PROJECT REPORT ON

Onion under Greenhouse

SUBMITTED BY

Promoter Name:
Xxxxxxxxxxxxxx

Project Loaction:
Xxxxxxxxxxxxxxxx

Prepared By:
Download Project Report.com
1187/67, Ground Floor, Gruhalaxmi,
J.M. Road, near Balgandharva Chowk,
Pune, Maharashtra 411005.

C O N T E N T S

CHAPTER - I

ABOUT THE PROMOTER

1. Name of Firm : xxxxxxxxxxxxxx
2. Name of Promoter : xxxxxxxxxxxxxx
3. Address(Residence) : xxxxxxxxxxxxx
4. Contact Number : xxxxxxxxxxxxx
5. Project Location (Addr.) :xxxxxxxxxxxxxx

CHAPTER – II

PROJECT DESCRIPTION

The onion is one of the most important commercial vegetable crops grown in India: The demand for onion is worldwide. It is used both in raw and mature bulb stage as vegetable and spices. The pungency in onion is due to a volatile oil known as ally-proopyldisulphide. The bulb of onion consists of swollen bases of green foliage leaves and fleshy scales. Maharashtra, Tamil Nadu, A.P., Bihar and Punjab are the important onion producing states.

Climate:

Onion is a cool season crop. It is grown during winter and harvested before the real hot season begins. Onion can be grown under a wide range of climatic condition. But it succeeds best in mild season without extremes of heat and cold. According to Rao and Purewal (1954), it can be grown as a rained crop even at elevation of 1500 to 2000 m between April and August, Onion produce bulbs more rapidly at warm (210C to 260C) that at cool 150C to 210C) temperature.

Soil and its Preparation:

Onion can be grown on various soils. But sandy loam, silly loam and deep friable soils are best suited for onion crop. The land is prepared by giving 5-6 ploughings. The optimum pH range is between 5.8 and 6.5.

Seed rate & Time of Sowing:

In onion 10 to 12 kg seeds require/ha..For kharif it is sown in June & for rabi sown in October-November.

Layout & Spacing:

Ridges & furrow type of layout is follow15x10 cm. spacing is given.
In case of onion preferably flat beds are use because
1. As in flat beds plants accommodate are more than ridges & furrow so we get more yield.

2. In flat bed (leveled) there is equal distribution of water & fertilizers. So we get uniform size & compact bulb of onion which have good keeping quality in storage & transport.

3. In percentage of twines is less in flat beds than ridges & furrow.

Manures & Fertilizers:

25 to 30 cart loads of well rotten FYM or compost applied at the time soil preparation per hectare. For onion 50 kg N, 25 kg P^Os & 25 kg Potash should be applied, as .usual method.

Intercultural, Weeding and Other Operations:

Cultural Operation keeps the field absolutely free from weeds to produce a good crop of onion. Weeds if not controlled in early stage but removed later on, will injure the onion bulbs and the out-turn will be poor. 2-3 hoeing and weedings are enough for the crop. After 2 to 3 irrigations, earth up the poor plants. According to Mehta (1959), if the mature bulbs are to be stored for any length of time care should be taken to cut away the seed stalks as soon as they come out, otherwise they will develop thickness will not be cured properly and, therefore,, they will also fail to keep well in storage. Though no work has been done on the usefulness of crushing or bending over the leaf tops to hasten maturity yet the results of experiments done in U.S.A. indicate that it is an ineffective measure.

Irrigation:

The root system of onion is restricted io top 8 cm and roots penetrate seldom deeper than 15 cm. Water requirement of the crop at the Initial growth period is less. Irrigation should be stopped 15-20 days before attaining maturity for improving the keeping quality of bulbs. Frequent irrigation delays maturity. In kharif season, depending upon the rains and time of planting 6-10 irrigations are enough. In rabi, 10-15 irrigations are given at bulb formation, irrigation is necessary and moisture stress at this stage results in low yield.

Harvesting, Curing, Yield and Storage:

Follow harvesting of onion bulbs at right stage of maturity. It is important in deciding storage life of onion as bulbs may be stored for about six months.

CHAPTER – III

MARKET POTENTIAL

Marketing of Onion is the crucial factor for the success of the project. There is tremendous potential for cultivating Onion through poly houses. In India, Onion is grown for its mature fruits and is widely used as salad. It has attained a status of high value crop in India in the recent years and occupies a pride place among vegetables in Indian cuisine, because of its delicate taste and rich content of ascorbic acid and other vitamins and minerals.

