



Pre-feasibility Study

MAIZE SILAGE UNIT

May 2022

“The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA’s website and consult financial experts to stay current with market conditions.”

Small and Medium Enterprises Development Authority
Ministry of Industries and Production
Government of Pakistan

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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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2. EXECUTIVE SUMMARY

Maize Silage processing unit is proposed to be located at fodder sufficient areas with suitable land, water, and climatic conditions. These areas include, Jafferabad, and Lasbela (Baluchistan), Bannu, Charsada, D.I. Khan, Kohat, Mardan, Newshehra, and Swabi (Khyber Pakhtunkhwa), Badin, Hyderabad, Mirpurkhas, Tando Adam, and Tando Jam (Sind), Arifwala, Bhurewala, Chiniot, Faisalabad, Khanewal, Multan, Melsi, Sahiwal, and Vehari (Punjab). Few areas of GB may also be considered for the project.

The proposed project will have the installed capacity of 10,800,000 Kg/ year but keeping in view the ground realities of Pakistan, the operation will start with a capacity of 60% (6,480,000 Kg/Year) and continue with the same.

The total Project Cost is **Rs. 6,598,632** including the Capital Cost of **Rs. 5,195,102** and the Working Capital of **Rs. 1,403,530**. Given the cost assumptions, Internal

Rate of Return (IRR) and payback are **65%** and **1.76** years respectively, hence making the project viable. The NPV @ 17% is **Rs. 19,437,003**.

The most critical consideration or factors for success of the project are:

- Location must have sufficient maize crop. It should preferably be an area with 10,000 tons, however with a minimum 6,000 tons of harvest area the machine will need to be moved to nearest area for capacity optimization.
- Availability of 03 phase electricity and tractor.
- Proximity of commercial dairy farms.

3. 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 Tilapia Aquaculture 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.

4. 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.

5. BRIEF DESCRIPTION OF PROJECT AND PRODUCT

The project is related to setting up Maize Silage Unit with following detail:

- **Technology:** This proposed unit will start with imported Single Row Maize Chopper and Baler. Generator may be added in case of unavailability of three phase electricity connection.
- **Location:** The unit may be located at areas having abundant maize crops and preferably nearest to dairy farms with availability of three phase electricity connection.
- **Product:** The farm will produce maize silage bales of 60 Kg weight per bale.
- **Target Market:** Dairy farms in the nearest areas of farm's location as well as other provinces.
- **Employment Generation:** The proposed project will initially provide direct employment to 04 persons. The indirect employment is at the time of maize harvesting season.
- **Profitability:** The Financial Analysis shows the unit to be profitable from the very first year of the operation.

5.1) Production Process Flow

Maize Harvesting

The single row maize chopper can harvest about 4 acres crop per day, provided it is being pulled by 70 hp tractor.

Inoculant Spray

Before loading on the maize bailer and wrapper, the maize is sprayed with inoculant for better preservation. A bottle costing Rs. 8,500 per pack is sufficient for treatment of 260 bales.

Making Bales

Silage is wrapped in shape of bales weighing 60 kg each. At this stage wrapping paper is required. This 10 Kg role costing Rs. 5,000/ can be used to wrap 55 bales. Similarly the cost of rope will be Rs. 0.2 per Kg of silage.



5.2) Installed and Operational Capacities

Though the installed capacity of this machinery with 24 hours working and 06 Months season assumption is 12,960 tons per year but keeping in view the ground realities, the machine will operate a maximum of 12 hours a day. This report considers the maize season to be of 06 months, that is, from May to October. The farm will start with operational capacity producing 6,480 tons maize silage per year (50 bales per hour with weight of 60 Kg per bale) which is the optimum capacity as well.

6. CRITICAL FACTORS

The following factors should be considered thoroughly:

- Location must have sufficient maize crop. It should preferably be an area with 10,000 tons, however with a minimum 6,000 tons of harvest area the machine will need to be moved to nearest area for capacity optimization.
- Availability of 03 phase electricity and tractor.
- Proximity of commercial dairy farms.

