

**National Horticulture Mission**

**Revised Action Plan for Rajasthan**

Prepared by  
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For

Ministry of Agriculture  
Government of India

September 2005

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## Chapter 1 Introduction

### 1.1 Background

Rabo India was appointed by Ministry of Agriculture to review action plan submitted by the state. Ministry of Agriculture circulated operational guidelines to the States detailing Mission objectives, structure, procedures for approval and implementation, ongoing schemes, mission intervention and management and Overall targets under NHM. Based on the guidelines, states have submitted their reports.

The objective of the review is to develop a demand –driven approach for horticultural products. The review included the following:

- Identification of Market linkages of production areas in each of the states with
  - Agri Export Zones
  - Food Parks
  - Existing processing facilities
  - Terminal Markets
  - Existing mandis
  - Ports
- Mapping of production clusters of various horticultural crops with markets
- Prioritization of crops and clusters
- Identification of quality and varietal issues as per the market needs
- Identify missing links between farmers and processors, traders and retailers

### 1.2 Methodology

Rabo discussed the initial plan with state horticulture department. It was followed by collection of data for mapping market linkages (Food Parks, AEZs, Processing facilities, pack houses, cold storages, mandis). Rabo held discussions with other stakeholders including processors with facilities in the state and traders in mandis. Rabo also used its existing databases and international network.

### 1.3 Guiding Principals under NHM

The horticulture sector has contributed significantly to GDP in agriculture (28.5 per cent from 8.5 per cent area). The objectives of the National Horticulture Mission are to

double the horticulture production, i.e. to achieve a production of 300 million tonnes by 2011-12.

The Mission would adopt an end-to-end approach covering production, post harvest management, processing and marketing to assure appropriate returns to growers/producers; promote Research and Development (R&D) of technologies for production, post-harvest management and processing in potential belts/clusters; Enhance acreage, coverage, and productivity in potential belts/clusters; Adopt a coordinated approach and promote partnership, convergence and synergy among R&D, processing and marketing agencies in public as well as private sectors, at all levels; promote, where appropriate, National Dairy Development Board model of cooperatives to ensure support and adequate returns to farmers; Facilitate capacity-building and Human Resource Development. State and sub-state level structures will be evolved, keeping in view the need for getting adequate returns for the produce of the farmers and eliminating middlemen to the extent possible.

## Chapter 2

### Potential of Horticulture in Rajasthan

Rajasthan has geographical area of 3.42 lakhs Sq.Km. has attained the status of being the largest state of India. The state represents 10.4% land surface area with 5.5% population of India. 66% is dependent on agricultural for their livelihood. The state is divided into 32 districts, which are further subdivided into 241 Tehsils and 237 Panchayat Samitis.

#### 2. 1 Potential of Horticulture in the state

- The diverse agro-ecological conditions prevailing in State is amenable for growing fruits, vegetables, spices, flowers, root and tuber crops, medicinal and aromatic crops. Out of the net cultivated area of about 165 lakh ha. in Rajasthan, Horticultural crops are grown in an area of about 10 lakh hectares with an annual production of about 14 lakh MT.
- The area and production of Horticulture crops in the state during last three years are as under. Area and production of horticultural crops has shown fluctuating trend over last three years. Horticulture production for last 10 years has been growing at 5.8% which needs to be increased to 10.3% for doubling production.

**Table 2.1 Area (ha) and Production (MT)**

Crops/groups	2001-02		2002-03		2003-04	
	Area	Prod.	Area	Prod.	Area	Prod.
Fruits	21948	200724	22332	189258	50000*	285700
Vegetables	104328	459362	93704	353532	124807	507393
Spices	762923	616727	532584	343823	590411	646953
Flowers	1863	2434	1505	1986	1949	2161
M&A Plants	143024	89552	167625	78805	161223	107770
Total	1034086	1368799	817750	966404	901685	1549977

\*Horticulture Department Estimate

Crop-wise area and production is in Appendix # 1.

