

UNIVERSITY OF FORT HARE

SPECIAL EXAMINATION

NOVEMBER 2017

AGE 311 - Advanced Farm Business Management

Time: 3 hours

Marks: 100

Internal examiner

External examiner

Mr. IRF Trollip

Dr. P Chaminuka

Instructions

1. Answer **ANY** three (3) questions in Section A **AND** question 5 in Section B.
2. This paper consists of THREE pages, including the cover page.

SECTION A

Answer **any three (3)** questions **ONLY**.

QUESTION ONE (25 marks)

In Classical Production Theory it is possible to substitute one input for another. In Linear Production Theory this is not possible for a single activity. Explain why this is so. Also explain, in detail with the aid of an illustration, how input substitution can be incorporated.

QUESTION TWO (25 marks)

Capital budgeting is used to provide information regarding decisions relating to long term capital investments. Give a DETAILED explanation of why such decisions are extremely important as well as why they are virtually unavoidable. (NB: Do NOT merely recite the notes!!)

QUESTION THREE (25 marks)

Subjective probabilities are very useful in making farm business decisions in an uncertain environment. Explain how they, in conjunction with the concepts of expected monetary value (EMV) and certainty equivalents (CE) can be used to advantage when making such decisions. Use a simple decision tree to illustrate your answer.

QUESTION FOUR (25 marks)

Explain why the control task is absolutely necessary in the farm management function. Show how the different types of control are incorporated into the function.

SECTION B

Question five **MUST** be answered.

QUESTION FIVE (25 marks)

A fairly common disease in onions is Leaf Blight which causes stunting in the growth of the plant resulting in considerably reduced yields and hence severe reduction in Gross Margin. Various management practices, such as spraying, can reduce or eliminate its occurrence.

In spite of other practices, such as crop rotation and careful treatment of the plants to avoid injury, it may be necessary to spray the crop, incurring additional costs.

It is estimated that if the crop **is not** sprayed and Leaf Blight **does not** occur, a Gross Income of R90 000 per ha. will be obtained with normal operating costs of R40 000. If Leaf Blight **does** occur as a result of **not** spraying, the gross Income is expected to be only R65 000 due to decreased yield and loss of quality. In order to prevent the disease occurring, the crop can be sprayed at an additional cost of R12 500 per ha.

Depending on the farm manager's perception (subjective probability) of how often the disease will strike should the onions **not** be sprayed, as well as the assumed impact this will have on the farm business, the manager must decide whether to spray the onions or not.

- i. A farmer who believes the disease will strike once every five years is seeking your advice as to whether the cabbages should be sprayed or not. What would you advise the farmer to do? Show all calculations you need in order to reach your conclusion. [13]
- ii. As you are rather vague regarding the occurrence of the disease, calculate the break-even probability of it occurring. Briefly explain the implications of this. [12]