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PROJECT REPORT

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PROJECT:

Organic Fertilizer Manufacturing Unit

PROJECT REPORT OF ORGANIC FERTILIZER MANUFACTURING UNIT

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Organic Fertilizer Manufacturing Unit. The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

PROJECT AT GLANCE

1 Name of Proprietor/Director	XXXXXXXXXX	
2 Firm Name	XXXXXXXXXX	
3 Registered Address	XXXXXXXXXX	
4 Nature of Activity	XXXXXXXXXX	
5 Category of Applicant	XXXXXXXXXX	
6 Location of Unit	XXXXXXXXXX	
7 Cost of Project	47.49	Rs. In Lakhs
8 Means of Finance		
i) Own Contribution	4.75	Rs. In Lakhs
ii) Term Loan	33.75	Rs. In Lakhs
iii) Working Capital	8.99	Rs. In Lakhs
9 Debt Service Coverage Ratio	2.21	
10 Break Even Point	34%	
11 Power Requirement	20	KW
12 Employment	9	Persons
13 Details of Cost of Project & Means of Finance		

COST OF PROJECT	
(in Lacs)	
PARTICULARS	Amount
Land & Building	Owned/Rented
Plant & Machinery	35.00
Furniture & Fixture	1.50
Miscellaneous Assets	1.00
Working capital Required	9.99
Total	47.49

MEANS OF FINANCE	
(in Lacs)	
PARTICULARS	Amount
Own Contribution @ 10%	4.75
Term Loan @ 90%	33.75
Working Capital (Bank Finance)	8.99
Total	47.49

ORGANIC FERTILIZER MANUFACTURING UNIT

1. INTRODUCTION



Fertilizer is one of the major inputs in agricultural production. Green Revolution was a combination of increasing agricultural produce and extensive use of chemical fertilizers. Organic fertilizer means substances made up of one or more unprocessed material(s) of a biological nature (plant/ animal) and may include unprocessed mineral materials that have been altered through the microbiological decomposition process. The chemical fertilizers boosted the agricultural produce but on the other hand, generated a lot of second - generation problems. These problems mainly included loss of soil fertility and nutrients and an increase in the number of barren lands. These chemicals also entered the food chain and serious consequences of that are being noticed to date. Heavy metals present inside the chemical fertilizers can affect the vital organs and cause several chronic diseases such as cancer, kidney diseases, nervous disorders, among others. Due to this, a paradigm shift towards the use of organic methods of farming is witnessed. The use of organic fertilizers not

only rejuvenated soil fertility but also increased the produce. Organic fertilizers have gained traction with the support of government policies and increasing awareness amongst the farmers. The organic sector is changing at an unprecedented pace, with new definitions, policies, certifications, products.

2. MARKET POTENTIAL:

The organic fertilizers market is projected to reach USD 11.16 billion by 2022, at a CAGR of 12.08% during the forecast period. Increasing demand for organic food and rising awareness regarding environmental safety are the key factors driving the growth of the organic fertilizers market. Moreover, the abundant availability of organic waste and advances in organic fertilizer manufacturing processes further support the growth of this market. However, the high demand for inorganic (synthetic) fertilizers and challenges to new entrants and small companies hinder the growth of this market marginally. The global population is growing rapidly; therefore, there is a need to increase agricultural production to fulfill the food requirements of the growing population. The use of chemical fertilizers to enhance agricultural production has become a common practice across the globe. However, the increasing use of agrochemical inputs has been a matter of debate for a long time due to their adverse effects on plant physiology, soil quality, animals, and human beings. The overuse of chemical fertilizers causes soil pollution (soil erosion) and water pollution. Also, their extensive use has a direct effect on the environment as chemical residues from fertilizers may remain in the soil and cause soil pollution, contaminate the surface or groundwater, or be released into the atmosphere through volatilization. Residues left in the soil emit ammonia, methane, nitrous oxide, and elemental nitrogen into the environment. Agricultural chemicals have been linked to a wide range of human health hazards, ranging from short-term impacts such as headaches and nausea to chronic impacts like cancer, reproductive harm, and endocrine disruption. Nitrogen and other chemicals in fertilizers can contaminate groundwater and cause blue baby syndrome after drinking. Therefore, due to the adverse effects of chemical fertilizers on the environment, growers increasingly prefer organic fertilizers as a safe alternative to chemical fertilizers. There are several organizations such as the Organic Trade

