"Investing in Africa's future"

COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

NACP 211: CROP PHYSIOLOGY

NOVEMBER/ DECEMBER 2020

LECTURER: MR. MTAITA T. A.

DURATION: 24 HRS

INSTRUCTIONS

1. Download the examination paper from MOODLE and work offline
2. Choose and answer **one** question
3. Upload your response on Moodle in PDF format

NACP 211: CROP PHYSIOLOGY

Question One

a) Discuss the main concerns of a crop physiologist in agriculture science. **[20]**

b) As a newly employed crop physiologist, discuss how to increase plant crop growth and yield. **[30]**

c) From a crop physiology perspective, critique why developing countries are still failing to achieve food security and suggest some practical solutions. **[30]**

d) Explicitly and separately, elucidate the processes and attributes governing yield when solar radiation and water are limiting. **[20]**

Question Two

a) Discuss how resource poor farmers can improve solar radiation interception and utilization. **[20]**

b) Explain why growing a crop is considered to be an exercise in energy transformation and specify why there is no one set of characteristics that can be recommended to improve yield. **[30]**

c) Separately discuss the processes and attributes governing yield when water or light is limiting and how to overcome the problem. **[30]**

d) From a crop physiology perspective, critique why developing countries are still failing to achieve food security. **[20]**

Question Three

a) As a crop physiologist, clearly identify plant yield components and analyse how to improve plant growth and final yield. **[40]**

b) Discuss the main concerns of a crop physiologist in agriculture science. **[20]**

c) Explicitly, discuss the commercial uses of plant growth regulators in agriculture and indicate why with their shining virtues, plant growth regulators are not very common in the developing countries. **[20]**

d) With realistic examples, elucidate why crop physiologists cannot provide one set of characteristics to improve crop yield. **[20]**

END OF EXAMINATION PAPER