THE CURRENT STATUS OF THE GAYAZA HIGH SCHOOL DAIRY FARM

Currently we have 13 milk producing cows out of a total herd of 28 and their average milk production from the available statistical data in the last two months has been given in the table below.

CATTLE	MORNING (litres)	EVENING (litres)
Esther	7	5
Monica	7	4
Namutebi	9	5
Victo	6.5	4
Kalipuso	7	4
Talemwa	8	4
Namubiru	4	3
Nakibombo	6	4
Jasi	5	3
Milly	7	4
Jenifer	7	4
Sanyu	8	5
Claire	2	1.5

Before you attempt the exercise below please read the article about the school farm that follows below to be able to place the questions in their right context.

Please ask one of your parents or guardian to read the article too.

Exercise: ***Please hand in this exercise in a report form to your class teacher at the start of the term. Find a suitable title for your report.***

Using the table of production on page (1) above, attempt the following questions;

(1) Calculate the total production realised by the Gayaza High school farm in a day.

(2) Find the difference in production between the two times of the day. What could be the cause of this difference?

(3) If the enhanced nutritional programme started in April 2014 was to generate a 75% increase in production by the end of one year, include new columns in the table on page 4 to show the new individual production values per cattle and label these columns morning-new and afternoon-new.

(4) The Farm sells milk to the school dining room at sh. 1,000 per litre. Calculate the income received by the farm in a month of 30 days. Taking the total revenue per day as an average sale throughout the year, calculate the total sales received by the dairy unit of the farm in a year with 365 days.

(5) What is the farm's anticipated revenue from the total sales in April 2015?

(6) Complete the table below extracted from the main table

CATTLE	**MORNING (litres)**	**EVENING (litres)**	**TOTAL PRODUCTION (litres)**
Esther	7	5	
Monica	7	4	
Namutebi	9	5	
Victo	6.5	4	
Kalipuso	7	4	
Talemwa	8	4	

(a) Construct a pie chart showing the total production of milk.

(b) Draw a bar graph showing the total production of milk.

(c) Using the information given write out a (6x2) matrix representing the production per cow. If the selling price at an outlet shop varies with sh.1,200 in the morning and sh.1,000 in the evening write out a (2x1) matrix showing the selling prices.

(d) Use the matrices in (c) above to calculate the revenue realised by the farm through the outlet shop per day.

(7) Using the 26 values in the table on page 1 complete the frequency table below.

Number of litres.(**x**)	Tally	Frequency (**f**)	Total production(**fx**)	Cummulative frequency(CF)
1.5				
2				
3				
4				
5				
6				
6.5				
7				
8				
9				
TOTALS		$\sum f = ...$	$\sum fx = ...$	

(a) Calculate the average production per milking session of a cow using.

(b) Given that there are two milking sessions for the 13 cows a day and that the production remains constant throughout the year, calculate the total average production of the farm in a year with 365 days.

(c) If this farm was within your home area, working with your parent/guardian find out the cost of a litre of milk at the current market price and use this value to estimate the annual revenue of the farm.

(d) Taking the 26 values in the table on page.1 make out four samples of 5 values each and calculate the sample mean of each set. Construct a distribution of sample mean values and find the mean and variance of the sample means.

IMPROVEMENT OF DAIRY FARMING AT GAYAZA HIGH SCHOOL

A YOUTH ENTERPRENEURSHIP SCHEME(YES) STRATEGY.

A visit to Njeru Stock Farm, a government owned enterprise left the 53 Senior two girls and 10 teachers of Gayaza High School wondering about what they can do together with the school to improve the dairy farming processes at Gayaza High School. Seeing the good looking cattle with a high yield we all wondered about the processes of scientific cattle management that we needed to adopt at our school farm for the much needed improvement. Thanks to Dr.D.K.N.Semambo, the Executive Director- National Animal Genetic Resources Centre and Data Bank (NAGRC&DB) our chief host and the staff of the Njeru Stock Farm for arranging this visit that enabled us learn practically the science of improved nutrition for the dairy cattle.

Introductory and concluding remarks made by the staff at Njeru Stock Farm

We learnt a lot about improved cattle nutrition involving pasture management and participated in planting maize and legumes that will be turned into fodder for the cattle. We also had chance to see the different types of silos in which silage is kept to feed the cattle especially during the dry seasons.

Gayaza High School students engaged by Dr.Semambo in practical farm work at Njeru Stock Farm.

Students being introduced to how silage is stored and fed to the cows.

Pamela Goode says that at the Gayaza High School Jubilee in 1955, the visitors to the jubilee celebration were told about the commencement of the Farm-Diet Scheme, and an appeal was made for gifts of cows to start the school herd. Many people responded to the appeal and for some months in the early 1956 Pamela went round the villages collecting animals until she raised a herd of eighty-one cows. This is testimony that the Gayaza High School farm received a contribution from the community during its foundation and we must continue providing extension services to the community today as an obligation and not just a service. Pamela says that the management of the Nganda cattle at the time was very difficult and it seemed absolutely impossible to bring about improvements in cattle management and many times she had wanted to sell off all the cattle or to leave Gayaza! She further notes that if the cattle had been sold, life would have been easier but the girls would never have learnt how to look after animals properly in order to contribute to the improvement of the standard of animal management throughout the country.

Today, we read Pamela's passion for the learning that the girls must have at a school farm and roll our sleeves to make that possible. The Senior two and Senior three 2014 students opened up a garden of maize following the scientific planting procedures that we learnt at Njeru Stock Farm

and we later on received support by the workers from Njeru who helped to grow this garden to 4.5 acres of maize. This maize will be cut into silage to facilitate the improved nutritional programme for the cattle. The Senior two class will follow through all the steps from growing, harvesting, making silage and feeding the cattle in order to learn the total management of fodder as we prepare them to support the farmers in their communities.

The Senior two and Senior three students setting up the maize garden -4.5 acres.

As we wait for our maize to grow, we are blessed to have some silage given to us from Njeru stock farm to enable us to straight away start our cattle on the improved feeding programme and allow the animals to get used to the new feed. I am excited to see the change that we have been talking about starting to take shape and our cows are now feeding on silage-though a gift, Hay from the grass cut from the compound and the cow dung dropped from a central place to be fed into the upcoming bio-gas plant.

Silage being loaded at Njeru and off loaded late at night at Gayaza High School.

Gayaza High School cows get a try at eating silage which seems a new feed to them.

All these units will be part of our training grounds when we host a Youth Farm Camp for secondary school students during the August 2014 Holidays. Watch this space for the programme and book your daughter or son for this camp.

THE CHANGE WE WANT TO SEE.

(i) We are hopeful that with the improved nutritional programme the production of milk at the farm will double within a space of one year.

(ii) The farm must change into a classroom space where the teachers can conduct their lessons either physically or by using the data collected by another class over time. Hence the farm spaces must be accident free and properly prepared to host students for long hours. The records at the farm must be well arranged and up to date such that the information gathered can be utilized by the different teachers in their subjects. This will definitely require us to conduct teacher sensitization workshops in the farm spaces so as to determine the possible classroom activities that will enhance learning for both the students and staff.

(iii) The Students Agricultural Society can start to own a cow or two and build a business enterprise.

For any comments or questions email ronaldddungu@yahoo.com /call 0772433879/0701433878