

***EXAMINATIONS COUNCIL OF ESWATINI***

**JC**

**EXAMINATION REPORT**

**FOR**

**AGRICULTURE**

**YEAR**

**2023**

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**Questions that were easily accessible to candidates**

**Section A:** Questions 2 (a), (c); 7 (a), (b), (c); 8 (a); 10 (a)

**Section B: Question 1**

- Introduction
- Safety precautions

**Question 2**

- Introduction
- Importance of honey bees
- Factors considered when establishing an apiary

**Question 3**

- Introduction
- Preparations for killing
- Methods of killing rabbits
- Packaging and storage

**Questions that were challenging to candidates**

**Section A:** Questions 1 (a); 3 (a); 4 (a), (b), (c); 5 (a), (b); 6 (a), (b); 8 (b); 10 (b); 11 (b); 12

**Section B: Question 1**

- Two things to consider on the method of control to use
- Ways in which systemic and contact pesticides work
- Preparation for spraying
- Using a sprayer

**Question 2**

- Topic
- Marketing of honey
- Packaging
- Labelling
- Grading
- Promotion strategies

**Question 3**

- Maturity for slaughter
- Dressing of the rabbit after killing
- Packaging and storage

## Paper 516/02

### Theory

JC Agriculture Paper 2 consists of two (2) sections, **SECTION A**: - Structured Questions and **SECTION B**: - Essay questions. This paper contributes 30% of the overall mark.

### General Comments on Paper 2

The general performance of candidates for Agriculture Paper 2 was poor as the majority of the candidates could not get 50%. There were few candidates who obtained very good marks (above 60%) and a reasonable number scored below 20%. However, most candidates ranged between 20 – 40% which was the average for most centres. Some candidates had challenges with both sections, section A of the paper and so was section B especially essays 1 and 3.

The paper was balanced in terms of syllabus coverage. In terms of language used it was appropriate and relevant to the grade level of the candidates. The candidates had serious challenges on certain questions and these included questions 1 (a); 3 (a); 4 (a), (b), (c); 5 (a), (b); 6 (a), (b); 8 (b); 10 (b); 11 (b); 12. There were few candidates with very poor spellings and grammar which made some of the answers provided to be difficult to be understood. Some hand writings for the candidates were very difficult to read.

### B. Comments on Specific Questions

#### Section A - Structured Questions – 50 Marks

**Question 1 (a)** Describe the role of intercropping in improving crop yield.

#### Expected responses:

- Full ground cover - reduce soil erosion
  - reduce weed growth
  - conserve moisture
- Including legumes - add/fix nitrogen/ nutrients
- Include repellent plants – to reduce pests and diseases infestation
- Optimal use of land – increases productivity of the land

#### Comments

This question was poorly answered by most candidates. Some candidates defined intercropping other than describing the role of intercropping in improving crop yield. Most candidates stated the advantages of intercropping. Another common incorrect answer was to define crop rotation

**Question 1 (b)** Explain the benefits of planting grass in a crop rotation.

#### Expected responses:

- Improve soil structure –leaves drop and rot; roots bind soil particles
- Control pests and disease – different types of crops break the cycle

#### Comments

Most candidates did fairly well in this question as they mentioned the improvement of soil structure without the explanatory aspect. Very few of the candidates simply defined crop rotation instead of answering the question. Some simply outlined the advantages of crop rotation.

**Question 2 (a) Fig. 2. 1** is a diagram of a farm implement.



**Fig. 2.1.**

**(a)** Name the implement in **Fig. 2.1**.

**Expected response:**

- disc plough

**Comments**

This question was poorly answered, and a majority of the candidates did not attempt to answer the question. Common incorrect responses included: tractor plough, plough, and disc. The candidates did not have an idea of what the equipment was.

**Question 2 (b)** Describe how a wheelbarrow is used.

**Expected responses:**

- Put load into the barrow. lift handles; push

**Comments**

This question was poorly answered by the candidates. Most candidates stated the functions of a wheelbarrow in a school or farm instead of how it functions or works.

**Question 2(c)** Discuss the importance of using tools that are in good condition.

**Expected response:**

- Avoid breakage of the tools
- Prevent injuries – tools may slide and hit people
- Faults can become worse/ tools last longer
- Makes work easier/ tool efficiency

**Comments**

Most of the candidates gave correct answers to this question as most of them stated that tools makes work easier and tools last longer.

**Question 3(a)** State any **two** benefits of a green house in vegetable production.

**Expected response:**

- Protects crops from extreme weather conditions
- Ensures availability of the vegetables all year round/ extends the growing season of the crops
- Control pests and diseases

### Comments

This question was very poorly answered by the candidates. Some candidates mentioned the effects of greenhouse gases and global warming. A majority of them seemed not to know much about the concept of green house. Some could not link the concept of green house and vegetable production.

