

## Annexure I: List of tables

<b>Table:3 Distribution of respondent according to farmers' type</b>				
Group	A	B	C	Total
A1	56	32	12	100
A2	41	51	8	100
A3	48	4	48	100
A4	80	10	10	100
A5	36	63	1	100
Total	261	160	79	500
Percentage	52.20	32.00	15.80	100

<b>Table:4 Age-group-wise distribution of respondent</b>				
Group	<30yr	30-50 yr	>50yr	Total
A1	12	34	54	100
A2	16	61	23	100
A3	17	55	28	100
A4	14	51	35	100
A5	16	39	45	100
Total	75	240	185	500
%	15.00	48.00	37.00	100

<b>Table:5 Educational level of respondents</b>					
Group	Illiterate	Upto 5 <sup>th</sup> std.	Upto 10 <sup>th</sup> std	Above 10 <sup>th</sup> std	Technical training
A1	12	19	33	34	2
A2	6	31	25	36	2
A3	17	37	30	14	2
A4	16	37	30	15	1
A5	8	14	32	45	0
%	11.80	27.60	30.00	28.80	1.40

<b>Table 6: Family structure of the respondents</b>				
Group	Single	Joint	Total	Av. Family member engaged in farming
A1	79	21	100	2.88
A2	68	32	100	1.81
A3	76	24	100	4.71
A4	56	44	100	3.64
A5	78	22	100	1.41
%	71.40	28.60	500	

Group	Male	Female	Children	Overall
A1	2.42	2.22	1.96	5.76
A2	2.48	2.14	2.43	6.09
A3	2.76	2.33	2.79	7.28
A4	2.47	2.14	3.12	6.92
A5	1.75	1.59	3.29	6.40
Average	2.38	2.08	2.72	

Land holding	Ownership	Farmers type			Overall
		A	B	C	
Total average land area (in bigha)	Own	3.60	8.54	2.30	5.02
	N	240	151	71	462
	Rent	0.38	0.8	0.43	0.44
	N	21	9	8	38
Farm shed area (sq. ft)		502.15	388.88	841.79	517.34
Fodder cultivation area (in bigha)	Own	1.37	0.79	1.5	1.26
	N	69	29	26	124

<b>Table9: Housing type of farmers</b>				
Group	Kuccha	Pucca	Both	Total
A1	25	25	50	100
A2	2	55	43	100
A3	62	4	34	100
A4	66	29	5	100
A5	67	33	0	100

<b>Table 10: Availability of basic amenities to the farmers</b>						
Group	Electricity	Water supply	School	Hospital	Telephone	Motorable road
A1	93	40	99	92	70	89
A2	71	12	95	51	44	88
A3	85	3	93	72	76	64
A4	72	53	80	74	52	67
A5	88	51	98	97	39	97
Average	81.80	31.80	93.00	77.20	56.20	81.00

<b>Table 11. Herd strength and number of animals as per farmers type</b>						
Farmers type			A	B	C	Over all
Herd strength	Present	Avg	14.07	10.34	24.58	14.54
		N	261	160	79	500
	Initial	Avg	5.31	4.08	5.81	4.99
Milch cow		Avg	6.41	4.41	11.47	6.57
		N	261	160	79	500
Dry cow		Avg	2.09	2.03	3.22	2.33
		N	145	57	58	
Heifer		Avg	3.39	2.82	5.50	3.56
		N	243	150	79	
Male calf		Avg	1.98	1.69	2.47	1.98
		N	190	107	62	359
Female calf		Avg	2.30	1.80	3.69	2.39
		N	193	114	66	373
Bull		Avg	1.15	1.31	1	1.18
		N	32	16	6	54

<b>Table 12: Distribution of breed</b>		
Group	Number of farmers rearing Jersey and Holstein Friesian cross	
	Jersey cross	Holstein Friesian cross
A1	61	39
A2	11	89
A3	79	21
A4	84	16
A5	50	50
Average %	57.00	43.00

<b>Table 13: Farmers group wise distribution of breed</b>			
Breed	Number of farmers		
	A	B	C
Jersey cross	131	125	29
Holstein Friesian cross	130	35	50

<b>Table14: Feeding details of calf (1-6month)</b>								
Group	Wheat bran (kg)		Grass (Kg)		Straw (Kg)		Milk (Kg)	
	Total	Average	Total	Average	Total	Average	Total	Average
A1	130.95	1.35	499	5.14	220.2	2.59	90.65	0.96
A2	118.05	1.24	208.35	2.31	135.1	1.71	45.15	0.50
A3	114.5	1.19	349.5	3.68	188	2.14	67.75	0.74
A4	99	1.02	227	2.49	143.2	1.61	64.2	0.69
A5	105.35	1.09	236.75	2.57	159.55	1.81	61.83	0.65

