**443/1**

**AGRICULTURE PAPER 1**

**MARKING SCHEME**

**TRIAL ONE EVALUATION TEST - 2019**

**AGRICULTURE PAPER 1 MARKING SCHEME**

1. Egg production / weight gain.­

Labour records

Feeding records

Health records

Market records

Inventory records.

1. Low nutritive value per unit volume/weight.

Likelihood of spread of disease/pests/weeds.

Bulky / difficult to store / transport/ apply

Loses nutrients if poorly stored.

Difficult to quantify the amount of nutrients/ unit volume.

1. Ensures maximum utilization of nutrients.

Controls build up of pests/ disease/ control

Controls weeds that are specific to particular crops.

Improves soil fertility when leguminous crops are included.

Improves soil structure.

1. Type of crop to be established/ size of seed.

Moisture content of soil.

Type of soil

Conditions of land after primary cultivation/ implements used for primary cultivation

Amount of organic matter on the surface.

Vulnerable to soil erosion/ slope of the land/ topography’s.

1. Tree felling

Stumping / removal of stumps / destumping.

Slashing mowing.

1. Require little land.

Quick accumulation of manure.

Easy to control diseases and parasites.

Less wastage of feeds

Has high stocking rate

High milk yield

Efficient use of fodder

1. Intended use of the crop

Chemical concentration of the produce / stage of maturity / change in colour

Prevailing weather conditions.

Market demand for the produce / market price.

1. The crop seedlings are delicate and need great care.

Bulking up of planting materials is necessary like sugarcane.

Nursery helps to select the healthy and seedlings

When cuttings to propagate the crop need special treatment.

1. This is the dressing of legumes with nitro-culture in order to improve nitrogen fixation in the root nodules.
2. Occurrence of blossom end rot disease

Delayed maturity of plants.

Fruits crack when young

Grow more vegetative parts and produce less fruits.

Scorching effects on leaves.

1. Detaching soil particles on the surface.

Transferring the soil particles in splashes.

1. Species of forage crop

Stage of harvesting.

Drying period

Weather conditions

Storage

1. Cleaning the store

Proper drying of beans

Making store vermin proof.

Use of traps/ physical destruction

Use of cats / biological

1. For easy transplanting.

Root system is not disturbed during transplanting

Can be carried over a long distance

Seedlings can easily be stored before planting.

1. To increase production

Reduce incidence of banana weevils.

Materials removed acts as mulch.

1. Add nutrients e.g Ca to the soil.

Modifies soil Ph

Modifies soil structure.

1. Clear the land

Plough the land deeply using tactors

Harrow to a fine lith

Level the land

Construct bunds around the plot.

Puddle the soil to produce a fine mud.

**SECTION B**

1. (a) X irish potato tuber/set.

 Y sugarcane cutting / set.

b) Chitting

c) Burn sugar fields to chase away vermines

 Deliver the cane within 24hrs to maintain quality.

1. (a) Couch grass / digitaria scalarum.

(b) Presence of underground stems/ rhizomes which are difficult to control/ underground storage structure.

(c) uprooting

 Cultivation

 Slashing.

1. (a) 120-112=08 grams

(b) 112-106 = 6 grams

$\frac{6}{120}x 100 $= 5%

(c) $\frac{8}{6}=1\frac{1}{3} times $

(d) Crop rotation

 Minimum tillage

 Liming

 Use of manure

 Drainage water logged soils

 Leaving land fallow.

1. a) Cutworm.

b) Early planting for crop to establish early and outgrow the pest.

Application of appropriate insecticide / chemicals.

Field hygiene to prevent transmission from previous crop residues.

Physical killing and destruction.

1. (a) (i) at on set of rains

 Delay planting in long rains.

 Place 2 or or 3 seeds hole.

 Apply DAP/ Phosphate fertilizer

 Seed rule is 50-60kg or one teaspoonful per hole.

 (ii) Weeding

 Irrigation

 Pest control

 Disease control

 Gapping

 Thinning.

(iii) Drying

 Threshing

 Winnowing

 Sorting

 Dusking

 Package.

(b) Adaptability – should be adapted to local ecological condition.

 Physical deformities/ damage: should be free from physical deformities / damage.

 Health- should be free from pests and disease.

 Viability / germination percentage: should have high visibility germination percentage

 Parent plant should be form high yielding / healthy / high quality / early maturity.

 Purity – should be clean/ free impurities

 Maturity – should be of correct maturity stage.

 Age/ storage period: seeds stored for long periods have low viability/ germination percentage.

1. (a) Lack of ground cover exposes soil to agents of soil erosion / removal of cover exposes soil to agents of soil erosion/ removal of cover crops.

Steep slopes increase the speed of surface run-off hence erosive power of water.

Light / sandy soils are easily carried away by agents of soil erosion.

Shallow soils are easily saturated with water and carried away.

High rainfall intensity on bare ground/ leads at detachment of soil hence run off.

Frequent cultivation/ over cultivation pulverizes the soil making it easy to detach and carry away.

Overstocking leads to overgrazing which destroys ground cover exposing it to agents of erosion.

Ploughing up and down the slopes creates channels which speed up and increases the erosive it to agents of water.

Cultivation of river banks destroys riverine (viparia) vegetation and destroys soil structure exposing it to agents of erosion.

Cultivating the soil when too dry destroys soil structure making it easy to be eroded.

Long slopes increase volume speed of run off hence increasing erosive power of water.

High rainfall amount increase saturation of soil erosion.

(b) Mulching of conserve moisture.

Erection of shade to minimize evapotranspiration.

Weed control to reduce competition with seedlings for nutrients , light, space et.c

Pest and disease control to ensure healthy and vigorously growing seedlings

Pricking out/ thinning to minimize competition for growth elements.

Fertilizer application to supplement nutrients in the soil.

Watering to ensure adequate moisture supply.

Hardening off/removing shade/ reducing watering to acclimate the seedling to conditions in the field.

Removing of mulch immediately after germination.

1. (a) Land tenure is the mature of the right to own and use land while land reform is any deliberate organized action with the purpose of improving land ownership and land use.

(b) (i) Shifting cultivation – individuals own several pieces of land in the process of clearing and shifting to new ground after soil eschaustion.

(ii) Customary law of land ownership – land is fragmented to several pieces to facilitate inheritance by the heirs.

(iii) Population increase – people are focused to buy several pieces of land in different places due to population pressure in their area.

(iv) Accumulation of land by money lenders – private money leaders accumulate land/ repay themselves with pieces of land if an individual farmer is able to pay back the debt.

(v) Traditional use of land – land may be offered to settle debts and as present to newly weds and others. This makes an individual to have several fragments.

(c) (i) Time wasting travelling around scattered fragments of land.

 (ii) Difficult to provide proper and effective weed, pets and disease control measures:

 (iii) Difficult to develop and follow a sound farm plan;

 (iv) Difficult to supervise the scattered fragments

 (v) Livestock disease and parasites are hard to control due to constant movement.

 (vi) Soil conservation measures are difficult to carry out.

 (vii) Restricted grazing in one holding is not possible due to overstocking, leading to land

 Degeneration and demidation .

 (viii) Difficult to make use of Agricultural existence advice since the fragments are not easily

 Reached.

 (ix) Results to low productivity leading to low standards of living.