

AGRO SEED PROCESSING PLANT



QUALITY AND STANDARDS : As per Agro Seed Certification specifications

PRODUCTION CAPACITY : 2 tonnes per hour (Paddy 26 tpd or wheat 35 tpd in 3 shifts) or 4540 tpa.

1.0 PRODUCT AND ITS APPLICATIONS

Cereal grains like paddy and wheat together constitute the main staple food in the country. Hence production of these crops ranks highest in quantity. India produces 95 million tonnes of rice and 75 million tonnes of wheat annually. In addition, 35 million tonnes of coarse grains (13 million tonnes maize) and 14 million tonnes of pulses are produced. The use of certified agricultural seeds is essential to ensure higher agricultural production. The certified seeds are produced and processed under Indian Seed Act 1996 (amended in 2002). These are sound, healthy, genetically pure with higher yields. The process consists of agricultural activity as well as processing activity under a licence from State Authority.



2.0 MARKET POTENTIAL

Rice and maize constitute the staple food in North-Eastern Region, cultivated in all the states. In addition, wheat is also cultivated in Assam, Arunachal Pradesh, Manipur, Nagaland and Sikkim. There exists a vast scope for improvement in productivity. Replacement of 10% seeds annually would ensure higher production. The region procures certified seeds from different parts of the country. There is a tremendous scope for setting up seed processing units to meet the local demand and make the region self sufficient in food grain production.



3.0 BASIS AND PRESUMPTIONS

- The processing plant will work for 180 days per annum on 3 shifts basis.
- The unit can achieve its full capacity utilization during the 2nd year of operation.
- The wages for skilled workers are 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 would construct its own building as per Seed Certification Authority specifications.
- Costs of machinery and equipment are based on average prices of 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

Since the process consists of crop cultivation and processing activity, the plant should be located inside/near the farm wherein crop is cultivated. Availability of power, road connectivity and marketing links for supply of seed to various traders/users should be ensured.



5.2 Process of Manufacture

(a) Agricultural activity:

Nucleus seed (Produced by authorized seed companies with certificate of genetic purity)

↓
Breeder seed



Certified Seed Production Co.



Multiply



Foundation Seed Stage I



Multiply



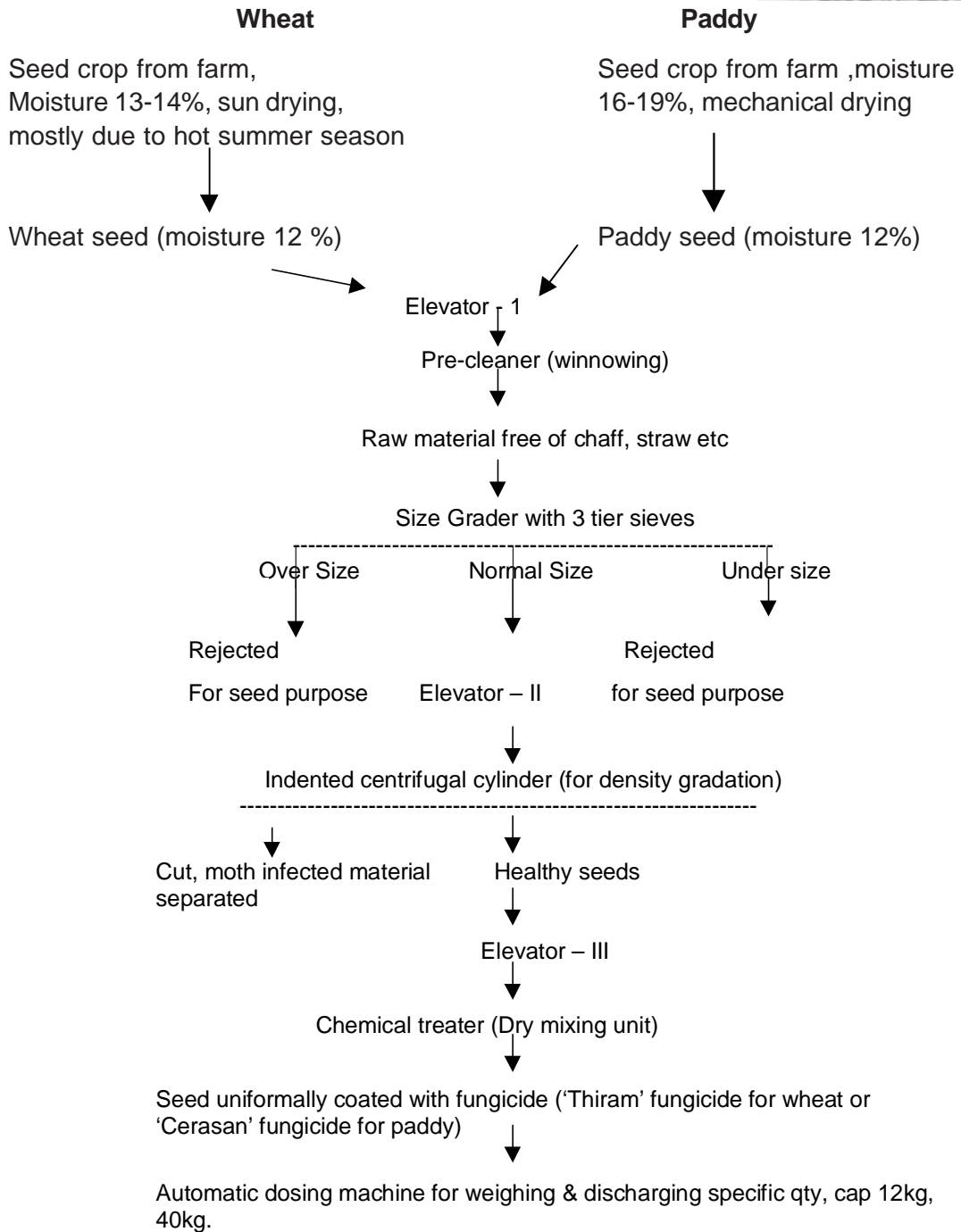
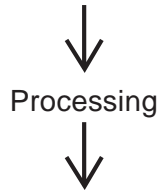
Foundation Seed Stage II
(To be certified by State Seed Certification Agency)



