

# Pre-Feasibility Study

## APPLE GRADING, WAXING AND PACKING UNIT

(FOR GILGIT BALTISTAN)



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## 1. DISCLAIMER

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## 2. EXECUTIVE SUMMARY

Apples are in abundance but have limited shelf life and low market appeal due to their perishable nature. The entire process flow is semi-automatic requiring both skilled and unskilled workers. The unit will treat and pack the mentioned products on internationally acceptable standards making the final product compatible enough for local market and even export. The unit would add value to the fruit by bringing it to the international standards, giving it greater shelf-life and lowering the overall wastages.

There are several issues with apple grading, packing and waxing that hinders its overall value, price and market. This study is focused on proper grading, waxing and packing of fresh apple to overcome the above issues.

There are other fresh fruit such as cherries and apricot in Gilgit Baltistan but the fact is that cherries and apricot has got abundant market and higher prices in fresh form. Both cherries and apricot have lesser shelf life as compare to Apple and thus grading, waxing and packing would not add value and would not affect its prices in either retail or wholesale markets.

The proposed business involves a total investment of about Rs. 35.70 million. This includes capital investment of Rs. 34.07 million and Rs. 1.6 million as initial working capital. The project is financed through 40% debt and 60% equity. The Net Present Value (NPV) of the project is around Rs. 12.87 million with an Internal Rate of Return (IRR) of 24% and a payback period of 4.39 years.

The suitable locations for setting up the proposed unit is Gilgit Baltistan, the reason is that abundant quantity of fresh apple is produced. Within Gilgit Baltistan the main city and surrounding areas of **Gilgit** is proposed and the reason is that already business activities are operational there, transport, infrastructure and access to other high end down markets of Pakistan is available. The unit will provide direct employment opportunities to 29 people including management, skilled, semi-skilled and support staff. Higher return on investment and a steady growth of business is expected with the entrepreneur having some prior experience or education in the related field of business. The legal business status of this project is proposed as Sole Proprietorship.

### 3. Introduction to SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs" , SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of pre feasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the pre feasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need based capacity building programs of different types in addition to business guidance through help desk services.

### 4. Purpose of the Document

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in Apple Waxing, Grading & Packing Unit by providing them with a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding

source regarding various aspects of business set-up and its successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form basis of any Investment Decision.

## 5. Project Profile

The project is about starting the business of apple processing i.e. grading, waxing and packing in Gilgit Baltistan. There are other fresh fruit such as cherries and apricot but the fact is that cherries and apricot has got abundant market and higher prices in fresh form. Grading, waxing and packing would not add value and would not affect its prices in either retail or wholesale markets.

### 5.1 Project Brief

The project's objective is to process apples that are in abundance but has limited shelf life and low market appeal due to their perishable nature. The entire process flow is semi-automatic requiring both skilled and unskilled workers. The unit will treat and pack the mentioned products on internationally acceptable standards making the final product compatible enough for local market and even export. The unit would add value to the fruit by bringing it to the international standards, giving it greater shelf-life and lowering the overall wastages.

### 5.2 Rationale

Pakistan produces some of the best quality fruits in the world. Pakistan is world's 10th largest country with almost 1.5 Million tons of Apple production. There are many kinds of apples in Gilgit Baltistan but the well-known kinds are "golden" , "red " , " star" and "five star". Similarly the apricot is also produced in bulk in Gilgit Baltistan. This Feasibility Study is proposed for Apple Grading, Waxing and Packing.

There are other fresh fruit such as cherries and apricot in Gilgit Baltistan but the fact is that cherries and apricot has got abundant market and higher prices in fresh form. Both cherries and apricot have lesser shelf life as compare to Apple and thus grading, waxing and packing would not add value and would not affect its prices in either retail or wholesale markets.

**Table 1: Exports of Major Fruits**

Commodity	2011-12		2010-11	
	Quantity	Value	Quantity	Value
APPLE (FRESH)	1,448,951	48,862	1,328,972	47,914
APPLES (DRIED)	7,042	1,771	-	-
PEARS AND QUINCES,(FRESH)	1,748,835	60,190	137,124	4,779
PEACHES(ARROO)	15,122	1,095	235	110
APRICORTS;FRESH(KHUBANI)	155,088	18,394	158,102	23,296
APRICOTS DRIED	326,125	78,470	644,217	158,715
PEACHES,(AAROO) FRESH	786,776	36,161	671,160	26,887
PLUMS AND SLOES	41,798	11,872	35,072	6,199
<b>Total Exports</b>	<b>4,529,737</b>	<b>256,815</b>	<b>2,974,882</b>	<b>267,900</b>

Source: Pakistan Bureau of Statistics

The weaknesses in Gilgit Baltistan Fruit Sector Practices are as follows;

**a. Grading**

Lack of product uniformity within a container is a serious constraint to marketing fresh fruit, particularly for export. It is very important to have as much uniformity in size, shape, and color within the package as possible. Many countries have national grade standards for each individual commodity that growers must adhere to in marketing their products. Such grade standards do not exist in Pakistan, and therefore a wide variation in fruit quality is common in the domestic market. This does not facilitate orderly marketing of the products and buyers are reluctant to pay premium prices because of this lack of product consistency. In some cases, apples, which have fallen from the tree onto the ground, are put on the bottom layers of the wooden crate and the better appearing fruit are packed on the top layers. Bruised and partially decayed fruit are often mixed in the same container as good fruit.