## 2.2 SWOT analysis of horticulture in Rajasthan

### STRENGTHS

- Favorable climate for production of quality Seed spices, Ber, Mandarin, Kinnow, Pomegranate and Aonla
- Available surplus in Spices, Kharif Onion, Pea

### OPPORTUNITIES

- Scope in area expansion of fruits – Dry land Agriculture
- Potential to increase production and export of seed spices.
- Vast potential of medicinal and aromatic plants

### WEAKNESSES

- Lesser-availability of quality seeds of vegetable and spices and quality planting material of fruits.
- Lack of water resources
- Poor post harvest management and marketing facilities like cold storage, pre-

### THREAT

- High cost of production, poor price stability and lack of remunerative prices to farmer
- Problem of chronic diseases and Frost during

## Chapter 3

### Consumption of Horticultural Products in the State

Fruits, Vegetables and Spices consumption is growing at a faster rate than most other food products at 11, 12 and 9 percent respectively. This implies diversification in consumer demand in favour of fruits, vegetables, spices.

Table 3.1: Consumption of food products in Rajasthan (1993–94 prices)

	1996–97	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	CAGR
Cereals, gram	3674	4505	4366	6139	5525	5314	5899	8%
Pulse & prod	500	685	601	921	883	967	864	10%
Milk & prod	5415	6445	6165	7180	7083	7763	7219	5%
Edible oil	1025	882	1024	1270	1141	1342	1386	5%
Meat,egg,fish	271	377	239	377	310	485	382	6%
<b>Vegetables</b>	<b>1096</b>	<b>1373</b>	<b>1395</b>	<b>1864</b>	<b>1759</b>	<b>2063</b>	<b>2185</b>	<b>12%</b>
<b>Fruits (fresh)</b>	<b>249</b>	<b>331</b>	<b>299</b>	<b>375</b>	<b>441</b>	<b>418</b>	<b>468</b>	<b>11%</b>
<b>Fruits (dry)</b>	<b>69</b>	<b>81</b>	<b>112</b>	<b>120</b>	<b>126</b>	<b>137</b>	<b>106</b>	<b>8%</b>
Sugar	950	1014	1052	1115	1083	1243	1083	2%
Salt	39	50	55	71	72	78	76	12%
<b>Spices</b>	<b>547</b>	<b>613</b>	<b>590</b>	<b>967</b>	<b>814</b>	<b>894</b>	<b>907</b>	<b>9%</b>
Beverage etc.	900	1018	1247	1456	1433	1554	1702	11%
TOTAL	14,737	17,376	17,145	21,859	20,669	22,258	22,278	7%

Source: Rabobank Analysis, NSSO

State has significant deficit in fruit demand at the current consumption rate as well as per recommended norms. Deficit as per WHO norms (120 grams per day of fruits and 280 grams per day of vegetables) in 22.67 lac tonnes and 55.16 lac tonnes for fruits and vegetables respectively.

Table 3.2: Demand of Fruits in Rajasthan (Lac tonnes)

Sr.No.	Years	2003	2005	2010
1	Population in Lakhs	597	632	726
2	Demand @ current consumption rate	6.32	6.69	7.69
3	Demand @ All India consumption rate	8.72	9.22	10.60
4	Demand @ WHO norms	20.1	27.6	24.4
5	Production		2.85	

6	Product inflow from other states		2.16	
7	Product outflow from the state		NA	
8	Exports from the state		Negligible	
9*	Deficit @ current consumption rate		1.68	
10*	Deficit @ All India consumption rate		4.21	
11*	Deficit @ WHO norms		22.67	

Source: Rabobank Analysis

Table 3.2: Demand of Vegetables in Rajasthan (Lac tonnes)

Sr.No.	Years	2003	2005	2010
1	Population in Lakhs	597	632	726
2	Demand @ current consumption rate	8.72	9.22	10.60
3	Demand @ All India consumption rate	28.35	29.97	34.46
4	Demand @ WHO nutritional norms	65.41	69.17	79.52
5	Production		5.07	
6	Product inflow from other states		4.36	
7	Product outflow from the state		NA	
8	Exports from the state		Negligible	
9*	Deficit @ current consumption rate		0.21	
10*	Deficit @ All India consumption rate		20.54	
11*	Deficit @ WHO norms		55.16	

Source: Rabobank Analysis, NSSO

## Chapter 4

### Existing and Potential Market Linkages

#### A) Food Parks

There are three food parks in the state:

- Ranpur at Kota
- Boranda at Jodhpur
- Udhyog Vihar at Sriganganagar

The products for each of the food park is as follows:

