Final Report

"Impact Assessment and Evaluation of Ration Balancing Program in Vidarbha and Marathawada Dairy Development Project in Maharashtra State"

Funded by Vidarbha Marathawada Dairy Development Project, Nagpur, Maharashtra

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February 2021

AERC Report No. 199

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Draft Submitted in February, 2021

Final report submitted February 2021

Foreword

India stands at first position in terms of cattle and buffalo population in the World. The population of cattle and buffalo in India was 192.49 million and 109.85 million in 2019 which accounts for around 19.5 per cent and 54.6 per cent share respectively of World cattle and buffalo population. However, the productivity of dairy animals in India is very low as compared to other countries. The reason cited for this is inappropriate feeding as well as inadequate supplies of quality feeds and fodder in addition to the low genetic profile of the Indigenous breeds. It will not be possible to achieve higher productivity in a milch animal by merely increasing its genetic potential, due attention needs to be given on proper feeding of milch animal. There is evidence to show that when a milch animal is fed with balanced diet, it receives the required nutrients to produce milk commensurate with its genetic potential. Research and field trials indicate that this approach to feeding has the potential to increase milk yield, reduce cost of milk production, and contribute to reducing methane emissions. Milch animals in India are usually fed one or two locally available concentrate feed ingredients, locally available grasses and crop residues. This often leads to an imbalanced ration–resulting in proteins, energy, minerals and vitamins being either in excess or deficient. Imbalanced feeding adversely impacts not only on the health and productivity of animals but also affects income from milk production since an estimated 70 per cent of the total cost of milk production is contributed by feed and fodder alone. Therefore, there is a need to educate milk producers on feeding balanced ration to their animals so that the nutrients required by their individual milch animals is fulfilled in an optimum manner, thereby improving milk production efficiency and the economic return.

With an aim to increase productivity of milch animals and thereby increase milk production to meet the rapidly growing demand for milk as well as to provide rural milk producers with greater access to the organized milk-processing sector, Government of India had approved the scientifically planned multi-state initiative, i.e. National Dairy Plan Phase I (NDP I) as a Central Sector Scheme for a period of six years from 2011-12 to 2016-17, which is extended up to 2018-19. This plan is implemented wholly by National Dairy Development Board, Anand (Gujarat) through milk co-operatives and state agencies. The project includes a number of programs, of which Ration Balancing Program (RBP) was designed with an aim to improve milk yield of milch animals, reduce the feeding costs/kg of milk produced and reduction in methane release per kg of milk produced by animals.

Under the productivity enhancement program of NDP-I, among various other components, implementation of 'Ration Balancing Program' of dairy animals was also implemented in selected Dairy Unions of Maharashtra. The Kolhapur, Solapur and Pune milk unions has implemented NDDB's ration balancing programme covering around 600 villages with an aim to cover about 56000 milch animals in these milk sheds. The positive impacts of Ration Balancing Programme under

NDP-I in selected district/milk unions of Maharashtra has been inspirational and therefore it was decided to take forward this project in Vidarbha and Marathawada regions through Vidarbha Marathawada Dairy Development Board (VMDDP) in 2019 under Rashtriya Krishi Vikas Yojana. RBP under VMDDP plans to cover 10 districts. Through Tri Party MOU, this RBP is being implemented in three districts, viz. Nagpur, Wardha and Amravati districts by MoooFarm Private Limited Gurgaon, Haryana on pilot basis in October 2019. Six months was the duration agreed for this project which ended on April 22, 2020. Due to unprecedented situation of COVID19 Pandemic, the operational; period has been extended till October 22, 2020. NDDB is involved in this pilot project as a technical monitoring and advisory agency. Under this RBP programme, it was reported that total 400 villages are covered with 13600 animals of 6800 farmers and it is estimated reduction of cost of feeding by 7 percent. As the project period got completed and for future plan of action, it was felt necessary by VMDDP, Nagpur to have impact evaluation of this program before proceeding further. Therefore, present study was undertaken by our Centre in the selected three districts of Vidarbha region of Maharashtra state.

The study has been completed within a very short span of two-month period under the shadow of COVID19 pandemic and came out with the suitable policy implications. I would like to congratulate the entire project team for collecting quality data and preparing this excellent research report. I hope findings of the study would be useful for policy makers, funding agency and administrators of this programme.