**b. Waxing**

A dull surface appearance diminishes the attractiveness of apples. Food-grade waxes are widely used internationally on apples to enhance their appearance and reduce shriveling. For those markets in which appearance is critical, apple growers should have available the capability to wax their fruit. The mechanics of waxing generally consists of applying a liquid form of wax to the dry surface of the fruit following washing. The procedure is generally automated and part of the packinghouse operation. However, waxing of individual apple fruit can be done where manual labor is adequate.

**c. Packing**

The packing materials used by the majority of Pakistani fruit growers are not conducive to protecting the product quality and are inferior in appearance and design for the export market. Unfinished 18-kg wooden crates are widely used for domestic marketing of apples. The outer appearance of the crate is not attractive and does not enhance the value of the product inside. Furthermore, the rough inner surface of the standard wooden crate can result in significant physical injury to the delicate skin of the commodity if it comes in direct contact with the rough wood surface. Newspaper and straw are commonly used to protect the fruit inside the wooden crate, but these materials are not appropriate for marketing fruit to supermarkets, high-end shops, or for export. Furthermore, the crates are often over-filled and considerable abrasion and compression bruising of the fruit occurs inside the crate. The additional weight of the wooden crates versus corrugated cartons results in higher transport costs. Food safety regulations and packing restrictions against the use of wood containers in many export markets will preclude the use of this type of packing in the international market. Strong, well-ventilated, attractive corrugated cartons are the norm in packing fruit for export.

## **5.3 Marketing Strategy**

### **5.3.1 Promotional Strategies**

Fruit consumers are getting hygiene conscious day by day throughout the country and abroad and try to purchase properly processed and packed fruits from well-established stores. Such a growing demand can be properly tapped by following few of the below mentioned strategies.

### **5.3.2 Promotion through media**

The most important issue when starting a new business idea is getting the word out. Using a web page is a popular way of doing this. Similarly, television and print media can also be very effective in spreading the news about a new brand amongst the general fruit consumers.

### **5.3.3 Participation in fruit melas/fairs**

Participating in different fruit fares programs will increase the brand awareness in the local and international markets and will increase the chances of establishing business networking with different fruit buyers within and outside the country resulting in future supply orders.

### **5.3.4 Location**

Location of the unit also could play an important role in marketing and promoting processed apples. A location near the fruit mandi would increase attraction from bulk apple buyers and suppliers. However, since proximity of the unit to the apple orchards is also equally important for reducing operational charges adding to net returns, therefore, the investor has to make the decision about Processing unit's location accordingly.

### **5.3.5 Pricing Strategy**

Pricing strategy plays important role in any business's success and sustainability. The investor is recommended to adopt different pricing strategy for domestic and international markets followed by extensive market research and updates.

## **6. Project Requirements**

The project's main requirement would be the complete Apple Grading Unit. Other requirements include appropriate space, human resource, office equipment and basic utilities. These equipment are easily and readily available in the local markets.

### **6.1 Standards for Apple Processing/Grading & Waxing Unit**

#### **6.1.1 Roller Feed Conveyor Roller Belt Conveyor**



Length: 6 Feet  
 Width: 3 Feet  
 Height: 3.5 Feet

**Stand Size:**

Channel Stand 2" X 4", Mild Steel (M.S)	Gauge 12
Structure Sheet (Mild Steel)	Gauge 12
Supporting Sheet (Mild Steel)	Gauge 16

**6.1.2 Roller Sorting Conveyer**

Length 8ft (length Adjustable)  
 Width (Net) 4ft (length Adjustable)

Arranged with sorting bins on both sides with belt underneath to send sorted fruit in main sorting conveyer

Rollers (Aluminum)	Gauge 14
Inner Sheet with Rollers (Stainless Steel)	Gauge 14
Channel Stand 2" X 4", Mild Steel (M.S)	Gauge 12
Structure Sheet (Mild Steel)	Gauge 12
Supporting Sheet (Mild Steel)	Gauge 16

**6.1.3 Roller Brush Washer**

Brush roller 30 with Food Grade brushing material (Imported EU, American or Equivalent)

Roller Shaft (S.S)	
Inner Sheet with Rollers (S.S)	Gauge 14
Channel Stand 2" X 4" (S.S)	Gauge 12
Main Structure (S.S)	Gauge 12
Supporting Sheet (S.S)	Gauge 16

Conveyer with adjustable speed (1X25).

