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Ref : AES / AIMS / MBA / 2022-23 / 249

Date: 25/01/2023

To,

Diecta Foods (P) Ltd.,
36, Rajnigandha Shopping Centre,
1st Floor, Gokuldham, Goregaon (E),
Mumbai-400063

Consultancy Charges Statement –Reg.

Respected Sir,

Please find below details of the payment received and due for the consultancy Services provided to your esteemed organization:

Description	**Amount (Rs.)**
Total	1,00,000/-
Received on 25/05/2022	50,000/-
Received on 20/06/2022	25,000/-
Balance	25,000/-
Grand Total	**1,00,000/-**

With Regards,

Dr. M.A. Lahori
Director,
AIMS, Baramati

ANEKANT INSTITUTE OF MANAGEMENT STUDIES ★ BARAMATI (PUNE)

A Report

on

Feasibility of Milk Procurement in Bhor, Wai and Khandala

Submitted to

M/s. D'lecta Foods (Pvt.) Ltd., Mumbai

Prepared By

Anekant Institute of Management Studies (AIMS), Baramati

September 2022

Preface

AIMS, Baramati and D'lecta Foods (P) Ltd., Mumbai decided to have have collaboration to study feasibility of milk procurement at selected parts of western Maharashtra. A Survey was conducted for the purpose to analyze feasibility of milk procurement from the specified areas of Wai, Khandala and Bhor Talukas representing Satara and Pune Districts. The major objective to select these areas was explore untapped potential of and logistical convenience to procure raw milk from the dairy farmers.

The study was conceived by a team of Teachers and Students of the AIMS, Baramati in consultation with Mr.Anant R. Sumant representing D'lecta Foods (P) Ltd., Mumbai. A series of interactions were held with students of the Institute by Mr. Anant R. Sumant in this regard. A Survey Team of six students was finalized considering their suitability for the task in terms of family background, basic knowledge relevant to the dairy farming and willingness to stay and execute the pre-conceived survey in the rural areas as specified.

The survey was completely funded by D'lecta Foods (P) Ltd., Mumbai. Throughout the study, important inputs were given by Mr. Anant R. Sumant such as geographical areas to be covered, specific questions to be asked to the dairy farmers and the collection agents, being the important stakeholders in raw milk production and procurement. The survey commenced on 1st June 2022. Students were deployed as three teams of two students each. Each team was tasked to survey six farmers and as many Collection Agents as available on daily basis.

Important insights into the dairy farmers overall management of the raw milk production and potential to supply the same adhering to quality specification were developed. The report will be handy to D'lecta Foods (P) Ltd., Mumbai in deciding to further their business interests in the areas of study.

Dr. M.A. Lahori,

AIMS, Baramati

11th September 2022

ACKNOWLEDGEMENT

This study report is an outcome of the business interest of M/s. D'lecta Foods (P) Ltd., Mumbai and academic interests of AIMS, Baramati in the field of Dairy farming. The present areas of Wai, Khandala and Bhor Talukas were chosen due to sizeable and relatively untapped potential as compared to their urban vicinities.

I thank Mr. Anant R. Sumant and the Management of D'lecta Foods (P) Ltd., for considering us for the assignment. He provided several perspectives of the dairy farming and milk processing in the present scenario, which was a great learning for our students. Dr. M.A. Lahori, Director, AIMS provided us the necessary infrastructure and valuable guidance in executing the study.

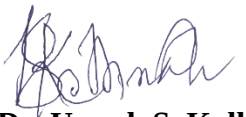
I acknowledge the contribution of the following students in carrying out this project:

Student Survey Team (from MBA I Year):	1. Mr. Chavan Bhairinath M. 2. Mr. Yadav Gaurav S. 3. Mr. Pawar Suraj D. 4. Mr. Jadhav Ajay S. 5. Mr. Shende Avinash V. 6. Mr. Zanje Ramdas B.
Student Data Compilation Team (from MBA II Year):	1. Ms. Shweta Mane A. 2. Mr. Pawal Sushant B. 3. Ms. Sayali Joshi M. 4. Mr. Pawar Sandeep D. 5. Ms. Nikita Nalawade S. 6. Ms. Lembe Dhanashree A.

I express my deep gratitude to my dear colleagues for their support during the project. Dr. D. P. More was instrumental in carrying out scientific data analysis of the large and complex data, helping us bring meaningful conclusion to the study.

Last but not the least I express my heartfelt gratitude to our administrative staff for their wholehearted support in this project.

Thanking one and all!!



Dr. Umesh S. Kollimath
Coordinator,
AIMS-D'lecta Consultancy Project

CONTENTS

Research Methodology

Following objectives were kept in mind while carrying out the study:

1. To find out raw milk production potential in setting up a procurement system.

2. To identify existing players, purchase price of the raw milk in the study area.

3. To evaluate cost of procurement of the raw milk from the area.

4. To find out role of vendors (collection agents) in improving Milk Supply Chain.

Sample Technique:

Convenient sampling technique was adopted given that we have undefined population of dairy farmers and milk collection agents. Six student surveyors, in three teams of two students each were deployed in the area. Each team scouted for dairy farmers and collection agents across the study area. A total of 373 dairy farmers and 38 Milk Collection agents were covered during the study period of 30 days.

Research instruments:

Survey was administered in Marathi language using two structured questionnaires (one each for dairy farmers and milk collection agents) to elicit maximum information from them. Besides, surveyors were also trained to make subtle observations on storage of food and fodder, drainage system, composting of the cow dung, sanitation practices in the animal housing, chances of milk contamination, etc.

Data Analysis:

The data collected by the above survey was compiled by a separate students' team. The same was analyzed using advances version of SPSS software. An interpretation was made of 11 data sets for farmers and 6 data sets for the collection agents. The same was used to arrive at findings and observations and recommendation therein the end of the report.

DATA REPRESENTATION & INTERPRETATIONS

1. Profile of the Dairy Farmers in the Study Area:

i) Educational Background of the Farmers in the Study Area:

Male Head of the Family:

Education Level	Count	Percentage
Graduation	91	24.4
Some Formal Schooling	271	72.7
No School	11	2.9
Grand Total	**373**	**100**

Female Members of the Family:

Education Level	Count	Percentage
Graduation	30	8.0
Some Formal Schooling	229	61.4
Prefer not to disclose	108	29.0
No School	6	1.6
Grand Total	**373**	**100**

Interpretation:

The study area has largely well literate population. It may be seen that 24.4% of the Male heads of the family and mere 8.0% among the ladies of the families studied were found to have had college education up to an University Graduation. However, 72.7% of the male heads and 61.4% of the women heading the family had some form of formal education such as primary schooling or even up to high school education, making them able to read, write and understand in local language i..e., Marathi and to some extent the English language.

ii) Occupation Structure

Activities	Count	Percentage
Exclusively Farming	4	1.1
Exclusively Milk Production	4	1.1
Farming & Milk Production & other dairy related activities such as collection, processing, etc.	339	91
Farming, Milk Production & Poultry Farming	03	0.8
Brick Production, Farming & Milk Production with other activities (Job, shops, coal, etc)	23	6
Grand Total	**373**	100

Interpretation:

The above data reveals that only a miniscule of the population i.e., 1.1.% is exclusively into agriculture with no involvement in allied activities. 91% of the population is engaged into a combination of Farming, Milk Production and dairy farming related economic activities. However, negligible population i.e., only 1.1.% is exclusively into milk production for their livelihood.

2. Farm holding Pattern in the Study Area:

Land in Acre	Count	Percentage
Marginal or Small	348	93.3
Medium	21	5.7
Large	4	1
Grand Total	**373**	**100**

Interpretation:

Marginal farmers (with a landholding less than 2 Acres) and Small Farmers (with a holding slightly higher than 2 Acres up to 5 Acres) constitute major chunk of the population in the study area i.e., 93.3%. Medium sized farmers (up to 10-15 Acres of Landholding) form a very small constitution of the population at 5.7%. Large farmers (landholding above 15 Acres) exist to the extent of just 1% of the total population at the study areas.