7. GEOGRAPHICAL POTENTIAL FOR INVESTMENT

These areas include, Jafferabad, and Lasbela (Baluchistan), Bannu, Charsada, D.I. Khan, Kohat, Mardan, Nowshera, and Swabi (Khyber Pakhtunkhwa), Badin, Hyderabad, Mirpurkhas, Tando Adam, and Tando Jam (Sindh), Arifwala, Bhurewala, Chiniot, Faisalabad, Khanewal, Multan, Melsi, Sahiwal, and Vehari (Punjab). Though the maize production season in GB is limited to only September, but still this option may be considered for investment due to acute shortage of green fodder in the region.

8. POTENTIAL TARGET CUSTOMER/MARKETS

The product can be sold across Pakistan, especially within the areas having shortage of green fodder.

9. PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of the Maize Silage Unit. Various cost and revenue related assumptions along with results of the analysis are outlined in this section.

9.1) Project Economics

All the figures in this financial model have been calculated for installed and operational capacity as mentioned in the above section.

The following table shows internal rates of return and payback period.

Table 1 - Project Economics

Description	Details
Internal Rate of Return (IRR)	65%
Payback Period	1.76 Years
Net Present Value (NPV)	Rs. Rs. 19,437,003

9.2) Project Financing

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

Table 2 - Project Financing

Description	Details
Total Equity (50%)	Rs. 3,299,316
Bank Loan (50%)	Rs. 3,299,316

9.3) Project Cost

Following requirements have been identified for operations of the proposed business.

Table 3: Project Cost

Description	Amount Rs.
Capital Cost	
Land (01 Kanal)	1,000,000
Infrastructure Development	1,250,000
Machinery and Equipment	2,810,000
Furniture and Fixtures	60,000
Office Equipment	25,500
Pre-operating Cost	50,000
Total Capital Cost	5,195,500
Working Capital	
Raw Material Inventory	813,608
Upfront Insurance Payment	140,500
Cash	450,000
Total Working Capital	1,403,530
Total Project Cost	6,598,632

9.4) Space Requirement

This proposed project may be established on 01 Kanal land acquired on ownership or lease. This study assumes own land for working.

Table 4: Space Requirement

Space Requirement (in Sq. ft.)	Rs/Unit	Units	Amount (Rs.)
Raw Material Dumping Place	100	600	60,000
Finished Goods Storage Space	100	600	60,000
Processing Shed	1,500	300	450,000
Admin Room	1,800	225	405,000
Washroom	1,000	50	50,000
Boundary Wall	-	-	150,000
Others	-	-	75,000
Total			1,250,000

9.5) Machinery and Equipment

Following table provides list of machinery and equipment. Costs may vary from area to area and underground water table.

Table 5: List of Machinery and Equipment

Space Requirement (in Sq. ft.)	Rs/Unit	Units	Amount (Rs.)
Single Row Maize Cutter	1,000,000	01	1,050,000
Baler	1,450,000	01	1,700,000
Miscellaneous Tools/Utensils	Lump Sum		60,000
Total			2,810,000

9.6) Furniture and Fixtures

Table 6: List of Furniture and Fixtures

Description	Units	Cost Rs/unit	Total (Rs.)
Cots	04	8,000	32,000
Fans	02	4,500	9,000
Others	Lumpsum		19,000
Total			60,000

9.7) Office Equipment

Such type of project only requires a cell phone for communication. A smart cell capable of hosting social media apps worth **Rs. 25,500/** will be purchased.

9.8) Human Resource Requirement

Table 8: Payroll For Financial Analysis (Human Resource Requirements)

Description	No.	Monthly Salary/ Person (Rs.)	Months (No.)	First Year Salaries (Rs)
Owner	01	40,000	12	480,000
Labor (piece rate basis: Rs. 0.55 per Kg) Chopping: Rs. 0.2/Kg Packing: Rs. 0.25/Kg Loading: Rs. 0.1/Kg	04	N/A	N/A	3,564,000
Total Cost				4,044,000

9.9) Utilities and Other Costs (Raw Material and Other Expenses)

On the basis of 260 bales per bottle of inoculants about 415 bottles are required to suffice 108,000 bales for a total of 06 months. Similarly, as a single role of wrapping paper packs 55 bales, so, every year 1,962 roles are needed.