**6.1.4 Roller Foam Dryer**

10 foam roller + 2 brush roller 1 at start and 1 at end Foam roller press at the bottom for excessive water removal

Rollers (Foam & Bottom), Aluminum	Gauge 14
Inner Sheet with Rollers (Stainless Steel)	Gauge 14
Channel Stand 2" X 4"	Gauge 12
Main Structure Steel	Gauge 12
(10 should be used for good results)	
Supporting Sheet	Gauge 16

(Chamber /structure will be closed and fitted with a blower for good performance)

### 6.1.5 Hot Air Dryer

Whole structure/chamber closed

Length 16ft

Width 4-5ft

Channel Stand 2" X 4" (M.S)	Gauge 12
Main Structure Steel (M.S)	Gauge 12
Supporting Structure Sheet (M.S)	Gauge 16
Fitted with S.S roller	Gauge 14
Inner Sheet with Rollers (Stainless Steel)	Gauge 14

Electric & Gas Burner options (Make: European Origin) with Automatic Temperature Control. Blower Motor 2hp (Make: European Union or equivalent)

Shooter Fan, Blower with Aluminum/ appropriate Propellers (Gauge 16)  
fan blades 18" X 24" (With proper chimney for exhaust).

### 6.1.6 Roller Sorter

Length 6ft (Adjustable)

Width 4ft (Adjustable)

With sorting bins on both sides with belt underneath to send sorted fruit main sorting conveyer

Rollers (Aluminum)	Gauge 14
Inner Sheet with Rollers (Stainless Steel)	Gauge 14
Channel Stand 2" X 4", Mild Steel (M.S)	Gauge 12
Structure Sheet (Mild Steel)	Gauge 12
Supporting Sheet (Mild Steel)	Gauge 16

### 6.1.7 Roller Waxing System

Channel Stand 2" X 4" (M.S)	Gauge 12
Main Structure Sheet (M.S)	Gauge 12
Supporting Structure Sheet (M.S)	Gauge 16
Roller Base (S.S)	Gauge 16
Inner Sheet with Rollers (Stainless Steel)	Gauge 14

Brush roller 10 with soft food grade brushing material (Imported EU, American or Equivalent) Stainless Steel Wax Spray Pump (European Origin or equivalent)  
Spray nozzles 4-5, longitudinal side Height adjustable

### 6.1.8 Hot Air Dryer (II)

Whole structure/chamber closed

Length 18-19ft  
Width 4-5ft

Channel Stand 2" X 4" (M.S)	Gauge 12
Main Structure Steel (M.S)	Gauge 12
Supporting Structure Sheet (M.S)	Gauge 16
Fitted with S.S roller	Gauge 14
Inner Sheet with Rollers (Stainless Steel)	Gauge 14

Electric & Gas Burner options (Make: European Origin) with Automatic Temperature Control.

Blower Motor 2hp (Make: European Union or equivalent)

Shooter Fan, Blower with Aluminum Appropriate Propellers (Gauge 16) fan blades 18" X 24" (With proper chimney for exhaust).

### 6.1.9 Sizer/Grader

42-45 fingers and 8 sizes with rollers and fingers with food grade rubber

Channel Stand 2" X 4" (M.S)	Gauge 12
Main Structure Sheet (M.S)	Gauge 12
Supporting Structure Sheet (M.S)	Gauge 16

Horizontal belt conveyer (M.S) 18inch wide (Belt Thickness 3mm, Food Grade) with packing trays (S.S)

Apart from the aforementioned important machinery there are some other machines that need to be procured.

## 7. Process Flow

Process follow is given as follows;

- **Washing and sterilization (Sanitation unit)**

Apples are washed and disinfected with the introduction of chlorine and other chemical disinfectant.

- **Sorting**

The sorting of apples are carried out according to predetermined parameter as per demand led strategy.

- **Defect Identification**

The defected apples including culls are identified and are removed from the processing line.

- **Waxing**

The apples are waxed to protect the fruit humidity.

- **Additional protective coating**

An extra precautionary protective and decorative value added measure for top quality of apple as per the demand of the consumer market.

- **Drying**

After waxing the apples are dried through drying tunnel in a very precise manner.