3. Water Resources in the Study Area:

i) Rainfed Farming:

Landholding	No of farmers	Percentage
(Marginal or Small)00-02	361	96.78
Medium	11	3.37
Large	1	0.27
Grand Total	**373**	100

ii) Irrigated Farming:

Irrigated Farm Area in Acre	No of farmers	Percentage
Marginal or Small	338	90.61
(Medium)	23	06.18
Large	12	3.21
Grand Total	373	100

Interpretation:

The above data reveals that major chunk of the population in the study area, formed by the small or marginal farmers is dependent on rainwater and dug wells or borewells which are replenished during the monsoon. Whereas relatively higher percentage of the medium and large farmers (23% and 12% respectively in case of irrigated farming) as compared to (11% and 1% respectively in case of rainfed farming) make use of irrigation facilities such as canal water channelized from rivers.

The data endorses the general understanding that small and marginal farmers do not have access the irrigation facilities. Therefore, they are dependent on monsoon for the water resources.

4. Animal Husbandry Practices:

i) Type of cowshed (Animal Housing)**:**

Row Labels	Sum of Count	Percentage
Closed Housing	333	89.28
Loose Housing	40	10.72
Grand Total	**373**	**100**

ii) Livestock holding:

No of Cows	Count	Percentage
<1 or No Response	9	2.41
1-10	319	85.52
11-20	30	8.04
21-30	11	2.95
31-40	1	0.27
41-50	1	0.27
61-70	2	0.54
Grand Total	**373**	**100**
Avg. livestock holding		**04 Per herd**

iii) No. of In-Milk Cows:

No. of Cows	Sum of Count	Percentage
0-4	312	83.6
5-9	43	11.5
10-14	11	2.9
30-34	3	0.8
15-19	2	0.5
20-24	2	0.6
Grand Total	**373**	100.0

iv) No. of Dry Milch animals

Row Labels	Sum of Count	Percentage
0-2	308	82.57
3-5	40	10.72
6-8	19	5.09
8-10	0	0
10-12	0	0
12-15	4	1.08
9-11	2	0.54
Grand Total	**373**	100.00

v) No of Adult Cows:

No of Adult Cows	Count	Percentage
0-4	306	82.04
5-9	44	11.80
10-14	11	2.95
15-19	4	1.07
20-24	3	0.80
25-29	2	0.54
30-34	1	0.27
35-40	2	0.54
Grand Total	**373**	100.00

vi) No of calves

No of calves	Sum of Count	Percentage
<2	237	63.54
2-2	67	17.96
3-3	35	9.38
4-4	11	2.95
5-5	6	1.61
6-6	8	2.14
7-7	2	0.54
8-8	2	0.54
10-10	1	0.27
20-20	2	0.54
25-26	2	0.54
Grand Total	**373**	100.00

vii) Livestock Composition:

Cows

Total Cows	Count	Percentage
0-9	334	89.81
10-19	24	6.43
20-29	10	2.68
40-49	1	0.27
50-59	1	0.27
60-69	2	0.54
Grand Total	**373**	100.00

Buffalos

No of Buffalos	Count	Percentage
0-1	318	85.25
2-3	37	9.92
4-5	10	2.68
6-7	4	1.07
10-11	1	0.27
12-13	1	0.27
24-25	1	0.27
28-30	1	0.27
Grand Total	**373**	100.00

Oxen:

No of Oxen	Sum of Count	Percentage
0	321	86.06
1	23	6.17
2	27	7.24
4	2	0.54
Grand Total	**373**	**100**

No of Goats:

Row Labels	Sum of Count	Percentage
0-9	349	93.57
10-19	16	4.29
20-29	2	0.54
30-39	1	0.27
40-49	2	0.54
50-59	1	0.27
90-100	2	0.54
Grand Total	**373**	100.00

viii) Breed of cows:

Type of Cow	Count	Percentage
Jersey Only	183	49.06
Indigenous (GIR, Sahiwal, etc.) Only	21	3.75
HF	1	0.27
Jersey, HF, GIR	113	29.76
Indigenous, Jersey	37	9.38
Jersey, HF, Indigenous	18	4.83
Grand Total	**373**	**100**

Interpretation:

The data shows that 89.28% of the dairy farmers make use of closed housing and only 10.72% of them use progressive practices such as loose housing to shelter their cattle.

Majority of them i.e., 85.52% of them had a livestock holding of 1-10 milch animals. More than 10 milch animals but less than 20 milch animals seen with 8% of the farmers. Another 2.95% of them held cattle population up to 30.

83.6% of the farmers had in-milk cows up to 4. Whereas 11.5% of them had milking milch animals ranging from 5 to 9. Only 2.9% had milking milch animals ranging from 10 to 14.

82.57% had either no or 1 0r 2 dry milch animals in their animal housing. Another 10.72% claimed to have dry milch animals between 3 to 5. About 5% of the farmers held 6-8 dry milch animals in their stable.

82.04% of the farmers held adult cows up to 4 cows. 11.8% of them had 5-9 adult cows in their housing. 63.54% of the farmers held calves less than 2 with them. The livestock composition of the farmers clearly shows more cows than Buffalos and Goats for the dairy farming. 86.06% of them held no ox in their housing while, 6.17% and 7.24% respectively had 1 or 2 oxen.

Nearly half of the farmers (49.06%) population held crossbred Jersey cows. 29.76% of them had a combination of Jersey, HF, GIR. Only 3.75% of them reared exclusively indigenous breeds such as GIR, Sahiwal, etc.

5. Daily Milk Production Per Herd:

Milk output in ltrs.	Count	Percentage
0-10	122	32.71
10-20	119	31.90
20-30	67	17.96
30-40	22	5.90
40-50	11	2.95
50-60	8	2.14
60-70	3	0.80
70-80	3	0.80
80-90	3	0.80
90-100	2	0.54
100-110	6	1.61
110-120	1	0.27
120-130	2	0.54
170-180	1	0.27
180-190	1	0.27
200-210	1	0.27
240-250	1	0.27
Grand Total	**373**	100
Average Milk output	**21.15 ltr.**	

Interpretation:

The data reveals that 32.71% of the farmers had the milk output up to 10 ltr., per day and another 31.90% of them produced between 10 to 20 litr., per day. Average milk production of the area stood at 21.15 ltr., per day. Thus, majority of the respondents were found to be small livestock holders in the study area. (Details of farmers with exemplary milk production are provided in the annexure)

6. Daily Household Consumption Vs. Sale of the Milk by the Dairy Farmers:

a) <u>Household Consumption per herd</u>:

Milk in Ltr	No of Farmers
0-2	179
2-4	181
4-6	10
8-10	1
10-12	1
12-14	1
Grand Total	**373**
Average Consumption	**1.71 Ltr.**

b) Sale of Milk per herd:

Milk in Ltr	Sum of Count	Percentage
0-10	61	16.35
10-20	117	31.37
20-30	73	19.57
30-40	48	12.87
40-50	19	5.09
50-60	10	2.68
60-70	8	2.14
70-80	8	2.14
80-90	3	0.80
90-100	6	1.61
100-110	1	0.27
110-120	3	0.80
140-150	2	0.54
150-160	1	0.27
170-180	4	1.07
180-190	1	0.27
190-200	3	0.80
200-210	1	0.27
210-220	1	0.27
240-250	1	0.27
390-400	1	0.27
490-500	1	0.27
Grand Total	**373**	100
Average Sale	**20.05 Ltr.**	

Interpretation:

The milk producers retained 1.71 ltr., of their milk production for household consumption selling 20.05 Ltr., on an average, per day. The data reflects per capita consumption of milk among the producers themselves at par with the (Recommended Dietary Allowance) RDA.

7. Supply of the Milk

i) Bulk Coolers Vs. Chilling Centers:

Supplied to	Sum Count	Percentage
Bulk Coolers	276	74%
Chilling Centers	97	26%
Total	373	

ii) Whether the milk is tested for fat:

Responses	**Count**	Percentage
Yes	348	93.29759
No	25	6.702413
Grand Total	**373**	100

iii) Pricing during the study period (01.06.2022 to 30.06.2022):

Price/Ltr.	**Sum of Count**	Percentage
33.5	1	0.27
32	79	21.18
33	287	76.94
32.5	3	0.80
30	2	0.54
34	1	0.27
Grand Total	**373**	100.00
Average	Rs. 32.50	

iv) Whether the Price Card is provided by the Procurer?

