

Pre-Feasibility Study

SEED PROCESSING UNIT (WHEAT & RICE)



Small and Medium Enterprises Development Authority

Ministry of Industries & Production

Government of Pakistan

www.smeda.org.pk

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1 DISCLAIMER

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2 EXECUTIVE SUMMARY

Agriculture sector contributes 24% of the total GDP for Pakistan. However, the massive population influx in Pakistan, has greatly burdened the agriculture sector, as its productivity is not able to meet the current food requirements. The solution lies in increasing the crop yield by developing high yielding crop seeds having disease resistance and high germination percentage. This particular pre-feasibility study provides the basic information for capturing the potential investment opportunity in the seed-processing sector of Pakistan.

The proposed seed-processing unit is a medium size processing facility for producing Wheat and Rice seed. Under this project, approved seed will be processed and marketed in the local market. This business venture can be easily started in majority of rural and peri-urban areas of Punjab and Sindh and in some parts of KPK and Baluchistan. According to the estimates of this pre-feasibility, the proposed seed processing unit will have a maximum capacity of processing 3 tons of seed (wheat and rice) per hour on seasonal basis. This production capacity is estimated to be economically viable and justifies the capital as well as operational costs of the project. However, complete adherence to best agronomic practices is critical to the success of this project. Therefore, technical knowledge & experience of the entrepreneur is absolutely necessary.

The estimated cost for setting up the proposed seed processing unit is Rs. 21.20 million out of which Rs. 15.73 million is the capital cost and Rs. 5.48 million is for working capital. The project is to be financed through 50% debt and 50% equity. The project NPV is around Rs. 20.85 million, with an IRR of 34% and Payback Period of 3.99 years. The project will provide employment opportunities to 10 people including owner manager. 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, production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in **Seed Processing** (Wheat and Rice) business by providing them a general understanding of the business with an 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 it's successful management.

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

5 BRIEF DESCRIPTON OF PROJECT

Wheat and rice are recognized as the main staple crops in Pakistan due to their substantial use as a basic food ingredient of majority of the population. This pre-feasibility study provides basic information for establishing a seed-processing unit for producing seeds of wheat and rice through the multiplication process. Multiplication is the growth of certified seeds through supplying basic seed to the selected registered growers, from whom the output of their crops of wheat and rice will be purchased. For this proposed venture, basic seed will be acquired from Seed Research Institutes & Seed Corporations approved and certified by the Government of Pakistan.

Currently, there is a shortage of approved and certified seeds. The proposed project will help in fulfilling this gap and will provide quality wheat and rice seed suitable for sowing in local conditions. Similarly, this project can be considered as a lucrative investment opportunity because the potential for quality seed is quite high in the agriculture market.

The processing of the seed involves cleaning, grading, treating, packing and storing operations. Processing is a value addition activity, which improves the physical purity

