Final Report

Breakeven Analysis in Dairy Farm Enterprises and Strategies for its Sustainable Growth under National Dairy Plan-I in Selected States of India

Funded by PMU NDDB

Agro-Economic Research Centre
(Ministry of Agriculture & Farmers Welfare, GOI)
H. M. Patel Institute of Rural Development
Sardar Patel University,
Vallabh Vidyanagar 388120, Dist. Anand, Gujarat.
Ph. +91-2692-230106/230799; Fax- +91-2692-233106

AERC Report No. 191

Prepared by: Agro-Economic Research Centre, **Sardar Patel University, Vallabh Vidyanagar**

Dr. S. S. Kalamkar, *Director and Professor, AERC, SPU, VVN*
Dr. Kinjal Ahir, *Deputy Director (Hon), AERC, SPU, VVN*
Dr. S. R. Bhaiya, *Field Officer, CCS, SPU, VVN*
Dr. H. Sharma, *Research Officer/ Assistant Professor, AERC, SPU, VVN*
Dr. D. P. Raykundaliya, *Assistant Professor, Deptt. of Statistics, SPU, VVN*

State Partners

Karnataka	Centre for Ecological Economics and Natural Resources(CEENR) , Institute for Social and Economic Change, Nagarbhavi, Bangalore, India.
Bihar	Director, Agro-Economic Research Centre, T M Bhagalpur University, Bhagalpur – 812 007, Bihar.
Gujarat	Director & Professor, AERC, Sardar Patel University, Vallabh Vidyanagar, Anand.
Punjab	Principal Scientist and Head, Division of Dairy Economics, Statistics & Management, National Dairy Research Institute, Karnal (Haryana), & Indraprastha Softech Private Limited, New Delhi.

Published by

The Director
Agro-Economic Research Centre
(Ministry of Agriculture & Farmers Welfare, Govt. of India)
Sardar Patel University, Vallabh Vidyanagar, Anand, Gujarat.
Ph. No. +91-2692-230106, 230799, 292865 (direct)
Fax- +91-2692-233106
Email: director.aerc@gmail.com; directoraercgujarat@gmail.com

Printing and Circulation In-charge:

Shri Deep K. Patel, Res. and Ref. Assistant

Report submitted on November, 2019

Citation: Kalamkar, S. S.; Ahir Kinjal; Bhiaya S. R.; Sharma H. ; and Raykundaliya D. P. (2019). **"Breakeven Analysis in Dairy Farm Enterprises and Strategies for its Sustainable Growth under National Dairy Plan-I in Selected States of India"**, AERC Report No. 191, Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar, Anand, Gujarat.

Foreword

Dairying has become an important secondary source of income for millions of poor and rural households and has assumed an important role in providing employment and income generating opportunities particularly for marginal and women farmers. This sector has created a significant impact on providing equity in terms of employment and poverty alleviation as well. It cannot be merely a co-incidence that the level of rural poverty is significantly higher in states where livestock sector is underdeveloped. This is the sector where the poor contribute to growth directly instead of deriving benefits from growth generated in other sectors of the economy. Besides milk has always played a critical role in addressing hunger and malnutrition.

Cost plays an important role in portraying economic viability of a dairy enterprise. It is a critical economic indicator for milk producers, consumers and policy makers in order to provide an effective linkage between the milk producers and consumers for fixing the price of milk rationally. Generally, a milk producer can increase his dairy income in two ways either by increasing the milk production or by reducing cost of milk production. Cost of milk production often becomes a policy issue, when milk producers complain that the price of milk they are getting does not the cover cost of milk production. One of the main problems identified is that many dairy producers, especially small operators, are unaware of their costs of production and financial breakeven point. During these tough times, it is important for producers to see how they can reduce costs without reducing milk production. Therefore, there is a need to know the break-even point to estimate the minimum quantity of milk to be produced to cover the total cost on all the size groups of household for both the cow and buffaloes. Breakeven point is a point where no profit no loss status is achieved. The costs that have to be covered by the milk price determine the break-even point, or price. Keeping the above background in mind, it was felt necessary to study the comparative analysis of per liter cost of milk production as well as break even analysis for two groups - members and non-members of dairy cooperative society for two categories of dairy farmers (small and medium) in case of milch Cow and buffalo. In view of above, as desired by the NDDB, Anand, the present study was undertaken in selected milk unions of four states to know the break-even point to estimate the minimum quantity of milk to be produced to cover the total cost of milk production for both the cows and buffaloes. The study came out with important and relevant policy implications which would help to adopt strategic interventions to enhance net income of the milk producers.

I am thankful to authors and the 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.

Agro-Economic Research Centre
For the states of Gujarat and Rajasthan
(Ministry of Agriculture and Farmers Welfare, GOI)
Sardar Patel University,
Vallabh Vidyanagar 388120

(Dr. S.S. Kalamkar)
Director & Professor

Acknowledgements

The study on "**Breakeven Analysis in Dairy Farm Enterprises and Strategies for its Sustainable Growth under National Dairy Plan-I**" has been carried out at the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar, Anand, Gujarat, as supported by National Dairy Development Board, Anand, Gujarat.