<b>Table 15: Feeding details of Heifer in Kg ( average)</b>							
	Wheat Bran	Maize	R. polish	MOC	Broken R	Besan	Purabi
A1	2.64	0.5	0.89	0.14	1	0.53	0.93
N1	96	3	14	50	46	3	11
A2	3.05	0	0.54	0.44	1.03	0.75	0.15
N2	97	0	7	64	53	21	1
A3	2.81	0	1.56	0.25	1.11	1.33	1.23
N3	96	0	35	13	32	3	15
A4	2.16	0	1.56	0.2	0.83	1	1.31
N4	94	0	47	17	37	4	19
A5	2.44	0.5	1.56	0.33	0.72	0.7	1.15
N5	98	4	27	63	26	20	17
Over all	2.62		1.43	0.30	0.91	0.77	1.16
	481		130	207	194	51	63



Table 16 : Feeding details of cow as per farmers type													
Farmers Type	Category	In Kg											
		Grass	Straw	Milk	WB	Maize	RP	MOC	BR	Besan	Purabi	Other commercial	Salt
A	Milch cow	12.02	7.30	-	3.76	0.86	3	0.97	4	1.19	1.63	2.25	0.25
	N	248	231	-	-	7	73	186	15	181	57	20	248
B	Milch cow	13.17	8.29	-	3.08	0.92	8	0.34	4	1.01	1.54	2.07	0.25
	N	156	154	-	-	6	84	54	84	60	70	20	156
C	Milch cow	12.23	6.75	-	3.45	0.87	5	0.44	7	1.40	1.19	-	0.25
	N	74	72	-	-	4	18	72	49	73	8	-	74
Overall	Milch cow	12.12	7.55	-	3.49	0.88	9	0.74	9	1.21	1.55	2.16	0.25

N.B- WB: Wheat bran; RP: Rice polish; MOC: Mustard Oil cake; BR: Broken rice

<b>Table 17 : Prices (Rs.) of different feed ingredients (per Kg)</b>				
Farmers type	A	B	C	Over all
Wheat bran	9.09	9.15	8.98	9.09
Maize	10.11	8.6	8.2	9.10
Rice polish	6.60	4.98	6.80	5.87
MOC	8.94	8.12	8.58	8.71
Broken Rice	10.41	10.08	10.69	10.36
Besan	11.52	11.38	11.45	11.47
Purabi	9.55	7.92	8.45	8.66
Naaf	6.32	6.25	0	6.28

<b>Table 18. Total Milk yield in the study group</b>					
	A	B	C		Overall
Av. No of animal	6.41	4.41	11.47		4.99
No. of farmers	261	160	79		500
Total milch cow	1673	706	906		3285
Avg. daily yield	6.88	8.28	5.39		6.77
Total milk yield	3483440	1771338	1481822		6736599
Av. Lactation length=303 days					

Farmer type	Avg. Labour	Sd	Range	Family member
A	2.01	1.385202	1 to 7	3.01
B	1.33	0.668708	1 to 5	1.82
C	1.61	1.005341	1 to 5	4.78
over all	1.73	1.181291	1 to 7	2.94

**Table20. Cost of Veterinary services**

Particulars	Average veterinary cost (Rs/annum)			
	A	B	C	Overall
Vet fee (Rs.)	1869.16	1379.53	3503.21	1986.37
Medicine Cost (Rs.)	4684.22	2411.06	9478.87	4731.28
Deworming (Rs.)	816.06	382.04	858.15	701.31
Vaccine (Rs.)	725.72	495.04	1551.13	820.22
A.I (Rs.)	1049.12	697.52	1953.47	1096.24
Natural service (Rs.)	758.71	300.00	537.86	640.77
Any other (Rs.)	342.67	266.67	262.00	312.24
Total (Rs)	10,245.60	5,931.86	18,144.68	10,288.43

<b>Table 21: Inventory cost according to farmers type</b>				
Average inventory cost (Rs)				
Particulars	A	B	C	Overall
Initial cost of shed	26616.64	22905.06	37,288.00	27,012.03
Repairing cost of shed	6474.72	4518.31	10598.36	6838.06
Utensil cost + instruments	6001.63	5682.19	8050.00	6577.94
Total	39092.99	33105.56	55936.36	40428.03

