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SULTANATE OF OMAN**

**JUNE 2021**

**PRE-FEASIBILITY REPORT (DRAFT)**

**FOR**

**SETTING UP A DAIRY PRODUCTS & FRUIT JUICE  
MANUFACTURING UNIT  
IN OMAN**

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## **ANNEXURES : FINANCIAL PROJECTIONS**

## **1. INTRODUCTION**

### **1.1. PROJECT BRIEF**

This report relates to a study on the feasibility of setting up a Dairy Products & Fruit Juice manufacturing Plant in Sultanate of Oman.

The following is the Brief illustration of the project:

<b>Name of Product</b>		<b>Dairy &amp; Fruit Juice Products</b>
Domestic Market Potential (as of 2019)		<ul style="list-style-type: none"><li>• Dairy Products – 73.6 million litres</li><li>• Fruit Juice – 38.6 million litres</li></ul>
Export Potential (as of 2019)		Not considered
Capacity of the Project		<ul style="list-style-type: none"><li>• Laban – 15 million litres</li><li>• Labneh – 180,000 litres</li><li>• Yoghurt – 6 million litres</li><li>• Fruit Juice – 3 million litres</li></ul>
Total Investment		RO 1.796 million
Equity Investment		RO 718,000
<b>Key Appraisal Criteria:</b>		
IRR on total investment		13.1%
IRR on Equity		20.7%
Payback period of Total Investment		7 years 2 Months
Payback period on equity		6 years 4 Months
Break Even Point (as % of Capacity)		44%
Cash Break Even Point (as % of Capacity)		37%
DSCR		2.11
Debt Equity Ratio		1.5 : 1
Manpower	Total	52
	Nationals	19

### **1.2. PROJECT RATIONALE**

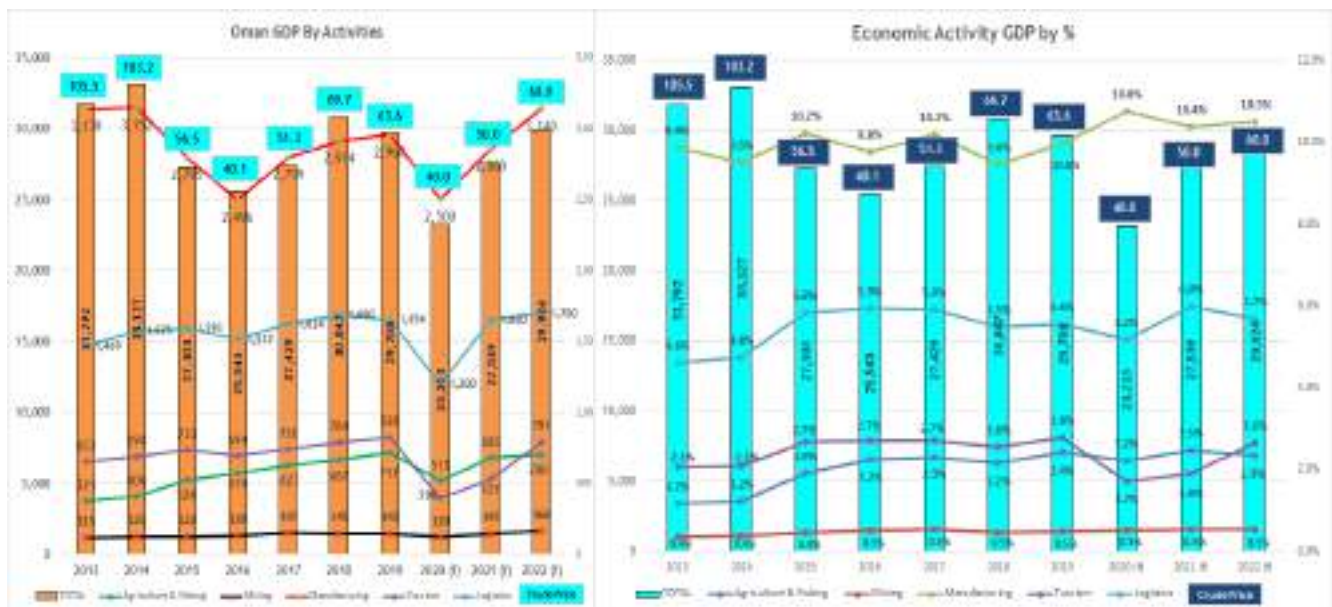
- Growing demand for the proposed products in Oman.
- Potential to tap the regional/interior market of Oman.
- Improving food security / self sufficiency

## 2. INDUSTRY ANALYSIS

### 2.1. MACROECONOMIC CONDITIONS

The recently published statistical bulletin from National Centre for Statistics and Information (NCSI) indicates that the GDP at market prices reduced by 15% during Year 2020 when compared to the Year 2019. This is mainly due to the dual impact of slump in oil prices and the COVID – 19 pandemic.

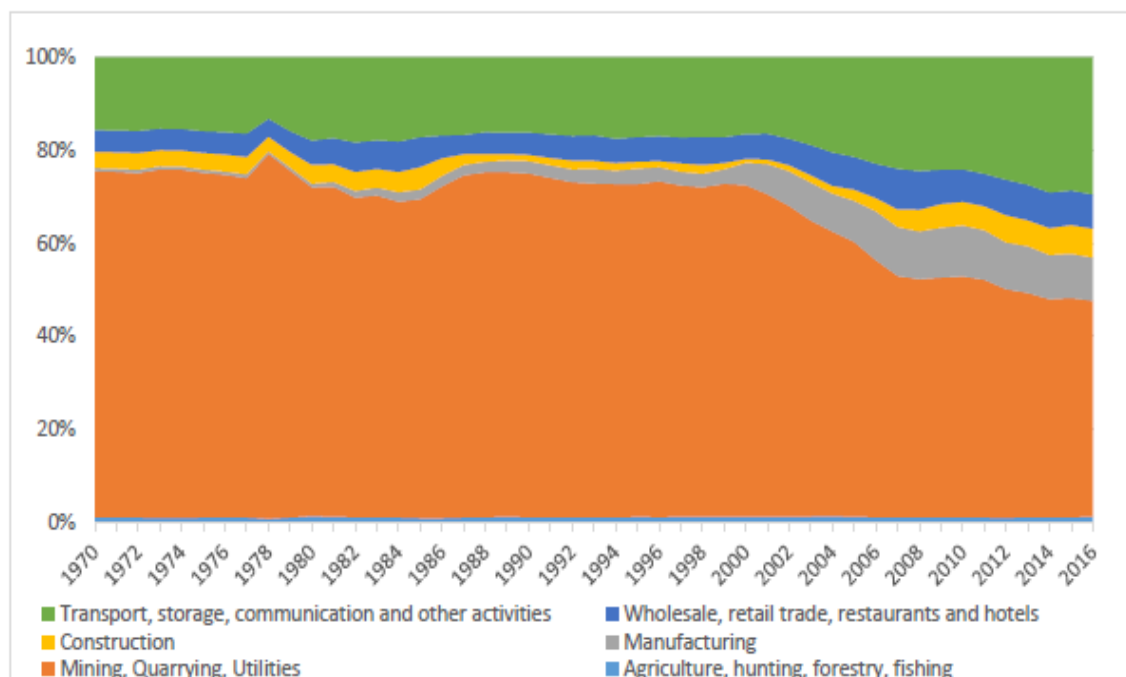
As per the World Bank outlook a revival is expected in 2021 and in 2022 on an average of around 4%. The estimated GDP of Oman considering the past trend, current situation and the expected recovery is illustrated below:



The average price of Oil for 2020 was USD 46/Barrel. We expect this to go up to USD 50/barrel in 2021 and USD 60/barrel in 2022.

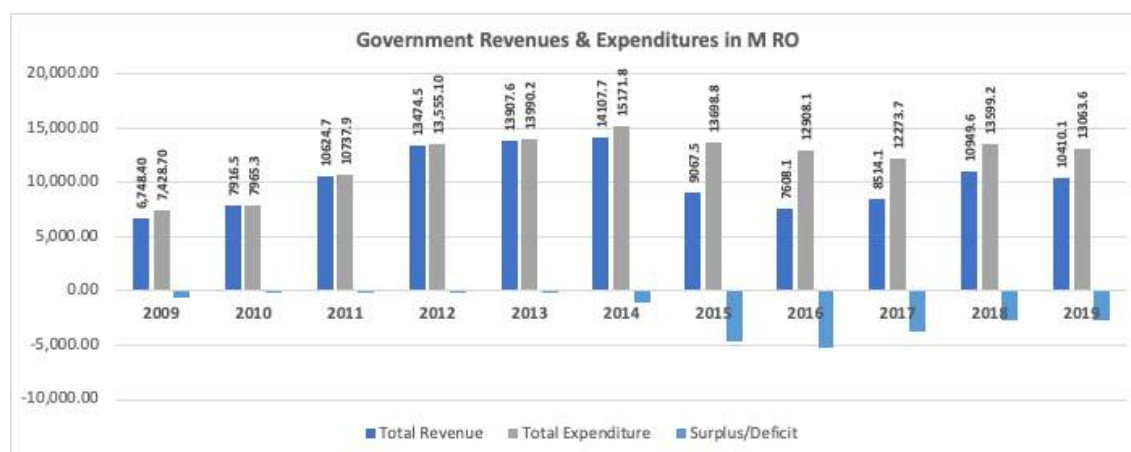
## 2.2. TREND IN ECONOMIC DIVERSIFICATION

Since the beginning of the millennium our economic activity has significantly moved away from oil as indicated below. The following graph gives data up to 2016. In 2019 Crude Petroleum contributed to 29.11% of GDP.



Source: UNIDO elaboration based on UN Statistics Division (2018)

However the Government income is still substantially dependent on Oil sector. The tightening of spending, introduction of VAT and increased revenues from Gas are expected to contain deficits to manageable levels by 2022.





### **2.3. OVERVIEW OF THE DAIRY SECTOR IN OMAN**

The following table illustrates the overall performance of the Dairy sector in Oman (2012 to 2017).

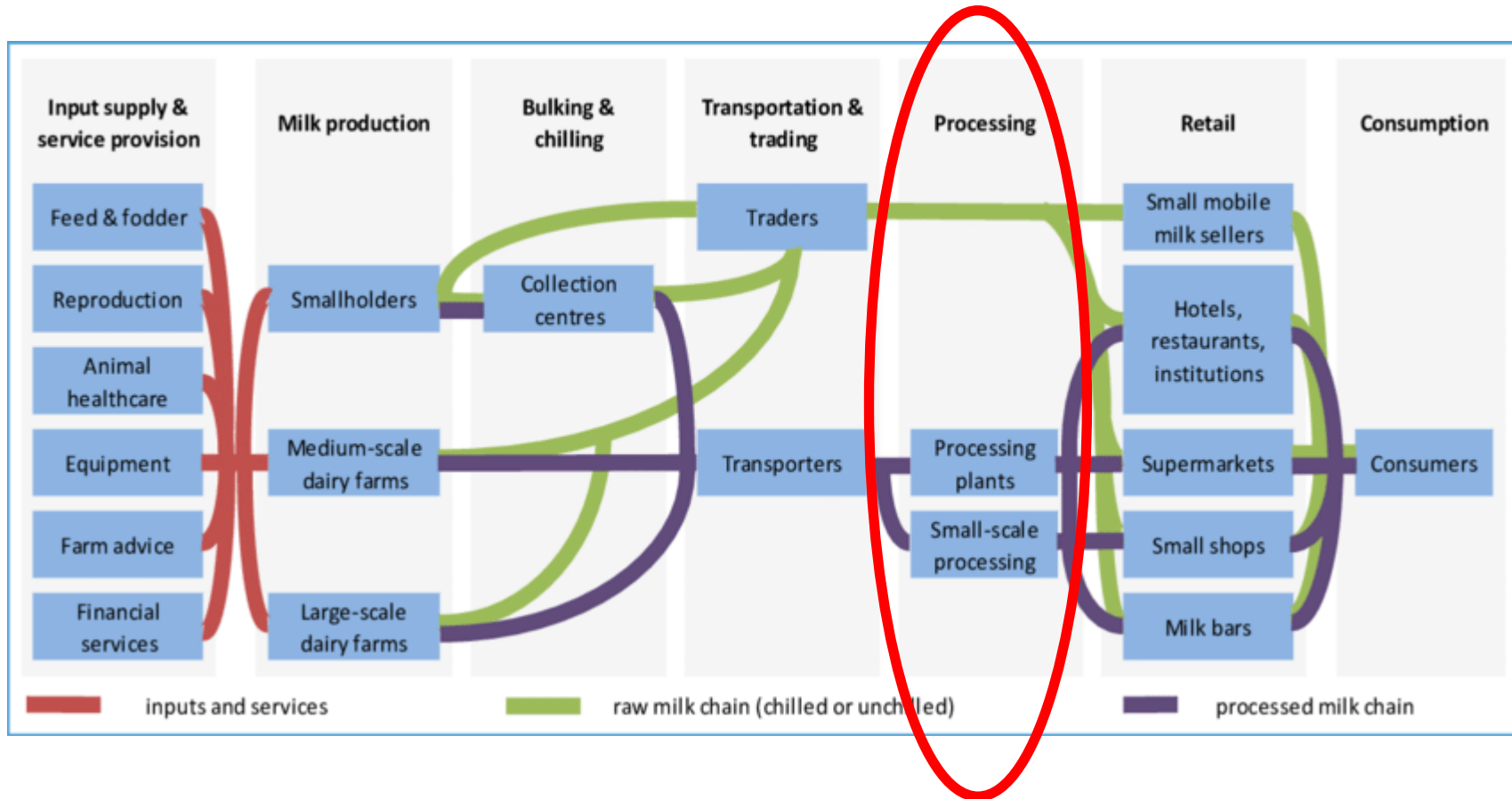
Year	Total Units	Total Employees	Book Value of Fixed Assets (VFA)	Materials	Imported Materials	Output	Value Added (VA)	Labour Efficiency ( RO/ Employee)	Capital Efficiency (VA/VFA)
	No.	No.	(RO million)					Rial Omani	
2012	3	435	1.4	5.3	3.8	9.2	2.4	5,517	1.75
2013	3	912	12.1	8.4	7.5	20.7	6.0	6,550	0.49
2014	2	726	10.9	13.5	9.2	20.1	4.8	6,652	0.44
2015	2	780	27.3	6.7	5.4	26.7	17.2	22,001	0.63
2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
2017	3	910	21.1	17.1	16.0	40.4	15.0	16,446	0.71

Following are the key inferences with respect to the sector performance:

- The increase in the level of employment, value of fixed assets and output indicate a growth in the sector performance.
- The labour efficiency and the capital efficiency have improved, indicating some technology improvements in the sector.