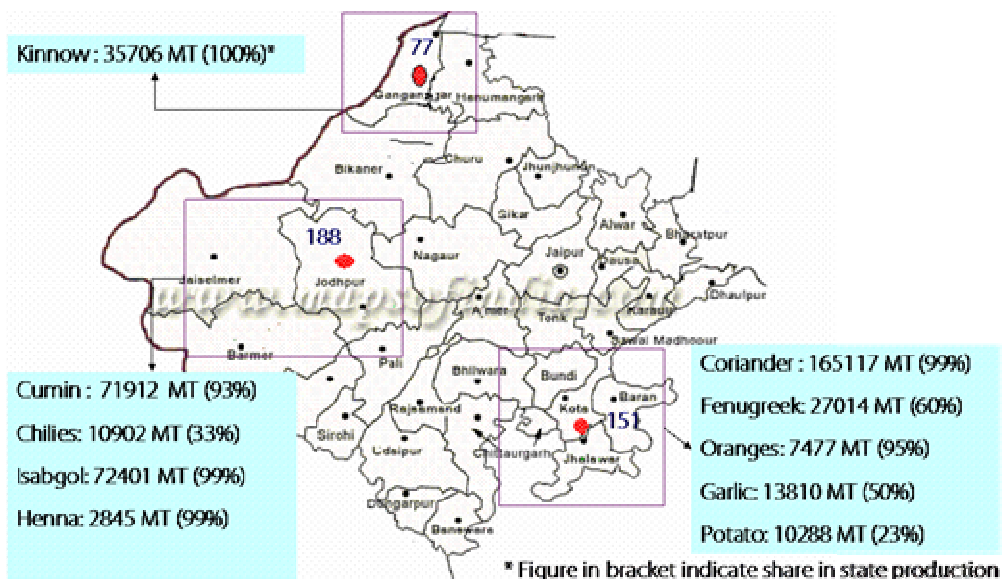
- Kota : Coriander, Fenugreek, Tomato, Garlic, Potatoes, Mandarin, Guava, Aonla
- Jodhpur : Cumin, Chillies, Garlic, Onion, Ber, Pomegranate, Aonla, Sonamukhi, Mehandi, Isabgol
- Sriganganagar: Kinnow, Aromatic grass, Ber

The details of food parks are as follows:

Table 3.1.1: Food Parks in Rajasthan

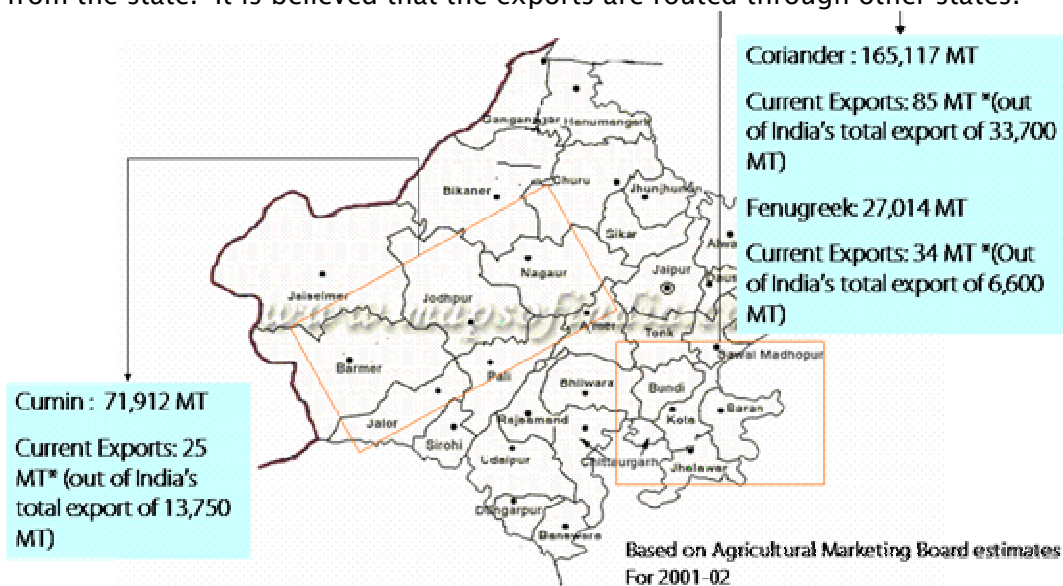
Component	Kota	Jodhpur	Sriganganagar
Area(in acres)	139.80	192.47	81.14
Nos. of plots	151	188	77
No. of plots for Dry process	109	151	57
No. of plots for Wet process	34	28	17
No. of plots for green house	8	9	3

The production of key commodities in each food park is listed below:



**B) Agri-Export Zones:**

There are two AEZs in the state. One is for coriander and another for cumin. India exports 33,700 MT of coriander; 13,750 MT of cumin and 6,600 MT of Fenugreek. Rajasthan, being the leading producer of these commodities account for majority share of exports from India. However, there is no accurate data available on exports directly from the state. It is believed that the exports are routed through other states.