Table 6: Cost of Material

Item	Rs./Kg of Silage	Total Cost (Rs.)
Wrapping film	1.52	9,849,600
Rope	0.20	1,296,000
Inoculants	0.54	3,499,200
Total	2.26	14,644,800

The electricity charges are based on the assumption of baler operating for 12 hours a day, and 180 days per year. Rs. 388,800 per year will be the direct electricity charges (Rs. 0.6 per Kg of Silage).

Table 7: Miscellaneous

Description	Rs./Production Cycle
Machinery Maintenance	30,000
Travelling Expenses	70,000
Communication Expenses	12,000
Electricity	24,000
Total	136,000

9.10) Revenue Generation

The revenue stream is calculated on the basis of service charges against provision of maize chopper and baler to farmers. The maize chopper is rented out at Rs. 8,000 per acre where the production of maize is 20,000 kg per acre, so making the processing charges to be Rs. 0.4 per Kg. The charges of Bailer are Rs. 3.6 per Kg of maize silage.

Table 8: Revenue Generation

Product	Unit	Service Charges (Rs./Unit)	First Year Production	First Year Revenue (Rs)
Bale of 60 Kg	Kg	4	6,480,000	25,920,000
Total Revenue				25,920,000

10. CONTACTS

Circles International

Business: Agriculture and livestock farm and processing machinery suppliers.

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Contact Detail: 18 Km Multan Road, Lahore, Punjab

Phone: +92 42 35971504-9 Fax: +92 42 35971501

Email: info@circleinternational.com.pk

Cattle Kit

Business: Agriculture and livestock farm and processing machinery suppliers.

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11. USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.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 Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jamu Kashmir	www.ajk.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
Fisheries Development Board	Phone: +92 51 923 0348-9 Fax: +92 51 8365937
NARC	www.parc.gov.pk

12. ANNEXURES

12.1) Income Statement

	Rs. in actuals									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	25,920,000	28,512,000	31,363,200	34,499,520	37,949,472	41,744,419	45,918,861	50,510,747	55,561,822	61,118,004
Cost of goods sold	18,628,110	20,481,517	22,519,349	24,759,959	27,223,528	29,932,244	32,910,504	36,185,133	39,785,626	43,744,414
Gross Profit	7,291,890	8,030,483	8,843,851	9,739,561	10,725,944	11,812,175	13,008,357	14,325,614	15,776,196	17,373,590
<i>General administration & selling expenses</i>										
Administration expense	485,808	533,107	585,011	641,968	704,471	773,060	848,326	930,920	1,021,556	1,121,016
Rental expense	-	-	-	-	-	-	-	-	-	-
Utilities expense	24,000	26,337	28,901	31,715	34,802	38,191	41,909	45,990	50,467	55,381
Travelling & Comm. expense (phone, fax, etc.)	82,176	90,177	98,957	108,591	119,164	130,766	143,497	157,468	172,799	189,624
Office vehicles running expense	-	-	-	-	-	-	-	-	-	-
Office expenses (stationary, etc.)	5,808	-	-	-	-	-	-	-	-	-
Promotional expense	-	-	-	-	-	-	-	-	-	-
Insurance expense	140,500	126,450	112,400	98,350	84,300	70,250	56,200	42,150	28,100	14,050
Professional fees (legal, audit, etc.)	129,600	142,560	156,816	172,498	189,747	208,722	229,594	252,554	277,809	305,590
Depreciation expense	352,050	352,050	352,050	352,050	352,050	352,050	352,050	352,050	352,050	352,050
Amortization expense	9,920	9,920	9,920	9,920	9,920	-	-	-	-	-
Property tax expense	-	-	-	-	-	-	-	-	-	-
Miscellaneous expense	777,600	855,360	940,896	1,034,986	1,138,484	1,252,333	1,377,566	1,515,322	1,666,855	1,833,540
Subtotal	2,007,462	2,135,960	2,284,950	2,450,077	2,632,939	2,825,371	3,049,142	3,296,454	3,569,636	3,871,250
Operating Income	5,284,428	5,894,523	6,558,901	7,289,483	8,093,004	8,986,804	9,959,214	11,029,160	12,206,559	13,502,340
Other income	-	-	-	-	-	-	-	-	-	-
Gain / (loss) on sale of assets	-	-	-	-	-	-	-	-	-	-
Earnings Before Interest & Taxes	5,284,428	5,894,523	6,558,901	7,289,483	8,093,004	8,986,804	9,959,214	11,029,160	12,206,559	13,502,340
Interest expense	388,073	285,572	226,689	160,151	84,963	-	-	-	-	-
Earnings Before Tax	4,896,354	5,608,950	6,332,212	7,129,332	8,008,042	8,986,804	9,959,214	11,029,160	12,206,559	13,502,340
Tax	1,566,833	1,794,864	2,026,308	2,281,386	2,562,573	2,875,777	3,186,949	3,529,331	3,906,099	4,320,749
NET PROFIT/(LOSS) AFTER TAX	3,329,521	3,814,086	4,305,904	4,847,946	5,445,468	6,111,027	6,772,266	7,499,829	8,300,460	9,181,591