## 2.4. VALUE-CHAIN OF DAIRY PRODUCTS

The following chart illustrates the overall value chain of dairy products:



## **2.5. REGIONAL (GCC) VALUE-CHAIN**

GCC dairy products supply chains are very large and include a number of farms, vendors, distribution centers, suppliers, buyers, manufacturing plants, and logistics service providers.

Despite harsh weather/climatic conditions, GCC has an organized dairy industry with cattle farms and technology for producing quality products. Almarai brand of Saudi Arabia is popular brand in the entire region.

Though the cultivation of fruits is limited in the region, there are major manufacturers of reconstituted juices also in the GCC countries. It may also be noted that most of the dairy companies also own a range of reconstituted juice range in their product portfolio.

## **2.6. VALUE CHAIN IN OMAN**

There are 3 established players (Mazoon Dairy being the latest addition in 2019) that manufacture and distribute dairy and fruit juice products in Oman. However, imports are large part of the consumption in Oman.

## **2.7. MISSING VALUE CHAIN ACTIVITIES IN OMAN**

In our considered opinion, the value chain is fairly complete with respect to Dairy products. However, possibility of enhancing the local production to reach self-sufficiency does exist.

### **3. MARKET ANALYSIS**

#### **3.1. PRODUCT & ITS USES**

The following section gives the proposed products to be produced by the project.

##### **3.1.1. Dairy Products**

Dairy products or milk products are a type of food produced from or containing the milk of mammals. They are primarily produced from mammals such as cattle, water buffaloes, goats, sheep, camels and humans. Dairy products include food items such as yogurt, cheese and butter. A facility that produces dairy products is known as a dairy, or dairy factory.

##### **3.1.1.1. Yoghurt**

Yoghurt is a fermented milk product and is one of the famous fermented milk preparations. The word yoghurt is derived from the Turkish word “jugurt” which means dense thick.

Yoghurt is a dairy product produced by bacteria fermentation of milk sugar (lactose) into lactic acid. This gives yoghurt its gel-like texture and characteristics taste. It is often sold with a fruit vanilla or chocolate flavour but can be unflavoured. Its nutritional and therapeutic functions have been known in the middle east, far east and Eastern Europe for hundreds years, but it has only been appreciated in the west in the last decades.

To produce yogurt, milk is first heated, usually to about 85 °C (185 °F), to denature the milk proteins so that they do not form curds. After heating, the milk is allowed to cool to about 45 °C (113 °F). The bacterial culture is mixed in, and that temperature of 45 °C is maintained for 4 to 12 hours to allow fermentation to occur.

Yoghurt is eaten as a snack, as part of the meal, as a drink and sometimes eaten for medicinal purposes.

#### **3.1.1.2. Laban**

Laban or Buttermilk is a word that refers to a food or beverage of fermented milk.

Buttermilk can be drunk straight, and it can also be used in cooking. Buttermilk is also used in marinating, especially of chicken and pork, which the lactic acid helps to tenderize, retain moisture and allows added flavors to permeate the meat.

#### **3.1.1.3. Labneh**

Labneh is a soft cheese, similar in texture to cream cheese, made from strained yogurt and a popular food item in Middle Eastern cuisine. At about half the fat and calories of standard cream cheese, it's a healthier alternative. It is served as an accompaniment to breakfast or as a snack with fruit or stirred into cooked dishes instead of sour cream or milk.

Labneh results when the whey gets strained out of yogurt, leaving a thick, creamy, not-quite-firm cheeselike substance that can be used as a dip, spread, or stir-in ingredient. Labneh pairs equally well with sweet and savory flavors, and it makes a cooling accompaniment to spicy dishes as well.

#### **3.1.1.4. Fruit Juice**

Fruit juice is made from fruit concentrates prepared with water and adding additives to boost flavor and prevent spoiling. It is commonly consumed as a beverage or used as an ingredient or flavoring in foods or other beverages, as for smoothies. Short-life juices have a shelf life of up to 30 days and must be kept chilled.

## **3.2. INDUSTRY OVERVIEW**

### **3.2.1. Global Scenario**

The global dairy market reached a value of US\$ 718.9 Billion in 2019 (Source: *imaarcgroup.com*).

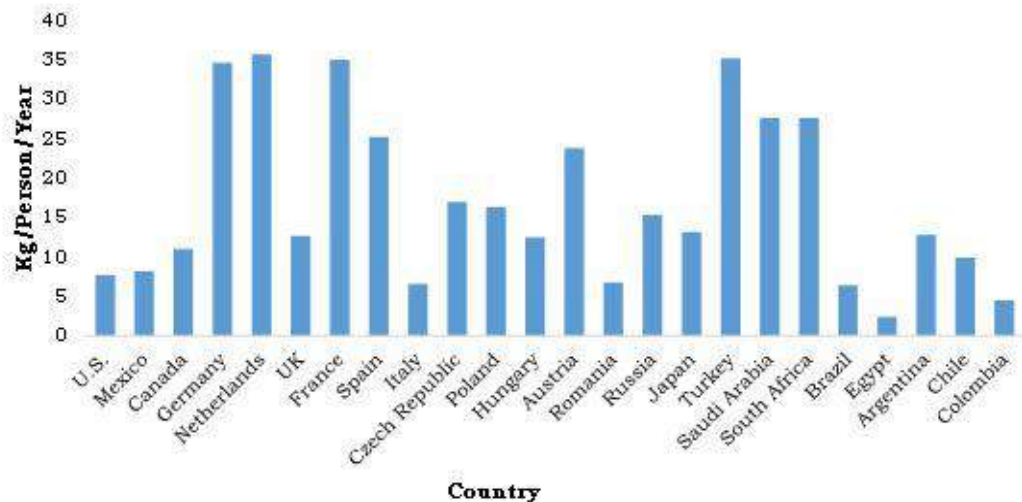
Increasing demand for dairy products is driven by the growing population, higher income levels, and rising health consciousness. The global market is primarily dominated by the milk segment, followed by butter and cheese segments. The yogurt and dairy desserts segments are expected to be the fastest-growing segments across the world.

The sale of dairy products in the developing countries of the Asia Pacific Region and the European region accounts for more than 50% to global sales. This western market is witnessing a high growth rate, primarily driven by product innovation, and the rising health consciousness among consumers. In the Asia-Pacific region, India dominates the market, followed by China, and Australia, whereas in the demand in the European region is driven by countries such as Belarus, and Ukraine. Furthermore, factors, such as efficient and sustainable dairy production in these countries are impacting the global market's growth.

#### **3.2.1.1. Dairy Products**

#### **3.2.1.2. Yoghurt**

The global yogurt market was worth US\$ 40.6 Billion in 2019 (Source: *Allied Research Group, India*). The per capita consumption of yoghurt is illustrated in the following chart.



The global yogurt market is mainly driven by the health benefits associated with consuming yogurt and increasing awareness among people for losing weight.

Other factors supporting the market growth are expansion of retail market in various regions and the lower lactose content for lactose intolerant people willing to eat dairy products. Some of the major players spreading awareness and promoting consumption of spoonable & drinkable yogurt include Yakult, Danone, Nestle, Chobani, and others. However, artificial additives & ingredients added in yogurt and harmful hormonal treatment of milk producing cow may limit people from consuming yogurt.

Growth in demand for yogurt in the developing nations owing to rise in disposable income and increase in health awareness are expected to provide numerous opportunities for the development of the global yogurt market.

#### **3.2.1.3. Laban**

The global Buttermilk (Laban) market is valued at 840 million USD in 2018 and will reach 950 million USD by the end of 2025, growing at a CAGR of 1.5% during 2019-2025 (*Source: Market Watch.Com*).

Buttermilk is widely used in retail. With the development of economies, not only retail but also food processing needs more buttermilk. So, buttermilk has a huge market potential, Milk is the main raw materials of buttermilk. With the development of buttermilk, raw materials' manufacturers are also benefited from the buttermilk industry in some extent.

#### **3.2.1.4. Labneh**

The current value of the GCC Labneh market is estimated to be about USD 200 million, and sales are rising as people are drawn to the health benefits and flavor of the dairy product (*Source: Zawya.com*).

#### **3.2.1.5. Fruit Juice**

The global fruit juice market reached a volume of 46.3 Billion Litres in 2019, registering a CAGR of 1.8% during 2014-2019 (*Source: imarcgroup.com*).

The consumption of soft drinks, such as colas and flavored sodas, is reducing globally as they have high sugar content, artificial coloring, phosphoric acid, artificial sweeteners, and caffeine which can cause negative effects on the human body. Owing to this, a large number of consumers are shifting from carbonated drinks towards natural fruit juices.



In order to expand the consumer-base, manufacturers are introducing a wide array of flavors, and producing preservative-free and sugar-free fruit juices. In addition to this, growth in the food and beverage industry is boosting the overall demand for fruit juices worldwide.

Currently, juice drinks account for the majority of the market share, representing the most popular product type. Juice drinks contain several vitamins, flavors and anti-oxidants owing to which they are preferred by the consumers.

On a geographical front, Europe enjoys the leading position in the global fruit juice market. The fast-paced modern lifestyle and high-income levels of the consumers in the region have led to a rise in the demand for on-the-go fruit juices. Europe is followed by North America, Asia Pacific, Latin America, and Middle East and Africa.

### **3.2.2. Global Trade**

Global trade for dairy products including Buttermilk, curdled milk and cream, Yogurt, kephir and other fermented or acidified milk and cream, whether or not concentrated or flavoured or containing added sugar or other sweetening matter, based on the 4 digit HS Code 0403 is presented and analyzed below.

The 4 digit HS Code for Fruit Juice is 2009 and the global trade is illustrated below.

### 3.2.2.1. Major Global Exporters

No.	Dairy	2019		Fruit Juice	2019	
		USD '000	Tons		USD '000	Tons
1	Germany	952,222	665,188	Brazil	2,110,092	2,364,439
2	France	530,911	342,774	Netherlands	1,920,108	1,394,213
3	Belgium	277,275	243,114	Germany	947,598	939,774
4	KSA (Saudi)	232,503	186,857	Spain	820,616	831,220
5	Austria	162,572	129,840	Belgium	946,000	829,758
6	Thailand	134,959	127,051	Poland	637,370	687,262
7	Spain	176,906	123,296	USA	844,311	605,782
8	Poland	147,919	110,847	Thailand	571,296	526,203
9	Greece	197,249	92,270	Italy	541,727	496,338
10	Russia	81,088	71,460	KSA (Saudi)	326,369	488,563

### 3.2.2.2. Major Importers

No.	Dairy	2019		Fruit Juice	2019	
		USD '000	Tons		USD '000	Tons
1	UK	537,658	325,403	Netherlands	1,600,590	1,389,316
2	Italy	402,966	250,112	France	1,244,407	1,283,935
3	Netherlands	292,620	208,364	Germany	1,398,855	1,181,381
4	Spain	236,192	170,037	UK	1,032,021	1,054,431
5	Germany	192,779	164,625	Belgium	781,667	939,558
6	Portugal	186,694	135,915	Japan	692,986	320,475
7	Belgium	194,074	125,175	Austria	300,444	234,463
8	Russia	175,686	124,001	China	364,645	198,205
9	France	138,828	96,823	Poland	286,509	197,631
10	Sweden	139,323	89,291	Russia	163,713	182,207

### **3.2.3. Major Global Producers**

#### **3.2.3.1. Yoghurt**

The yogurt market is a highly competitive market, with the presence of various international players. The major players of the market are extensively focusing on providing consumers with innovative and exotic flavors while including functional benefits in each of the yogurt product categories. Danone SA, Chobani LLC, General Mills Inc., Nestlé SA, and China Mengniu Dairy Company Limited are the major players in the global yogurt market.

#### **3.2.3.2. Laban**

The key players in the global market are;

Amul, Arla Foods, DairyAmerica, Sodial Group, Fonterra, Dairy Farmers of America, Glanbia, Valley Milk, Associated Milk Producers, Arion Dairy Products, Innova Food Ingredients, Sterling Agro Industries, Grain Millers, Agri-Mark, Land O' Lakes, etc.

#### **3.2.3.3. Labneh**

- Al Marai
- Puck Arabia
- Pinar Labneh

#### **3.2.3.4. Fruit Juice**

The market is highly fragmented in nature with the presence of several small and large manufacturers who are competing against each other in terms of prices and quality. Some of the leading key players include:

- The Coca-Cola Company
- PepsiCo, Inc.
- China Huiyuan Juice Group Limited
- WILD Flavors, Inc.

#### **3.3. GCC SCENARIO**

According to 'The Cattle Site' report, the UAE, dairy farm companies have plans to double in size seeing the yearly demand for dairy and dairy products increasing by approximately 20%. The UAE dairy products market stood at \$ 1.8 billion in 2018 and is projected to grow at a CAGR of over 7%, to surpass \$ 2.6 billion by 2024 (according to The Business Wire website). The following are the key producers in the UAE.

- Al Rawabi Dairy Company
- Al Ain Farms
- Gulf & Safa Dairies
- National Food Product Company
- Marmum Dairy
- UNIKAI
- Italian Dairy Products
- International Dairy & Juices Products Factory
- Al Buheira Lacnor Dairies Co. Ltd.

Saudi Arabia is one of the world's ten largest dairy producers. Their largest dairy, Almarai, is one of the most significant food producers in the entire Persian Gulf. They manage a herd of 67,000 dairy cattle each year, producing approximately 2.5 million liters of milk per day. About 2.74 million metric tons of milk are produced each year by the Saudi Arabia dairy industry.

Kuwait United Dairy Company has about 3,000 heads of cattle, 1,700 of them are milk cows. The farm produces 35 tons of concentrated milk in winter and 25 Tons in Summer. Their daily production capacity is more than 120,000 liters.

