

**2<sup>ND</sup> SEMESTER 2012/2013**



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**UNIVERSITY OF SWAZILAND**

**FINAL EXAMINATION PAPER**

**PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR 4**

**COURSE CODE: CP 408**

**TITLE OF PAPER: WEED MANAGEMENT**

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

**INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS**

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CHIEF INVIGILATOR**

**QUESTION 1**

- (a) Explain why cultivated fields in the tropics have a smaller amount of weed seed in the soil weed seed bank compared to similar soils in the temperate region (4 marks).
- (b) Outline the major objectives of most weed management programmes indicating the feasibility and limitations of each (6 marks).
- (c) Which factors affect the effectiveness of herbicide application when used in field crops production? (7 marks).
- (d) How are herbicides able to kill weeds and not the crops? (8 marks).

**[25]**

**QUESTION 2**

- (a) Outline seed-related characteristics that facilitate persistence of weeds (7 marks).
- (b) Name definable plant traits that set weeds apart from other types of plant species (10 marks).
- (c) Discuss factors that influence the competitive ability of weeds (6 marks).
- (d) Which is the best weed management strategy (2 marks)

**[25]**

**QUESTION 3**

- (a) Define the term herbicide formulation (5 marks).
- (b) Distinguish the various types of herbicide formulations that are now available on the market (15 marks).
- (c) Which factors influence a farmers' choice of a herbicide (to buy) for weed control on the farm (5 marks).

**[25]**

#### QUESTION 4

- (a) Explain why *Striga* is a difficult weed to control (5 marks).
- (b) Which technologies or methods would you recommend to control *Striga* infestation of maize in southern Africa? (10 marks).
- (c) Outline the factors that influence survival of *Chromolaena odorata* (5 marks).
- (d) How would you control *Sandanazwe* infestation? (5marks).

[25]

#### QUESTION 5

- (a) What are the major (i) advantages and (ii) limitations of chemical weed control? (10 marks).
- (b) Briefly discuss the fate of soil-applied herbicides (10 marks).
- (c) Describe a simple way of calibrating a knapsack sprayer for herbicide application (5 marks).

[25]