Volume-I

Summary Report

of

Pre-investment Feasibility Study

on

"Development of Dairy Industry in North Eastern Region"

Study Commissioned by

North Eastern Development Finance Corporation Ltd. Guwahati

Study Conducted by Genesis Fintec limited,

May 2003

TITLE OF STUDY

PRE INVESTMENT FEASIBILITY STUDY ON "DEVELOPMENT OF DAIRY INDUSTRY IN NER

EXECUTIVE SUMMARY

The study of dairy industry in North Eastern region was commissioned by NEDFi with definite objectives. These objectives may be divided into immediate objectives and wider objectives as under

IMMEDIATE OBJECTIVES

- o To examine the techno-economic viability of taking up dairy development projects in different locations of the NE Region.
- To provide basic information together with the location specific data on project parameters to prospective Entrepreneurs, Investors, Financial Institutions, Government Agencies etc. regarding business opportunities in the dairy sector in different States of the NE Region.
- o To provide above information in such a way that these would form the basis for preparation of DPR by Domestic and International Investors

WIDER OBJECTIVES

- Economic development of the NE Region through generation of direct and indirect employment opportunities in Dairy Sector.
- Facilitating prospective entrepreneurs to invest in the region in following Activities:
 - Dairy Farming
 - Milk Processing Units
 - Other entrepreneurial Units

5.1 Overall Summary of Projects for 8 North Eastern States.

The following table 5.1 gives an overall summary of all the projects that have been envisaged as potentially feasible in the concerned 8 States. The table indicates not only the number & capacity of each type of project, but also the Investment required for setting up those Units.

The projects that have been identified and considered are as follows:

- Commercial dairy farms with 10 cattle
- Commercial dairy farms with 25 cattle
- Rural dairy farms with 2 cattle
- Rural dairy farms with 5 cattle
- Milk processing plants
- Cattle feed compounding plants
- Ice cream plant
- Sweet manufacturing Unit
- Artificial insemination (A.I.) centers

Overall Summary of Projects for 8 North Eastern States

Sl. No.	Projects		ınach al adesh	Ass	am	Man	ipur	Meg	halaya	Mi	zoram	Nag	aland	Sik	kim	Tri	pura	Т	ota 1
		No. of Unit s	in crore s)	No. of Units	Invsm t. (in crore s)	No. of Units	Invsm t. (in crore s)	No. of Units	Invsm t. (in crore s)	No. of Unit s	Invsm t (in crore s)	No. of Units	Invsm t. (in crore s)	No. of Unit s	Invsm t (in crore s)	No. of Units	Invsm t (in crore s)	No. of Units	Invsmt. (in crores)
1.	Commercial 10 Cattle 25 Cattle	Dairy I 51	2.20	593 289	21.70 24.16	83	4.25	97 67	3.64 5.76	167	7.06	129	6.41 2.67	5	1.84	150	6.00	1275 412	53.1 35.63
2	Rural Dairy F	arms				-	-				-	1		-	-				
	2 Cattle 5 Cattle	2354 313	12.38	53870 7183	198.3 1 59.01	1905 254	14.08 3.97	6160 821	25.14 7.17	230 0 308	13.92	1307 5 1742		85 5	3.28 0.94	10918 485	50.94	7	408.2 6
	3 Came	313	3.00	/183	39.01	234	3.97	821	/.1/	308	4.03	1/42	23.36	11 4	0.94	483	4.83	1122	109.1 5
3.	Milk Processi ng Plants (with capacity in lpd)	-	-	8 (10,00 0)	14.19	1 (10,00 0)	1.76	(5,000)	1.20	-	-	-	-	-	-	(5,000	1.21	11	18.36
4.	Cattle Feed Compoundi ng Plants (with capacity in MT/day)	-	-	4 (8)	1.98	-	-	-	-	-	-	-	-	-	-	-	-	4	1.98
5.	Ice Cream Plants (with capacity in lpd)	-	-	(1,000)	4.07	-	-	-	-	-	-	-	-	-	-	-	-	3	4.07
6.	A.I Centres	27	0.47	350	6.19	25	0.44	13	0.23	2	0.03	14	0.24	9	0.15	50	0.88	490	8.63

7.	Sweet				1 (1250	0.18	$\frac{1}{(500)}$ 0.0)8	(500)	0.08	3	0.34
	Manufacturi				(1250		(500)		(500)			
	ngUnit)							
	(with											
	capacityin											
	lpd)											
	Total funds (in Rs. Crores) required for setting up the proposed units in 8 North						639.5					
	Eastern States						 •					2

Summary of Identified Projects

Summary Report

o State-wise identification of prospective districts and list of viable projects:

The preceding paragraph 6.1 and its table gave an overall summary position of the identified projects. The following tables give details of different projects identified in various districts of the 8 identified North Eastern States.

