

# Milk Production of Red Chittagong cattle in farm condition in Chattogram Region



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# **Milk Production of Red Chittagong cattle in farm condition in Chattogram Region**



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## Abstract

This study was done to estimate the milk production of Red Chittagong Cattle. A total of 63 milk yielding cow were observed and recorded in two farms in Chittagong region in month of May and June. Lactation length, lactation yield, daily milk yield and dry period were estimated at Hathajari Cattle breeding and dairy farm ( Farm 1 ) ( 232 $\pm$  5 days, 385.12  $\pm$  9.2 kg, 1.66 $\pm$  .2283 kg, 70-75 ) and Mamata dairy farm ( Farm 2 ) ( 223 $\pm$  4.7 days, 274.09  $\pm$  7.4 kg, 1.23 $\pm$  .166 kg, 62-68 day) respectively. This study was compared with some previous study which was done in BAU in 1999, 2001, 2006 to estimate the present condition of the above mentioned farm. In this study comparison of the production of these two farm were mentioned and tried to find out the reason of deviation.

## Introduction

Most of the village people of Bangladesh rear indigenous cattle in their backyards..Due to have different coat color and distinguishing character Red Chittagong Cattle have a special place in our country , mostly in Chittagong. In this context to know about the present productive performance of RCC in farm condition is very important. Also productive performance is the most important factor for farm to get optimum profit .In regarding so many environmental factor like disease resistency, adjustment in our environment RCC can be a convenient breed to rear. Due to shortage of proper and sufficient information about RCC a comprehensive study is very essential to evaluate its production efficiency. Because most of the RCC are reared in backyard which not having any proper production record and not having any parental history. These cattle is mainly available in Chattogram and its surrounding areas .It has been reported that its number is declining due to indiscriminate breeding with other indigenous , exotic and cross breed cattle since last three and a half decade (Hossain et al ....2006).Now government is more concerned about to preserve its purity .In this respect this present study will be more beneficiary to evaluate the some important traits of RCC. There also try to comparative study of the two farm to the actual cause of deviation production

**Key words:** Lactation yield, daily milk yield, lactation length, comparison of mentioned farm.

## **Objectives**

1. To know about production trait of RCC like daily milk yield , lactation length ,total milk yield, dry period.
2. Comparison of the above mentioned two farm's productivity
3. Try to find out the deviation of productivity of these two farm

## **Background**

Pakistan Journal of Biological Sciences published on the performance of Red Chittagong Cattle under different production system in the year 2000 .Where they show the individual observation ,general mean ,effect of production system etc.

M A Habib , M A Afroz, AKF Bhuiyan Department of Animal Breeding and Genetics ,Faculty of Animal Husbandry Bangladesh Agriculture University , Mymensingh Bangladesh in the year 2002 published a report on lactation performance of Red Chittagong Cattle and effects of environmental factors where they showed the lactation length , lactation yield ,daily milk yield , corrected lactation yield , corrected 305 day milk yield ,corrected daily milk yield where I cited to analysis my information

Article named Red Chittagong Cattle an indigenous Cattle to Help Tackle the Challenges of Modern Animal Production by Nani Gopal Das ( Animal production Research division, BLRI, Dhaka, Bangladesh. ) Mohammad R Islam (Livestock Production and welfare group, School of Life of Environmental Sciences, university of Sydney, Sydney NSW Australia). Nath Ram Sarkar ; Md Abdul Jalil Cameron E F Clerk published 12 August 2021 on Frontiers

# **Method and Materials**

## **2.1 Study area and duration**

The study was conducted at Dairy and Cattle Breed Development farm Hathazari, Chattogram and Mamata RCC dairy farm at Chandanaish in the month of May and June 2022.

