PROJECT REPORT

Of

CATTLE FEED

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Cattle feed 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.]

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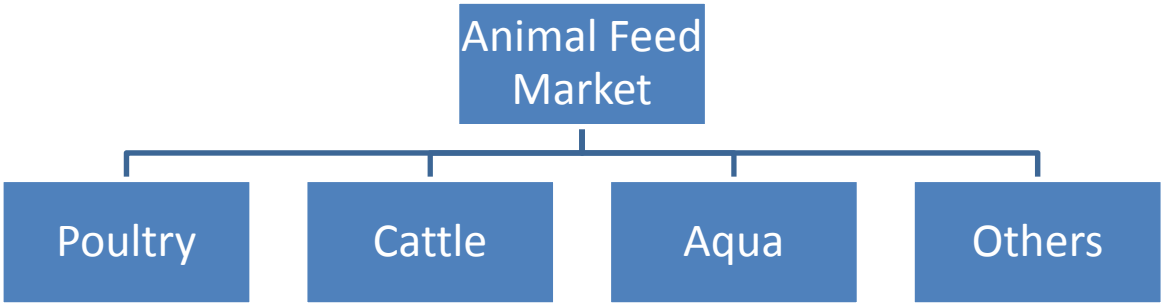
Indian Feed Sector.

India is one of the largest and fastest growing compound feed markets in the world. Feed manufacturing on a commercial and scientific basis started around 1965 in India with the setting up of medium-sized feed plants in northern and western India.

Feed was produced mainly to cater to the needs of dairy cattle. The poultry sector was not developed at that time and was restricted to backyard production, with the desi (or native bird) kept mainly for the production of eggs. The Indian feed industry is undergoing a very exciting phase of growth for the next decade.

Indian feed industry is presently growing at a CAGR of 8 percent. Poultry, aqua and dairy industry occupies the major share in overall feed demand. While the potential feed requirement is huge and stands at around 96 million tonnes, only 20.3 million tonnes was produced during 2012-13.

There is a huge scope for the growth in the sector, with industry becoming more organized. With this growth rate India will soon become the largest feed market in the coming years. The feed industry requirements that are met with the compound feed are only 11 percent for cattle, 14 percent for aqua feed and 55 percent for poultry feed.



The poultry industry has grown at an annual growth rate of percent from 2002 to around 2013. The seafood sector is also witnessing a growth of 6 percent annually in production of aquaculture. Simultaneously, Indian dairy sector has also been growing at a rate of 4 percent annually. Growth in these sectors has pushed up the demand for compound feed by 50 percent. India's demand for compound feed is expected to rise 28 million tonnes by 2017-18

However, majority of the feed production is highly fragmented, composed mostly of home and custom mixers. The table below provides a detailed breakup of animal feed industry into various segments – Poultry (broiler and layer), cattle and aqua in India.

Sector	Feed Consumption (million tonnes)	Potential Feed Volume Requirements (2017-18)	Estimated Future Annual Feed Consumption Growth rate (%)
Broiler	9.4	10.	8
Layer	2-3	11.	5-6
Cattle	7.5	67	6
Aqua	1	7	9

Cattle Feed Industry

Dairy Feeding System in India

Feeding systems in India is prevalent small dairying primarily based on grazing of native pastures of low nutritive value. Cattle and buffalo are usually fed on wheat, paddy, millet, sugarcane tops and other straws and stovers. These are supplemented with small quantity of grass available from grazing. Very limited amount of concentrate is fed to the animals.

According to National Dairy Development Board (NDDB), the livestock feeding systems in India is categorized into six major types:

1. Dry Fodder + Compound Feed + Concentrate Feed
2. Dry Fodder + Green Fodder + Compound Feed + Concentrate Feed
3. Dry Fodder + Homemade Concentrate Mix + Grazing
4. Green Fodder + Compound Feed + Concentrate Feed
5. Silage + Dry Fodder + Concentrate Feed
6. Silage + Compound Feed + Concentrate Feed

The table below depicts the projected demand and availability of feed/fodder by 2020 in India.

Projected demand and availability of fodder in India

	Demand Projections (2020) (million MT)	Availability Projections	Shortfall (2020) (%age)
Dry Fodder	46	41	11
Green Fodder	21	13	35
Concentrate	81	44	45

Source: CLFMA Annual Survey 2013-14, NDRI.

