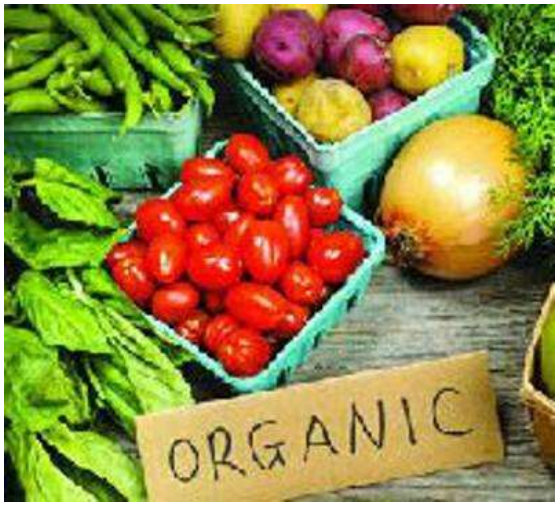
DETAILED PROJECT REPORT ON

CUILTIVATION OF ORGANIC FRUITS & VEGETABLES



SUBMITTED BY

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xxxxxxxxxxxxxx

Project Location:
xxxxxxxxxxxxxxx

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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 : xxxxxxxxxx
2. Proprietor : xxxxxxxxxx
3. Firm Address : xxxxxxxxx
4. Contact Number : xxxxxxxxx
5. Date Of Birth : xxxxxxxxx
6. Educational Qualification: xxxxxx
7. Project Location : xxxxxxxxxx
8. Constitution : xxxxxxxxx
9. Experience : xxxxxxxxx

CHAPTER – II

PROJECT DESCRIPTION

INTRODUCTION

Fruits & Vegetables in India were always well-regarded, valued and cultivated with the understanding towards sustainability of bio-network, the planet and future generations. However, the face of the Indian agriculture has changed drastically over few decades. The fruits & vegetables available in market is laden with chemical fertilizers and pesticides to achieve early and abundant produce. Though by virtue of chemical fertilizers the production and productivity of crops has increased, the increased use of pesticides has posed many environmental and health problems. The chemical fertilizers and pesticides used over a long period of time have adverse toxic effects on the production potential of the land and the ultimate consumers of the products.

The increased consciousness towards healthy lifestyle has seen organic farm production and trade emerging as an important sector in India as in other parts of the developing world. Organic food is grown with nil or minimal use of chemical fertilizers and pesticides and in its processing no chemical, artificial colour or flavouring is used either as processing aid or as additive. These foods are cultivated using organic manures, bio-fertilizers and bio- pesticides. Organic products are being seen as a natural choice by consumers and producers.

CULTIVATION TECHNOLOGY:

Choice of crops and varieties:

All species and varieties that are cultivated will be adapted to the soil and climatic conditions and be naturally resistant to pest and disease of the region.

All seeds and planting materials will be from crops of organic cultivation. When organic planting materials are not available, chemically untreated conventional planting materials shall be used initially. The use of genetically engineered seeds, pollen, transgenic plants and plant materials is not allowed.

Conversion period

The establishment of an organic management system and building of soil fertility requires an interim period, the conversion period. The duration of the conversion period will depend upon - 1. The past use of the land 2. The ecological situation.

The plant products produced annually can be certified organic when the national standards requirements have been met during a conversion period of atleast two years before sowing or in the case of perennial crops other than grassland, atleast 3 years before the first harvest of the products. Conversion period can be extended by the certification
program depending on the past use of the land and environmental conditions. The accredited certification program may allow plant products to be sold as “produce of organic agriculture in process of conversion” when these national standards stipulation have been met for at least 12 months

Diversity in crop production

Diversity in crop production is achieved by a combination of:

1. A versatile crop rotation with Vegetables & fruits
2. An appropriate coverage of the soil during the year of production with diverse plant species.
3. Follow crop rotation for annual crops and intercropping for perennial crops.
4. Avoid crops belonging to the same family in the rotation.
5. Biofencing with green manure shrubs or neem and other plant protection agents.