Association (OTA), the International Federation of Organic Agriculture Movements (IFOAM), the International Society of Organic Agriculture Research (ISO FAR), the Midwest Organic and Sustainable Education Service (MOSES), the Northeast Organic Farming Association (NOFA), the Organic Federation of Australia, the Organic Federation of Canada, and the Organic Growers School, that provide education, resources, and practical advice, creating awareness regarding organic farming. Organic fertilizers are formulated with natural plant residues and waste, animal manures & excreta, micro-organisms, and botanical extracts to enhance agricultural production. Organic fertilizers decompose very quickly without any negative effects on the surface and groundwater; thus, they are less hazardous to humans, animals, birds, and anything else that comes in contact with them. These fertilizers remain effective for a long time and improve the soil structure while increasing its water & nutrient holding capacity. They are slow-releasing, non-toxic fertilizers and don't leave any residues in the food; hence, they are preferred for producing residue-free agricultural yield. Therefore, factors such as the growing need to increase agricultural production and increasing awareness about the harmful effects of chemical inputs and benefits of organic fertilizers augment the demand for organic fertilizers.

3. PRODUCT DESCRIPTION

3.1 PRODUCT USES

The use of organic fertilizers for farming helps in eliminating unwanted and harmful contamination in the environment like surface water contaminations, underground water tables, etc. They effectively help in the degradation of other natural substances present in the soil thereby enriching the soil contents.

3.2 PRODUCT RAW MATERIAL

- **Sheep Manure, Poultry Manure, Cow Dung, Agriculture waste, Fish meal, Bone meal, coir pith, Biogas waste, Rock phosphate, etc.**



- **Other:** Packing materials.

3.3 MANUFACTURING PROCESS

This process can be broken down into the following steps-

- **Raw material procurement**
- **Fertilizer Making Process**
- **Testing**

➤ Fertilizer Making Process

- Mother manure preparation
- Granulation
- Packing

➤ Testing

- Quality control

4. PROJECT COMPONENTS

Plant & Machinery

S.No.	Machine
1.	Bio reactor
2.	Bio fermenter
3.	Auto clave
4.	Boiler
5.	RO plant
6.	Compost seiving machine
7.	Rotary Drum Fertilizer Granulator
8.	Pulveriser
9.	Compressor
10.	Laminar Flow Hood
11.	Culture Media Tanks
12.	Freezers
13.	Conveyors
14.	QC Lab Setup
15.	Others (Weighing Machine, Bag Stitching Machine, Pumps, Gear Motors)

PROJECTED BALANCE SHEET					
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
<u>Liabilities</u>					
Capital					
Opening Balance		7.01	11.18	16.65	23.22
Add:- Own Capital	4.75				
Add:- Retained Profit	7.26	10.17	12.47	15.57	18.86
Less:- Drawings	5.00	6.00	7.00	9.00	12.00
Closing Balance	7.01	11.18	16.65	23.22	30.08
Term Loan	30.00	22.50	15.00	7.50	-
Working Capital Limit	8.99	8.99	8.99	8.99	8.99
Sundry Creditors	1.75	2.02	2.29	2.58	2.88
Provisions & Other Liabilities	0.50	1.00	1.16	1.50	1.80
TOTAL :	48.25	45.68	44.09	43.80	43.76
<u>Assets</u>					
Fixed Assets (Gross)	37.50	37.50	37.50	37.50	37.50
Gross Depreciation	5.58	10.32	14.36	17.79	20.71
Net Fixed Assets	31.93	27.18	23.14	19.71	16.79
<u>Current Assets</u>					
Sundry Debtors	2.87	3.51	4.05	4.66	5.31
Stock in Hand	8.87	10.23	11.69	13.24	14.85
Cash and Bank	4.58	4.76	5.21	6.19	6.82
TOTAL :	48.25	45.68	44.09	43.80	43.76