ARUNACHAL PRADESH

A. DAIRY FARMS:

District	COMMERCIA	AL DAIRY FARM	RURAL D	AIRY FARM
	No. of units of cattle strength 10	No. of units of cattle strength 25	No. of units of cattle strength 2	No. of units of cattle strength 5
Papumpare	17	-	315	42
West Siang	4	-	203	27
West Kameng	-	-	41	5
Dibang Valley	2	-	93	12
Lower Subansiri	5	-	421	56
Changlang	2	-	194	26
Tirap	10	-	680	91
Upper Subansiri	11	-	407	54
Total Number	51		2354	313
Investment required per Project (Rs)	4,32,000	-	52,603	1,15,00 8
Total Investment required in State(Rs in Crores)	2.20	-	12.38	3.60

- **B. MILK PROCESSING PLANTS Nil**
- C. CATTLE FEED COMPOUNDING PLANT Nil
- D. ICE CREAM PLANT Nil
- E. SWEET MANUFACTURING UNIT- Nil
- F. A.I CENTRES:

	Name of District	No. of Centers @ one for every 15,000 cattle
Tawang		1
West Kameng		1
East Kameng		2
Lower Subansiri		2

Name of District	No. of Centers @ one for every 15,000 cattle
West Siang	3
East Siang	7
Dibang Valley	1
Lohit	5
Changlang	3
Papun-pare	1
Upper Siang	1
Total Number	27
Investment required per Center (in Rs lacs)	1.77
Total Investment required in State(in Rs Crores)	0.47

ASSAM

A. DAIRY FARMS:

District	COMMERCI FARM	IAL DAIRY	RURAL DAIRY FARM			
	No. of units of cattle strength 10	No. of units of cattle strength 25	No. of units of cattle strength 2	No. of units of cattle strength 5		
Bongaigao n	9	-	466	62		
Barpeta	52	-	4238	565		
Kokrajhar	8	-	659	88		
Kamrup	63	218	1051 2	1402		
Goalpara	18	-	1362	182		
Darrang	18	-	2339	312		
Sonitpur	29	8	3456	461		
Nagaon	147	-	7802	1040		
Karbi Anglong	-	-	-	-		
Jorhat	33	9	2076	277		
Golaghat	-	-	20	3		
Sibsagar	32	-	2132	284		
Dibrugarh	21	11	1676	224		
Tinsukia	34	8	1757	234		
Cachar	26	25	4051	540		
North Cachar Hills	-	-	-	-		
Karimganj	15	-	1293	172		
Hailakandi	12	-	939	125		
Dhubri	50	10	4135	551		
Lakhimpur	-	-	-	-		
Dhemaji	-	-	-	-		
Nalbari	13	-	3306	441		
Marigaon	13	-	1651	220		
Total Number	593	289	5387 0	7183		
Investment required per project (Rs)	3,66,00	8,36,000	36,79	82,161		
Total Investment required in State (in Rs Crores)	21.70	24.16	198.3	59.01		

B. MILK PROCESSING PLANTS:

Deman d Zone	District	Location	Major Towns in demand zone	Capacity of Unit	No. of Units
A	Dhubri	On	Bilasipara	Ont	
		NH31 between	Chapar		
		Dhubri andKokrajhar	Dhubri		
		-	Gauripur		
			Mankachar		
			Others		
	Kokrajhar		Kokrajhar		
			-	10,000	1
В	Bongaigaon	On	Bongaigaon		
		NH31 between Sorbhog &Bongaigaon	Bongaigaon Rlwy		
	Barpeta		Barpeta		
			Barpeta Road		
			Howli		
				10,000	1
С	Kamrup	One plant on NH37-	Guwahati		
	1		North Guwahati		
		1 4 111	Rangia		
	Goalpara		Goalpara		
			Others		
	Darrang	One plant of 10000	Kharupatia		
	_	lpd onNH 37 – G'hty	Teliamura		
		to Loch	Udaipur		
		route close to milk	Others		
	Nalbari	pockets in northen part of Kamrup.	Nalbari		
				10,000	2