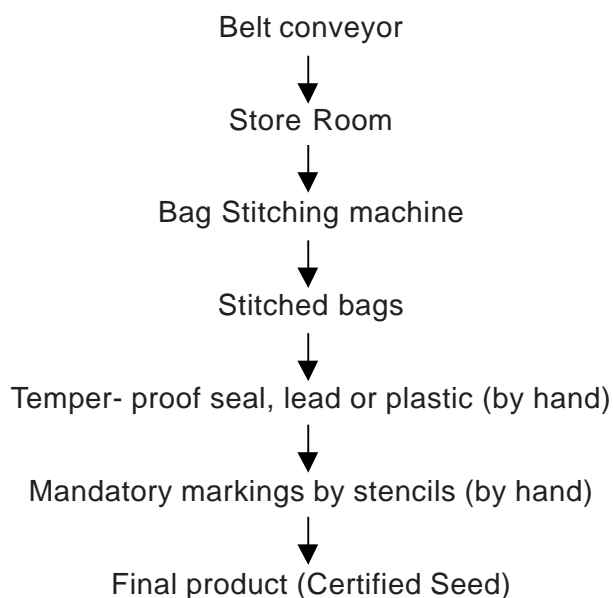
Seed crop



(b) Processing Activity:



Material filled in jute/polythene- lined bags (standard wt. is 40kg for wheat or 12 kg for paddy, being requirement for one-acre land.)



The yield of seed is 85% in case of paddy and 90% in case of wheat.

5.3 Quality Control and Standards : As per State Seed Certification 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

Only electricity is being used in the process.

8.0 PRODUCTION CAPACITY

Quantity	:	2650 tpa paddy seed + 1890 tpa wheat seed
Installed capacity	:	20 tpd
Optimum capacity utilization	:	70%
Working days	:	300/annum (processing activity 180 days)
Manpower	:	28
Utilities		
Motive Power	:	15 kW
Water	:	1 kL/day

9.0 FINANCIAL ASPECTS

9.1 Fixed Capital

9.1.1 Land & Building Amount (Rs. lakh)

Land 10,000 sq.m.	:	07.00
Built up area 1,000 sq.m.	:	20.00

Total cost of Land and Building	:	27.00

9.1.2 Machinery and Equipment

Mechanical dryer, elevators-3, pre-cleaner, size grader, indented centrifugal cylinder, chemical treater, automatic dosing machine, conveyor belt, bag stitching machine, misc. equipment

Erection and electrification @ 10% of machinery cost

Office furniture & fixtures

Total

9.1.3 Pre-operative Expenses

Consultancy fee, project report, deposits with electricity department etc.