**Question 3 (b)** Explain how desertification can be reduced.

#### Expected responses:

- Planting trees/ grass - which hold soil together; improve soil structure; reduce soil erosion; promote ground cover
- Reduce number of grazing livestock – to prevent vegetation loss.

#### Comments:

This question was fairly answered as most candidates were able to explain how desertification is reduced.

**Question 4 (a)** Name the term which describes the balance of available nutrient in the soil and nutrient required by the plant.

#### Expected response:

- Nutrient cycle

#### Comments:

This question was poorly answered by most candidates, and it seems like they did not have an idea of the expected response. The most commonly written response was “soil fertility.

**Question 4 (b)** State the role of lime in clay soils with a pH of 5.5-6.5.

#### Expected response:

- Flocculates the clay particles.

#### Comments:

This part of the question was poorly answered by most candidates. Common wrong answers included: increases clay soil pH.

**Question 4 (c)** Explain the process of green manuring in a field.

#### Expected response:

- Growing a crop; cultivate it into soil at maximum maturity; to decompose and release nutrients into the soil/ add organic matter into the soil which is then cut and dug/ ploughed into the soil

#### Comments:

This question was poorly answered by the candidate. Candidates failed to understand the concept of green manuring. Incorrect answers written by the candidates included: make soil rich in nutrients; and adding nutrients; and defined green manuring.

**Question 5 (a)** Explain the process of respiration in plants.

**Expected responses**

- Breaking down of carbohydrates; to release energy.

**Comments:**

This question was poorly answered as most candidates. Candidates explained transpiration instead of respiration. Common wrong responses provided include: photosynthesis definition. Very few of the candidates showed understanding of respiration in full.

**Question 5 (b)** Discuss the effects of light on the rate of respiration.

**Expected responses**

- Increase in light intensity; increase the rate of respiration.

**Comments:**

This question was poorly answered by a majority of the candidates. They related the question to transpiration saying light increases the loss of water in plants growth. Common incorrect answers written by candidates included: increase in light results to wilting; light does not affect respiration but only photosynthesis; increase in light results to decrease in respiration and vice versa.

**Question 6 (a)** Give any **one** method of curing sweet potatoes.

**Expected responses**

- Drying/ put in dry place; steaming; warming.

**Comments:**

This question was poorly answered by most candidates as they did not understand the curing of sweet potatoes. Common wrong responses by the candidates included: store in a brown paper; store in a cool place or expose to sunlight.

**Question 6 (b)** Explain the procedure for testing if tobacco leaves are ready for harvest.

**Expected responses**

- Hold the middle of the underside of the leaf and squeeze; a cracking sound indicate that it is ready.

**Comments:**

This question was poorly answered as the majority of candidates got nothing out of this question. Most candidates indicated the observations done to check if the tobacco is ready for harvest. Common wrong answers given by the candidates included: plant turn mottled yellow. Candidates were not able to explain how tobacco is tested for harvest readiness.

**Question 7 (a)** State the importance of a footbath in a poultry house.

**Expected responses:**

- Prevent entry of diseases into the poultry house

**Comments:**

This question was well answered by a majority of the candidates. Accepted responses included: killing germs; destroy bacteria and disinfect germs on the sole of the shoes. Almost all the candidates had an idea on the concept of the footbath.

**Question 7 (b)** Describe how the age of chickens affects the size of eggs in layers.

Expected responses:

- Younger hens lay smaller eggs, egg size increases with age.

**Comments:**

This question was easily accessible by most of the candidates. Those who did not get it correctly, misinterpreted “size of the eggs” for “quality of the eggs” and “frequency of laying eggs”. Common incorrect responses included: old chickens lay few eggs and younger chickens lay many eggs without qualifying whether they were big or small. Some even mentioned that old chickens cannot produce eggs and young chickens cannot produce eggs.

**Question 7 (c)** Explain any **one** way of preventing cannibalism in poultry.

Expected response:

- Provide enough food for good nutrition;
- Hang greens for chickens to peck and to be kept busy/ prevent boredom;
- Add a little salt in the drinking water for calcium enrichment
- Provide enough space to reduce overcrowding

**Comments:**

This part of the question was well attempted by most of the candidates. Most common correct answers written by the learners included: hanging greens and provision of enough space for each chicken.

**Question 8 (a)** Give any **two** types of pheromones in bee keeping.

Expected response

- Alarm/ alert; aggregation/ swarming; forager bees; virgin; brood; marker pheromone.

