PROJECT REPORT ON

Coriander under Greenhouse



SUBMITTED BY

Promoter Name: Xxxxxxxxxxxx

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Project Location:

XXXXXXXXXXXXXXXXXXX

Prepared By:

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## **CHAPTER - I**

### ABOUT THE PROMOTER

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

### <u>CHAPTER – II</u>

### **PROJECT DESCRIPTION**

#### Field preparation and sowing:

Prepare the main field to a fine tilth and form beds and channels (for irrigated crop). Sow the split seeds at a spacing of 20 x 15 cm. The seeds will germinate in about 8-15 days.

Presowing seed hardening treatment with Potassium Dihydrogen Phosphate @ 10g/lit of water for 16 hours is to be done for rainfed crop. Seeds are to be treated with *Azospirillum* @ 3 packets/ha. Seed treatment with *Trichoderma viride* @ 4 g/kg of seed has to be done to control wilt disease. **Seed rate:** 

10 - 12 kg/ha (Irrigated crop)

20 – 25 kg/ha (Rainfed crop)

Whole seed will not germinate and hence the seeds are split open into halves before sowing for more germination percentage.

#### Seed Treatment:

Soak the seeds in water for 12 hours. Treat the seeds with Azospirillum @ 1.5 kg /ha for better crop establishment + *Trichoderma viride* @ 50 kg/ha to control wilt disease.

Pre sowing seed hardening treatment with Potassium Dihydrogen Phosphate @ 10 g/lit of water for 16 hours is to be done for rainfed crop.

Field preparation and sowing:

- Prepare the main field to a fine tilth.
- Add FYM 10 t/ha before last ploughing.
- Form beds and channels (for irrigated crop).
- Show the split seeds at a spacing of 20 x 15 cm.
- Spray pre-emergence herbicide Fluchloralin 700 ml in 500 lit of water per ha .
- The seeds will germinate in about 8-15 days.

#### Manuring:

#### Basal

FYM 10 t/ha; 10 kg N, 40 kg P and 20 kg K for rainfed and irrigated crops.

#### Top dressing

Top dressing may be done at 10 kg N/ha 30 days after sowing for the irrigated crop only.

#### Irrigation (for irrigated crop only):

First irrigation should be given immediately after sowing and the second on the third day and subsequent irrigations

at 7-10 days interval.

#### Aftercultivation:

Pre-emergence spray of herbicide Fluchloralin 700 ml in 500 lit/ha. Thinning is done 30 days after sowing. Subsequent we Leave 2 plants per hill. Spray CCC @ 250 ppm one month after sowing for inducing drought tolerance in rainfed crops.

#### Plant protection:

#### Aphid

Aphids can be controlled by spraying Methyl demeton 20 EC @ 2 ml/lit or Dimethoate 30 EC @ 2 ml/lit.

#### Diseases:

#### Powdery mildew:

Seed treatment with Pseudomonas fluorescens (Pf 1) @ 10 g /kg and foliar spray of Pf1 2 g/lit or Spray Wettable sulphur 1 kg/ha or Dinocap 250 ml/ha at the time of initial appearance of the disease and 2nd spray at 10 days interval. Neem seed kernel extracts 5 % spray thrice (1st spray immediately after the appearance of disease, 2nd and 3rd at 10 days interval).

#### Wilt

Seed treatment with Pseudomonas fluorescens @10g /kg followed by soil application of Pf1 @ 5 kg /ha

#### Grain mould

Grain mould can be controlled by spraying Carbendazim 0.1% (500 g/ha) 20 days after grain set.

#### Harvest:

The plants are pulled just when the fruits are fully ripe but green and start drying. The plants are dried and thrashed with sticks, winnowed and cleaned. For leaf, pull out the plants when they are 30-40 days old.

#### <u>CHAPTER – III</u>

### MARKET POTENTIAL

Marketing of Coriander is the crucial factor for the success of the project. There is tremendous potential for cultivating Coriander through poly houses. In India, Coriander 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.

Coriander 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 Coriander 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.

# <u>CHAPTER – IV</u>

### SWOT ANALYSIS

### Strengths:

- Domestic market for Coriander 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 Coriander 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.