9.1.4 Total Fixed Capital

(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	1	8,000	0.96
Supervisor & marketing staff	2	4,000	0.96
Office Assistant	2	3,500	0.84
Technician	1	3,500	0.42
Skilled workers	4	2,500	0.12
Unskilled workers (6 months)	16	2,000	1.92
Unskilled worker (regular)	2	2,000	0.48
			5.70
Perquisites @ 15%			0.85

Total :		28	6.55

9.2.2 Raw Material including packaging materials

Particulars	Qty.(MT)	Rate/MT	Amount (Rs. lakh)
• Paddy 26 tpd x 120 days	3,120	5850	182.52
• Wheat 35 tpd x 60 days	2,100	6600	138.60
• Gunny bag for paddy seed cap. 12 kg	2,21,000	1.50 each	003.33
• Gunny bag for wheat seed cap 40 kg	47,250	5.00 each	002.35
• Fungicide, stiching, marking	LS	LS	000.40

Total :			327.20

9.2.3 Utilities

Power

Amount (Rs. lakh)

1.17

9.2.4 Other Contingent Expenses **Amount (Rs. lakh)**

Repairs and maintenance@10%	1.50
Consumables & spares	
Transport & Travel	
Publicity	0.43
Postage & stationery	
Telephone	
Insurance	0.25

Total: **2.18**

9.2.5 Total Recurring Expenditure **Amount (Rs. lakh)**

(9.2.1+9.2.2+9.2.3+9.2.4) 334.90

9.3 Working Capital

Recurring Expenditure for 2 months 55.80

9.4 Total Capital Investment **Amount (Rs. lakh)**

Fixed capital (Refer 9.1.4) 45.00
Working capital (Refer 9.3) 55.80

Total : **100.80**

10.0 FINANCIAL ANALYSIS

10.1 Cost of Production (per annum) **Amount (Rs. lakh)**

Recurring expenses (Refer 9.2.5)	334.90
Depreciation on building @5%	1.00
Depreciation on machinery @10%	1.65
Depreciation on furniture @20%	0.10
Interest on Capital Investment @12%	12.00

Total: **349.65**

10.2 Sale Proceeds / Annual turnover

Item	Qty. (MT)	Rate per MT	Amount (Rs.lakh)
Paddy seed in 12 kg bags	2650	9250	246.00
Wheat seed in 40 kg bags	1890	9500	179.00

			425.00

10.3 Net Profit per year

$$\begin{aligned} &= \text{Sales} - \text{Cost of production} \\ &= 425.00 - 349.65 \\ &= \text{Rs. } 75.35 \text{ lakh} \end{aligned}$$

10.4 Net Profit Ratio

$$\begin{aligned} &= \frac{\text{Net profit} \times 100}{\text{Sales}} \\ &= \frac{75.35 \times 100}{425} \\ &= 17.73\% \end{aligned}$$

10.5 Rate of Return on Investment

$$\begin{aligned} &= \frac{\text{Net profit} \times 100}{\text{Capital Investment}} \\ &= \frac{75.35 \times 100}{100.80} \\ &= 74.75\% \end{aligned}$$

10.6 Annual Fixed Cost

Amount (Rs. Lakh)

All depreciation	2.75
Interest	12.00
40% of salary, wages, utility, contingency	3.96
Insurance	0.25

Total:	18.96

10.7 Break even Point

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

$$= \frac{18.96 \times 100}{18.96 + 75.35}$$

$$= 21\%$$

11.0 ADDRESSES OF MACHINERY AND EQUIPMENT SUPPLIERS

Batliboi Engineers (Bangalore) Pvt. Ltd.
99/2&3, N.R.Road
Bangalore - 560 002

Narene Tulaman Manufacturers Pvt. Ltd.
Balanagar
Hyderabad - 500 037

M/s. Kodesia Eng Works,
Izzatnagar
Bareilly

Shree Murugan Industries,
Plot No. 68/W, Hootagalli
Industrial Area, Balawadi Post
Mysore - 571186

Nalanda Agro Works
Nalanda Nagar, Kurji
Patna - 800 010

Mac-Well Engineering Works,
14, Kartar Compound, LBS Marg
Behind State Bank
Vikroli (West)

Mumbai - 400 079
Septu (India) Pvt. Ltd.
12/7, Urban Estate,
Post Box No. 4
Gurgaon - 122 001

Raylon Metal Works
Kondivitta Lane
Post Box 17426
J.B.Nagar, Andheri (E)
Mumbai - 400 059

SSP (Pvt) Ltd.
13th Milestone, Mathura Road
Faridabad - 121003, Haryana

Grovers Pvt. Ltd.
223, Kaliandas Udyog Bhavan
Prabhadevi
Mumbai - 400 025

Macneill and Magor Ltd.
4, Mangoe Lane
Kolkata - 700 001

12.0 OTHER SPECIAL FEATURES

A careful selection of product mix is necessary based on the local market demand and availability of raw materials. The facilities can also be utilised to manufacture quality seeds of carrot, radish, peas, spinach, coriander, okra, other vegetables and pulses for fuller utilisation of capacity.