

A comparative study on production parameters of cattle on small holdings in hill and plain region of Bangladesh



A production report

By

Progayan Chakma

Roll no.: 12/27

Reg. No.: 00749

A production report submitted in partial fulfillment of the requirements for
the degree of

Doctor of Veterinary Medicine (DVM)

Faculty of Veterinary Medicine

Chittagong Veterinary and Animal Sciences University

Khulshi, Chittagong, Bangladesh

December 2017

A comparative study on production parameters of cattle on small holdings in hill and plain region of Bangladesh



Approved as to style and content by

Ashutosh Das, PhD

Associate Professor

Department of Genetics and Animal breeding

Faculty of Veterinary Medicine

Chittagong Veterinary and Animal Sciences University

Khulshi, Chittagong, Bangladesh

December 2017

Contents	Page
List of figures.....	iv
List of tables.....	iv
List of Abbreviation and Symbols used.....	v
Abstract.....	vi
CHAPTER-I.....	1
INTRODUCTION.....	1
CHAPTER-II.....	3
MATERIALS AND METHODS.....	3
2.1 Area of study.....	3
2.2 Study population.....	4
2.3 Data collection.....	4
2.4 Data analysis.....	4
CHAPTER-III.....	5
RESULTS AND DISCUSSION.....	5
3.1 Cattle management in both hill tract and plain lands	5
3.2 Cattle breed types found in hill tract and plain lands	5
3.3 Comparison on Body condition of cattle between hill tract and plain land	6
3.4 Comparison of production parameters in hill tract and plain land	6
CHAPTER-IV.....	8
CONCLUSIONS.....	8
CHAPTER-V.....	9
REFERENCES.....	9
ANNEX.....	11
ACKNOWLEDGEMENT.....	13
BIOGRAPHY.....	14

List of figures

Figure 1: Difference of milk production on the basis of geographical location.....	7
--	---

List of tables

Table 1: Study population statistics.....	4
Table 2 Differences in population structure in smallholding cattle farms in hill tract and plain land of Bangladesh.....	5
Table 3 Mean \pm SEM in body condition parameters for smallholding cattle in hill tract and plain land of Bangladesh.....	6
Table 4 Comparative production parameters for smallholding cattle in hill tract and plain land of Bangladesh.....	6

List of Abbreviations

Abbreviation

GDP	Gross domestic product
%	percentage
DLS	Department of livestock Services
UVH	Upazilla veterinary hospital
SEM	Standard error of mean
kg	killogram
BCS	Body condition score

Abstract

An observational study was carried out to compare production parameters of cattle on smallholding in hill and plain land of Bangladesh, Data was collected from smallholder cattle farmers of three upazilas- Khagrachari (68 cattle), Pirojpur (79 cattle), Matlob (86 cattle). The result revealed that average herd size was 4 cattle both in hill tract and plain land. In hill tracts there were 7.5 indigenous cattle against 1 cross bred cattle whereas in plain lands the ratio was 0.69 indigenous cattle: 1 cross bred cattle. Mean birth weight of calf in hill and plain land was 10.20kg and 11.40kg, respectively (P=0.0469). Mean body condition score was 3.2 in hill tract and 3.09 in plain land (P=0.0236). The mean daily milk yield was significantly (P=0.0001) higher in plain land (4.97 liter) compared to hill tract (2.39 liter). Average lactation length in hill tract and plain area was 6.9 months and 7.6 months respectively. Mean lactation yield was significantly (P=0.0003) higher in plain lands (795.93 liter) than that of hill tract (2.98.08 liter). Milk production of indigenous cattle and cross bred cattle of hill tract was 1.5 liter and 6.5 liter, respectively. On the other hand, milk production in plain land from indigenous cattle and cross bred cattle was 2.5 liter and 7.5 liter respectively. The production parameters for cattle on smallholdings were better in plain land compared to hill tract.

Key words: Hill, Plain land, indigenous, cross bred cattle, production parameter