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# Pre-Feasibility Study

## RICE HUSKING MILL – 26 Tons



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**Ministry of Industries & Production**

**Government of Pakistan**

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**April, 2020**

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## 1 DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data / information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision, including taking professional advice from a qualified consultant / technical expert before taking any decision to act upon the information.

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### *Document Control*

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## 2 EXECUTIVE SUMMARY

Rice is Major crop in Pakistan and it is consumed largely after wheat. It is grown on large scale in all the provinces of Pakistan. Punjab and Sindh has major share in production whereas KPK and some parts of Balochistan also share good amount in production by cultivating different varieties of rice. Pakistan is major exporter of rice in the world and rice produced from Pakistan is widely demanded across the world. Two main varieties of rice are exported which are IRRI and Basmati. Therefore, this feasibility study is focused on these two varieties.

One of the major agriculture based business; the rice market is currently more than 480 million metric tons of husked rice which amount to \$ 18.7 Billion annually. The world rice consumption has been increasing continuously since the last few decades and this upward trend is predicted to continue in 2018-19 specially for parboiled which is one of the most popular rice products in Europe, Saudi Arabia, South Africa and other regions of the world. It has become more important not only by the fact of improved nutritional value but also by the better cooking and processing properties which are desired from the industrial standpoint. Rice production in Pakistan has increased greatly in the past 3-4 years. There is immense potential for value addition in the rice sector in post-harvest processing, such as quality polishing and packaging.

The proposed unit has an installed capacity of **7,800 tons** of rice husking annually on 8 hours per day operational basis. The unit will operate at 55% of the installed capacity during first year of operation with a gradual increase of 5% in subsequent years to achieve the maximum capacity utilization. This production capacity is estimated to be economically viable & justifies the capital as well as operational cost of the project.

The estimated total cost of the proposed rice husking Mill is **Rs. 71.46 million** out of which Rs. 50.63 million is the capital cost and Rs. 20.83 million is for working capital. The project is to be financed through 100% equity. The project NPV is around **Rs. 41.68 million**, with an **IRR of 37%** and **Payback Period of 3.9 years**. The project will provide direct employment opportunities to 22 people including owner manager; additionally, seasonal worker will also be engaged. 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 prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility 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 **Rice Husking** 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 BRIEF DESCRIPTION OF PROJECT & PRODUCT

There are a number of different varieties of rice produced in Pakistan, major varieties include the Basmati and IRRI of which the world renowned Super Basmati is only produced in Pakistan. The proposed unit would be providing husking services to rice producers. Additionally, the unit would also be purchasing Basmati and IRRI rice paddy for de-husking the rice to sell it into the market. The husking mill would operate 12 months in a year.

The project is proposed to be set up in any of the rice planting areas and big cities of Punjab and Sindh and some parts of Baluchistan and KPK. As it is estimated that IRRI 6 rice is mainly produced in Sindh therefore data evaluated for this feasibility collected from Sindh province. The business legal status of the proposed project can either be sole proprietorship

or partnership. However, this pre-feasibility assumes the legal status to be Sole Proprietorship.

## **5.1 Production Process**

### **5.1.1 Rice Husking**

Husking is the process of separating the rice from the husk. Rubber roll and hullers are used to shatter the paddy to produce rice. The husking of paddy produces different products, which include 58% Head Rice, 10% Broken Rice, 20% Husk, 9 % Bran and 3% Waste and Dust Particles. Different processes are used for separation of head rice, broken rice, rice powder, dust and bran. This husking unit operates 12 months in a year.

### **5.1.2 Rice Husking Process**

Rice milling is the process, which helps in removal of hulls and barns from paddy grains to produce polished rice. Rice forms the basic primary processed product obtained from paddy and this is further processed for obtaining various secondary and tertiary products. Milling process of paddy starts when the paddy is brought from fields and gathered in an open space of milling area where it is gathered for drying and is placed in an open place till it achieve desire moisture level. Then paddy is brought and placed in a ware house where it is processed into following stages:

#### **Pre Cleaning:**

Removes all impurities and unfilled grains, objects, such as hey, large stone, tree stump, from the paddy for smooth operation.

#### **Hulling/Husking:**

Remove excessive husks to clean paddy. On removed, brown rice is separated from the husks though ventilation process and mechanical equipment leaving pure brown rice available for milling. Rubber roll husker is used for pre cleaning stage then it moves to husk aspirator.

