

443/3 MS
AGRICULTURE PROJECT
MARKING SCHEME
Paper 3
July 2021-Jan. 2022



THE KENYA NATIONAL EXAMINATIONS COUNCIL Kenya

Certificate of Secondary Education AGRICULTURE PROJECT: (443/3)

MARKING SCHEME

(CONFIDENTIAL)

This marking scheme is to be used when assessing the candidate's project.

The Agriculture Teacher concerned with the project assessment is reminded to keep this information confidential.

No **candidate** or any **unauthorised** person should have access to this information either directly or indirectly.

This paper consists of 9 printed pages.

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PROJECT A: VEGETABLE CROP PRODUCTION
GUIDELINES FOR MARKING CANDIDATE'S PROJECTS

	ITEM	Scoring guide	Maximum score
1.	Project portfolio of evidences		5
1.1.	Portfolio maintained	0- No evidence of Portfolio 1- Portfolio maintained	1
1.2.	Initial project description	0- No write up present 1- Write up present 2- All the stages included (ecological requirements to harvesting)	2
1.3.	Pictorial evidences for the stages carried out	0- No evidence 1- Some evidences present 2- All the evidences present	2
2.	Seedbed/ land preparation		13
2.1.	Timely land preparation	0- Not prepared 1- Late compared to others 2- Timely with the rest 3- Early compared to others	3
2.2.	Appropriate tilth	0- seedbed 1- Appropriate to size of planting materials	1
2.3.	Free from weeds	0- Many weeds present 1- Some weeds present 2- Weed free	2
2.4.	Uniform seedbed	0- Uneven seedbed & not firmed 1- Levelled or firmed 2- Levelled and firmed	2
2.5.	Edges of plot/growing area are straight	0- All edges straight 1- Some edges straight 2- All ages straight	2
2.6.	Depth of soil/cultivation/growing medium	0- Shallow 1- Deep	1
2.7.	Correct plot/growing area dimensions/size	0- Area too small/big for the plant population 1- Adequate sized area	1
2.8.	Watering or drainage	0- Too dry or water logged soil 1- Soil has adequate moisture to facilitate germination	1
3.	Crop establishment		14

	ITEM	Scoring guide	Maximum score
3.1.	Timely planting	0- Not planted	3
		1- Late compared to others	
		2- Timely with the rest	
		3- Early compared to others	
3.2.	Correct depth of planting	0- some seeds/roots exposed	1
		1- Seeds covered/plants firmly anchored	
3.3.	Correct spacing	0- Unevenly spaced on the growing area	1
		1- Uniformly spaced on the growing area	
3.4.	Watering or drainage	0- Too dry or water logged soil	1
		1- Soil has adequate moisture to facilitate germination	
3.5.	Appropriate crop stand/ coverage/plant population	0- Few/excess plants	1
		1- Correct plant population	
3.6.	Manure and fertilizer application	0- No manure/fertilizer used	4
		1- Manure/fertilizer used	
		2- Fertilizer/manure used	
		3- Both manure and fertilizer used	
		4- Manure and fertilizer mixed with the soil	
3.7.	Crop vigour	0- Weak emaciated plants	1
		1- Deep green strong plants	
3.8.	Straightness of rows	0- no rows	2
		1- rows not uniform	
		2- rows uniformly distributed	
4.	Weed control		8
4.1.	Timely weeding	0- not weeded/many weeds present	2
		1- some weeds present	
		2- weed free	
4.2.	Thorough weeding	0- many weeds persisting	2
		1- some weeds persisting	
		2- clean/all weeds removed	
4.3.	No effects of weeding on the crop e.g. injury; burying of some foliage;	0- many plants damaged/buried by weeding	2
		1- some plants damaged/buried by weeding	
		2- no plants damaged/buried	

	ITEM	Scoring guide	Maximum score
4.4.	Maintenance of edges of the plot/growing area.	0- Not maintained/dirty/many weeds present 1- Some weeds/dirt present 2- Clean/weed free	2
4	Pest and disease control		4
4.1	Effectiveness of pest control considering symptoms, presence or absence of pests.	0- Many plants damaged by pests 1- Some plants damaged by pests 2- No plants damaged by pests	2
4.2	Effectiveness of disease control considering symptoms, presence or absence of diseases.	0- Many plants damaged by diseases 1- Some plants damaged by diseases 2- No plants damaged by diseases	2
6	Soil erosion control		2
6.1	Appropriate and effective soil and water management measures taken considering topography, climate and soil e.g. terracing, contour planting and ridging.	0- signs of soil erosion present 1- soil control measures inadequate 2- no signs of soil erosion/control measures effective	2
7	Harvesting and handling:		9
7.1	Stage of harvesting	0- too early or too late 1- At correct stage of harvesting	1
7.2	Correct method of harvesting	0- Correct method not applied 1- Correct method applied	1
7.3	No wastage or damage during harvesting	0- Wastage observed 1- No wastage observed	1
7.4	Post-harvest handling	0- No drying/proper storage 1- Inadequate drying/storage 2- Proper drying/storage	2
7.5	Yield quantity	0- Less than half the expected yield/acre 1- Equal to the expected yield/acre 2- More than the expected yield/acre	2
7.6	Yield quality	0- None 1- Small sized/ deformed/diseased 2- Large and free of deformities /diseases	2
8.	Innovations		25
8.1	Earthing up/ use of cambered beds	0- None observed 3- Earthing up/ cambered beds used	3

