**THE MIGHTY AGRICULTURE STRATEGY 2018**

**ANIMAL PRODUCTION**

1. (a) Describe the characteristics of a laying hen.

(b) Explain the factors that affect the quality and quantity of eggs produced by birds in a deep litter house.

1. (a) Describe the features of a good deep litter house.

(b) Outline the problems poultry farmers face when using litter in poultry house.

(c) Explain the ways farmers should manage litter in deep litter house to avoid decline in poultry production.

1. (a) Mention the abnormalities that may occur in eggs during their formation.

(b) State and explain the measures a farmer could take in order to produce high quality eggs.

1. (a) State the characteristics of a good quality egg.

(b) Describe the management practices to carryout to produce good quality eggs.

1. (a) Give reasons why poultry keeping is gaining popularity in Uganda.

(b) Outline the major problems that poultry farmers in Uganda face.

1. (a) How is an egg formed in a hen?

(b) Describe the management practices carried out in a deep litter house.

1. What are the features of a deep litter house?
2. How can you manage layers in a deep litter house from brooding up to laying?
3. (a) What are the advantages of keeping local breeds of poultry?

(b) Give the measures taken to ensure high production of local chicken.

(c) Explain the causes of poultry diseases.

1. (a) State the causes of poultry vices?

(b) State the qualities of a good layer.

1. (a) Explain the factors affecting livestock distribution in Uganda.

(b) What are the characteristics of indigenous cattle?

1. (a) What are the characteristics of nomadic pastoralism?

(b) Suggest how nomadic pastoralism could be transformed into modern livestock farming.

1. (a) explain the livestock improvements practices below:
2. cross breeding
3. in breeding
4. selection

(b) Outline the advantages and limitations of artificial insemination.

1. (a) Describe the procedure of dehorning an animal using the chemical method.

(b) What are the benefits of dehorning farm animals?

1. (a) State the objectives of breeding animals.

(b) Describe the methods farmers use to maintain a high breeding efficiency.

1. (a) Explain the measures a farmer could take to ensure availability of livestock feeds.

(b) Describe the ways of ensuring that feeds are efficiently utilized by animals on a farm.

(c) Explain ways of guarding against the following disorders in livestock:

(i) Bloat

(ii) Common calf scours

1. (a) Describe the reasons for carrying out the following practices.
2. steaming up
3. drying off
4. castration

(b) Describe how you can use a surgical method to castrate a calf.

1. (a) State the features of a good calf pen.

(b) Describe how a calf is trained to drink from a bucket.

1. (a) Describe the process of milk let down.

(b) Outline the steps taken to produce clean milk.

1. Describe the procedure of carrying out artificial insemination using rectal virginal method.
2. (a) Why should animals be given plenty of water?

(b) State ways through which water is lost from the animal’s body.

(c) Explain factors governing water intake by animals.

1. (a) Describe how a cow holds up its milk.

(b) Explain the factors affecting quality and quantity of products at the farm.

1. Explain the challenges that dairy farmers face in marketing milk.
2. (a) Explain the following methods of animal selection:
3. Pedigree selection
4. Progency testing
5. Mass selection
6. Independent calling

(b) State the qualities that livestock breedens may look for a dairy breed.

(c) What causes low production in dairy animals?

1. (a) Give the differences between roughness and concentrates.

(b) A farmers has a maize meal containing 8% protein and soya bean meal containing 43% protein. Using appropriate method, calculate the proportions in which he will mix the two ingredients to make a meal mixture of 15% protein of 100kgs.

(c) Outline the ways in which a farmer should take care of stick animals.

(d) Describe the signs of heat in cattle.

1. (a) Describe the factors that affect milk composition on a farm.

(b) Explain various ways by which high quality milk is maintained on a farm.

1. (a) What are the signs of pregnancy in a cow?

(b) How can one tell that a cow is about to calve down?

1. (a) Describe the management practices carried out on a calf from the time of birth to weaning.

(b) Outline the importance of feeding a newly born calf on colostrum.

1. (a) Describe the process of milk let down in lactating goats.

(b) Outline conditions that lead to milk let down.