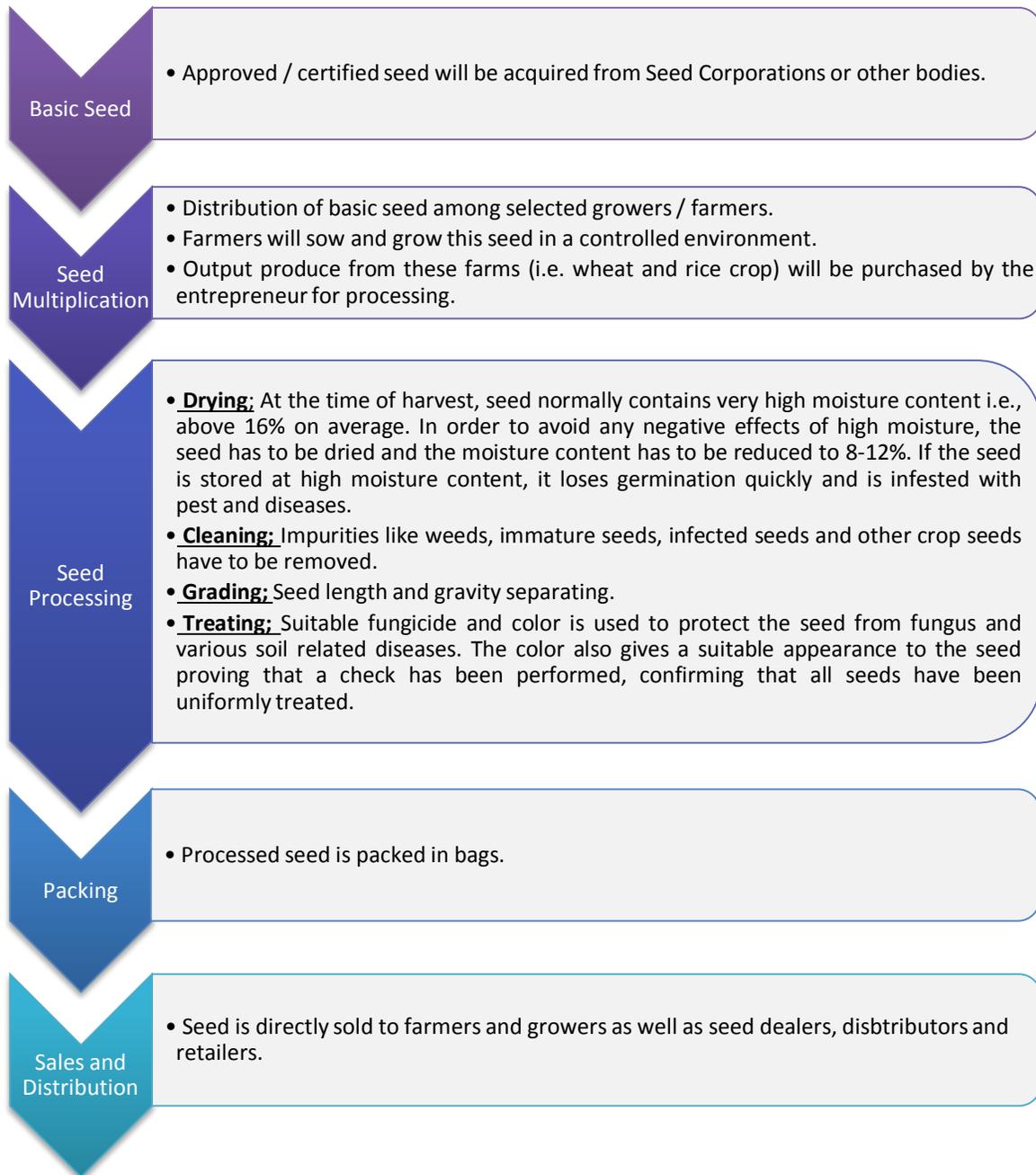
and health of seed stock by removing various contaminants including undersized and shrivelled grains, inert matter and seeds of other crops.

Proposed project is designed to produce a maximum of 03 tons of seed per hour and will provide employment opportunities to ten (10) individuals directly, while seasonal pickers & packers would also be required. The project is proposed to be established on a purchased land having an area of around 4 Kanals and should be preferably located in the proximity of grains and agro market of rural and peri-urban areas for easy accessibility of growers.

The total cost of project is assumed as Rs. 21.20 million. All the expenditures that are required to be incurred for setting up of seed processing unit and purchase of raw material (i.e. basic seed of wheat and rice) for start-up are included in the capital cost of the project.

5.1 Production Process Flow

The production process flow of proposed fresh fruit-processing unit mainly includes the following steps:



5.2 Installed & Operational Capacities

The proposed Seed Processing Unit has a maximum capacity of processing 03 tons of seed per hour. As both rice and wheat are seasonal crops, therefore the proposed unit will operate on seasonal basis. It is estimated that at 100% capacity utilization, the unit would be able produce 2,880 tons of wheat and 2,160 tons of rice per season annually. However, capacity utilization during first year of operation is assumed at 60%, which means 1,728 tons of wheat and 1,296 tons of rice seed will be processed and available for sale. Capacity utilization growth rate of 5% is considered for subsequent years, while maximum capacity utilization (i.e. 95%) will be achieved during the 8th year of operation. This production capacity is estimated to be economically viable and justifies the capital as well as operational costs of the project.

It is pertinent to mention that, the processing of above-mentioned quantities of seeds would entail wastage of 5%.