B.I.S SPECIFICATION

Bureau of Indian Standard has developed standard specification for cattle feed. It is given by:-

IS: 2052- 1975: - Compounded feeds for cattle.

IS: 1664- 1981: - Mineral mixture for supplementing cattle feed.

MANUFACTURING PROCESS.

Cattle feed is precisely obtained by blending the concerned raw material in desired quantity to get the particular cattle feed.

The raw material are ground first individually and is latter feed into mixer to obtain homogenous mixing , where after it is transported to the pulverizer, where it is pulverized to the required mesh size.

The product is then screened to obtain the required particle size. There after it is mixed with molasses.

According to the given formulation take a requisite quantity of raw material. These raw materials are pulverized to their required mesh size. After pulverization the mass is fed to the mixing section, where it is intimately mixed with minerals, vitamins and other ingredients, when the ingredients are well mixed then the whole mass is fed to pelletizing machine to get cattle feed in pellets form. Now, the pellets are tested in laboratory to confirm the analytical value.

Reception:-

The raw materials usually arrive at the factory in sacks, which can be either man handled or conveyed mechanically into the ware house. Since quality control is an important part of feed compounding, checks should be made on the weight & condition of the incoming raw materials & samples should be taken for laboratory analysis where possible.

Storage of Raw Materials:-

In coming raw materials should be stored conditions which ensure that they are kept dry & free from insect & rodent pests. If they are to be stored in bags. They should be kept in a produce w a r e house constructed to an appropriates standard. The ware house should have a concrete floor but the roof & walls need only be lightly constructed, provided of course that they are pest & water roof. As a rough guide to the space requirements 6 Sq. ft. ton of stored materials regd.

The amount stored will vary firm time to time since storage can be used to even out fluctuations in the supply of individual ingredients a n d allows advantage to be taken of price fluctuations.

Raw materials may also be bulk stored either in silos constructed from concrete or steel or in bins formed with partitions in conventional stores. In general bulk storage entails a great, i n v e s t m e n t in capital, e q u i p m e n t b u t lower operating c o s t s working capital which would be tied up in the bags used to contain the raw materials is also released.

The particular method chosen for low materials storage will depend on the local circumstances but in areas where labour is cheap & plentiful & capital funds scarce, it is likely the storage in bags will be preferable.

Grinding:-

Some material including cereals & oil seed cakes, need grinding to prepare then for blending and or mixing. In same units materials are first blended then ground before mixing in other, they are ground first then blended mixed of time the grinder can be kept supplied with material.

Blending:-

Blending involves the assembling & measuring out of the required quantities of raw material. The raw materials are brought manually from the ware house & weighed out in batches. Those which need grinding are tipped into the foot of the elevator which feeds the grinder less, the other material are into the base of the mixer.

In some units blending is semi mechanical material used in large quantities are elevated into one of the four bulk bins. An operator determines which bin is filled by means of a four-way switch.

The material flows out of the bins under gravity into one of the two batch weighs the flow being controlled by an operator. Who opens & closes a flow in response to readings from a dial which registers the amount of material in the weigher. The weight of each raw material in any batch & the no of batches in each formulation is predetermined.

In all cases, the raw materials, blended or single, are fed into an elevator which feeds a grinder bin. The out let of these bin incorporate a magnetic tray & a oslesating feed which regulator the flow of material into the grinder so that the load on the grinder motor is kept at the optimum level.

All the grinders are hammer mills, also known as unijact grinders. These are the most suitable type available at present for use in feed compounding. The other common types disc grinders & roller grinders, have their own applications but are not usual in feed mills. Both have a higher capital cost than however, mills of similar capacity & produce products with qualities that hammer mills cannot achieve.

The material enters a chamber in which set of beaters revolve driven by and an electric motor. The beaters throw the material against the projections on the inner surface of the chamber, which breaks up the material & against a perforated screen. Through which the ground material passes. Wear on the beaters, projections & screen is slight but they can be dawaged by foreign bodies such as stores, glass or metal objects entering the grinder chamber.

After the material has passed through the screen, it is blow through a pipe into a cyclone which collects the ground material.

Certain mixtures of air & dust, created by the grinders are explosive, esp. when, as in a grinder, these is a risk of sparks.

Because of the dangers of explosion, the grinders are contained in special structures either above or below ground.