Responses	**Count**	**Percentage**
Yes	247	66.21984
No	126	33.78016
Grand Total	**373**	**100**

v) Payment Card Period:

Period	Count	Percentage
1 Month	32	8.58
10 Days	120	32.17
15 Days	210	56.30
20 Days	1	0.27
One Year	1	0.27
No Response	9	2.41
Grand Total	**373**	100.00

vi) Payment Method:

Method	Count	Percentage
Bank	169	45.31
Cash	204	54.69
Grand Total	**373**	100

vii) Whether Agents Commission is deducted from Producers' price?

Responses	Sum of Count	Percentage
Yes	3	0.81
No	249	66.76
Don't Know	69	18.50
Prefer not to respond	51	13.97
Grand Total	**373**	0.00

viii) Whether Receipt is provided at the Collection Centers?

Response		Percentage
Yes	99	26.54155
No	225	60.32172
Prefer not to respond	48	12.86863
Grand Total	**373**	100

ix) Frequency of Testing Milk Sample:

Row Labels	Count	Percentage
Daily	300	80.43
Sometime	51	13.67
Never	3	0.80
Prefer not to respond	19	5.09
Grand Total	**373**	100.00

x) Whether Milk Sample tested at collection point (producer's place) or collection center?

Row Labels	Count	Percentage
At Collection point	181	48.52547
At Milk Collection Centre	135	36.19303
No Reponse	57	15.2815
Grand Total	**373**	100

xi) Measurement method of the Procured Milk:

Row Labels	Count	Percentage
Litre scale	11	2.95
Weighing Scale	352	94.37
No Response	10	2.68
Grand Total	**373**	100.00

xii) Payment issues confronted by the Producers:

Payment Issues existing	Sum of Count	Percentage
Regular Payment / No Issues	343	91.42
Persisting Payment Issues	17	04.57
Prefer not to Respond	13	03.49
Grand Total	**373**	100

Interpretation:

Majority of the milk producers supplied their produce through the agents to Bulk Coolers. Likewise, 26% of them supplied to Chilling Centers. 93.30% of them test it for fat. 76.94% of all the producers say that they are paid between Rs. 30/- Rs. 40 per ltr. Average milk price prevailing in the study area comes out at Rs. 32.38/-. 66.22% of the producers get the Price-Card indicating price against the fat content of the milk. Majority of the producers get paid fortnightly or every ten days. Predominantly the payments are made in cash whereas NEFT to the producers Bank Account is next most prevalent payment method in the study area. Only a negligible chunk i.e., 0.81% of the producers admit that collection agents deduct their commission from their payments. Whereas nearly 30% of the respondents either are ignorant or silent on the probing related to agents' commission. 66.76% of them grossly deny having

paid any commission to the agents. 60.32% of the farmers claim that they do not get any receipt for the milk supplied whereas another 12.87% are silent on the matter.

The survey reveals that only 19.30% of the producers endorse that the procure tests the milk sample on regular basis. 48.53% of them say that the sample testing happens right in front of them at the collection point. Whereas another 36.19% of them claim that the sample testing happens at the collection center. Weighing Scale is the most predominant measurement scale used while procuring milk.

Majority of the respondents i.e., 91.42% have never come across any issues with the payment of their dues. However, 4.57% of them had some payment issues such as withheld payments for 1-3 months, irregular payments and other unspecified difficulties. Nearly 3.5% of them have not answered the probes related to payment issues. Even though, the statistical data reveals otherwise, informal talks with the farmers indicate irregularities and delays in the payments.

8. Feed and Fodder:

i) Cultivation of fodder crop:

Whether Fodder Crops are cultivated	**Count**	**Percentage**
Yes	299	80.16086
	74	19.83914
Grand Total	373	100

ii) **Green Fodder**

Green Fodder	**Count**	Percentage
<10	106	28.41823
10-60	205	54.95979
60-110	27	7.238606
110-160	9	2.412869
160-210	6	1.608579
210-260	4	1.072386
260-310	1	0.268097
310-360	3	0.80429
360-410	1	0.268097
410-460	3	0.80429
460-510	2	0.536193
510-560	2	0.536193
760-810	1	0.268097
960-1010	1	0.268097
1460-1510	1	0.268097
9960-10010	1	0.268097

Grand Total	**373**	100
Average Green Fodder Weight in Kg per day per milch animal		85.838

iii) **Dry Fodder**

Dry Fodder Wright in KG	**Count**	**Percentage**
0-499	215	57.64
500-999	11	2.95
1000-1499	42	11.26
1500-1999	100	26.81
2500-2999	2	0.54
4000-4499	1	0.27
5000-5499	1	0.27
199500-200000	1	0.27
Grand Total	**373**	100.00
Average dry Fodder Weight in Kg per year		1233 kg
Average dry Fodder used per day per milch animal		**3.38 Kg**

iv) Fodder Type:

Dry Fodder Name	**Count**	**Percentage**
Bhusa & Kadba, Bajara, Bhatya, Corn, Pend, Groundnut, Rice, Elephant Grass	71	19.03
Dry Fodder	36	9.65
Cattle feed	141	37.80
Green Fodder, Kadba, Rice,	4	01.08
Kadwal	1	0.27
Grazing in open pasture	3	0.81
Penda	1	0.27
Vairan	2	0.54
Blank	115	30.83
Grand Total	**373**	**100.00**

v) Other Crops (Monocot or Ekdal):

Other Crops	Count	Percentage
Bajra, Corn	56	15.01
Corn	8	2.14
Jowar	102	27.35
Jowar, Bajra	20	5.48
Kadba & Corn	5	1.37
Rice	10	2.74
Soyabeans, Bhuimung , Kadba ,Corn	5	1.37
Wheat	5	1.37
Wheat, Bajra	5	1.37
Wheat, Jowar	5	1.37
(blank)	151	40.48
Grand Total	373	100.00

vi) Other Crops (Pulses)

Row Labels	Count	Percentage
Peanuts, Green Gram	52	13.94
Pulses	94	25.20
Soyabean	38	10.19
Soyabean, kidney beans	22	5.90
(blank)	167	44.77
Grand Total	373	100

vii) Sugarcane/Vegetables/others

Sugar cane/Vegetables	**Count of Count**	Percentage
Brinjal, Sugarcane	5	1.37
Paddy	5	1.37
Sugarcane	215	57.53
Tomato	5	1.37
Tomato, Soyabean	5	1.37
Tomato, Sugarcane	10	2.74
Tomato, Turmeric, Sugarcane	5	1.37
No Response	123	32.88
Grand Total	373	100.00

Interpretation: Most of the farmers i.e., 80.16% cultivate fodder crops whereas 19.84% of them have never taken up fodder cultivation themselves. Average green fodder consumption stands at 85.838 Kg per day per animal. Whereas daily dry fodder consumption stands at 3.38 Kg., per nilch animal in the study area.

Given that the average livestock holding stands at 4 milch animals per herd {refer table no. 4 (ii)}, the details of feed and fodder revealed during the study indicate that the dairy farmers feed more green fodder than the dry fodder or concentrate to manage cost and availability. Further, the green fodder consists considerably the sugarcane tops to the extent of 57.53% {refer Table No. 8(vii)}. This is shows lack of nutritious fodder to the milch animals.

Jowar, Bajra, Rice, grass are the major green fodder crops. Pulses are the other types of fodder crops cultivated on predominant basis. Sugarcane cultivation being a major crop, forms important basis for the fodder crop in the study area. 37.80% of the respondents use cattle feed bought from the market.

About 30% of the respondents have not specified their responses on the queries related to fodder crops.

