**SET 4**

**AGRICULTURE MARKING SCHEME PP1**

SECTION A [30MKS]

1. i)Mutual benefit between plants and animals.

ii) Diversification of risks.

iii) labour economization in farm.

iv) Continuous flow of cash from both enterprises/high revenue/more income.

v) Maximum utilization of land.

vi) Animal power used to work in farms.

1. i)Reduce rate of evaporation.

ii) Prevent growth of weeds which take up water.

iii) Reduce water run-off.

1. i)Growth habit.

ii) Size of the plant.

iii) Rainfall/soil moisture

iv) Use of crop.

v) Type of machinery to used in subsequent operations.

1. Leafy.

Fast growth rate.

Leguminous crops.

Easy to decompose.

Hardy/able to survive in poor soils.

1. Purity of the materials.

Germination percentage

Certified seeds / health

Suitable to ecological conditions

1. To prevent rotting

To prevent sprouting

Prevent pest infestation

Reach market early when the demand is high for good prices.

1. Growing of crops and rearing of livestock without using Agrochemicals.
2. White/unstained

Free from foreign materials / clean

Free from insect damage.

1. Purchase/sale of land

Sharing of land by family/cooperative members

Government allocation to people.

1. a)Prevent attack by pest/diseases

b)Faster establishment

Make lifting easier

The seedlings develop short, dense strong rooting system

Prevent seedling damage

c) A climatise the seedling to field conditions

1. Title number/parcel number/location

Size of the land

Name identity of the owner.

Date of registration

Seal of registrar

Conditions, if any.

1. Part of the plant

Age of the plant

Stage of the flower development

Variety of the crop

Altitude

Handling after harvesting

1. Poor water infiltration/water logging/flooding

Lack of air /poor aeration

Hinder proper root development /penetration

Lead to accumulation of salts/salinity

Hinder activities of soil micro-organisms

1. Seed dressing to avoid/prevent pest attack

Drying

Store should be cleaned and dusted

Rodent /insect proof

Well ventilated

1. Provides good conditions for the growth of rice

Control weeds

Control soil borne pests

SECTION B [20MKS]

16a) A – stone line

B – cut off drain

b) i)stone line A – stones are heaped along the contour to trap washed away soil from a gently sloping area

ii) cut off drain B- deep trench excavated at the head of the farm, soil removed from the trench is heaped on the lower side of the farm- excess water diverted away not to enter farm and cause soil erosion.

c) A – gently sloping area

 B – head of the farm in steep slopes

17.a)Smuts/ear smuts

 b) The tussel/male inflorescence

 c)i) Sorghum

 ii) Wheat

 iii) Millet

 d)i) seed treatment/certified seeds

 ii) crop rotation

 iii) use of resistant varieties

 iv) field hygiene

 v) rogueging

18a) T-budding method

b) health

Vigorous growth

adaptability to the area

compatibility of the scion

c) budding knife

polythene strip/cellotape

budding jelly/vaselint

d) to prevent entry of water

t hold the scion tightly onto the stem of the root stock

19a) P – sugar cane sett/cutting

 Q – green top of sugar cane

b) Q does not produce roots easily since the rooting hormones are concentrated downwards the stem/roots easily before root production.

c) Dipping in hot water for 50 minutes

di) End to end

ii) Overlapping manner

SECTION C [40MKS]

20a) Transplant at the beginning of rains/irrigate

Transplant when seedlings are 1 – 11/2 months/4-6 true leaves/6 weeks old

Water before uprooting

Using garden trowel uproot seedling carefully to avoid root damage

Trim long root

Use phosphatic fertilizers when transplanting

Rate of 1 teaspoonful/hole DSP and a handful of well rotten manure

Select health and vigorously growing seedlings

Use a spacing of 90 – 100 cm x 50 – 60cm depending on variety.