Manurial Policy

Sufficient quantities of biodegradable materials of microbial, plant or animal origin will be returned to the soil to increase or atleast maintain its fertility and the biological activity within it. Organic material must be the product of organic farms and the farms must become self-sufficient in producing such organic material

Soil fertility will be maintained or enhanced by

1. Raising green manure crops, leguminous crops
2. Incorporate crops residues
3. Use biodegradable materials of microbial, plant or animal origin
4. Encourage the use of on - farm organic inputs
5. Use of synthetic or chemical fertilizers and growth regulators are not permitted

6. Mineral based materials like rock phosphate, gypsum, lime etc in limited quantities and in their natural compositions.
7. Prevent the accumulation of heavy metals and other pollutants
8. Minimize the nutrient loss by management practices
9.Apply manures as per soil test results
10.Maintain adequate pH levels

Pests, diseases and weed management

Organic farming systems will be carried out in a way, which ensures that losses from pests, diseases and weeds are minimized. Conditions for minimizing the loss due to pests, diseases and weeds are

1.Balanced manurial programme
2.Use of crops and varieties well adapted to the environment
3.Fertile soil of high biological activities
4.Adopt rotations
5.Companion planting
6.Green manuring
7.Natural enemies of pests and diseases will be protected and encouraged.
8.Cultivate trap crops

Pest and disease control

1.Prohibit the use of synthetic chemicals
2.Use preventive cultural techniques
3.Encourage and protect natural enemies
4.Use products from local plants and of biological origin prepared at the farm.
5.Prohibit the use of genetically engineered organisms and products
6.Brand name products must always be evaluated

Weed control

1.Slash weeding
2.Use mechanical weed control
3.Use weeded materials as mulch
4.Use clean equipments for organically managed areas
5.Use of synthetic herbicides, synthetic growth regulators and synthetic dyes are prohibited

Contamination control

All relevant measures will be taken to minimize contamination from outside and within the farm. Accumulation of heavy metals and other pollutants will be limited. That cultivation has to guard against the possibility of pesticide and weedicide contamination and the carriage of inorganic chemicals used as fertilizers by irrigation and drainage. For protected structure coverings, plastic mulches, fleeces, insect netting and silage rapping, only products based on polyethylene and polypropylene or other polycarbonates are allowed. These shall be removed from the soil after use and shall not be burned on the farm land. The use of polychloride-based product is prohibited.

Soil and water conservation

Soil and water resources will be handled in a sustainable manner. Relevant measures will be taken to prevent erosion, salination of soil, excessive and improper use of water and the pollution of ground and surface water. In sloppy lands adequate precautions will be taken to avoid the entry of run off water and drift from the neighboring farms. Clearing land through the means of burning organic matter shall be restricted to the minimum. The clearing of primary forest is prohibited.

Food Processing And Handling Storage, Transportation, Processing And Labelling

Organic produce must be stored, transported and conveyed to the final consumer in its pristine stage. Co-mingling with inorganic products shall be prevented. Pests at the storage and processing stage must be controlled by means of physical barriers, sound and light, with temperature and atmospheric control. Mixture of organic and non-organic products must be prevented during processing. Additives and substances that diminish or alter the nature of organic produce are to be avoided. Irradiation is not allowed. Processing methods will be based on mechanical, physical and biological process. Packaging must take care to prevent material contact to diminish the organic purity of the produce. Eco-friendly, biodegradable materials will be the preferred media of packing. Waste generating packaging and pollution causing packing materials are discouraged. Labelling shall convey clear and accurate information on the organic status of the product. The label for organic products will be clearly distinguishable from the label for conventional products. The labelling of organic produce must declare openly the fact of totally organic or under conversion period. Direct sales by producers are to be encouraged. Equal wages for equal tasks is a practiced principle in organic farming. The women and

children's rights are left inviolate. The practice of organic farming is found to be compatible with the preservation and improvement of the environment. The Government of India having concern for the health and well being of its citizenry finds it necessary to institute a system to assure them a supply of food and food materials free from unnatural treatment of additives

CHAPTER – III

MARKET POTENTIAL

Increasing awareness towards nutritious, tasty and healthy food and changing lifestyle are surging the demand for organic food, particularly across the metro cities which has nearly quadrupled the size of organic foods in India in the last few years. Majority of the demand for organic food is being contributed by cities such as Mumbai, Chennai, Delhi, Gurgaon, Bengaluru and Pune.

Consumers are consciously opting for healthy eating habits which is driving entrepreneurship in organic foods. As per the study prepared by industry body Assocham and TechSci Research, the size of the Indian organic food market, which is highly unorganised, was Rs. 25 billion (2016), and organic fruits and vegetables took the lion's share of the market. According to the study, India's organic food market has potential to grow more than 25 per cent annually. provided there is more awareness about these products and the government incentivises region-specific organic farming to ensure consistent growth in future.