Key issues due to low level of direct exports from the state are:

- There are no laboratories in the state for sanitary and phytosanitary certification and organic certification
- The market intelligence network is weak. For instance, there are no estimates available for exports of spices, kinnows, henna, Isabgol and Ashwagandha
- Exports of Ashwagandha gets routed through MP and Isabgol through Gujarat due to lack of mandis in the state
- There is no perishable cargo centre at Jaipur airport

### C) Mandis

There are 45 big mandis in the state. The arrival details of 5 mandis are as follows:

#### Annual arrival in Mandis

		Fruits	Vegetables	Spices
<b>Jaipur</b>	MT	354,221	475,516	50,683
	Rs. Crores	208	223	34
<b>Jodhpur</b>	MT	68,364	102,285	11,543
	Rs. Crores	68	75	11
<b>Ajmer</b>	MT	32,018	682	
	Rs. Crores	27	NA	
<b>Sriganganagar</b>	MT	5,000	84,106	
	Rs. Crores	NA	95	
<b>Bikaner</b>	MT	17,209	62,578	4,920
	Rs. Crores	20	37	377
<b>Total</b>	MT	476,812	725,167	67,146
	Rs. Crores	324	393	422

There are 15 commodity-specific mandis.





## Chapter 5

### Selection of Crops & Districts

Selection of crops is done on the on the following basis

- Market linkages (existing and potential)
- Return to farmers
- Production advantage – potential in the domestic market
- Export potential

#### 5.1 Spices

Coriander, cumin & fenugreek are selected due to their market linkages and export potential.

Table 5.1 Prioritization of spices crops

Products	Market Linkages					Production Advantage	Export Potential	Return to Farmer
	Food Parks	AEZ	Mandis*	Processing Units	Cold Storages	(% of India Production)		(Rs. / Hectare)
Coriander	Y	Y	Y	Y	NA	50	High	13,000
Cumin	Y	Y	Y	Y	NA	40	High	16,400
Fenugreek	Y	Y	X	Y	NA	49	High	10,200
Chilli	Y	N	Y	N	NA	3	Medium	22,100
Garlic	Y	N	Y	N	NA	4	Low	21,000
Fennel	N	N	N	N	NA	12	High	12,300

#### 5.2 Fruits

Kinnow and Mandarin has market linkages and has strong growing demand. Aonla has strong potential for processing in higher value added products as well as industrial applications in pharmaceuticals industry. Ber is peculiar to Rajasthan and caters to the demand of other states as well. Kinnow, mandarin, aonla and ber are selected.

**Table 5.2 Prioritization of fruit crops**

Products	Market Linkages					Production Advantage	Export Potential	Return to Farmer (Rs. / Hectare)
	Food Parks	AEZ	Mandis	Processing Units	Cold Storages			
Kinnows	Y	N	Y	Y	N	30-35	Medium	28,700
Mandarin	Y	N	N	N	N	< 1%	Low	28,700
Aonla	N	N	Y	Y	NA	High	Medium	29,840
Guava	N	N	Y	N	N	< 1%	Low	23,500
Ber	N	N	N	N	N	15-20	Low	28,700
Mango	N	N	N	N	N	< 1%	Low	46,700
Lemon	N	N	N	N	N	< 1%	Low	38,600
Pomegranate	N	N	N	N	N	< 1%	Low	21,400
Papaya	N	N	N	N	N	< 1%	Low	40,000

### 5.3 Medicinal Plants / Flowers

Medicinal plants are not under NHM has are not selected except Aloe Vera. Aromatic plants such as citronella, Palma Rosa are also selected. Rose and Marigold are selected among flowers.