#### **Paddy Separator:**

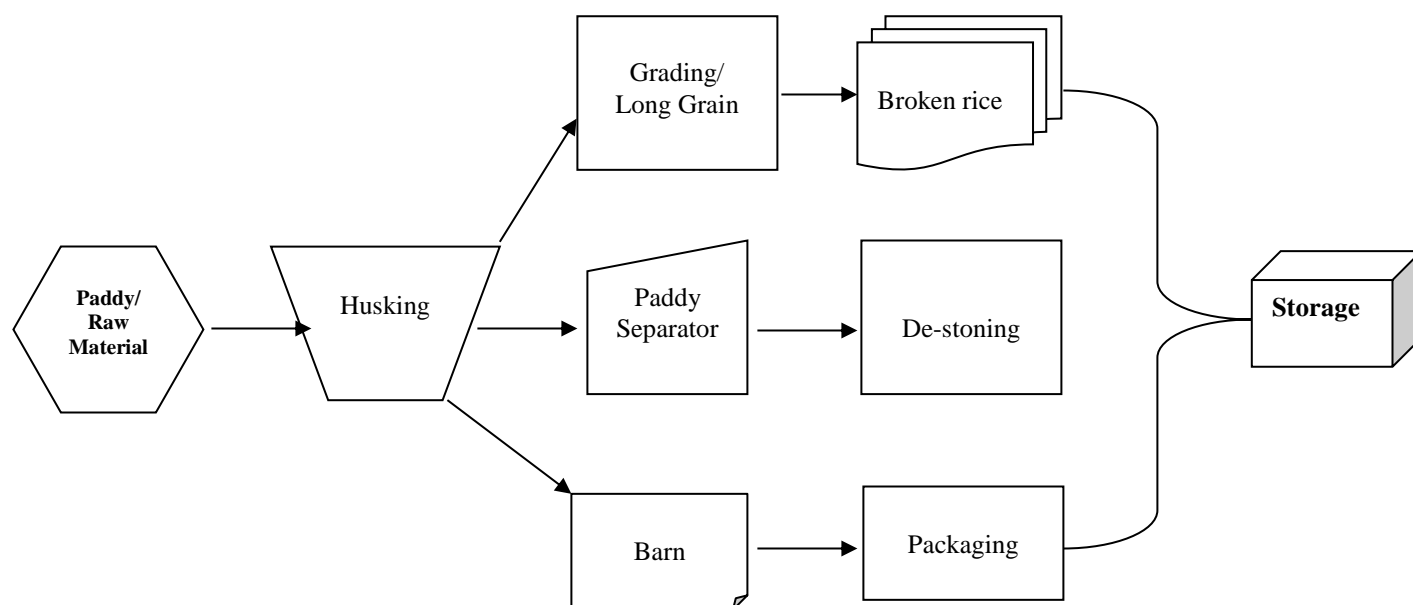
Mixture of brown rice and unhusked paddy moves to the separator and then unhusked paddy is separated and returned to the rubber roll husker.

#### **De Stoning**

Brown rice after the husking process moves towards de-stoner where small stones, mud balls and other impurities are removed by de-stoner.

#### **Packaging**

Destoned brown rice then proceeds for packaging in jute bags for further process of whitening and polishing



**Figure: Production Process and byproduct Diagram**

## 5.2 Product Mix

The proposed project would mainly provide husking and polishing services to rice producers who do not own a husking and polishing unit. It is assumed that 90% of the husking machinery capacity would be utilized in providing husking services, while the remaining 10% of the capacity would be used to process the paddy rice purchased / bought by the entrepreneur himself.

**Table 1: Variety of Product Mix**

Product Mix	Percentage
IRRI	83%
Basmati	17%

The products produced from the husking mill include: Head Rice, Broken Rice, Powder and Husk. The head rice would be processed further by the polishing, the broken rice, powder and husk are sold into the consumer market.

## 5.3 Global Trade

### 5.3.1 Top Exporters of the world

World rice consumption increased 40 percent in the last 30 years, from 61.5 kg per capita to about 85.9 kg per capita (milled rice). Total world rice exports in 2016-17 was approximately 48,774,974 metric tons, higher than the 41,035,447 tons estimated for 2015-16, according to the USDA<sup>1</sup>. Table below shows the rice exported from the countries with value and quantity in tons. It can be seen that Pakistan is recently upgraded from number 4 to 3 in terms of rice exporters in the world followed by Thailand and India. The recent data on international trade center<sup>2</sup> shows Pakistan rice export to increasing year by year.