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Acknowledgements

The study on "Impact Assessment and Evaluation of Ration Balancing Program in Vidarbha and Marathawada Dairy Development Project in Maharashtra State" has been carried out at the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar, as desired and sponsored by the Vidarbha Marathawada Dairy Development Project (VMDDP), Nagpur, Maharashtra.

We have benefited immensely from various scholars and officials from different government departments while carrying out this study. At the outset, we would like to thank **Dr. Shirish Kulkarni,** Vice Chancellor of our University and Chairman, AERC Advisory Body for his constant encouragement for undertaking such research activity at the Centre. We also thank **Dr. Jyoti Tiwari**, Registrar (In-charge) and **Dr. Bhautik A. Patel** (Deputy Accountant) of our University for their administrative support for this project.

Special thanks to **Shri. Anoop Kumar, Hon. Principal Secretary, Animal Husbandry and Dairying, Government of Maharashtra**; Shri. Sachindra Pratap Singh, Commissioner Animal Husbandry, Government of Maharashtra and other officers of Department of Animal Husbandry and Dairy Development, Government of Maharashtra; District Deputy Commissioners of Animal Husbandry for their feedback on presentation about the progress of study made online on February 12, 2021.

We are grateful to the **Shri Ravindra Thakare, District Collector, Nagpur district, Maharashtra** and Project Director Vidarbha Marathawada Dairy Development Project (VMDDP), Nagpur, Maharashtra for approaching us for this research study work and guiding us during the entire study period.

We are grateful to the **Dr. Sathish Raju,** Additional Project Director, Vidarbha and Marathawada Dairy Development Project & Regional Manager, Additional Frozen Semen Laboratory, Telangkhedi, Bharatnagar, Nagpur for acting as a Coordinator and providing all necessary support and help required during the field survey work as well as processing of invoices and related submission. We also thank **Dr. Rajesh Sharma** (Senior Manager, Animal Nutrition), NDDB, Nagpur for proving us the INAPH datasets. Thanks to Dr. S. S. Puri (VMDDP, Nagpur), Dr. Atul Mahajan, Mr. Sachin (NDDB, Nagpur), and officers of Mother Dairy, Nagpur for their support.

We are also grateful to **Dr. Ulhas Chandrabhan Nimkar** and his team of 'Vishwas Group' in Aroli village of Mauda tehsil of Nagpur district for sharing with us the progress of the collective production and marketing of milk as well as perennial fodder production and marketing model.

Thanks to **Madam Manju Singh**, MoooFarm Pvt. Limited, Gurgaon, Haryana and team of Mooofarm on field (includes Cluster Coordinators and Local Resource Persons) of all three districts under study for their support and cooperation during the field survey work.

The study would not have reached to this stage without the active co-operation of the Local Resource Persons and sample households (beneficiaries, non beneficiaries), who provided all the required data for the study without any hesitation and expectation. We thank each one of them for their invaluable support.

Special thanks to faculty members of College of Agriculture, Nagpur; **Dr. Rupesh S. Zodade**, Krishi Vigyan Kendra, Selsura, Wardha and Shri Shivaji College of Agriculture, Amravati; **Shri Kishor Chaudhary**, Department of Agriculture, Government of Maharashtra, Kantanagar, Amravati.

We thank all the field investigators/field staff who have collected the field data in very short period of time.

We have also received support and encouragements from our colleagues in the Centre while carrying out the study. Special thanks to Shri Thansigh B. Parihar, Ms. Kalpana Kapadia, Shri Jasawant Singh and Shri Mihir Rana for their support in data feeding and data analysis. Thanks to Shri D. N. Thakkar, Shri Deep Patel, Shri Vinod Parmar, and all staff of AERC for providing necessary support.

Lastly but not least, we thank all the staff of our University, AERC and CCS for their direct and indirect support.