9. Animal Healthcare Management:

i) Vaccination Status:

Vaccination Status	**Count**	**Percentage**
Yes	326	87.40
No	37	9.92
Grand Total	373	100.00

ii) Vaccination Frequency in a year:

Vaccination Frequency	Count	Percentage
Once	246	65.95174
Twice	64	17.15818
Thrice	63	16.89008
Grand Total	373	100

iii) Month/s of Vaccination

Row Labels	**Sum of Count**	Percentage
January	5	1.34
February	3	0.80
March	3	0.80
April	17	4.56
May	24	6.43
June	7	1.88
July	4	1.07
September	1	0.27
October	2	0.54
December	3	0.80
After 3 Month	59	15.82
Anytime	2	0.54
April, October	2	0.54
August, March	1	0.27

August, May	54	14.48
January, June	1	0.27
June /May	1	0.27
June, August	2	0.54
June, November	1	0.27
June, October	3	0.80
June, May	1	0.27
June, November	139	37.27
June/ October	2	0.54
March, August	1	0.27
March, October	2	0.54
May / Nov	1	0.27
May / Oct	2	0.54
May, July	1	0.27
May, June	1	0.27
May, October	3	0.80
May. June	1	0.27
May/ Aug	1	0.27
May-November	1	0.27
November	22	5.63
Grand Total	**373**	100.00

iv) Vaccination details:

Vaccine	**Count**	**Percentage**
Foot and Mouth Disease (FMD)	15	4.03
Deworming	1	0.26
Don't Know	357	95.71
Grand Total	**373**	100

v) Veterinarian's Fee:

Fee in Rs	**Count**	**Percentage**
Free	55	14.75
0-50	66	32.44
51-101	25	6.70
102-152	48	12.87
153-203	128	34.32
204-254	4	1.07
255-305	35	9.38
306-356	1	0.27
357-407	2	0.54
459-509	6	1.61
969-1019	1	0.27
1173-1223	1	0.27

2958-3008	1	0.27
Grand Total	**373**	**100**
Average		**177.6**
Minimum		**0**
Maximum		**300**

vi) Approximate Yearly expenditure per herd on Animal Healthcare:

Row Labels	**Sum of Count**	Percentage
Do Not Know	89	23.86
0-500	38	10.19
501-1001	23	6.17
1002-1502	19	5.09
1503-2003	20	5.36
2505-3005	11	2.95
3006-3506	1	0.27
3507-4007	5	1.34
4509-5009	38	10.19
5511-6011	7	1.88
6513-7013	1	0.27
7515-8015	8	2.14
8517-9017	1	0.27
9519-10019	27	7.24
10521-11021	1	0.27
11523-12023	8	2.14
14529-15029	21	5.63
15531-16031	2	0.54
17535-18035	2	0.54
19539-20039	23	6.17
23547-24047	1	0.27
24549-25049	9	2.41
29559-30059	4	1.07
49599-50099	8	2.14
75651-76151	1	0.27
79659-80159	4	1.07
99699-100199	1	0.27
Grand Total	**373**	0.00
Average Expenditure		10374
Minimum Expenditure		500
Maximum Expenditure		100000

Interpretation:

The survey reveals that 87.40% of the farmers have got their cattle vaccinated. 65.95% of them have vaccination done at least once. 37.27% which is the highest among those who regularly vaccinate prefer June and November for the purpose. 95.71% do not have clarity on the vaccination in spite of having done it for their livestock.

Foot and Mouth Desease and Deworming are the only two health conditions that have some awareness among the farmers. On an average Rs. **177.60/- is the fee that the farmers incurred on vaccinating their milch animals.** 23.86% of the respondents have no idea on expenditure they incur on animal healthcare. The expenditure on animal healthcare ranged from Rs. 500/- to Rs. 1,00,000/-, at an average healthcare spending of Rs. 10,374/-.

10.Breeding Practices:

i) Conception Method:

Method	Count	Percentage
Natural propagation/mating	07	1.88
Artificial insemination (AI)	352	94.37
No Response	14	3.75
Grand Total	**373**	**100.00**

ii) Semen used for AI:

Semen Used	Count	Percentage
ABS	346	92.8
BAIF	13	3.5
GOVT Siemens Station	14	3.8
Grand Total	**373**	**100.0**

iii) Frequency of Conception:

Frequency	Count	Percentage
1	144	38.61
2	167	44.77
3	57	15.28
No Responses	5	1.34
Grand Total	**373**	**100.00**

iv) Gap Between successive conceptions:

Gap in Months	Count	Percentage
3 Month	64	17.16
4 Months	19	5.09
5 Months	46	12.33
6 Month	64	17.16
No Response	180	48.26
Grand Total	**373**	**100**

Interpretation:

Most farmers i.e., 94.37% resort to Artificial Insemination for the breeding purpose. ABS is the most preferred Semen for the purpose. 44.77% of the farmers get the AI done twice in a year while another 38.61% doing it once in a year. Mostly observed gap between successive conceptions is three months at 13.40% of the respondents whereas another 13.40% of them have expressed their ignorance on the matter.

11. Overall Management of the Livestock:

i) Whether cows are purchased/sold/ domestically bred:

Particulars	Count	Percentage
Bought	116	31.0992
Sold	29	7.774799
Domestically bred	163	43.69973
No Response	66	17.69437
Grand Total	**373**	**100**

ii) How many among newly bought cows were conceived:

Pregnancies	Sum of Count	Percentage
No	45	12.06
1	159	42.63
2	91	24.40
3	38	10.19
4	20	5.36
Total	**373**	**100.00**

iii) No. of Family members working in the dairy farm:

Family members	**Sum of Count**	Percentage
1	45	12.06
2	194	52.01
3	59	15.82
4	29	7.77
5	2	0.54
All	12	3.22
(blank)	32	8.58
Grand Total	**373**	100.00
Average	2.57	

iv) Whether dairy farming is profitable

Response	Count	
Yes	278	74.53
No	85	22.79
Can't Say	10	2.68
Grand Total	373	100.00

v) Whether prefer to avail Crossbreeding services:

Preference	Count	Percentage
Yes	218	58.45
No	99	26.54
No Responses	56	15.01
Grand Total	373	100.00

vi) Whether prefer to avail veterinary services, if provided by private companies at a price:

Response	Count	Percentage
Yes	182	48.79
No	106	28.42
No Response	85	22.79
Grand Total	373	100.00

Interpretation:

The study reveals that 43.70% of the dairy farmers domestic breed the milch animals whereas another 31.01% of them prefer to buy them from the nearby cattle markets. A 42.63% of the respondents said at least one cow was conceived status when they had bought the new cattle. 58.45% of the respondents have expressed their preference for cross breeding services if provided by the professionals. Another 48.79% of them prefer various kinds of veterinary services provided by private professionals.

Majority of the milk producing farmers i.e., 52.01% have two of the family members dedicated to milk production activities. 74.53% of the respondents affirm that dairy farming has turned out profitable for them.

Survey of the Collection Agents / Organizations

1. Business Profile of the Respondent:

i) Scale of the Business:

Scale of Business	**Count**	**Percentage**
Large	8	21.05263
Middle	8	21.05263
Small	22	57.89474
Grand Total	**38**	100

ii) Experience of the Business (in years)

Experience in years	Count	Percentage
1-5	12	31.58
6-10	8	21.05
11-15	13	34.21
16-20	5	13.16
Grand Total	**38**	100.00
Mean		**9.81**
Minimum		**1**
Maximum		**20**

iii) Reason to choose Milk Business:

Reason of Selecting Business	Count	Percentage
As a livelihood	3	7.89
Entrepreneurial Motivation	8	21.05
Wish to resolve Farmers' Difficulties	8	21.04
Inherited (family) Business	5	15.78
Surplus milk produced at home	1	2.63
Total	**38**	**100**

iv) No of Cowsheds milk collected from:

No of Cowshed	Count	Percentage
5-14	4	10.53
15-24	4	10.53
25-34	4	10.53
35-44	2	5.26
45-54	4	10.53
55-64	4	10.53
65-74	5	13.16
75-84	2	5.26
95-104	2	5.26
105-114	1	2.63
115-124	1	2.63
125-134	1	2.63
145-154	2	5.26
295-304	1	2.63
305-314	1	2.63
Grand Total	**38**	100.00

v) Distance covered for milk collection:

Distance in Km	Sum of Count	Percentage
Up to 1 Km	6	15.79
2KM to 5KM	14	36.83
6KM to 10KM	09	23.68
11KM to 20KM	5	13.16
More than 20KM	4	10.52
Grand Total	**38**	**100.00**

Interpretation:

The study reveals that most of the collection agents (57.89%) are small scale operators. However. There are some (21.05%) large operators as well. The industry experience prevailing among the agents ranges from mere 1 year to 20 years, average experience being 9.81 years. Entrepreneurial motivation and an intention to support milk producers are the major reasons attributed to being in the business of milk collection. Largest number of collection points covered for milk collection stands between 65-74 cowsheds by a single agent (at 13.16% of the respondents). Most of the agents (36.83%) cover a distance of 2Km to 5Km.

