



UNIVERSITY OF ESWATINI

FIRST SEMESTER, 2020/2021 ACADEMIC YEAR

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MAIN EXAMINATION PAPER

PROGRAMME: B.Sc. AGRONOMY 4  
COURSE CODE: CP 402  
TITLE OF THE PAPER: BIOFUEL CROPS PRODUCTION  
TIME ALLOWED: TWO (2) HOURS  
INSTRUCTION: ANSWER ANY OF **FOUR (4)** QUESTIONS

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### QUESTION 1

[25 marks]

Describe the different types of bioenergy crops including their potential, limitation and examples for each of them.

### QUESTION 2

[25 MARKS]

2.1 Define carbon sequestration. (5 marks)

2.2 Explain the different methods of carbon sequestration. (20 marks)

### QUESTION 3

[25 marks]

Explain the reasons for the stoppage of research and commercial production of *Jatropha curcas* L. (JCL) in Eswatini.

### QUESTION 4

[25 marks]

Explain the differences among bioethanol, biodiesel and biogas with emphasis on the processes involved, environmental benefits, costs and greenhouse-gas emissions (GHG).

### QUESTION 5

[25 marks]

With the aid of a schematic diagram, describe the major steps involved in the processing of sugarcane stating the major products and byproducts at each step.