1. (a) Mention the functions of the following parts of the female reproductive system:
2. Ovary
3. Fallopian tube
4. Vagina
5. Funnel
6. cervix
7. (a) What are the signs of liver fluke infestation in cattle?

(b) How can liver flute infestation be controlled?

1. (a) Describe the effects of tick infestation on the lost animals.

(b) Outline the body features of ticks that help them to adopt as parasites.

(c) Explain the procedure of hand spraying animals to control ticks.

1. (a) Describe the procedure of preparing hides and skins.

(b) What are the factors that affect the quality of hides and skins?

1. (a) With aid of a diagram, describe the lifestyle of a two host stick.

(b) Why are ticks a problem to livestock farmers?

(c) Outline the non-chemical methods used in tick controls.

1. (a) How can disease spread be prevented on the farm?

(b) State the signs of ill health in farm animals.

1. (a) Explain the common causes of mortality in calves.

(b) Describe how calf mortality can be prevented.

1. State the signs of the following diseases in livestock:
2. Bloat
3. Mastitis
4. East coast fever
5. Grass tetany
6. (a) Outline the measures taken by farmers to control east coast fever.

(b) What are the factors that pre-dispose cows to mastitis?

1. (a) Outline the advantages of rearing pigs as compared to the rearing of other types of livestock.

(b) What are the problems associated with rearing pigs.

1. (a) Why are parasites a problem in livestock farming?

(b) Describe the life cycle of a liver fluke.

1. (a) What are the qualities of a good boar?

(b) Mention the steps taken to ensure proper growth of piglets up to mating.

(c) Why are most farmers in Uganda today taking much interest in pig production?

1. (a) Mention five advantages of raising pigs using the intensive system of production.

(b) Give the common breeds of pigs reared in Uganda.

**MECHANIZATION AND FARM MANAGEMENT**

1. (a) Explain the challenges of marketing agricultural products.

(b) Outline ways of improving the marketing of agricultural products.

1. (a) How do farmers benefit from farming organizations?

(b) What problems have farming organization faced in Uganda?

1. (a) What are the benefits of being a member of a co-operative society?

(b) State the principles on which co-operatives operate.

(c) What led to the collapse of co-operative societies in Uganda?

1. (a) Giving an example in each case, distinguish between risks and uncertainties.

(b) Explain how farmers may reduce the effects of risks and uncertainties.

1. (a) Suggest four ways in which prices of products are determined in a market.

(b) Explain the causes of low supply of agricultural products.

1. (a) Given the following information, draw up a profit and loss account for agro-mixed farm as at 20th June 2016. Interest on a loan 500,000, closing valuation, 300,000 feed cost 100,000, casual labour 400,000, income tax 200,000, milk sales 500,000, pre-paid expense 600,000, band overdraft 400,000. Bank balance 600,000, cash at hand 400,000, opening valuation 250,000 other receipts 780,000.

(b) Give the importance of the above record farming.

1. (a) Outline the marketing functions that help farmers to sale their farm products easily.

(b) Explain the problems of marketing agricultural products.

(c) What are the characteristics of agricultural products?

1. (a) State the uses of gross margins in agriculture.

(b) List five examples of variable in a given farm enterprise.

(c) A farmer planted 5 hectares of maize and obtained yields of 10,000kg. He sold the maize at 300/= per kg. His production costs were as follows:

Bought seeds at 50,000

Bought fertilizers at 100,000

Paid casual labour at 200,000

Salary for 2 permanent works 480,000/=

Other fixed costs at 650,000.

Calculate the gross margin per hectare and net profit of the farm. Show your working)

1. (a) What is labour?

(b) State the characteristics of labour.

(c) Explain the factors that affect supply.

(d) Describe the factors that may affect labour efficiency in agricultural production.

1. Give reasons why agricultural products are perishable.
2. (a) Explain the factors that bring about fluctuation in prices of agricultural products.

(b) What are the effects of fluctuation of agricultural products?

1. (a) State and explain the factors of production.

(b) State the advantages and disadvantages of:

(i) Specialization

(ii) Diversification

(c) Distinguish between elastic and inelastic demand.

1. (a) Describe the functions of the parts of a radiator.