**Table 5.3 Prioritization of medicinal / flower crops**

Products	Market Linkages					Production Advantage	Export Potential	Return to Farmer
	Food Parks	AEZ	Mandis	Processing Units	Cold Storages			
Isabgol	N	N	N	N	NA	60%	High	20,000
Ashwagandha	N	N	N	N	NA	High	High	22,000

Henna	Y	N	Y	Y	NA	High	Low	24,000
Senna	N	N	N	N	NA	High	Medium	10,000
Rose	N	N	Y	Y	NA	Medium	Low	55,000–60,000
Marigold	N	N	Y	Y	NA	Low	Low	20,000

The districts for the select crops are selected on the basis of the production advantage. Total of 13 districts are selected out of 32 districts. These 13 districts can be divided in 4 clusters:

- Cluster # 1: Jaipur, Alwar, Ajmer
- Cluster # 2: Baran, Kota, Jhalawar, Chittor
- Cluster # 3: Sriganganagar
- Cluster # 4: Jodhpur, Pali, Jalore, Barmer, Nagpur

In summary, selected crops and districts are as follows:

		Jaipur	Alwar	Ajmer	Baran	Kota	Jhalawar	Chittor	SriGanganagar	Jodhpur	Pali	Jalore	Barmer	Nagaur
FRUITS	Aonla													
	Mandarin													
	Kinnow													
	Ber													
SPICES	Coriander													
	Cumin													
	Fenugreek													
	MAP													
	Flowers													

## Chapter 6

### Annual Action Plan under National Horticulture Mission during 2005–06

#### A. Plantation, Infrastructure and Development:

##### 1. Production of planting material:

###### a. Development of Nurseries:

The basic bottleneck in the area expansion of fruits is inadequate availability of quality saplings. At present around 30 to 40 lac nos. of plants are required annually. State is having 27 Government nurseries engaged in production of quality planting material of fruits and 102 private nurseries registered with the Department of Horticulture. State department is in the capacity of producing 15–20 lac plants from its own resources in the state from Government as well as from voluntary nurseries. There is a gap of 15–20 lac plants between demand and supply, which is being managed through procurement of plants from out side the state. The procured plants are having low survival rate due to long distance transportation. The problem of low survivality could be resolved by increasing plant raising capacity of the state nurseries.

###### i) Public Sector Nurseries:

State is having 27 public sector nurseries. The list of which and their production capacity is at annexure 1. These nurseries are not well equipped with modern plant raising facilities. Therefore, it is required to develop 5 model nurseries for raising of planting material of horticulture crops, planting of new mother plants blocks and to develop infra-structure like construction of green house, shading net, pot shades, poly house, creation of micro irrigation facilities, tools, equipments, light & heavy machinery, development of irrigation channels, boundary walls, creation of better approaches etc. For this purpose Rs. 90.00 lacs would be required during 2005–06. The name of nursery along with the plants to be raised is as under:

Component	Proposed District	Physical targets (Nos.)	Fin. Req. (Rs. in lacs)	Plants to be raised
Public (Model Nurseries)	Ganganagar	1	18.00	Kinnow
	Jaipur	1	18.00	Aonla
	Kota	1	18.00	Mandarin, Mango

	Jodhpur	1	18.00	Ber
	Alwar	1	18.00	Aonla
	Total	5	90.00	

ii) Private Sector Nurseries:

For promotion of private sector participation in the production of high quality planting material, it is proposed to provide financial assistance to establish nurseries in private sector to increase plant-raising capacity with Hi-tech plant propagation facilities. During 2005-06 one model nursery and 10 small nurseries would be developed with the assistance @ 50% of developmental work cost or Rs. 9.00 lac and 15.00 lac respectively. The assistance would be provided on construction of green house, shading net, pot shades, poly house, creation of micro irrigation facilities for plant raising and mother plants both, planting of new mother plants, development of irrigation channels, mulching sheets and provision for solar sterilization of soil media etc. The budget provided is Rs. 24 lacs. The name of nursery along with the plants to be raised is as under:

Sector	Nursery	District	Physical targets (Nos.)	Fin. Req. (Rs. in lacs)	Plants to be raised
Private Sector	Model Nursery	Ajmer	1	9.00	Aonla
	Small Nursery	Jaipur	2	3.00	Aonla
		Ajmer	1	1.50	Aonla/ Rose
		Alwar	1	1.50	Aonla
		Jodhpur	1	1.50	Ber
		Chittor	1	1.50	Aonla
		Pali	1	1.50	Aonla
		Ganganagar	1	1.50	Kinnow/ Rose
		Jhalawar	1	1.50	Mandarin
		Kota	1	1.50	Mandarin
		Total		10	15.00
	Grand Total		11	24.00	

**b. Vegetable Seed Production:**

Seed production of okra, chillies, pea, onion, cucurbitaceous vegetables, guar etc. and raising of disease free seedlings of tomato, capsicum etc. would be done so that cultivation of early and late crop could be possible through involvement of public as well

as private sector. It is proposed to develop seed production programme in 50 ha in public sector and 100 ha in private sector with an estimated outlay of Rs.50.00 lacs. It is programmed to undertake seed production through the Rajasthan State Seeds Corporation, Govt. Farms, SAU's and private seed growers.