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

Table 1: Installed and Operational Capacity

Description	Processing Season	Production Capacity Per hour (tons)	Total Production Capacity per Season (Annually)	Operational Capacity 60% (Year 1)	Maximum Operational Capacity 95% (Year 8)
Wheat Seed	Aug. –Nov. (120 Days)	3	2,880	1,728	2,736
Rice Seed	Feb. – Apr. (90 Days)	3	2,160	1,296	2,052
Total	210 days		5,040	3,024	4,788

6 CRITICAL FACTORS

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

- ⇒ Complete adherence to best agronomic practices is critical to the success of this project; therefore, technical knowledge & experience of the entrepreneur is absolutely necessary.
- ⇒ The harvested seed must be dried to the level of safe moisture content to reduce physiological activity and damage from storage fungi and insects.
- ⇒ Sourcing of good quality of basic seed duly approved / certified on reasonable prices.

- ⇒ All seed plants should have an internal seed-quality control system. Laboratories to assess quality before and after processing and to monitor the efficiency of the different processing machines are essential.
- ⇒ Appropriate arrangements for cleaning, grading, treating, packing, storing and transportation of seed to the market.
- ⇒ Properly trained seed staff should be engaged and comprehensive staff training programs to be adopted for capacity building.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

As per the current agricultural practices and climatic conditions, this business can be easily started in majority of rural and peri-urban areas of Punjab and Sindh and in some parts of KPK and Baluchistan. Following are few of the potential areas for wheat and rice cultivation in Pakistan:

Sahiwal, Okara, Gujrawala, Gujrat, Narowal, Sialkot, Rahim Yar Khan, Faisalabad, Toba Tek Sing, Swat, Tarnab, Mardan, Khairabad, MirpurKhas, Chiniot, Sanghar, Noshera and etc.

8 POTENTIAL TARGET MARKETS

Potential target customers for the processed seed will be the growers of wheat and rice. Hence, the proposed unit should be established in any of the above-mentioned locations across Pakistan. However, it is be ensured that unit should be located in the vicinity of local grain and agro product markets of the rural and peri-urban areas of said districts for easy accessibility of growers.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of the Seed Processing 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 assumptions in this financial model are based upon total installed capacity of processing of 03 tons of seed (either wheat or rice) per hour on seasonal basis. Whereas, during first year of operation capacity utilization is assumed as 60% with

1,728 tons of wheat and 1,296 tons of rice to be processed, out of total processed seeds 5% will be wastage and remaining 95% will be sold.

The following table shows internal rate of return, payback period and Net Present Value.

Table 2: Project Economics

Description	Details
Internal Rate of Return (IRR)	34%
Pay Back Period (Years)	3.99
Net Present Value (NPV)	Rs. 20,850,820

Returns on the project and its profitability are highly dependent on quality of processed seed and knowledge of entrepreneurs regarding the agriculture practices.

9.2 Project Financing

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

Table 3: Project Financing

Description	Details
Total Equity (50%)	10,602,099
Bank Loan (50%)	10,602,099
Tenure of the Loan (Years)	5
Annual Markup to the Borrower – Short Term Debt	16%

9.3 Project Cost

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

Table 4: Project Investment

Description	Amount Rs.
Capital Investment	
Land	2,000,000
Building/Infrastructure	8,840,000
Plant Machinery & Equipment	3,425,000
Furniture & Fixtures	132,000
Office Vehicles	788,550
Office Equipment	64,500
Pre-operating Costs	428,765

Training Costs	50,000
Total Capital Cost	15,728,815
Working Capital Requirements	
Equipment Spare Parts inventory	3,019
Raw Material Inventory	4,709,250
Cash	763,115
Total Working Capital	5,475,384
Total Investment	21,204,199

9.4 Plant Machinery and Equipment Requirement

Following table provides list of machinery and equipment required for an average sized Seed Processing Unit.

Table 5: Machinery and Equipment Required

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Pre Cleaning System	1	425,000	425,000
Gravity Separating System	1	300,000	300,000
Length Grader	1	225,000	225,000
Elevator	4	125,000	500,000
Rotary Dryer Plant	1	800,000	800,000
Traitor Plant Iron	1	450,000	450,000
Generator 10 Kva	1	275,000	275,000
Laboratory Equipment's	1	350,000	350,000
Safety Equipment's	1	100,000	100,000
Total			3,425,000

9.5 Office Equipment Requirement

Following office equipment will be required for the proposed venture:

Table 6: Office Equipment Required

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computers	1	30,000	30,000
Printer	1	15,000	15,000
Telephone Sets	2	3,500	7,000
Ceiling Fans	5	2,500	12,500