## **2.2 Study population**

Total 50 lactating cows from Dairy and Cattle Breed Development Farm of age 2-7 years and 13 lactating cows from Mamata Dairy Farm, Chandanaish were considered for study

## **2.3 Data analysis**

The cows were seldomly grazed and regularly dewormed in both farms. But Dairy and Cattle breed Development farm Hathajari strictly maintain their vaccination schedule than Mamata Dairy Farm .Both of the farm maintain different ration .But Dairy and Cattle Breed Development farm bring some change according to their productivity in different lactating period. Simple mean, median ,mode ,standard deviation are done in per day lactation, lactation yield , lactation length, dry period of these two farm and try to analysis these two farm with some previous study to know the present condition of the farm .In daily milk yield data here presents 5 month average daily milk yield of 63 cows.

## Result and discussion

### Lactation length

Data on milk production of RCC cows were collected from the nucleus herd of Govt. Dairy Cattle Breeding Farm Hathazari Chattogram., and Mamata Dairy Farm ,Chattogram. Lactation record was collected from 50 and 13 lactating cows respectively from above mentioned farm. Animal were stall fed throughout and were seldom grazed . Artificial insemination was practiced .Animals are regularly dewormed with (Endokil –ACI , Helmex - Renata.)

The mean lactation length of RCC in farm 1 is 232 +/- 5 days and Farm 2 is 223 +/-4.7 which is agreeing the studies of Alam et al (2007) , Munim et al (2006), Khan et al (1991) is ( 211. 5 +/- 20.9 to 242.2 +/- 8.3 days ) and also agreeing the the study of Khan et al (2001) and Rahman et al (2001) for non descriptive Desi cattle lactation period (221.3 +/- 21.9 to 250.6 +/-69.8 days .....Longer lactation period were reported by Habib et al (2003) for RCC (261.1 +/- 14.5 days ) at BAU dairy farm : Hossain and Routledge (1982) for Pabna cows( 284.2+/- 18.4 days ) , these findings are not agreeing the with our study .

|                        | Farm 1(mean +/- SD) | Farm 2(Mean +/- SD) |
|------------------------|---------------------|---------------------|
| Lactation length (day) | 232 +/- 5 days      | 223 +/- 4.7 days    |
| Lactation yield (kg)   | 385 .12 +/-9,2 kg   | 274.09 +/- 7.4kg    |
| Daily milk             | 1.66 +/- .2283 kg   | 1.23 +/- .1666      |
| Dry period             | 70-75 days          | 62-68 days          |

### Lactation yield

The mean lactation yield of Farm 1is 382.12 +/- 5 kg and Farm 2 is 274.09 .Both farm lactation performance are lower than the study of results of Alam et al (2007) and Munim et al (2006) ,who was found 516.9+/- 35.9 and 528.+/- 59.8 kg for RCC and Shahiwal cross respectively .But Munim et al (2006) : Habib et al found better lactation yield of RCC 570.5 +/- 112.5 and 661.2 +/- 39.8 kg , respectively . The lactation of RCC is better than that of non descriptive Desi cows (213.09+/- 7.8) kg reported by Hossain and Routledge (1982). In study by Hossain and Roultedge (1982) lactation yields was 803 +/- 290 kg for Pabna cows ,



higher than this study .The mean age season corrected lactation yield and projected 305 day milk yield of RCC were 605.4 +/- 22.9 and 670. +/- 19.4 kg respectively..There is no literature on RCC and other indigenous cows in Bangladesh for age season corrected milk yield traits.

