

SUPPLY CHAIN MANAGEMENT OF VALUE-ADDED SHEEP MEAT IN CHATTOGRAM HILL TRACTS AREAS OF BANGLADESH



UKYAWON MARMA

Roll No: 0121/03

Reg. No: 0969

Session: January-June 2021

**A thesis submitted in the partial fulfillment of the requirements for the degree of
Masters of Science in Agricultural Economics
Department of Agricultural Economics and Social Sciences
Faculty of Veterinary Medicine**

**Chattogram Veterinary and Animal Sciences University
Khulshi, Chattogram-4225, Bangladesh.**

JUNE 2023.

AUTHORIZATION

I hereby declare that I am the sole author of this thesis. I also authorize the Chattogram Veterinary and Animal Sciences University (CVASU) to lend this thesis to other institutions or individuals for scholarly research. I further authorize the CVASU to reproduce the thesis by photocopying or by other means, in total or part at the request of other institutions or individuals for scholarly research.

I, the undersigned, and author of this work, declare that the electronic copy provided to the CVASU Library is an accurate copy of the print thesis submitted, within the limits of the available technology.

Ukyawon Marma

SUPPLY CHAIN OF VALUE-ADDED SHEEP MEAT IN CHATTOGRAM HILL TRACTS REGIONS OF BANGLADESH



UKYAWON MARMA

Roll No: 0121/03

Reg. No: 0969

Session: 2020-2021

A thesis submitted in the partial fulfillment of the requirement for the degree of
Masters of Science in Agricultural Economics

Prof. Dr. Meherunnesa Chowdhury Sumy
Supervisor
Dept. of Agricultural Economics & Social
Sciences

Prof. Dr. Md. Kabirul Islam Khan
Co-Supervisor
Dept. of Genetics and Animal Breeding

(Prof. Dr. Meherunnesa Chowdhury Sumy)

Head &
Chairman of the Examination Committee
Department of Agricultural Economics and Social Sciences

Faculty of Veterinary Medicine
Chattogram Veterinary and Animal Sciences University
Khulshi, Chattogram-4225, Bangladesh.

JUNE, 2023

ACKNOWLEDGEMENT

The author would like to express his deepest gratitude and all sorts of praises to the Almighty God for the blessing, the Omnipotent, Omnipresent and Omniscient, whose blessing enabled him to complete this dissertation. God had bestowed upon the author to do this work.

The author is immensely pleased to place on record his profound gratitude and heartfelt thanks to his research supervisor Dr. Meherunnesa Chowdhury Sumy, Professor and Head of the Department of Agricultural Economics and Social Sciences, Faculty of Veterinary Medicine, Chattogram Veterinary and Animal Sciences University (CVASU), who suggested the problem, extended all facilities, provided inspiring guidance and constructive criticism for the successful completion of this research work.

The author also feels the privilege to acknowledge his honorable teacher Dr. Md. Kabirul Islam Khan, Professor and Head, Department of Genetics and Animal Breeding, Faculty of Veterinary Medicine, Chittagong Veterinary and Animal Sciences University (CVASU), for his valuable advice during whole research work.

The author is also grateful to Krishi Gobeshona Foundation (KGF), Bangladesh Agricultural Research Council (BARC) , Farmgate, Dhaka for their financial support through the project (CRP-IV, title: “Increasing livestock production in the Hills through better husbandry, health services and improving market access through value and supply chain management” to conduct this research work in the hilly region of Bangladesh.

The author also grateful to all honorable teachers of Department of Agricultural Economics and Social Sciences, Faculty of veterinary medicine, Chattogram Veterinary and Animal Sciences University (CVASU) for their sincere co-operation. The author also grateful to all staff of Department of Agricultural Economics and Social Sciences, Faculty of veterinary medicine, Chattogram Veterinary and Animal Sciences University (CVASU) for their sincere co-operation. Last but not least the author expresses his deepest sense of gratitude, and cordial respect of feelings to his beloved family members for their immense sacrifice, blessings and encouragement.

The Author

LIST OF CONTENTS

Contents	Page No.
Authorization.....	ii
Acknowledgement.....	iv
Abstract.....	viii
CHAPTER-I INTRODUCTION.....	1-4
1.1: Background of the Study.....	1
1.2: Problem Statement.....	1-2
1.3: Justification of the Study.....	2-3
1.4: Research Question.....	3
1.5: Objective of the Study.....	3
1.6: Organization of the Study.....	4
CHAPTER-II REVIEW OF LITERATURE	5-14
2.1: Socio-economic Characteristics of Sheep Farmer	5-7
2.2: Profitability of Sheep Farming	7-9
2.3: Value-added Meat Production and its Marketing.....	9-11
2.4: Value Chain Relation with Value Addition.....	11-14
CHAPTER-III METHODS AND MATERIALS.....	15-20
3.1: Study Area.....	15
3.2: Study Period.....	16
3.3: Sampling Technique.....	16
3.4: Preparation of Questionnaire.....	16
3.5: Socio-economic Characteristics.....	16
3.6: Profitability Analysis.....	16-17
3.7: Cost Estimation.....	17-18
3.8: Value Addition Analysis.....	18-19
3.9: Supply Chain Analysis.....	19
3.10: Adoption of Sheep Meat in the Market.....	19
3.11: Data Collection	19
3.12:Data Analysis	20