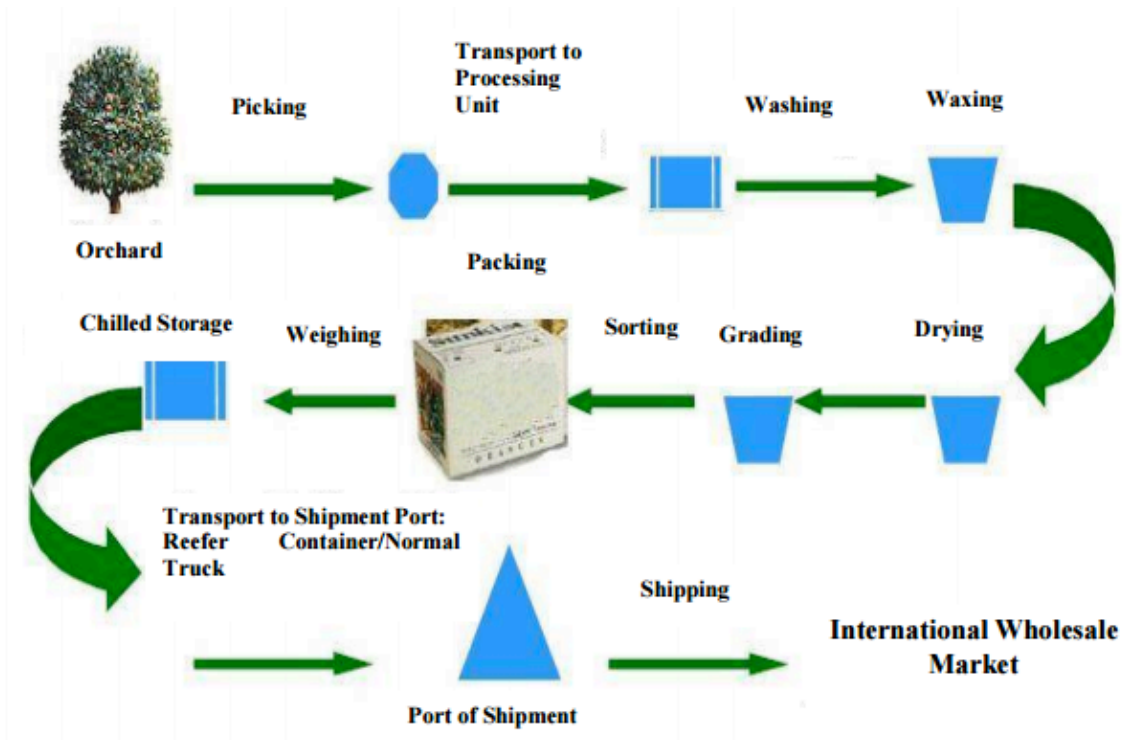
- **Grading**

- ✓ Color grading
- ✓ Size grading
- ✓ Weight grading
- ✓ Shape grading

- **Packing**

The packing of apples are carried out as per requirement. Mostly apples are packed in 5Kg and 10Kg (corrugated carton packs) for each variety of the graded fruit.

## **The Process Flow Chart**



## 8. CRITICAL FACTORS

The commercial viability of the proposed Unit depends on the following critical factors:

- Technical know-how and relevant experience of entrepreneur.
- Suitable location where raw material and skilled labor having relevant technical know-how is easily available.
- Ability to generate work orders through appropriate networking, direct marketing and negotiating long term contracts.
- Higher return on investment and a steady growth of business is closely associated with regular training and capacity building of the entrepreneur and employees.
- The most important factor for the success of the project would be the quality products and customer satisfaction in order to get a comparative advantage.

## 9. GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The suitable locations for setting up the proposed unit is Gilgit Baltistan, the reason is that abundant quantity of fresh apple is produced. Within Gilgit Baltistan the main city and surrounding areas of **Gilgit** is proposed and the reason is that already business activities are operational there, transport, infrastructure and access to other high end down markets of Pakistan is available.

## 10. POTENTIAL TARGET CUSTOMER/MARKETS

The target customers for this Apple Processing Unit are domestic and international apple wholesalers and retailers. Key markets are Fruit Wholesale dealers in Gilgit Baltistan, Islamabad, Lahore and etc, if proper transport system is developed.

## 11. PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of apple grading, waxing and packing unit. Various cost and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are also attached as annexure.

### 11.1 Project Economics

All the figures in this financial model have been calculated for estimated sale of Rs 15.87 million in the first year. The capacity utilization for year one is worked out at 60% with 5% increase in subsequent years up to the maximum capacity utilization of 95%. Total 25% of wastage is assumed for per unit of production.