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# **V. ECONOMICS OF THE PROJECT**

# A. PROJECT PROFILE (Financial)

| Sr. No. | PARAMETERS                  | VALUE       |
|---------|-----------------------------|-------------|
|         |                             |             |
| 1       | Unit Size in sq.m.          | 20,000      |
| 2       | Product                     | Coriander   |
| 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               | 1.18 :1     |
|         | NPW at 15% DF Rs.           | 35,91,088   |
|         | IRR%                        | 36          |
| 7       | Average DSCR                | 1.8         |
| 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.            | 2        |
|         | Cost of one semiskilled<br>worker per annum       | Rs.             | 72,000   |
| II.     | Income norms                                      |                 |          |
|         | Sale price of Coriander                           | Rs./Kg          | 100      |
|         | Yield per 1000 sqm per crop cycle                 | Kg.             | 600      |
|         | Crop cycles per pear                              |                 | 4        |
|         | Subsidy receives @ 50% from N.H.B. treated as F.I | D. in bank @ 6% |          |

This amount of subsidy is used for repayment of loan

# C. TOTAL COST OF PROJECT

| Unit      | Unit Rate in<br>Rs.                                               | Quantity                                                                                   | Amount in Rs.                                                                                                              |
|-----------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Sq.m.     | 800                                                               | 20,000                                                                                     | 1,60,00,000                                                                                                                |
|           |                                                                   |                                                                                            |                                                                                                                            |
| Rs./sq.m. | 50                                                                | 20,000                                                                                     | 10,00,000                                                                                                                  |
| Rs./sq.m. | 5                                                                 | 20,000                                                                                     | 1,00,000                                                                                                                   |
| Rs./sq.m. | 50                                                                | 20,000                                                                                     | 10,00,000                                                                                                                  |
| Rs./sq.m. | 100                                                               | 20,000                                                                                     | 20,00,000                                                                                                                  |
|           |                                                                   |                                                                                            | 41,00,000                                                                                                                  |
| Sq. ft.   | 650                                                               | 670                                                                                        | 4,35,500                                                                                                                   |
|           | TOTAL                                                             |                                                                                            | 2,05,35,500                                                                                                                |
|           | Unit<br>Sq.m.<br>Rs./sq.m.<br>Rs./sq.m.<br>Rs./sq.m.<br>Rs./sq.m. | UnitUnit Rate in<br>Rs.Sq.m.800Rs./sq.m.50Rs./sq.m.50Rs./sq.m.50Rs./sq.m.100Sq.ft.650TOTAL | Unit<br>Rs.Unit Rate in<br>Rs.QuantitySq.m.80020,000Rs./sq.m.5020,000Rs./sq.m.5020,000Rs./sq.m.10020,000Sq. ft.650670TOTAL |

## **D. MEANS OF FINANCE**

| Sr. No. | Particular            | Unit     | Quantity | A          | Mount in Rs. |
|---------|-----------------------|----------|----------|------------|--------------|
| 1       | Term loan             | %        | 75       |            | 1,54,01,625  |
| 2       | Own contribution      | %        | 25       |            | 51,33,875    |
|         |                       |          |          | TOTAL<br>= | 2,05,35,500  |
| 3       | Subsidy entitlement @ | 50% from | n NHB    |            | 1,02,67,750  |

