

“Impact Assessment and Evaluation of Fodder Seed Production and Sale activities under National Dairy Plan I in Gujarat State”



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Foreword

India is the highest milk producer country in the World but milk production per animal per year is very low. Deficiency in quantity and quality of fodder is one of the major cause of this low productivity. The animals need proper feeding to meet their nutrient requirement to express their full genetic production potential. Deficiency of green forage is mainly due to non-availability of land for fodder cultivation. India has vast tracts of grazing land, most of which has fragmented or become degraded due to lack of appropriate policy interventions and management inputs. Fodder are cultivated or grown naturally on degraded and marginal lands with minimum inputs, in terms of fertilizers water and operational energy. Moreover, in case of forages, regional and seasonal deficiencies are more important than the national deficiencies, as it is not economical to transport the forage over long distances.

The marginal and small farmers own only 44 per cent of the agricultural land while they own 80 per cent livestock assets. Quite logically, if the income of the farmer is to be doubled by 2022 as per the vision given by the Hon Prime Minister in 2016, then livestock is perhaps the best and most available assets to enhance farmers income due to higher availability of the livestock as compared to land as an asset for income generation. While overall productivity of livestock has been low in past, because of inadequate nutrition from green fodder, along with dry residue and protein concentrate. As per NIANP (ICAR) estimate, there is shortage of up to 36 per cent of green fodder and protein concentrates besides up to 23 per cent shortage of dry fodder.

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 organised milk-processing sector, Government of India 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. This plan was launched to cover 15 major milk producing States viz. Andhra Pradesh, Telangana (after separation), Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal which account for over 90 per cent of the country's milk production, having 87 per cent of breedable cattle and buffalo population and 98 per cent of the fodder resources. In June/August 2015, the Union Government included three more states viz. Uttarakhand, Jharkhand and Chhattisgarh and it was extended up to 2018-19. This plan was 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 Fodder Development Programme (FDP) was designed with an aim to enhance green fodder yield of cultivated fodder crops from the land already under fodder production as well as to increase seed production of fodder crops and enhance use of quality fodder seeds. To strengthen fodder seed multiplication and distribution chain, an important component of sub-project plan on Fodder Development, NDP I was to create required infrastructure of fodder seed production, processing, storage and marketing of fodder seeds at dairy cooperative level, encourage production and usage of fodder seeds by farmers for enhancing yield and availability of green fodder. About 3.18 per cent of total project cost (Rs. 2060 Crore) was earmarked for this component. Fodder Development

Programme under NDP I had entered into its 5th year of operations in April, 2017. It was planned to undertake an impact assessment and evaluation for strengthening fodder seed multiplication and distribution chain at dairy cooperative level under sub project of FDP. Therefore, present study was undertaken in eight states covered under NDPI fodder development programme (Andhra Pradesh, Bihar, Gujarat, Karnataka, Maharashtra, Punjab, Rajasthan and Uttar Pradesh) for a comprehensive assessment of the present status of fodder development programme under NDP I thereby enhancing dairy development. The study came out with important and relevant policy implications which would help to enhance efficiency of implementation benefitting the milk producers.

I am thankful to authors and their research team for putting in a lot of efforts to complete this excellent piece of work. I also thank the National Dairy Development Board, Anand for giving us an opportunity to undertake this study. I hope this report will be useful for policy makers and researchers.