Qatar had relied mainly on dairy product imports from Saudi Arabia with 400 tons of milk and yoghurt imported daily. After Gulf crisis, Qatari dairy firm imported thousands of cows from Europe, US. With this the country shall be self-sufficient and plans export from 2021 onwards (based on news articles online – edairynews.com).

### **3.4. ESTIMATE OF DOMESTIC DEMAND**

The entire requirement of float glass in the country is met from import, in the absence of a local manufacturer.

#### **3.4.1. Local Production**

The following table lists the details of local production based on brief primary and secondary data.

<b>PRODUCTS</b>	<b>ESTIMATED DOMESTIC PRODUCTION (Kg or Liters)</b>		
	<b>2017</b>	<b>2018</b>	<b>2019</b>
<i>Yoghurt</i>	64,867,000	68,237,000	63,541,000
<i>Laban</i>	4,841,571	7,349,143	9,918,857
<i>Labneh</i>	379,250	902,000	386,250
<i>Fruit Juice</i>	4,021,385	4,704,389	9,757,016

### **3.4.2. Foreign Trade**

#### **3.4.2.1. HS Codes Considered**

The proposed products for the project are categorized under the following HS codes:

- HS Code 04031000 – Yoghurt
- HS Code 04039020 – Buttermilk/Laban
- HS Code 04039010 – Labneh
- HS Code list for Fruit Juices;

HS CODE	PRODUCT
20091900	ORANGE JUICE
20092900	GRAPEFRUIT JUICE
20093110	LEMON JUICE
20093190	JUICE FO SINGLE CITRUS FRUIT (EXCLUDING LEMON)
20091900	ORANGE JUICE
20092900	GRAPEFRUIT JUICE
20093110	LEMON JUICE
20093190	JUICE FO SINGLE CITRUS FRUIT (EXCLUDING LEMON)
20093900	JUICE OF ANY OTHER SINGLE CITRUS FRUIT
20094100	PINEAPPLE JUICE
20094900	PINEAPPLE JUICE
20097100	APPLE JUICE
20097900	APPLE JUICE
20098929	MANGO JUICE
20098939	GUAVA JUICE
20098990	OTHER JUICE OF ANY SINGLE FRUIT

## 3.4.2.2. Trend in Foreign Trade – Dairy Products

Foreign Trade	In Kg/Litres				CAGR	In OMR				RO/Kg.			
	2016	2017	2018	2019		2016	2017	2018	2019	2016	2017	2018	2019
Imports													
Yoghurt	45,928,000	64,867,000	68,237,000	63,541,000	19%	20,664,118	29,855,532	30,780,837	29,538,097	0.450	0.460	0.451	0.465
Laban	1,652,000	11,297,000	17,148,000	23,144,000	167%	719,102	1,957,405	3,450,945	5,388,443	0.435	0.173	0.201	0.233
Labneh	866,000	1,517,000	3,608,000	1,545,000	85%	516,567	725,082	1,916,509	1,686,978	0.596	0.478	0.531	1.092
Exports													
Yoghurt	244,000	28,000	10,000	2,000	-69%	88,994	8,605	3,249	1,056	0.365	0.307	0.325	0.528
Laban	3,000	119,000	9,000	16,000		1,030	39,993	5,013	6,067	0.343	0.336	0.557	0.379
Labneh	4,000	11,000	-	-		1,304	4,050	-	-	0.326	0.368		
Net Imports													
Yoghurt	45,615,000	64,838,000	68,227,000	63,539,000	19%								
Laban	1,649,000	11,178,000	17,139,000	23,128,000	167%								
Labneh	862,000	1,506,000	3,608,000	1,545,000	85%								

(Source: Foreign Trade Statistics, ROP 2019)

- No re-exports are recorded in the last 3 years for all 3 products.
- Oman is a net importing country for the products in the list.

### 3.4.2.3. *Import & Export Sources*

- The major imports are from UAE and Saudi Arabia.
- Oman's exports are limited to Qatar & Yemen.

### 3.4.2.4. *Trend in Foreign Trade – Fruit Juice*

H S Code	Unit	Imports			Exports		
		2017	2018	2019	2017	2018	2019
20091900	Kg.	834,333	1,087,011	3,364,823	145,390	1,796	22,676
	RO	4,914,013	6,804,842	16,577,945	1,234,088	8,098	99,211
	RO/Kg	0.170	0.160	0.203	0.118	0.222	0.229
20092900	Kg.	16,285	22,666	29,671	-	-	-
	RO	48,423	79,987	134,929	-	-	-
	RO/Kg	0.336	0.283	0.220	-	-	-
20093110	Kg.	191,877	101,882	145,638	7,624	-	-
	RO	334,401	271,716	349,066	15,832	-	-
	RO/Kg	0.574	0.375	0.417	0.482	-	-
20093190	Kg.	278,033	173,602	114,035	12,180	2,122	-
	RO	979,529	381,613	227,502	20,000	1,950	-
	RO/Kg	0.284	0.455	0.501	0.609	1.088	-
20093900	Kg.	137,911	88,622	134,642	27,898	2,729	20,050
	RO	1,202,683	391,763	281,329	113,900	2,900	68,740
	RO/Kg	0.115	0.226	0.479	0.245	0.941	0.292
20094100	Kg.	213,872	140,332	82,029	-	15,635	10,709
	RO	466,681	463,242	242,253	-	60,060	25,720
	RO/Kg	0.458	0.303	0.339	-	0.260	0.416
20094900	Kg.	65,651	96,698	95,895	-	-	737
	RO	163,453	376,328	462,900	-	-	3,468
	RO/Kg	0.402	0.257	0.207	-	-	0.213
20097100	Kg.	100,479	192,239	28,552	26,195	1,563	593
	RO	273,658	582,377	152,954	100,620	5,328	1,680
	RO/Kg	0.367	0.330	0.187	0.260	0.293	0.353
20097900	Kg.	40,826	26,233	86,101	-	-	1,187
	RO	91,550	123,564	341,729	-	-	3,360
	RO/Kg	0.446	0.212	0.252	-	-	0.353
20098929	Kg.	267,996	417,073	537,948	59,439	47,593	9,794
	RO	1,067,660	1,958,391	2,259,450	247,609	248,119	30,648
	RO/Kg	0.251	0.213	0.238	0.240	0.192	0.320
20098939	Kg.	21,981	39,133	12,237	39,977	37,213	3,498
	RO	75,339	191,706	58,851	110,888	64,339	14,994
	RO/Kg	0.292	0.204	0.208	0.361	0.578	0.233
20098990	Kg.	1,496,911	1,174,542	2,551,360	66,389	235,270	59,692
	RO	2,446,765	2,487,637	8,182,139	194,371	601,177	154,638
	RO/Kg	0.612	0.472	0.312	0.342	0.391	0.386

The summary of the imports and exports is illustrated below.



Unit	2017	2018	2019
<b>Imports</b>			
Kg.	12,064,155	14,113,166	29,271,047
RO	3,666,155	3,560,033	7,182,931
RO/Kg	0.304	0.252	0.245
<b>Exports</b>			
Kg.	2,037,308	991,971	402,459
RO	385,092	343,921	128,936
RO/Kg	0.189	0.347	0.320
<b>Net Imports</b>			
<b>Kg or Liters</b>	<b>10,026,847</b>	<b>13,121,195</b>	<b>28,868,588</b>

**3.4.2.5. Estimated Demand/ Consumption**

Details	2017	2018	2019
<b>Yoghurt</b>			
Domestic Production	27,800,143	29,244,429	27,231,857
Imports	64,867,000	68,237,000	63,541,000
Exports + Re-exports	29,000	10,000	2,000
<b>Demand</b>	<b>92,638,143</b>	<b>97,471,429</b>	<b>90,770,857</b>
<b>Laban</b>			
Domestic Production	4,841,571	7,349,143	9,918,857
Imports	11,297,000	17,148,000	23,144,000
Exports + Re-exports	119,000	9,000	16,000
<b>Demand</b>	<b>16,019,571</b>	<b>24,488,143</b>	<b>33,046,857</b>
<b>Labneh</b>			
Domestic Production	379,250	902,000	386,250
Imports	1,517,000	3,608,000	1,545,000
Exports + Re-exports	11,000	-	-
<b>Demand</b>	<b>1,885,250</b>	<b>4,510,000</b>	<b>1,931,250</b>
<b>Fruit Juice</b>			
Domestic Production	4,021,385	4,704,389	9,757,016
Imports	12,064,155	14,113,166	29,271,047
Exports + Re-exports	2,037,308	991,971	402,459
<b>Demand</b>	<b>14,048,232</b>	<b>17,825,584</b>	<b>38,625,604</b>

### 3.5. EXPORT POTENTIAL FOR THE PROPOSED PROJECT

#### 3.5.1. Imports into GCC – Trend Analysis

The overall imports of the products in to GCC is illustrated in the following table. The following data is collected through secondary sources (UN COM TRADE – ITC DATA).

GCC Market	2015	2016	2017	2018	Imports from (2018)				
					KSA	Bahrain	Oman	Kuwait	UAE
	In Tons								
Dairy Products including Buttermilk, curdled milk and cream, Yogurt, kephir and other fermented or acidified milk and cream, etc. - HS Code 0403									
UAE	69,349	79,276	72,900	78,006	66,597				
KSA	24,519	17,785	19,227	17,773					143
Qatar	73,873		33,806	2,639			76		
Bahrain	17,750	21,514	22,274	23,097	21,681			8	28
Kuwait	22,432	44,069	47,671	56,315	50,155	672			1,501
Fruit Juice - HS Code 2009									
UAE			180,260	169,920	82,006	4,521	1,138		
KSA	269,359	214,809	193,807	168,335		495	18	27,376	4,453
Qatar	16,460		27,179	21,426			1,186		
Bahrain	38,767	38,826	29,452	27,504	18,350				474
Kuwait	61,476	61,110	68,486	72,817	49,487	2,262	20		1,296

- As seen in the table, Oman exports to GCC for the dairy products are negligible.
- For fruit juices too, the potential is only in the Qatar & UAE markets.

#### 3.5.2. Conclusion

Considering that UAE & Saudi are one of the major exporters of the world and having established brands that also have a large market share in Oman, the project should focus on domestic market and consider exports only after the projects products are well received in the local market.

### **3.6. DEMAND PROJECTION**

The projected demand for the proposed products is illustrated in the following table. Considering the Covid situation and fall in the economy and the oil price, the overall manufacturing industry shall see a growth decline. Although, being food products, the demand for the products shall not be affected. A conservative growth rate of 3% is considered till the year 2026 for the products.

With that the **projected demand (in Kg.)** is illustrated below.

PRODUCTS	2020	2021	2022	2023	2024	2025	2026
<i>Yoghurt</i>	93,493,983	96,298,802	99,187,766	102,163,399	105,228,301	108,385,150	111,636,705
<i>Laban</i>	34,038,263	35,059,411	36,111,193	37,194,529	38,310,365	39,459,676	40,643,466
<i>Labneh</i>	1,989,188	2,048,863	2,110,329	2,173,639	2,238,848	2,306,013	2,375,194
<i>Fruit Juice</i>	39,784,372	40,977,903	42,207,240	43,473,457	44,777,661	46,120,991	47,504,620

### 3.7. COMPETITION ANALYSIS

#### 3.7.1. Major Sources of Supply - Local

The details of major Dairy farms/Companies in Oman are summarized in the following Table.

Name	Brand	Products	History & Activities
A'Safwah Dairy, Salalah	A'Safwah	<ul style="list-style-type: none"><li>✓ Fresh Milk (Full Cream &amp; Low-fat)</li><li>✓ Strawberry</li><li>✓ Chocolate &amp; Banana Flavored Milk</li><li>✓ Fresh Yoghurt</li><li>✓ Mixed Fruit and Strawberry</li><li>✓ Flavored Yoghurt</li><li>✓ Fresh Laban(Full Cream and Low-fat)</li><li>✓ Mango &amp; Strawberry Flavored Laban</li></ul>	The largest single site dairy farm in Oman. Started operation in 1984 in Salalah. The dairy products which are sold both in Oman and overseas.
Dhofar Beverages SAOG	Al Khaleej, Meeza, Darbat, Jarziz	<ul style="list-style-type: none"><li>✓ <b>Fruit Juice</b></li><li>✓ Shark Energy Drink</li><li>✓ Cool Pop</li><li>✓ Carbonated Drinks</li></ul>	Established in 1976 and located in Salalah, Dhofar region.

##### 3.7.1.1. Mazoon Dairy Company

Mazoon Dairy Company started production in Q4 of 2019. The project details are highlighted:

- The project will have the capacity to produce 200 million liters of milk annually by 2026.
- The project has a processing, filling and packaging facility that includes a state-of-the-art, fully automated milking parlor along with chilling and storage facilities with zero human intervention.

- An integrated bottle production unit produces the required packaging materials in-house to ensure that the dairy and juice products are monitored and maintained from start to finish.
- Mazoon Dairy is also partnering with global leaders in food production and packaging, including Tetra Pak, the foremost food processing and packaging solutions company in the world to ensure the supply and installation of all dairy processing equipment, including milk reception and storage, homogenization and pasteurization machines, as well as all refrigerators and other utility requirements.
- The first 3,000 Holstein-Friesian cows at the facility are imported from Europe and housed in an environment-controlled barn, with computer controlled cooling systems.