B. MILK PROCESSING PLANTS (Contd.):

Deman d Zone	District	Locatio n	Major Towns in demand zone	Capacit y of Unit	No. of Units
D	Sonitpur	On NH52 in the vicinity of	Dhekiajuli	Of Chit	
	1	Tezpur	Biswanath Chariali		
			Rangapara		
			Tezpur		
	Nagaon		Lanka		
			Lumding		
			Lumding Rly		
			Nagaon		
				10,00	1
\mathbf{E}	Jorhat	On NH37 between	Jorhat		
		Jorhat & Sibsagar	Mariani		
	Golaghat		Golaghat		
			Others		
	Sibsagar		Sibsagar		
			Sonari		
				10,00	1
F	Dibrugar h	On NH 37 on way fromDibrugarh to	Dibrugarh		
		Tinsukia.	Duliajan Town		
		Tillisania.	Naharkatiya		
			Namrup		
	Tinsukia		Digboi		
			Digboi Oil Town		
			Doom Dooma		
			Makum		
			Margherita		
			Tinsukia		
G	Cachar	Near Silchar on NH53	Silchar	10,00	1
	Karimga nj	between Silchar & Karimganj	Karimganj		
	J		Others		
	Hailakan di		Hailakandi		
				10,00	1
Investme	nt require	d per Project (in Rs lacs)			177.46
I otal Inv	estment re	equired in State for 8 Proje	ects (in Rs Crores)		14.19

C. CATTLE FEED COMPOUNDING PLANT:

Project Location	Targeted market	Capacity	No. of Units	Investmen t
				Required

Kamrup	Goalpara, Nalbari,	8 MT / day	3	148.8
	Barpeta, Bongaigaon,	OR 1 MT /		9
	Darrang, Kamrup,	hour		
	Marigaon			
Jorhat	Golaghat, Sibsagar, Jorhat,	8 MT / day	1	49.63
	Dibrugarh,	OR 1 MT /		
	Tinsukia.	hour		
Total Inve	1.98			

D. ICE CREAM PLANT:

Project Location	Targeted Urban Market	Capacity (in lpd)	No. of Units			
Guwahati	Dhubri, Kokrajhar, Bongaigaon,	1,000	1			
	Barpeta,					
	Kamrup, Goalpara, Darrang,					
	Nalbari(As well as					
	Meghalaya)					
Jorhat	Sonitpur, Nagaon, Jorhat,	1,000	1			
	Golaghat,					
	Sibsagar, Dibrugarh,					
	Tinsukia(As well as					
	Nagaland)					
Silchar	Cachar, Hailakandi, Karimganj (As well as Manipur, Mizoram & Tripura)	1,000	1			
-	Investment Required per Unit (in Rs lacs) 135.8					
Total Investment	t required in State for 3 Units (in Rs	Crores)	4.07			

E. SWEET MANUFACTURING UNIT- Nil

F. A.I CENTRES:

DISTRIC T	No. of Centers @ one for every 25,000
.	cattle
GOALPARA	11
KOKRAJHAR	14
DHUBRI	17
BONGAIGAON	12
BORPETA	21
NALBARI	14
KAMRUP	13
MARIGAON	14
NA-GAON	25
DARANG	19
SONITPUR	19
GOLAGHAT	13
JORHAT	20
SIBSAGAR	13
DHEMAJI	14
LAKHIMPUR	19
DIBRUGARH	12
TINSUKIA	19
KARBI ANGLONG	15
N.C. HILLS	3
CACHAR	21
HAILAKANDI	9
KARIMGANJ	15
TOTAL	350

Investment required per Center (in Rs lacs)	1.77
Total Investment required in State (in Rs Crores)	6.19

MANIPUR

A. DAIRY FARMS:

	A. DAIRT FARMS:					
Deman	District	COMMERCIAL DAIRY		RURAL DAIRY FARM		
dZone		FA	RM			
		No. of units	No. of units	No. of units of	No. of units of	
		of	of	cattle	cattle	
		cattle	cattle	strengt	strengt	
		strengt	strengt	h2	h5	
		h10	h25			
A	Imphal	81	-	113	152	
	West			9		
	, Imagh of					
	Imphal Eas					
	t,Thoubal,					
	Bishnupur					
В	Senapati	-	-	10	1	
С	Tamenglong	-	-	65	9	
D	Churachandpur		-	540	72	
Е	Chandal	2	-	151	20	
F	Ukhrul	-	-	-	-	
	Total	83	-	190	254	
				5		
Investment required		5,13,00	-	73,916	1,56,41	
(; D)	perproject				5	
(in Rs)		4.25		1400		
Total Investment		4.25	-	14.08	3.97	
required in						
State (in Rs. Crores)						