(b) State the advantages of using water as a coolant in the engine.

1. (a) What are the advantages of using 4-stroke engine?

(b) Describe how a 4-stroke cycle petrol engine works.

1. (a) What are the features of a good wet types coil bath air cleaner?

(b) State the functions of the various features of clean air production.

(c) How can the wet (oil bath) air cleaner be serviced to perform well?

1. (a) Outline the qualities of a good planter.

(b) Explain the factors that influence the choice of implements used for cultivation.

1. (a) Why are diesel engine tractors commonly used than petrol engines?

(b) What are the benefits of mechanizing agriculture products?

1. (a) Describe the process of power production in a four cycle petrol engine.

(b) What are the advantages of using machines to perform farm work?

1. (a) Describe how water cooling system maintains the engine temperature below risk levels.

(b) Mention four steps taken to improve performance of the water cooling system.

1. (a) Describe the features of a good calf pen.

(b) Why is a crush important on a farm?

1. (a) Describe the features that make a cattle dip good for tock control at the farm.

(b) Mention the factors considered in selecting a site for construction of farm structures.

1. (a) Describe the types of record used for animal management that are kept on a farm.

(b) Explain why keeping records are important in animal improvement.

1. (a) Why are agricultural produce processed before sale?

(b) Explain the factors affecting supply of agricultural products.

1. (a) Why are farm buildings important?

(b) Explain the factors that determine the durability of farm buildings.

1. (a) Outline the uses of fences on a farm.

(b) Describe the procedure of erecting a barbed wire fence.

1. (a) What are reasons for having a store at the farm?
2. (a) Describe the procedures of preserving wood using hot and cold soaking method.

(b) What are the advantages of using wood in construction?

1. (a) Explain the factors considered in selecting building materials to use.

(B) Describe the procedure for making good quality motor for building purpose.

1. (a) Mention the properties of clean and safe water.

(b) State the factors affecting water quality on the farm.

(c) Describe how the quality of water can be improved on the farm.

1. (a) Explain the role played by farm structure in farm management.

(b) Mention the factors that may determine the type of fence used.

1. (a) Describe the working of a water cooling system in the tractor engine.

(b) What are the causes of overheating in a water cooled tractor engine.

**CROP PRODUCTION**

1. (a) What are the factors considered in planning a good crop rotation?

(b) What are the advantages and disadvantages of crop rotation?

1. (a) Explain the role played by mulching in soil production and waste conservation.

(b) What is the importance of soil water in crop production?

(c) Give the different forms in which water exists.

1. (a) Describe an experiment to compare the capillarity of two soil samples.

(b) Why is it necessary to have a good soil structure in crop production?

1. (a) State the factors affecting soil formation.

(b) Suggest the farming practices that maintain soil fertility.

1. (a) Distinguish between soil texture and soil structure.

(b) Explain the importance of soil texture and structure in crop production.

(c) How can the structure of the soil be destroyed?

1. (a) What is the importance of improving soil drainage?

(b) Describe the various methods of improving soil drainage.

1. (a) Describe the physical methods of soil and water conservation.

(b) What are the effects of soil erosion on arable land?

1. (a) Name and describe four types of soil erosion.

(b) Explain factors that influence the rate of soil erosion.

1. (a) Name and describe the type of water erosion.

(b) Explain the factors that encourage erosion.

1. (a) State the causes of accelerated soil erosion.

(b) State the factors affecting the rate of soil erosion.

1. (a) Explain the factors that may determine the methods of irrigation to be used in a given area.

(b) Mention ways in which irrigation improve crop yields.

1. (a) State the characteristics of a good green manure crop.

(b) Describe how green manure is prepared on a farm.

(c) State the advantages and limitations of using green manure.

1. (a) Describe the methods used to apply fertilizers.

(b) State the limitations of using inorganic fertilizers.

1. (a) Explain the characteristics of fertile soil in a garden.

(b) What are the benefits of the following practices?

(i) Early cultivation

(ii) Row planning

(iii) Intercropping

1. (a) What are the benefits of using farm yard manure?

(b) Describe how good quality FYM is prepared on the farm.

