

# **KENYA NATIONAL EXAMINATION COUNCIL KCSE, 2014**

## **AGRICULTURE PAPER 1 ANALYSIS**

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### 3.8 AGRICULTURE (443)

In the year 2014, K.C.S.E Agriculture Examination consisted of three papers; Paper 1, Paper 2 and Paper 3. The three papers tested the candidates' competence in understanding the agricultural principles, concepts and practices as stipulated in the syllabus. A wide range of knowledge and skills was tested in order to bring out the different abilities of the candidates. The format of the three papers is as follows:

- **Paper 1 (443/1):** This is a theory paper that covers General Agriculture, Crop Production, Agriculture Economics and Soil and Water Conservation. It has three sections, A, B and C, which are marked out of 30, 20 and 40 marks respectively.
- **Paper 2 (443/2):** It is also a theory paper but covers Livestock Production, Farm Power, Farm Machinery, Farm Structures and Farm Tools and Equipment. It has three sections, A, B and C which are also marked out of 30, 20 and 40 marks respectively.
- **Paper 3 (443/3):** This is a project paper with two project questions, **Project A** and **B**. In 2014, Project A required candidates to prepare **compost manure** while B was on production of **beans or cabbages**. Candidates selected and carried out only one of the two projects. The paper is scored out of 100 marks.

#### 3.8.1 CANDIDATES' OVERALL PERFORMANCE

The table below shows the general performance of candidates in the year 2014 KCSE Agriculture Examination. Performance in the previous five years has been included for comparison.

**Table 16: Candidates overall performance in Agriculture for the last six years**

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2014	1		90	40.93	15.75
	2		90	31.47	12.85
	3		20	8.63	2.76
	Overall	191362	200	83.00	29.29
2013	1		90	29.80	13.53
	2		90	31.22	14.30
	3		20	6.19	2.28
	Overall	178,771	200	67.19	28.26
2012	1		90	38.87	15.15
	2		90	25.61	12.86
	3		20	7.72	2.49
	Overall	178,419	200	69.96	28.85
2011	1		90	26.33	13.73
	2		90	40.30	15.29
	Overall	167,709	180	74.33	29.62
2010	1		90	24.82	11.58
	2		90	36.07	15.07
	Overall	140,237	180	67.96	27.12
2009	1		90	33.54	15.10
	2		90	34.91	13.49
	Overall	137,217	180	77.67	29.12

The following observations can be made from the summary in the table:

- (i) Candidates' performance in Agriculture improved. This is shown by the increase in the overall mean score from **67.19** in 2013 to **83.00** in 2014. **Paper 1 (443/1)** mean score improved from **29.80** in 2013 to **40.93** in 2014. The mean score for **Paper 2 (443/2)** slightly improved from **31.22** in 2013 to **31.47** in 2014.
- (ii) The overall standard deviation was **29.29**. The value of the standard deviation indicates that the two papers were able to adequately discriminate candidates of different abilities.
- (iii) The candidature increased from **178,771** in 2013 to **191,632** in 2014. A similar trend was also observed in the years 2013, 2012, 2011, 2010, 2009 and 2008. This is a likely indication of increasing popularity of the subject in schools.

### 3.8.2 ANALYSIS OF POORLY PERFORMED QUESTIONS

The following is the analysis of the items that were poorly performed by candidates in the year 2014 KCSE Agriculture examination. This report highlights these questions and gives the expected responses. It also offers a general advice to teachers on the possible methodologies to emphasise during instruction.

#### 3.8.3 Agriculture Paper 1 (443/1)

##### Question 2

Give **four** factors that can increase seed rates in crop production.

(2 marks)

##### Weaknesses

Most of the candidates did not comprehend the stem of the item. Instead of giving factors that increase seed rates, they gave the factors that influence seed rates.

##### Expected responses

- (i) Seed impurity;
- (ii) Low germination percentage;
- (iii) Close spacing;
- (iv) More seeds per hole / broadcasting;
- (v) Early planting / dry planting;

##### Question 10

What is meant by each of the following in agroforestry?

- (a) Pollarding; (1 mark)
- (b) Coppicing; (1 mark)
- (c) Lopping. (1 mark)

**Weaknesses**

Most of the candidates were not able to define *pollarding*, *coppicing* and *lopping*.

**Expected responses**

- (a) Pollarding - cutting back the crown and the top branches of a tree;
- (b) Coppicing - cutting down trees about half a meter from the ground;
- (c) Lopping - cutting one or more branches from the stem;

**Question 20 (a)**

Describe the various risks and uncertainties in crop farming. (10 marks)

**Weaknesses**

Most of the candidates were not able to describe the risks and uncertainties in crop production.

**Expected responses**

- Technology uncertainty.
- Price uncertainty.
- Personal injury or sickness.
- Government policy.
- Demand for a commodity uncertainty.
- Yield uncertainty.
- Theft of crop.
- Fire risk.
- Political instability.
- Labour uncertainty.
- Natural catastrophes.
- Pests and diseases.
- Obsolescence.