Total			64,500
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9.6 Furniture and Fixture Requirements

The details of required furniture and fixture for the proposed Seed Processing unit are provided in the following table:

Table 7: Furniture and Fixture Required

Description	Quantity / Area	Unit Cost (Rs.)	Total Cost (Rs.)
Chairs	10	3,500	35,000
Tables	5	8,000	40,000
Stools	4	500	2,000
Lighting	1	10,000	10,000
Air conditioner	1	45,000	45,000
Total			132,000

9.7 Space Requirement

Approximately 4 Kanals of land would be required for establishment of the proposed unit, it is recommended that required land should be procured in the vicinity of grain and agro products market of any rural or peri-urban areas of identified potential cities. Cost of land is estimated at a rate of Rs.0.5 million per kanal; hence total cost of required land is Rs. 2.00 million.

The infrastructural requirements of the project mainly comprises of the construction of Production Hall, Office, Store and other facilities. The cost of construction of building for the proposed unit is provided in the table below:

Table 8: Building and Infrastructure Requirements

Description	Area Required Sq. ft.	Rate / Unit (Rs.)	Total Cost (Rs.)
Production Hall	3,200	800	2,560,000
Stores	4,800	800	3,840,000
Office	360	1,200	432,000
Security Room	80	1,200	96,000
Open Space	9,560	200	1,912,000
Total	18,000		8,840,000

9.8 Raw Material Requirements

Basic seed of wheat and rice are the main raw material required for the proposed business, which will be procured from seed corporations or other certified institutions. After that, basic seed will be cultivated under the controlled environment at various seed farms, which will result in multiplying it and producing approved seed through processing. The approved seed is the final product of the unit, which will then be distributed and sold through marketing for growing crops with higher yields.

According to the estimated installed and operational capacity of the proposed plant, following table provides the details of basic seeds of wheat and rice required as a raw material per season:

Table 9: Raw Material Requirements (1st Year of Operation)

Description / Product Range	First Year Production in Tons @ (60% Capacity)	Unit Cost (Rs.)	Total Cost
Wheat Seed	1,728	32,000	55,296,000
(Goods in Inventory)	(72)		(2,304,000)
Rice Seed	1,296	42,500	55,080,000
(Goods in Inventory)	(54)		(2,295,000)
Total Raw Material Cost			105,777,000

The raw material requirement in subsequent years will be determined according the capacity utilization of the unit. The purchasing cost of raw material is assumed to increase at 10% annually. However, it is only estimated, as the market price of seed may vary due to Government pricing strategy and other seasonal fluctuations.

9.9 Human Resource Requirement

In order to run operations of Seed Processing unit smoothly, details of human resource required along with number of employees and monthly salary are recommended as under:

Table 10: Human Resource Requirement

Description	No. of Employees	Salary per Employee per Month (Rs)
Owner / General Manager	1	35,000
Seed Analyst (Researcher)	1	18,000
Field Assistant	1	16,000

Plant Operator	1	16,000
Sales Officer	2	18,000
Accountant	1	16,000
Store Keeper	1	12,000
Guard	1	12,000
Office Boy	1	12,000
Total	10	

It is assumed that the owner would have prior experience or knowledge about the Seed Processing Business. Salaries of all employees are estimated to increase at 10% annually.

9.10 Other Costs

An essential cost to be borne by the business is the cost of electricity; a three-phase commercial electricity connection is required. The annual electricity expenses are estimated as Rs. 460,298. This project also requires heavy marketing and promotional activities; for which approximately 0.5% of total revenues will be spent on marketing and promotion expenses annually. Similarly, during 1st year of operation communication and office expenses are estimated at Rs. 90,000 and 9,000 respectively. The cost of maintenance of machinery and equipment is assumed as Rs. 25 per unit of production.