<u>PROJECTED CASH FLOW STATEMENT</u>					
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
<u>SOURCES OF FUND</u>					
Own Margin	4.75				
Net Profit	7.66	11.15	14.13	18.50	23.19
Depriciation & Exp. W/off	5.58	4.74	4.04	3.44	2.92
Increase in Cash Credit	8.99	-	-	-	-
Increase In Term Loan	33.75	-	-	-	-
Increase in Creditors	1.75	0.26	0.28	0.29	0.30
Increase in Provisions & Other liabilities	0.50	0.50	0.16	0.35	0.30
TOTAL :	62.97	16.66	18.60	22.57	26.72
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	37.50				
Increase in Stock	8.87	1.36	1.46	1.55	1.61
Increase in Debtors	2.87	0.64	0.54	0.61	0.65
Repayment of Term Loan	3.75	7.50	7.50	7.50	7.50
-	-	-	-	-	-
Drawings	5.00	6.00	7.00	9.00	12.00
Taxation	0.40	0.98	1.66	2.92	4.33
TOTAL :	58.39	16.48	18.15	21.59	26.09
Opening Cash & Bank Balance	-	4.58	4.76	5.21	6.19
Add : Surplus	4.58	0.18	0.44	0.98	0.63
Closing Cash & Bank Balance	4.58	4.76	5.21	6.19	6.82

PROJECTED PROFITABILITY STATEMENT					
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
Capacity Utilisation %	45%	50%	55%	60%	65%
SALES					
Gross Sale					
Organic fertilizer	123.12	150.44	173.45	199.61	227.51
Total	123.12	150.44	173.45	199.61	227.51
COST OF SALES					
Raw Material Consumed	75.17	86.40	98.21	110.59	123.55
Electricity Expenses	1.73	1.92	2.11	2.30	2.50
Depreciation	5.58	4.74	4.04	3.44	2.92
Wages & labour	7.44	8.56	9.84	11.32	13.01
Repair & maintenance	3.69	4.51	5.20	6.59	7.51
Consumables	3.69	4.51	7.46	9.98	12.51
Packaging cost	4.92	7.52	8.67	9.98	11.38
Cost of Production	102.22	118.17	135.53	154.20	173.38
Add: Opening Stock	-	5.11	5.91	6.78	7.71
Less: Closing Stock	5.11	5.91	6.78	7.71	8.67
Cost of Sales	97.11	117.37	134.66	153.26	172.42
GROSS PROFIT	26.01	33.07	38.79	46.35	55.08
Salary to Staff	5.52	6.35	7.62	9.14	10.51
Interest on Term Loan	3.32	2.92	2.10	1.27	0.45
Interest on working Capital	0.99	0.99	0.99	0.99	0.99
Rent	3.60	4.14	4.76	5.48	6.30
Selling & Administration Expenses	4.92	7.52	9.19	10.98	13.65
TOTAL	18.35	21.92	24.66	27.86	31.89
NET PROFIT	7.66	11.15	14.13	18.50	23.19
Taxation	0.40	0.98	1.66	2.92	4.33
PROFIT (After Tax)	7.26	10.17	12.47	15.57	18.86
GROSS PROFIT RATIO	21.12%	21.98%	22.36%	23.22%	24.21%
NET PROFIT RATIO	6.22%	7.41%	8.15%	9.27%	10.19%

CALCULATION OF D.S.C.R					
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
CASH ACCRUALS	12.83	14.92	16.51	19.01	21.78
Interest on Term Loan	3.32	2.92	2.10	1.27	0.45
Total	16.15	17.84	18.61	20.28	22.23
REPAYMENT					
Instalment of Term Loan	3.75	7.50	7.50	7.50	7.50
Interest on Term Loan	3.32	2.92	2.10	1.27	0.45
Total	7.07	10.42	9.60	8.77	7.95
DEBT SERVICE COVERAGE RATIO	2.29	1.71	1.94	2.31	2.80
AVERAGE D.S.C.R.	2.21				