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February 2021

Contents

Foreword *iii*
Acknowledgements *iv*
List of Tables *x*
List of Figures *xiii*
List of Maps *xiii*
List of Boxes *xiii*
List of Annexures *xiv*
List of Abbreviations *xv*

Executive Summary *xvii*

Chapter I **Introduction** 1
1.1 Introduction
1.2 Objectives of the study
1.3 Database
1.4 Survey Design
1.4.1 Sampling Framework
1.4.2 Quality of data
1.4.3 PERT Chart of Work done
1.4.4 Development of Survey schedule
1.5 Analytical Framework
1.5.1 Effects and Outcomes
1.5.2 Effectiveness
1.5.3 Sustainability
1.5.4 Lessons learned
1.6 Limitations of the Study
1.7 Organization of Report

Chapter II **Need of RBP and Achievements of RBP under NDP-I** 19
2.1 Introduction
2.2 National Dairy Plan Phase I (NDP I)
2.3 Need of Ration Balancing
2.4 NDDB's Ration Balancing Program Software INAPH
2.5 Achievements under NDP I
2.6 Chapter Summary

Chapter III **About Study Area and VMDDP** 27
3.1 Introduction
3.2 Role of Dairy Sector in State Economy of Maharashtra
3.3 Composition of Livestock in the State
3.4 Growth in Milk Production and Productivity
3.5 Status of Availability of Feed and Fodder
3.6 Dairy Development in Maharashtra
3.7 Genesis of VMDDP
3.8 Chapter Summary

Chapter IV Implementation and Monitoring of RBP by EIA 47

4.1 Introduction
4.2 About End Implementing Agency (EIA)
4.3 Targets and Achievements
4.4 RBP Implementations
4.4.1 Training Programs
4.4.2 Village Awareness Programme Organized
4.4.3 RBP Material distribution
4.4.4 Use of INAPH
4.4.5 LRP-Village Coverage
4.4.6 Remuneration Paid to LRP
4.5 Impact of RBP
4.6 Constraints faced by EIA
4.7 Opinions and Suggestions of EIA of RBP
4.8 Chapter Summary

Chapter V Findings from Secondary Data 63

5.1 Introduction
5.2 Progress of RBP in Selected three districts of Vidarbha
5.3 Impact of RBP in Selected three districts of Vidarbha
5.4 Chapter Summary

Chapter VI About Selected Villages, Sample Households & LRPs 69

6.1 Introduction
6.2 About Region and Selected Districts
6.3 About Selected Villages
6.4 About Sample Households
6.4.1 Profile of Selected Households
6.4.2 Socio-Economic Characteristics
6.4.3 Communication Characteristics
6.4.4 Holding of Productive Assets
6.4.5 Cropping Pattern
6.5 About Local Resource Persons (LRP)
6.6 Chapter Summary

Chapter VII Findings from Field Survey Data 85

7.1 Introduction
7.2 Livestock Holdings/Herd Strength
7.3 Breedable Animals
7.4 Details of Feed and Fodder
7.5 Details on Prices of Feed and Fodder and Wages
7.6 Details on Veterinary & Breeding Services & Expenditures
7.7 Labour Use Pattern
7.8 Handling of Feeding and Income from Dairying
7.9 Production of Milk

7.10 Disposal of Milk and Dung
7.11 Awareness about RBP among Adopters
7.12 Outreach of RBP among Adopters and its Benefits
7.13 Performance of LRPs
7.14 Chapter Summary

Chapter VIII Opinion of Local Resource Persons 111
8.1 Introduction
8.2 Functioning under LRP
8.3 Constraints Faced by LRPs
8.4 Opinions and Suggestions by LRPs
8.5 Chapter Summary

Chapter IX Conclusions and Policy Implications 119
9.1 Conclusions
9.2 Policy Implications

