QUESTION 5**

- a) The maize and beans intercropping system is common in tropical and subtropical regions. Discuss the factors that influence the performance of this intercropping system. (15 marks)
  - b) Discuss five aspects to successful intercropping. (10 marks)
- [25 Marks]**