**Comments:**

A well answered question but some candidates simply described the pheromones instead of stating the pheromones e.g. instead of stating forage pheromones they said food pheromones. Common incorrect responses included: mating pheromone and meeting pheromone.

**Question 8 (b)** Describe supplementary feeding in bees.

Expected response

- Using a concentrated syrup to provide the bees with raw material so that they can store/reserve of food/ honey



**Comments:**

This question was poorly answered as the candidates wrote answers such as dilute syrup instead of concentrated syrup. Those who had forgotten the correct response mentioned mixing sugar with water while others wrote planting flowers.

**Question 9 (a) Table 9.1** shows organs and functions of parts of the digestive system of a rabbits.

Complete the following information:

ORGAN	FUNCTION
Small intestines	(i) .....
Ceacum	(ii) .....
(iii) .....	Absorption of water

**Expected responses**

- (i) Food absorption
- (ii) Breakdown of cellulose
- (iii) Colon/ large intestines

**Comments:**

This question was poorly answered by most candidates. Most candidates did not know the functions of the organs. Common incorrect responses included: (i) – passage of food to the intestines and digestion; (ii) – absorption of nutrients or minerals; and (iii) – stomach. Some misspelled colon for colony.

**Question 9 (b)** Explain why rabbits feed on their night feaces.

**Expected responses:**

- Obtain nutrients – nutrients are not absorbed during the first cycle of digestion.
- Easy to digest.

**Comments:**

This part of the question had an average performance from candidates. Common incorrect responses included: vitamin D instead of vitamin B; digest instead of easily digest.

**Question 10 (a)** State **any** two factors to consider when buying a breeding stock of goats.

**Expected responses:**

- Healthy animal with strong, well placed and good feet;
- Bright, and alert eyes;
- Clean and shiny coat;
- Firm udder with normal teats for milking goats;
- Buy goats without horns.
- Do not buy milking goats if you are not going to milk them
- Well-developed testicles

- Breeding records
- Age (1 – 2 years)

**Comments:**

A good performance by most candidates in most centres was noted. A few candidates repeated similar points.

**Question 10 (b)** Explain the importance of hoof-trimming.

**Expected responses:**

- For the sole to be level - to avoid self-injury  
- to prevent stress/ limping.

**Comments:**

This question was poorly answered by the candidates as they confused hoof-trimming for dehorning. Some even confused it with the pruning of trees. Common incorrect responses included: to avoid injuries during fights; horns lead to injuries during fights; to allow new branches to grow and also to get higher yield.

**Question 11 (a)** Describe any one way of controlling invasive plant in a pasture.

**Expected responses:**

- Cutting with bush knives - digging out roots;
- Using herbicides; introducing insects/goats;
- Digging out the roots; burn stumps

**Comments:**

This question was fairly attempted and performed by most candidates. Common correct responses given included: cutting and digging out of roots.

**Question 11 (b)** Explain the benefit of planting kikuyu and rye grass together in a pasture.

**Expected responses:**

- Provide good grass through-out the year – when kikuyu dies, rye grass remains.
- Kikuyu is palatable and nutritious whist rye grass is poor but perennial

**Comments:**

A very poor performance by most candidates in most centres. The candidates failed to apply the differences between kikuyu and rye grass. Common incorrect responses included: to avoid erosion; to help get nutrients and to feed the cattle.

**Question 12** Describe **two** marketing processes that promote a product.

**Expected responses:**

- Advertising – informing consumers about what is available.
- Selling – convincing customers that they need the product.
- Pricing – putting value to the product.

**Comments:**

This question proved to be challenging for most candidates. Some seemed to have no idea of the marketing processes. Those who got it correct only named the marketing functions without the description.

**SECTION B: Essay Questions**

Candidates answered any **two** questions from this section.

**Question 1**

1. Describe the control of pests on crops using the guidelines below.

- Topic
- Introduction (description of pest)
- Two things to consider on the method of control to use.
- Describe with an example the following pest control methods:
  - biological
  - cultural and
  - chemical)
- Ways in which systemic and contact pesticides work.
- Preparation for spraying.
- Using a sprayer.
- Any three safety precautions.

**Topic of the essay:**

**Expected response:**

- Pest control

**Comment:**

This bullet of the essay was well answered by most candidates, except for a few who wrote the topic as “pest”

**Introduction (description of pest)**

**Expected response:**

- Any living organism that feeds on crops

**Comment:**

This part of the essay was fairly answered by most of the candidates. A few of them confused pest and disease and as such they described a disease instead of a pest.

**Two things to consider on the method of control to use.**

**Expected responses:**

- Pest type
- How badly crop is attacked
- Farmer's knowledge
- Cost of labour
- Equipment availability
- Chemicals availability

**Comment:**

This bullet of the essay was poorly answered by most of the candidates. Only a few mentioned the pest type as something to be considered. Candidates appeared to lack an idea on what the question required them to do or state.

