

- SSSW - Flooding in the valley - drainage / addition of organic manure.
 SSSS - Soil washed away from gently slope - contour ploughing (other methods) *To avoid soil erosion*
 SSSG - Small cobs - addition of fertilizers / manuring. *To increase the size of cobs*
 Stunted growth - liming / fertilizer application / manuring. *To encourage faster growth*

	4	3	2	1
5 and above	3-4	1-2	0	
4	2	0	0	

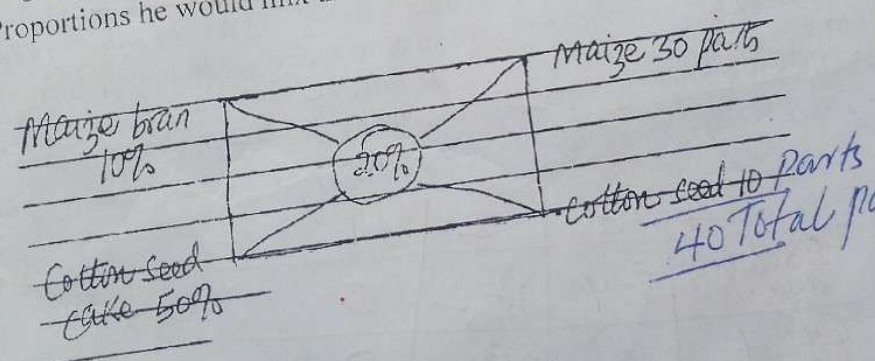
Item 3
Expected responses

Challenges

- She*
 The structure is muddy; they should construct a good foundation structure / floor with all the characteristics to promote hygiene.
 Animals have standing hairs indicates parasites. She should spray with recommended acaricides and drench using the right dewormers to control parasites.
 She should give her animals a balanced ration to maintain the good health of her animals not giving them only forages.
 Should carry out castration of her young male animals since they can be easy to handle and take care of *Boost growth*.
 She should mix the ingredients in the following procedure;
 • Get the desired ratio percentage and place in the center of the square.
 • Place the protein percentage of each ingredient at the left hand corners.
 • Subtract diagonally across the square, the small numbers from the large numbers regardless of the sign.
 • The figures obtained at the right hand corners give the parts of the ingredients to be mixed in the ratio: As seen below.
 o Crude protein 20% using
 o Maize bran 10% crude protein
 o Cotton seed cake 50% crude protein
 Proportions he would mix the maize bran and cotton seed cake are;

No score for steps. Only score calculations.

AMS D



Total parts = 40 Parts

Est

	3	2	1
2 and above	1-2	0	
1	0	0	
4	3	2	1
3 and above	2	1-2	0
2	1	0	0

Harvesting = 1

Proportion of maize = $\frac{30}{40} \times 100 = 75\%$
 Proportion of cotton seed cake = $\frac{10}{40} \times 100 = 25\%$
 Quantity of each ingredient needed
 Maize bran = $\frac{\text{Proportion of maize bran}}{\text{Quantity of the total ratio needed}} \times \text{Quantity needed}$
 Maize bran = $\frac{75}{100} \times 500 \text{ kgs} = 375 \text{ kgs}$

Item 3

Cotton seed cake = $\frac{25}{100} \times 500\text{kg} = 125\text{kgs}$

Dr. Olga

So a farmer will need 375 kgs of maize bran and 125kgs of cotton seed cake to formulate this ration for his animals

Est = 2

4	3	2	1
3	1-2	1-2	0
2	1	0	0

Harve = 2
2+4+2 = 08

Item 4

Expected responses

- Subsistence farming - Adopt modern methods of commercial agriculture. *to increase returns*
- Local breeds- introduce exotic proven breeds which have high yielding capacity.
- Poor grazing systems- Adopt grazing management practices like using optimum stocking rate and concealing. *to boost production*
- Poor pasture management- manage the grazing pasture well by paddocking to facilitate rotational grazing.
- Inbreeding among animals - practice cross breeding. *to boost hybrid vigour*
- Poor animal management - employ proper livestock management practices like proper feeding housing, vaccination and disease control.
- Unpalatable pastures species - Weed the unpalatable plants and over sow with legumes to improve palatability.
- Parasites - Control parasites in the grazing land by draining marshy areas and spraying acaricides.
- Long distance for water and pasture construction of valley dams/ boreholes. *to supply adequate water.*
- Low GDP- Adopt diversification in agriculture other than relying on animal production alone. *to reduce risks*

Basis of assessment

Item 5

Challenge

- He planted late his beans.
- He just slashed his garden area.
- He used a blunt hoe to dig out holes
- Seed were of poor quality.
- The bean seeds were mixed with weed seeds.
- A few bean seeds germinated
- Bought more seeds for planting
- Used wrong chemical for weed control
- Had no harvest at all.