12.2) Balance Sheet

	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
Assets											
<i>Current assets</i>											
Cash & Bank	450,000	823,671	1,645,892	1,972,878	2,055,445	6,777,342	12,636,962	19,060,354	26,094,706	33,790,064	47,219,321
Accounts receivable	-	2,130,411	2,236,932	2,460,625	2,706,687	2,977,356	3,275,091	3,602,601	3,962,861	4,359,147	4,795,061
Finished goods inventory	-	-	-	-	-	-	-	-	-	-	-
Equipment spare part inventory	-	-	-	-	-	-	-	-	-	-	-
Raw material inventory	813,030	983,767	1,190,358	1,440,333	1,742,803	2,108,792	2,551,638	3,087,482	3,735,853	4,520,382	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	140,500	126,450	112,400	98,350	84,300	70,250	56,200	42,150	28,100	14,050	-
Total Current Assets	1,403,530	4,064,299	5,185,581	5,972,186	6,589,235	11,933,739	18,519,892	25,792,587	33,821,520	42,683,643	52,014,383
<i>Fixed assets</i>											
Land	1,000,001	1,000,001	1,000,001	1,000,001	1,000,001	1,000,001	1,000,001	1,000,001	1,000,001	1,000,001	1,000,001
Building/Infrastructure	1,250,000	1,187,500	1,125,000	1,062,500	1,000,000	937,500	875,000	812,500	750,000	687,500	625,000
Machinery & equipment	2,810,000	2,529,000	2,248,000	1,967,000	1,686,000	1,405,000	1,124,000	843,000	562,000	281,000	-
Furniture & fixtures	60,000	54,000	48,000	42,000	36,000	30,000	24,000	18,000	12,000	6,000	-
Office vehicles	-	-	-	-	-	-	-	-	-	-	-
Office equipment	25,500	22,950	20,400	17,850	15,300	12,750	10,200	7,650	5,100	2,550	-
Total Fixed Assets	5,145,501	4,793,451	4,441,401	4,089,351	3,737,301	3,385,251	3,033,201	2,681,151	2,329,101	1,977,051	1,625,001
<i>Intangible assets</i>											
Pre-operation costs	49,600	39,680	29,760	19,840	9,920	-	-	-	-	-	-
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	-
Total Intangible Assets	49,600	39,680	29,760	19,840	9,920	-	-	-	-	-	-
TOTAL ASSETS	6,598,632	8,897,430	9,656,743	10,081,377	10,336,456	15,318,991	21,553,093	28,473,738	36,150,621	44,660,695	53,639,384
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable	-	1,287,043	1,424,642	1,577,868	1,748,677	1,939,301	2,152,297	2,390,597	2,657,571	2,957,104	2,844,122
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	-	1,287,043	1,424,642	1,577,868	1,748,677	1,939,301	2,152,297	2,390,597	2,657,571	2,957,104	2,844,122
<i>Other liabilities</i>											
Lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	449,600	449,600	449,600	449,600	449,600	359,680	269,760	179,840	89,920	-
Long term debt	3,299,316	2,196,711	1,743,762	1,231,929	653,559	-	-	-	-	-	-
Total Long Term Liabilities	3,299,316	2,646,311	2,193,362	1,681,529	1,103,159	449,600	359,680	269,760	179,840	89,920	-
<i>Shareholders' equity</i>											
Paid-up capital	3,299,316	3,299,316	3,299,316	3,299,316	3,299,316	3,299,316	3,299,316	3,299,316	3,299,316	3,299,316	3,299,316
Retained earnings	-	1,664,761	2,739,423	3,522,664	4,185,305	9,630,773	15,741,800	22,514,066	30,013,894	38,314,355	47,495,946
Total Equity	3,299,316	4,964,077	6,038,739	6,821,980	7,484,621	12,930,089	19,041,116	25,813,382	33,313,210	41,613,671	50,795,262
TOTAL CAPITAL AND LIABILITY	6,598,632	8,897,430	9,656,743	10,081,377	10,336,456	15,318,991	21,553,093	28,473,738	36,150,621	44,660,695	53,639,384