1. (a) Describe the procedure of preparing composite manure using the indoor method.

(b) Outline the precautions taken to produce high quality composite manure.

1. (a) State the qualities of good fertilizers.

(b) Describe the methods of fertilizers.

(c) What are the factors that affect response of crops to fertilizers?

1. (a) What are the factors contributing to soil fertility?

(b) Explain the different ways in which soil fertility can be maintained.

1. (a) State four signs of nitrogen deficiency in crops.

(b) State any four farming practices that may increase the level of nitrogen in soil.

1. (a) Explain the advantages of using the biological method of crop pest control.

(b) Outline the surely precaution that should be taken when handling and using agro-chemicals.

1. (a) Describe the characteristics of weeds that make them better competitors than crop plants.

(b) How can effective use of herbicides in weed control be ensured?

(c) What precautions should farmers take when applying herbicides?

(d) What are the cultural methods used by farmers in weed control.

1. (a) Why are weeds a problem in farming.

(b) What are the advantages of chemical weed control?

1. (a) Name the common storage pest.

(b) State ways in which crop produce is lost while in the store.

(c) Suggest possible solutions to overcome crop losses in the store.

1. (a) Describe the damage caused by pest to crops.

(b) What are advantages of controlling pest?

(c) Mention the precautions taken while using pesticides.

1. (a) Describe the damage caused by pest to crops.

(b) What are the advantages of controlling pests?

(c) Mention the precautions taken while using pesticides.

1. (a) State various ways of disease spread crops.

(b) Mention the signs of diseases in crops.

(c) How do crop growers reduce the effect of diseases in crops?

1. (a) Suggest reasons for carrying out primary tillage in seed bed preparation.
2. (a) What are the objectives of cultivation?

(b) Explain why ox-cultivation is not widely practiced in Uganda.

1. (a) Describe the factors that you would consider when choosing a crop to grow in your area.

(b) Give the field practices carried out when growing a banana crop.

1. (a) Describe the different methods of vegetative propagation of crops.

(b) Outline the advantages and disadvantages of vegetative propagation in crop production.

1. (a) Describe the characteristics of good vegetative planting materials which area used to establish a crop field.

(b) Outline the advantages and disadvantages of broadcasting method of planting.

1. (a) State the characteristics of a good vegetable crop to grow.

(b) Describe how to determine viability of a seed lot using the germination test.

1. (a) What considerations should a farmer make when grafting?

(b) Describe the advantages and disadvantages of grafting as a method of propagation.

1. (a) Explain the importance of carrying out agronomic practice in crop production.

(b) What is the importance of producing cereals?

(c) Mention any four practices carried out in crop production after harvesting to improve their quality.

1. (a) Distinguish between seed dormancy and seed viability.

(b) State the main cause of seed dormancy.

(c) Describe the various methods used to break seed dormancy.

1. (a) State reasons for drying crop seeds before storage.

(b) What are the disadvantages of mulching a field?

1. (a) State the advantages of raising cassava crop from sets.

(b) Explain the importance of the various management practices in improving cassava yield.

(c) What is the importance of producing root crops?

1. (a) State the field practices carried out in the growing of maize.

(b) Why is growing more popular in Uganda?

(c) Outline the common field pests of maize.

1. (a) What are the benefits of growing perennial crops?

(b) Give the factors that affect the distribution of perennial crops ion Uganda.

(c) Outline the challenges of growing perennial crops.

1. (a) Give the problems caused by the following:
2. Having a poor soil structure.
3. Planting crops late
4. Give the reasons for pruning perennial crops.
5. Outline four factors that help to determine the spacing of crop plants in a crop field.
6. (a) Outline the aims of crop breading in Uganda.

(b) What are the advantages of using seeds in propagation?

1. (a) What is the importance of growing pastures?

(b) How can a farmer improve the productivity of a pasture?

(c) Give the qualities of a good pasture species.

1. (a) Describe how silage is prepared on the farm.

(b) Outline the factors affecting the quality of silage.

(c) State the precautions taken when preparing silage.

1. (a) What makes elephant grass a good pasture plant?

(b) Mention the advantages of rotation grazing.

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