### Daily milk yield

|                                 |  |  | Farm 1 |  | Farm 2 |
|---------------------------------|--|--|--------|--|--------|
| Average milk production of cow. |  |  | 1.5    |  | 1.2    |
|                                 |  |  | 1.6    |  | 1.1    |
|                                 |  |  | 1.7    |  | 1      |
|                                 |  |  | 1.5    |  | 1.5    |
|                                 |  |  | 1.9    |  | 1      |
|                                 |  |  | 1.5    |  | 1.2    |
|                                 |  |  | 2      |  | 1.3    |
|                                 |  |  | 2.1    |  | 1.4    |
|                                 |  |  | 2.2    |  | 1.2    |
|                                 |  |  | 1.5    |  | 1.1    |
|                                 |  |  | 1.6    |  | 1.3    |
|                                 |  |  | 1.8    |  | 1.3    |
|                                 |  |  | 1.7    |  | 1.5    |
|                                 |  |  | 1.5    |  |        |
|                                 |  |  | 1.7    |  |        |
|                                 |  |  | 1.5    |  |        |
|                                 |  |  | 1.9    |  |        |
|                                 |  |  | 1.5    |  |        |
|                                 |  |  | 1.7    |  |        |
|                                 |  |  | 1.6    |  |        |
|                                 |  |  | 1.5    |  |        |
|                                 |  |  | 2      |  |        |
|                                 |  |  | 1.6    |  |        |
|                                 |  |  | 1.5    |  |        |
|                                 |  |  | 1.7    |  |        |
|                                 |  |  | 1.5    |  |        |
|                                 |  |  | 1.8    |  |        |

|  |                    |        |          |  |          |
|--|--------------------|--------|----------|--|----------|
|  |                    |        | 1.5      |  |          |
|  |                    |        | 1.6      |  |          |
|  |                    |        | 1.8      |  |          |
|  |                    |        | 1.5      |  |          |
|  |                    |        | 1        |  |          |
|  |                    |        | 1.5      |  |          |
|  |                    |        | 1.7      |  |          |
|  |                    |        | 1.5      |  |          |
|  |                    |        | 1.8      |  |          |
|  |                    |        | 1.8      |  |          |
|  |                    |        | 1.7      |  |          |
|  |                    |        | 1.5      |  |          |
|  |                    |        | 1.6      |  |          |
|  |                    |        | 1.7      |  |          |
|  |                    |        | 1.5      |  |          |
|  |                    |        | 1.4      |  |          |
|  |                    |        | 2        |  |          |
|  |                    |        | 2.2      |  |          |
|  |                    |        | 1.7      |  |          |
|  |                    |        | 1.5      |  |          |
|  |                    |        | 1.6      |  |          |
|  |                    |        | 1.9      |  |          |
|  |                    | Mean   | 1.75306  |  | 1.238462 |
|  |                    | Median | 1.5      |  | 1.2      |
|  |                    | MODE   | 1.5      |  | 1.2      |
|  | Standard deviation |        | 0.222253 |  | 0.166024 |

The mean daily milk yield of RCC of farm 1 is 1.75 +/- .222 and farm 2 is 1.238462 +/- .166024 .The result of farm 1 is nearly about to the study of Khan et al (1999) who found daily milk yield of RCC to be 1.8 +/- .9 and 2.09 +/- .7 kg for RCC in rural and farm condition respectively .Khan et al (2001) found daily milk yield of non descriptive Desi cows to be 1.9 +/- .03 kg , which is nearly similar to the study of Farm 1, but the result is inconsistent with Munim et al (2006) : Habib et al (2003) who found 2.5 +/- .3 and 2.6 +/- .1 kg respectively for RCC.

## **Comparison between two farms**

Farm 1 is showing the value of milk yield nearly about to the study of some former study of Khan et al(1999) and farm 2 is showing very low value of milk yield in comparison to some previous study and farm 1 .Some reason are working behind of this variation. Disease prevalancy is more in farm 2 than farm 1 like parasitic disease ,some protozoal disesase etc. Second reason is ration formulation which is much more accurate and balanced in farm 1 than farm 2. Third reason is RCC breed selection , in which farm 1 is highly cautious . Farm 1 collect most of their RCC from Savar dairy farm and semen from DLS . But farm 2 collect breed from field level ,those having not any proper parental history . Both farm 1 and 2 should test the blood percentage of their cattle.

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## **Biography**

The author name is Asif Al Hossain ,from Battali ,Anowara ,Chattogram .Studying DVM final year at CVASU.I have passed SSC in 2013 from Battali S.M Aulia High School.And also have completed my intermediate from Hazerataju University College. I have my parent, two sister and one little brothers in my family.

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