B. MILK PROCESSING PLANTS:

District	Locatio n	Major Towns in demand zone	Capacity of Unit	No. of Units
Demand Zone A	Imphal West, around Imphal city	Imphal Lilong	10,000	1
		Thongkho ng Bishnupur		
		Moirang Nambol		
Investment requ Total Investmen	176.14 1.76			

C. CATTLE FEED COMPOUNDING PLANT - Nil

- D. ICE CREAM PLANT Nil
- E. SWEET MANUFACTURING UNIT Nil

F. A.I CENTRES:

Distric ts	No. of Centers @ one for every 25,000 cattle
Imphal	7
Senapati	6
Bishnupur	2
Tamenlong	1
Churachandpur	1
Ukhrul	2
Thoubal	4
Chandel	2
State Total	25
Investment required per Center (in Rs lacs)	1.77
Total Investment required in State (in Rs Crores)	0.44

MEGHALAYA

A. DAIRY FARMS:

District	COMMERCIAL DAIRY FARM			OAIRY FARM
	No. of units of cattle strength 10	No. of units of cattle strength 25	No. of units of cattle strength 2	No. of units of cattle strength 5
	7 1	10	1510	202
East Khasi Hills	51	19	1513	202
West Garo Hills	17	-	1067	142
East Garo Hills	10	-	491	65
West Khasi Hills	-	-	1321	176
Jaintia Hills	15	-	1305	174
Ri-bhoi	-	48	-	-
South Garo Hills	4	-	463	62
Total	97	67	6160	821
Investment required per project (in Rs)	3,76,000	8,61,000	40,82	87,442
Total Investment (in Rs Crores)	3.64	5.76	25.14	7.17

B. MILK PROCESSING PLANTS:

Deman d zone	District Identifie d for the Plant	Locatio n	Major Towns in demand zone	Capacity of Unit	No. of Units
A		Khasi Hills district on the G.S. Road route of National Highway-40	Cherapunjee, Madanrting, Mawlai, Nongmynsong, Nongthymmai, Pynthorumkhrah, Shillong and Shillong Cantt. etc	5,000	1
Investme		per Unit (in Rs lacs)	1		120.83

1	Total Investment	required in State	(in Rs Crores)
ı	I Otal IIIV ESTINCIIT	equileu iii State	(111 185 (101 65)

C. CATTLE FEED COMPOUNDING PLANT - Nil

D. ICE CREAM PLANT - Nil

E. SWEET MANUFACTURING PLANT:

Locatio n	Targeted Markets	No. of Units with capacity of 1,250 lpd (250) kg sweets/day)Unit
Any location beside NH-40 and between		1
Barapani Industrial Area and Khanapara		
in Ri-Bhoi district of Meghalaya		
Investment required per Unit (in Rs l	18.85	
Total Investment required in State (in	n Rs Crores)	0.18

F. A.I CENTRES:

DISTRIC T	No. of Centers @ onefor every 15,000 cattle
East Khasi Hills	1
Ri-Bhoi	1
West Khasi Hills	2
Jaintia Hills	2
East Garo Hills	2
West Garo Hills	4
South Garo Hills	1
Total	13
Investment required per Center (in Rs lacs)	1.7 7
Total Investment required in State (in Rs Crores)	0.2

MIZORAM

A. DAIRY FARMS:

District	COMMERCIAL DAIRY FARM	RURAL DAIRY FARM	
	No. of units of cattle strength 10	No. of units of cattle strength 2	No. of units of cattle strength 5
Aizwal	93	811	108
Lunglei	26	409	55
Champhai	13	234	31
Kolasib	13	143	19
Serchip	10	127	17
Saiha	9	200	27
Mamit	3	140	19
Lawngtlai	-	236	32
Total	167	2300	308
Investment	4,23,000	60,534	1,31,590
require		•	
d per project (in Rs)			

Total	7.06	13.92	4.05
Investme			
ntrequired in			
State (in			
Rs Crores)			

- **B. MILK PROCESSING PLANTS Nil**
- C. CATTLE FEED COMPOUNDING PLANT Nil
- D. ICE CREAM PLANT Nil
- §. SWEET MANUFACTURING UNIT Nil
- F. A.I CENTRES:

DISTRIC T	No. of Centers @ one for every 10,000 cattle
Aizwal, Kolasib, Mamit, Serchhip & Chamhai	1
Saiha and Lawngtlai	1
Total	2
Investment required per Center (in Rs lacs)	1.77
Total Investment required in State (in Rs Crrores)	0.03