	ITEM	Scoring guide	Maximum score
8.2	Fencing	0- None observed	4
		2- Fencing done	
		4- Fencing adequate and secure	
8.3	Mulching	0- None observed	4
		2- Mulching done	
		4- Mulching adequately done	
8.4	Irrigation	0- None observed	4
		2- Container watering	
		4- Drip irrigation	
8.5	Innovative gardening	0- none observed	10
		10- container/vertical/hydroponic gardening not adequate/functional	
		20- container/vertical/hydroponic gardening functional	
	Total		80

PROJECT B: LIVESTOCK REARING

GUIDELINES FOR MARKING CANDIDATES' PROJECTS

No.	Description	Scoring guide	Maximum score
1.	Portfolio of evidences		10
1.1	Portfolio maintained	0- No evidence of Portfolio 1- Portfolio maintained	1
1.2	Initial project description	0- No write up present 1- Write up present 2- All the rearing stages included	2
1.3	Pictorial evidences for the stages carried out	0- No evidence 1- Some evidences present 2- All the evidences present	2
2.	Housing		5
2.1	Clean house	0- Muddy/dusty/damp with cobwebs 1- Clean, dry & free of cobwebs 2- Clean, dry & free of cobwebs	2
2.2	Appropriate bedding material considering texture and type	0- No bedding material 1- Absorbent material e.g dry grass, straw, etc present	1
2.3	Adequate bedding material considering thickness of litter	0- Floor not fully covered 1- Floor fully covered	1
2.4	Dry bedding material/ absence of wetness	0- Damp materials 1- Dry materials	1
3.	Feeding and watering		10
3.1	Different types of feeds	0- Only one type used 1- Different types used e.g fodder, concentrates, etc depending on age	1
3.2	Appropriate feed types	0- Feed used is not appropriate for the class and age of the livestock kept 1- Feed used is appropriate for the class and age of the livestock kept 2- Feed is fresh/regularly changed	2
3.3	Provision of water	0- No water provided 1- Water is provided 2- Water is fresh/regularly changed	2
3.4	Provision of salt lick	0- Mineral supplements not provided 1- Mineral supplements provided	1
3.5	Feeders	0- Feeders not provided 1- Feeders provided 2- Feeders provided and cleaned regularly	2
3.6	Clean water and waterers	0- Waterers not provided 1- Waterers provided 2- Waterers provided and cleaned regularly	2

4.	Health of livestock	Scoring guide	7
4.1	Signs of good health/disease control	0- Rough coat/potbellied/dull/non responsive 1- Prophylactics administration 2- Vaccination 3- Smooth and shiny coat/active animal free from diseases and deformities	3
4.2	Parasite control	0- Parasites/eggs/segments present on coat/dung 1- Potbellied/rough coat 2- Evidence of deworming present 3- Spraying/dusting 4- Smooth and shiny coat/active animals free from parasites	4
5.	Identification	0- No evidence of identification 1- Branding 2- Ear notching/tagging/tattooing/Neck straps or chains	2
6.	Record keeping	0- No evidence of record keeping	2
		1- Records available	
		2- Up to date records kept	
7.	Other rearing practices		9
7.1	Castration; Caponisation; Teat clipping; Dehorning; Hoof trimming; Docking; Flushing; Steaming up; Shearing; Tooth clipping; Debeaking; Raddling; Crutching; ringing; Administration of iron injection	0- No evidence 1- Evidence present 2- Practice carried out at the correct stage 3- Practice correctly carried out (Any 3 practices)	9
	Total		40

PROJECT A: VEGETABLE CROP PRODUCTION

GUIDELINES FOR MARKING CANDIDATES' PROJECT REPORTS

The project report should be assessed out of 20 marks. The guidelines below should be followed to arrive at an objective score.

	Aspects of the project report	Maximum Score
1.	Project title Clearly written	1
2.	Introduction Stating the aim of the project	2
3.	Seedbed preparation Clearing the land using pangas/ slashers	1
4.	Preparation Appropriate tilth using jembes/ fork jembes	1
5.	Planting Application of manures/fertilizers Appropriate preparation of planting materials Details of planting procedure appropriate to the crop	2
6.	Weed control Application of pesticides Time of weed control Types of weeds Method of weed control	1
7.	Pests control Types of pests identified Types of damage caused Control measures taken	1
8.	Disease control Symptoms of diseases identified Control measures taken	1
9.	Other crop management practices Mulching, thinning, gapping and watering Soil and water management	2
10.	Observations Achievements and problem experienced	2
11.	Harvesting Method applied, tools and materials used and timeliness	2
12.	Result/ yield Considering quality and quantity (to be) obtained	2
13.	Conclusion Consistent with the aim/ management of the project	2
	Total (20 marks)	

PROJECT B: LIVESTOCK REARING

GUIDELINES FOR MARKING CANDIDATES' PROJECT REPORTS

The project report should be assessed out of 20 marks. The guidelines below should be followed to arrive at an objective score.

	Aspect of the project report	Maximum Score
1.	Project title Clearly written	1
2.	Introduction Stating aim of project	1
	Breed of livestock kept	1
3.	Housing Description of the housing	1
	Siting of the house	1
4.	Feeding Type of feed	1
	Quality and quantity of feed given daily	1
	Supplementary feeds	1
	Frequency of feeding	1
5.	Watering Provision of water(fresh/ adequate/ clean)	1
6.	Health Free from symptoms of disease	1
	Disease control measures put in place	1
	Free from parasites and parasite infestation symptoms	1
	Parasite control measures put in place	1
7.	Observation Achievements made	1
	Problems encountered and actions taken	1
8.	Results Consider results in relation to the aim and management of project	2
9.	Conclusion Consistent with the aim and operations	2
	Total	(20 marks)

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