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# E. PROJECTION OF PERFORMANCE & PROFITABILITY

| Sr. No. Particular                                    | Unit        | Unit rate<br>in Rs. | Quantity  | l year    | ll year   | III year  | IV year   | V year      |
|-------------------------------------------------------|-------------|---------------------|-----------|-----------|-----------|-----------|-----------|-------------|
| I. Income                                             |             |                     |           |           |           |           |           |             |
| a. Sale of Cucumber                                   |             |                     |           |           |           |           |           |             |
| Yield per crop cycle                                  | Kg          |                     |           | 12,000    | 12,000    | 12,000    | 12,000    | 12,000      |
| l otal yield per annum ( Crop<br>cycles per anuum- 4) | Kg          |                     |           | 48,000    | 48,000    | 48,000    | 48,000    | 48,000      |
| Selling price                                         | Rs./kg      |                     |           | 100       | 100       | 100       | 100       | 100         |
| Total Income                                          | Rs.         |                     |           | 48,00,000 | 48,00,000 | 48,00,000 | 48,00,000 | 48,00,000   |
| 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) | 54,16,065 | 54,16,065 | 54,16,065 | 54,16,065 | 1,56,83,815 |
| II. Expenditure                                       |             |                     |           |           |           |           |           |             |
| a. Cost of Raw Materials                              |             | -                   | 00.000    | 4 00 000  | 4 00 000  | 4 00 000  | 4 00 000  | 4 00 000    |
| Planting material for 4 crop cycl                     | e per sq.m. | 5                   | 20,000    | 1,00,000  | 1,00,000  | 1,00,000  | 1,00,000  | 1,00,000    |
| Ferunsers                                             | per sq.m.   | 5<br>F              | 20,000    | 1,00,000  | 1,00,000  | 1,00,000  | 1,00,000  | 1,00,000    |
| b Cost of Consumbles                                  | per sq.m.   | 5                   | 20,000    | 1,00,000  | 1,00,000  | 1,00,000  | 1,00,000  | 1,00,000    |
| Packaging material                                    | per ka      | 0.50                | 48.000    | 24.000    | 24.000    | 24.000    | 24.000    | 24.000      |
| c. Cost of Utilities                                  | P 5         |                     | ,         | _ ,,      | ,         | ,         | ,         |             |
| 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              | 2         | 1,44,000  | 1,44,000  | 1,44,000  | 1,44,000  | 1,44,000    |
| e. Overhead Expenses                                  |             |                     |           |           |           |           |           |             |
| Transportation                                        | per month   | 1000                | 12        | 12,000    | 12,000    | 12,000    | 12,000    | 12,000      |
| Marketing expenses 1% of sales                        | 5           |                     |           | 48,000    | 48,000    | 48,000    | 48,000    | 48,000      |
|                                                       |             | •                   | TOTAL (A) | 5,58,000  | 5,58,000  | 5,58,000  | 5,58,000  | 5,58,000    |
| III Net Income                                        |             | то                  | TAL (A+B) | 48,58,065 | 48,58,065 | 48,58,065 | 48,58,065 | 1,51,25,815 |

# F. Financial Analysis

| Particulars                                                     |           | l year       | ll year   | III year  | IV year   | V year      |
|-----------------------------------------------------------------|-----------|--------------|-----------|-----------|-----------|-------------|
| Capital Costs                                                   |           | 2,05,35,500  |           |           |           |             |
| Recurring cost                                                  |           | 5,58,000     | 5,58,000  | 5,58,000  | 5,58,000  | 5,58,000    |
| Total Cost                                                      |           | 2,10,93,500  | 5,58,000  | 5,58,000  | 5,58,000  | 5,58,000    |
| Benefit                                                         |           | 54,16,065    | 54,16,065 | 54,16,065 | 54,16,065 | 1,56,83,815 |
| Depreciated value of<br>buildings @ 10%<br>Depreciated value of |           |              |           |           |           | 2,54,985    |
| Machinery &<br>equipments @ 15%                                 |           |              |           |           |           | 77,13,000   |
| Total Benefit                                                   |           | 54,16,065    | 54,16,065 | 54,16,065 | 54,16,065 | 2,36,51,800 |
| Net Benefit                                                     |           | -1,56,77,435 | 48,58,065 | 48,58,065 | 48,58,065 | 2,30,93,800 |
| Discounting Factor@ 15%                                         |           | 0.87         | 0.76      | 0.66      | 0.57      | 0.50        |
| NPV cost at 15% DF                                              |           | 1,83,51,345  | 4,24,080  | 3,68,280  | 3,18,060  | 2,79,000    |
| NPV benefits at 15% DF                                          |           | 47,11,977    | 41,16,209 | 35,74,603 | 30,87,157 | 78,41,908   |
| NPW at 15% DF                                                   | 35,91,088 |              |           |           |           |             |
| BCR at 15% DF                                                   | 1.18      | :1           |           |           |           |             |
| IRR %                                                           | 35.76     |              |           |           |           |             |

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# G. Term Loan Repayment

Rate of interst - % per annum : 12

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

| Year | Loan<br>Outstanding | Gross<br>Surplus | Principal | Interest | Total<br>Repayment | Net<br>Surplus | DSCR |
|------|---------------------|------------------|-----------|----------|--------------------|----------------|------|
|      |                     |                  |           |          |                    |                |      |
| 1    | 1,54,01,625         | 48,58,065        | 3080325   | 1848195  | 4928520            | -70,455        | 1.0  |
| 2    | 1,23,21,300         | 48,58,065        | 3080325   | 1478556  | 4558881            | 2,99,184       | 1.1  |
| 3    | 92,40,975           | 48,58,065        | 3080325   | 1108917  | 4189242            | 6,68,823       | 1.2  |
| 4    | 61,60,650           | 48,58,065        | 3080325   | 739278   | 3819603            | 10,38,462      | 1.3  |
| 5    | 30,80,325           | 1,51,25,815      | 3080325   | 369639   | 3449964            | 1,16,75,851    | 4.4  |

Avg. DSCR 1.8