The size & capacity of the grinder required depends on the amount of materials to be ground the finesses of grind required & the amount when a batch is complete, it is elevated to the grinder bin & ground.

PROJECT AT GLANCE

NAME OF FIRM	:	**XXXX**
CONSTITUTION	:	XXXX
NAME OF PROPRIETOR	:	XXXX
NATURE OF ACTIVITY	:	Manufacturing of Animal Feed(Cattle/Pig)
UNIT ADDRESS	:	XXXX

PRODUCTS :

Product	Capacity
Animal Feed	300 Kg/Hr

FINANCIAL ASSITANCE REQUIRED	:	Term Loan	10.29 Lacs
		Working Capital Loan	10.00 Lacs

COST OF PROJECT

PARTICULARS	**TOTAL COST**
Civil Work	5.39
Plant & Machinery	5.19
Office Furniture	0.25
Working Capital required	10.50
Total	**21.33**

MEANS OF FINANCE

PARTICULARS	**TOTAL COST**
Own Contribution(5% of Project Cost)	1.07
Term Loan	10.29
Working capial From Bank	10.00
Total	**21.33**

Subsidy from Government **35 % of Rs 21.33** **(Rs. 746550)**

PROJECTED BALANCE SHEET STATEMENT

Particulars	*YEAR1*	*YEAR2*	*YEAR3*	*YEAR4*	*YEAR5*
SOURCES OF FUND					
Opening Capital	-	6.90	14.67	22.19	28.10
Addition in Capital	1.07	-	-	-	-
Add:- Profits	6.34	9.76	10.52	9.91	11.00
Less:- Drawings	0.50	2.00	3.00	4.00	5.00
Closing Capital	**6.90**	**14.67**	**22.19**	**28.10**	**34.10**
			-		
Subsidy Reserve	7.47	7.47	7.47	7.47	7.47
Term Loan From Bank	9.89	9.09	8.29	-	-
Working Capital Loan	10.00	10.00	10.00	10.00	10.00
Sundry Creditors	4.17	4.63	4.93	5.27	5.57
Other Current libilities & Provisions	2.00	4.00	5.00	6.00	7.00
TOTAL :	**40.43**	**49.86**	**57.88**	**56.84**	**64.14**
APPLICATION OF FUND					
Fixed Assets					
Gross Block	11.77	11.77	11.77	11.77	11.77
Depreciation	0.44	1.83	3.05	4.11	5.03
Net Block	**11.33**	**9.94**	**8.72**	**7.66**	**6.73**
Fixed Deposit of Subsidy	7.47	7.47	7.47	-	-
Current Assets					
Sundry Debtors	14.76	11.33	12.07	12.87	13.10
Inventory	5.00	10.00	15.00	20.00	25.00
Cash and Bank	1.87	11.12	14.62	16.31	19.30
TOTAL :	**40.43**	**49.86**	**57.88**	**56.83**	**64.14**
	-	-	-	-	-

STATEMENT OF COST OF PRODUCTION AND PROFITABILITY

Particulars	*YEAR1*	*YEAR2*	*YEAR3*	*YEAR4*	*YEAR5*
%Capacity	65%	75%	80%	85%	90%
Gross Sale	147.55	170.00	181.00	193.00	204.00
NET SALES	**147.55**	**170.00**	**181.00**	**193.00**	**204.00**
COST OF PRODUCTION					
Raw Material & Consumable	125.00	139.00	148.00	158.00	167.00
Power Expense	1.48	1.70	1.81	1.93	2.04
Repair & Maintenance	0.74	0.85	0.91	0.97	1.02
Wages & Salary	7.98	8.38	8.80	9.24	9.70
Factory Expenses	1.77	2.04	2.17	2.32	2.45
COST OF PRODUCTION	136.96	151.97	161.68	172.45	182.21
Add :Op. Fin. Goods	-	5.00	10.00	15.00	20.00
Less : Cl. Fin. Goods	5.00	10.00	15.00	20.00	25.00
TOTAL (B)	**131.96**	**146.97**	**156.68**	**167.45**	**177.21**
GROSS PROFIT (A-B)	15.59	23.03	24.32	25.55	26.79
G.P Ratio	**10.56%**	**13.55%**	**13.43%**	**13.24%**	**13.13%**
Salary to Staff	4.20	4.62	5.08	5.59	6.15
Selling & Adminsitrative Expenses	2.95	5.10	5.43	5.79	6.12
Interest on Term Loan	0.56	1.05	0.97	0.87	-
Interest on Working Capital Loan	1.10	1.10	1.10	1.10	1.10
Depreciation	0.44	1.39	1.22	1.06	0.93
TOTAL (D)	**9.25**	**13.27**	**13.79**	**14.41**	**14.30**
NET PROFIT (C-D)	***6.34***	***9.76***	***10.52***	***11.14***	***12.50***
LESS : TAXES	**-**	**-**	**-**	**1.23**	**1.50**
PROFIT AFTER TAX	***6.34***	***9.76***	***10.52***	***9.91***	***11.00***
	4.30%	5.74%	5.81%	5.14%	5.39%
ADD : DEPRECIATION	0.44	1.39	1.22	1.06	0.93
CASH ACCRUALS	***6.77***	***11.16***	***11.74***	***10.98***	***11.92***