### **3.7.2. Major Sources of Supply - GCC**

The other major competitors from other GCC are detailed below:

<b>Company</b>		<b>Brands</b>
1	Unikai Foods P.J.S.C., UAE	Unikai
2	Al Marai Company, K.S.A	Al Marai
3	Al Rawabi Dairy Co., UAE	Al Rawabi
4	Gulf & Safa Dairy, Abu Dhabi	"Freshco" Juices, "Safa" Laban

### 3.7.3. Marketing Mix Strategy of Competitors

#### 3.7.3.1. Product Type

Products	Details	Popular Packs
Plain Yoghurt	<ul style="list-style-type: none"> <li>Packed in easy to store tubs</li> <li>Single serve packs are available</li> </ul>	200 g, 1kg, 2kg, 4kg
Laban	<ul style="list-style-type: none"> <li>Packed in paper cartons and plastic bottles</li> <li>Single serve packs are available</li> </ul>	200 ml, 400 ml
Labneh	<ul style="list-style-type: none"> <li>Packed in easy to store tubs</li> <li>Flavoured available (eg. Garlic)</li> </ul>	250 g, 1kg
Fruit Juice	<ul style="list-style-type: none"> <li>Packed in plastic bottles</li> <li>Single serve packs are available</li> <li>Available in flavors like Orange, Mango, Pineapple, Apple, Lemon, etc.</li> </ul>	200 ml, 400 ml

#### 3.7.3.2. Pricing Strategy

The end user pricing for products is illustrated below:

Manufactured Products		Pack Size	OMR per unit
1	Laban	200 ml	0.200
		400 ml	0.400
2	Juice	200 ml	0.200
		400 ml	0.350
		1 L	0.800
3	Labneh	1 L	1.700
		500 ml	0.900
4	Yoghurt	200 G	0.300
		1 Kg	0.650
		2 Kg	1.200

#### 3.7.3.3. Promotion

The most popular promotion method is display. The merchandisers ensure availability on the shelf. Discounts are offered by retailers during Eid season.

#### **3.7.3.4. Distribution**

- Distribution is the key when dealing with these products. The strength of the major players is their strong and reliable distribution network.
- The competitors handles sales to hypermarkets, major supermarkets and institutional buyers directly and through / smaller distributors.
- The transportation is generally by road for local and export market. The key players have own trucks for delivery of goods.
- All export sales is handled through agents / distributors in the respective markets

### **3.8. PROPOSED MARKETING MIX STRATEGY FOR THE COMPANY**

#### **3.8.1. Product**

The proposed project (for dairy products) shall be produced from powdered milk compared to other dairy projects that use fresh milk.

The fruit juice shall be produced from fruit pulp imported for the production.

#### **3.8.2. Product Mix**

<b>Products to be offered / produced</b>	<b>Packs Sizes to be offered</b>	<b>Packing type</b>	<b>Flavors</b>
Yoghurt	200 g, 1kg, 2kg	Plastic tub	Plain
Laban	200 ml	Paper carton	Plain, Jeera
Labneh	250 g	Plastic tubs	Plain, Garlic
Fruit Juice	200 ml	Plastic bottles	Orange, Tamrind, Grape, Mix.

#### **3.8.3. Target Market**

The project can consider locating in the interior regions of Oman and focus on selective markets (like Dakhliyah and Sharqiyah South) as its primary market and the rest as its secondary market.

### **3.8.4. Pricing**

The pricing / realization for the products is illustrated below:

Manufactured Products		Pack Size	Pricing of products from integrated projects	Pricing for the products from proposed project (from powdered milk)	Sales Realisation (Price to Retailer allowing 20% margin)
1	Laban	200 ml	0.200	0.200	0.200
		400 ml	0.400	0.400	0.300
		1 L	0.650	0.650	0.600
2	Juice	200 ml	0.200	0.200	0.150
		400 ml	0.350	0.350	0.300
		1 L	0.800	0.700	0.600
3	Labneh	1 L	1.700	2.000	1.800
		500 ml	0.900	0.900	0.800
4	Yoghurt	200 G	0.300	0.300	0.200
		1 Kg	0.650	0.650	0.550
		2 Kg	1.200	1.200	1.000

### **3.8.5. Promotion**

The company shall concentrate on building healthy personal contacts with retailers and institutional buyers like school, restaurants, catering companies, etc.

The company could buy prime shelf space for promotion

The company will also consider the following promotional activities:

- Participation in Food & Beverage Fairs
- Advertisement in Electronic & print media
- Sales promotion programs

The company could also offer its customers a credit period of 60 days as per the industry norms.



### **3.8.6. Distribution**

The company would concentrate on direct marketing to the retailers and have merchandizers for ensuring product availability in the stores.

The supply could be done in freezer trucks with 1 driver and 1 sales and merchandising staff for distribution.

The unit could also look into marketing in the tier 2 super markets in the interiors.

### **3.9. PROJECTED MARKET SHARE**

The realistic market share of the project considering the robust competition for all the products produced is projected in the following table.

<b>PRODUCTS</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
<b><i>Yoghurt</i></b>	99,187,766	102,163,399	105,228,301	108,385,150	111,636,705
<i>Estimated market share</i>	1%	1.5%	1.5%	1.5%	1.5%
<i>Estimated sales</i>	<b>991,878</b>	<b>1,532,451</b>	<b>1,578,425</b>	<b>1,625,777</b>	<b>1,674,551</b>
<b><i>Laban</i></b>	36,111,193	37,194,529	38,310,365	39,459,676	40,643,466
<i>Estimated market share</i>	4%	5%	5%	5%	5%
<i>Estimated sales</i>	<b>1,444,448</b>	<b>1,859,726</b>	<b>1,915,518</b>	<b>1,972,984</b>	<b>2,032,173</b>
<b><i>Labneh</i></b>	2,110,329	2,173,639	2,238,848	2,306,013	2,375,194
<i>Estimated market share</i>	3%	4%	4%	4%	4%
<i>Estimated sales</i>	<b>63,310</b>	<b>86,946</b>	<b>89,554</b>	<b>92,241</b>	<b>95,008</b>
<b><i>Fruit Juice</i></b>	42,207,240	43,473,457	44,777,661	46,120,991	47,504,620
<i>Estimated market share</i>	1%	1.5%	1.5%	1.5%	1.5%
<i>Estimated sales</i>	<b>422,072</b>	<b>652,102</b>	<b>671,665</b>	<b>691,815</b>	<b>712,569</b>

*(All figures in Litres)*

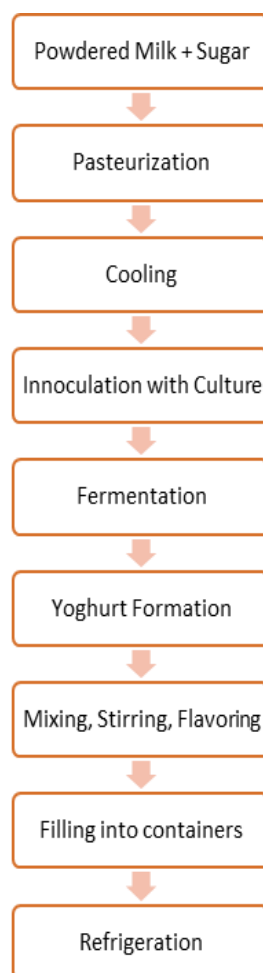
## **4. TECHNICAL ANALYSIS**

### **4.1 LOCATION**

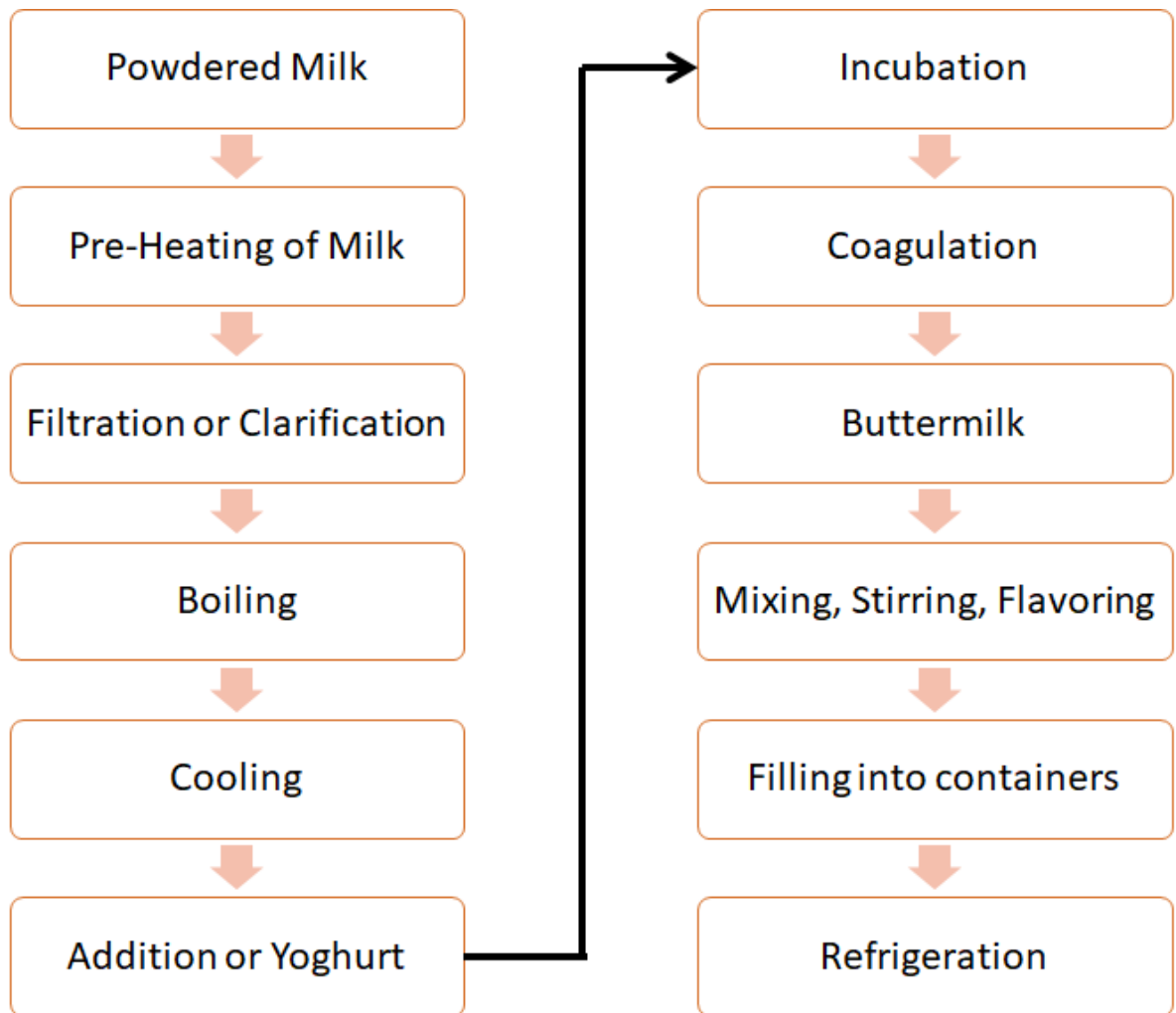
The proposed packing line unit will be established in a total land area of 5,000 Sq. m.

### **4.2 PRODUCTION PROCESS**

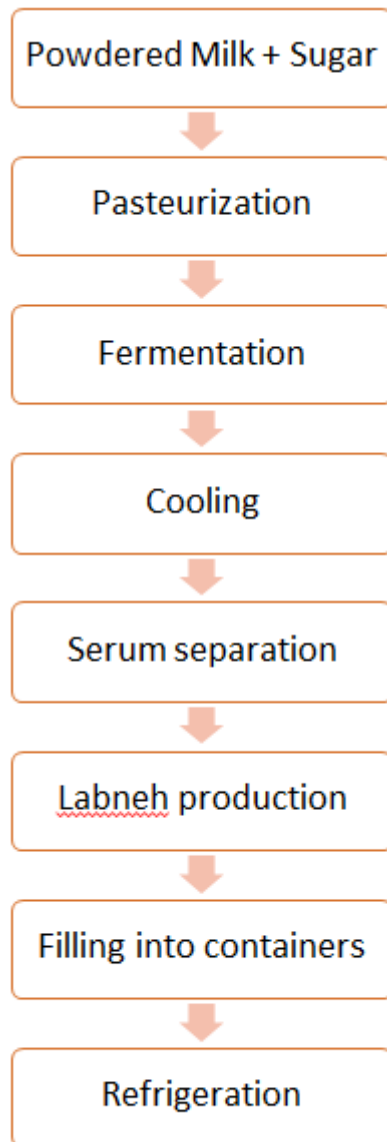
#### **4.1.1. Yoghurt**



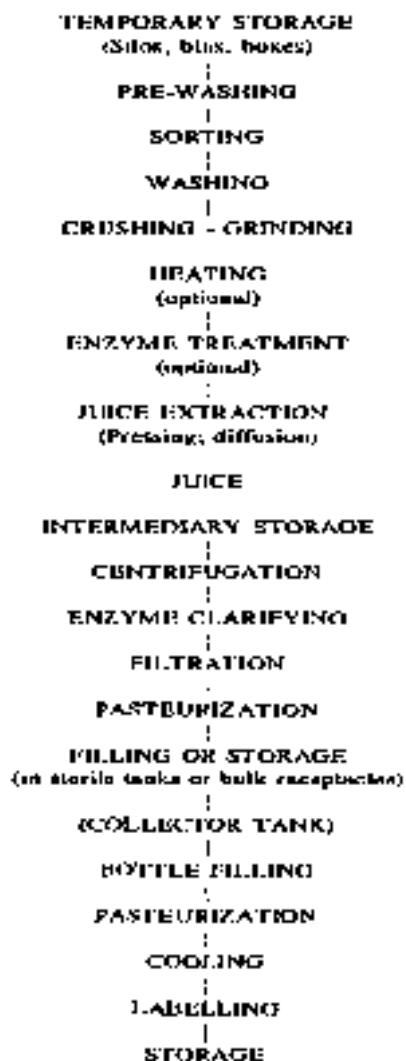
#### 4.1.2. Butter Milk or Laban



#### 4.1.3. Labneh



#### 4.1.4. Fruit Juice



#### 4.3 POTENTIAL MACHINERY SUPPLIERS

No.	Suppliers Name	Address
1.	Alpes Industries Services International	69 Rue du Président Faure, 74800 La Roche-sur-Foron, France
2.	Paul Mueller Company	<b>Iowa Manufacturing</b> 1715 Ticken Dr. Osceola, Iowa 50213 +1-641-342-6531
3.	Krones	Böhmerwaldstraße 5, 93073 Neutraubling, Germany
4.	Feldmeier Equipment INC	6715 Robert Feldmeier Parkway Syracuse, NY 13211 (315) 454-8608 USA

#### 4.4 MACHINERY & EQUIPMENT

The following table lists the machinery details for the project.