The current growth in the organic food market is driven by rising health consciousness, changing lifestyles, mounting disposable spending and growing availability of organic food products in shopping malls and retail outlets.

More growth is expected in future as the government is increasingly supporting organic farming in the form of subsidies and is also planning to roll out a comprehensive policy in this regard.

CHAPTER-IV

ECONOMICS OF THE PROJECT

A. PROJECT PROFILE (Financial)

Sr. No.	PARAMETERS	VALUE
1	Product	Organic Fruits & Vegetables
2	Area in acre	
	Vegetables	20
	Fruits	10
3	Cost of the project	213
4	Bank loan	170
5	Own Contribution	43
6	Financial Indicators	
	BC R	1.48 :1
	N P W 15% (Rs.)	130
	I R R %	67.04
	Average DSCR	2.4
7	Interest Rate (% per annum)	12
8	Repayment	8 Years including first year as a moratorium period

B. BASIS & PRESUMPTIONS

1 Subsidy receives @40% from N.H.B. treated as F.D. in bank @ 6%. This amount of subsidy is used for repayment of loan.

2 Payback period 8 years including first 1 year as a moratorium period

3 Tax on income ignored.

4 Promoters share includes self-contribution plus loan from friends and relatives.

5 There is no change in Government policies and interest rates in next 8 years.

Values In Lacs

C. TOTAL COST OF PROJECT

SR. NO.	PARTICULAR	UNIT	UNIT RATE (Rs.)	QUANTITY	AMOUNT
1.	**Land & Land**				
	i) Land (Own)	Acre	5,00,000	30	150.00
	ii) Land Leveling & pit digging	Acre	25,000	30	7.50
	iii) Fencing	Mtr	150	3,150	4.73
	iv) Farm Road	Mtr	150	1,200	1.80
	SUB TOTAL – 1				**164.03**
2.	**Irrigation**				
	i) Cost of Open/Tube Well	No	1	1,50,000	1.50
	iii) Cost of Pipeline 110mm/4kg	Mtr	150	4,500	6.75
	SUB TOTAL – 2				**8.25**
3.	**Micro Irrigation**				
	i) Drip Irrigation	Acre	25,000	30	7.50
	SUB TOTAL – 3				**7.50**
4	**Cost of Cultivation**				
	a. Cost of Planting Material				
	i) Vegetables	Acre	10,000	20	2.00
	ii) Fruits	Acre	25,000	10	2.50
	b. Initial cost of inputs				
	i) Organic Fertilizer and Manure	Acre	10,000	30	3.00
	ii) Bio-insecticide and Bio-pesticide	Acre	5,000	30	1.50
	iii) Labour Charges	Acre	15,000	30	4.50
	SUB TOTAL – 4				**13.50**
5	**Infrastructure**				
	i) Cost of Labour Quarter (20'x10' x 2 Nos)	Sq. ft.	750	400	3.00
	ii) Cost of Storage Room (20'x10'x2 nos.)	Sq. ft.	500	400	2.00
	iii) Pump House (12'x10')	Sq. ft.	500	120	0.60
	SUB TOTAL – 5				**2.60**
6	**Mechanization**				
	i) Cost of Sprayers & other farm equipments	Ls			5.00
	ii) Tractor (25 HP)	No	5,15,000	1	5.15
	iii) Electric motor (3 phase)	No	50,000	1	0.50
	iv) Generator Set (10 KVA)	No	50,000	1	0.50
	SUB TOTAL – 6				**11.15**
7.	**Post Harvest**				
	i) Functional Pack House	Sq. ft.	600	1000	6.00
	SUB TOTAL – 7				**6.00**
	GRAND TOTAL				**213.03**

D. MEANS OF FINANCE

Values In Lacs

Sr. No.	Particular	Unit	Quantity	Amount
1	Term loan	%	80	170.42
2	Own contribution	%	20	42.61
			TOTAL	**213.03**
3	Subsidy entitlement for fruit crops under NHB scheme (Total cost of fruits cultivation considered for subsidy @ Rs. 4.00 Lacs per acre * 10 acres= Rs. 40 lacs Rate for subsidy @ 40% of total financial outlay)			**16.00**