**Table 1- Project Economics**

Description	Details
Internal Rate of Return (IRR)	24%
Payback Period (Yrs)	4.39
Net Present Value (NPV) Rs.	<b>12,878,883</b>

## 11.2 Project Financing

Total cost of the proposed unit is Rs.35.70 million including half of the contribution from equity and half from bank borrowings. Following table provides details of the equity required and variables related to bank loan;

**Table 2- Project Financing**

Description	Details
Total Equity (60%)	21,422,689
Bank Loan (40%)	14,281,793
<b>Total</b>	<b>35,704,482</b>
Mark up to the Borrower (%age / year)	
Long term loan (5 years)	12 %

## 11.3 Project Cost

The proposed unit will be started at a rented building thus there is no requirement for land and infrastructure development. Total capital costs and working capital requirements for operations of the proposed unit have been identified and outlined below;

**Table 3: Project Cost**

Description	Amount Rs.
<b>Capital Cost</b>	
Land	1,850,000
Infrastructure Development	26,750,000
Machinery and Equipment	4,000,000
Furniture and Fixtures	234,500
Office Vehicles	974,650
Office Equipment	200,000
Pre Operating Costs	67,704
Training Costs	
<b>Total Capital Cost</b>	<b>34,076,854</b>
<b>Working Capital</b>	
Equipment and Spare Parts Inventory	204,120
Raw Material Inventory	875,070
Upfront Insurance Payment	48,733
Cash	500,000
<b>Total Working Capital</b>	<b>1,627,923</b>
<b>Total Project Cost</b>	<b>35,704,482</b>

### 11.4 Space Requirement & Civil Works

After the discussion with market players, around 18,500 sq ft. area will be sufficient for installation of this unit. The land will be acquired on lease and prevailing rate of lease per sq ft is estimated to be Rs 100<sup>1</sup>.

Civil works are divided into management building, factor area, store and grounds for future expansion. Per sq ft construction rate is estimated to Rs 1500 for covered area whereas Rs 1,000 is estimated to be for grounds including pavements, pathways, boundary wall etc.<sup>2</sup>

**Table 4: Space Requirement**

Space Requirement (in ft.)	Units
Management Building (Sq. Ft)	500
Production Area (Sq. Ft)	12,000
Store for Raw Material (Sq. Ft)	4,000
Grounds (Sq. Ft)	2000
<b>Total (Sq. Ft)</b>	<b>18,500</b>

### 11.5 Machinery and Other Equipment

Machinery and equipment for the proposed project will cost a total of Rs 4.0 million as it will be procured from local manufacturers in Lahore etc and will be custom-made. Details of the machines and equipments are given in later sections of this study.

### 11.6 List of Human Resource

**Table 5: Human Resource Requirement**

Description	Unit	Monthly Salary/ Person (Rs)	Total /Month (Rs)	First Year Salaries (Rs)
Manager	1	35,000	35,000	420,000
Packers	4	12,000	48,000	576,000
Skilled Labor	8	12,000	96,000	1,152,000
Machine Mechanic	1	20,000	20,000	240,000
Accountant	1	20,000	20,000	240,000
Support Staff	2	15,000	30,000	360,000
Security Guards	2	15,000	30,000	360,000

<sup>1</sup> This rate is given by Chamber of Commerce & Industry in Gilgit as prevailing market rate.

<sup>2</sup> Civil work rates are provided by Chamber of Commerce & Industry Gilgit as prevailing market rate in private sector.



**Total Cost****19****3,348,000****11.7 List Furniture and Fixtures**

Following office equipment will be required for the proposed project:

**Table 6: List of Furniture and Fixture**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Executive chair	1	7,000	7,000
Office chairs	5	5,000	25,000
Visitors Chairs	6	3,000	18,000
Executive table	1	8,000	8,000
Office tables	9	5,000	25,000
File Cabinet	1	6,500	6,500
Small tables	10	3,000	30,000
Sofa set	1	15,000	15,000
Air Conditioner (1.5 tons)	1	70,000	70,000
Fans	5	3,500	17,500
Exhaust Fans	5	3,000	15,000
<b>Total Furniture and Fixtures Cost</b>			<b>234,500</b>

**11.8 Office Equipment Requirement**

Following office equipment will be required for the proposed project:

**Table 7: List of Office Equipments**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Desktop Computer	50,000	2	100,000
Office Printer	20,000	1	20,000
Telephone Sets	2,500	2	5,000
Photocopier	75,000	1	75,000
<b>Total</b>			<b>200,000</b>

**11.9 Raw Material Requirement**

The details of raw material required for this unit are provided below:

**Table 8: Cost of Raw Material**

Description	Unit	Rate/ Unit (Rs)	Qty (Yr 1)	Total Cost (Yr 1), Rs
Apple	Kgs	18	243,000	4,082,400
Packing	No. of Crates	3.15	243,000	487,620

Wax (food grade)	Kgs	2 <sup>3</sup>	243,000	<b>486,000</b>
<b>Total Cost</b>				<b>5,055,020</b>

### 11.10 Revenue Generation

**Table 9: Revenue Generation**

Product	Unit	Sales Price (Rs./Unit)	First Year Production (60%)	First Year Sales Revenue (Rs)
Graded and Packed Apple	Kgs	70	243,000	15,876,000
<b>Total Revenue</b>				<b>15,876,000</b>

<sup>3</sup> One kg wax is utilized for 100 Kgs apple. One kg wax price is Rs 200, so wax cost is Rs 2/kg.

