

Human Resource for Sustainable Dairy Sector Development

## PROCEEDINGS

### One-Day Workshop

on

# Availability and Requirement of Dairy Science and Technology Related Human Resources in Nepal



11 June, 2019 (28 Jyestha, 2076)  
Kathmandu, Nepal



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11 June, 2019 (28 Jestha, 2076)

Kathmandu, Nepal

**Edited by:**

Tek Bahadur Thapa

Uttam K. Bhattarai

Bimal Kumar Dahal

**Organized by:**

College of Applied Food and Dairy Technology (CAFODAT)

Department of Food Technology and Quality Control (DFTQC)

National Dairy Development Board (NDDB)

Dairy Development Corporation (DDC)

Nepal Dairy Association (NDA)

Dairy Industries Association (DIA)

Nepal Dairy Science Association (NDSA)

Nepal Food Scientist and Technologist Association of Nepal (NEFOSTA)

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DFTQC



CAFODAT



NDDB



DDC



NDA



DIA



KDPL



SGMKPL



NDSA



NEFOSTA



Food and Agriculture  
Organization of the  
United Nations



Nepal Livestock Sector  
Innovation Project  
GoN 2076 (2019)

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## PROCEEDINGS ONE-DAY WORKSHOP ON AVAILABILITY AND REQUIREMENT OF DAIRY SCIENCE AND TECHNOLOGY RELATED HUMAN RESOURCES IN NEPAL

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**Cover Photo** : Cross section of workshop participants posing for photo session.

## TABLE OF CONTENTS

|  |         |
|--|---------|
| Cover Page   | I       |
| Table of Contents  | III     |
| Acronyms   | IV      |
| Foreword   | V       |
| Preface  | VI      |
| Chapter 1: Workshop Rationale  | 1-3     |
| Chapter 2: Opening session   | 4-6     |
| Chapter 3: Technical session   | 7-53    |
| 3.1. Government Policies and Programs in Developing Dairy sub-sector focusing on Human Resources with respect to Processing and Marketing; Babu K. Pant and Balak Chaudhary. | 11-17   |
| 3.2. Regulatory System of Dairy Businesses in Nepal – Challenges and Way Forward; Sanjeev Kumar Karn et al.  | 18-26   |
| 3.3. Current Status, Requirement and Availability of Technical Human Resources in the Dairy Industries; Arniko Rajbhandari.  | 27      |
| 3.4. Human Resource Development for Nepalese Dairy Sector: Current Status, Issues and Way Forward; Tek B. Thapa et al.   | 28-36   |
| 3.5. DDC Perspective: Technical Manpower Constraints and Way Forward; Govind R. Joshi.   | 37      |
| 3.6. Availability and Requirement of Technical Human Resources for Dairy Industries in Nepal; Uttam K Bhattarai et al.   | 38-53   |
| Chapter 4: Group work, Plenary and Closing Session   | 54-59   |
| Chapter 5: Summary of Findings and Recommendations   | 60-63   |
| Workshop Photos Gallery  | 65-72   |
| <b>Annexes</b>   |         |
| Annex-1: Workshop Programmes   | 74-77   |
| Annex-2: Workshop Participants   | 78-80   |
| <b>Annex-3: PowerPoint Presentations</b>   |         |
| Annex-3.1: Needs of skill and innovation through R&D; Prof. Bhesh Bhandari   | 82-96   |
| Annex-3.2: “गोठदेखि ओठसम्म” From Farm to Fork; Arniko Rajbhandari  | 97-107  |
| Annex-3.3: Technical Human Resources in Milk Processing Industries; RK Sapkota   | 108-116 |

## ACRONYMS

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|         |   |
|---------|---|
| AEC     | Agro-Enterprises Centre                             |
| AFU     | Agriculture and Forestry University                 |
| B.S.    | Bikram Sambat                                       |
| CBS     | Central Bureau of Statistics                        |
| CDCAN   | Central Dairy Cooperatives Association of Nepal     |
| CIP     | Cleaning-in-place                                   |
| DDC     | Dairy Development Corporation                       |
| DFTQC   | Department of Food Technology and Quality Control   |
| DIA     | Dairy Industries Association                        |
| DLS     | Department of Livestock Services                    |
| DoC     | Department of Cooperatives                          |
| DT      | Dairy Technology                                    |
| FAO     | Food and Agriculture Organisation                   |
| GDP     | Gross Domestic Product                              |
| GoN     | Government of Nepal                                 |
| HRD     | Human Resource Development                          |
| MIS     | Management Information System                       |
| MOALD   | Ministry of Agriculture and Livestock Development   |
| NARC    | Nepal Agriculture Research Council                  |
| NASA    | Nepal Animal Science Association                    |
| NDA     | Nepal Dairy Association                             |
| NDDDB   | National Dairy Development Board                    |
| NDSA    | Nepal Dairy Science Association                     |
| NEFOSTA | Nepal Food Scientists and Technologists Association |
| NPC     | National Planning Commission                        |
| NVA     | Nepal Veterinary Association                        |
| NVC     | Nepal Veterinary Council                            |
| P.U     | Purbanchal University                               |
| PSC     | Public Service Commission                           |
| R&D     | Research and Development                            |
| SAP     | System Application & Product                        |
| SMP     | Skimmed Milk Powder                                 |

## FOREWORD

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Production and marketing of milk and milk products is on the increasing trend due to increased market access, and change in the consumer habits and demand. It is mainly due to the improved government interventions and support services through number of livestock development programme and projects. However, per capita requirement of milk, as recommended by WHO, is yet to be achieved in the country. It can be expected that this lacking will be met within couple of years.