2. Procurement:

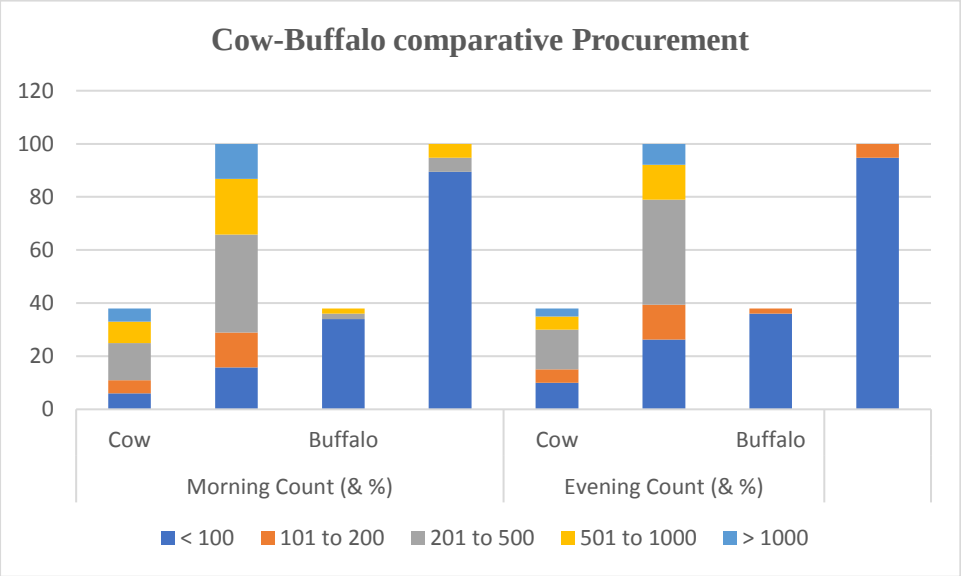
i) Quantity of daily Milk Collection

Milk Collection in Ltr.	Sum of Count
Up to 100	2
101 to 200	2
201 to 500	8
501 to 1000	13
More than 1000	13
Grand Total	**38**
Average Milk Collection	**1185.13**

ii) Daily Milk Collection Break up:

Quantity	**Morning Count (& %)**				**Evening Count (& %)**			
Liters	**Cow**		**Buffalo**		**Cow**		**Buffalo**	
	Agents	**%**	**Agents**	**%**	**Agents**	**%**	**Agents**	**%**
< 100	6	15.79	34	89.47	10	26.31	36	94.73
101 to 200	5	13.15	00	00	05	13.15	02	5.26
201 to 500	14	36.83	02	5.26	15	39.47	00	00

501 to 1000	08	21.04	02	5.26	05	13.15	00	00
> 1000	05	13.15	00	00	03	7.89	00	00
Grand Total	**38**	**100**			**38**			



Interpretation:

Average milk collected by an agent per day is **1185.13 ltr. Maximum number of the agents (**36.83% in the morning and 39.47% in the evening**) collect between** 201 ltr to 500 ltr., of cow milk. Relatively, evening output seems to be higher than that in the morning. Even though the statistics reveals that maximus number of agents (i.e., 89.47% in the morning and 94.73% in the evening) collect buffalo milk less than 100 ltr., most among them do not collect any buffalo milk. Therefore, supply of buffalo milk can be treated as nonexistent in the study area.

3. Quality Management of the Procured Milk:

i) Basic quality

Milk Testing Method ⇨ For ⇩	Milkotester - Gerber	Lactometer	Thermometer	Sensory Taste
Fat	■			
Solids Not Fat (SNF)		■		
Temperature			■	
Acidity				■

ii) Milk Quality Testing:

Milk Testing Method	Count	Percentage
Alcohol Taste	8	21.05
Fat / SNF	35	21.05
Smell	38	44.74
No Response	5	13.16

iii) Whether spoilt / adulterated milk is rejected?

Rejection	Count	Percentage
Yes	16	42.11
No	22	57.89
Grand Total	**38**	100.00

iv) Whether Caustic Soda is added to the rejected milk?

Use of Costic Soda	Count	Percentage
No	35	92.11
No Reponse	3	7.89
Grand Total	**38**	100

v) What if Bulk Milk Test is positive for rejectable milk?

Row Labels	Sum of Count	Percentage
Do not accept	2	5.26
Fresh Milk provided to dairy	5	13.16
Never confronted such an issue	8	21.05
Dispose off the milk	3	7.89
No Reponse	20	52.63
Grand Total	**38**	100

Interpretation:

Predominantly, Milkotester – Gurber test for fat; Lectometer test for SNF, Thermometer for temperature and Taste method for testing acidity of the collected milk are used. Testing of Spoilt / Adulterated Milk is done mostly (44.74% of the respondents) by Smell. Majority of the agents i.e., 57.89% admit that they do not reject Spoilt / Adulterated Milk during quality testing. But when probed if they use caustic soda to conceal the adulteration or acidity of the milk, they (92.11% of the respondents) respond in negation. Majority of them (52.63%) remain silent on their action if the Bulk Milk test turns out to be positive.

4. Pricing of the Procured Milk:

i) How do you decide the price against quality of the milk?

Criteria for milk price	Count	Percentage
Fat and SNF both	1	2.63
SNF only	3	7.89
Fat only	13	34.21
Common Price	21	55.26
Grand Total	**38**	100.00

ii) Pricing Criteria of the Milk as on June 2022:

Rate of Milk	Count
23 Rs. For 3.5 Fat & 8.5 SNF	1
29 Rs. For 3.5 Fat & 8.5 SNF	1
30 Rs. For 3.5 Fat & 8.5 SNF	1
31 Rs. For 3.5 Fat & 8.5 SNF	1
32 Rs. For 3.5 Fat & 8.5 SNF	8
33 Rs. For 3.5 Fat & 8.5 SNF	13
34 Rs. For 3.5 Fat & 8.5 SNF	5
35 Rs. For 3.5 Fat & 8.5 SNF	6
36 Rs. For 3.5 Fat & 8.5 SNF	1
Variable Rate	1
Grand Total	**38**

iii) Price variation as per Fat & SNF:

Criteria	Variation in parameter	Price increase / decrease (Rs.)
Fat	0.5 for	0.25
SNF	0.10 for	0.30

iv) Milk producers receive payments from:

Payment by	Count
Collection Agent	31
Dairy Plant	7
Grand Total	**38**

v) Payment method:

Payment Method	Count	Percentage
Cash	21	55.26
NEFT	17	44.74
Grand Total	**38**	100.00

vi) Transport Expenditure:

Response (Rs.)	Count
0	20
0.20-0.50 per ltr	2
1.00-2.00 per ltr	12
More than 2 per Ltr	02
6000 per month	1
28000 per month	1
Grand Total	**38**

Interpretation:
Most of the agents (55.26%) consider common price for the milk for deciding the price of milk. Considerable number (34.21%) of respondents give importance to fat content of the milk while deciding the price. Rs. 33/- For 3.5 Fat & 8.5 SNF is the most accepted price among the largest no. of agents (34.21%). For every 0.5% variation of the fat, ± Rs. 0.25 is paid/deducted. Likewise, for every 0.10% variation of the SNF, ±Rs. 0.30 is paid/deducted as applicable.

5. Supply Chain Infrastructure:

i) Major Dairies where the procured milk is supplied:

Name of Milk Dairy	Count
Agrawal, Kikavi	1
Anant Milk Dairy, Kikavi	7
Country Delight	1
Govind Dairy	3
Jogeshwari Milk Collection Centre	1
Kanhaiyya Milk Dairy	1
Katraj Milk Collection Centre	1
Khandala Dudh Sangh	3
Khute Group, Lonand	1
Mumbai	1
Navnath Milk	1
Own processing unit	3
Parag Milk Foods	1
Real Dairy	2
Sai Milk	1
Santkrupa Alajapur	4
Shahaji Shedage	1
Siddheshwar Dairy	1
Sonai, Real Dairy	2
Tirumala	1
Vijapuri Dairy, Chakan, Pune	1
Grand Total	**38**

iii) Are there Bulk Coolers nearby?

