DETAILED PROJECT REPORT ON

RICE CULTIVATION

SUBMITTED BY

Promoter Name:
xxxxxxxxxxxxxxx

Project Location:
xxxxxxxxxxxxxxxx

Prepared By:
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C O N T E N T S

CHAPTER - I

ABOUT THE PROMOTER

PARTICULARS	ABOUT THE PROMOTER

1. Name of Firm : xxxxxxxxxxxxx
2. Name of Promoter : xxxxxxxxxxxxx
3. Address : xxxxxxxxxxxxx
4. Contact Number : xxxxxxxxxxxxx
5. Constitution : xxxxxxxxxxxxx
6. Experience : xxxxxxxxxxxxx

CHAPTER – II

PRODUCTION TECHNOLOGY

SEED SELECTION

Proper seed selection based on the cultivation environment is the first step towards ensuring that the highest possible yield is achieved.

Selecting good quality seed has many advantages and will help to;

Improve yield by 5 – 20%

Improve germination by more than 80%

Increase resistance to disease and pest attacks

Maintain uniformity in plant size

Have fewer weed problems

LAND PREPARATION

The main purpose of land preparation is to have the soil in optimum physical condition for growing rice. Plowing and tilling of land is done to predetermined levels that allow rice plants to develop a good root system.

The proper preparation of land for sowing is achieved via tractors (mechanical means) or with the help of water buffaloes. Land preparation also includes land leveling to ensure water reaches all areas planted.

CROP ESTABLISHMENT

Two main methods are used for introducing rice plants to the soil:

Transplanting, Direct seeding

Transplanting:

Transplanting is the more popular plant establishment technique in India Transplanting occurs when pre-germinated seedlings are transferred from a seedbed to the wet field. It requires less seed and is an effective method for controlling weeds. A disadvantage is that the practice of transplanting is more labor intensive.

Prior to transplanting, seedlings are established in a separate nursery area. They grow between 20 and 80 days before being transplanted to the field. Seedlings can be transplanted by either machine or hand.

Direct seeding

Direct seeding is when dry seed or pre-germinated seeds and seedlings are sown by hand or planted by machine.

WATER MANAGEMENT

Cultivated rice is extremely sensitive to water shortages and when the soil water content drops below saturation, most rice varieties develop symptoms of water stress. Good water management practices are needed to keep usage at optimum levels and to maximize rice yield.

Pre-planting steps that help with water management include;

Proper creation and maintenance of field channels for water delivery

Land levelling that allows water to be evenly distributed and retained

Tilling operations that include rice field bund preparation, water puddling and maintenance

NUTRIENT MANAGEMENT

Each growth stage of the rice plant has a different nutrient need. Keeping this in mind, farmers must ensure that the rice plant gets the proper nutrients at the right time.

Prolonged flooding of rice fields ensures that farmers are able to conserve soil organic matter and also receive free input of nitrogen from biological sources. If higher yields are required, more nutrients must be added to the soil.

CROP HEALTH MANAGEMENT

The rice plant can come under threat from different sources in the field. These include attack by rodents, insects, weeds and disease. Farmers use many different strategies to protect and maintain crop health.

A good understanding of pest behavior, natural enemies, host plants, other organisms and the environment help determine the type of pest management required.

Farmers manage weed control through water management and land preparation, by hand weeding, and in some cases with the application of herbicides.

HARVESTING

Harvesting is the process of collecting the mature rice crop (rice paddy or rough rice) from the field. Depending on the variety, a rice crop usually reaches maturity at around 115-120 days after crop establishment.Harvesting activity includes cutting, stacking, handling, threshing,

cleaning, and hauling. Good harvesting methods help maximize grain yield and minimize grain damage and deterioration.Harvesting can be performed manually or mechanically. Manual harvesting is common across Asia and involves cutting the rice crop with simple hand tools like sickles and knives.Manual harvesting is very effective when a crop has fallen over. However, it is labour intensive. Manual harvesting usually requires 40 to 80 man-hours per hectare and it takes additional labour to manually collect and haul the harvested crop. Mechanical harvesting using reapers or combine harvesters is the other option, but is not so common due to the availability and cost of machinery. After cutting, the rice must be threshed to separate the grain from the stalk and cleaned. Threshing can be done by hand or machine.