**Table 2: Top Rice Exporters of the world**

Exporters	2015		2016		2017		2018	
	Value	Qty	Value	Qty	Value	Qty	Value	Qty
<b>World</b>	23,215	45,556	20,749	41,035	24,682	48,774	26,209	3,932
<b>India</b>	6,380	11,025	5,315	9,907	7,081	12,120	7,399	11,665
<b>Thailand</b>	4,542	9,795	4,370	9,883	5,159	11,628	5,571	11,075
<b>Pakistan</b>	1,927	4,054	1,703	3,957	1,743	3,656	2,001	3,932
<b>USA</b>	1,993	3,854	1,793	3,887	1,718	3,834	1,690	3,194
<b>China</b>	267	285	378	484	596	1,195	887	2,089

### 5.3.2 Top Importers of Pakistani rice

Rice Export from Pakistan in year 2019-20 was 2,396,387 metric tones amounted for USD 1,214 million. Rice exports is continuously increasing and rice export shown a sizeable growth of overall 27% at the end of February 2018. Exportable supply of Basmati rice. Exportable supply of Basmati rice increased due to improved logistics. Strong international demand, particularly from the UAE, was reported. According to participants, Basmati exports from India remained largely limited due to logistical constraints and buyers showed a preference for Pakistani rice. Pakistani Super Kernel White Basmati 2% broken and 1121 Steam Basmati 2% broken are assessed up to US \$1,060 PMT and US \$1,075 PMT respectively<sup>3</sup>.

Pakistan's rice production was 6849 thousand tons in 2016-17 which shows about 1% higher production as compared to the total production of 2015-16 which was recorded 6801 thousand metric tons as shown in table below,

<sup>1</sup> United states Department of Agriculture Agricultural service.

<sup>2</sup> ITC, Trademap.org

<sup>3</sup> Report Live Rice Index, <http://livericeindex.com/methodology>



**Table 3: Top Rice Importers of Pakistani Rice<sup>4</sup>**

Value US\$ (000), Quantity in tons (m)

Importers	2015		2016		2017		2018	
	Value	Qty	Value	Qty	Value	Qty	Value	Qty
<b>World</b>	1,927	4,054	1,703	3,957	1,743	3,656	2,001	3,932
<b>Kenya</b>	206	496	191	511	229	589	188	460
<b>China</b>	167	462	220	626	95	279	161	350
<b>Indonesia</b>	51	164	41	132	30	87	119	312
<b>Afghanistan</b>	138	345	119	326	124	296	131	281
<b>UAE</b>	135	170	134	208	179	233	120	165

On the world level, Pakistan ranks 11th in rice production. It is the 3rd largest exporter of rice, holding 8% share in rice export of the world. Pakistan Basmati rice has been a favorite among international rice buyers.<sup>5</sup>

#### 5.4 Installed and Operational Capacity

The husking unit would have a processing capacity of 26 tons rice paddy per day, operating 12 months a year. The project would initially run at 55% production capacity in year 1 and eventually reach 100% production capacity over the years. The unit would operate for 8 hours per day at 100% capacity, working in one shift of 8 hours each.

Details of operational and installed capacity according to product mix are provided in the table below:

**Table 4: Installed and Operational Capacity**

Description	No of Operational Days per Year	Installed Production Capacity per Hour (Tons)	Operational Hours per Day	Total Production Capacity Annually (Tons)
Rice Husking	300	3.2	8	7,800

## 6 CRITICAL FACTORS

Following are the factors critical for the success of this business venture;

<sup>4</sup> Trademap.org

<sup>5</sup> Planning and development commission Department, Govt. of Sindh

- Complete adherence to best agronomic practices is critical to the success of this project; therefore, technical knowledge & experience of the entrepreneur in the field of food processing technology / business is absolutely necessary.
- Selection of quality paddy rice on the basis of best analysis of cost and revenues for a given season; cost efficiency through better management.
- Appropriate logistics and transportation of paddy rice to the processing unit.
- Brand positioning and enhancement of production of rice may widen national and international market for the product.
- Organic rice produced with the use of bio-fertilizer, bio insecticides and pesticides has a good domestic and international market.
- Efficient recovery of by-products and their utilization may improve operational performance.
- Properly trained seed staff should be engaged and comprehensive staff training programs to be adopted for capacity building.
- Careful selection of good location and purchase of land at competitive price.
- Effective marketing and distribution of the product particularly to the retailers.
- Increasing regulatory pressures (e.g. Tax Regulation and various other regulations from government departments).

## 7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

As per current agricultural practices, rice cultivation is mainly concentrated in upper Punjab and Sindh and in some parts of South Punjab, Baluchistan and KPK. Keeping in view the varying geographical locations for rice cultivation, it is recommended that the project may be preferably located in the vicinity of urban areas of Punjab and Sindh for easy access and availability of the high quality paddy rice. As IRRI 6 rice is mainly produced in upper Sindh so the data evaluated in this feasibility is obtained from Sindh Province.

Following areas could be the most appropriate locations for the proposed unit:

Sialkot, Gujrat, Jhang, Mandi Bahhaudain, Hafizabad, Gujranwala, Narowal, Sheikhpura, Okara, Kasur, Bahawalnagar, Hyderabad, Badin, Larkana, Shikarpur, Kambar & Shahdadkot, Dadu, Jacobabad, Jafferabad, Naseerabad, Mardan, etc.