August 29, 2019

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Contents

<i>Foreword</i>	<i>iii</i>	
<i>Acknowledgements</i>	<i>v</i>	
<i>List of Tables</i>	<i>x</i>	
<i>List of Figures</i>	<i>xv</i>	
<i>List of Maps</i>	<i>xvi</i>	
<i>List of Boxes</i>	<i>xvi</i>	
<i>List of Annexures</i>	<i>xvi</i>	
<i>List of Abbreviations</i>	<i>xvii</i>	
<i>Highlights of Report</i>	<i>xix</i>	
<i>Glimpses of Field Visits</i>		
Chapter I	Introduction	01
1.1	Introduction	
1.2	Dairy Development in India	
1.3	Cooperative Dairy Sector in India	
1.4	Growth and Compositional Changes in Livestock Population	
1.5	Milk Production and Productivity	
1.6	Status of Availability of Feed and Fodder	
1.7	Need for an Inclusive Fodder Development Programme	
1.8	Need of the Study	
1.9	Objectives of the study	
1.10	Data Sources	
1.11	Survey Design	
	1.11.1 Sampling Framework	
	1.11.2 Development of Survey schedule	
	1.11.3 Analytical Framework	
1.12	Limitations of the Study	
1.13	Organization of the Report	
Chapter II	Dairy and Fodder Development in Gujarat	43
2.1	Introduction	
2.2	Role of Dairy Sector in State Economy of Gujarat	
2.3	Composition of Livestock in the State	
2.4	Growth in Milk Production and Productivity	
2.5	Status of Availability of Feed and Fodder	
2.6	State Government Policies for Fodder Development	
2.7	Chapter Summary	

Chapter III	Profile of Selected Area, Milk Union, Villages & PDCS	67
3.1	About Selected Study Area	
3.2	Selected Milk Unions	
3.2.1	Surat Milk Union	
3.2.2	Baroda/Vadodara Milk Union	
3.2.3	Basic Information of Selected EIAs	
3.2.4	Fodder Seed Multiplication and Distribution	
3.2.5	Fodder Seed Management	
3.2.6	Training Programmes on Fodder Development	
3.2.7	Development Activities	
3.3	About Selected Villages	
3.3.1	Cropping Pattern	
3.3.2	Livestock and Machinery	
3.4	About Selected PDCS	
3.5	Chapter Summary	
Chapter IV	Profile of Selected Fodder Seed and Fodder Growers	93
4.1	Introduction	
4.2	Fodder Growers and Seed Growers	
4.2.1	Profile of Selected Households	
4.2.2	Breedable Animals	
4.2.3	Source-wise Farmers' Income	
4.2.4	Cropping Pattern	
4.3	Chapter Summary	
Chapter V	Fodder Seed Production	103
5.1	Introduction	
5.2	Seed received from Milk Union for Seed Production	
5.3	Changes in Area under Fodder Seed crops	
5.4	Participation in Fodder Seed Production under NDP- I	
5.5	Reasons for Choice for participating in Fodder Seed Production under NDP- I	
5.6	Training on Fodder Development by Milk Union/PDCS	
5.7	Details Cultivation Practices adopted (Seed Production)	
5.8	Cultivation of Fodder Seed and Competitive Crop	
5.9	Production and Sale of Green and Dry Fodder as well as Seed	
5.10	Opportunity Costs of Fodder Seed Cultivation	
5.11	Constraints Faced by the Fodder Seed Growers	
5.12	Chapter Summary	

Chapter VI	Cultivation of Fodder Crops	115
	6.1 Introduction	
	6.2 Seed received from Milk Union	
	6.3 Changes in Area under Fodder Crops	
	6.4 Participation in Fodder Production under NDP- I	
	6.5 Reasons for Choice of Source of Seed for Fodder Production	
	6.6 Training on Fodder Development by Milk Union/PDCS	
	6.7 Details Cultivation Practices adopted	
	6.8 Cultivation of Fodder and Competitive Crop	
	6.9 Opportunity Costs of Fodder Cultivation	
	6.10 Constraints Faced by the Fodder Seed and Fodder Growers	
	6.11 Chapter Summary	
Chapter VII	Milk Production, Use and Sale	127
	7.1 Introduction	
	7.2 Cost of Milk Production& Types of Fodder	
	7.3 Effect of Green Fodder on Milk Productivity	
	7.4 Milk Production, Use and Sale	
	7.5 Chapter Summary	
Chapter VIII	Awareness /Outreach of FDP under NDP-I	133
	8.1 Introduction	
	8.2 Awareness about FDP	
	8.3 Effect of Fodder Seed and Fodder Production Programme	
	8.4 Perception of Non Beneficiary Households	
	8.5 Constraints faced by PDCS and Suggestions	
	8.6 Constraints faced by Milk Unions and Suggestions	
	8.7 Chapter Summary	
Chapter IX	Conclusions and Recommendations	141
	References	151
	Annexures (I-V)	155