NAGALAND

A. DAIRY FARMS:

District		CIAL DAIRY FARM	RURAL DAIRY FARM	
	No. of units of cattle strength 10	No. of units of cattle strength 25	No. of units of cattle strength 2	No. of units of cattle strength 5
			1=00	
Dimapur	9	23	1788	238
Kohima	51	-	2347	313
Wokha	6	-	287	38
Mokokchung	18	-	1608	214
Tuensang	22	-	3753	500
Zunheboto	8	-	614	82
Mon	10	-	1932	258
Phek	5	-	746	99
Total	129	23	13,075	1,742
	4.0.	44 (2 000	(0.004	4.46.50
Investment required pe	4,97,000	11,63,000	68,992	1,46,72
project (in Rs) Total	(41	2.67	00.21	25.56
Investment required in State (in Rs Crores)	6.41	2.67	90.21	25.56

B. MILK PROCESSING PLANTS - Nil

C. CATTLE FEED COMPOUNDING PLANT -Nil

- D. ICE CREAM PLANT Nil
- **E. SWEET MANUFACTURING UNIT:**

Any location beside NH-36 and in or around Dimapur township	Targeted Markets Dimapur	No. of Units with capacity of 500 lpd (100 kg sweets/day)
Investment required per un	8.59	
Total Investment required i	0.08	

F. A.I CENTRES:

DISTRIC T	No. of Centers @ one forevery 10,000 cattle
Kohima	3
Dimapur	5
Mon	1
Wokha	1
Phek	1
Zunheboto	1
Makokchung	1
Tuensang	1
Total	14
Investment required per Center (in Rs lacs)	1.7 7
Total Investment required in State (in Rs Crores)	0.2

5.2.7 <u>SIKKIM</u>

A. DAIRY FARMS:

District	COMMERCIAL DAIRY FARM	RURAL DAIRY FARM		
	No. of units of cattle strength 10	No. of units of cattle strength 2	No. of units of cattle strength 5	
East South	4 1	106 403	14 54	
North West Total	5	51 295 855	7 39 114	
Investment required pe	367,000	38,304	82,721	
rProject (in Rs) Total Investment required in	0.18	3.28	0.94	
State (in Rs Crores)				

- **B. MILK PROCESSING PLANTS Nil**
- C. CATTLE FEED COMPOUNDING PLANT Nil
- D. ICE CREAM PLANT Nil
- E. SWEET MANUFACTURING UNIT-Nil

F. A.I CENTRES:

Name of District	No. of Centers @ one forevery 15,000 cattle
East	3
West	3
North	1
South	2
Total	9
Investment required per Center (in Rs lacs)	1.7
Total Investment required in State (in Rs Crores)	0.1 5

5.2.8 TRIPURA

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A. DAIRY FARMS:

District	COMMERCIAL DAIRY FARM		RURAL DAIRY FARM	
	No. of units of cattle strength 10	No. of units of cattle strength 25	No. of units of cattle strength 2	No. of units of cattle strength 5
Wesr Tripura	96	33	5472	243
North Tripura	27	-	2059	91
South Tripura	17	-	1975	88
Dhalai	10	-	1412	63
Total	150	33	10918	485
Investment required pe rproject (in Rs)	4,00,000	9,20,000	46,655	99,968
Total Investment required in State(in Rs lacs)	6.00	3.04	50.94	4.85

B. MILK PROCESSING PLANTS:

District	Location	Major Towns in demand zone	Capacity of Unit	No. of Units
South District	NH42etween Udaipur &Belonia	Udaipur Belonia Sabroon	5,000	1
		Risyamukh Barpathari		
		Mathabari		
Investment required per Unit (in Rs lacs) Total Investment required in State (in Rs Crores)				121.22 1.21

C. CATTLE FEED COMPOUNDING PLANT - Nil

D. ICE CREAM PLANT - Nil

E. SWEET MANUFACTURING UNIT:

Locatio	Targeted Markets	No. of Units with
n	_	capacity of
		500 lpd

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		(100 kg sweets/day)	
Agartala	Agartala	1	
71gai tala	/ Igai taia	1	
	red per unit (in Rs lacs)	8.35	
Total Investment	required in State (in Rs Crores)	0.08	

F. A.I CENTRES:

DISTRIC T	No. of Centers @ one for every 15,000 cattle
West	26
South	11
Dhalai	5
North	8
TOTAL	50
Investment required per Center (in Rs lacs) Total Investment required in State (in Rs Crores)	1.77
Total Investment required in State (in Rs Crores)	0.88

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