## 8 POTENTIAL TARGET CUSTOMERS / MARKETS

Potential local target market for the produced rice will be the general public of upper-middle income group of urban cities, who generally prefer to buy rice from super markets and big departmental stores. Taking that into consideration, all the major metropolitan cities as well

as urban and semi-urban cities across Pakistan would be the potential local target markets for the proposed business.

Besides that, following segments of clients in all the major cities of Pakistan will also be the potential target customers for the proposed business venture:

- Departmental / Super Stores and Retail Chains
- Traders, Suppliers and Exporters of Rice
- Hotels, Restaurants and Banquet Halls

## 9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Rice Husking Unit. Various costs 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.

### 9.1 Project Economics

All the figures in this financial model have been calculated on the basis of rice husking capacity of 26 tons per day at 8 hours production. The capacity utilization during year one is worked out at 55% with 5% increase in subsequent years up to the maximum capacity utilization of 100%.

The following table shows internal rate of return, payback period and net present value of the proposed venture.

**Table 5: Project Economics**

Description	Details
Internal Rate of Return (IRR)	37%
Payback Period (Yrs.)	3.9
Net Present Value (Rs.)	41,689,051

### 9.2 Project Financing

Following table provides details of the equity required and variables related to bank loan:

**Table 6: Project Financing**

Description	Details
100% Equity	Rs. 71,468,156

### 9.3 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business.

**Table 7: Project Cost**

Description	Amount Rs.
<b>Capital Cost</b>	
Land	10,000,000
Building / Infrastructure	22,950,000
Machinery & Equipment	14,497,250
Furniture & Fixtures	200,000
Office Equipment	138,000
Pre-operating Costs	2,717,900
Training Costs	50,000
<b>Total Capital Cost</b>	<b>50,633,150</b>
<b>Working Capital</b>	
Raw Material Inventory	19,594,518
Equipment Spare Part Inventory	95,516
Cash	1,000,000
Upfront insurance payment	144,973
<b>Total Working Capital</b>	<b>20,835,006</b>
<b>Total Project Cost</b>	<b>71,468,156</b>

### 9.4 Space Requirement

The most important factor for setting up a rice unit is accessibility to raw material. Therefore, the unit should preferably be set up in areas, where rice is grown. Total land requirement for proposed project is 1 acre. It is suggested to purchase land for setting up this project as the investment required for infrastructure and other costs is high and it is not advisable to invest a huge amount on leased or rented area. The structure estimated for factory is Iron shed and for storage it is considered as tear guarder.

Details of space requirement and cost related to land & building is given below;

**Table 8: Space Requirement**

Description	Quantity / Area	Cost / Rate (Rs.)	Total (Rs.)
Management building	500	1,500	750,000
Factory	5,000	2,400	12,000,000
Brown Rice Storage	2,000	1,250	2,500,000
Paddy Storage	3,000	1,250	3,750,000
Weighing & Packing Area	2,000	1,200	2,400,000
Wastage Storage	5,000	50	250,000
Paddy drying Area	12,000	50	600,000
Free Space	14,000	50	700,000
<b>Total Infrastructure</b>	<b>43,500</b>		<b>22,950,000</b>

### 9.5 Machinery & Equipment Requirement

Majority of the machinery required for husking and polishing unit is manufactured locally apart from few items, which are mainly used for refining of the rice. Machinery can also be imported from China at cheaper rates compared to those from Japan or Korea.

Major machinery components of the Rice Husking & Polishing Unit are manufactured in the local market of Daska, Jallapur Bhattian, Gujranwala and Lahore. Amongst the foreign suppliers, China is considered to be more competitive than other countries. For the purpose of this pre-feasibility study majority of machinery is considered from local suppliers except the few ones, which are assumed to be China make and will be purchased from local suppliers.

List of plant machinery and equipment required for the proposed unit is given in the table below:

**Table 9: Machinery and Equipment Requirement**

Descriptions	Qty.	Total Cost
Paddy -Cleaner 5'x10'	1	585,000
Rubber Roll Huller (with pulley belt complete) Rs. 490000/each	2	980,000
Husk Cleaner (double blower patti size 8'x5'x42"	1	350,000
Kundi Cleaner 5'x10' with belt and pulley	1	350,000