POST HARVEST

After harvest, the rice grain undergoes a number of processes depending on how it will be used. These steps include drying, storing, milling, and final processing. Drying is the process that reduces grain moisture content to a safe level for storage. Drying is the most critical operation after harvesting a rice crop. Delays in drying, incomplete drying or ineffective drying will reduce grain quality and result in post harvest losses. Proper storage conditions will ensure minimal loss of paddy rice due to changes in weather and moisture content, rodents, insects, microorganisms etc.

CHAPTER – III

MARKET POTENTIAL

Marketing agency:

Rice is our staple diet and in the south and east of India people eat rice thrice a day in various forms. Rice is the principal food crop grown right from historic days. Today, this unique grain helps sustain two-thirds of the world's population. It is life for thousands of millions of people. It is deeply embedded in the cultural heritage of their societies. About four-fifths of the world's rice is produced by small-scale farmers and is consumed locally. Rice cultivation is the principal activity and source of income for about 10 million households in India Rice is a great source of complex carbohydrates, which is an important source of the fuel our bodies need. Carbohydrates are broken down to glucose, most of which is used as energy for exercise and as essential fuel for the brain.
Rice is healthful for what it does not contain. Rice has no fat, no cholesterol and is sodium free. Rice is an excellent food to include in a balanced diet and produce no cholesterol. Rice is a low-sodium food for those with hypertension.

A good source of vitamins and minerals such as thiamine, niacin, iron, riboflavin, vitamin D, calcium, and fiber. It is a fair source of protein containing all eight amino acids.

Rice contain low sugar, and is gluten free. Thus it makes rice the essential choice for people with gluten free dietary requirements.

Rice contains no additives or preservatives, making it an excellent inclusion in a healthy and balanced diet.

Rice also contains resistant starch, which is the starch that reaches the bowel undigested. This encourages the growth of beneficial bacteria, keeping the bowel healthy. Further, it is non-allergenic.

Whole grains (such as brown rice) contain high amounts of insoluble fiber-the type of fiber some scientists believe may help protect against a variety of cancers.

Medicinal Properties Rice is believed by some to have medicinal properties. Although, this is not scientifically proven effective, it has been used in many countries for medicinal purpose.

CHAPTER-IV

ECONOMICS OF THE PROJECT

A. PROJECT PROFILE (Financial)

Sr. No.	PARAMETERS		VALUE
1	Area in acre	Total :	35
		Own Land:	15
		Own Lease:	20
2	Product		Rice
3	Cost of the project		13,19,000
4	Bank loan		10,55,200
5	Own Contribution		2,63,800
6	Financial Indicators		
	BC R		2.68 :1
	N P W 15% (Rs.)		33,18,826
	I R R %		More than 50
	Average DSCR		4.1
7	Interest Rate (% per annum)		4.0
8	Repayment		3 Years

B. BASIS & PRESUMPTIONS

1 Payback period 3 years.

2 Tax on income ignored.

3 Promoters share includes self-contribution plus loan

from friends and relatives.