## ANNEXURES

### Income Statement

Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Rs. in actuals									
Revenue	15,876,000	18,711,000	21,954,240	25,659,018	29,885,209	34,700,048	38,170,053	41,987,059	46,185,765	50,804,341
Cost of goods sold	8,164,325	8,967,079	10,315,286	11,843,482	13,574,184	15,532,616	17,075,498	18,771,658	20,636,325	22,686,242
Gross Profit	7,711,675	9,743,921	11,638,954	13,815,536	16,311,025	19,167,433	21,094,555	23,215,401	25,549,439	28,118,099
<i>General administration &amp; selling expenses</i>										
Administration expense	756,000	829,605	910,377	999,012	1,096,278	1,203,013	1,320,140	1,448,670	1,589,715	1,744,492
Rental expense	-	-	-	-	-	-	-	-	-	-
Utilities expense	314,282	345,710	380,281	418,309	460,140	506,154	556,770	612,447	673,691	741,060
Travelling & Comm. expense (phone, fax, etc.)	151,200	165,921	182,075	199,802	219,256	240,603	264,028	289,734	317,943	348,898
Office vehicles running expense	292,395	321,635	353,798	389,178	428,096	470,905	517,996	569,795	626,775	689,452
Office expenses (stationary, etc.)	75,600	82,961	91,038	99,901	109,628	120,301	132,014	144,867	158,972	174,449
Promotional expense	79,380	93,555	109,771	128,295	149,426	173,500	190,850	209,935	230,929	254,022
Insurance expense	48,733	38,986	29,240	19,493	9,747	78,484	62,787	47,091	31,394	15,697
Professional fees (legal, audit, etc.)	119,070	140,333	164,657	192,443	224,139	260,250	286,275	314,903	346,393	381,033
Depreciation expense	1,975,880	1,975,880	1,975,880	1,975,880	1,975,880	2,094,887	2,094,887	2,094,887	2,094,887	2,094,887
Amortization expense	13,482	13,482	13,482	13,482	13,482	-	-	-	-	-
Property tax expense	-	-	-	-	-	-	-	-	-	-
Miscellaneous expense	476,280	561,330	658,627	769,771	896,556	1,041,001	1,145,102	1,259,612	1,385,573	1,524,130
Subtotal	4,302,301	4,569,397	4,869,225	5,205,566	5,582,626	6,189,099	6,570,848	6,991,940	7,456,271	7,968,120
Operating Income	3,409,373	5,174,524	6,769,729	8,609,970	10,728,398	12,978,334	14,523,707	16,223,460	18,093,169	20,149,979
Other income	-	-	-	-	-	-	-	-	-	-
Gain / (loss) on sale of assets	-	-	-	-	389,860	-	-	-	-	-
Earnings Before Interest & Taxes	3,409,373	5,174,524	6,769,729	8,609,970	11,118,258	12,978,334	14,523,707	16,223,460	18,093,169	20,149,979
Interest expense	3,272,212	3,129,394	3,129,394	3,129,394	3,129,394	-	-	-	-	-
Earnings Before Tax	137,161	2,045,130	3,640,335	5,480,576	7,988,864	12,978,334	14,523,707	16,223,460	18,093,169	20,149,979
Tax	-	253,526	629,583	1,163,673	2,015,602	3,761,916	4,302,797	4,897,710	5,552,108	6,271,992
<b>NET PROFIT/(LOSS) AFTER TAX</b>	137,161	1,791,604	3,010,751	4,316,904	5,973,263	9,216,418	10,220,910	11,325,750	12,541,060	13,877,987