CHAPTER-IV	RESULT.....	21-33
	4.1: Socio-economic Condition.....	21-24
	4.1.1: Age.....	21
	4.1.2: Level of Education.....	22
	4.1.3: Household Size.....	22-23
	4.1.4: Occupation	23
	4.1.5: Monthly Income	23-24
	4.2: Profitability of Sheep Farmer	24
	4.2.1: Cost of the Sheep Farmers	24-25
	4.2.2: Revenue.....	25-27
	4.3: Value addition and its Effect.....	27-29
	4.4: Supply Chain Identification.....	29-33
	4.4.1: Sheep Marketing Channel.....	30-31
	4.4.2: Product Value Chain.....	31-32
	4.5: Sheep Meat Adoption in Hilly Market.....	32-33
CHAPTER-V	DISCUSSION.....	34-40
	5.1: Socio-economic Condition.....	34-35
	5.2: Profitability of Sheep Farmer	35-36
	5.3: Value Addition in Sheep and its Effect	36-37
	5.4: Supply Chain Identification.....	38-39
	5.5: Sheep Meat Adaption in the Market of Hilly Area.....	39-40
CHAPTER-VI	CONCLUSION.....	41-42
	6.1: Constrains.....	41-42
	6.2: Recommendations.....	42
	REFERENCES.....	43-48

LIST OF TABLE

<u>Table No</u>	<u>Contents</u>	<u>Page No.</u>
Table. 4.1	: Age Range of the Farmers	21
Table. 4.2	: Household Size	23
Table. 4.3	: Monthly Income of Sheep Farmers	24
Table. 4.4	: Cost and Return per Farm per Year (N=40)	26
Table. 4.5	: Profitability of Sheep per Farm per Year (N=40)	26
Table. 4.6	: Marketing cost of Slaughterhouse	27
Table 4.7	: Marketing Costs and Margins of the Slaughterhouse	28
Table 4.8	: Adaption of Sheep Meat by Hilly Farmers	33

LIST OF FIGURE

<u>Figure No</u>	<u>Contents</u>	<u>Page No.</u>
Figure 3.1	: Bandarban District and Khagrachhari District	15
Figure 4.1	: Percentage of Level of Education	22
Figure 4.2	: Percentage of Occupation	23
Figure 4.3	: Supply Chain of Sheep and Sheep meat	29

ABSTRACT

The study was conducted to identify the supply chain of value-added sheep meat in the Chattogram Hill Tracts (CHT) region of Bangladesh along with identify the socioeconomic status of sheep farmers, profitability of sheep farming, and adaptation of sheep meat in the study area. Multistage sampling technique was used to collect 40 sample farmers data to attain the objectives of the study. In the study, the average age of sheep farmers was 38 years old. More than 52.5% farmers in the CHT region are illiterate due to a lack of educational facilities and only 15% of farmers have an H.S.C level or above. The average family size was 5.57. The main occupation of sheep farmers (37.5%) was farming, and their average monthly family income was BDT 17,510.00. The total gross income of a sheep farm per year was BDT 19283.23 and the net profit of the farm was BDT 8948.25. The study reveals that the BCR on a full-cost basis and cash cost basis were 1.88 and 2.01, respectively which indicates sheep farming was profitable. After value addition, slaughterhouses earn a profit of BDT 305.41 and BDT 271.49 for per kg sheep meat in Bandarban and Khagrachorri district, respectively. In addition, the producer's share is 44.29% in Bandarban and 46.15% in Khagrachorri district respectively. The participants in the sheep and sheep meat supply chain were Bepari, slaughterhouse, local markets, hotels and restaurants, army personnel. Government officials and local consumers. The adaptability of sheep meat in the hills has been tested using a 6- point Likert scale and it was observed that 60% respondents either very strongly agreed or agreed that in the hilly area sheep production should be increased and 32.5% consumers either agreed or somewhat agreed that sheep meat is tender and juicier than other meat. Therefore, The Government of Bangladesh, researchers and policy makers should take necessary steps to increase sheep production in the hilly areas with logistic supports for economic development in the hilly areas.

Keywords: Hilly area, Profitability, Socioeconomic, Value addition, Supply chain.