9.11 Revenue Generation

Following tables provide assumption for revenues and costs of the proposed seed processing business venture during first year of operation:

Table 11: Revenue Generation in First Year

Description / Product Range	First Year Production in Tons @ (60% Capacity)	Sales Price (Rs. / Unit)	Sales Revenue (Rs) Year 1
Wheat Seed	1,728	40,000	69,120,000
(Goods in Inventory)	(72)		(2,880,000)
Rice Seed	1,296	55,000	71,280,000
(Goods in Inventory)	(54)		(2,970,000)
Revenue before Wastage			134,550,000
Wastage @ 5% During Processing			(6,727,500)
Revenue after Wastage			127,822,500

10 Mandatory Regulations and Registrations

In Pakistan, Seed Act 1976 provided the regulatory mechanism for controlling and regulating the quality of seed. According to this act and Amended Seed Bill 2009, it is mandatory for every organization, dealers, growers and processors of seed business to get registered with Federal Seed Certification Agency (FSCA) and National Seed Registration. Thus for starting the seed-processing business, the owner has to get registered with Federal Seed Certification & Registration Department (FSCRD), Islamabad to be eligible for selling the approved seed. It operates under the supervision of Ministry of National Food Security and Research (MNFSR) and has provincial offices. The major functions of FSCRD are as follows:

- Certification of Seeds
- Registration of the growers
- Field inspection of the crops
- Sampling and testing of seeds
- Quality control of seeds
- Issuance of the quality certificate

11 Contact Details

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

11.1 Machinery Suppliers

Name of Supplier	Address	Phone / Fax
Qallandar Corporation	Rahim Yar Khan	Ph: +92-301-3948869 0300-6708301
Alhamra Industries	AlhamraMechanical Works, Bhawalnagar Road Kabula Sharif	Ph: +92-457-851110
S.T Associates	Office No. 10, 2 nd Floor, Mujahid Plaza, Blue Area Islamabad	Ph: +92-51-280 3154 0321-5155764

11.2 Raw Material Suppliers

Name of Supplier	Address	Phone / Fax	E-mail / Website
Punjab Seed Corporation	4 Lytton Road Lahore	Ph: +92-42-992 12557	www.psc.punjab.gov.pk
Sindh Seed Corporation			www.sindhagri.gov.pk

12 USEFUL LINKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries & Production	www.moip.gov.pk
Ministry of Education, Training & Standards in Higher Education	http://moptt.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.khyberpakhtunkhwa.gov.pk
Government of Balochistan	www.balochistan.gov.pk
Government of GilgitBaltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jamu Kashmir	www.ajk.gov.pk
Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security Commission of Pakistan (SECP)	www.secp.gov.pk
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	www.fpcci.com.pk
State Bank of Pakistan (SBP)	www.sbp.org.pk
Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
Federal Seed Certification and Registration Department, Islamabad	G 9/4, Mauve Area, Islamabad Ph: +92-51-9260126
Agriculture Policy Institute, Islamabad	3 rd Floor, Evacuee Trust Complex, Islamabad Ph: +92-51-9215233
Ministry of National Food Security and Research (MNFSR)	www.mnsfr.gov.pk
Pakistan Agriculture Research Council (PARC)	www.parc.gov.pk

National Agriculture Research Council (NARC)	www.narc.gov.pk
Agriculture University of Faisalabad (UAF)	www.uaf.edu.pk
Agriculture Department Government of Punjab	www.punjabagri.gov.pk
Agriculture Department Government of Sindh	www.sindhagri.gov.pk
Agriculture Department Government of KPK	www.khyberpakhtunkhwa.gov.pk