PROJECTED FUND FLOW STATEMENT

	Particulars	*YEAR1*	*YEAR2*	*YEAR3*	*YEAR4*	*YEAR5*
A.	***SOURCES OF FUND***					
	Capital	1.07		-	-	-
	Term Loan from Bank	10.29	-	-	-	-
	Working Capital Loan	10.00	-	-	-	-
	Net Profit	6.34	9.76	10.52	11.14	12.50
	Subsidy reserve	7.47	-	-		
	Depreciation & Exp. W/off	0.44	1.39	1.22	1.06	0.93
	Increase in Sundry Crediotrs	4.17	0.47	0.30	0.33	0.30
	Increase Other Current libilities & Prov	2.00	2.00	1.00	1.00	1.00
	TOTAL (A)	***41.77***	***13.62***	***13.04***	***13.54***	***14.72***
B.	***APPLICATION OF FUND***					
	Capital Expenditure	11.77	-	-	-	-
	Repayment of Term Loan	0.40	0.80	0.80	8.29	-
	Increase in FD	7.47	-	-	(7.47)	-
	Tax Paid	-	-	-	1.23	1.50
	Increase in Finished Goods	5.00	5.00	5.00	5.00	5.00
	Increase in Sundry Debtors	14.76	(3.42)	0.73	0.80	0.23
	Drawings	0.50	2.00	3.00	4.00	5.00
	TOTAL (B)	***39.89***	***4.38***	***9.53***	***11.85***	***11.73***
	Opening Balance	-	1.87	11.12	14.62	16.31
	Add/Less Surplus	1.87	9.24	3.50	1.69	2.99
	Closing Balance	1.87	11.12	14.62	16.31	19.30

Assumptions of the Project

Product Manufactured	:	Animal feed (Cattle Feed and Pig Feed)
Plant Capacity	:	500-1000 kg/hr(as per Quotation)
Operating Capacity	:	300 kg/hr

Raw Material Requirement

The Raw Material for Animal feed are as follows:

Cattle Feed	Pig Feed
1. Wheat Bran	1. Maize
2. Ground nut extraction	2. Rice Polish
3. Rice bran	3. Soya DOC
4. Maize	4. Ground nut extraction
5. Mustard Cake	5. Milk powder
6. Molasses	6. MBM
7. Calcium carbonate	7. Salt
8. Mineral mixture & Vitamin mix	8. Fish meal
9. Soya DOC	9. Toxin binder
	10. Yeast

Calculation of Production

Capacity	:	300	kg/hr
No. of Shifts per day	:	1 shift of 10 hours	
No. of workkng Days in a year	:	300	days
Total Production per annum	:	900,000.00	Kg/annum
Selling Price of Finished Goods	:	1300	per 50 kg bag
		600	per 25 kg bag

No. of Bags to be manufactured

50 kg bag (60% of Total production)	:	10800
25 kg bag (40 % of total production)	:	14400

COMPUTATION OF WORKING CAPITAL

Turnover Method

(i) Projected Sales(2019-20)	147.55
(ii) Working Capital Requirement 25% of Projected Sales	36.89
(iii) Margin 5% of Projected Sales	7.38
(iv) MPBF	29.51
Working Capital Limit Required	10.00

BREAK UP OF SALARY (ADMINISTRATIVE STAFF)