<b>Table 22. Mode of milk marketing and prices</b>												
Farmers type	Direct selling			Co-Operative			Middle man			Home consumption		
	Amount (Lt)	Av. Price (Rs)	N	Amount (Lts)	Av. Price (Rs)	N	Amount (Lts)	Av. Price (Rs)	N	Amount (Lts)	Av. per household	N
A	843.5	16.83	59	3037	14.13	101	5919.5	17.07	138	568	2.34	243
B	1089.5	15.95	73	1400.3	14.18	66	826.5	15.80	33	274.5	1.78	154
C	1933	18.17	3	1329	13.42	44	5555.5	17.32	62	265.5	3.45	77
Total	3866		135	5766.3		211	12301.5		233	1108		474
Overall average		16.39			13.91			17.08			2.52	

A total of 216 (43.2%) respondents managed to get price 17.5 and above.

<b>Table 23 : Sale of animals (farmers type)</b>						
Average prices (Rs.)						
	Mode of sale	Particulars	A	B	C	Over all
Animal marketing	Direct sale from Farm	Male calf	826.56	887.50	531.43	766.26
		Female calf	1,557.97	1,830.00	1,242.00	1,456.59
		Heifer	4,737.71	8,888.89	4,739.22	5,047.11
		Milch cow	24,939.80	20,615.54	29,518.00	25,841.56
		Bull	9,500.00	7,000.30	9,833.33	8,500.13

<b>Table 24. Different loan facilities</b>							
	Bank loan (Rs)	Max (Rs)	Min (Rs)	Private loan (Rs)	Max (Rs)	Min (Rs)	Other debt (Rs)
No.	167	-	-	31	-	-	25
Monthly repayment	2643.51	-	-	3859.68	-	-	-
Amount of loan (Av)	71786.87	200000	5000	56629.63	500000	10000	17200

## Annexure II: Schedule of Interview

UNCTAD / DFID / Ministry of Commerce Project  
“Strategies and Preparedness for Trade and Globalization in India”

Implemented By



Tire-II Partner under  
Center for International Trade in Agriculture and Agro-based Industries (CITA)

### **SCHEDULE OF INTERVIEW**

**EVALUATION OF COST OF MILK PRODUCTION AND QUALITY OF MILK PRODUCED BY THE DAIRY FARMS LOCATED WITHIN THE RADIUS OF 100 KM FROM GUWAHATI CITY.**

**QUESTIONNAIRE details:**

<b>DISTRICT</b>	
<b>BLOCK</b>	
<b>VILLAGE</b>	
<b>ENUMERATOR Name</b>	
<b>Date of interview:</b>	

Checked / evaluated by:

**Co-P.I.**

**P.I.**

**Monitoring Officer**

**FARMER'S DETAILS**

<b>Farmer's name:</b>		
<b>Address (with phone if any):</b>		
<b>Age:</b>		
<b>Farmer's type:</b> (Tick only)	<p>A. Traditional small holders (5-20 cattle head rearing for more than 10 years);</p> <p>B. Neo-small holder farms (5-20 cattle head rearing for not less than 1 year and not more than 10 years)</p> <p>C. Medium farm holder (both Traditional &amp; neo) having more than 20 cattle heads.</p>	
<b>Years in farming:</b>		
<b>Member of (Tick):</b>	Coop. Society / SHG/ NGO / Any other	
<b>Since when (Year):</b>		
<b>Caste &amp; Religion</b>		
<b>Education level:</b>		
<b>Illiterate:</b>		
<b>Upto 5 std.</b>		
<b>Upto 10 std.</b>		
<b>Above 10<sup>th</sup> std:</b>		
<b>Technical training:</b>		
<b>Primary occupation:</b>	<b>Occupation</b>	<b>Approx. income (yearly)</b>
<b>Dairy farming-</b>		
<b>Agri/ horti farming-</b>		
<b>Both the above-</b>		
<b>Govt. service-</b>		
<b>Shop-</b>		
<b>Pension holder-</b>		
<b>Any other (specify)-</b>		

<b>Family size (Tick):</b>	<b>Joint</b>	<b>Single</b>
<b>Adult Male Number:</b>		
<b>Adult Female number:</b>		
<b>Children:</b>		
<b>Family member working in farm (Nos.):</b>		
<b>Farmers Land (Tick):</b>	<b>Own</b>	<b>Rented</b>
Total Land size:		
Farm/shed area size:		
Fodder Cultivation area:		
<b>Farmer House type:</b>	<b>Kuccha / Pucca / Both</b>	
<b>Availability of essential amenities (Tick):</b>	<b>Electricity (Y / N)</b>	<b>Water supply (Y / N)</b>
	<b>School (Y / N)</b>	<b>Hospital (Y / N)</b>
	<b>Telephone (Y / N)</b>	<b>Motor able road (Y / N)</b>