13 ANNEXURES

13.1 Income Statement

Calculations										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	127,822,500	158,435,063	187,727,719	221,294,556	259,697,483	303,568,050	353,615,755	410,637,321	452,693,803	497,963,183
<i>Cost of sales</i>										
Raw Material Cost	105,777,000	131,109,825	155,350,388	183,127,964	214,907,552	251,211,779	292,627,775	339,814,852	374,617,868	412,079,654
Processing Cost	7,245,000	8,980,125	10,640,438	12,543,011	14,719,695	17,206,286	20,042,998	23,274,990	25,658,758	28,224,634
Operation costs 1 (direct labor)	1,127,000	1,289,454	1,418,725	1,560,908	1,717,298	1,889,318	2,078,533	2,286,666	2,520,860	2,772,946
Operating costs 2 (machinery maintenance)	72,450	89,801	106,404	125,430	147,197	172,063	200,430	232,750	256,588	282,246
Operating costs 3 (direct electricity)	353,798	438,529	519,608	612,517	718,812	840,240	978,766	1,136,595	1,253,003	1,378,303
Total cost of sales	114,575,248	141,907,735	168,035,562	197,969,831	232,210,554	271,319,686	315,928,502	366,745,853	404,307,076	444,737,784
Gross Profit	13,247,253	16,527,328	19,692,156	23,324,725	27,486,928	32,248,364	37,687,253	43,891,468	48,386,726	53,225,399
<i>General administration & selling expenses</i>										
Administration expense	900,000	990,000	1,089,000	1,197,900	1,317,690	1,449,459	1,594,405	1,753,845	1,929,230	2,122,153
Administration benefits expense	90,000	99,000	108,900	119,790	131,769	144,946	159,440	175,385	192,923	212,215
Electricity expense	106,500	117,150	128,865	141,752	155,927	171,519	188,671	207,538	228,292	251,121
Travelling expense	319,556	396,088	469,319	553,236	649,244	758,920	884,039	1,026,593	1,131,735	1,244,908
Communications expense (phone, fax, mail, internet, etc.)	90,000	99,000	108,900	119,790	131,769	144,946	159,440	175,385	192,923	212,215
Office vehicles running expense	1,278,225	1,406,048	1,546,652	1,701,317	1,871,449	3,035,680	3,339,249	3,673,173	4,040,491	4,444,540
Office expenses (stationary, entertainment, janitorial services, etc.)	9,000	9,900	10,890	11,979	13,177	14,495	15,944	17,538	19,292	21,222
Promotional expense	639,113	792,175	938,639	1,106,473	1,298,487	1,517,840	1,768,079	2,053,187	2,263,469	2,489,816
Professional fees (legal, audit, consultants, etc.)	319,556	396,088	469,319	553,236	649,244	758,920	884,039	1,026,593	1,131,735	1,244,908
Depreciation expense	968,310	968,310	968,310	968,310	968,310	1,072,469	1,072,469	1,072,469	1,072,469	1,072,469
Amortization of pre-operating costs	85,753	85,753	85,753	85,753	85,753	-	-	-	-	-
Amortization of legal, licensing, and training costs	10,000	10,000	10,000	10,000	10,000	-	-	-	-	-
Bad debt expense	319,556	396,088	469,319	553,236	649,244	758,920	884,039	1,026,593	1,131,735	1,244,908
Subtotal	5,135,569	5,765,599	6,403,867	7,122,773	7,932,062	8,828,115	10,949,816	12,208,300	13,334,293	14,560,475
Operating Income	8,111,683	10,761,729	13,288,290	16,201,952	19,554,866	22,420,249	26,737,437	31,683,168	35,052,434	38,664,924
Gain / (loss) on sale of office equipment	-	-	-	-	25,800	-	-	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	315,420	-	-	-	-	-
Earnings Before Interest & Taxes	8,111,683	10,761,729	13,288,290	16,201,952	19,896,086	22,420,249	26,737,437	31,683,168	35,052,434	38,664,924
Interest on short term debt	193,080	193,080	-	-	-	-	-	-	-	-
Interest expense on long term debt (Project Loan)	1,258,305	1,075,336	863,091	616,888	331,292	-	-	-	-	-
Interest expense on long term debt (Working Capital Loan)	410,354	343,419	264,952	172,967	65,137	-	-	-	-	-
Subtotal	1,861,739	1,611,834	1,128,043	789,855	396,428	-	-	-	-	-
Earnings Before Tax	6,249,944	9,149,895	12,160,246	15,412,097	19,499,658	22,420,249	26,737,437	31,683,168	35,052,434	38,664,924
Tax	1,409,980	2,424,962	3,478,586	4,616,733	6,047,379	7,069,586	8,580,602	10,311,608	11,490,851	12,755,223
NET PROFIT/(LOSS) AFTER TAX	4,839,964	6,724,932	8,681,661	10,795,364	13,452,278	15,350,662	18,156,835	21,371,560	23,561,583	25,909,701