Availability	Count	Percentage
Yes	20	52.63
No	18	47.37
Grand Total	**38**	100

iv) Whether own a Bulk Cooler or provided by a company:

Ownership of bulk cooler	Count	Percentage
Company Provided	12	31.58
Own*	8	21.05
No	18	47.37
Grand Total	**38**	100

*** Details attached in the annexure**

v) Name of the bulk cooler provider:

Name of the Company	Count
Anant Dairy	1
Govind Dairy	3
Khandala Dudh Sangh	2
Navnath Milk	1
Parag Milk Foods	1
Sai milk	1
Sonai Real Dairy	2
Vijapuri Dairy, Chakan, Pune	1
Grand Total	**12**

vi) Whether Chilling Center exists? If yes, own or company's:

Status	Count	Percentage
Company's	11	28.95
Own	7	18.42
Not available	19	50.00
No Response	1	2.63
Grand Total	**38**	100.00

vii) Name of the Chilling Centre provider:

Name of the Company	Count
Anant Dairy	2
Govind Dairy	2
Khandala Dudh Sangh	2
Khute Group, Lonand	1
Navnath Milk	1
Parag Milk Foods	1

Sonai Real Dairy	1
Vijapuri Dairy, Chakan, Pune	1
Grand Total	**11**

viii) Whether Plant & Building of BC/CC is own/ rented or company/'s?

Plant & Building	Count	Total
Own	15	39.47
Rented	1	2.63
Company's	5	13.16
Not available	9	23.68
No Response	8	21.05
Grand Total	**38**	100.00

Interpretation:

Anant Milk Dairy, Kikavi, Santkrupa Alajapur, Govind Dairy, and Khandala Dudh Sangh are the most preferred companies where the collection agents supply their procurement. Considerable number of agents also procure for own processing. 52.63% of the agents have access to Bulk Coolers. 31.58% of the respondents have access to company owned bulk coolers whereas another 21.05% have their own bulk coolers. Considerably, 47.37% of them admit that they do not have any access to bulk Govind Dairy, Khandala Dudh Sangh and Sonai Real Dairy are prominently mentioned by them as the providers of bulk coolers.

6. Support Services to the Milk Producers:

i) Assorted Services

Services Provided	Count
Cattle feed, Advance Payment (no interest), Online payment, Dairy App, Veterinary	14
Cattle Feed	9
Vaccination, Cattle Feed	2
Vaccination	1
Home milk collection, Cattle feed, Veterinary, Vaccination, Advance Payment (Exclude Interest), Cattle Feed	7
No Services Provided	3
Online payment	2
Grand Total	**38**

ii) Incentives to the Producers:

Incentives	Count
Cash per ltr (20 Paise to Rs. 1/-)	8
If company provides	1
Gift & Sweet Items	9
No incentives	20
Grand Total	**38**

Interpretation:

The following services are readily provided by the collection agents to the milk producers: Cattle feed, Advance Payment (no interest), and Veterinary services. Assistance in online payment, using Dairy App, collection of the milk at the farmgate are the other miscellaneous services provided by them. Most of the agents (52.63%) admit that no incentives were provided to the milk producers. However, a mere 23.68% of the agents surveyed said that they occasionally offer gifts or sweets as incentives to the milk producers. Likewise, another 21.05% of the respondents even pay a cash incentive between Rs. 0.20 to Rs.1.00 per ltr to the producers on periodically.

OBSERVATIONS

Following were the observations made by the surveyors during the survey:

1. Price discrimination is more rampant in interior villages of the study area.
2. Many dairy farmers possess entrepreneurial qualities to take up value added products.
3. Productivity of the cows in the area was found to be 12-18 ltr., per day, reaching maximum of 20-22 ltr.
4. During the study it was realized among the three talukas (i.e., Bhor, Wai and Khandala), Bhor has more pronounced scarcity of water resources and green fodder. Veterinary services were also scanty in the area. Wai has very limited population involved in dairy farming. Lonand and Shirwal have better scenario in this regard.
5. Generally, larger dairy farmers were found to be with those who are operating as Collection Agents.
6. Khandala was found to have more entrepreneurial dairy farmers. Better food and fodder management was visible with silages in bigger farms of Khandala.
7. Major companies actively procuring in the area are Santkrupa, Amar Dairy, Vijaypuri, Kanhaiya, Anant, Jaikishan, Katraj Milk Dairy, and Real Dairy.
8. Government Veterinary Services are e in the are extremely poor in the study area. Many govt veterinarians were found to operate private practice against the work ethics. However, some practitioners such as Dr. Nitin Pawar are rendering exemplary services.
9. Agents were found to charge a commission of Rs.2/- to Rs.4/- per ltr of their procurement from the producers. Generally, they withheld at least 10 days payment dues to the farmers to retain them. Most of the Agents provided advance payment to the milk producers without charging any interest. Many agents gave away Diwali Gifts / Sweets or even an incentive of Rs. 0.20/- per ltr., to the producers.
10. Generally, agents are collecting milk at a fixed price.

11. Some of the farmers have established own bulk coolers. On the other extreme, there are farmers who do not know Bulk Coolers.
12. Samruddhi, Sonai and Indrayani are the most popular brands of cattle feed in the area.
13. It was also observed that even though, fewer farmers had loose animal housing, had better productivity in terms of milk yield, overall health of the cows, etc.
14. Dairy farmers were found to be lacking in pricing information prevailing in the market.
15. If provided by a company, farmers were readily inclined to avail veterinary services.

FINDINGS

1. The literacy level of the dairy farmers was found to be reasonably good. This can be useful in imparting quality practices in dairy farming.

2. Farming community in the study area is engaged into combination of Farming, Milk Production and dairy farming related economic activities for their livelihood.

3. The study area is largely having marginal and small farm holdings with average farm holding ranging from 2 Acres to 5 Acres. Therefore, milk production is highly fragmented and scattered.

4. Irrigation facilities are well exploited by medium to large farmers, leaving the marginal and small farmers at the mercy of rainfed farming. Dug wells and borewells are the means of water resources for them.

5. Closed housing dairy farming is more prevalent among the dairy farmers. Small dairy farms with moderate livestock of 1-10 cows are seen. Mostly, the dairy farms had 1-4 in-milk cows and 1-2 dry milch animals. Cows rather than buffalos are dominating the dairy farms with crossbred Jersey cows.

6. Average milk production of the area stood at 21.15 ltr., per day.

7. On an average, about 20 Ltr., per day of the milk was sold off by each dairy farmer.

8. Largely the milk procured from them was supplied to bulk coolers. Milk quality was adjudged by fat content. Average milk price prevailing in the study area comes out at Rs. 32.38/-. Producers are paid in cash but gradually they are shifting to digital transactions. Farmers seemed to be cautious while commenting on the Agents collecting commission. Transparency in payments was found to be missing.

9. Farmers cultivate fodder crops themselves. Average green fodder consumption stands at 85.838 Kg per day whereas annually 1233 kg of dry fodder is consumed by the livestock in the study area.

10. Dairy farmers undertake some form of vaccination. However, there is general lack of awareness about vaccination schedule. While specifics on animal healthcare expenditures are generally not recorded, it was found that on an average healthcare spending of Rs. 10,374/- is incurred by a dairy farmer in a year.

11. Dairy farmers prefer Artificial Insemination for their cows; ABS is the most preferred Semen for the purpose. AI is done twice in a year. Mostly observed gap between successive conceptions is three months.

12. Livestock is developed by domestic breeding rather than acquiring fresh livestock from the cattle market. Farmers were found to be interested in Crossbreeding services and other veterinary services if easily accessible.

13. The study area has raw milk collection agents operating in a small scale with an average experience being 9.81 years. Even though, collection agents claimed entrepreneurial motivation and an intention to support milk producers as major reasons to be in the business, awareness and commitment towards quality practices in milk procurement were found to be missing.

14. Average milk collected by an agent per day is 1185.13 ltr. Generally, evening output was higher than the same for morning. Cow's milk (rather than buffalo's) had a major share in the total output. Maximum milk collected by an agent stands at 5,700 Ltrs., and minimum at 100 Ltrs., as per the statistical data.