Development of agriculture is a pre-requisite to the overall economic growth of Nepal. Production of safe and quality raw materials for industrial processing should be the main goal of agricultural production, and safety and quality assurance of processed agro-products is must for sustainable agriculture development. Till date, Nepalese agriculture is seriously lacking in achieving sustainability by assuring the safety and quality. Dairy sector is not the exception to this reality.

Major problem is inadequate number of technical human resources providing services in the dairy value chain across the country. Furthermore, there is no clear action plan to integrate dairy value chains with the academic programs producing technical dairy human resources.

To help resolve HR problem, this one-day workshop on **Availability and Requirement of Dairy Science and Technology Related Human Resources in Nepal** with the theme **Human Resource Development for Sustainable Dairy Sector Development** is a timely effort. We hope the compilation of workshop recommendations, full papers presented in the event and other details in the form of this Proceeding would be a milestone for the dairy sector development.

We hope this publication will be a reference document for the planners and decision-makers, entrepreneurs, academia and other dairy value chain stakeholders.

We want to express our sincere thanks to the editorial team, especially Mr. Tek Bahadur Thapa, Chairman, Nepal Dairy Science Association, for his efforts bringing out this proceeding.

Adj. Prof. Uttam K. Bhattarai  
**Member Secretary**

Prof. Jagat Bahadur K.C.  
**Chairperson**

**Workshop Organizing Committee**

Date: 2076/07/07 (24th October, 2019)

## PREFACE

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Dairy development is one of the key drivers of the national economy, and the share of dairy (milk) in the national economy (GDP) is around 9 % which is very significant. According to the Ministry of Agriculture and livestock development, Nepal produced 1,911,239 MT of milk during fiscal year 2073/74 (2016/17). Most of the milk is consumed or passes through informal channel, and only around 17% of the total production passes through formal channel or through the public and private sector dairy plants.

Significant quantities of value-added dairy products are imported such as milk powders, baby foods, cheeses, long-life milk and cream, butter, ghee etc which could be produced in the country provided adequate processing facilities and trained dairy manpower is available. One of the major gaps in the dairy sector development is inadequate appropriately trained and skilled human resources for the entire value chain of the dairy processing industries. Buzz word for dairy value chain is from *farm/shed to fork/table* (*Goth Dekhi Oth Samma*).

In order to identify the HR dairy sector issues and recommend the way forward, a “***One-Day Workshop on Availability and Requirement of Dairy Science and Technology Related Human Resources in Nepal***” was planned and jointly organised by College of Applied Food and Dairy Technology (CAFODAT; Department of Food Technology and Quality Control (DFTQC); National Dairy Development Board (NDDB); Dairy Development Corporation (DDC); Nepal Dairy Association (NDA); Dairy Industries Association (DIA); Nepal Dairy Science Association (NDSA) and Nepal Food Scientist and Technologist Association of Nepal (NEFOSTA). The objective was to assess existing scenario and future requirements of dairy science & technology related human resources in Nepal, and to develop strategies to fulfil the HRD gap.

I would like to thank the Chief Guest and special guests who attended the opening and closing ceremony. Special thanks goes to Prof. Dr. Bhesh Bhandari of University of Queensland, Australia for his valuable participation and thought-provoking presentation on R&D for dairy sector development. I also would like to thank the organising committee chairman and the organisers, resource persons, various sub-committee members, rapporteurs, participants, media persons, CAFODAT staffs for their respective contributions to make this event successful. Special appreciation goes to Food and Agriculture Organization (FAO) and Nepal Livestock Sector Innovation Project/GoN for their financial and moral support.

Mr. Man B Shrestha, Ms. Sneha Shrestha and her team from CAFODAT worked very hard. Mr. Uttam K. Bhattarai, Member-secretary, Organising Committee worked very tirelessly to coordinate the workshop planning and organisation to bring everyone on-board; and deserves a high appreciation. Appreciation goes to Bimal K. Dahal for his contribution to finalise this proceeding. Thanks to the Chairman, Nepal Dairy Science Association who worked very closely with member-secretary for the successful outcome.

**Tek Bahadur Thapa**

Co-ordinator

Editorial and Publication sub-committee

11 November 2019,

Kathmandu