Sector	Crop	District	Area	Fin Req. (Rs. in lacs)
Public Sector	Tomato	Jaipur, Chittor, Jalore	50 ha	25.00
	Chilli	Jodhpur, Chittor, Ajmer, Tonk		
	Onion	Jaipur, Ajmer, Alwar, Jodhpur		
	Pea	Kota		
Private Sector	Tomato	Jaipur, Jalore, Chittor	100 ha	25.00
	Okra	Jaipur, Ajmer, Kota		
	Guar	Jaipur, Jodhpur		
	Cucurbits	Jaipur		
	Total		150 ha.	50.00

### c. Seed infrastructure:

State is a leading producer of seed spices like coriander, cumin, and fenugreek and has a substantial area under vegetable crops. To facilitate proper handling, packaging and storage of seeds it is essential to equip the units with modern facilities like cleaning and grading facilities, drying platforms, threshing floors, shades etc. 100% assistance will be provided to the public sector (Rajasthan State Seed Corporation, State Agriculture Universities etc.) and the assistance to the private sector will be credit linked back-ended subsidy limited to 25% of cost. For this purpose a provision of Rs. 80.00 lacs is being kept out of which Rs. 40.00 lacs is being proposed in public sector and Rs. 40.00 lacs in private sector to provide assistance on infrastructure development.

The financial requirements for production of planting material during 2005-06 are as under:

S.No.	Component	Phy. Targets	Fin. req. (Rs. in lacs)
a.	Development of Nurseries		
i	Public Sector		
	Model Nursery	5 Nos.	90.00
ii	Private Sector		
	Model Nursery	1 Nos.	9.00
	Small Nursery	10 Nos.	15.00
b	Vegetable Seed Production		
	Public Sector	50 Ha.	25.00

	Private Sector	100 Ha.	25.00
c	Seed Infrastructure		
	Public Sector		40.00
	Private Sector		40.00
	Total		244.00

## 2. Establishment of new gardens:

Rajasthan being the largest state in the country has land which can be fruitfully utilized for establishing new gardens. The suggested area expansion for the select crops is as follows:

### a. Fruits:

S.No.	Fruit Crop	Area to be covered (ha.)	Varieties
1	Aonla	4000	NA-7, Chaikaiya and other improved varieties
2	Mandarin	1000	Nagpuri
3	Kinnow	700	Kinnow
4	Ber	1300	Umran, Gola, Seb
	Total	10000	

### b. Spices, Medicinal & Aromatic plants

S. No.	Crop	Coverage area (Ha.)	Name of districts to be covered
I	Coriander	2500	Kota, Jhalawar, Baran, Bundi, Chittor, Tonk
ii	Cumin	2500	Jalore, Barmer, Jodhpur, Nagaur, Pali, Sirohi, Ajmer etc.
iii	Fenugreek	2000	Siker, Nagaur, Jhalawar, Kota, Baran, Jaipur, Jhunjhunu etc.
iv	Fennel	300	Sirohi, Tonk, Ajmer, Jodhpur, Pali
V	M&A Plants	200	Pali, Baran, Ganaganagar, Jaipur, Ajmer
	Total	7500	

### c. Flowers:

S. No.	Flower group	Coverage area (Ha.)	Name of districts to be covered	Financial requirements (Rs. in lacs)
i	Cut Flowers	50	Jaipur, Ajmer, Alwar	12.74
ii	Bulbous	25	Jaipur, Ajmer, Alwar	8.19

	flowers			
iii	Loose flowers	1000	Sriganganagar, Ajmer, Jaipur, Alwar,	87.36
	Total	1075		108.29

The requirement of funds to establish new gardens during 2005–06 is as under:

S.No.	Component	Phy. Targets (ha.)	Fin. requirement (Rs. in lacs)
a.	Fruits	10000	2250.00
b	Flowers	1075	108.29
c	Spices and M&A Plants	7500	843.75
	Total	18575	3202.04

### 3. Rejuvenation/replacement of senile plantation:

To bridge the gap between demand and supply of fruits, it is very much essential to increase the production of fruits in the State. The horizontal expansion of fruit plantation is having limited scope as the availability of land and water resources are very limited. Therefore, it is required to increase the production of existing fruit plantation by means of rejuvenate them or replacement of senile plantation.