4 There is no change in Government policies and interest rates in next 3 years.

C. TOTAL COST OF PROJECT

SR. NO.	PARTICULAR	UNIT	UNIT RATE(Rs.)	QUANTITY	AMOUNT (Rs.)
A.	**Capital Cost**				
1.	**Land** (Own- 15 acre & on lease- 20 acre)				-
2.	**Irrigation**				
i)	Cost of Open/Bore Well	No	1	100000	1,00,000
ii)	Cost of Electric Pump	No	1	25000	25,000
iii)	Cost of Pipeline 110mm/4kg	Mtr	100	700	70,000
					1,95,000
3	**Infrastructure**				
i)	Cost of Multipurpose Shed (Storage & Other- 30'x10')	Sq. ft.	250	300	75,000
ii)	Labour Quarters (1 nos. - 20'x10')	Sq. ft.	250	200	50,000
ii)	Pump House (12'x10')	Sq. ft.	200	120	24,000
					1,49,000
4	**Mechanization**				
i)	Cost of Sprayer & other farm equipments	Lumpsum			**1,00,000**
				TOTAL	**4,44,000**
B.	**Working Capital (first year cultivation cost)** (@ Rs. 25,000 per acre)				**8,75,000**
			TOTAL COST OF THE		**13,19,000**

D. MEANS OF FINANCE

Sr. No.	Particular	Unit	Quantity	Amount in Rs.
1	Term loan	%	80	10,55,200
2	Own contribution	%	20	2,63,800
			TOTAL	**13,19,000**

E. PROJECTED PROFITABILITY

Sr. No.	Particular	Unit	Unit rate in Rs.	Quantity	I year	II year	III year
A.	**INCOME**						
a.	Sales of Rice (Production @ 2500 kg./per acre/year)	Kg.	23.33	87,500	20,41,375	20,41,375	20,41,375
b.	Sales of Rice Straw	Rs./acre	6,000		2,10,000	2,10,000	2,10,000
			TOTAL (A)		**22,51,375**	**22,51,375**	**22,51,375**
B.	**EXPENDITURE**						
a.	Land Lease	Rs./acre	12,000	20	2,40,000	2,40,000	2,40,000
b.	Mannures & Fertilisers	acre	2,500	35	87,500	87,500	87,500
c.	Insectisides & Pesticides	acre	2,500	35	87,500	87,500	87,500
d.	Manpower (For land preparation, planting, Inter - cultural operation, harvesting & other farm operations)	acre	4,000	35	1,40,000	1,40,000	1,40,000
e.	Packaging, Transportation etc.	acre	2,000	35	70,000	70,000	70,000
f.	Overhead (Electricity, Water etc.)	acre	1,000	35	35,000	35,000	35,000
g.	Contengencies	acre	1,000	35	35,000	35,000	35,000
			TOTAL (B)		**6,95,000**	**6,95,000**	**6,95,000**
C.	**NET INCOME**		**TOTAL (A-B)**		**15,56,375**	**15,56,375**	**15,56,375**

F. Financial Analysis

Particulars		I year	II year	III year
Capital Costs		4,44,000		
Recurring cost		6,95,000	6,95,000	6,95,000
Total Cost		**11,39,000**	**6,95,000**	**6,95,000**
Benefit		22,51,375	22,51,375	22,51,375
Depreciated value of buildings, fencing etc. @ 10%				87,240
Depreciated value of Machinery & equipments @ 15%				1,26,408
Total Benefit		**22,51,375**	**22,51,375**	**24,65,022**
Net Benefit		**11,12,375**	**15,56,375**	**17,70,022**
Discounting Factor@ 15%		0.87	0.76	0.66
NPV cost at 15% DF		9,90,930	5,28,200	4,58,700
NPV benefits at 15% DF		19,58,696	17,11,045	16,26,915
NPW at 15% DF	**33,18,826**			
BCR at 15% DF	**2.68 :1**			
IRR %	**More than 50**			

G. Term Loan Repayment

Rate of interst - % per annum **:** 4.00

Opening balance of term loan **:** 10,55,200

Year	Loan Outstanding	Net Income	Principal	Interest	Total Repayment	Net Surplus	DSCR
1	10,55,200	15,56,375	3,51,733	42,208	3,93,941	11,62,434	4.0
2	7,03,467	15,56,375	3,51,733	28,139	3,79,872	11,76,503	4.1
3	3,51,733	15,56,375	3,51,733	14,069	3,65,803	11,90,572	4.3
						Avg. DSCR	**4.1**