Plant at the same depth as the seedlings were in the nursery

Top dress with nitrogenous fertilizers when plants are 25 – 30 cm high at rate of 100kg/ha/CAN/teaspoonful/plant

Weed control – keep field clean always

Pest control eg aphids, bolluworms, cutworms, mites are controlled by appropriate method

Disease controlled using appropriate fungicides

Stalking – done to particular varieties eg money maker

Pruning – lower leaves/infected parts are removed/suckers

Harvesting –selectively as required, red ripe for processing for fresh market when blossom and changes colour

b) Ready tomatoes are red in colour

delivered to market immediately

wooden crates are used to avoid squashing

wooden crates to allow air circulation/avoid rotting

dirty and soiled tomatoes are washed before packing

the fruits are sorted out into 3 grades- small, medium and large

sorting out also done according to green, red ripe, over ripe

over ripe tomatoes are sold immediately while green tomatoes are left overnight

grading helps fix prices

21a) Profit and Loss A/C for Mr Makomere for the year ending 31/12/2004

|  |  |
| --- | --- |
| **PURCHASE AND EXPENSES** | **SALES AND RECEIPTS** |
| **DATE** | **DETAILS** | **SHS.** | **DATE** | **DETAILS** | **SHS.** |
|  | Milk sales | 8,000 |  | Opening valuation | 12,000 |
|  | Sales of goats | 5,000 |  | Construction of store | 10,000 |
|  | Sales of cabbages | 1,750 |  | pesticides | 3,000 |
|  | Sales of a heifer | 10,000 |  | Depreciation of machines | 3,000 |
|  | Sale of tea | 5,000 |  | Interest payable | 1,750 |
|  | Closing valuation | 16,000 |  | Purchase of tools | 800 |
|  |  |  |  | Veterinary bills | 1,400 |
|  |  |  |  | Wages  | 10,000 |
|  | **TOTAL** | **45,750** |  | **TOTAL**NET PROFIT45,750 – 41,950 | **41,950****3,800** |
|  |  | **45,750** |  |  | **45,750** |

ii) Net profit = 3,800 x 100

 45,750

 = 8.3 %

b) Diversification – production of several products at the same time to avoid risks due to weather, price fluctuation and diseases.

Selecting more reliable enterprices – where there is surerity of success eg artificial insermination as opposed to natural mating.

Contracting – make contracts with dealers to supply or buy certain commodities at fixed prices hence transfer the risk of drop in demand and supply.

Insurance – purchase security by payment of small sum of money for compensation in case of failure.

Input rationing – use of inputs sparingly to avoid wastage.

Flexibility production – combination and substitution of inputs and techniques of product for each other – use the cheapest.

Adapting modern methods of farming – use of researched varieties and breeds and getting credits for improvement.

Use of government price stabilization policies.

22a) This is the replacement of the seeds which did not germinate /take after planting.

b) it maintains plant population since the correct number of plants are contained in a given area.

Economic use of labour – no. of labour is wasted on empty areas of land.

Economic use of chemicals – where there is use of machinery in spraying, machine cannot select an empty space.

Maintains high yields – yield calculated on tacts that the whole area is cropped.

c) use of seeds with low germination/low viability – the seeds automatically fail to germinate leaving gaps.

Use of diseased/pest infested seeds – the embryo is already destroyed.

Soil borne pests and diseases cause destruction when the seeds are planted.

Poor soil filth – large soil clods will lower soil seed contact leading to poor germination.

Soil erosion after planting- seeds are carried away by water or seedling is uprooted.

Planting too early before rains – some seeds are scotched by the sun hence loose viability.

Poor rainfall distribution – may lead to some seeds not germinating due to lack of moisture.

Seedlings could be cut immediately by cutworms.

d) The hole is redug

any leftover/remain of seedling or seed is removed

any organisms like cutworms/termites are checked and removed.

More manure and fertilizers are added.

New seedlings/seed is planted as the same depths/correct depth.

Watering and mulching is done.

e) Grapping should be done within the 1st two weeks of germination so that:

- the seedling can catch up with the others.

- the seedlings can grow when there is enough rainfall/ not late

- to avoid the seedlings from being infested heavily by pests and diseases

- to avoid overshadowing of new seedlings by the older plants.