**CROP PRODUCTION V**

**(VEGETABLES)**

1. a)three management practices that have not been carried on the plant above

* Pruning
* Staking
* Weed control 3x ½ = 1 ½ mks

 b) For each management practice state one reason why it should be carried out

* Pruning
* Staking – prevents lying on ground where fruits are soiled and get diseases

 Easy movement in field 1x ½ = ½ mk

* Weeding – reduce competition for nutrients, water and space 1x ½ =1/2 mk

 c) Name two diseases that attack the crop above in the field

* Tomato blight
* Bacterial wilt

Blossom – end rot

2. the production of tomatoes (lycopersicon esculentum) under the following subheadings

a) Varieties

* fresh market e.g. money maker, beef eater, marglobe supermande
* processing varieties-cal –j, marzano, Kenya beauty (1/2x4=2mks)

b) Nursery establishment

* select site and clear
* dig to remove weeds and narrow to fine tithe
* mark out nursery beds I wide with convenient length and level it
* make drills 10cm apart and crop seeds singly in furrows
* cover with thin layer of soil, mulching, water (1/2x4=2mks)

c) Field management practices

* gabbing-to reduce dad seeds and maintain optimum plant population
* weed control-remove weeds mechanically to prevent competition avoid during flowering
* top dressing-use fertilizers at 20kg/ha when plants are 25-30cm tall
* staking-train plants to grow in desired shape; to produce clean fruits, control pests and disease
* pruning-to remove unwanted braches to input micro climate facilitate spraying
* pest control-use pesticides and other appropriate methods to control pests e.g. aneucal ball worm, leaf hopper
* disease control-use fungicides, legislative methods ,etc to control early blight, damping off, bacterial wilt (7x2=14mks)

3. two symptoms of late blight in tomatoes.

 - Rapid drying of leaves.

 - Brownish dry rots of fruits.

 - Destruction / drying of the whole plant.

4. four factors to consider when grading tomatoes for fresh market.

 - Size i.e. large, medium, small.

 - Degree of ripeness of fruit.

 - Damage of tomatoes e.g. bruises on skin.

 - Shape of the fruit.

5. Two ways of controlling purple blotch in onions

* Crop rotation

- Application of fungicides

6. (a) The disease which may have caused the condition shown in the illustration

.Bacterial with (Pseudomonas solana cerum). ( ½ x 2 = 1mk)

 (b) Any other crop which may be affected by the disease identified in (a) above

* Irish potatoes( ½ x 2 = 1mk)

 (c) Two other factors which can lead to the same condition as shown by the illustration

* Nematode attack
* Lack of water
* Physical damage on the roots/male attack ( ½ x 2 = 1mk)

 (d) Two measures that can be sued to control the disease named in (a) above

* Crop rotation
* Regueing /field hygiene

- Use of certified seeds

7. -Enables efficient coverage of plant with chemicals

* Creates unfavorable micro climate for disease causing organism
* Diseased branches are removed hence reduced incidences of disease spread

Remove branches touching the ground to avoid infection

8. - Altitude – 900-2900 meters above sea level

 - Rainfall - well distributed throughout the growing period

 - 750mm – 2000 mm per annum

 - practice irrigation

 - Soils – well drained

 - Deep rich

- Slightly acidic PH of 6.5

9. a)

* American boll worm
* Cut worm
* Red spider mite
* Nematodes

b) Lack of calcium

* Irregular watering
* Excessive application of Nitrogen in early stages of the plants growth

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* Altitude 0 – 2100m above sea level.
* Temperature range 18 - 29º C
* Sunlight is important during ripening to give the tomatoes a bright red or yellow colour depending on the variety
* Rainfall – well distributed during the growing season. (760 - 1300mm pa)
* Soils - warm and well drained soils with a PH of 5.5 - 7.0