**Describe with an example the following pest control methods:**

- **biological**
- **cultural and**
- **chemical**

**Expected responses:**

- Cultural; use of practical measures to control pest e.g. paraffin lamp in a bowl of water; crop rotation; early planting; weeding; picking; use of resistant varieties; pest repellent crops; winter ploughing
- Biological; use of natural enemies to control pests e.g. ladybirds on aphids; praying mantis; wasps; spiders and frogs
- Chemical; use of pesticides to control pest e.g. insecticides; fungicides; nematicides

**Comment:**

This part of the essay was fairly answered by the candidates. On cultural control, they were able to give the appropriate examples even without the proper description. Biological control was well answered with proper description and relevant examples. The most commonly provided answer was the use of natural enemies e.g. lady birds on aphids. Pertaining to chemical control, most candidates described chemical control as the use of chemicals with the correct example.

**Ways in which systemic and contact pesticides work**

**Expected responses:**

- Systemic; pesticides absorbed and carried in plant sap/kill sucking pests
- Contact; kill upon touch

**Comment:**

The performance of the candidates in this bullet of the essay was very poor. A large number of candidates did not have an idea on what was required of them. Those who attempted partially described how contact pesticides work.

### **Preparation for spraying**

#### **Expected responses:**

- Fill sprayer with water
- Pump sprayer to correct pressure
- Check if it sprays correctly
- If spraying correctly, release the pressure
- Empty the water from the sprayer and refill with 1 litre of water

#### **Comment:**

This question in this bullet of the essay was poorly answered by most candidates. Most candidates did not know the preparations done as they listed the safety precautions followed when using a sprayer such as wear protective clothing, do not spray when raining and do not spray on a windy day.

### **Using a sprayer**

#### **Expected responses:**

- Measure correct amount of pesticide and pour it in the sprayer
- Put back the cap valve and shake well to mix it
- Remove cap and fill sprayer with water to the correct level. Replace cap and shake well
- Pump to the correct pressure
- Spray the whole plant

#### **Comment:**

This part of the essay was poorly answered because the candidates mixed up the preparations with the use of the sprayer.

### **Any three safety precautions**

#### **Expected responses:**

- Start spraying when you reach the plot
- Do not spray when raining or about to rain
- Do not eat when spraying
- Do not spray on a windy day

#### **Comment:**

This part of the essay was well answered by the majority of the candidates and the most mentioned correct answers were: do not eat when spraying and do not spray on a windy day.

### **General Comments on Essay**

Candidates performed poorly in this essay. They had challenges on the two things to consider on the method of control to use, ways in which systemic and contact pesticides work, preparations for spraying, and using a sprayer. Most responses from candidates indicated that there were less emphasis on pest control during teaching and learning.

2. Describe the production and marketing of honey using the guidelines below.

- Topic
- Introduction (description of honeybee production)
- Importance of honeybees
- Factors considered when establishing an apiary
- Marketing of honey:
  - packaging
  - labelling details
  - grading
  - promotion strategies

**Topic of the essay**

**Expected responses:**

- Production and marketing of honey

**Comments:**

This bullet of the question was poorly answered by most candidates as they could not write the topic in full. A sizeable number wrote “production of honey” while some wrote “marketing honey”.

**Introduction (description of honey bee production)**

**Expected responses:**

- Keeping bees to produce honey.

**Comments:**

This bullet of the question was poorly answered by the candidates. Only a few candidates stated that honeybee production are bees kept for honey. Some simple defined bees.

**Importance of honeybees**

**Expected responses:**

- Income generation
- Health improvement
- Pollinators
- Education
- Entertainment / stress relief

**Comments:**

This bullet of the question was well answered by most candidates however, some candidates stated entertainment and stress relief as two separate points.

**Factors considered when establishing an apiary.**

**Expected responses:**

- Drainage
- Water
- Wind breakers

- Shade and sun
- Vehicle access

**Comments:**

This bullet of the question was fairly answered by the candidates. Most of the candidates mentioned water availability, shade from sun and also accessibility by vehicle. Drainage and wind breakers were rarely mentioned by the candidates.

**Marketing of honey:**

- **packaging**
- **labelling details**
- **grading**
- **promotion strategies**

**Expected responses:**

- **packaging:**
  - Packed in glass or plastic jars
  - Light weight
  - See-through
- **labelling details:**
  - Contents
  - Source of honey
  - Country of production
  - Weight of honey
  - Date of packaging
  - Name and address of bee-keeper
- **grading:**
  - According to color
  - According to thickness
- **promotion strategies:**
  - Personal selling
  - Advertising
  - Publicity
  - Sales promotion

**Comments:**

Most candidates did not do well on this bullet of the essay, more especially on the packaging, grading and promotion strategies. However, some candidates mentioned a few correct answers on the labelling details such as source of honey, packaging date, and name of the producer. On the overall, it showed that the candidates had not practically done bee keeping at their schools, thus were giving irrelevant answers.