The old fruit plantations are giving very less yield as the production phase of the plantation has been over after a certain period. Some of the plantation has been infected from certain disease like wilt in Guava, decline in citrus, malformation in mango etc. as a result of which they are infecting other plants and giving very poor or no yield to the farmers. Therefore such type of plantation are required to be rejuvenated/uprooted and replaced by the plants of high yielding cultivars, so that farmers could get better yield from the orchards. Besides those orchards that are giving poor yield due to want of input and poor management, would be provided critical input including fertilizers, micro nutrients, PP chemicals etc. to upgrade their productivity level. For this purpose, it is proposed to take up productivity improvement programme in 200 ha old orchards of citrus, guava and mango in selected districts of the State during 2005–06 and a sum of Rs. 30.00 lacs would be required. The district wise proposed targets of rejuvenation of senile orchards are as under:

S.No.	District	Crop	Rejuvenation of Senile orchards (ha.)	Fin. requirement (Rs. in lacs)
1	Kota	Mango / Citrus	25	3.75
2	Jodhpur	Ber	25	3.75
3	Jhalawar	Mandarin	75	11.25
5	Sriganganagar	Kinnow	75	7.50
	<b>Total</b>		<b>200</b>	<b>30.00</b>

#### 4. Creation of Water resources:

n of water resources– water harvesting structure, farm ponds/ reservoirs with plastic lining etc. on farmers field on community basis, it is proposed to assist the farmer in the selected districts and a sum of Rs. 200.00 lacs has been kept for creation of 20 water resources in 200 ha. These resources would be constructed in following districts:

S.No.	Name of district	Area of water resources in ha.	Fin. Requirement (Rs. in lacs)
1	Jalore	20	20.00
2	Jodhpur	40	40.00
3	Barmer	40	40.00
4	Ajmer	20	20.00
5	Jaipur	20	20.00
6	Pali	20	20.00
7	Nagaur	20	20.00
8	Ganganagar	20	20.00
	<b>Total</b>	<b>200</b>	<b>200.00</b>

#### 5. Protected cultivation:

##### a . Green House:

The greenhouse technology is the technique of providing favorable growth condition to the plants inside fabricated structures with ultra violet established cladding material. In its simplest form it is used to protect the plants from the adverse climatic conditions. In the sophisticated form the greenhouse technology is used to provide the optimum growth conditions of light, temperature, humidity, CO<sub>2</sub> etc. for the best growth of plant to achieve maximum yield and best quality.

During 2005–06, 40 green houses of 500 Sq.Mtr. each would be established in the state and for this purpose; a sum of Rs. 45.20 lacs would be required.

District	No.	Fin. Req. (Rs. in lacs)	Crops
Jaipur	10	11.85	Capsicum, Tomato, Bitter gourd, Cucumber
Alwar	8	9.15	Cauliflower, Flowers
Ajmer	5	5.925	Gerbera, Carnation, Rose
Baran	3	3.225	Tomato, Bitter gourd
Kota	5	5.375	Tomato, chillies
Jhalawar	2	2.15	Tomato, Cabbage, chillies
Chittor	2	2.15	Capsicum, Tomato
Ganganagar	5	5.375	Capsicum, Tomato
Total	40	45.20	

#### b. Mulching:

Covering of soil around the root zone of plant with a plastic film is called plastic mulching. It is an effective practice to restrict weed growth, conserve moisture and reduce the effect of soil borne diseases through soil solarisation. The mulching is quite beneficial in state like Rajasthan as the proper solarisation could be done due to high temperature prevailing in the state resulting in higher yields as compare to non-mulch area. It is also beneficial in the areas where soil erosion through air is a major problem. During 2005–06, 100 ha. area would be covered through mulch and farmers would be given assistance. For this purpose a sum of Rs. 7.00 lac would be required. The programme of mulching would be taken in following districts:

District	Proposed area (Ha.)	Fin. Req. (Rs. in lacs)
Sriganganagar	20	1.40
Jaipur	20	1.40
Jodhpur	10	0.70
Pali	10	0.70
Jalore	10	0.70
Nagaur	10	0.70
Ajmer	10	0.70
Barmer	5	0.35
Alwar	5	0.35
Total	100	7.00

**c. Shade Net:**

It is proposed to give assistance to the farmers for installation of shade nets. During 2005–06, a provision of Rs. 7.00 lacs is being proposed to provide assistance on installation of 1.00 lacs Sq.Mtr. shade nets.

