

CATTLE & POULTRY FEED

QUALITY AND STANDARDS	:	As per BIS specifications
PRODUCTION CAPACITY	:	1,000 tpa



1.0 PRODUCT AND ITS APPLICATIONS



The animal feed industry has a wide choice of utilising various cereals, millets, agricultural wastes, oilseed meals, various chunnies, fish/silkworm meal and other available local material to evolve formulations to meet the nutritional standards. The genetic potential for milk production of the crossbreed cows and buffaloes can be fully exploited by providing nutritious and palatable green fodder throughout the year. On an average, about 35-40 kg of green fodder is required per day per adult animal. If the indigenous breeds are fed adequately with the supplement of concentrated feed, their milk yield can be increased by 30%. On an average, even 10% improvement in feeding efficiency can increase the milk output by 25%. In the case of poultry, about 2.1 kg of poultry feed is required to produce 1 kg of live weight broiler. Due to feed efficiency, a broiler takes 7-9 weeks to attain 1.8 kg weight.

2.0 MARKET POTENTIAL

Major raw materials required for manufacture of animal feed are jowar, ragi, broken wheat, maize, rice bran (deoiled), rice bran whole, gram husk, groundnut cake, groundnut deoiled cake, sunflower cake, safflower cake, wheat bran, wheat husk, fish meal, dried fish, niger cake, silk worm pupae and molasses. The raw materials are available readily. The feed consists of three major group of substances : carbohydrates, oils and proteins together with smaller amounts of minerals and vitamins. Today India is the largest producer of milk in the world with annual production of more than 85 million tonnes and important producer of poultry. The need for animal/poultry feed has gone up substantially. There is a good potential to set up small scale feed production units to meet the local demand.



3.0 BASIS AND PRESUMPTIONS

- The unit proposes to work at least 300 days per annum on single shift basis.
- The unit can achieve its full capacity utilization during the 2nd year of operation.
- The wages for skilled workers is taken as per prevailing rates in this type of industry.
- Interest rate for total capital investment is calculated @ 12% per annum.
- The entrepreneur is expected to raise 20-25% of the capital as margin money.
- The unit proposes to construct own building.
- Costs of machinery and equipment are based on average prices enquired from machinery manufacturers.

4.0 IMPLEMENTATION SCHEDULE

Project implementation will take a period of 8 months. Break-up of the activities and relative time for each activity is shown below:

- Scheme preparation and approval : 01 month
- SSI provisional registration : 1-2 months
- Sanction of financial supports etc. : 2-5 months
- Installation of machinery and power connection : 6-8 months
- Trial run and production : 01 month

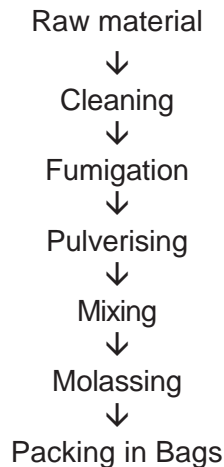
5.0 TECHNICAL ASPECTS

5.1 Location

The unit can be set up in any rural and semi-urban area where the raw material is available in plenty and local demand exists for the product. The availability of water, power, road connectivity are also to be considered while selecting the location.

5.2 Process of Manufacture

The animal feed comprises of various formulations such as chick mash, growers mash, layers mash, broiler starter, broiler finishers, poultry feed and cattle feed to meet the requirements of calves, milk cows, draught animals etc. The flow diagram of the process is as follows:



5.3 Quality Control and Standards: As per BIS requirements

6.0 POLLUTION CONTROL

There is no major pollution problem associated with this industry except for disposal of waste which should be managed appropriately. The entrepreneurs are advised to take “No Objection Certificate” from the State Pollution Control Board.

7.0 ENERGY CONSERVATION

Adequate care should be to minimise the wastage of electric power.

8.0 PRODUCTION CAPACITY

Quantity	:	1,000 tpa
Installed capacity	:	4.5 tpa
Optimum capacity utilization	:	70%
Working days	:	300/annum
Manpower	:	18
Utilities		
Motive Power	:	20 kW
Water	:	5 kL/day

9.0 FINANCIAL ASPECTS

9.1 Fixed Capital

9.1.1 Land & Building

		Amount (Rs. lakh)
Land 1000 sq.m.	:	1.25
Built up Area 250 sq. m..	:	8.25
		<hr/>
Total cost of Land and Building	:	9.50