15. Predominantly, Milkotester / Gerber test for fat; Lectometer test for SNF, Thermometer for temperature and Taste method for testing acidity of the collected milk are used. Testing of Spoilt / Adulterated Milk is done mostly by Smell. It was found that agents were unaware of importance of quality parameters and on most occasions adulterated milk was not rejected by them, indicating serious fault lines in the quality management.

16. Anant Milk Dairy, Kikavi, Santkrupa Alajapur, Govind Dairy, and Khandala Dudh Sangh are the most preferred companies where the collection agents supply their procurement. Many of the agents also procure for own processing. While access to bulk coolers and chilling centers was reasonably good, there is vast potential to set up more bulk coolers in the study area.

17. It was found that agents provide advance payments at no cost to the producers besides some basic services such as assistance in online payment, using Dairy App, collection of the milk at the farmgate,

cattle feed, veterinary services, etc., there is no organized efforts from the companies neither the vendors (collection agents) to support and augment milk production in the study area.

SUGGESTIONS / RECOMMENDATIONS

The outcome of the survey has following suggestions / recommendation for D'lecta Foods (P) Ltd., Mumbai:

1. The limited data collected during survey and the observations made by the surveyors support the view that the company has vast untapped potential to procure raw milk at a reasonable price.

2. Proper training of the farmers in global standards of breeding, animal healthcare, food/fodder and overall management of the animal housing can bring remarkable improvement in the milk yield and its quality.

3. Milk collection agents have strong influence on the producers. Moreover, location of the small, fragmented farmers in largely scattered areas make the agents inevitable while developing the supply chain. However, by proper training, they can be made vital links between the company and the producers.

4. Professional veterinary services are not available in the study area. Existing infrastructure of government operated hospitals and private veterinarians exhibit inefficiencies. If the company plans to provide the same, it will go long way in reaping rich dividends.

CONCLUSION

The company can contemplate readily procuring raw milk of about 30,000 ltrs per day from the villages around Bhor, Khandala, and Shirwal. The requisite infrastructure may be set up in this regard.

The study also emphasizes that sensitizing the dairy farmers in healthy milk production practices will ensure better productivity. Likewise, fair practices in pricing and procurement from collection agents will help the company build a robust supply chain for raw milk and even set up processing units to produce value added products in the long run.

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List of Dairy Farmers with higher Production

Farmer's Name	Address	Mob. No	Daily Production (Ltrs.)
Waghmode Pavan Pralhad	A/P. Nimbodi, Tal. Khandala, Dist. Satara	9096044503	149
Dhamal Navnath	A/P. Kesurdi, Tal. Khandala, Dist. Satara	7875632595	199
Jagtap Shamrao Abaso	A/P. Morave, Tal. Khandala, Dist. Satara	9673904590	179
Sudhir Kulkarni	A/P. Bawada, Tal. Khandala, Dist. Satara	9272316668	249
Vishal Vitthal Bodare	A/P. Sukhed, Tal. Khandala, Dist. Satara	8805156244	170
Rajesh Shedge	A/P. Utroli Tal.Bhor, Dist.Pune	9850098233	392
Rahul Ramchandra Dhumal	A/P. Pasure, Tal. Bhor, Dist. Pune	9881373752	175
Tushar uttamrao Shalke	A/P. Nimbodi, Tal. Khandla, Dist. Satara	9890821084	500
Ganesh Appa Dhygude	A/P. Khed, Tal. Khandla, Dist. Satara	9527239058	150
Dr. Pratik Raghunath Jagtap	A/P. Morvi, Tal. Khandla, Dist. Satara	7218317097	108
Raghunath Ramchandra Handbar	A/P. Rui, Tal. Khandla, Dist. Satara	7410547084	199
Ganpat Kisan Shinde	A/P.Mereeaaichi Wad Tal-Khandala Dist - Satara	9960413246	117
Dattatry Santoram Kshirsagr	A/P.Loland Tal- Khandala Dist - Satara	9689409354	117
Dattatray Shrirang Mahangare	A/P. Guthale, Tal. Khandala, Dist. Satara	9022517460	140
Sandip Bhagavat	A/P. Kanheri, Tal. Khandala, Dist. Satara	8999267001	200
Dipaji Baburao Sulasakar	A/P. Ghatdare, Tal. Khandala, Dist. Satara	8698582872	110
Sachin Tatyji Shgde	A/p. Shegdevadi, Tal. Khandala, Dist. Satara	7640757928	210
Sunita Navnath Bodake	A/P. Aandori, Tal. Khandala, Dist. Satara		180
Prashant Prakash Dhaigude	A/P. Andori, Tal. Khandala, Dist. Satara	7620776853	176
Dattatray Jijaba Dhaigude	A/P. Andori, Tal. Khandala, Dist. Satara	9423228778	196

List of Collection Agents with Own Chilling Centers

Sr. No.	Name of the Collection Agent	Location
1	Mr. Dongare	Kondapuri, Bhor
2	Mr. Daygude	Andure, Khandala
3	Mr. Daygude Vijay	Padali, Khandala
4	Akshay Bhong	Vhatar, Khandala
5	Ajit Kondake	Chikalgaon, Bhor
6	Raju Shendage	Borawake, Bhor
7	Mr. Shahaji Shendage	Shendagewadi, Khandala

शेतकरी प्रश्नावली

अ) प्राथमिक माहीती -

१. शेतकयाचे नाव व पूर्ण पत्ता - _____

_____

२. फोन नं - _____

३. कुटूंब सभासद संख्या - ☐

मोठे	स्त्री		लहान	मुलगे	
	पुरूष			मुली	

४. व्यवसाय- शेती ☐ दूध उत्पादन ☐

दुकान ☐ दूध संकलन ☐

अन्य व्यवसाय ☐

५. शिक्षण- कुटूंब प्रमुख- प्राथमिक ☐ स्त्रिया- प्राथमिक ☐

माध्यमिक ☐ माध्यमिक ☐

विश्व विद्यालयीन ☐ विश्व विद्यालयीन ☐

ब)शेतीसंबंधी थोडक्यात माहिती-

१. जमीनीचे क्षेत्रफळ- जिरायती ☐ एकर बागायती ☐ एकर

२. चारा पिके घेतली जातात का- होय/ नाही

अ. कोणती १.मका /ज्वारी/ कडवळ
२.हत्तीघास
३.लसूण घास
४.इतर (नमुद करावे)

ब. अन्य पिकेः

	एकदल गहू /ज्वारी/ बाजरी	व्दिदल डाळी	अन्य ऊस भाजीपाल
एकर /गुंठे (आकडे नमुद करावे)			

४. सिंचन प्रकार जिरायती _____ एकर बागायती _____ एकर

५. पाणी विहीर ☐ पावसाळी ☐

बोअर ☐ कॅनॉल ☐

क) दूध उत्पादनाबाबतः

१. गोठ्याचा प्रकार बंदिस्त ☐ मुक्त ☐

२. गुरे गायी ☐ दुभत्या ☐

भाकड ☐

दिड वर्षापेक्षा लहान ☐

मोठ्या ☐

वासरे ☐

स्त्रीलिंगी ☐

एकूण गायींची संख्या ☐

अन्य जनावरे म्हशी ☐

बैल ☐

शेळ्या मेंढ्या ☐

गायी कोणत्या जातीची देशी ☐ जर्सी ☐ काळी बांडी ☐

३. **दूध उत्पादनः** (वर्तमान स्थिती)

i) दुभत्या गाई ☐ ii) एकूण दूध उत्पादन ☐ iii)सरासरी दैनिक उत्पादन ☐

३. घरगुती वापर ☐ ली.

४. विक्री ☐ ली.