### **General Comment on Essay**

The overall performance on the essay by the candidates was poor. The performance showed that the candidates were not exposed to practicals on bee keeping in their respective schools. They had challenges in the marketing of honey whilst this aspect of the essay had thirteen marks.

3. Describe the killing and dressing of rabbit using the guide below.

- Topic
- Introduction (description of rabbits production)
- Maturity for slaughter (weeks and kg)
- Preparations for killing
- Methods of killing
- Dressing of the rabbit after killing
- Packaging and storage

#### **Topic of the essay**

##### **Expected response:**

- Killing and dressing a rabbit

##### **Comments:**

This bullet of the question was fairly answered as the candidates provided answers that were acceptable.

#### **Introduction (description of rabbits production)**

##### **Expected responses:**

- Keeping of small domesticated animals (rabbits) for meat production

##### **Comments:**

This bullet of the question was poorly answered by the candidates. Most candidates gave an incorrect introduction as they only defined what a rabbit is.

#### **Maturity for slaughter (weeks and kg)**

##### **Expected responses:**

- 12-24 weeks old (3-6 months)
- 2 kg

##### **Comments:**

This bullet of the question was poorly answered by most candidates.

#### **Preparations for killing**

##### **Expected responses:**

- Do not give food for 12 hours



- Make sure water is available

**Comments:**

This bullet of the question was well answered by most candidates. Most responses included starving the rabbit without the mention of the duration. Water availability was also mentioned by most candidates.

**Methods of killing**

**Expected responses:**

- Hold the hind legs and head separately and pull or twist to dislocate the neck
- Hitting the rabbit hard on the back of the head behind the ears with a hard object.

**Comments:**

This bullet of the question had a poor performance from candidates. Only a few candidates mentioned the correct ways of killing a rabbits.

**Dressing of the rabbit after killing**

**Expected responses:**

- Hang carcass by its hind legs
- Cut the neck and allow blood to drain
- Use a sharp knife to cut through the skin around the hind legs
- Cut until cut meets behind the tail
- Cut from the tail along the belly till the neck
- Pull the skin down the body until it reaches the head.
- Cut around the front legs and head.
- Then pull the skin from the body.
- Cut the skin along the bodyline and pin it out for curing.
- Carefully cut into the abdomen until you see the intestines.
- Cut up to the chest and down to the anus.
- Remove the eviscerates (heart, lungs, liver, kidneys and digestive organs).
- Remove contents of the abdominal cavity.
- Wipe/ wash the carcass with a clean damp cloth.

**Comments:**

This bullet of the question was poorly answered by most candidates with a very few candidates mentioning a number of activity done when dressing a rabbit. Common correct activities mentioned included the removal of eviscerates and cleaning of the carcass. From the answers provided it appeared the candidates had never saw a rabbit dressed after slaughter.

**Packaging and storage**

**Expected responses:**

- Wrap/ pack the carcass in a transparent plastic bag.

- Store in a refrigerator / freeze the carcass.

### **Comments:**

Most candidates responded fairly well to this bullet of the question. They could mention at least the storage of the carcass in refrigerator or freezer.

### **General Comments on Essay**

The overall performance was very poor with the candidates having difficulty in articulating the dressing of a killed rabbit. A majority of the candidates stated how the rabbit is usually killed. The performance indicated that the question was not practicalized in the schools to warrant good performance from learners as they had to recall almost everything as there was no practical experience.

### **Comments on the question paper**

Very few candidates did not fully answer the question paper, yet the allocated time was sufficient for the candidates to answer all the sections. A majority of the candidates attempted all the questions as per the instructions. It was observed that some candidates did not attempt some questions at all especially in Section A and only a few candidates answered only one essay question in section B.

### **Advice to Agriculture teachers**

- Ensure that all topics of the syllabus are taught.
- Teachers need to teach candidates how to answer high order questions e.g. discussing, describing and explaining questions as the candidates take these to mean one thing and usually answer in the same vain.
- Emphasis should be made on the usage of technical terms used in agriculture when teaching.
- Engage learners in all topics that require practicals to make it easy for them when answering practical questions.
- Teachers are encouraged to use Examination Reports as they teach their candidates in order to note areas where they need to improve on.

