

Name..... Signature.....

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AGRICULTURE

Paper 1

May 2025

2½ hours



ACEITEKA RESOURCEFUL ASSESSMENT 2025

Uganda Certificate of Education

AGRICULTURE S.4

Paper 1

Theory

2 hours 30 minutes

INSTRUCTIONS:

- The paper contains **six** items and two section **A** and **B**.
- Section **A** is compulsory.
- Section **B** has two parts **I and II**, answer **one item** from **each part** in section **B**
- Attempt **four** items in all the paper.

Section A

Soil science and value addition

Item 1

Bananas and milk are common agricultural products that Ugandans have been producing for a long time. Kumi county is located about 400 km from a large urban centre with a good market for these products. Last season, favourable conditions led to excess production of both milk and bananas. The urban market could not absorb all the produce, causing significant losses for the farmers.

Task

a) As a student with knowledge about value addition in agriculture, develop a plan detailing how the farmers can overcome the current challenges of surplus production.

Item 2

Kabagando mixed farms owns 250 acres of land in Butanko village, they use 100 acres to grow maize for livestock feed and to sell the surplus. For the past decades, their old Massey Ferguson tractor has reliably cultivated the land, and yields have been constantly good. However, in the past five years, there has been a noticeable reduction in production. The maize crops have symptoms such as stunted growth, yellow leaves, purple streaks on leaf margins, poorly developed roots and small grains.

Task

As an agricultural expert identify the likely causes of the reduced maize production and recommend strategies for Kabagando mixed farm to improve their land and ensure better crops yields.

Section B

Part I: animal production

Item 3

Mr. Basagwa keeps traditional cattle with big humps and prominent dewlaps, inherent from his grandfather. He uses these cattle for meat and milk

production, grooms one bull for breeding purposes and grazes this herd on natural plants. His 30 lactating cows produce 45 liters of milk per day. The cattle drink water once a day from a nearby swamp which poses some issues. Additionally, the cattle are infected with blood feeding organisms, although they are not correctly showing signs of illness. Mr.

Basagwa's brother on the other hand, owns six cows imported from Ireland that produce 120 liters of milk per day. These cows are fed on well-chopped elephant grass, cotton seed cake, minerals and maize bran. He has suggested that Mr. Basagwa sells his cattle and purchase cows like his but Mr. Basagwa has refused.

Task

As a veterinarian, explain the value of the animals each brother is keeping and provide recommendation for both to improve their livestock production.

Item 4

Mr. Linto is raising poultry for egg production, initially enthusiastic, he has seen a decline in production and profitability over time. To address the issues, he invited Mr. Buugi, an expert in animal husbandry from the district production office to assess his farm. Mr. Buugi observed several issues, the poultry house was over crowded, there were insufficient laying nests, feeders were contaminated with droppings, some birds had wounds, empty egg shells were on the bare floor, the house had a foul order and the windows were covered with dark curtains all day. Additionally, the birds were only fed whole grains and given water once a day starting at 3:00pm.

Task

As Mr. Buugi, write a message to Mr. Linto explaining how the observed issue may be affecting bird production and suggest practical solutions.

Part II: Crop production

Item 5

Coffee is a high value crop that can generate more income than many other crops. It has been a major cash crop for many farmers in various areas of Uganda. Luuba has a colonial coffee garden with plants planted in rows at a spacing of 60 cm X 30 cm.

Most plant branches have grown to reach each other, providing shade. Under wealth, these branches are colonies of black organisms feeding on the juice of mature coffee berries. Many coffee branches on each plant have leaves that have changed color to yellow, purple and brown.

The ground of the garden is bare, and the top layer of the soil is missing. For the past five years, nothing has been added to the soil except for the removal of unwanted plants done once a year. The yield of the plantation has been decreasing year after year, with the berries harvested being small and few in number.

Task

As a person with knowledge about coffee production, write a message to Luuba advising him on the best ways to increase his yield and profitability.

Item 6

The s.2 has been actively involved in garden work at the school farm where each student owns a plot measuring 2 meters wide and 6 meters long for corn growing. After the fast seasons rains began, many students planted their crops except for Panda who had not prepared her plot in time. Masavu planted maize with a spacing of 30 cm X 90 cm on time, but most of the seeds did not germinate, so he took care of the few that did. Kabaga's plot of groundnuts initially did well but was soon invaded by weeds for she couldn't remove due to a busy class schedule. After a month of rain, drought set in and scotched many of the plants. Upon close observations, the remaining plants in many plots had turned yellow even though their plots were weed free.

The maize stems and leaves had holes bored by some organisms, the carrots had tubers exposed to sunlight, and the tomatoes had developed more branches than necessary.

Task

Evaluate the gardening efforts of the students and provide them with guidance on measures to ensure successful crop production.

END.