## Balance Sheet

Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Rs. in actuals										
<b>Assets</b>											
<i>Current assets</i>											
Cash & Bank	602,060	412,438	1,531,899	2,861,175	4,527,478	5,250,293	10,118,837	14,437,060	21,763,105	29,456,046	45,007,004
Accounts receivable	-	1,304,877	1,421,384	1,671,174	1,956,709	2,282,639	2,654,189	2,994,662	3,294,128	3,623,541	3,985,895
Finished goods inventory	-	-	-	-	-	-	-	-	-	-	-
Equipment spare part inventory	102,060	7,017	8,644	10,608	12,973	15,817	18,268	21,100	24,371	28,148	-
Raw material inventory	875,070	1,134,466	1,464,217	1,882,434	2,411,730	3,080,316	3,727,182	4,509,890	5,456,967	6,602,930	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	48,733	38,986	29,240	19,493	9,747	78,484	62,787	47,091	31,394	15,697	-
<b>Total Current Assets</b>	<b>1,627,923</b>	<b>2,897,783</b>	<b>4,455,384</b>	<b>6,444,885</b>	<b>8,918,638</b>	<b>10,707,549</b>	<b>16,581,263</b>	<b>22,009,803</b>	<b>30,569,964</b>	<b>39,726,361</b>	<b>48,992,898</b>
<i>Fixed assets</i>											
Land	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000
Building/Infrastructure	26,750,000	25,412,500	24,075,000	22,737,500	21,400,000	20,062,500	18,725,000	17,387,500	16,050,000	14,712,500	13,375,000
Machinery & equipment	4,000,000	3,600,000	3,200,000	2,800,000	2,400,000	2,000,000	1,600,000	1,200,000	800,000	400,000	-
Furniture & fixtures	234,500	211,050	187,600	164,150	140,700	117,250	93,800	70,350	46,900	23,450	-
Office vehicles	974,650	779,720	584,790	389,860	194,930	1,569,684	1,255,747	941,810	627,873	313,937	-
Office equipment	200,000	180,000	160,000	140,000	120,000	100,000	80,000	60,000	40,000	20,000	-
<b>Total Fixed Assets</b>	<b>34,009,150</b>	<b>32,033,270</b>	<b>30,057,390</b>	<b>28,081,510</b>	<b>26,105,630</b>	<b>25,699,434</b>	<b>23,604,547</b>	<b>21,509,660</b>	<b>19,414,773</b>	<b>17,319,887</b>	<b>15,225,000</b>
<i>Intangible assets</i>											
Pre-operation costs	67,410	53,928	40,446	26,964	13,482	-	-	-	-	-	-
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	-
<b>Total Intangible Assets</b>	<b>67,410</b>	<b>53,928</b>	<b>40,446</b>	<b>26,964</b>	<b>13,482</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>35,704,482</b>	<b>34,984,980</b>	<b>34,553,219</b>	<b>34,553,359</b>	<b>35,037,750</b>	<b>36,406,983</b>	<b>40,185,810</b>	<b>43,519,463</b>	<b>49,984,737</b>	<b>57,046,248</b>	<b>64,217,898</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable	-	558,916	631,856	754,930	899,767	1,070,325	1,255,136	1,414,430	1,596,743	1,805,864	1,386,929
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
<b>Total Current Liabilities</b>	<b>-</b>	<b>558,916</b>	<b>631,856</b>	<b>754,930</b>	<b>899,767</b>	<b>1,070,325</b>	<b>1,255,136</b>	<b>1,414,430</b>	<b>1,596,743</b>	<b>1,805,864</b>	<b>1,386,929</b>
<i>Other liabilities</i>											
Lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	-	253,526	883,109	2,046,782	4,062,384	7,824,300	12,127,096	17,024,807	22,576,915	28,848,907
Long term debt	14,281,793	12,866,214	11,280,765	9,505,063	7,516,277	-	2,794,102	-	-	-	-
<b>Total Long Term Liabilities</b>	<b>14,281,793</b>	<b>12,866,214</b>	<b>11,534,291</b>	<b>10,388,172</b>	<b>9,563,058</b>	<b>4,062,384</b>	<b>10,618,402</b>	<b>12,127,096</b>	<b>17,024,807</b>	<b>22,576,915</b>	<b>28,848,907</b>
<i>Shareholders' equity</i>											
Paid-up capital	21,422,689	21,422,689	21,422,689	21,422,689	21,422,689	21,422,689	21,422,689	21,422,689	21,422,689	21,422,689	21,422,689
Retained earnings	-	137,161	964,383	1,987,567	3,152,235	4,562,749	6,889,583	8,555,247	9,940,498	11,240,779	12,559,383
<b>Total Equity</b>	<b>21,422,689</b>	<b>21,559,851</b>	<b>22,387,072</b>	<b>23,410,256</b>	<b>24,574,924</b>	<b>25,985,438</b>	<b>28,312,273</b>	<b>29,977,936</b>	<b>31,363,188</b>	<b>32,663,469</b>	<b>33,982,072</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>35,704,482</b>	<b>34,984,980</b>	<b>34,553,219</b>	<b>34,553,359</b>	<b>35,037,750</b>	<b>31,118,147</b>	<b>40,185,810</b>	<b>43,519,463</b>	<b>49,984,737</b>	<b>57,046,248</b>	<b>64,217,908</b>