9.1.2 Machinery and Equipment

Description		Amount (Rs. lakh)
Screw conveyor, single deck vibroscreen, bucket elevator, hammer mill, suction blower, batch mixer, peddle conveyor, molasses and mixer, bucket elevator, bagging and conveying system, aspirators, electrical control panel	:	12.00
Erection and electrification @ 10% of machinery cost	:	1.20
Office furniture & fixtures	:	0.40
Total	:	13.60

9.1.3 Pre-operative Expenses

Consultancy fee, project report, deposits with electricity department etc.	:	0.50
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9.1.4 Total Fixed Capital

	:	22.00
(9.1.1+9.1.2+9.1.3)		

9.2 Recurring expenses per annum

9.2.1 Personnel

Designation	No.	Salary Per month	Amount (Rs.lakh)
Factory Manager/Entrepreneur	1	8000	0.96
Supervisor	1	5000	0.60
Skilled worker	2	2500	0.60
Unskilled workers(8 months)	14	2000	3.36
			5.52
Perquisites @15%			0.83
Total	18		6.35

9.2.2 Raw Material including packaging materials

Particulars	Qty.(MT)	Rate/MT	Amount (Rs. lakh)
Broken rice, maize, rice bran, Fish meal etc.	1150	3250	37.38
Gunny bags	10,500 No.	12 each	01.22
Total:			38.60

9.2.3 Utilities

	Amount (Rs. lakh)
Power	0.58
Water	0.02
Total:	0.60

9.2.4 Other Contingent Expenses

	Amount (Rs. lakh)
Repairs and maintenance@10%	1.32
Consumables & spares	
Transport & Travel	
Publicity	0.60
Postage & stationery	
Telephone	
Insurance	0.18
Total:	2.10

9.2.5 Total Recurring Expenditure (9.2.1+9.2.2+9.2.3+9.2.4)	Amount (Rs. lakh) 47.65
9.3 Working Capital Recurring Expenditure for 3 months	12.00
9.4 Total Capital Investment	Amount (Rs. lakh)
Fixed capital (Refer 9.1.4)	22.00
Working capital (Refer 9.3)	12.00
Total:	<hr/> 34.00

10.0 FINANCIAL ANALYSIS

10.1 Cost of Production (per annum)	Amount (Rs. lakh)
Recurring expenses (Refer 9.2.5)	47.65
Depreciation on building @5%	0.41
Depreciation on machinery @10%	1.32
Depreciation on furniture @20%	0.08
Interest on Capital Investment @12%	4.04
Total:	<hr/> 53.50

10.2 Sale Proceeds (Turnover) per year

Item	Qty. (MT)	Rate (MT)	Amount (Rs.lakh)
Feed (assorted)	1,000	6800	68.00

10.3 Net Profit per year

= Sales – Cost of production
= 68.00 – 53.50
= Rs. 14.50 lakh

10.4 Net Profit Ratio

= $\frac{\text{Net profit} \times 100}{\text{Sales}}$

= $\frac{14.50 \times 100}{68.00}$

= 21.3%

10.5 Rate of Return on Investment

$$= \frac{\text{Net profit} \times 100}{\text{Capital Investment}}$$

$$= \frac{14.50 \times 100}{34}$$

$$= 42.6\%$$

10.6 Annual Fixed Cost

Amount (Rs. Lakh)

All depreciation	1.81
Interest	4.04
40% of salary, wages, utility, contingency	3.62
Insurance	0.18
Total:	9.65

10.7 Break even Point

$$= \frac{\text{Annual Fixed Cost} \times 100}{\text{Annual Fixed Cost} + \text{Profit}}$$

$$= \frac{9.65 \times 100}{9.65 + 14.50}$$

$$= 40\%$$

11.0 ADDRESSES OF MACHINERY AND EQUIPMENT SUPPLIERS

De Smet (India) Pvt. Ltd.
Shree Niketan, F-Block,
Shivasagar Estate, Dr. A.B.Road
Mumbai – 400 025

Spectoms Engineering Pvt. Ltd.
Purushottam Estate,
Bahucharji Road, Karelibaug
Vadodara – 390 018

Panchal Workshop
Anand Sojitra Road,
P.B.No. 62,
Anand – 388 001

Troica Processes Pvt. Ltd.
58/1, 3rd Block, Tata Silk Firms,
16th Main Road, Basavanagudi
Bangalore

12.0 OTHER SPECIAL FEATURES

A careful selection of sound fruits is necessary. The facilities can also be utilised to manufacture different formulations useful as fish feed, chicken feed and animal feed.