## **Paper (516/03) Practicals**

### **Introduction**

Paper 3 is continuous assessment of the candidates' practical work compiled by the teacher, the teacher who is responsible for allocating marks is required to submit the complete schedule of all marks for the purpose of moderation. The total marks available for the assessment of the practical project over the 3 year course is 100. There are two practical projects worth 60 marks and two written reports based on the practical undertaken worth 40 marks.

### **General comments**

Teachers generally show good understanding on the practicals submitted, though this year there was a bit of decline in the quality of work submitted. Most Centres submitted 2 practicals as expected ie one on vegetables or crops and the other on livestock. There was an exception of very few schools though that submitted short term practicals instead of long term practicals. Teachers are advised to develop their own practicals.

### **Teachers file**

A majority of centres were able to submit the teacher's files with all the expected contents.

Contents of the teachers file:

- Blank practicals/ models of the practicals
- Mark guides for written work
- Diaries for each practical
- MS 1 mark sheets (**do not** staple or **punch holes**)
- Summary forms

Very few centres did not submit the teachers file

Some teacher's files lacked required content inside. Centres are advised to present Teachers files containing only the required contents inside.

### **Registers**

Most centres which had their registers submitted were marked correctly, with both columns ticked. Few centres however still have a challenge in completing the register correctly. Some centres marked sampled students on the present column of register. Other centres did not have the page totals written. Some centres had students appearing on the register and not in the summary sheets. All registered students must appear on the summary sheets, if not, there must be a covering letter explaining for explanation. All details on the register have to be filled, then signed and must have the date. Centres are reminded that they should keep the copy of the register and send the original.

### **Sampling**

Some centres sampled correctly according to expectations. Teachers were able to submit all three categories or a whole mark range: top students, moderate and low-ranking students. The highest and lowest students should be part of the sample. Some centres sampled incorrectly, some only sampled top bracket only. It was also noted that some centres submitted work that was not sampled. Some centres did not show sampled students by asterisk on the summary sheet. There is also a growing trend of centres not submitting the files of sampled students.

The sampling procedure should be as follows.

1 - 10 candidates (all files)

11 – 50 candidates (10 files)

51 – 100 candidates (15 files)

101 and above (20 files)

**NB. Centres are advised to sample students as they appear on the register which informs of the number of students registered to sit for the exam.**

### **MS 1 Form**

Most centres submitted the MS 1 form which was correctly filled. Some centres though did not submit the MS 1 form claiming that they were not delivered in schools. Some centres had the forms which were filled but had some information missing, such as shading marks without writing marks. Very few centres would shade M but at the same time have a mark shaded. A number of challenges were again repeated this year, which included MS1 forms being shaded but marks not entered. Some MS1 forms were punched, some fastened with staples and some written in ink. Teachers are advised to avoid doing the above. Some centres shaded the form but the corresponding mark being different, e.g. shading 60 then write 50 as a mark. Some centres had missing students entered by hand on the MS1. Centres are encouraged to use supplementary forms to enter students that are missing in the form. Absent students must be marked with an A on the MS 1 form. The MS1 marks should be similar to those in the summary sheet.

### **Summary Sheets**

A majority of the centres submitted well written summary sheets. Some centres had submitted their summary sheet but were incomplete with blank spaces on both practicals and guided reports. Some centres had decimals on their marks. We still had some centres having marks higher than the total e.g. 61 over 60. Centres are advised to provide a covering letters for the absent candidates as per the expectations. These letters should bear a school stamp. Centres are advised to staple summary sheets together especially those with a large number of candidates. All necessary information should be filled in the summary sheet e.g. Centre name and code, teachers name and contacts, the summary sheets should have the school stamp. Centres are also advised to use summary sheets provided by ECESWA. Summary sheets should be filled using a pen and candidates' names should appear as in the register.

**Note:** Centres that have students that dropped out for whatsoever reason should give their form 1 and 2 marks, these should be accompanied by a covering letter.

### **Student Cards**

Most centres filled and provided students cards that were correctly filled. Most centres had the practical activities arranged according to the arrangement of the practicals in the student's cards. However some centres did not arrange their practical activities in the correct order. The correct order being Vegetable Production or Field Crops and Livestock Production. Some centres submitted all the student cards instead of the sampled ones. The title of practicals in the student card should be similar to that on the practical. Some centres still enter marks with decimals which is not allowed. Teachers are requested to fill student cards themselves.

## **PRACTICAL SKILLS**

Centres are advised to develop and improve their own practicals. Teachers are requested to consult if they are facing challenges in developing practicals. Some centres still continue to have their practicals as short term eg killing and dressing a rabbit, instead of long term as per the requirements of the syllabus.