Particulars	Salary Per Month	No of Employees	Total Salary
Accounts & Clerical Staff	15,000.00	**1**	15,000.00
Marketing Staff	10,000.00	**2**	20,000.00
Total Salary Per Month			35,000.00
			35,000.00
Annual Salary (Rs in Lacs)			4.20
Y1			4.20
Y2			4.62
Y3			5.08
Y4			5.59
Y5			6.15

BREAK UP OF LABOUR & WAGES (WORKERS)

Particulars	Wages Per Month	No of Labours	Total Salary
			-
Skilled Worker	10,000.00	4	40,000.00
Unskilled Worker	8,000.00	3	24,000.00
Casual Labour	2,500.00	1	2,500.00
Total Wages Per Month			66,500.00
Annual Salary (Rs in Lacs)			7.98
Y1			7.98
Y2			8.38
Y3			8.80
Y4			9.24
Y5			9.70

SCHEDULE OF DEPRECIATION

Particulars		Building 10%	Plant 15.00%	Furniture 10.00%	Total
Addition	-	5.39	5.19	0.25	10.83
Intt. Capitalised	-	0.47	0.45	0.02	0.94
Less : Depreciation	-	-	0.42	0.01	0.44
WDV at end of Year	-	5.86	5.22	0.26	11.33
Additions During The Year	-	-	-	-	-
Less : Depreciation	-	0.59	0.78	0.03	1.39
WDV at end of Year	-	5.27	4.43	0.23	9.94
Additions During The Year	-	-	-	-	-
Less : Depreciation	-	0.53	0.67	0.02	1.22
WDV at end of Year	-	4.74	3.77	0.21	8.72
Additions During The Year	-	-	-	-	-
	-	4.74	3.77	0.21	8.51
Less : Depreciation	-	0.47	0.57	0.02	1.06
WDV at end of Year	-	4.27	3.20	0.19	7.66
Additions During The Year	-	-	-	-	-
	-	4.27	3.20	0.19	7.47
Less : Depreciation	-	0.43	0.48	0.02	0.93
WDV at end of Year	-	3.84	2.72	0.17	6.73

REPAYMENT SCHEDULE OF TERM LOAN

Intt. Rate **11.00%**

Year	Particulars	Amount	Addition	Total	Interest	Repayment	Cl Balance
YEAR1	Opening Balance						
	Ist Quarter	-	10.29	10.29	0.09		10.29
	IInd Quarter	10.29	-	10.29	0.28	-	10.29
	IIIrd Quarter	10.29	-	10.29	0.28	0.20	10.09
	Ivth Quarter	10.09	-	10.09	0.28	0.20	9.89
					0.94	0.40	
YEAR2	Opening Balance						
	Ist Quarter	9.89	-	9.89	0.27	0.20	9.69
	Iind Quarter	9.69	-	9.69	0.27	0.20	9.49
	IIIrd Quarter	9.49	-	9.49	0.26	0.20	9.29
	Ivth Quarter	9.29		9.29	0.26	0.20	9.09
					1.05	0.80	
YEAR3	Opening Balance						
	Ist Quarter	9.09	-	9.09	0.25	0.20	8.89
	Iind Quarter	8.89	-	8.89	0.24	0.20	8.69
	IIIrd Quarter	8.69	-	8.69	0.24	0.20	8.49
		8.49		8.49	0.23	0.20	8.29
					0.97	0.80	
YEAR4	Opening Balance						
	Ist Quarter	8.29	-	8.29	0.23	0.27	8.02
	Iind Quarter	8.02	-	8.02	0.22	0.27	7.75
	IIIrd Quarter	7.75	-	7.75	0.21	0.28	7.47
	Ivth Quarter (Subsidy Adjusted)	7.47		7.47	0.21	7.47	(0.00)
					0.87	8.29	

Subsidy Will be Adjusted 2022-23 After Three Years

Deducted From Principle 7.47 Lacs

CALCLUATION OF D.S.C.R.

Particulars	***YEAR2***	***YEAR3***	***YEAR4***
CASH ACCRUALS	11.16	11.74	18.66
ADD : INTEREST ON TERM LOAN	1.05	0.97	0.87
Total	***12.21***	***12.70***	***19.52***
LESS : REPAYMENT			
INTEREST ON TERM LOAN	1.05	0.97	0.87
INSTALMENT OF TERM LOAN	0.80	0.80	8.29
	1.85	***1.77***	***9.16***
D.S.C.R.	**6.58**	**7.19**	**2.13**
AVERAGE D.S.C.R.		**3.48**	

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