Onion consumption in India is increasing now-a-days due to increasing demand by urban consumers. There is a good demand for export too. The export market needs fruits with longer shelf life, medium size, tetra lobed fruits with an attractive dark colour, mild pungency and good taste. But, the supply is inadequate due to low productivity of the crop. But there is increased demand for Onion by the consumers and lot of farmers are also showing interest in the cultivation of this crop under protected conditions, as this type is having definite qualitative and quantitative advantage over the traditional cultivation.

CHAPTER – IV

SWOT ANALYSIS

Strengths:

- Domestic market for Onion is growing.
- The Governments have identified vegetables in polyhouse as a sunrise sector and are providing strong support through various policies and schemes.

WEAKNESS:

- High capital investment
- Demand fluctuate according to different seasons
- Unavailability of skilled manpower
- Incidence of pest and diseases many a times becomes unmanageable.
- Poor marketing linkage and poor market infrastructure.
- Non-availability of adequate quality planting material.
- Poor post-harvest management infrastructure. Due to the perishable nature of the products it's important to have enough transportation and good logistics facilities.
- Negligence to research relating to technical factors

OPPORTUNITY:

- There is tremendous demand for Onion due to the growing popularity of western life style
- Access to metropolises like Kolkata, Chennai, Mumbai and Delhi etc. and other big cities enhances the possibilities for tapping market of these states.
- Growing consumer base with higher income is expected to add demand in new market
- Availability of new and unique varieties

THREATS:

- Uncertainty in weather conditions and frequent occurrence of natural calamities like cyclone and drought.
- Uncertainty about market stability
- Exploitation by middlemen in the market chain.
- High incidence of pest and diseases.

V. ECONOMICS OF THE PROJECT

A. PROJECT PROFILE (Financial)

Sr. No.	PARAMETERS	VALUE
1	Unit Size in sq.m.	20,000
2	Product	Onion
3	Cost of the project	2,05,35,500
4	Bank loan	1,54,01,625
5	Margin money	51,33,875
6	Financial Indicators	
	BCR at 15% DF	2.11 :1
	NPW at 15% DF Rs.	2,36,34,538
	I R R %	60
7	Average DSCR	3.2
8	Interest Rate (% per annum)	12
9	Repayment	5 years

B. BASIS & PRESUMPTIONS

Sr. No.	Particular	Unit	Quantity
I.	**Techno-economic parameters**		
	Payback period		5 years
	Rate of interst	%	12
II.	**Expenditure norms**		
	Fertilizer per annum	Rs./ Sq.m.	5
	Pesticides per annum	Rs./ Sq.m.	5
	No of semiskilled workers	Nos.	4
	Cost of one semiskilled worker per annum	Rs.	72,000
II.	**Income norms**		
	Sale price of Onion	Rs./Kg	30
	Yield per 4000 sqm per crop cycle	Tonn	25
	Crop cycles per pear		3
	Subsidy receives @ 50% from N.H.B. treated as F.D. in bank @ 6%		
	This amount of subsidy is used for repayment of loan		

C. TOTAL COST OF PROJECT

Sr. No.	Particular	Unit	Unit Rate in Rs.	Quantity	Amount in Rs.
I.	**Cost of Polyhouse**	Sq.m.	800	20,000	1,60,00,000
II.	**Initial Planting cost**				
	Bed material & preparation	Rs./sq.m.	50	20,000	10,00,000
	Fertilizers & mannures	Rs./sq.m.	5	20,000	1,00,000
	Manpower & supervision	Rs./sq.m.	50	20,000	10,00,000
	Irrigation system (with drip)	Rs./sq.m.	100	20,000	20,00,000
					41,00,000
III.	**Cost of grading/pack house**	Sq. ft.	650	670	4,35,500
			TOTAL		**2,05,35,500**

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D. MEANS OF FINANCE

Sr. No.	Particular	Unit	Quantity	Amount in Rs.
1	Term loan	%	75	1,54,01,625
2	Own contribution	%	25	51,33,875
			TOTAL	**2,05,35,500**
3	Subsidy entitlement @ 50% from NHB			**1,02,67,750**