<b>A</b>	<b>PRODUCTION LINE 10,000 LIT/ HR</b>
	<i>Supplier-Alpes Industries Services International LTD.</i>
1	Milk Reconstitution
2	Juice and Milk Pasteurization and Homogenization 10,000 lit/hr
3	Laban Process and Storage
4	CIP 1 pressure lines 20,000 lit/hr
5	Process Piping
6	Air Compressor and accessories 180 m3/hr
7	Steam Boiler and accessories 1000 kg/hr
8	Integrated Water Cool Chiller and accessories
9	Water Treatment System
10	Electricals
11	Spare parts
<b>B</b>	<b>Chiller Room &amp; Warm Room</b>
	<i>Supplier: Salalah Refrigeration's &amp; Services Co. LLC</i>
1	Chiller Room & Warm Room
2	Chiller Room 20m x 15m x 1.4m
3	Chiller Room 3m x 2m
4	Chiller Room 10m x 4m x 3m
5	Warm Room 2m x 2m x 3m
6	Warm Room 15m x 7m x 3m
<b>C</b>	<b>Factory Shelves &amp; Packaging Unit</b>
	<i>Supplier-Mohamed Al Shamsi Modern Projects</i>
1	Factory Shelve 10m x 2.7m x 0.9m: 35@ RO 355
2	Gondola shelving ht 1.8m; 20 m@ RO 283.750
3	HVAC PACKAGE UNIT: 6 @ RO 13,200
<b>D</b>	Automatic Form, Fill and Seal Packaging Machine for Plain Yogurt or Fruit Flavoured
<b>E</b>	Water and Laban Machines

#### 4.5 PRODUCTION CAPACITY

The annual capacity of the plant is as detailed in the table below:

No.	Products	Unit	Hourly Capacity	Hours / day	Daily Capacity	Annual Working Days	Annual Capacity
1	Laban	Liters	10,000	6	60,000	250	15,000,000
2	Fruit Juices	Liters	10,000	6	60,000	50	3,000,000
3	Labneh	Kg.	75	8	600	300	180,000
4	Yoghurt	Kg.	4,000	5	20,000	300	6,000,000

#### 4.6 CAPACITY UTILIZATION

Based on sales estimation, the capacity utilization is illustrated in the following table.

Year of Operation	1	2	3	4	5	6	7	8	9	10
Laban	10%	12%	13%	13%	14%	14%	14%	14%	14%	14%
Fruit Juices	14%	22%	22%	23%	24%	24%	24%	24%	24%	24%
Labneh	35%	48%	50%	51%	53%	53%	53%	53%	53%	53%
Yogurt	17%	26%	26%	27%	28%	28%	28%	28%	28%	28%

#### 4.7 BUILDING AND CIVIL WORKS

The plant will be established in a land area of 5,000 Sq. m. The following table details the actual area to be built for overall operations:

S. No.	Item of work	Area in Sq. m
1	Building for housing Plant and Machinery	1,000
2	Area for Raw Material and Finished Goods	1,000
3	Administrative and Sales Office including Rest Rooms, Change Rooms and Canteen	170
<b>Total Constructed Area</b>		<b>2,170</b>
Parking Area for Vehicle Movement and for Other Purposes including Roads, Fencing, Office Parking etc.		2,830
<b>TOTAL</b>		<b>5,000</b>

#### 4.8 UTILITIES

The following sections give the utilities requirement of the unit at 100% utilization.

1	Electricity	KWH	3,150,000
2	Water	CM	30,000
3	LPG	NM3	900,000
4	Diesel	Ltrs	15,000

#### **4.9 MANPOWER & HUMAN RESOURCES DEVELOPMENT PLAN**

The total manpower required for the operation is 52. The annual wages and salaries include 40% additional benefits on basic salary. The Omanization level is at 37%. The details are provided in Annexure 2.2.

Department	Omanis	Expats	Total
Production	9	29	38
Administration & Accounts	4	2	6
Sales	6	2	8
<b>Total</b>	<b>19</b>	<b>33</b>	<b>52</b>

#### **4.10 WASTE DISPOSAL AND ENVIRONMENTAL ASPECTS**

The manufacturing process involves mechanical operations using machines and the operation does not involve fossil fuels or harmful chemicals. Following are the key aspects of effluents:

- There is no gaseous emission
- The solid and liquid wastes are limited to the municipal waste. The project shall be located in an approved industrial zone and the waste (limited to waste generated by humans) shall be delivered to the Municipal waste management system.
- The noise level shall be maintained below the prescribed levels.

#### **4.11 PROJECT IMPLEMENTATION PERIOD**

The critical activities include identification and allotment of land, civil construction and the erection of the plant. It will take about 12 months for completing erection of the plant from the date of financial closure.



## 5 FINANCIAL ANALYSIS

### 5.1 COST OF PROJECT

The total cost of the project is estimated at RO 1.796 million. The break-up is given below:

Details	Amount (RO)
Land Development for Plant Site	29,000
Building etc.	236,000
Plant & Machinery	855,000
Vehicles and Internal transport	61,000
Furniture & Office Equipment	27,000
Pre- Operative Expenses	140,000
Contingency & Escalation	67,000
<b>Sub Total</b>	<b>1,415,000</b>
Working capital	381,000
<b>Total Project Cost</b>	<b>1,796,000</b>

#### 5.1.1 Site development

Cost of site development such as soil testing, paving roads, drainage and sewage etc. is estimated at RO 29,000 and the details are provided in Annexure 1.1.

#### 5.1.2 Building & Civil Structures

The total cost of building and civil work is estimated at RO 236,000. The detailed break-up is given in Annexure 1.2.

#### 5.1.3 Plant & Machinery

The total cost of the plant and machinery is estimated at RO 855,000 and the detailed break-up is given in Annexure 1.3.

#### **5.1.4 Vehicles**

The total cost of the vehicles is estimated at RO 61,000 and the detailed break-up is given in Annexure 1.4

#### **5.1.5 Furniture and Office Equipment**

Furniture and office machinery includes computers, office equipment, air conditioners, furniture and furnishings and furnishing cost for employees. The total cost of the same is estimated at RO 27,000 and the details are provided in Annexure - 1.5.

#### **5.1.6 Pre-operative expenses**

The pre-operative expenses include expenses for feasibility study, expenses up to company formation, interest during project implementation, project management fee, salaries and wages of project staff, travel and communication, legal fees, audit fees and other miscellaneous expenses. The total pre-operative expenses are estimated at RO 140,000 and the detailed break up is given in Annexure - 1.6.

#### **5.1.7 Contingency & Escalation**

A provision of 5% of the estimated cost of items including plant & machinery, vehicles, etc., is made to account for any currency fluctuation, unforeseen expenses and price escalation. This works out to RO 67,000 and the detailed break up is given in Annexure - 1.7.

#### **5.1.8 Working Capital**

The assumptions are made as follows. The break up is given in Annexure 1.8.

- Account receivables - 60 Days
- Raw materials - 45 Days
- Consumables and Packing - 1 Month
- Utilities - 1 Month
- Factory wages - 1 Month

- Administrative Expenses - 1 Month
- Sales Expenses - 1 Month
- Work in progress - 1 Day
- Finished Goods - 0.5 Month
- Finance Cost - 1 Month

The Net working capital requirements are given below:

Year 1	Year 2	Year 3	Year 4
RO 381,000	RO 541,000	RO 557,000	RO 570,000

## **5.2 MEANS OF FINANCE**

It is proposed to finance the Project as follows:

Means of Finance	Amount (RO)
Equity	718,000
Term Loan	849,000
Borrowing for working Capital	229,000
<b>Total</b>	<b>1,796,000</b>

### **5.2.1 Equity Capital**

The proposed equity for the project would be RO 718,000 which is around 40% of the total project cost.

### **5.2.2 Term Loan from Bank**

Term loan of RO 849,000 is proposed to be availed from commercial bank and the rate of interest considered is at 6% p.a. and this loan is proposed to be repaid in 7 years period from the second year of operation. Working capital loan of RO 229,000 would be availed at a rate of 6% per annum. The details are given in Annexure 2.7.

### 5.3 COST OF SALES

The estimated cost of sale for first five years of operation are given in Annexure-2.

No.	Details	1	2	3	4	5
		<i>In RO '000</i>				
1	Raw Materials	590	829	853	879	905
2	Packing Material	59	83	85	88	91
3	Utilities	102	102	102	102	102
4	Factory Wages	150	154	159	164	168
5	<b>PRIME COST</b>	<b>901</b>	<b>1,168</b>	<b>1,200</b>	<b>1,233</b>	<b>1,267</b>
6	Rent for land	5	5	5	5	5
7	Factory Overheads	25	31	38	38	38
8	Misc. Factory Exp.	9	12	12	13	13
9	<b>FACTORY COST</b>	<b>940</b>	<b>1,216</b>	<b>1,255</b>	<b>1,288</b>	<b>1,322</b>
10	Admin. Salaries	63	65	67	69	71
11	Admin. Expenses	11	12	12	13	13
12	<b>TOTAL ADMIN EXPENSES</b>	<b>74</b>	<b>76</b>	<b>79</b>	<b>82</b>	<b>84</b>
13	Sales Salaries	70	72	74	76	78
14	Other Sales Expenses	105	147	152	156	161
15	Advert.& Business Promotion	13	18	19	20	20
16	<b>TOTAL SALES &amp; DISTRIBUTION COSTS</b>	<b>188</b>	<b>238</b>	<b>245</b>	<b>252</b>	<b>260</b>
17	<b>OPERATING COST</b>	<b>1,202</b>	<b>1,530</b>	<b>1,579</b>	<b>1,622</b>	<b>1,666</b>
18	<b>FINANCE COST</b>					
19	Interest on Institutional finance	51	51	51	45	38
20	Interest on working capital	14	14	14	14	14
21	Total finance cost	65	65	65	59	52
21	<b>NON-CASH EXPENSES</b>					
22	Depreciation	125	125	125	125	125
23	Prelim Expenses written off	140	0	0	0	0
24	<b>COST OF SALE</b>	<b>1,531</b>	<b>1,719</b>	<b>1,768</b>	<b>1,806</b>	<b>1,843</b>

#### 5.3.1 Raw Materials

The cost of raw material is considered to be about 45% of the sales revenue. This is in line with the competitors as established during a detailed secondary survey.

### **5.3.2 Utilities**

The total cost of utilities is RO 170,610 per annum. Details are given in Annexure 2.1.

### **5.3.3 Salaries & Wages**

The salaries and wages include basic salary and about 50% of the basic salary is provided additionally as staff benefits. The annual cost of wages is around RO 282,408 and detailed further in Annexure 2.2.

### **5.3.4 Factory overheads**

The annual expenses include repairs and maintenance, cost of spares, insurance and vehicle expense and the same is estimated at RO 24,870 for the first year, RO 31,283 for the second year and RO 37,695 in the third year. Details are given in annexure 2.3.

### **5.3.5 Administrative Expenses**

The basis of estimates of administrative expenses inclusive of salaries & wages is given in Annexure 2.4 and it works out to RO 74,000 for the first year of operation.

### **5.3.6 Sales and distribution Expenses**

Total sales salaries are estimated to be RO 69,720. The sales and distribution expenses are pegged at 8% of the sales revenue. In addition advertisement and business promotion expenses are considered at 1% of the sales revenue. Details are provided in Annexure 2.

### 5.3.7 Depreciation

Depreciation works out to RO 124,650 each for first ten years and is computed at following rates: (See also Annexure 2.6). Pre-operative expenses are written off in the first year of operation.

	<u>Life (years)</u>
Building	20
Plant and Machinery	10
Vehicles & Int. transport etc.	4
Furniture	5
Contingency and escalation	10

### 5.3.8 Loan and interest calculation

Interest rate for institutional finance and working capital borrowing are taken at 6% per annum. Details are given in Annexure 2.7.

## 5.4 WORKING RESULTS

No .	Details	1	2	3	4	5
		<i>In RO '000</i>				
1	<b>Operating Cost</b>	1,202	1,530	1,579	1,622	1,666
2	<b>Expected Sales</b>	<b>1,311</b>	<b>1,841</b>	<b>1,896</b>	<b>1,953</b>	<b>2,012</b>
3	<b>Profit before Interest &amp; depreciation</b>	<b>109</b>	<b>311</b>	<b>318</b>	<b>332</b>	<b>346</b>
4	Depreciation	125	125	125	125	125
5	Finance Cost	65	65	65	59	52
6	<b>Operating profit</b>	<b>-80</b>	<b>122</b>	<b>128</b>	<b>148</b>	<b>169</b>
7	Other income if any					
8	Prelim Exp. written off	140	-	-	-	-
9	Profit/Loss before tax	-220	122	128	148	169
10	Income Tax	0	0	0	0	0
11	<b>Profit after tax</b>	<b>-220</b>	<b>122</b>	<b>128</b>	<b>148</b>	<b>169</b>
12	Statutory reserve	0	12	13	15	17
13	Profit for appropriation	-220	109	116	133	152
14	Dividend	0	0	0	0	0
15	General reserve	-220	109	116	133	152
16	<b>Net cash accruals</b>	<b>44</b>	<b>246</b>	<b>253</b>	<b>272</b>	<b>294</b>

## 5.5 COST RATIOS

The major cost indicators as a percentage of sales realization are given in Annexure- 9.

No.	Details	1	2	3	4	5
1	Raw Material / Total Sales	45%	45%	45%	45%	45%
2	Packing Materials/Sales	5%	5%	5%	5%	5%
3	Utilities / Total Sales	8%	6%	5%	5%	5%
4	Factory wages / Total Sales	11%	8%	8%	8%	8%
5	Prime Cost / Total Sales	69%	63%	63%	63%	63%
6	Factory exp. / Total Sales	3%	3%	3%	3%	3%
7	Factory Cost / Total Sales	72%	66%	66%	66%	66%
8	Administrative exp. / Total Sales	6%	4%	4%	4%	4%
9	Selling exp. / Total Sales	14%	13%	13%	13%	13%
10	Finance Cost / Total Sales	5%	4%	3%	3%	3%
11	Non-Cash exp. /Total Sales	20%	7%	7%	6%	6%
12	<b>Total Cost/ Sales</b>	<b>117%</b>	<b>93%</b>	<b>93%</b>	<b>92%</b>	<b>92%</b>

## 5.6 KEY APPRAISAL CRITERIA

The viability of the project based on major appraisal criteria is given below.