Paddy Separator china 40 sheet	1	1,185,000
Dust blower 24"with shaft, bearing NTN complete	1	120,000
Dust blower 30"with shaft,bearing NTN complete	1	150,000
S.M. 18 China Rs.490000/each	4	1,960,000
Rotary Shifter size 5x10 with variable pully and belt complete	1	650,000
Length Grader 27 1/2"x10 with gear motor 2hp	1	280,000
Elevator size 10"x9"1/2 17 total Length 459.5ft per ft rate 5500	1	2,527,250
Cyclone (60"x9'.5 daya,sheet 16g and worm type) Rs. 95000 each	2	190,000
Stock Bin sheet 16 gauge, Angle 1 1/4"x3/16,size 26"x36"x54" Rs. 35000/each	4	140,000
Stock Bin sheet 16 gauge, Angle 1 1/4"x3/16,size 8'x4x6'	1	135,000
Stock Bin sheet 16 gauge, Angle 1 1/4"x3/16,size 4'x4'x6'	1	85,000
Platform (sheet 14 gauge,grill pipeline 16 gauage)	1	785,000
Varm Converter 10 1/2x12	1	190,000
Powder Machine 6Ft (7.5HP 1400)	1	125,000
Khati Fan 5Fit (5Hp 1400)	1	180,000
Mill Accessory Pully and Belt Machine		485,000
Pipe line Complete (4"+5"+6"+8"+10"+12" and folding pipeline sheet 16G)		995,000
Plant Installation cost		850,000
<b>Total</b>		<b>13,297,250</b>
Transformer - 200 kVA	1	1,200,000
<b>Total Machinery</b>		<b>14,497,250</b>

## 9.6 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below:

**Table 10: Furniture & Fixture Requirement**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Complete furniture	1	100,000	100,000
Air Conditioners (1.5 ton split)	1	75,000	75,000

Misc...			25,000
<b>Total</b>			<b>200,000</b>

### 9.7 Office Equipment Requirement

Following office equipment will be required for the proposed project.

**Table 11: Office Equipment and Vehicles**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computers	2	60,000	120,000
Computer Printer (S)	1	15,000	15,000
Telephone Set	1	3,000	3,000
<b>Total</b>			<b>138,000</b>

### 9.8 Human Resource Requirement

During husking season, the skilled labour is required for drying the paddy, loading and unloading of paddy bags. For a husking plant with processing capacity of 3.2 tons per hour, a minimum of 15 workers are required for yearly operations.

The table below shows Human Resource requirement and the proposed annual salary for administrative and operational needs of the project during the first year, machines are operating at 55% capacity.

**Table 12: Human Resources**

Description	No. of Staff	Monthly Salary (Rs.)	Annual Salary in (Rs.)
<b>Administrative Staff</b>			
Plant Manager	1	60,000	720,000
Operator	1	35,000	420,000
Accountant	1	25,000	300,000
Contract Labor	15	17,500	3,150,000
Security Guards	2	22,000	420,000
Godown Keeper	2	17,500	420,000
<b>Total Admin Salaries</b>			<b>5,430,000</b>

### **9.9 Utilities and Other Costs**

An essential cost to be borne by the project is the cost of electricity are assumed as Rs. 477,600 during first year of operations. An increase of 8% in electricity expenses is assumed in subsequent years. Other expenses includes traveling and communication expanse amounted 202,800, promotional expenses 198,042 etc.



## 10 CONTACT DETAILS

In order to facilitate potential investors, contact details of private sector Service Providers relevant to the proposed project be given.

### 10.1 Machinery Suppliers

Name of Supplier	Address	Phone / Fax	E-mail / Website
Kaneko Agricultural Machinery	Kaneko Agri, Pass Road Near Admore Filling Station GT Road, Gujranwala	0300-8742188	
Shoaib Industry	Nawab Chowk, G.T. Road, Gujranwala	055-3292941, 0300-8640841	<a href="mailto:amiragro205@gmail.com">amiragro205@gmail.com</a>
Muhafiz Industries	Maqbara Mor, Old G.T.Road, Shahdara, Lahore	042-37923558-9 042-35881129	<a href="mailto:mahafiz@brain.net.pk">mahafiz@brain.net.pk</a>
Amna Agriculture Industry	Gondlanwala Road, Raajkot, Near Alipur Bypass, Gujranwala.	0300-8641022	
New Allied Industries	Saeed Park, Behind Sahil Cinema, Shahdara More, Lahore	042-37933559, 37920577, 37910576 042-379630577	<a href="mailto:allied1@hotmail.com">allied1@hotmail.com</a> / <a href="http://www.alliedind.com.pk">www.alliedind.com.pk</a>

### 10.2 Raw Material Suppliers

Raw Material for this project is normally purchased direct from rice cultivators / farmers and ghala mandies of different cities.