List of Tables

Table No.	Title	Page
1.1	Percentage Contribution of Livestock in Total Agriculture GVA	2
1.2	Value of Output from Livestock Sector (at current prices)	3
1.3	Growth of Dairy Cooperatives Societies in India	5
1.4	Share of Major States in Total Milk Procurement by Cooperative sector	8
1.5	Livestock Population in India by Species (in million numbers) for 1951-2012	9
1.6	Milch Animal Population by States (2012)	10
1.7	Livestock holding pattern among Landowners	11
1.8	Milk Production and Per Capita Availability in India	12
1.9	State-wise Milk Production in India	13
1.10	Milk Yield in India and other Selected Countries (2012 & 2017)	15
1.11	Statewise Estimates of Milk Yield Rates 2013-14& 2017-18	16
1.12	Area under Fodder Cultivation and Permanent Pastures & Other Grazing Lands in India	18
1.13	Forage crops grown and their area and productivity in India	19
1.14	Projected Livestock Population Estimates	21
1.15	Estimates of feed and Fodder in India	22
1.16	Supply and Demand of Green and Dry Fodder	22
1.17	Availability, Requirement & Deficit of Crude Protein (CP) & Total Digestible Nutrients (TDN) including CP & TDN from concentrates	22
1.18	Availability, requirements and deficit of concentrates for livestock	23
1.19	State-wise Production of Dry & Green Fodder('000 tonnes)	23
1.20	State-wise Availability and Requirement of Fodder in India (2008)	25
1.21	Production of Coarse Cereals in India	25
1.22	Region-wise Cattle Feed Production in India	26
1.23	Estimated National Seed Requirement & Status of Breeder Seed Produced	27
1.24	Details regarding dual purpose fodder species Cultivated in different regions	28
1.25	High yielding fodder varieties suggested for Seed production programme	28

1.26	Forage crops and their varieties suitable for waterlogged soil	28
1.27	Fodder Seed Production under NDP I (2016-17)	33
1.28	States and EIAs covered under study	36
1.29	Details regarding Selected Sample Households for the Study	37
2.1	Contribution of Gross Value of Output and Gross Value Added from Agriculture and Livestock Sector to total GSDP at Current Prices of Gujarat State	44
2.2	Value of Output: Agriculture and Livestock	46
2.3	Growth of the Livestock in Gujarat and India	47
2.4	Species-wise Livestock population & its Share in total livestock	47
2.5	Growth in Livestock Population in Gujarat- 1951 to 2012	48
2.6	District wise Percentage share of Animals in Total Livestock Population	49
2.7	District-wise Livestock and Bovine Density (1992-2012)	50
2.8	Distribution of Gujarat's Cattle Breeds	51
2.9	Comparison of yield related attributes of Cattle and Buffalo Breeds	52
2.10	Number per 1000 of households reporting owning livestock of different types for each size class of households operational holdings in Gujarat (Rural) 2003	52
2.11	Estimated Milk Production in Gujarat: 2000-01 to 2017-18	53
2.12	District wise & category wise Percentage share of Milk Production in Gujarat	56
2.13	Zonewise Fodder Crops grown in Gujarat	58
2.14	Districtwise Area of Forage and Fodder crops in Gujarat	59
2.15	Varieties of Forage Crop	60
2.16	Breeder Seed Production of Forage Crops (2007-08 to 2016-17)	61
2.17	Gap Analysis of Forage Crop Yield	61
2.18	Feed Nutrients Availability, Requirement & Surplus/Deficit in Gujarat	61
3.1	Selected Milk Producers' Cooperative Unions in Gujarat	69
3.2	Details of Selected Milk Producers' Cooperative Unions in Gujarat	72
3.3	Details of Milk Purchase, Sale and Fodder Seed by Selected EIAs in Gujarat	73
3.4	Fodder Seeds Distribution Programme (for fodder production) by SUMUL to PDCS	74
3.5	Details on Fodder Seeds Distribution Programme by SUMUL (2016-17 & 2017-18)	74
3.6	Fodder Seed Production and Distribution by Baroda Dairy	74