### **TOPIC**

It is expected that all practical activities should have a topic that is relevant to the practical skill evaluated. The topic should be short and clear within the enterprises in the syllabus. The topic that appears on the assessment instrument must be the same as the one on the student card. Some centres still had topics that were not specific to the enterprise e.g. Vegetable Production which could fit every vegetable. Some topics were not corresponding with what is written in the practical inside. Centres are advised to edit their practicals to make their topics specific to the enterprise.

### **Instructions**

The expectation is that the instructions must be brief and precise. They should cover the entire duration of the practical. Observations are to the effect that some centres had their instructions for short term practicals. Some centres still had too many instructions and very few had no instructions at all.

### **Materials**

It is expected that tools, equipment and inputs be relevant to the practical activity. Most centres had materials properly written in their practicals. Teachers may tabulate the materials. Some centres still had the main input missing.

### **Tasks**

Most centres were able to select practical tasks across the enterprise they had selected. Example in vegetable production, tasks were selected from preparation, planting, management and harvesting. Some centres though had tasks taken from one part of the enterprise.

### **Criteria**

Most centres had followed the well written format of the criteria, ie Responsibility, Initiative, Technique, Perseverance and Quality. Few centres had criteria jumbled for example starting with Initiative or ending with Perseverance. This resulted in some criteria being omitted in the process. Each criterion should start on a new page. It is preferred that the criteria are not typed back to back. Few centres had their criterion overlapping to other pages. The tasks should be specific to the enterprise.

### **Descriptors**

Descriptors must be distributed across the enterprise under each criterion, the descriptors should be specific to the enterprise. The number of descriptors must also be the same within and across the criteria. There was slight decline in the instruments submitted for moderation this year. There was an improvement in the construction of the responsibility and perseverance descriptor. Challenges were noted in the construction of initiative, Technique and Quality. Very few centres still use the examples in the syllabus. Some centres had their descriptors too general and not clear. Teachers should edit their descriptors to avoid some being irrelevant to the enterprise e.g. having a good descriptor for onion production in a spinach production practical exercise. NB. Centres are encouraged to develop their own descriptors. It is recommended that centres must have 5 descriptors.

## Scaling

The expected scaling should be 5/4; 3/2; and 1/0 differentiating the three levels under each criteria in their own column. The columns of the instrument should be as follows. Descriptors, Scale, Mark allocated and Teachers comment.

Descriptors	Scale	Mark allocated	Teacher's comment
	5/4		
	3/2		
	1/0		

Most centres had the correct scaling. There were only a few centres that had the wrong scaling. Very few centres had no column for marks and also had the first column as the scale.

## Teacher's comments

Teachers are expected to comment on marks obtained by candidates per criterion to justify the marks awarded. There was a great improvement in the comments made by teachers, doing away with the general comments of good, fair and bad.

## Packaging

### (a) Student files

These should have the following materials arranged in this order:

- Student cards for practical
- Student cards for guided write up
- Practical exercises in this order vegetables or Crops and Livestock
- Guided write up also arranged in the same order
- Evidence ie Diaries, pictures and written work.
- Teachers are urged to use paper files with Indian treasure tags not metal paper fasteners

It is recommended that all work for a pupil is placed in one file i.e. practicals and write-ups. Some Centres did not have anything to fasten papers in the student files. Very few centres used pocket files which is discouraged.

### (b) Examination Packaging

Centres are expected to write the following items under CONTENTS ENCLOSED.

1. Attendance register
2. Summary sheet
3. Quantity of sampled students' files
4. Teacher's file
5. MS1 form (in a brown envelope)

There should be one teacher's file even in schools where there are more than one teacher for that level.

## **Evidence**

Evidence in the form of diaries, production records written work and photos are ideal to a practical exercise. Most centres submitted diaries and written work as evidence. Very few centres did not submit any evidence at all. Centres are encouraged to submit evidence in the form of diaries and or pictures. Teachers are encouraged to maintain original diaries or ensure that they do not lose critical information during the transfer of diaries.

## **Guided write-up report**

### **Title**

The report should bear a clear title. This should appear on the first page, together with the name of the candidate and name of centre. Most centres had specific topics and relevant to the enterprise, but some still have general topics thus are encouraged to have specific titles to the enterprise stating the vegetable or crop and livestock. A few centres still had titles that are not in line with the practical undertaken.

### **Introduction**

The introduction should include the importance of the enterprise, the nutritional value, economic importance and the origin. Sometimes may be a brief description of the enterprise. Most centres had the introduction relevant to the topic and its depth was relevant to the level of the candidates. We still had a few centres even this year that had very long Introductions which were of higher level than the candidates. The structure of the introductions should be that for form three not form five. Introductions should just give an outline.