12.3) 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
Operating activities											
Net profit	-	3,329,521	3,814,086	4,305,904	4,847,946	5,445,468	6,111,027	6,772,266	7,499,829	8,300,460	9,181,591
Add: depreciation expense	-	352,050	352,050	352,050	352,050	352,050	352,050	352,050	352,050	352,050	352,050
amortization expense	-	9,920	9,920	9,920	9,920	9,920	-	-	-	-	-
Deferred income tax	-	449,600	-	-	-	-	(89,920)	(89,920)	(89,920)	(89,920)	(89,920)
Accounts receivable	-	(2,130,411)	(106,521)	(223,693)	(246,062)	(270,669)	(297,736)	(327,509)	(360,260)	(396,286)	(435,915)
Finished good inventory	-	-	-	-	-	-	-	-	-	-	-
Equipment inventory	-	-	-	-	-	-	-	-	-	-	-
Raw material inventory	(813,030)	(170,736)	(206,591)	(249,975)	(302,470)	(365,989)	(442,846)	(535,844)	(648,371)	(784,529)	4,520,382
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Advance insurance premium	(140,500)	14,050	14,050	14,050	14,050	14,050	14,050	14,050	14,050	14,050	14,050
Accounts payable	-	1,287,043	137,599	153,226	170,809	190,625	212,996	238,299	266,974	299,533	(112,982)
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(953,530)	3,141,037	4,014,593	4,361,482	4,846,243	5,375,456	5,859,621	6,423,392	7,034,351	7,695,358	13,429,257
Financing activities											
Change in long term debt	3,299,316	(1,102,605)	(452,949)	(511,832)	(578,371)	(653,559)	-	-	-	-	-
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	3,299,316	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares	-	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financ	6,598,632	(1,102,605)	(452,949)	(511,832)	(578,371)	(653,559)	-	-	-	-	-
Investing activities											
Capital expenditure	(5,195,102)	-	-	-	-	-	-	-	-	-	-
Acquisitions	-	-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by invest	(5,195,102)	-	-	-	-	-	-	-	-	-	-
NET CASH	450,000	2,038,432	3,561,644	3,849,649	4,267,872	4,721,897	5,859,621	6,423,392	7,034,351	7,695,358	13,429,257

13. KEY ASSUMPTIONS

13.1) Operating Cost Assumptions

Description	Details
Hours Operational Per Day	12
Days Operational Per Month	30
Days Operational Per Year	180
Operating Cost Growth Rate (per annum)	10%

13.2) Production Cost Assumptions

Description	Details
COGS Annual Growth Rate	10%

13.3) Revenue Assumptions

Description	Details
Sales Price Growth Rate	10%
Maximum Capacity Utilization	60%
Initial Capacity Utilization	60%

13.4) Economy Related Assumptions

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

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