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E. PROJECTION OF PERFORMANCE & PROFITABILITY

Sr. No.	Particular	Unit	Unit rate in Rs.	Quantity	I year	II year	III year	IV year	V year
I.	**Income**								
a.	Sale of Onion								
	Yield per crop cycle	Tonn			125	125	125	125	125
	Total yield per annum (Crop cycles per anuum- 3)	Tonn			375	375	375	375	375
	Selling price	Rs./kg			30	30	30	30	30
	Total Income	Rs.			1,12,50,000	1,12,50,000	1,12,50,000	1,12,50,000	1,12,50,000
b.	Interest on Subsidy @ 6%				6,16,065	6,16,065	6,16,065	6,16,065	6,16,065
c.	Subsidy				0	0	0	0	1,02,67,750
				TOTAL (B)	**1,18,66,065**	**1,18,66,065**	**1,18,66,065**	**1,18,66,065**	**2,21,33,815**
II.	**Expenditure**								
a.	Cost of Raw Materials								
	Planting material for 3 crop cycle	per sq.m.	20	20,000	4,00,000	4,00,000	4,00,000	4,00,000	4,00,000
	Fertilisers	per sq.m.	5	20,000	1,00,000	1,00,000	1,00,000	1,00,000	1,00,000
	Pesticides & fungicides	per sq.m.	5	20,000	1,00,000	1,00,000	1,00,000	1,00,000	1,00,000
b.	Cost of Consumbles								
	Packaging material	per kg	0.50	375	188	188	188	188	188
c.	Cost of Utilities								
	Electricity, Water	per month	2,500	12	30,000	30,000	30,000	30,000	30,000
d.	Cost of Manpower								
	Semiskilled workers	per annum	72,000	4	2,88,000	2,88,000	2,88,000	2,88,000	2,88,000
e.	Overhead Expenses								
	Transportation	per month	1000	12	12,000	12,000	12,000	12,000	12,000
	Marketing expenses 1% of sales				1,12,500	1,12,500	1,12,500	1,12,500	1,12,500
				TOTAL (A)	**10,42,688**	**10,42,688**	**10,42,688**	**10,42,688**	**10,42,688**
III	**Net Income**			**TOTAL (A+B)**	**1,08,23,378**	**1,08,23,378**	**1,08,23,378**	**1,08,23,378**	**2,10,91,128**

F. Financial Analysis

Particulars	I year	II year	III year	IV year	V year
Capital Costs	2,05,35,500				
Recurring cost	10,42,688	10,42,688	10,42,688	10,42,688	10,42,688
Total Cost	**2,15,78,188**	**10,42,688**	**10,42,688**	**10,42,688**	**10,42,688**
Benefit	1,18,66,065	1,18,66,065	1,18,66,065	1,18,66,065	2,21,33,815
Depreciated value of buildings @ 10%					2,54,985
Depreciated value of Machinery & equipments @ 15%					77,13,000
Total Benefit	**1,18,66,065**	**1,18,66,065**	**1,18,66,065**	**1,18,66,065**	**3,01,01,800**
Net Benefit	**-97,12,123**	**1,08,23,378**	**1,08,23,378**	**1,08,23,378**	**2,90,59,113**
Discounting Factor@ 15%	0.87	0.76	0.66	0.57	0.50
NPV cost at 15% DF	1,87,73,023	7,92,443	6,88,174	5,94,332	5,21,344
NPV benefits at 15% DF	1,03,23,477	90,18,209	78,31,603	67,63,657	1,10,66,908

NPW at 15% DF **2,36,34,538**

BCR at 15% DF **2.11 :1**

IRR % **60.33**

G. Term Loan Repayment

Rate of interst - % per annum **:** 12

Opening balance of term loan **:** 1,54,01,625

Year	Loan Outstanding	Gross Surplus	Principal	Interest	Total Repayment	Net Surplus	DSCR
1	1,54,01,625	1,08,23,378	3080325	1848195	4928520	58,94,858	2.2
2	1,23,21,300	1,08,23,378	3080325	1478556	4558881	62,64,497	2.4
3	92,40,975	1,08,23,378	3080325	1108917	4189242	66,34,136	2.6
4	61,60,650	1,08,23,378	3080325	739278	3819603	70,03,775	2.8
5	30,80,325	2,10,91,128	3080325	369639	3449964	1,76,41,164	6.1
						Avg. DSCR	**3.2**