Detail	Value
IRR on total investment	13.1%
IRR on Equity	20.7%
Payback period of Total Investment	7 years 2 Months
Payback period of Total Equity	6 years 4 Months
Break Even Point at Plant Capacity	44%
Cash Break Even Point at Plant Capacity	37%
Debt Service Coverage Ratio	2.11
Debt : Equity Ratio	1.5 : 1

## 5.7 SENSITIVITY ANALYSIS

A sensitivity analysis was carried out for the following three parameters:

- a. Reduction in Volume 10%
- b. Increase in Raw material cost by 10%
- c. Reduction in Sales realization by 10%

The effect of these on the IRR (calculated for 10 years) is provided in the table.

Detail	Original value	Reduction in Volume 10%	Increase in Raw material cost by 10%	Reduction in Sales realization by 10%
Total Investment %	13.1%	8.7	8.7	3.0
Total Equity (%)	20.7%	12.4	12.4	2.8



## **6 KEY SUCCESS AND PUSHBACK FACTORS**

The following aspects are highlighted as the key success / pushback factors.

### **6.1 KEY SUCCESS FACTOR**

- The project shall ensure import substitution and improve the ICV performance in the sector.
- It shall add to the domestic food security aspect, to a limited extent.
- The project shall be able to effectively leverage on the government incentives including low cost well developed industrial land, utilities etc.
- It can also utilise the support of the government to cater to the school food programme where in local products are preferred.
- Access to well-developed roads and sea ports will help the unit in reaching potential markets (Domestic and Export markets)

### **6.2 KEY PUSHBACK FACTORS**

The project shall face stiff competition from large players (domestic as well as foreign) which needs to be effectively handle by developing niche products (local favours) and focusing on the interior markets where the presence of large players is limited.

## **7 CONCLUSION AND RECOMMENDATIONS**

The project, based on various analyses and the indicated sales realization levels, is expected to have an IRR of 13.1% on the total investment and shall yield an IRR of 20.7% on the total equity.

The DSCR is around 2.11 and the project shall be able to meet its financial obligations effectively.

Thus based on the above analysis the project is found to be technically feasible and financially viable.

*Annexures : Financial Projections*

ANNEXURE- 1					
DAIRY & FRUIT JUICE PROJECT					
ESTIMATED PROJECT COST					
S. No.	Item	Refer		Amount	Remarks
		Appendix		(R.O)	
<b>A1</b>	<b>PROJECT COST</b>				
1	Land Development for Plant Site	1.1	29,000		Estimates & Offer
2	Building etc.	1.2	236,000		Estimates & Offer
3	Plant & Machinery	1.3	855,000		Estimates & Offer
4	Vehicles and Int. Transport	1.4	61,000		On lease
5	Furniture & Office Equip.	1.5	27,000		Estimates
6	Pre- Operative Expenses	1.6	140,000		Estimates
7	Contingency & Escalation	1.7	67,000		Estimates
	<b>Sub Total</b>		1,415,000	<b>1,415,000</b>	
<b>A2</b>	<b>WORKING CAPITAL</b>		381,000	<b>381,000</b>	
<b>A3</b>	<b>TOTAL</b>			<b>1,796,000</b>	
<b>B</b>	<b>MODE OF FINANCE</b>				
1	Equity			718,000	40% of Total Project Cost
2	Term Loan			849,000	60% of the Fixed assets
3	Commercial Borrowings for WC			229,000	60% of the Working capital
	<b>TOTAL CAPITAL</b>			<b>1,796,000</b>	

ANNEXURE- 1.1						
DAIRY & FRUIT JUICE PROJECT						
ESTIMATED COST OF LAND & SITE DEVELOPMENT						
S.No.	Item	Unit	Q'ty	Rate (R.O)	Amount (R.O)	Remarks
<b>A</b>	<b>LAND</b>					
1	Land for Plant	Sq. M	5,000			On lease
<b>B</b>	<b>SITE DEVELOPMENT</b>					
1	Soil Testing				3,000	Lumpsum - Estimate
2	Levelling	Sq. M	2,500	1.000	2,500	Estimate
3	Fencing	M	283	35.000	9,899	Estimate
4	Paving /Roads	M	1,000	5.000	5,000	Estimate
5	Gate, Gate House & Misc.	Set			1,000	Estimate
6	Sewerage/Drainage				2,500	Estimate
7	Provision for Electrical Lines				2,500	Estimate
8	Provision for Water Lines				2,500	Estimate
	Sub Total				28,899	Lumpsum - Estimate
<b>C</b>	<b>TOTAL</b>				28,899	
	Say				<b>29,000</b>	

ANNEXURE- 1.2					
DAIRY & FRUIT JUICE PROJECT					
ESTIMATED COST OF BUILDING & CIVIL WORKS					
S.No.	Item	Area	Rate	Amount	Remarks
		(Sq. M)	RO	RO	
<b>A</b>	<b>MAIN PLANT BUILDINGS</b>				
1	Production & Packing Line	1,000	100	100,000	Estimates
2	Storage Area for RM and Packed Materials	1,000	100	100,000	Estimates
	<b>Sub Total</b>	<b>2,000</b>		<b>200,000</b>	
<b>B</b>	<b>OTHER BUILDINGS</b>				
1	Office Space within the Plant Main Building	150	130	19,500	
2	Guard Room	20	120	2,400	
3	Water Tank and Related Works			5,000	
	<b>Sub Total</b>	<b>170</b>		<b>26,900</b>	
<b>C</b>	<b>ENGINEERING FEES</b>				
1	Design			4,538	2% of B&C Works
2	Supervision			4,538	2% of B&C Works
	<b>Sub Total</b>			<b>9,076</b>	
<b>D</b>	<b>TOTAL</b>	<b>2,170</b>		<b>235,976</b>	
	<b>Say</b>			<b>236,000</b>	

ANNEXURE- 1.3				
DAIRY & FRUIT JUICE PROJECT				
ESTIMATED COST OF PLANT & MACHINERY				
S.No.	Item	USD	Amount (RO)	Remarks
		2.58		
A	<b>PRODUCTION LINE 10,000 LIT/ HR</b>			
	<i>Supplier-Alpes Industries Services International LTD.</i>			
1	Milk Reconstitution	49,376		
2	Juice and Milk Pasteurisation and Homogenisation 10,000 lit/hr	149,942		
3	Laban Process and Storage	164,153		
4	CIP 1 pressure lines 20,000 lit/hr	90,975		
5	Process Piping	32,191		
6	Air Compressor and accessories 180 m3/hr	14,137		
7	Steam Boiler and accessories 1000 kg/hr	77,679		
8	Integrated Water Cool Chiller and accessories	73,956		
9	Water Treatment System	44,655		
10	Electricals	40,309		
11	Spare parts	75,000		
12	<b>Total ex-works</b>	<b>812,373</b>		
13	Packing, Insurance & Transport	48,342		
14	<b>CIF</b>	<b>860,715</b>		
15	Installation, commissioning, training, etc.	212,980		
	<b>Total</b>	<b>1,073,695</b>	<b>416,161</b>	
B	<b>Chiller Room &amp; Warm Room</b>			
	<i>SupplierSalalah Refrigerations &amp; Services Co. LLC</i>			
1	Chiller Room & Warm Room			
2	Chiller Room 20m x 15m x 1.4m		31,081	
3	Chiller Room 3m x 2m		4,474	
4	Chiller Room 10m x 4m x 3m		15,070	
5	Warm Room 2m x 2m x 3m		4,395	
6	Warm Room 15m x 7m x 3m		10,283	
	<b>Sub Total</b>		65,303	
	Less - Discount		1,303	
	<b>Total</b>		<b>64,000</b>	
C	<b>Factory Shelve &amp; Pakaging Unit</b>			
	<i>Supplier-Mohamed Al Shamsi Modern Projects</i>			
1	Factory Shelve 10m x 2.7m x 0.9m: 35@ RO 355		12,425	

ANNEXURE- 1.3				
DAIRY & FRUIT JUICE PROJECT				
ESTIMATED COST OF PLANT & MACHINERY				
S.No.	Item		Amount	Remarks
		USD	(RO)	
2	Gondola shelving ht 1.8m; 20 m@ RO 283.750		5,675	
3	HVAC PACKAGE UNIT: 6 @ RO 13,200		79,200	
	<b>Sub Total</b>		<b>97,300</b>	
D	Automatic Form, Fill and Seal Packaging Machine for Plain Yogurt or Fruit Flavoured	159,800	<b>70,910</b>	
E	Water and Laban Machines		<b>150,500</b>	350000 Euro
	<b>Total</b>		<b>798,871</b>	
F	Misc.Equipments		55,921	Estimated
G	<b>Grand Total</b>		854,792	
	<b>Say</b>		<b>855,000</b>	



ANNEXURE- 1.4					
DAIRY & FRUIT JUICE PROJECT					
ESTIMATED COST OF VEHICLES & INTERNAL TRANSPORT					
S.No.	Item	Q'ty (Nos.)	Rate	Amount (R.O)	Remarks
1	Vehicles for Office use	3	8,500	25,500	
	<b>Sub Total</b>	<b>3</b>		<b>25,500</b>	
<b>B</b>	<b>INTL TRANSP. EQUIPMENT/Vehicle</b>				
1	Fork lifts- 3 T	2	15,000	30,000	
	<b>Sub Total</b>	<b>2</b>		<b>30,000</b>	
	<b>Registration and other expenses</b>			<b>5,550</b>	
	<b>TOTAL (Rounded off)</b>	<b>3</b>		<b>61,000</b>	

ANNEXURE- 1.5					
DAIRY & FRUIT JUICE PROJECT					
ESTIMATED COST OF FURNITURE & OFFICE EQUIPMENT					
S.No.	Item	Q'ty	Rate	Amount	Remarks
				(R.O)	
<b>A</b>	<b>Furniture &amp; Fixtures</b>				
1	Office Furniture			10,400	<i>Lumpsum (RO 200/employee)</i>
	<b>Sub total</b>			<b>10,400</b>	
<b>B</b>	<b>Office Equipment</b>				
1	Computers & Printers	12	350	4,200	
2	Photocopier	2	1,000	2,000	
3	Fax, telephone etc			1,000	
4	Other Office equipment			1,500	
5	Air Conditioner	20	350	7,000	
6	Miscellaneous items			500	
	<b>Sub total</b>			<b>16,200</b>	
	<b>TOTAL</b>			<b>26,600</b>	
				<b>27,000</b>	

ANNEXURE- 1.6				
DAIRY & FRUIT JUICE PROJECT				
ESTIMATED COST OF PRE-OPERATIVE EXPENSES				
S.No	Item		Amount	Remarks
		(R.O)	(R.O)	
1	Preliminary Expenses		5,000	Up to formation of Co.
2	Feasibility Studies		7,000	
3	Project Management Expenses		35,375	2.5% of the project cost
4	Company Employees			
a	Salary & benefits - Plant Manager	4,480		2 Months
b	Salary & benefits - Admin. Staff	4,900		1 Month
	Sub Total		9,380	
c	Visa, Passage etc.			
	Lower level employees (nos.)	25	22,500	
	Middle Level Employees (nos.)	3	3,900	
	Senior level employees (nos.)	5	12,500	
5	Financing Cost			
a	Institutional Loan Interest	25,470		At 6% for 6 months
b	Mortgage Expenses	4,245		At 0.5% on Institu: Loan
c	Other Bank Charges	1,500		Lumpsum
	Sub Total		31,215	
6	Communication		600	R.O 100/M for 6 Months
7	Travel		500	Lumpsum
8	Recruitment Charges		3,300	RO 100 per expat employee
9	Audit Fees, Legal Fees		1,200	Lumpsum
10	Insurance		1,091	At 0.1 % of Plant & Bldg.
11	Start Up Expenses		500	Estimate
12	Product Launching, Advt. etc.		5,000	Provision
13	Miscellaneous		1,000	Provision
	Total		140,061	
	Say..		140,000	

ANNEXURE- 1.7					
DAIRY & FRUIT JUICE PROJECT					
ESTIMATES OF CONTINGENCY AND ESCALATION					
S. No.	Item	Cost	Rate	Provision	Remarks
		(R.O)	( % )	(R.O)	
A	<b>FIXED ASSETS</b>				
1	Land for Plant Site	29,000	5.0	1,450	
2	Building etc.	236,000	5.0	11,800	
3	Plant & Machinery	855,000	5.0	42,750	
4	Vehicles and Int. Transport	61,000	5.0	3,050	
5	Furniture & Office Equip.	27,000	5.0	1,350	
6	Pre- Operative Expenses	140,000	5.0	7,000	
	<b>TOTAL</b>			67,400	
				<b>67,000</b>	say

ANNEXURE- 1.8								
DAIRY & FRUIT JUICE PROJECT								
ESTIMATES OF WORKING CAPITAL REQUIREMENTS								
S.No.	Item	Req.		1	2	3	4	Remarks
				In RO '000				
1	Acct. Receivable	60	Days	208	262	270	276	Cost of sales - Non C Ex.
2	Raw Materials	45	Days	73	102	105	108	
3	Consumables &Packing	1	Month	5	7	7	7	
4	Utilities	1	Month	9	9	9	9	
5	Factory Wages	1	Month	12	13	13	14	
6	Admin Expenses	1	Month	6	6	7	7	
7	Sales Expenses	1	Month	16	20	20	21	
8	Work in Progress	1	Day	3	3	3	4	At Factory Cost
9	Finished Goods	0.5	Month	45	113	117	119	At total Cost-Non cash-Selling and Distribution
10	Finance Cost	1	Month	5	5	5	5	At Finance Cost
11	<b>Total</b>			<b>381</b>	<b>541</b>	<b>557</b>	<b>570</b>	
11	<b>Payables</b>							
	Raw Materials	0	Month	0	0	0	0	
	<b>Subtotal</b>			0	0	0	0	
	<b>Total Working capital</b>			<b>381</b>	<b>541</b>	<b>557</b>	<b>570</b>	