### 10.3 Technical Experts

Name	Address	Phone
Rice Research Institute	Grand Trunk Rd, Kala Shah Kaku, Lahore, Punjab	(042) 37951826
Rice Research Institute	Dokri Sindh	(074) 4080328

## 11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	<a href="http://www.smeda.org.pk">www.smeda.org.pk</a>
Government of Pakistan	<a href="http://www.pakistan.gov.pk">www.pakistan.gov.pk</a>
Ministry of Industries & Production	<a href="http://www.moip.gov.pk">www.moip.gov.pk</a>
Government of Punjab	<a href="http://www.punjab.gov.pk">www.punjab.gov.pk</a>
Government of Sindh	<a href="http://www.sindh.gov.pk">www.sindh.gov.pk</a>
Government of Khyber Pakhtunkhwa	<a href="http://www.khyberpakhtunkhwa.gov.pk">www.khyberpakhtunkhwa.gov.pk</a>
Government of Balochistan	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>
Government of Gilgit Baltistan	<a href="http://www.gilgitbaltistan.gov.pk">www.gilgitbaltistan.gov.pk</a>
Government of Azad Jamu Kashmir	<a href="http://www.ajk.gov.pk">www.ajk.gov.pk</a>
Trade Development Authority of Pakistan (TDAP)	<a href="http://www.tdap.gov.pk">www.tdap.gov.pk</a>
Security Commission of Pakistan (SECP)	<a href="http://www.secp.gov.pk">www.secp.gov.pk</a>
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	<a href="http://www.fpcci.com.pk">www.fpcci.com.pk</a>
State Bank of Pakistan (SBP)	<a href="http://www.sbp.org.pk">www.sbp.org.pk</a>
Punjab Small Industries Corporation (PSIC)	<a href="http://www.psic.gop.pk">www.psic.gop.pk</a>
Sindh Small Industries Corporation (SSIC)	<a href="http://www.ssic.gos.pk">www.ssic.gos.pk</a>
Punjab Vocational Training Council (PVTC)	<a href="http://www.pvtc.gop.pk">www.pvtc.gop.pk</a>
Technical Education and Vocational Training Authority (TEVTA)	<a href="http://www.tevta.org">www.tevta.org</a>
Punjab Industrial Estates (PIE)	<a href="http://www.pie.com.pk">www.pie.com.pk</a>
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	<a href="http://www.fiedmc.com.pk">www.fiedmc.com.pk</a>
Ministry of National Food Security and Research (MNFSR)	<a href="http://www.mnsfr.gov.pk">www.mnsfr.gov.pk</a>
Pakistan Agriculture Research Council (PARC)	<a href="http://www.parc.gov.pk">www.parc.gov.pk</a>
National Agriculture Research Council (NARC)	<a href="http://www.narc.gov.pk">www.narc.gov.pk</a>
Agriculture University of Faisalabad (UAF)	<a href="http://www.uaf.edu.pk">www.uaf.edu.pk</a>
Agri Punjab – Agriculture Department Government of Punjab	<a href="http://www.agripunjab.gov.pk">www.agripunjab.gov.pk</a>
Sindh Small Industries Corporation	<a href="http://www.ssic.gos.pk">www.ssic.gos.pk</a>
University of Agriculture Faisalabad	<a href="http://www.uaf.edu.pk">www.uaf.edu.pk</a>

## 12 ANNEXURES

### 12.1 Income Statement

Statement Summaries										SMEDA
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	198,041,626	237,110,749	274,916,557	316,853,335	363,314,172	414,726,943	471,557,264	505,671,712	541,068,732	578,943,543
Cost of goods sold	170,840,263	203,314,474	231,607,092	262,320,767	295,637,436	331,752,344	370,875,072	391,554,500	412,461,673	434,537,134
Gross Profit	27,201,363	33,796,276	43,309,465	54,532,568	67,676,736	82,974,599	100,682,192	114,117,212	128,607,059	144,406,410
<i>General administration &amp; selling expenses</i>										
Administration expense	1,606,800	1,763,240	1,934,912	2,123,298	2,330,025	2,556,879	2,805,821	3,078,999	3,378,775	3,707,738
Rental expense	-	-	-	-	-	-	-	-	-	-
Utilities expense	477,600	515,808	601,638	757,891	1,031,103	1,515,028	2,404,159	4,120,306	7,626,399	15,245,207
Travelling & Comm. expense (phone, fax, etc.)	202,800	222,545	244,212	267,989	294,081	322,713	354,133	388,612	426,447	467,967
Office vehicles running expense	-	-	-	-	-	-	-	-	-	-
Office expenses (stationary, etc.)	31,200	34,238	37,571	41,229	45,243	49,648	54,482	59,786	65,607	71,995
Promotional expense	198,042	237,111	274,917	316,853	363,314	414,727	471,557	505,672	541,069	578,944
Insurance expense	144,973	130,475	115,978	101,481	86,984	72,486	57,989	43,492	28,995	14,497
Professional fees (legal, audit, etc.)	198,042	237,111	274,917	316,853	363,314	414,727	471,557	505,672	541,069	578,944
Depreciation expense	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025
Amortization expense	564,580	564,580	564,580	564,580	564,580	5,000	5,000	5,000	5,000	5,000
Property tax expense	-	-	-	-	-	-	-	-	-	-
Miscellaneous expense	2,980,416	3,421,107	3,906,791	4,508,629	5,262,036	6,226,198	7,501,535	8,976,846	11,202,503	14,774,443
Subtotal	9,035,477	9,757,240	10,586,540	11,629,828	12,971,705	14,208,431	16,757,258	20,315,410	26,446,889	38,075,759
Operating Income	18,165,886	24,039,035	32,722,925	42,902,740	54,705,031	68,766,168	83,924,934	93,801,802	102,160,170	106,330,651
Other income	152,615	307,742	846,958	1,979,448	3,449,249	5,285,035	7,677,575	10,598,212	13,800,388	22,065,660
Gain / (loss) on sale of assets	-	-	-	-	-	-	-	-	-	-
Earnings Before Interest & Taxes	18,318,502	24,346,778	33,569,883	44,882,188	58,154,280	74,051,204	91,602,509	104,400,015	115,960,557	128,396,312
Interest expense	-	-	-	-	-	-	-	-	-	-
Earnings Before Tax	18,318,502	24,346,778	33,569,883	44,882,188	58,154,280	74,051,204	91,602,509	104,400,015	115,960,557	128,396,312
Tax	3,663,700	4,869,356	6,713,977	8,976,438	11,630,856	14,810,241	18,320,502	20,880,003	23,192,111	24,319,934
NET PROFIT/(LOSS) AFTER TAX	14,654,801	19,477,422	26,855,906	35,905,750	46,523,424	59,240,963	73,282,007	83,520,012	92,768,446	104,076,377