13.2 Balance Sheet

Calculations											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	763,115	-	1,994,275	5,964,802	11,122,698	16,189,791	26,135,909	37,404,209	51,716,458	66,910,659	131,640,395
Accounts receivable		10,505,959	11,764,009	14,225,868	16,809,135	19,766,796	23,147,899	27,007,554	31,407,661	35,479,361	39,068,095
Finished goods inventory		4,981,533	5,931,835	7,022,382	8,271,720	9,700,702	11,332,763	13,194,230	15,314,662	16,846,128	18,530,741
Equipment spare part inventory	3,019	4,116	5,365	6,956	8,980	11,546	14,795	18,898	22,917	27,730	-
Raw material inventory	4,709,250	6,420,789	8,368,704	10,851,586	14,008,219	18,012,082	23,079,806	29,481,641	35,751,187	43,258,937	-
Total Current Assets	5,475,384	21,912,397	28,064,187	38,071,593	50,220,751	63,680,918	83,711,172	107,106,532	134,212,886	162,522,816	189,239,231
<i>Fixed assets</i>											
Land	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Building/Infrastructure	8,840,000	8,398,000	7,956,000	7,514,000	7,072,000	6,630,000	6,188,000	5,746,000	5,304,000	4,862,000	4,420,000
Machinery & equipment	3,425,000	3,082,500	2,740,000	2,397,500	2,055,000	1,712,500	1,370,000	1,027,500	685,000	342,500	-
Furniture & fixtures	132,000	118,800	105,600	92,400	79,200	66,000	52,800	39,600	26,400	13,200	-
Office vehicles	788,550	630,840	473,130	315,420	157,710	1,269,968	1,015,974	761,981	507,987	253,994	-
Office equipment	64,500	51,600	38,700	25,800	12,900	103,878	83,102	62,327	41,551	20,776	-
Total Fixed Assets	15,250,050	14,281,740	13,313,430	12,345,120	11,376,810	11,782,345	10,709,876	9,637,407	8,564,938	7,492,469	6,420,000
<i>Intangible assets</i>											
Pre-operation costs	428,765	343,012	257,259	171,506	85,753	-	-	-	-	-	-
Legal, licensing, & training costs	50,000	40,000	30,000	20,000	10,000	-	-	-	-	-	-
Total Intangible Assets	478,765	383,012	287,259	191,506	95,753	-	-	-	-	-	-
TOTAL ASSETS	21,204,199	36,577,149	41,664,876	50,608,219	61,693,314	75,463,263	94,421,048	116,743,939	142,777,824	170,015,284	195,659,231
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		9,823,509	12,209,903	14,544,310	17,244,954	20,366,965	23,974,087	28,140,143	32,802,468	36,478,346	36,212,592
Short term debt	-	2,241,585	-	-	-	-	-	-	-	-	-
Other liabilities											
Total Current Liabilities	-	12,065,094	12,209,903	14,544,310	17,244,954	20,366,965	23,974,087	28,140,143	32,802,468	36,478,346	36,212,592
<i>Other liabilities</i>											
Long term debt (Project Loan)	7,864,408	6,720,849	5,394,321	3,855,548	2,070,572	-	-	-	-	-	-
Long term debt (Working Capital Loan)	2,737,692	2,349,142	1,893,657	1,359,704	733,767	-	-	-	-	-	-
Total Long Term Liabilities	10,602,099	9,069,991	7,287,978	5,215,253	2,804,340	-	-	-	-	-	-
<i>Shareholders' equity</i>											
Paid-up capital	10,602,099	10,602,099	10,602,099	10,602,099	10,602,099	10,602,099	10,602,099	10,602,099	10,602,099	10,602,099	10,602,099
Retained earnings		4,839,964	11,564,896	20,246,557	31,041,921	44,494,199	59,844,862	78,001,696	99,373,256	122,934,839	148,844,540
Total Equity	10,602,099	15,442,064	22,166,996	30,848,657	41,644,020	55,096,299	70,446,961	88,603,796	109,975,356	133,536,938	159,446,639
TOTAL CAPITAL AND LIABILITIES	21,204,199	36,577,149	41,664,876	50,608,219	61,693,314	75,463,263	94,421,048	116,743,939	142,777,824	170,015,284	195,659,231

