

443/3 Instr. to Sc.

**AGRICULTURE PROJECT**

**Paper 3**

**July 2021. - Jan. 2022**



**THE KENYA NATIONAL EXAMINATIONS COUNCIL**

**Kenya Certificate of Secondary Education**

**AGRICULTURE PROJECT**

**Paper 3**

**Instructions to Schools**

*Each school presenting candidates for Agriculture (443) in the KCSE examination for the year 2021 will produce **two** copies of this document. One copy of the document will be for the School Principal and the other one for the teacher in charge of Agriculture project hereafter referred to as the Agriculture teacher.*

*The School Principal and the Agriculture teacher should each read the document carefully. Relevant information should then be conveyed to the candidates as soon as possible to enable them to carry out the project in good time.*

*There are two alternative projects, namely **Project A** and **Project B**. Each school should select only **one** alternative. It is therefore necessary for the Agriculture teacher to discuss the alternatives with the School Principal and the candidates so as to select the most appropriate alternative.*

*The Agriculture Teacher will mark all candidates' projects.*

*The projects should be accessible for monitoring by authorized KNEC agent(s).*

**This paper consists of 6 printed pages.**

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## GENERAL INSTRUCTIONS

*The Agriculture teacher, School Principal and candidates should discuss the alternative projects and make a suitable choice appropriate for the school as soon as this document is received from the Kenya National Examinations Council (KNEC).*

*These instructions, together with the marking schemes should then be printed and distributed to all the candidates*

*Each candidate should read the instructions, conceptualize and write a brief description of how he or she plans to carry out the project. The candidate should keep this write up in his or her project portfolio (file or folder). The portfolio can be physical or electronic in a computer or other digital storage devices. The electronic portfolio should also be accessible to the School Principal, and Deputy Principal.*

*The candidate should then submit a summary of his/her project requirements to the Agriculture teacher who will then compile for the school to provide the inputs.*

*Each candidate is required to maintain a collection of evidence of performance on the specified milestones at different stages of project implementation. The pieces of evidence should include write-ups, photographs and video recordings (where appropriate). Maintenance of a **project portfolio of evidence** will be monitored and assessed.*

*The candidates are individually required to keep records of their project activities and observations, which they will later use to write the final project report.*

*Each candidate should be supplied with an adequate number of ruled A4 papers on which to write the initial project description and final project report. Each of these should be between 1, 000 and 1, 500 words. Alternatively, the report can be typed and printed.*

*In addition, each candidate should be given a declaration form which will make the cover page of the report.*

*The school should provide adequate security for the candidates' projects.*

*The project chosen by the school must be seen and treated as an examination. It must therefore be the candidate's true and unaided work. At the same time, the scores awarded by the Agriculture teacher must be objective and remain confidential.*

*The Agriculture teacher should assess each candidate's project from time to time using the marking scheme and time lines provided by KNEC and enter the marks in the individual candidate project assessment sheets. It is **important** that the marks are entered in the project assessment sheets **immediately** after each assessment.*

*All the project assessment sheets must be kept under lock and key in the School Principal's office in a sealed envelope. They should be made available **only** to the Agriculture teacher whenever the teacher is going to assess the project or an authorized KNEC agent. The sheets must be returned to the School Principal immediately after each assessment.*

*The School Principal should check to ensure that scores are entered on the assessment sheets after every assessment. In the absence of the School Principal, the Deputy School Principal should be in charge of the custody of the documents.*

*The candidate scores on the project, together with a pictorial evidence of the entire school project status will be electronically submitted to KNEC twice. Milestone I by **15<sup>th</sup> October 2021** and milestone II by **31<sup>st</sup> January 2022**.*

*The Agriculture teacher should transfer the total score of each candidate from the assessment sheet to the Manual Mark Sheet. The scores, together with a photograph showing the project status for the entire class at the time the last assessment was done should be uploaded on the KNEC Portal. The photograph should be in .gif or .jpeg format. It should capture the school Principal, Agriculture teacher and candidates standing at their respective projects in full school uniform. This should be done following the time lines provided.*

*The index numbers of candidates should be entered in assessment sheets and manual mark sheets in ascending order ensuring that all candidates **have the same Index Numbers as in the final examination**.*

*The KNEC Portal will only be accessible for the uploading of scores from **15<sup>th</sup> September to 15<sup>th</sup> October 2021** for milestone I and **1<sup>st</sup> to 31<sup>st</sup> January 2022** for milestone II. The scores once uploaded cannot be accessed for alteration.*

*The Agriculture Teacher should write a brief report about the centre using the centre report form provided by KNEC.*

***The project implementation and assessment should be completed by the end of January 2022.***

*At the end of the project, the School Principal **must** ensure that the Assessment Sheets and Manual Mark Sheet are duly filled, signed and stamped. All the candidates' Agriculture Project Reports, Project Assessment Sheets, Manual Mark Sheets and Project Report Form for the centre should be packed and handed over to the Sub-County Director of Education in the **first week of February 2022**.*

*The Sub-County Director of Education will then hand over **all** the documents to the Kenya National Examinations Council.*