### **ANIMAL HUSBANDRY ASPECTS**

**Herd strength:-**

**Present:** .....

**On start:** .....

<b>Category</b>	<b>Breed (Majority)</b>	<b>Age (avg)</b>	<b>Farm born (No.)</b>	<b>Private lease (No.)</b>	<b>Bank loan / Purchase (No.)</b>	<b>Total No.</b>
Cows Milch: Dry:						
Heifers (6months to 1 <sup>st</sup> calving):						
Male calf (below 6 months)						



Female calf (below 6 months)						
Bull						

**Lactating animals & Production (Yield):**

Category	Total numbers	Total daily milk yield (lts.)	Present Peak yield (lt)	Last lactation peak yield (lt)	Last lactation yield (lt)	Dry periods days
1 <sup>st</sup> lactation cow						
2 <sup>nd</sup> Lact. Cow						
3 <sup>rd</sup> lact cow						
4 <sup>th</sup> Lact. cow						
5 <sup>th</sup> Lact. Cow						
6 <sup>th</sup> Lact. Cow						
7 <sup>th</sup> & above						
<b>Total:</b>						

**Total daily farm yield (lts.):**

.....

**REPLACEMENT STOCK REARING (IF NOT, WHY?):**

Heifer rearing:

Bull rearing:



**FEEDING DETAILS:**

<b>Animal category</b>	<b>Ration (Kg)</b>	<b>Grass (Kg)</b>	<b>Straw (Kg)</b>	<b>Milk (lts.)</b>
Calf (1-6 months)				
Heifers (6-conception)	Wheat bran: Maize: Rice polish: MOC: Broken rice: Besan: Purabi: <b>Total:</b>			
Milch cow (5-10 lts.)	Wheat bran: Maize: Rice polish: MOC: Broken rice: Besan: Purabi: <b>Total:</b>			
Milch cow (10-15 lts.)	Wheat bran: Maize: Rice polish: MOC: Broken rice: Besan: Purabi: <b>Total:</b>			

**Prices (Rs.) of different feed ingredients:**

<b>Ingredients</b>	<b>Price (Rs.)</b>
Wheat bran:	
Maize:	
Rice polish:	
MOC:	
Broken rice:	
Besan:	

Purabi:	
Grass:	
Paddy Straw:	

**Veterinary cost:**

<b>Particulars</b>	<b>Amount monthly (Rs.)</b>	<b>Amount yearly (Rs.)</b>
Veterinarian fees		
Medicine (s)		
Deworming cost		
Vaccine / vaccination cost		
Artificial insemination		
Natural service		
Any other		

**Marketing:**

<b>Commodity</b>	<b>Direct selling (qty. &amp; price / lt)</b>	<b>Cooperative society (qty. &amp; price / lt)</b>	<b>Middle man (qty. &amp; price / lt)</b>	<b>Processors (qty. &amp; price / lt)</b>	<b>Home consumption (lts.)</b>	<b>Any other (qty. &amp; price / lt)</b>
Milk						
Male calf						
Female calf						
Heifers						
Milch cow						
Bull						
Dung						
Urine						

**Additional information:**

<b>Commodity</b>	<b>Distance to sell booth / point</b>	<b>Transportation cost (if any)</b>	<b>Milk sold by testing</b>	<b>Mode of payment (Wkly / Monthly etc.)</b>	<b>Mode of price fixation Wt or Fat/ snf</b>	<b>Culling rate &amp; its cause</b>
Milk						
Male calf						
Female calf						
Heifers						
Milch cow						
Bull						
Dung						
Urine						

**FARM INVENTORIES:**

Shed		Particulars detail	Initial cost (Rs.)	Repairing cost (if any)	Remarks
	Age of shed				
	Roof type				
	Floor type				
	Pillars				
	Any other				
Utensils	Type of utensils	1.			
	With year of Purchase	2. 3. 4.			
Instruments or appliances	Spade				
	Knife				
	Pump set				
	Rope				
	Milk van etc.				
	Any Other				

**MAN POWER**

Name	Sex / age	Activities	Full / part time	Wage (Rs)	Lodging cost (Rs)	Meals cost (Rs)

**INTEREST AND INSURANCE EXPENSES:**

<b>S.No.</b>	<b>Particulars</b>	<b>Amount monthly (Rs)</b>	<b>Amount yearly (Rs)</b>	<b>Total (Rs.)</b>
1.	Bank loan			
2.	Private loan			
3.	Any other debt			

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