References 125

Annexures I to XI 129

List of Tables

Table No.	Title	Page
1.1	List of the Selected Villages in Nagpur district	11
1.2	List of the Selected Villages in Wardha district	12
1.3	List of the Selected Villages in Amravati district	12
2.1	RBP Impact on Milk Yield, Fat percent and Feed Cost	25
3.1	Growth of the Livestock in Maharashtra and India	30
3.2	Species-wise Livestock population & its Share in total livestock	30
3.3	Growth in Livestock Population in Maharashtra - 1951 to 2019	31
3.4	District-wise Share in Total Population of Cow, Buffalo, Sheep and Goat	33
3.5	District-wise share in Total Population of Cattle and Buffalo (Bovine) 2019	34
3.6	Estimated Milk Production in Maharashtra:1992-93 to 2017-18	36
3.7	Details on Milk Procurement by Government and Cooperative	36
3.8	District-wise Estimated Per Day Average Milk Yield in State During 2017-18.	37
3.9	Availability and Requirement of Fodder in Maharashtra (2015)	39
4.1	Activities of EIA and Coverage	48
4.2	Target and Achievement by EIA	49
4.3	Details on Training Programme Attended and Organized	50
4.4	Details on Village Area Programme conducted	51
4.5	Details on VAP material	51
4.6	RBP KIT distributed to LRP and any material given to Cluster Coordinator	52
4.7	Details on Use of INAPH and Suggestions made by EIA	53
4.8	Coverage of Villages by LRP	54
4.9	Number of Villages Covered by each LRP	54
4.10	Remuneration paid to LRP and Cluster Coordinator (Rs./month)	55
4.11	Impact of RBP at EIA Level	56

4.12	Implementation, Monitoring and Evaluation of RBP	57
4.13	Constraints faced by EIA in implementation of RBP	58
4.14	Opinions and Suggestions of EIA of RBP	59
5.1	Details on Coverage of RBP in Vidarbha region	64
5.2	Coverage of Villages under RBP in three districts of Vidarbha	64
5.3	Impact of RBP in Selected three districts of Vidarbha	65
5.4	Impact of RBP in Selected Villages of three districts of Vidarbha	65
5.5	Impact on Selected Parameters (Six months interval) of Dairy Farmers	66
5.6	Details of Animals those who have adopted the Advisory	67
5.7	Impact on Milk Yield and FAT % those who have adopted advisory	67
5.8	Impact on DM % in Milk and Average Cost of Fodder	68
6.1	Basic Information about Livestock Population in Selected districts	71
6.2	Demographic and Other details of Selected Villages of Nagpur district	72
6.3	Demographic and Other details of Selected Villages of Wardha district	72
6.4	Demographic and Other details of Selected Villages of Amravati district	73
6.5	Livestock Population in Selected Villages of Nagpur district	73
6.6	Livestock Population in Selected Villages of Wardha district	74
6.7	Livestock Population in Selected Villages of Amravati district	74
6.8	Profile of Selected Households	76
6.9	Socio-Economic Characteristics of Selected Households	77
6.10	Details on Communication Characteristics	78
6.11	Details on Mass Media Exposure	79
6.12	Details on Functions Attended	80
6.13	Holding of Productivity Assets	80
6.14	Cropping Pattern of Selected Households	81
6.15	Profile of Selected Local Resource Persons	82
6.16	Socio-Economic Characteristics of Selected LRPs	83
7.1	Herd Strength with Selected Beneficiary households (No/hh)	86
7.2	Details of Breedable Animals with Beneficiary & Non-	88

	Beneficiary Households	
7.3	Details of Non Covered Breedable Animals with Beneficiary Households	89
7.4	Details on Mode of Feeding and Grazing (BEN & NON-BEN)	91
7.5	Details of Feed and Fodder: BEN & NONBEN	92
7.6	Details of Feed and Fodder (at the Time of Survey)-Non beneficiary animals	92
7.7	Details of Prices of Feed and Fodder, Wages and Value of Animals and Use of Dung by Selected Households	93
7.8	Details of Veterinary and Breeding Expenditure during last one year BY Beneficiary and Non-Beneficiary Households	94
7.9	Details of Veterinary and Breeding Expenditure during last one year by Beneficiary Households for animals not covered under BRP	95
7.10	Labour Use Pattern	96
7.11	Distribution of total working hours	96
7.12	Handling of Feeding and Income from Dairying	97
7.13	Production of Milk by selected Beneficiary Households	97
7.14	Production of Milk by selected Non-Beneficiary Households	98
7.15	Coefficient of Variation and Standard Deviation in Milk Yield level	98
7.16	Disposal of Milk by Selected Beneficiary Households (All)	99
7.17	Awareness about the Programme among Adopters	100
7.18	Outreach of Programme among RBP Adopters	102
7.19	Changes realized by the RBP Adopters	103
7.20	Benefits of RBP realized by Adopters/Beneficiary hh	104
7.21	Rank to RBP & Suggestions for Improvement of RBP	105
7.22	Performance of Selected LRPs	107
8.1	Details on functioning of LRP	112
8.2	Coverage and Efficiency of RBP	113
8.3	Criteria for Selection of Cattle Owners under RBP by LRP	114
8.4	Understanding of LRP about RBP Benefits	114
8.5	Constraints faced by the LRP	116
8.6	Notable Impact of RBP notices villages	117
8.7	Opinion of LRP about RBP	117
8.8	Suggestions for Improvement of RBP	118

