# **TABLE OF CONTENTS**

| Contents                  | Page No. |
|---------------------------|----------|
| LIST OF TABLES            | ii       |
| LIST OF FIGURES           | ii       |
| LIST OF ABBREVIATIONS     | ii       |
| ACKNOWLEDGEMENTS          | iii      |
| ABSTRACT                  | iv       |
| CHAPTER 1                 | 1-3      |
| INTRODUCTION              |          |
| CHAPTER 2                 | 4-5      |
| MATERIALS AND METHODS     |          |
| 2.1 Study area and period | 4        |
| 2.2 Data collection       | 5        |
| 2.3 Data compilation      | 5        |
| 2.4 Data analysis         | 5        |
| CHAPTER 3                 | 6-9      |
| RESULTS                   |          |
| CHAPTER 4                 | 10-11    |
| DISCUSSION                |          |
| CHAPTER 5                 | 12       |
| CONCLUSION                |          |
| CHAPTER 6                 | 12       |
| LIMITATIONS               |          |
| REFERENCES                | 13-14    |
| BIOGRAPHY                 | 15       |

### LIST OF TABLES

| TABLES  | CONTENTS   | PAGE |
|---------|--|------|
| NO      |  | NO   |
| TABLE 1 | Herd structure of studied dairy farm in Chittagong area.                                       | 6    |
| TABLE 2 | Correlation between milk yield and environmental parameters                                    | 7    |
| TABLE 3 | Overall percentages of water source, bedding material and flooring system using in dairy farm. | 8    |
| TABLE 4 | Analysis of correlation between highest milk yield and environmental parameters.               | 9    |

#### LIST OF FIGURES

| FIGURES  | CONTENTS                             | PAGE |
|----------|--------------------------------------|------|
| NO       |                                      | NO   |
| FIGURE 1 | Maps of study area                   | 4    |
| FIGURE 2 | Measuring feed passage in dairy farm | 5    |

### LIST OF ABBREVIATIONS

| ABBREVIATIONS | ELABORATIONS                 |
|---------------|------------------------------|
|               |                              |
| %             | Percentage                   |
| et al.        | And his associates           |
| etc.          | Etcetra                      |
| MY            | Milk Yield                   |
| FP            | Feed Passage                 |
| WP            | Water Passage                |
| СМА           | Chittagong Metropolitan Area |

#### ACKNOWLEDGEMENTS

I am very grateful and indebted to the Almighty God without whose grace it would have never been possible to pursue this study in this field of science and to complete this production report writing for the Degree about Doctor of Veterinary Medicine (DVM).

I am grateful to my teacher and supervisor **Prof. Dr. Md. Kabirul Islam Khan,** Department of Genetics and Animal Breeding, Chittagong Veterinary and Animal Sciences University for his valuable suggestions and guidance to complete this report.

I am so much grateful to the **dairy farm owners** to co-operate with me by giving their information.

I am also grateful to Professor **Dr. Goutam Buddha Das**, Vice Chancellor, Chittagong Veterinary and Animal Sciences University who has inspired me in various ways for successful ending of the Study.

I would like to express my deep sense of gratitude and heartfelt appreciation to **Professor Md. Abdul Halim**, Dean, Faculty of Veterinary Medicine, Chittagong Veterinary and Animal Sciences University.

I am also highly expresses my sincere gratitude and gratefulness to the internship Coordinator, **Professor Dr. A.K.M. Saifuddin**, Director, External Affairs, Chittagong Veterinary and Animal Sciences University., for his constant inspiration, cordial co-operation, valuable suggestion for completion of the report work.

Finally, by no means least, I am really very much grateful to all of my teachers, friends, my parents, kiths and kins for their continuous inspiration to accomplish the study.

## EFFECT OF ENVIRONMENTAL FACTORS ON MILK PRODUCTION UNDER COMMERCIAL DAIRY FARMS IN CHITTAGONG AREA

#### ABSTRACT

The study was conducted to investigate the effect of environmental factors on milk production under commercial dairy farms in Chittagong areas. The study was carried out in twelve different dairy farms from August to September 2017 at the Chittagong Metropolitan Area (CMA). The data was collected from different farm on environmental effects (net covering, ventilation, lighting, total fan, temperature, humidity, feed passage, water passage, milk yield, light distance from the ground, water source, manger passage, flooring system, bedding materials, shed height and foot bath) on milk production of Holstein crossbred. Collected data were analyzed to investigate correlation between milk yield and environmental parameters. Among all environmental factors, it was observed that the correlation between milk yield with light (0.17) and fan (0.10) was positive but temperature (-0.23) and humidity (-0.27) was negative. Similarly, light had positive correlation with fan (0.70) and temperature (0.31) whereas negative correlation with humidity (-0.03). It was also observed that fan had showed positive correlation with temperature (0.42) and negative correlation with humidity (-0.22) whereas Temperature was negatively correlated with humidity (-0.24). ). The study result was indicated that all of the traits were negatively correlated with humidity. The study revealed that increasing humidity percentage will be resulted to decrease milk production. The study results suggested that if farmers provide favorable environment to the farm, they will get maximum milk production. Further investigation should be recommended.

Keywords: Environmental effects, Milk production, Dairy farms, CMA