ANNEXURE- 2												
DAIRY & FRUIT JUICE PROJECT												
COST OF SALE												
Year of Operation		1	2	3	4	5	6	7	8	9	10	
Utilization												
Laban		10%	12%	13%	13%	14%	14%	14%	14%	14%	14%	
Fruit Juices		14%	22%	22%	23%	24%	24%	24%	24%	24%	24%	
Labneh		35%	48%	50%	51%	53%	53%	53%	53%	53%	53%	
Yogurt		17%	26%	26%	27%	28%	28%	28%	28%	28%	28%	
1	Raw Materials	590	829	853	879	905	905	905	905	905	905	45% os sales realisation
2	Packing Material	59	83	85	88	91	91	91	91	91	91	At 10% of RM Cost
3	Utilities	102	102	102	102	102	102	102	102	102	102	At 60% of utility - Ref. Annexure 2.1
4	Factory Wages	150	154	159	164	168	174	179	184	190	195	Ref Annexure 2.2
5	<b>PRIME COST</b>	<b>901</b>	<b>1,168</b>	<b>1,200</b>	<b>1,233</b>	<b>1,267</b>	<b>1,272</b>	<b>1,277</b>	<b>1,282</b>	<b>1,288</b>	<b>1,294</b>	Sub total of 1 to 4
6	Rent for land	5	5	5	5	5	6	6	6	6	6	<i>RO 1 per Sq. M/ Year and Incremented by 15% after 5 years</i>
7	Factory Overheads	25	31	38	38	38	38	38	38	38	38	Ref Annexure 2.3 & 2.6
8	Misc. Factory Exp.	9	12	12	13	13	13	13	13	13	13	At 1% of (5) & (7)
9	<b>FACTORY COST</b>	<b>940</b>	<b>1,216</b>	<b>1,255</b>	<b>1,288</b>	<b>1,322</b>	<b>1,328</b>	<b>1,334</b>	<b>1,339</b>	<b>1,345</b>	<b>1,350</b>	Sub total of 6 to 8
10	Admin. Salaries	63	65	67	69	71	73	75	77	80	82	Ref Annexure 2.2
11	Admin. Expenses	11	12	12	13	13	14	15	15	16	17	Ref Annexure 2.4
12	<b>TOTAL ADMIN COST</b>	<b>74</b>	<b>76</b>	<b>79</b>	<b>82</b>	<b>84</b>	<b>87</b>	<b>90</b>	<b>93</b>	<b>96</b>	<b>99</b>	<b>Sum (10) &amp; (11)</b>
13	Sales Salaries	70	72	74	76	78	81	83	86	88	91	Ref Annexure 2.5
14	Distribution cost	105	147	152	156	161	161	161	161	161	161	At 8% of the sales realization
15	Advert.& Business Promotior	13	18	19	20	20	20	20	20	20	20	At 1% of Sales
16	<b>TOTAL SALES &amp; DISTRIBUTION COST</b>	<b>188</b>	<b>238</b>	<b>245</b>	<b>252</b>	<b>260</b>	<b>262</b>	<b>264</b>	<b>267</b>	<b>269</b>	<b>272</b>	<b>Sum of (13 to 15)</b>
17	<b>OPERATING COST</b>	<b>1,202</b>	<b>1,530</b>	<b>1,579</b>	<b>1,622</b>	<b>1,666</b>	<b>1,677</b>	<b>1,688</b>	<b>1,699</b>	<b>1,710</b>	<b>1,722</b>	<b>Sum (9)+(12)+(16)</b>
	<b>FINANCE COST</b>											
18	Int on Institutional finance	51	51	51	45	38	31	24	16	9	2	Ref Annexure 2.7
19	Int on working capital	14	14	14	14	14	14	14	14	14	14	Ref Annexure 2.7
20	Total finance cost	65	65	65	59	52	45	37	30	23	16	Sum(18)+(19)
	<b>NON-CASH EXPENSES</b>											
21	Depreciation	125	125	125	125	125	125	125	125	125	125	Ref Annexure 2.6
22	Prelim Expenses written off	140	0	0	0	0	0	0	0	0	0	Ref Annexure 2.6
23	<b>COST OF SALE</b>	<b>1,531</b>	<b>1,719</b>	<b>1,768</b>	<b>1,806</b>	<b>1,843</b>	<b>1,847</b>	<b>1,850</b>	<b>1,854</b>	<b>1,857</b>	<b>1,862</b>	<b>Sum 17+20+21+22</b>

ANNEXURE- 2.1						
DAIRY & FRUIT JUICE PROJECT						
ESTIMATED COST OF UTILITIES						
S.No.	Item	Unit	Qty	Rate	Amount	Remarks
					(R.O)	
<b>A</b>	<b>Utilities</b>					
1	Electricity	KWH	3,150,000	0.03	94,500	Based on details from the quotation
2	Water	CM	30,000	0.770	23,100	
3	LPG	NM3	900,000	0.055	49,500	
4	Diesel	Ltrs	15,000	0.234	3,510	
<b>TOTAL</b>					<b>170,610</b>	

ANNEXURE- 2.2						
DAIRY & FRUIT JUICE PROJECT						
ESTIMATES OF ANNUAL SALARIES AND WAGES						
S. No.	Item	No of		Salary		Amount
		Personnel		(R.O)		(R.O)
A	PRODUCTION	Omanis	Expat	Omanis	Expat	
1	Operations Manager (for 2 lines)	0	2	0	800	19,200
2	Operations - Skilled (Key Technicians)	1	2	450	450	16,200
3	Support Labor	8	25	370	120	71,520
	<b>Sub Total</b>	<b>9</b>	<b>29</b>			<b>106,920</b>
	<b>Total Manpower Cost - Production</b>					
1	Total					106,920
2	Other Benefits @40% over and above Basic Salary					42,768
	<b>Total Cost</b>					<b>149,688</b>
B	ADMINISTRATION & ACCOUNTS					
1	General manager	0	1	0	1200	14,400
2	Finance Manager	0	1	0	800	9,600
3	Secretary	1	0	350	0	4,200
4	P.R.O.	1	0	500	0	6,000
5	Security Guards	2	0	325	0	7,800
	<b>Sub Total</b>	<b>4</b>	<b>2</b>			<b>42,000</b>
	<b>Total Manpower Cost - Admin &amp; Accounts</b>					
1	Total Salary					42,000
2	Other Benefits @50% over and above Basic Salary					21,000
	<b>Total Cost</b>					<b>63,000</b>
C	SALES					
1	Marketing Manager	1		1000		12,000
2	Sales Team	5	2	450	450	37,800
	<b>Sub Total</b>	<b>6</b>	<b>2</b>			<b>49,800</b>
	<b>Total Manpower Cost - Sales</b>					
1	Total Salary					49,800
2	Other Benefits @40% over and above Basic Salary					19,920
	<b>Total Cost</b>					<b>69,720</b>
D	GRAND TOTAL	<b>19</b>	<b>33</b>			<b>282,408</b>
	<b>TOTAL MANPOWER</b>	<b>52</b>				
	<b>Omanisation Ratio</b>	<b>37%</b>				



ANNEXURE- 2.3					
DAIRY & FRUIT JUICE PROJECT					
ESTIMATES OF ANNUAL FACTORY EXPENSES					
S.No.	Item	Year	Year	Year	Remarks
		1	2	3	
1	Repairs & Maintenance	4,275	6,413	8,550	<i>At 0.5 , 1.5% &amp; 2% of erected cost of P &amp; M</i>
2	Civil Repairs	590	590	590	<i>At 0.25 % of cost of Building and Civil Works</i>
3	Spare Parts	8,550	12,825	17,100	<i>At 1%, 1.5% and 2% of 'at-site' cost of P &amp; M</i>
4	Insurance	5,455	5,455	5,455	<i>At 0.5 % of cost Building, Plant and Machinery</i>
5	Forklift	6,000	6,000	6,000	<i>RO 100/month for 5 units</i>
	<b>TOTAL</b>	<b>24,870</b>	<b>31,283</b>	<b>37,695</b>	

ANNEXURE- 2.4			
DAIRY & FRUIT JUICE PROJECT			
ESTIMATES OF ANNUAL ADMINISTRATIVE EXPENSES			
S.No.	Item	Amount (R.O)	Remarks
1	Salaries & Benefits	63,000	
2	Rent-Accommodation & food	-	Included in Wages
3	Vehicle Expenses & Petrol	3,600	At R.O 100/Month
4	Telephone, Fax, internet etc.	1,200	At RO 100 /Month
5	Electricity & Water	1,200	At RO 100 /Month
6	Stationery, Postage etc.	600	At R.O 50/Month
7	Trade license/government fee	1,000	Lumpsum
8	Travel & Recruitment	1,000	Lumpsum
9	Legal, Audit Fees	1,000	Lumpsum
10	Insurance on fixed assets and employee medical	1,000	
11	Miscellaneous	350	At 5 % of above
	Total	<b>74,000</b>	

ANNEXURE- 2.5				
DAIRY & FRUIT JUICE PROJECT				
ESTIMATES OF ANNUAL SALES EXPENSES				
S.No.	Item		Amount	Remarks
		(R.O)	(R.O)	
	<b>SALES</b>			
1	Salaries		69,720	See Annexure 2.2
2	Advertisement		-	Provided Separately in Cost of sales
3	Business Promotion		-	Provided Separately in Cost of sales
4	Distribution cost			Provided Separately in Cost of sales
	Total		<b>69,720</b>	

ANNEXURE- 2.6						
DAIRY & FRUIT JUICE PROJECT						
DEPRECIATION CALCULATIONS						
S. No	Item	Cost	Rate (%)	S.V. (R.O)	Amount (R.O)	Renewals
<b>A</b>	<b>FIXED ASSETS</b>					
1	Land for Plant Site	29,000	0	0	-	Nil
2	Building etc.	236,000	5	118000	11,800	Nil
3	Plant & Machinery	855,000	10	0	85,500	Year 11
4	Vehicles and Int. Transp.	61,000	25	30500	15,250	Years 5, 9
5	Furniture & Office Equip.	27,000	20	0	5,400	Years 6, 11
6	Contingency & Escalation	67,000	10	0	6,700	Nil
7	Sub Total	1,275,000		148500	<b>124,650</b>	
<b>B</b>	<b>PRELIM &amp; PRE OPE: EXP</b>	140000	100	0	<b>140,000</b>	Nil
<b>C</b>	<b>WORKING CAPITAL</b>					
1	Working Capital	570000	0	570000	-	
<b>D</b>	<b>TOTAL</b>			<b>718,500</b>	<b>264,650</b>	
	Less Balance Loan			<b>229,000</b>		
<b>E</b>	<b>SALVAGE VALUE</b>			<b>489,500</b>		
	Note: S.V. = Salvage Value at the end of 10th year.					

ANNEXURE- 2.7									
DAIRY & FRUIT JUICE PROJECT									
LOAN & INTEREST CALCULATIONS									
	Term Loan				WC Loan		Interest		
No	Year	Prn	Int	Rep	Prn	Int	TL	WC	Rep
	7		6%			6%			
1		849	25.5		229	6.9			
2	1	849	25.5		229	6.9	50.9	13.7	0
3		849	25.5		229	6.9			
4	2	849	25.5		229	6.9	50.9	13.7	0
5		849	25.5		229	6.9			
6	3	849	25.5	61	229	6.9	50.9	13.7	61
7		788	23.7	61	229	6.9			
8	4	728	21.8	61	229	6.9	45.5	13.7	121
9		667	20.0	61	229	6.9			
10	5	606	18.2	61	229	6.9	38.2	13.7	121
11		546	16.4	61	229	6.9			
12	6	485	14.6	61	229	6.9	30.9	13.7	121
13		425	12.7	61	229	6.9			
14	7	364	10.9	61	229	6.9	23.7	13.7	121
15		303	9.1	61	229	6.9			
16	8	243	7.3	61	229	6.9	16.4	13.7	121
17		182	5.5	61	229	6.9			
18	9	121	3.6	61	229	6.9	9.1	13.7	121
19		61	1.8	61	229	6.9			
20	10	0	0.0		229	6.9	1.8	13.7	61

### ANNEXURE- 3

## DAIRY & FRUIT JUICE PROJECT

## ESTIMATED WORKING RESULTS

[illegible]

[illegible]

## DAIRY & FRUIT JUICE PROJECT

## ESTIMATES OF SALES REALIZATION

[illegible]

ANNEXURE- 4													
DAIRY & FRUIT JUICE PROJECT													
PROJECTED CASH FLOW STATEMENT													
	Year of Operation	0	1	2	3	4	5	6	7	8	9	10	
No	Item	In R.O'000											Remarks
<b>A</b>	<b>CASH INFLOW</b>												
1	Equity	718	0	0	0	0	0	0	0	0	0	0	Ref Annexure 1
2	Profit before Tax & Interest		-156	186	193	207	221	210	199	188	177	166	Ref Annexure 3
3	Depreciation	0	125	125	125	125	125	125	125	125	125	125	Ref Annexure 2.7
4	Preliminary expenses written off		140	0	0	0	0	0	0	0	0	0	Ref Annexure 2.7
5	Increase in Other term loan	849	0	0	0	0	0	0	0	0	0	0	Ref Annexure 1
6	Increase in Institutional Loan	0	0	0	0	0	0	0	0	0	0	0	Ref Annexure 1
7	Increase in W C loan	229	0	0	0	0	0	0	0	0	0	0	Ref Annexure 1
8	Other income	0											Ref Annexure 3
9	Sub Total	1,796	109	311	318	332	346	335	324	313	302	290	Sum of A1 to A8
<b>B</b>	<b>CASH OUTFLOW</b>												
1	Capital Project expenditure	1,275	0	0	0	0	61	27	0	0	61	0	Ref Annexure 1& 2.7
2	Other normal cap exp	140	0	0	0	0	0						Ref Annexure 1& 2.7
3	Increase in Working Cap:	381		160	16	13	0	0	0	0	0	0	Ref Annexure 1.7
4	Decrease in Institutional Loan	0	0	0	61	121	121	121	121	121	121	61	Ref Annexure 2.8
5	Decrease in Other term loan		0	0	0	0	0	0	0	0	0	0	
6	Interest on term loans		51	51	51	45	38	31	24	16	9	2	Ref Annexure 2.8
7	Interest on work cap loan		14	14	14	14	14	14	14	14	14	14	Ref Annexure 2.8
8	Income Tax	0	0	0	0	0	0	25	24	24	23	23	Ref Annexure 3.2
9	Dividend	0	0	0	0	0	0	0	0	0	0	0	Provision
10	Sub Total	1,796	65	225	141	194	234	218	183	175	228	99	Sum of B1 to B9
	<b>OPENING BALANCE</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>131</b>	<b>307</b>	<b>445</b>	<b>556</b>	<b>673</b>	<b>814</b>	<b>952</b>	<b>1,026</b>	
<b>C</b>	<b>SURPLUS</b>	<b>0</b>	<b>44</b>	<b>86</b>	<b>176</b>	<b>138</b>	<b>111</b>	<b>117</b>	<b>141</b>	<b>138</b>	<b>74</b>	<b>192</b>	Difference(A9)-(B10)
<b>D</b>	<b>CLOSING BALANCE</b>	<b>0</b>	<b>44</b>	<b>131</b>	<b>307</b>	<b>445</b>	<b>556</b>	<b>673</b>	<b>814</b>	<b>952</b>	<b>1,026</b>	<b>1,217</b>	