3.7	Fodder Seed Multiplication & Fodder Production Programme in selected Milk Union	75
3.8	Fodder Seed (SEED multiplication programme under NDP- I) by Baroda Milk Union	75
3.9	Fodder Seed (for FODDER production) supplied by the Baroda Milk Union to PDCS	76
3.10	Fodder Seed Management (Quantity in qtls) – Baroda Milk Union	77
3.11	Fodder Seed Availability and disbursement (2013-2018) Fodder Production - MU Baroda	78
3.12	Training on Fodder Development provided by Surat Milk Union/PDCS	79
3.13	Details of Development Activities undertaken by Surat Milk Union under FDP: NDP-I	80
3.14	Basic details of Selected Villages (2011 Census)	81
3.15	Details of Workers Population in Villages (2011 Census)	81
3.16	Details on Facilities available in and nearby Selected Villages	82
3.17	Cropping Pattern of Selected Villages	82
3.18	Details on Livestock and Machinery (Village Census)	83
3.19	Identification of PDCS in Selected Villages	84
3.20	General Information of PDCS in Selected Villages	85
3.21	Details of Fodder Crops Cultivated in Village	85
3.22	Availability of Some Facilities	86
3.23	Fodder Seed (for fodder production) supplied by the Milk Union to Dairy Cooperative	87
3.24	Concentrates supplied by the Society/Firm during Last One Year	88
3.25	Training arranged/provided by Society during Last One Year	89
3.26	Details of Development Programmes/Support	90
3.27	Details of Development Activities undertaken under FDP-NDP-I	91
4.1	Family Profile of Selected Fodder Seed and Fodder Growers Households	94
4.2	Socio-Economic Characteristics of Selected Households	95
4.3	Details on Occupation and Land Holdings Size of Selected Households	96
4.4	Details on Land Holdings by Selected Sample Fodder Growers (ha	97
4.5	Herd Strength of Selected Fodder Growers Households	98
4.6	Cattle Shed and Fodder Storage Selected Fodder Growers Households	99
4.7	Holding of Productive Assets by Selected Fodder Growers Households	99

4.8	Source-wise Farmer's Households Income (Fodder Growers Households)	100
4.9	Cropping Pattern of Selected Fodder and Fodder Seed Growers	101
5.1	Seed received from Milk Union by selected households for Seed Production (NDP-I)	106
5.2	Changes in Area under Fodder Seed crops (Rabi 2017-18; Kharif 2018)	107
5.3	Details about Participation in Fodder Seed Production under NDP- I	107
5.4	Details regarding inputs received from Union/Dairy for production of fodder seed	108
5.5	Reasons for Choice for participating in Fodder SEED production under NDP- I	108
5.6	Details of Training Provided by Milk Union/Dairy Society - No training	109
5.7	Details Cultivation Practices adopted (Seed Production)	109
5.8	Cost of Cultivation of Fodder Seed Crop and Competitive crop (Rabi 2017-18)	110
5.9	Production and Sale of Green Fodder (before SEED production) & seed	111
5.10	Production and Sale of dry Fodder Production (Seed Growers)	111
5.11	Production and Sale of Fodder Seed Produced	112
5.12	Opinion regarding opportunity Costs of Fodder Seed Cultivation	112
5.13	Constraints Faced by the Fodder SEED GROWERS	113
6.1	Seed received from Milk Union for Fodder production (under NDP)	116
6.2	Changes in Area under Fodder crops	116
6.3	Details about Participation in Fodder Production under NDP- I	117
6.4	Reasons for Choice of Source of Seed for Green Fodder production	118
6.5	Details of Training Provided by Milk Union/Dairy Society	119
6.6	Inputs received from Union/Dairy for production of fodder	119
6.7	Details Cultivation Practices adopted for Fodder production	120
6.8	Cost of Cultivation of Fodder Crop and Competitive crop	120
6.9a	Production and Sale of Green and Dry Fodder - RABI – BENFGH	121
6.9b	Production and Sale of Green and Dry Fodder-Rabi season NONBFGH	121
6.9c	Production and Sale of Green and Dry Fodder - KHARIF – BENFGH	122
6.9d	Production and Sale of Green and Dry Fodder Kharif season NONBFGH	122
6.9e	Production and Sale of Green Fodder and Dry Fodder-MU	122