५. कोणत्या डेअरीस दूध पुरवठा केला जातो_____ CC/BC ☐

६. दूध संकलन करणाया व्यक्तिचे नाव फोन नंबर _____

७. दूधाची फॅट/डिग्री तपासतात का ☐

८. दूधाचा सध्याचा खरेदी दर ☐ रू. लि. किती फॅट साठी ☐ किती डिग्री साठी ☐

जास्तीत जास्त मिळालेला ☐ कमीत कमी मिळालेला ☐

९. दूध दरपत्रक आहे काय _____

१0.देयक पत्रक १0 दिवसाचे ☐ १५ दिवसाचे ☐

११.पेमेंट पद्धत (रोख/डिमांड ड्राफ्ट/ चेक/NEFT/RTGS) _____

१२.दूध गोळा करणाया एजंटला उत्पादकाकडून कमिशन म्हणून कपात केले जाते काय

किती केले जाते _____

कमिशन कंपनीमार्फत मिळते ते किती असते _____

१३.दूध संकलन केंद्रावर पोहोच पावती देतात काय _____
(पावतीवर लि.फॅट SNF दर किंमत आहे)

१४.एजंट एखाद्या ठराविक कंपनीसाठी दूध गोळा करतात काय_____ (कंपनीचे नाव)

१५. **दूधाचे नमुने तपासण्याची पद्धतः** (टिक मार्क करावे)

रोज/कधीतरी _____ घरी/ दूध संकलन केंद्रावर _____

१६.मोजमाप लीटर मापाने/ वजन काट्यावर _____

१७.पेमेंटबद्दल नियमितता/ अडचणी _____

ड) खाद्य व्यवस्थाः १.चारा

चा-याचा प्रकार	चा-याचे नाव	अंदाजे वजन	किंमत /किलो
हिरवा चारा			
सुका चारा			
गोळी पेंड			

२.पशु खाद्यः गोळी पेंड कोणते (कंपनीचे नाव व ब्रॅंड द्यावे)_____

मॅश /पॅलेट _____ प्रति किलो किंमत रू._____

इ)गायींचे आरोग्यः

१.लसीकरण

१.लसीकरण केले जाते का होय /नाही _____

२.वर्षातून किती वेळा लस दिली जाते _____ कोणत्या महिन्यात _____ कोणती लस _____

३.डॉ.नाव _____ मोबाइल नंबर _____

4. डॉक्टरांकडून आकारली फी _____ रू. अंदाजे वार्षिक खर्च _____

प्रामुख्याने कोणते आजार_____ अंदाजे वार्षिक खर्च _____

१.गायींचे आजारीपण व औषधोपचार

१. तुमच्या गायीस प्रामुख्याने कोणते आजार होतात_____

२.गायीच्या आजाराचे निदान व औषधोपचार यावर प्रत्येक गायीस सरासरी वार्षिक किती खर्च येतो _____

३. गायींच्या तपासणी वर सरासरी वार्षिक किती खर्च होतो_____

फ) गर्भधारणा AI नैसर्गिक

सीमेन कोणते वापरतात i) GOVT. Siemens Station ii) BAIF Cost/AI

डॉ. ची फी किती _____ रू.

गाय गर्भ राहण्याचे प्रमाण एक ☐ दोन ☐ तीन ☐

दोन वेतांमध्ये अंदाजे किती महिने अंतर _____

गाय उलटत असल्यास कारण उपचार _____

फ) गाय व्यवस्था

गोठ्यातील गायी विकत आणल्या आहेत काय _____

कोठून खरेदी केल्या _____

बाजारपेठेतून घेतल्या असल्यास बाजारपेठेचे नाव _____

केव्हा खरेदी केल्या _____

खरेदी करताना गायीचे वेत (पहिले दुसरे तिसरे)_____ किंमत रू._____

घरचे किती लोक काम करतात _____

एकूण व्यवसाय परवडतो का _____

लिटरमागे सरासरी किती नफा मिळतो _____

BC/CC व्यवस्था कोणती चांगली _____

वजन /फॅट -SNF- दर□ावती मिळणार असेल तर BC वर दूध द्यायला जाणार का _____

कोणी दूध संकलन करणा-यांनी चांगली Veterinary Service किंवा कृत्रिम गर्भधानाची व्यवस्था कंपनीने दिल्यास ती पाहिजे आहे काय _____

यासाठी लागणारा खर्च तुम्ही देणार काय _____

शेतकयांना अडीअडचणी आव्हाने _____

या तुमच्या व्यवसायात काय सुधारणा बदल हवे असे तुम्हाला वाटते

_____

विद्यार्थ्यांना व्यवसाय मार्गदर्शन म्हणून काय सांगाल

_____

_____

संस्था किंवा एजंट प्रश्नावली

१. नाव व पूर्ण पत्ता- _____

_____

२. मोबाईल नंबर- _____

३. व्यवसायाचे स्वरूप -_____

४. केव्हापासून दूध संकलन उद्योग आणि हा व्यवसाय का निवडला _____

५. दूध संकलन किती उत्पादक गोठ्यामधून केले जाते _____

६. कमीत कमी किती अंतर व सर्वात दुरचे अंतर _____

७. एकूण दूध संकलन किती [ ] लि

सकाळ		संध्याकाळ	
गाय	म्हैस	गाय	म्हैस

८.(i) दूधाची गुणप्रत कशी तपासली जाते (√ करा.)

अ. फॅट - मिल्कोटेस्टर गरबर ब. डिग्री - लेक्टोमीटर क. तापमान थर्मामीटर ड.आम्लता-चव

.(ii) शिळे दूध नाही हे कसे तपासता (√ करा.)

अ.अल्कोहोल टेस्ट ब. वास क. साय ड.उकळी तपासणी

९. उत्पादकांना दूध दर किती दिला जातो. _____ रू. प्रति लि. ३.५फॅटसाठी ८.५ SNF साठी

१०.भेसळयुक्त/ शिळे दूध नाकारले जाते का. (होय/नाही)

नाकारले न गेल्यास सोडा कॉस्टीक टाकले का. (होय/नाही)

११. बल्क भेसळ लागली तर _____

असे का होते (कारण) _____ महिन्यातून किती वेळा _____

१२.दूध दर कसा ठरवला जातो प्रत्येक दुध उत्पादकाच्या दूधाची गुणवत्ता तपासून की सरासरीने

१३. तुम्ही संकलित केलेले दूध कोणास पुरवले जाते _____

१४ . **बल्क कुलर/चिलींग सेंटर आहे काय (होय/नाही)**

अ . बल्क कुलर स्वतः उभा केला आहे की दूध विकत घेणा-या कंपनीने B.C. दिला आहे . _____

कंपनीने दिला असल्यास कंपनीचे नाव नमुद करावे _____

ब . चिलींग सेंटर आहे काय (होय/नाही) कोणाचा स्वतः ☐ कंपनी ☐

कंपनीने दिले असल्यास कंपनीचे नाव नाव नमुद करावे _____

१५ . BC/CC Plant ची जमीन आणि इमारत कोणाची

एजंटची स्वतःची ☐ कंपनीची ☐ भाडेतत्वावर घेतले आहे ☐

१६ . उत्पादकांना सेवा सुविधा:

अ . खालील सेवा पुरविल्या जातात

१ . पशुवैद्यकीय ३ . लसीकरण ५ . ॲडव्हान्स पेमेंट (बिनव्याजी/ व्याजासहीत)

२ . कृत्रिम रेतन ४ . पशुखाद्य

१७ . उत्पादकांचा दूध दरः

रूपये /प्रति लिटर ☐ किती फॅट साठी _____किती SNF साठी _____

१८ . फॅट डिग्रीप्रमाणे कमी/ जास्त

प्रति पॉईट फॅट ☐ रू . कमी किंवा अधिक ☐

प्रति पॉईट डिग्री ☐ रू . कमी किंवा अधिक ☐

१९ . उत्पादकांचे पेमेंट कोणाकडून अदा केले जाते . डेअरी प्लांट/संकलन करणारे एजंट

२० . पेमेंट कसे अदा केले जाते . रोख/डिमांड ड्राफ्ट/ चेक/NEFT/RTGS

२१ . Rate Structure/Approved Costs

तपशील	खर्च	रू/प्रति ली .
१ . उत्पादक दर		
२ . संकलक सहाय्यक पगार		
३ . मदतनीस पगार		
४ . वाहतुक खर्च		

२२ . उत्पादक बोनस दिला जातो का _____रू . /प्रति . ली .

Some Glimpses of the Project

1. **Initial interaction with the students and faculty of AIMS Baramati regarding the Project**

2. **Personal Interview of the student volunteers**

3. **Post Survey interactions with the students team**

4. Post Survey interactions with faculty members

5. Some on-field glimpses shared by the students