Est

2	1	1
1-2	0	
1	0	

Harve

2	1	1
1	0	
1	0	

mgst

4	3	2	1
3	1-2	1-2	0
2	1	0	0

AE AM AH

2	4	2
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= 08

Solutions and justifications

- Should plan early to plant his crops as the season starts to get high yields.
- He should carry out cultivation to open up the land for aeration, good germination conditions after clearing.
- Should carry out good maintenance of tools like she was supposed to sharpen the blade of the hoes to easy the cultivation activity.
- He should buy seeds for planting from a reliable source to have good germination ability.
- He should carry out sorting of planting materials before planting to have clean planting materials for high yields.

- (vi) He would have carried out/ should carry out seed dormancy test/ germinability test before he plants his seeds. *To improve germinability.*
- (vii) He bought other seeds to fill the gap because he had not tested for germinability which would reduce the costs spent on buying other seeds. *To determine suitability.*
- (viii) He should have used a selective herbicide or one should first read the instructions and the use of a chemical before applying to avoid losses.
- (ix) Had no harvests at all because he did not practice skills in crop farming. He should learn the don'ts and dos in crop farming to benefit profitably.

Item 6

Challenge

Expected responses

- Identify the materials, tools and equipment's. (hand hoes, seeds, sisal string, rake, =08
- watering, hand trowel, panga/PPE
- Put on PPE to protect yourself from injury.
- Select a suitable site.
- Clear the site of all surface vegetation, trees stumps and stones.
- Dig the soil by removing all the roots.
- Sterilize the soil.
- Apply and mix organic manures.
- Create a raised platform if the area has a high moisture content.
- Make planting drills.
- Plant the seeds using the recommended spacing and depth
- Cover the seeds using a thin layer of soil.
- Mulch the nursery bed.
- Construct a shade over the nursery bed.
- Water/ irrigate according to the moisture demand.
- Harden off the seedlings.
- Transplant
- Shading
- Control weeds.
- Fertilizer application
- Pest and disease control
- Harvest

CE	CM	CH
3	4	1
=08		

Estu	2	1
3		
2 and above	1-2	0
1	0	0

Mgt	3	2	1
4			
3 and above	2-3	1-2	0
2	1	0	0

How = 1

Plant seeds directly into the soil, use a nursery bed to ease

management

Sterilizing the soil as a waste of time, they should sterilize to control soil borne pests and disease.

Using seeds from ripe tomatoes. Buy seeds from a reliable source to ensure/Encourage germinability/Good germinability

Use herbicides to clear land, use appropriate methods of land clearing to prevent killing of seeds.

Few seeds germinated. Carry out germinability test before planting to improve germinability. To determine suitability.

Slender and weak stems - Apply manure/fertilizer to supply nutrients

mottled leaves, Use clean planting materials to prevent disease spread.

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SCORING GUIDE
Uganda Certificate of Education
AGRICULTURE 527/1
July/August 2024



Item 1

Expected responses

Challenges

- (i) Farmers keep their money at home.
- (ii) Rent rooms which are very expensive.
- (iii) Transport milk in jerrycans
- (iv) They carry their milk in jerrycan on their heads.
- (v) Milk goes bad on boiling.
- (vi) Milk has bad flavor.
- (vii) Opamba (one farmer) has no enough money to buy the machines.
- (viii) Milk has some hairs in it / un clean.
- (ix) *Electricity bills are high*
- (x) *Rooms are very hot*
- (xi)
- (xii)
- (xiii)

No score for challenges.

Solutions and justification

- (i) Farmers should keep their money in saving groups or open bank accounts for safety reasons.
- (ii) They should work in groups and share the bills of electricity and rentals to save money.
- (iii) They should transport their milk using metal cans coated with aluminum. They are easily cleaned and safe for the milk.
- (iv) Should get good means of transport since they are dealing with perishable products to reach faster to the selling points, *before going bad*
- (v) *not boiling* Poor hygiene should be corrected. And keeping the milk in cool areas not their hot rentals/ freezing/ refrigeration. *To avoid milk going bad*
- (vi) Milk has bad odour because of the poor hygiene in the transporting cans. They should maintain good hygiene before, during and after milking. *To avoid tainting of milk / developing bad odours.*
- (vii) They should start self-help groups and save so as to access credit to help them during the scarcity of money.
- (viii) Should sieve the milk before transportation *to ensure* of quality goods. *milk. / Grooming the animal before milking to avoid loose hair.*
- (ix)
- (x)
- (xi)
- (xii)
- (xiii)

	4	3	2	1
5 solutions and above	3-4	1-2	0	
Just 4	2	0	0	

Item 2

Expected responses

- SSSC - Continuous cultivation – practice bush fallowing to allow land to regain it's fertility.
- SSSM - Monocropping – practice crop rotation / intercropping while including legumes. *To maintain soil fertility*
- SSSB - Burn of vegetation – Allow them to decompose in the garden to release back the nutrients.
- SSSD - Different colours on the leaves – Fertilizer application and manuring. *To avoid nutrient deficiency*
- SSSF - Dry field – practice controlled irrigation/ mulching/ cover cropping *to conserve soil moisture*