F. PROJECTED PROFITABILITY

Values In Lacs

Sr. No.	Particular	Unit	Unit rate in Rs.	Quantity	I year	II year	III year	IV year	V year	VI year	VII year	VIII year
	INCOME											
a.	Organic Vegetables											
	Production Capacity	%			50	70	80	100	100	100	100	100
	Sales of organic vegetables *(Chilli, Bitter Gourd, Bottle Gourd, Ladies Finger, Cucumber, Brinjal etc.)*	Acre	3,50,000	20	35.00	49.00	56.00	70.00	70.00	70.00	70.00	70.00
b.	Organic Fruits											
	Production Capacity	%			0	0	0	50	70	80	100	100
	Sales of organic fruits *(Chikoo/Sapota, Pomgranate, Pineapple, Papaya, Banana, Dragon fruit etc.)*	Acre	4,50,000	10	0.00	0.00	0.00	22.50	31.50	36.00	45.00	45.00
c.	Income from intercropping	Acre	1,75,000	10	17.50	17.50	17.50	17.50	0.00	0.00	0.00	0.00
d.	Interest on subsidy @ 6%				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0
e.	Subsidy				0	0	0	0	0	0	0	16.00
				TOTAL (A)	**53.46**	**67.46**	**74.46**	**110.96**	**102.46**	**106.96**	**115.96**	**131.00**

EXPENDITURE

a. Organic Mannures & Fertilisers	acre	10,000	30	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
b. Bio-Insectisides & Pesticides	acre	10,000	30	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
c. Manpower (For land preparation, planting, Inter -cultural operation, harvesting & other farm operations)	acre	10,000	30	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
d. Packaging, Transportation etc.	acre	15,000	30	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50

F. PROJECTED PROFITABILITY (Contd..)

e. Overhead (Electricity, Water etc.)	month	20,000	12	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
f. Contengencies	acre	10,000	30	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
			TOTAL (B)	**18.90**	**18.90**	**18.90**	**18.90**	**18.90**	**18.90**	**18.90**	**18.90**
NET INCOME			**TOTAL (A-B**	**34.56**	**48.56**	**55.56**	**92.06**	**83.56**	**88.06**	**97.06**	**112.10**

F. Financial Analysis

Values In Lacs

Particulars	I year	II year	III year	IV year	V year	VI year	VII year	VIII year
Capital Costs	213.03							
Recurring cost	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90
Total Cost	**231.93**	**18.90**	**18.90**	**18.90**	**18.90**	**18.90**	**18.90**	**18.90**
Benefit	53.46	67.46	74.46	110.96	102.46	106.96	115.96	131.00
Depreciated value of buildings, fencing etc. @ 10%								4.29
Depreciated value of Machinery & equipments @ 15%								11.53
Total Benefit	**53.46**	**67.46**	**74.46**	**110.96**	**102.46**	**106.96**	**115.96**	**146.82**
Net Benefit	**-178.47**	**48.56**	**55.56**	**92.06**	**83.56**	**88.06**	**97.06**	**127.92**
Discounting Factor@ 15%	0.87	0.76	0.66	0.57	0.50	0.43	0.38	0.33
NPV cost at 15% DF	201.77	14.36	12.47	10.77	9.45	8.13	7.18	6.24
NPV benefits at 15% DF	46.51	51.27	49.14	63.25	51.23	45.99	44.06	48.45
NPW at 15% DF	**129.53**							
BCR at 15% DF	**1.48 :1**							
IRR %	**67.04**							

G. Term Loan Repayment *Values In Lacs*

Rate of interst - % per annu 12

Opening balance of term loa 170

Year	Loan Outstanding	Net Income	Principal	Interest	Total Repayment	Net Surplus	DSCR
1	170.42	34.56	0.00	20.45	20.45	14.11	-
2	170.42	48.56	24.35	20.45	44.80	3.76	1.1
3	146.07	55.56	24.35	17.53	41.87	13.69	1.3
4	121.73	92.06	24.35	14.61	38.95	53.11	2.4
5	97.38	83.56	24.35	11.69	36.03	47.53	2.3
6	73.04	88.06	24.35	8.76	33.11	54.95	2.7
7	48.69	97.06	24.35	5.84	30.19	66.87	3.2
8	24.35	112.10	24.35	2.92	27.27	84.83	4.1
						Avg. DSCR	**2.4**