6.10	Opportunity Costs of Fodder Cultivation	123
6.11a	Economic Constraints faced by the Fodder growers	124
6.11b	Marketing Constraints faced by the Fodder growers	124
6.11c	Resource Constraints faced by the Fodder growers	124
6.11d	Other Constraints faced by the Fodder growers	125
7.1	Cost of Milk Production (per month per animal (Rabi)	129
7.2	Cost of Milk Production (per month per animal) Kharif 2018	129
7.3	Cost of Milk Production (per month per animal) Seed Growers- Rabi 2017-18	130
7.4	Green Fodder and Prevailing market rate (Rs./Kg) 2017-18	130
7.5	Dry Fodder and Prevailing market rate (Rs./Kg) 2017-18	130
7.6	Types of Fodder and Prevailing market rate (Rs./Kg) 2017-18- seed grower	131
7.7	Effect of Green Fodder on Milk Productivity 2017-18	131
7.8	Milk Production, Use and Sale (Previous day)0 fodder	132
8.1	Awareness /Outreach of FDP under NDP- I	134
8.2a	Effect of Fodder Seed & Fodder Production programme under NDP I	135
8.2b	Effect of Fodder Seed & Fodder Production programme under NDP I	136
8.2c	Effect of Fodder Seed & Fodder Production programme under NDP I	137
8.3	Perceptions of non beneficiary households about the FDP	137
8.4	Constraints faced by PDCS	138
8.5	Constraints faced by Milk Union and Suggestions	139

List of Figures

Figure No.	Figure	Page
1.1	State-wise share in total Dairy Cooperative Societies in India (2017-18)	6
1.2	State wise Share in total milk producer members of Cooperative Societies (2017-18)	7
1.3	State wise Share in total milk procurement by Cooperative Societies (2017-18)	7
1.4	Milk Production and Per Capita Availability in India	12
1.5	State wise share in total Milk Production 2017-18 (%)	14
1.6	State-wise Per Capita Milk Availability in India 2017-18 (gm/day)	15
2.1	Contribution of Gross Value of Output from Livestock sector to Agriculture (At current price) in Gujarat: 2004-05 to 2013-14	45
2.2	Species-wise Share in Total livestock Population in Gujarat (1951-2012)	48
2.3	Districtwise share in total Livestock Population in Gujarat 2012 (%)	49
2.4	Trends in Total Milk production in Gujarat state (1983-84 to 2017-18)	54
2.5	Species wise Trends in Total Milk Productivity in Gujarat state	54
2.6	Year wise In milk Bovine Population, Milk Yield and Bovine Milk Production	54
2.7	Districtwise Milk Production in Gujarat (2017-18)	55
2.8	Species-wise Districtwise total Milk Yield (kg/day) 2016-17	56
2.9	Districtwise Milk Production Density and Per Capita Availability of Milk (2012-13)	57
2.10	Districtwise Area under Fodder Crops in Gujarat 2007-08	62
3.1	SUMUL-Milk Procurement (1996-1997 to 2017-2018)	70
3.2	BD- Milk Procurement (2005-06 to 2016-2017)	71