13.3 Cash Flow Statement

Calculations											SMEDA
Cash Flow Statement											
	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		4,839,964	6,724,932	8,681,661	10,795,364	13,452,278	15,350,662	18,156,835	21,371,560	23,561,583	25,909,701
Add: depreciation expense		968,310	968,310	968,310	968,310	968,310	1,072,469	1,072,469	1,072,469	1,072,469	1,072,469
amortization of pre-operating costs		85,753	85,753	85,753	85,753	85,753	-	-	-	-	-
amortization of training costs		10,000	10,000	10,000	10,000	10,000	-	-	-	-	-
Accounts receivable		(10,505,959)	(1,258,051)	(2,461,858)	(2,583,267)	(2,957,662)	(3,381,102)	(3,859,655)	(4,400,107)	(4,071,701)	(3,588,734)
Finished goods inventory		(4,981,533)	(950,302)	(1,090,547)	(1,249,338)	(1,428,982)	(1,632,061)	(1,861,467)	(2,120,432)	(1,531,466)	(1,684,613)
Equipment inventory	(3,019)	(1,097)	(1,249)	(1,592)	(2,023)	(2,567)	(3,249)	(4,104)	(4,019)	(4,813)	27,730
Raw material inventory	(4,709,250)	(1,711,539)	(1,947,915)	(2,482,882)	(3,156,633)	(4,003,864)	(5,067,724)	(6,401,835)	(6,269,546)	(7,507,749)	43,258,937
Accounts payable		9,823,509	2,386,394	2,334,407	2,700,644	3,122,011	3,607,122	4,166,056	4,662,325	3,675,878	(265,754)
Cash provided by operations	(4,712,269)	(1,472,592)	6,017,874	6,043,252	7,568,809	9,245,279	9,946,118	11,268,300	14,312,250	15,194,201	64,729,736
<i>Financing activities</i>											
Project Loan - principal repayment		(1,143,559)	(1,326,528)	(1,538,773)	(1,784,976)	(2,070,572)	-	-	-	-	-
Working Capital Loan - principal repayment		(388,550)	(455,486)	(533,952)	(625,937)	(733,767)	-	-	-	-	-
Short term debt principal repayment		-	(2,241,585)	-	-	-	-	-	-	-	-
Additions to Project Loan	7,864,408	-	-	-	-	-	-	-	-	-	-
Additions to Working Capital Loan	2,737,692	-	-	-	-	-	-	-	-	-	-
Issuance of shares	10,602,099	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activities	21,204,199	(1,532,108)	(4,023,599)	(2,072,725)	(2,410,913)	(2,804,340)	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(15,728,815)	-	-	-	-	(1,373,846)	-	-	-	-	-
Acquisitions											
Cash (used for) / provided by investing activities	(15,728,815)	-	-	-	-	(1,373,846)	-	-	-	-	-
NET CASH	763,115	(3,004,700)	1,994,275	3,970,527	5,157,896	5,067,093	9,946,118	11,268,300	14,312,250	15,194,201	64,729,736

14 KEY ASSUMPTIONS

14.1 Operating Cost Assumptions

Description	Details
Administration Benefit Expenses	10% of Administrative Expenses
Traveling Expenses	0.25% of Revenues
Communication Expenses	10% of Administrative Expenses
Office Expenses (Stationary, Entertainment, Janitorial Services, etc.)	1% of Administration Cost
Office Vehicles Running Expense	1% of Revenue
Promotional Expenses	0.5% of Revenue
Professional Fee	0.25% of Revenue
Depreciation Method	Straight Line
Depreciation Rate	10% on Furniture & Fixtures 20% on Office Equipment
Operating Cost Growth Rate	10%

14.2 Production Cost Assumptions

Description	Details
Basic Seed Price per Ton	Rs. 36,500
Wheat Price Per Ton	Rs. 32,000
Rice Price Per Ton	Rs. 42,500
Seed Wastage	5%
Processing Costs Per Ton	Rs. 2,500
Plant Operation Cost	Rs. 500
Electricity Cost	Rs. 375
Jute Bag Cost	Rs. 625
Company Packing Bags	Rs. 800
Loading and Unloading Labor Cost	Rs. 200
Production Cost Growth Rate	10%

14.3 Revenue Assumptions

Description	Details
Growth in Sales Price	10%
Days Operational / Year	300
Days Operational / Year for Plant	210
Wheat Seed / Days for Processing	120 Days
Rice Seed / Days for Processing	90 Days
Per Day Production Capacity	24 Tons (3 Tons per Hour)
Production Capacity in First Year	60%
Percentage Increase in Production Capacity every Year	5%
Maximum Production Capacity	95%

14.4 Financial Assumptions

Description	Details
Debt	50%
Equity	50%
Interest Rate on Debt	16%
Debt Tenure	5 Years
Debt Payment / Year (Monthly)	12