REPAYMENT SCHEDULE OF TERM LOAN							
						Interest	11.00%
Year	Particulars	Amount	Addition	Total	Interest	Repayment	Closing Balance
1st	Opening Balance	-					
	1st month		33.75	33.75	-	-	33.75
	2nd month	33.75	-	33.75	0.31	-	33.75
	3rd month	33.75	-	33.75	0.31	-	33.75
	4th month	33.75	-	33.75	0.31	-	33.75
	5th month	33.75	-	33.75	0.31	-	33.75
	6th month	33.75	-	33.75	0.31	-	33.75
	7th month	33.75	-	33.75	0.31	0.63	33.13
	8th month	33.13	-	33.13	0.30	0.63	32.50
	9th month	32.50	-	32.50	0.30	0.63	31.88
	10th month	31.88	-	31.88	0.29	0.63	31.25
	11th month	31.25	-	31.25	0.29	0.63	30.63
		30.63	-	30.63	0.28	0.63	30.00
					3.32	3.75	
2nd	Opening Balance						
	1st month	30.00	-	30.00	0.28	0.63	29.38
	2nd month	29.38	-	29.38	0.27	0.63	28.75
	3rd month	28.75	-	28.75	0.26	0.63	28.13
	4th month	28.13	-	28.13	0.26	0.63	27.50
	5th month	27.50	-	27.50	0.25	0.63	26.88
	6th month	26.88	-	26.88	0.25	0.63	26.25
	7th month	26.25	-	26.25	0.24	0.63	25.63
	8th month	25.63	-	25.63	0.23	0.63	25.00
	9th month	25.00	-	25.00	0.23	0.63	24.38
	10th month	24.38	-	24.38	0.22	0.63	23.75
	11th month	23.75	-	23.75	0.22	0.63	23.13
	12th month	23.13	-	23.13	0.21	0.63	22.50
					2.92	7.50	
3rd	Opening Balance						
	1st month	22.50	-	22.50	0.21	0.63	21.88
	2nd month	21.88	-	21.88	0.20	0.63	21.25
	3rd month	21.25	-	21.25	0.19	0.63	20.63
	4th month	20.63	-	20.63	0.19	0.63	20.00
	5th month	20.00	-	20.00	0.18	0.63	19.38
	6th month	19.38	-	19.38	0.18	0.63	18.75
	7th month	18.75	-	18.75	0.17	0.63	18.13
	8th month	18.13	-	18.13	0.17	0.63	17.50
	9th month	17.50	-	17.50	0.16	0.63	16.88
	10th month	16.88	-	16.88	0.15	0.63	16.25
	11th month	16.25	-	16.25	0.15	0.63	15.63
	12th month	15.63	-	15.63	0.14	0.63	15.00
					2.10	7.50	

4th	1st month	15.00	-	15.00	0.14	0.63	14.38
	2nd month	14.38	-	14.38	0.13	0.63	13.75
	3rd month	13.75	-	13.75	0.13	0.63	13.13
	4th month	13.13	-	13.13	0.12	0.63	12.50
	5th month	12.50	-	12.50	0.11	0.63	11.88
	6th month	11.88	-	11.88	0.11	0.63	11.25
	7th month	11.25	-	11.25	0.10	0.63	10.63
	8th month	10.63	-	10.63	0.10	0.63	10.00
	9th month	10.00	-	10.00	0.09	0.63	9.38
	10th month	9.38	-	9.38	0.09	0.63	8.75
	11th month	8.75	-	8.75	0.08	0.63	8.13
	12th month	8.13	-	8.13	0.07	0.63	7.50
					1.27	7.50	
5th	Opening Balance						
	1st month	7.50	-	7.50	0.07	0.63	6.88
	2nd month	6.88	-	6.88	0.06	0.63	6.25
	3rd month	6.25	-	6.25	0.06	0.63	5.63
	4th month	5.63	-	5.63	0.05	0.63	5.00
	5th month	5.00	-	5.00	0.05	0.63	4.38
	6th month	4.38	-	4.38	0.04	0.63	3.75
	7th month	3.75	-	3.75	0.03	0.63	3.13
	8th month	3.13	-	3.13	0.03	0.63	2.50
	9th month	2.50	-	2.50	0.02	0.63	1.88
	10th month	1.88	-	1.88	0.02	0.63	1.25
	11th month	1.25	-	1.25	0.01	0.63	0.63
	12th month	0.63	-	0.63	0.01	0.63	-
					0.45	7.50	
DOOR TO DOOR		60	MONTHS				
MORATORIUM PERIOD		6	MONTHS				
REPAYMENT PERIOD		54	MONTHS				

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