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 **Prof. Shirish Kulkarni**, **Vice Chancellor of our University** and Chairman, AERC Advisory Body for his constant encouragement and support for undertaking such research activity at the Centre.

We are deeply grateful to our former Honorary Advisor Prof. **Mahesh Pathak** for his constant support and guidance in undertaking and completion of this project work.

We are grateful to **Dr. Dilip Rath**, Chairman, National Dairy Development Board (NDDB), Anand for giving us an opportunity to undertake this study. We also thank the officers of NDDB, Shri Meenesh C Shah (Executive Director-I), Shri O. P. Sachan (General Manager, Purchase), Shri S. Regupathai (General Manager, Accounts), Dr. G. Chokkalingam (General Manager, Sectoral Analysis & Studies), Shri V. Sridhar (General Manager, Animal Nutrition), Shri Subir Mitra (Deputy General Manager, Sectoral Analysis & Studies), Dr. Jignesh Shah (Sr. Manager, Sectoral Analysis & Studies), Shri A. K. Srivastava, Team Leader (Animal Nutrition), Shri S. Y. Krishna (Sr. Manager, Purchase), Shri Arvind Kumar (Sr. Manager, Coordination and Monitoring Cell), Dr. Nihar Ghosh (Sr. Manager, Animal Nutrition), Shri Mayank Tandon (Manager, Animal Nutrition), and Shri Himanshu Ratnottar (Manager, Purchase) for their support and help during the study.

We are specifically thankful to Shri V. Sridhar (GM, AN) and Shri A. K. Srivastava (Team Leader, Animal Nutrition), Dr. Nihar Ghosh (Sr. Manager, Animal Nutrition), Shri Mayank Tondon (Manager, Animal Nutrition), NDDB, Anand for their constant support during the execution of field survey data as well as data analysis and presentation.

We thank all the corresponding officers of NDDB in selected four States for providing the necessary support in primary data collection. We are grateful to all the Chairman and Managing Director of selected District Co-operative Milk Producers' Union Ltd as well as Primary Dairy Cooperative Societies of selected villages from all the States covered under study for providing the necessary data and support in primary data collection.

We are also thankful to all our state partners, viz. Centre for Ecological Economics and Natural Resources (CEENR), Institute for Social and Economic Change, Bangalore, India; Director, Agro-Economic Research Centre, T M Bhagalpur University, Bhagalpur, Bihar; Principal Scientist and Head, Division of Dairy Economics, Statistics &

Management, National Dairy Research Institute, Karnal (Haryana) for their support in primary data collection in respective state.

The study would not have reached to this stage without the active co-operation of the respondent dairy households from selected villages who provided all the required data for the study without any hesitation and expectation. We thank each one of them for their invaluable support.

We have also received support and encouragement from our colleagues in the Centre while carrying out the study. We are thankful to our fieldsmen (for collecting data from the field and government/dairy union offices), accounts and supporting staff for necessary support.

Thanks to Shri Deep Patel (Research and Reference Assistant-Lib) for preparing the cover page of report and making necessary arrangements for printing of the report.

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

Agro-Economic Research Centre
For the states of Gujarat and Rajasthan
(Ministry of Agriculture, Govt. of India)
Sardar Patel University,
Vallabh Vidyanagar 388120, Anand, Gujarat.

S. S. Kalamkar
Kinjal Ahir
S. R. Bhaiya
Hemant Sharma
D. P. Raykundaliya

Contents

List of Tables

List of Figure

List of Map

List of Boxes

List of Annexures

List of Abbreviations

ACZ	-	Agro Climatic Zone
A.I	-	Artificial Insemination
ADP	-	Annual Development Plan
AN	-	Animal Nutrition
ASMM	-	Area Specific Mineral Mixture
Av.	-	Average
CB	-	Cross Breed
DCS	-	Dairy Cooperative Society households
DM	-	Dry Matter
EIA	-	End Implementing Agency
FGD	-	Focus Group Discussion
GOI	-	Government of India
ha	-	Hectare
HH/hh	-	Household
LTPD	-	Litres per day
MAAHI	-	Maahi Milk Producer Company Limited, Rajkot
M.T./mt	-	Metric Tone
MCLR		Marginal Cost of Funds Based Lending Rate
MGNREGA	-	Mahatma Gandhi National Rural Employment Guarantee Act
mha	-	Million hectares
MU	-	Milk Union (district level)
NA	-	Not Available/ Not Applicable
NDCS	-	Non-Dairy Cooperative Society households
NDDB	-	National Dairy Development Board
NDP	-	National Dairy Plan
NITI Ayog	-	National Institution for Transforming India
No./Nos	-	Number
PDCS	-	Primary Dairy Cooperative Society (village level)
PMC	-	Project Management Cell
PMU	-	Project Management Unit

Prodvty.	-	Productivity
Rs.	-	Rupees
SAUs	-	State Agricultural University
SC	-	Scheduled Caste
SF/MF/AL	-	Small Farmer, Marginal Farmer, Agricultural Laborer
ST	-	Scheduled Tribe
ST	-	Scheduled Tribe
TC	-	Total Cost
TR	-	Total Revenue
Y	-	Yield