## 12.2 Balance Sheet

Statement Summaries											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Rs. in actuals Year 10
<b>Assets</b>											
<i>Current assets</i>											
Cash & Bank	1,000,000	5,104,615	7,205,078	26,673,231	52,504,690	85,465,262	125,936,153	181,166,860	242,761,639	309,253,862	301,506,921
Accounts receivable	-	8,138,697	8,941,487	10,521,109	12,159,655	13,976,045	15,987,146	18,211,319	20,080,047	21,508,365	23,013,951
Finished goods inventory	-	7,643,976	8,839,215	10,246,124	11,806,687	13,535,524	15,448,544	17,563,064	18,792,478	20,107,952	21,515,509
Equipment spare part inventory	95,516	125,146	171,549	233,756	316,886	427,659	574,888	729,020	922,211	1,166,597	-
Raw material inventory	19,594,518	26,792,724	35,057,210	45,597,863	59,003,455	76,009,095	97,531,608	118,045,968	142,540,506	172,117,661	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	144,973	130,475	115,978	101,481	86,984	72,486	57,989	43,492	28,995	14,497	-
Total Current Assets	20,835,006	47,935,633	60,330,517	93,373,564	135,878,357	189,486,070	255,536,328	335,759,723	425,125,876	524,168,934	346,036,381
<i>Fixed assets</i>											
Land	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Building/Infrastructure	22,950,000	21,802,500	20,655,000	19,507,500	18,360,000	17,212,500	16,065,000	14,917,500	13,770,000	12,622,500	11,475,000
Machinery & equipment	14,497,250	13,047,525	11,597,800	10,148,075	8,698,350	7,248,625	5,798,900	4,349,175	2,899,450	1,449,725	-
Furniture & fixtures	200,000	180,000	160,000	140,000	120,000	100,000	80,000	60,000	40,000	20,000	-
Office vehicles	-	-	-	-	-	-	-	-	-	-	-
Office equipment	138,000	124,200	110,400	96,600	82,800	69,000	55,200	41,400	27,600	13,800	-
Total Fixed Assets	47,785,250	45,154,225	42,523,200	39,892,175	37,261,150	34,630,125	31,999,100	29,368,075	26,737,050	24,106,025	21,475,000
<i>Intangible assets</i>											
Pre-operation costs	2,797,900	2,238,320	1,678,740	1,119,160	559,580	-	-	-	-	-	-
Legal, licensing, & training costs	50,000	45,000	40,000	35,000	30,000	25,000	20,000	15,000	10,000	5,000	-
Total Intangible Assets	2,847,900	2,283,320	1,718,740	1,154,160	589,580	25,000	20,000	15,000	10,000	5,000	-
TOTAL ASSETS	71,468,156	95,373,178	104,572,457	134,419,899	173,729,087	224,141,195	287,555,428	365,142,798	451,872,926	548,279,959	367,511,381
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable	-	15,127,897	18,252,165	21,243,700	24,647,138	28,535,822	32,999,038	37,594,345	41,094,406	45,022,939	32,333,561
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	-	15,127,897	18,252,165	21,243,700	24,647,138	28,535,822	32,999,038	37,594,345	41,094,406	45,022,939	32,333,561
<i>Other liabilities</i>											
Lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	1,449,725	1,449,725	1,449,725	1,449,725	1,449,725	1,159,780	869,835	579,890	289,945	-
Long term debt	-	-	-	-	-	-	-	-	-	-	-
Total Long Term Liabilities	-	1,449,725	1,449,725	1,449,725	1,449,725	1,449,725	1,159,780	869,835	579,890	289,945	-
<i>Shareholders' equity</i>											
Paid-up capital	71,468,156	71,468,156	71,468,156	71,468,156	71,468,156	71,468,156	71,468,156	71,468,156	71,468,156	71,468,156	71,468,156
Retained earnings	-	7,327,401	13,402,411	40,258,317	76,164,068	122,687,492	181,928,454	255,210,462	338,730,474	431,498,920	535,575,297
Total Equity	71,468,156	78,795,557	84,870,567	111,726,473	147,632,223	194,155,648	253,396,610	326,678,618	410,198,630	502,967,076	607,043,453
TOTAL CAPITAL AND LIABILITIES	71,468,156	95,373,178	104,572,457	134,419,899	173,729,087	224,141,195	287,555,428	365,142,798	451,872,926	548,279,959	639,377,014