### **Objectives**

These should be specific based on the purpose of doing the enterprise or practical. Centres should have only four objectives that are specific to the enterprise. The objectives should be SMART (specific, measurable, attainable, realistic and time bound). Only a few students were able to write specific and measurable objectives. Some centres still write objectives that compare two variables which is not in JC level. Some other centres had less than four objectives. It is advisable to have an opening statement for objectives, e.g. The objectives of the practical were;

### **Materials Used**

It is expected that candidates list inputs, tools and equipment used during the practical. Some centres listed only tools and implements as they appear in the textbooks. Some centres just gave the list of tools without uses. Some centres still do not write the main input of the enterprise. eg on livestock enterprise centres fail to write rabbits, layers or chicks. It is recommended that candidates explain the functions or uses of the tools, equipment, and inputs. These should be explaining how they were used in the practical. Some centres had general inputs such as fertilizer instead of LAN. All materials used for the enterprise must be indicated.

### **Preparations**

These are activities done prior to management e.g. activities done until planting/ transplanting or receiving livestock. These activities must appear in sequence i.e. in the order of occurrence. Candidates should give a report on how they had done the activities. Most centres had their preparations activities in order. Some centres still had a plan for the whole practical activity instead of preparations, which should be avoided, while some gave instructions as preparations. Learners should report on activities done not as the activities appear in the book. Very few centres still did not understand how far they have to write on preparations. Centres are advised to keep updated with the syllabus to be able to stick to the dictates of the syllabus. The preparations must be written in subtopics e.g. land clearing, land preparation etc. Centres are advised to write in reported speech.

## **Management**

These are things done while the enterprise is in progress. Some centres listed preparations under management. These must be written in clear sub-headed points. Some centres still allow students to copy activities as they appear in the book instead of reporting on what they have in the practical. Most centres wrote the management in the report well. The report should include the timing on which the management activities were done. It is recommended that teachers should guide the learners on answering these questions what, when, how and why. Teachers are advised to help students discuss the management activities under the different subheadings.

## **Presentation**

The presentation should be done as per objective, data may either be qualitative or quantitative and or have a brief explanation below. Some centres had good presentations with tables and explanations. There are some centres though that still presented tables with no explanations, some had tables, linear graphs and bar graphs for the same objective. Some centres presented data that did not match any objective. Some presented data without explanations. Some centres had their presentations in statement form. Some few centres still presented diaries as their presentation, tables and graphs without headings. Centres are encouraged to present tables and graphs as per the objectives.

## **Conclusion**

The conclusion should inform on the outcome of the practical exercise per objective, summary of the results, problems and solutions. Most centres had their conclusions based on the objectives and results. Some concluded by giving a general comment on the enterprise without addressing the objectives. There were a few centres that only concluded by writing down problems and solutions encountered in the enterprise. Some also had conclusion without data to draw the conclusion from. Some confused problems and conclusions. Some used recommendations as conclusions. Very few centres did not have conclusions.

## **Recommendations**

These should be problems encountered as the practical was being done. Most centres identified the problems and also had solutions to them. Few centres though still misplaced the problems and solutions just after the introduction.

## **General Comments**

- Some centres were bringing same practicals as the previous year, teachers are encouraged to revisit their practical in order to improve on them.
- Some teachers are new in the programme thus must seek help.
- Candidates should be guided through all the stages of the report (guided). All the sections of the report should be covered.
- Some centres had their practicals and reports awarded very high marks, teachers are advised to improve their practical and reports to align with the marks allocated.
- Marks awarded to students should follow a normal distribution curve.
- It is impossible for a candidate to score 100%, reason being it's a guided practical report.
- During compiling of marks, some papers were misplaced, teachers are urged to be very careful compiling marks.
- When filing put student cards first (practical's first then reports), followed by two practicals and then two reports.



- Teachers are advised to keep the guided report at the level of form three. Centres must desist from the habit of making student write an investigatory project.
- Some centres type their work which is good, some remove the originality of the students work thus reports are similar for the whole class, and hence teachers must monitor the typing closely.
- Grading of reports must be consistent through all the candidates.
- The student's work must be marked, and the marked scripts should be submitted
- The report should follow the order of vegetables or field crop and livestock and should be arranged as per the student card.
- Reports should be in line with the specification of the JC syllabus.
- Teachers are advised to use summary sheets from ECESWA, no need for typing as some students end up being missed out.
- Teachers are advised help their students to start doing practicals earlier to avoid being caught off guard by ECESWA deadlines.
- Teachers are advised to take it upon themselves to request circulars from their principals. This will make the teacher plan better for the practicals and avoid late submissions.
- Centres are advised to start writing their reports in form one, so to avoid candidates getting zeros.