## PROJECT A: VEGETABLE CROP PRODUCTION

1. Each school should select only **one** crop from the following:
  - a) Carrots (*Daucus carota*)
  - b) French beans (*Phaseolus vulgaris*)
  - c) Tomatoes (*Solanuma lycopersicum*)
  - d) Bulb onions (*Allium cepa*)
  - e) Capsicum (*Capsicum annuum*)
  - f) Beetroot (*Beta vulgaris*)
  - g) Cucumber (*Cucumis sativus*)
  - h) Eggplant (*Solanum melongena*)
2. The Project work should be carried out by the candidates in the Form IV class between 26<sup>th</sup> July 2021 and 31<sup>st</sup> January 2022.
3. The variety of crop should be suited to the ecological zone of the school.
4. The school should acquire seeds or seedlings to be able to provide them to the candidates at the time of planting.
5. Each candidate should be allocated a space on which to carry out the project. Candidates are **not** limited to the 4m x 3m plot. They are encouraged to use other innovative ways of growing the selected crop. The candidates' projects should be numbered according to the candidates' Index Numbers in ascending order.
6. After space allocation, candidates should be instructed to grow the selected crop up to harvesting by applying appropriate agronomic and management practices.
7. The Agriculture Teacher should assess each candidate's project using the marking scheme provided by KNEC.
8. The Agriculture Teacher should then mark each candidate's project report out of 20 marks using the guidelines provided by KNEC. The marks for each candidate should be entered in the appropriate column on the assessment sheet.
9. The total score of each candidate should then be transferred from the assessment sheet to the manual mark sheet. Ensure that these scores are entered according to candidates' index numbers in ascending order.
10. The project should be concluded and handed over to the school by the **end of January 2022**.

## PROJECT B: LIVESTOCK REARING

1. Each school should select only **one** type of livestock from the following:
  - a) Chicken – *(two per candidate)*
  - b) Rabbits – *(two per candidate)*
  - c) Pigs – *(one per candidate)*
  - d) Goats/sheep – *(one per candidate)*
  - e) Calf – *(one per candidate)*
2. This project should be carried out from July 2021 and candidates should conclude it by the end of January 2022, when they should hand over the project to the school. The school should then make appropriate decision and arrangement on how best to rear the livestock or dispose of them.
3. Schools choosing this project shall be required to provide each candidate with the following facilities:

**(a) Housing structures**

Each candidate should be provided with appropriate housing structure for the class of livestock selected by **5<sup>th</sup> August 2021** latest. The housing structures should be bought or made by the school. The dimensions of the housing structure should be appropriate to the class of livestock selected. It is important to ensure the following:

- (i) Proper ventilation and lighting;
- (ii) The roof should be waterproof if the housing structure is to be kept outdoors;
- (iii) The floor of the housing structure may be weld mesh, slatted timber, earthen or concrete;
- (iv) Housing structures may be singly or in several units attached horizontally. The chicken/rabbit houses may be placed on top of each other up to a maximum of three tiers;
- (v) Housing structures can be placed indoors or outdoors depending on design and security arrangements;
- (vi) Each house should be lockable. One of the keys to the house should be labelled and kept at the Head teacher's office. The other key should be kept by the candidate for regular use.

Each candidate should

- Write his or her full index number on the housing structure provided;
- Equip the house with a feeder and waterer;

- Equip the cage with a record keeping card;
- Inventively make other preparation on the cage to make it ready for rearing the livestock.

**(b) Livestock**

A school selecting this project should acquire and give the selected class of livestock to candidates by **15<sup>th</sup> August 2021**.

**Note:** Procurement of livestock is the responsibility of the school and **NOT** that of the Kenya National Examinations Council (KNEC).

**(c) Means of weighing**

The school should provide a portable means of weighing or estimating weight up to 100 kg.

**(d) Feeds**

The school should provide enough feeds to each candidate for feeding the livestock.

3. After the candidates have been provided with the facilities outlined in (2) above, they should be instructed to:
  - (a) weigh the livestock accurately and record their weights on a record card;
  - (b) rear the livestock up to the end of second term;
  - (c) keep records of the activities carried out and observations made during the rearing period. These records will be used by the candidates to write their final report. The records should be written on a record card and hung securely inside the cage.
  - (d) avail the records to the agriculture teacher or KNEC agent whenever required.
4. The Agriculture teacher should assess each candidate's project two times (the 1<sup>st</sup> for milestone I and the 2<sup>nd</sup> for milestone II) using the marking scheme provided by KNEC. The scores for milestone I assessment should be uploaded by **15<sup>th</sup> October 2021** and the ones for milestone II by **31<sup>st</sup> January 2022**.
6. The Agriculture teacher should then mark each candidate's project report out of 20 marks using the guidelines provided by KNEC. All the marks for each candidate should be entered in the appropriate column of the assessment sheet.
7. The total score of each candidate should then be transferred from the assessment sheet to the manual mark sheet. Ensure that these scores are entered according to candidates' index numbers in ascending order.
8. The project should be concluded and handed over to the school by the **end of January 2022**.

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