## 12.3 Cash Flow Statement

Statement Summaries Cash Flow Statement											SMEDA
											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	-	14,654,801	19,477,422	26,855,906	35,905,750	46,523,424	59,240,963	73,282,007	83,520,012	92,768,446	104,076,377
Add: depreciation expense	-	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025	2,631,025
amortization expense	-	564,580	564,580	564,580	564,580	564,580	5,000	5,000	5,000	5,000	5,000
Deferred income tax	-	1,449,725	-	-	-	-	(289,945)	(289,945)	(289,945)	(289,945)	(289,945)
Accounts receivable	-	(8,138,697)	(802,790)	(1,579,622)	(1,638,546)	(1,816,389)	(2,011,102)	(2,224,173)	(1,868,728)	(1,428,318)	(1,505,586)
Finished good inventory	-	(7,643,976)	(1,195,240)	(1,406,908)	(1,560,563)	(1,728,836)	(1,913,021)	(2,114,520)	(1,229,414)	(1,315,473)	(1,407,557)
Equipment inventory	(95,516)	(29,631)	(46,402)	(62,207)	(83,130)	(110,773)	(147,230)	(154,132)	(193,190)	(244,386)	1,166,597
Raw material inventory	(19,594,518)	(7,198,206)	(8,264,486)	(10,540,653)	(13,405,592)	(17,005,640)	(21,522,513)	(20,514,360)	(24,494,538)	(29,577,155)	172,117,661
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Advance insurance premium	(144,973)	14,497	14,497	14,497	14,497	14,497	14,497	14,497	14,497	14,497	14,497
Accounts payable	-	15,127,897	3,124,268	2,991,535	3,403,438	3,888,684	4,463,216	4,595,308	3,500,061	3,928,532	(12,689,378)
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(19,835,006)	11,432,015	15,502,875	19,468,153	25,831,459	32,960,571	40,470,891	55,230,707	61,594,779	66,492,223	264,118,693
<i>Financing activities</i>											
Change in long term debt	-	-	-	-	-	-	-	-	-	-	-
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	71,468,156	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares	-	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing act	71,468,156	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(50,633,150)	-	-	-	-	-	-	-	-	-	-
Acquisitions	-	-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by investing act	(50,633,150)	-	-	-	-	-	-	-	-	-	-
NET CASH	1,000,000	11,432,015	15,502,875	19,468,153	25,831,459	32,960,571	40,470,891	55,230,707	61,594,779	66,492,223	264,118,693

## 13 KEY ASSUMPTIONS

### 13.1 Operating Cost Assumptions

Description	Details
Machinery Maintenance	5% of Machinery Cost
Office Expenses (Janitorial Services, Stationery, Entertainment etc)	2% of Administration Expenses
Communication Expenses	3% of Administration Cost
Promotional Expenses	1% of Revenues
Operating Expense Growth Rate	5%
Depreciation Method	Straight Line
Depreciation Rate	10% on Plant & Machinery 5% on Building & Infrastructure

### 13.2 Production and Revenue Assumptions

Description	Details
Cost of Goods Sold Growth Rate	5%
Growth in Sales Price	7%
Days Operational / Year	300
Days Operational for Husking / Year	300
Per Day Husking Capacity	26 Tons
Sale Price per Unit in Year 1	73
Hours Operational / Day	8
No of Shifts	1
Production Capacity Utilization in First Year	55%
Percentage Increase in Production Capacity every Year	5%
Maximum Production Capacity Utilization	100%

### 13.3 Financial Assumptions

Description	Details
Equity	100%
Inflation Growth Rate	8%
Electricity Price Growth Rate	8%
Salaries Growth Rate	10%