List of Figures

Figure No.	Figure	Page
1.1	State-wise share in total Milk Production in India (2018-19)	3
1.2	State-wise Per Capita Milk Availability in India (2018-19)	3
1.3	Sampling Framework- Maharashtra	11
3.1	Species-wise Share in Total livestock Population in Maharashtra (1961-2019)	31
3.2	District-wise share in Total Bovine Population in Maharashtra 2019	32
3.3	Region-wise share in Total Bovine Population in Maharashtra 2019	32
3.4	District wise Percentage share in Total livestock population Maharashtra in -2019	32
3.5	Division-wise Percentage share in Total livestock population Maharashtra in -2019	32
3.6	Species wise Milk Yield in Maharashtra (Kg./Day)	36
3.7	District-wise Milk Production in Maharashtra (2018-19)	38

List of Maps

Map No.	Maps	Page
1.1	Location Map of Study Area in Maharashtra, India	10
3.1	Regional Divisions of Maharashtra	28
3.2	Administrative Divisions of Maharashtra	28
6.1	Location Map of Selected Tahsils in Selected district	70

Box

No.	Box	Page
3.1	Feed, Fodder, Animal Nutrition and Grazing Policy of Govt. of Maharashtra	39

List of Annexures

Annexure No.	Title	Page
I	Glimpses of Field Visits	129
II	RBP Data Entry Book and Material provided	137
III	Village Schedule	139
IV	Beneficiary Household	143
V	Non Beneficiary Household	151
VI	LRP Schedule	157
VII	EIA Schedule	161
VIII	Focus Group Discussion Schedule	175
IX	Implementation of RBP in particular village	177
X	GOM Dudh 09.08.2017	185
XI	GOM RBP 28.12.2018	191

List of Abbreviations

A.I.	-	Artificial Insemination
A.I.C.	-	Artificial Insemination Centre
AERC	-	Agro-Economic Research Centre
AERC	-	Agro-Economic Research Centre
ASMM	-	Area Specific Mineral Mixture
Av.	-	Average
BEN	-	Beneficiary
BRGF	-	Backward Regions Grant Fund Programme
CB	-	Crossbred
CC	-	Cluster Coordinators
DADF	-	Department of Animal Husbandry, Dairying and Fisheries
DCP	-	Digestible Crude Protein
DCS	-	Dairy Cooperative Society
DM	-	Dry Matter
DPAP	-	Drought Prone Area Programme
EIA	-	End Implementing Agency
FDG	-	Focus Group Discussion
GCA	-	Gross Cropped Area
GIA	-	Gross Irrigated Area
GOI	-	Government of India
GOM	-	Government of Maharashtra
ha	-	Hectare
HH/hh	-	Household
IDA	-	International Development Association
INAPH	-	Information Network for Animal Productivity and Health
kg	-	kilograms
LRP	-	Local Resource person
LTPD	-	Litres per day
mha	-	Million hectares
MOA	-	Ministry of Agriculture
mt	-	Metric Tonnes

NA	-	Not Available
NBEN	-	Non-Beneficiary
NDDB	-	National Dairy Development Board
NDP	-	National Dairy Plan
Nos	-	Numbers
NRBP	-	Not covered under RBP
OF	-	Operation Flood
PCs	-	Producers Company
PDO	-	Project Development Objective
PMC	-	Project Management Cell
PMU	-	Project Management Unit
Prodvty.	-	Productivity
RBP	-	Ration Balancing Programme
SC	-	Scheduled Caste
SNF	-	Solid Not Fat
SPU	-	Sardar Patel University
ST	-	Scheduled Tribe
SWOT	-	Strength, Weakness, Opportunity and Threat
TDN	-	Total Digestible Nutrients
TO	-	Technical Officer
VAP	-	Village Awareness Programme
VMDDP	-	Vidarbha Marathawada Dairy Development Project
Y	-	Yield