List of Maps

Map No.	Maps	Page
1.1	Location Map of Selected States for the Study	36
3.1	Agro-Climatic Zones of Gujarat	68
3.2	Location of Selected Milk Unions in Gujarat	69

List of Boxes

Box No.	Maps	Page
1.1	Important Fodder crops with improved varieties under Fodder seed multiplication programme of NDP I	32
1.2	NDP-1 Progress Green Fodder Production & Conservation	33
2.1	Major fodder crops of Gujarat State	58
2.2	Community Fodder Farms in Gujarat	63

List of Annexures

Annexure No.	Annexure	Page
A1	Glossary of Seed Concepts	155
A2	Details on Fodder Development Programmes & Seed distributed/Imported	157
A3	Progress under NDP- I	160
A4	Details on Districtwise Fodder Production, Requirement and Consumption in Gujarat	163
A5	Fodder development Activities under various Development Schemes in Gujarat	171

List of Abbreviations

A.H.	-	Animal Husbandry
A.I	-	Artificial Insemination
ADP	-	Annual Development Plan
AN	-	Animal Nutrition
ASMM	-	Area Specific Mineral Mixture
Av.	-	Average
BENFGH)	-	Beneficiary Fodder Grower Households
BENSEED	-	Beneficiary Fodder Seed Growers
CB	-	Cross Breed
CSS	-	Centrally Sponsored Scheme
DADF	-	Department of Animal Husbandry, Dairying and Fisheries
DCS	-	Dairy Cooperative Society
DES	-	Directorate of Economics and Statistics
DM	-	Dry Matter
EIA	-	End Implementing Agency
FGD	-	Focus Group Discussion
ICAR	-	Indian Council for Agricultural Research
ICDP	-	Intensive Cattle Development Programme
GCA	-	Gross Cropped Area
GDP	-	Gross Domestic Product
GIA	-	Gross Irrigated Area
GNP	-	Gross National Product
GOG	-	Government of Gujarat
GOI	-	Government of India
GVA	-	Gross Value Added
GVO	-	Gross Value of Output
ha	-	Hectare
HH/hh	-	Household
IDA	-	International Development Association
IGFRI	-	Indian Grassland and Fodder Research Institute
INAPH	-	Information Network for Animal Productivity and Health
ISP	-	International Organization for Standardization
kg	-	kilograms
Km	-	Kilometer
KVK	-	Krishi Vigyan Kendra
LRP	-	Local Resource person
LTPD	-	Litres per day
M.T./mt	-	Metric Tone
mha	-	Million hectares
MOA	-	Ministry of Agriculture
MU	-	Milk Union (district level)
NA	-	Not Available/ Not Applicable

NIANP	- National Institute of Animal Nutrition and Physiology
NCDFI	- National Cooperative Dairy Federation of India
NDDDB	- National Dairy Development Board
NDP	- National Dairy Plan
NITI Ayog	- National Institution for Transforming India
NLM	- National Livestock Mission
No./Nos	- Number
NONBFGH	- Non-Beneficiary Fodder Grower Households
NSSO	- National Sample Survey Office's
OF	- Operation Flood
OFP	- Operation Flood Programme
PCs	- Producers Company
PDCS	- Primary Dairy Cooperative Society (village level)
PDO	- Project Development Objective
PMC	- Project Management Cell
PMU	- Project Management Unit
Prodvty.	- Productivity
RBP	- Ration Balancing Programme
Rs.	- Rupees
SAUs	- State Agricultural University
SC	- Scheduled Caste
SF/MF/AL	- Small Farmer, Marginal Farmer, Agricultural Laborer
SMR	- Seed Multiplication Ratio
SNF	- Solid Not Fat
ST	- Scheduled Tribe
SUMUL	- Surat Milk Union Limited
TL	- Truthful Seed
VAP	- Village Awareness Programme
Y	- Yield