ANNEXURE- 5													
DAIRY & FRUIT JUICE PROJECT													
INTERNAL RATE OF RETURN ON TOTAL CAPITAL													
No	Year of Operation	0	1	2	3	4	5	6	7	8	9	10	Remarks
	Item	In R.O'000											
A	CASH INFLOW												
1	Net Profit bef. Tax		-220	122	128	148	169	165	162	158	154	150	Refer Annexure - 3
2	Depreciation	0	125	125	125	125	125	125	125	125	125	125	Ref Annexure 2.7
3	Prelim Exp written off		140	0	0	0	0	0	0	0	0	0	Ref Annexure 2.7
4	Finance Cost	0	65	65	65	59	52	45	37	30	23	16	Ref Annexure 2.8
5	Salvage Value	0	0	0	0	0	0	0	0	0	0	1,736	Ref Annexure 2.7
6	Sub Total	0	109	311	318	332	346	335	324	313	302	2,026	Sum of A1 to A5
B	CASH OUTFLOW												
1	Capital Project expenditure	1275	0	0	0	0	61	27	0	0	61	0	Refer Annexure - 1
2	Other normal cap exp	140	0	0	0	0	0	0	0	0	0	0	Refer Annexure - 1
3	Working Capital	381	0	160	16	13	0	0	0	0	0	0	Refer Annexure - 1
4	Income Tax		0	0	0	0	0	25	24	24	23	23	Refer Annexure - 3.2
5	Sub Total	1796	0	160	16	13	61	52	24	24	84	23	Sum of B1 to B4
C	NET CASHFLOW (AT)	(1,796)	109	151	302	319	285	283	300	289	218	2,004	
E	INTERNAL RATE OF RETURN ON TOTAL INVESTMENT							13.1%					

ANNEXURE- 6													
DAIRY & FRUIT JUICE PROJECT													
INTERNAL RATE OF RETURN ON EQUITY CAPITAL (AFTER TAX)													
No	Year of Operation	0	1	2	3	4	5	6	7	8	9	10	Remarks
	Item	In R.O'000											
<b>A</b>	<b>CASH INFLOW</b>												
1	Net Profit before Tax	0	-220	122	128	148	169	165	162	158	154	150	Refer Annexure- 3
2	Depreciation	0	125	125	125	125	125	125	125	125	125	125	Refer Annexure - 2.7
3	Prelim Exp written off	0	140	0	0	0	0	0	0	0	0	0	Refer Annexure - 2.7
4	Salvage Value	0	0	0	0	0	0	0	0	0	0	1736	Refer Annexure - 2.7
5	Sub Total	0	44	246	253	272	294	290	287	283	279	2011	Sum of A1 to A4
<b>B</b>	<b>CASH OUTFLOW</b>												
1	Equity	718	0	0	0	0	0	0	0	0	0	0	Refer Annexure - 1
2	Fixed Assets	0	0	0	0	0	61	27	0	0	61	0	Refer Annexure - 1
3	Working Capital	0	0	160	16	13	0	0	0	0	0	0	Refer Annexure - 1
4	Loan Installment	0	0	0	61	121	121	121	121	121	121	61	Refer Annexure - 2.8
5	Income Tax	0	0	0	0	0	0	25	24	24	23	23	Refer Annexure - 3.1
6	Sub Total	718	0	160	77	134	182	173	146	145	205	83	Sum of A1 to A5
<b>C</b>	<b>NET CASHFLOW</b>	<b>-718</b>	<b>44</b>	<b>86</b>	<b>176</b>	<b>138</b>	<b>111</b>	<b>117</b>	<b>141</b>	<b>138</b>	<b>74</b>	<b>1927</b>	
<b>D</b>	<b>INTERNAL RATE OF RETURN ON EQUITY INVESTMENT</b>								<b>20.71%</b>				

## ANNEXURE- 7

## DAIRY &amp; FRUIT JUICE PROJECT

## PROJECTED BALANCE SHEET

No	Year of Operation	0	1	2	3	4	5	6	7	8	9	10	
	Item	In R.O'000											Remarks
<b>A</b>	<b>ASSETS EMPLOYED</b>												
<b>1</b>	<b>Fixed Assets</b>												
a	Gross Fixed Assets	1,275	1,275	1,275	1,275	1,275	1,336	1,363	1,363	1,363	1,424	1,424	Refer Annexure - 2.7
b	Preliminary expenses	140	0	0	0	0	0	0	0	0	0	0	Refer Annexure- 2.7
c	Acc. Depreciation	0	125	249	374	499	623	748	873	997	1,122	1,247	Refer Annexure - 2.7
d	Net Fixed Assets	1,415	1,150	1,026	901	776	713	615	490	366	302	178	
<b>2</b>	<b>Current Assets</b>												
a	Cash	0	44	131	307	445	556	673	814	952	1,026	1,217	Refer Annexure - 4
b	Other Cur. Assets	381	381	541	557	570	570	570	570	570	570	570	Refer Annexure - 1.7
c	Total Cur. Assets	381	425	672	864	1,015	1,126	1,243	1,384	1,522	1,596	1,787	
<b>3</b>	<b>Less: Cur. Liabilities</b>	0	0	0	0	0	0	0	0	0	0	0	
	<b>Total</b>	<b>1,796</b>	<b>1,576</b>	<b>1,697</b>	<b>1,765</b>	<b>1,791</b>	<b>1,839</b>	<b>1,858</b>	<b>1,875</b>	<b>1,888</b>	<b>1,898</b>	<b>1,965</b>	
<b>B</b>	<b>FINANCED BY</b>												
1	Equity	718	718	718	718	718	718	718	718	718	718	718	Refer Annexure - 1
2	Subordinated Loan	0	0	0	0	0	0	0	0	0	0	0	
2	Statutory reserve		0	12	25	40	57	71	84	98	111	124	
3	General reserves	0	-220	-111	5	138	290	416	540	661	779	894	Cu.NP-Cu.Divident
4	Other term loan	0	0	0	0	0	0	0	0	0	0	0	Refer Annexure - 2.8
4	Institutional Finance	849	849	849	788	667	546	425	303	182	61	0	Refer Annexure - 2.8
5	Bank Borrowings	229	229	229	229	229	229	229	229	229	229	229	Refer Annexure - 2.8
	<b>Total</b>	<b>1,796</b>	<b>1,576</b>	<b>1,697</b>	<b>1,765</b>	<b>1,791</b>	<b>1,839</b>	<b>1,858</b>	<b>1,875</b>	<b>1,888</b>	<b>1,898</b>	<b>1,965</b>	

ANNEXURE-8

## DAIRY & FRUIT JUICE PROJECT

RATIO ANALYSIS									
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S. No	Years of Operation	1	2	3	4	5	6	7	8	9	10
A	COST RATIOS										
1	Raw Material / Total Sales	45%	45%	45%	45%	45%	45.0%	45.0%	45.0%	45.0%	45.0%
2	Packing Materials/Sales	5%	5%	5%	5%	5%	4.5%	4.5%	4.5%	4.5%	4.5%
3	Utilities / Total Sales	8%	6%	5%	5%	5%	5.1%	5.1%	5.1%	5.1%	5.1%
4	Factory wages / Total Sales	11%	8%	8%	8%	8%	8.6%	8.9%	9.2%	9.4%	9.7%
5	Prime Cost / Total Sales	69%	63%	63%	63%	63%	63.2%	63.5%	63.7%	64.0%	64.3%
6	Factory exp. / Total Sales	3%	3%	3%	3%	3%	2.8%	2.8%	2.8%	2.8%	2.8%
7	Factory Cost / Total Sales	72%	66%	66%	66%	66%	66.0%	66.3%	66.6%	66.8%	67.1%
8	Administrative exp. / Total Sales	6%	4%	4%	4%	4%	4.3%	4.5%	4.6%	4.8%	4.9%
9	Selling exp. / Total Sales	14%	13%	13%	13%	13%	13.0%	13.1%	13.3%	13.4%	13.5%
10	Finance Cost / Total Sales	5%	4%	3%	3%	3%	2.2%	1.9%	1.5%	1.1%	0.8%
11	Non-Cash exp. /Total Sales	20%	7%	7%	6%	6%	6.2%	6.2%	6.2%	6.2%	6.2%
12	Total Cost/ Sales	117%	93%	93%	92%	92%	91.8%	91.9%	92.1%	92.3%	92.5%
B	PROFITABILITY RATIOS										
1	PBDIT / Sales	8.3%	16.9%	16.8%	17.0%	17.2%	16.6%	16.1%	15.6%	15.0%	14.4%
2	Operating profit / Sales	-6.1%	6.6%	6.8%	7.6%	8.4%	8.2%	8.1%	7.9%	7.7%	7.5%
3	PAT / Sales	-16.8%	6.6%	6.8%	7.6%	8.4%	7.0%	6.8%	6.7%	6.5%	6.3%
4	PAT / Investment	-14.1%	7.8%	8.2%	9.4%	10.8%	9.0%	8.8%	8.6%	8.4%	8.1%

ANNEXURE- 9				
DAIRY & FRUIT JUICE PROJECT				
BREAK EVEN ANALYSIS				
S. No	Item	Year 1	Year 6	Remarks
		In R.O '000		
<b>A</b>	<b>FIXED COST</b>			
1	Production Wages	150	174	Refer Annexure - 2
2	Factory Overheads	25	38	Refer Annexure - 2
3	Misc. Factory Exp.	9	13	Refer Annexure - 2
4	Admin. Expenses	74	87	Refer Annexure - 2
5	Sales Expenses	188	262	Refer Annexure - 2
6	Depreciation	140	125	Refer Annexure - 2
7	Prelim. Expenses written off	140	0	Refer Annexure - 2
8	Financing Cost	65	45	Refer Annexure - 2
9	Income Tax	0	25	Refer Annexure - 2
	<b>Sub Total</b>	<b>790</b>	<b>767</b>	
<b>B</b>	<b>VARIABLE COST</b>			
1	Raw materials	649	996	Refer Annexure - 2
2	Utilities	102	102	Refer Annexure - 2
3	Misc. Expenses	0	0	
	<b>Sub Total</b>	<b>751</b>	<b>1,098</b>	
<b>C</b>	<b>SALES</b>	1,311	2,012	Refer Annexure - 3
<b>D</b>	<b>CONTRIBUTION</b>	559	914	Difference C - B
<b>E</b>	<b>BREAK EVEN POINT</b>	141	84	As % of Production (A/D)
		50	44	As % of Plant Capacity (E/Cap. Util for Year 6)
<b>F</b>	<b>CASH BEP</b>	91	70	As % of Production (A-A6-A7)/D)
		32	37	As % of Plant Capacity (F/Cap. Util for Year 6)

ANNEXURE- 10					
DAIRY & FRUIT JUICE PROJECT					
SENSITIVITY ANALYSIS ( IRR FOR 10 YEARS)					
S. No.	Item	Projection	Change in One		
		No Change	Variable at a Time		
<b>A</b>	<b>VARIABLE</b>	<b>Original</b>	<b>Reduction in Volume</b>	<b>Increase in RM Cost</b>	<b>Reduction in Sales Realization</b>
				Cost	Value
<b>B</b>	<b>PESSIMISTIC</b>				
	Change		<b>-10%</b>	<b>10%</b>	<b>-10%</b>
1	IRR on Investment	13.1%	8.7	8.7	3.0
2	IRR on Equity	20.7%	12.4	12.4	2.8

## ANNEXURE- 11

## DAIRY & FRUIT JUICE PROJECT

DEBT SERVICE COVERAGE RATIO	
2017	1.17
2016	1.17
2015	1.17
2014	1.17
2013	1.17
2012	1.17
2011	1.17
2010	1.17
2009	1.17
2008	1.17
2007	1.17
2006	1.17
2005	1.17
2004	1.17
2003	1.17
2002	1.17
2001	1.17
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1950	1.17
1949	1.17
1948	1.17
1947	1.17
1946	1.17
1945	1.17
1944	1.17
1943	1.17
1942	1.17
1941	1.17
1940	1.17
1939	1.17
1938	1.17
1937	1.17
1936	1.17
1935	1.17
1934	1.17
1933	1.17
1932	1.17
1931	1.17
1930	1.17
1929	1.17
1928	1.17
1927	1.17
1926	1.17
1925	1.17
1924	1.17
1923	1.17
1922	1.17
1921	1.17
1920	1.17
1919	1.17
1918	1.17
1917	1.17
1916	1.17
1915	1.17
1914	1.17
1913	1.17
1912	1.17
1911	1.17
1910	1.17
1909	1.17
1908	1.17
1907	1.17
1906	1.17
1905	1.17
1904	1.17
1903	1.17
1902	1.17
1901	1.17
1900	1.17
1899	1.17
1898	1.17
1897	1.17
1896	1.17
1895	1.17
1894	1.17
1893	1.17
1892	1.17
1891	1.17
1890	1.17
1889	1.17
1888	1.17
1887	1.17
1886	1.17
1885	1.17
1884	1.17
1883	1.17
1882	1.17
1881	1.17
1880	1.17
1879	1.17
1878	1.17
1877	1.17
1876	1.17
1875	1.17
1874	1.17
1873	1.17
1872	1.17
1871	1.17
1870	1.17
1869	1.17
1868	1.17
18	

[illegible]