

149



UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY, YEAR FOUR

COURSE CODE: CP 408

TITLE OF PAPER: WEED MANAGEMENT

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ALL QUESTIONS

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

**QUESTION 1**

How do weeds differ from the crops with which they compete? Discuss\* citing appropriate examples.

(20 Marks)

**QUESTION 2**

Developing an effective chemical weed control program requires careful consideration of a number of factors. Describe these factors giving brief justification.

(20 Marks)

**QUESTION 3**

Table 1 below is adapted from work of Staniforth (2015). Describe the experiment, results and interpret the results.

Year	Weed Yld kg/ha	Soybean Yield (kg/ha)		Reductions Due to Weeds	
		Weed-free	Weedy	kg/ha	kg/kg weeds
2010	4936	2288	1460	828	0.17
2011	2486	2618	2221	397	0.16
2012	3304	2571	1454	1117	0.34
Avg	3584	2490	1710	780	0.22

(20 Marks)

**QUESTION 4**

Clearly distinguish the weed flora under no-till mulch-based conservation agriculture with that under tractor-tilled conventional agriculture practices. Give appropriate reasons for the differences.

(20 Marks)

**QUESTION 5**

The data in Table 2 below demonstrate the influence of soybean row spacing on weed problems later in the season. Note that soybeans received a postemergence herbicide in all row spacings. The data focus on weed resurgence after that postemergence

Row spacing	Weed density	Weed biomass
(cm)	No./10 m <sup>2</sup>	g/10 m <sup>2</sup>
23	37	300
46	67	620
92	1260	1250

application.

- Interpret the data giving justifications for your observations
- Based on your knowledge of weeds, crops and their interaction, what else should have been included in the study. Give reasons.

(20 Marks)