## Cash Flow Statement

Cash Flow Statement											Rs. in actuals
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit	-	137,161	1,791,604	3,010,751	4,316,904	5,973,263	9,216,418	10,220,910	11,325,750	12,541,060	13,877,987
Add: depreciation expense	-	1,975,880	1,975,880	1,975,880	1,975,880	1,975,880	2,094,887	2,094,887	2,094,887	2,094,887	2,094,887
amortization expense	-	13,482	13,482	13,482	13,482	13,482	-	-	-	-	-
Deferred income tax	-	-	253,526	629,583	1,163,673	2,015,602	3,761,916	4,302,797	4,897,710	5,552,108	6,271,992
Accounts receivable	-	(1,304,877)	(116,507)	(249,791)	(285,535)	(325,930)	(371,549)	(340,473)	(299,466)	(329,413)	(362,354)
Finished good inventory	-	-	-	-	-	-	-	-	-	-	-
Equipment inventory	(102,060)	95,043	(1,628)	(1,964)	(2,365)	(2,843)	(2,452)	(2,832)	(3,271)	(3,777)	28,148
Raw material inventory	(875,070)	(259,396)	(329,751)	(418,217)	(529,296)	(668,585)	(646,866)	(782,708)	(947,077)	(1,145,963)	6,602,930
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Advance insurance premium	(48,733)	9,747	9,747	9,747	9,747	(68,738)	15,697	15,697	15,697	15,697	15,697
Accounts payable	-	558,916	72,941	123,074	144,836	170,558	184,811	159,294	182,313	209,121	(418,936)
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(1,025,863)	1,225,957	3,669,293	5,092,545	6,807,325	9,082,688	14,252,861	15,667,572	17,266,543	18,933,720	28,110,351
<i>Financing activities</i>											
Change in long term debt	14,281,793	(1,415,579)	(1,585,448)	(1,775,702)	(1,988,787)	(7,516,277)	2,794,102	(2,794,102)	-	-	-
Change in short term debt	-	-	-	-	-	-	-	-	-	-	-
Change in export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Add: land lease expense	-	-	-	-	-	-	-	-	-	-	-
Land lease payment	-	-	-	-	-	-	-	-	-	-	-
Change in lease financing	-	-	-	-	-	-	-	-	-	-	-
Issuance of shares	21,422,689	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares	-	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing	35,704,482	(1,415,579)	(1,585,448)	(1,775,702)	(1,988,787)	(7,516,277)	2,794,102	(2,794,102)	-	-	-
<i>Investing activities</i>											
Capital expenditure	(34,076,560)	-	-	-	-	(1,569,684)	-	-	-	-	(10)
Acquisitions	-	-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by investing	(34,076,560)	-	-	-	-	(1,569,684)	-	-	-	-	(10)
<b>NET CASH</b>	<b>602,060</b>	<b>(189,622)</b>	<b>2,083,844</b>	<b>3,316,843</b>	<b>4,818,538</b>	<b>(3,272)</b>	<b>17,046,963</b>	<b>12,873,470</b>	<b>17,266,543</b>	<b>18,933,720</b>	<b>28,110,341</b>
Cash balance brought forward		602,060	412,438	1,531,899	2,861,175	4,527,478	(38,543)	10,118,837	14,437,060	21,763,105	29,456,046
Cash available for appropriation	602,060	412,438	2,496,282	4,848,742	7,679,714	4,524,206	17,008,421	22,992,307	31,703,603	40,696,825	57,566,387
Dividend	-	-	964,383	1,987,567	3,152,235	4,562,749	6,889,583	8,555,247	9,940,498	11,240,779	12,559,383
Cash carried forward	602,060	412,438	1,531,899	2,861,175	4,527,478	(38,543)	10,118,837	14,437,060	21,763,105	29,456,046	45,007,004

## **Key Assumptions**

### **Operating Cost Assumptions**

<b>Description</b>	<b>Details</b>
Office Expenses (Stationery, Entertainment etc)	10% of Administration expenses
Communication Expenses	7% of Administration Cost
Travelling Expense (Vehicle Running)	20% of Administration Cost
Promotional Expenses	1% of Revenue
Depreciation Method	Accelerated depreciation
Depreciation Rate	10% on Machinery 10% on Office Equipment 10% on Furniture & Fixture 20% on Office Vehicle
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Salaries Growth Rate	10%

### **Production Cost Assumptions**

<b>Description</b>	<b>Details</b>
Cost of Goods Per Unit- Apple (Rs)	18
Cost of Goods (Packing) Per Unit (Rs)	3.15
Wax cost (food grade) Per Kg (Rs)	2
Hours Operational Per Day	8
Days Operational Per Month	26
Days Operational Per Year	180
Operating Cost Growth Rate (per annum)	10%
COGS Annual Growth Rate	10%

### **Revenue Assumptions**

<b>Description</b>	<b>Details</b>
Sales Price Growth Rate	10%
Per Day Production Capacity (100%)	3 tons
Initial Capacity Utilization	60%
Percentage Increase in Production Capacity/Year	25%

*Project feasibility for setting up Apple Processing Unit (Gilgit Baltistan)*

Maximum Capacity Utilization (Year 4 – 10)	95%
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***Economy Related Assumptions***

Description	Details
Inflation Rate	10%
Electricity Price Growth Rate	10%
Wage Growth Rate	10%

***Financial Assumptions***

Description	Details
Debt	40%
Equity	60%
Interest Rate on Debt	Project loan 12%
Debt Tenure	Project loan 5 Years
Debt Payment / Year	1