The programme of shade net would be taken in following districts:

District	Nos. of shade net (500 Sq. mtr.)	Fin. Req. (Rs. in lacs)
Jaipur	30	1.05
Kota	20	0.70
Sriganganagar	20	0.70
Ajmer	20	0.70
Alwar	30	1.05
Baran	10	0.35
Chittor	20	0.7
Jalore	10	0.35
Jhalawar	10	0.35
Jodhpur	10	0.35
Pali	10	0.35
Nagaur	10	0.35
Total	200	7.00

**d. Plastic tunnels:**

It is proposed to provide assistance on plastic tunnels to the farmers. For this purpose a sum of Rs. 2.50 lacs is being proposed to cover 50000 Sq.Mtr. area under low tunnels during 2005–06. The districts where the programme would be implemented, is as under:

District	Plastic tunnel (Sq. mtr.)	Fin. Req. (Rs. in lacs)
Ajmer	5000	0.25
Alwar	5000	0.25
Jalore	5000	0.25
Jodhpur	5000	0.25
Barmer	5000	0.25
Ganganagar	10000	0.50
Jaipur	10000	0.50
Pali	5000	0.25
Total	50000	2.50

The total requirement of funds for promotion of protected cultivation during 2005–06 is as under:

S.No.	Component	Phy. Targets	Fin. requirement (Rs. in lacs)
a.	Green House	20000 Sq. Mtr.	45.20
b	Mulching	100 ha.	7.00
c	Shade Net	100000 Sq. Mtr.	7.00
d	Plastic tunnel	50000 Sq. Mtr.	2.50
	Total		61.70

## 6. Promotion of INM/IPM:

### a. Sanitary and phytosanitary:

Phytosanitary Certificate is very much essential for the horticultural commodities and plants meant for export. This has necessitated creation of well-established Phytosanitary and Sanitary laboratories with analytical facilities for ascertaining the freedom from pests and plant sanitation. It is proposed to establish Sanitary and Phytosanitary labs in the State with a financial provision of Rs. 200.00 lacs during the year 2005–06. The phytosanitary labs would be established at Jaipur/Jodhpur/Kota/Ganaganagar districts.

### b. Disease forecasting units:

Horticultural crops especially vegetables are highly susceptible to insect pests and diseases, which not only affect the production but have devastating influence under favorable weather conditions. Plant protection surveillance against diseases and insect pests etc. is most vital part especially in state like Rajasthan. This will require special equipments and studies for warning and advising the farmers. Therefore it is proposed to establish two disease-forecasting units in the State with the help of SAU's one at Jodhpur and other at Kota. For establishment of Disease forecasting units, a sum of Rs. 8.00 lacs would be required.

### c. Promotion of IPM:

Integrated pest management is a technique by which available pest reduction techniques like cultural, mechanical, physical, biological & chemical are integrated in such a manner so that pest population density is maintained below economic threshold level to avoid the economic loss and adverse effect of chemical pesticides.

In order to minimize the use of inorganic pesticides in plant protection programmes of Horticulture crops and to promote integrated Pest Management measures, the Department of Horticulture has planned to take up demonstrations in the farmers field

using bio-pesticides, bio-pathogens and sex pheromone traps. It is advantageous to go for this approach due to their eco-safety, target specificity, easy to manage resistance and resurgence in pest and diseases, yield and quality improvement.

During 2005–06, assistance would be given to the farmers for adoption of IPM practices in tomato, chilli, brnjal, cabbage, cauliflower, onion, okra, cumin, coriander, fennel, citrus fruits etc. For this purpose, a physical target of 5000 ha. area is being proposed and a sum of Rs. 50.00 lac would be required. The crop wise area proposed for IPM is as under:

S.No.	Crop	Coverage area (ha.)	Fin. requirement (Rs. in lacs)
1	Tomato	1000	10.00
2	Chilli	300	3.00
3	Cabbage	250	2.50
4	Cauliflower	250	2.50
5	Okra	200	2.00
6	Cumin	1400	14.00
7	Coriander	1400	14.00
8	Fennel	100	1.00
9	Citrus fruits	100	1.00
	Total	5000	50.00

#### d. Plant health clinic:

Plant Health Clinic is a new thought in Indian Agriculture and Horticulture. It is a place where advice will be given for the total Plant Health Care. Plant Health Care involves monitoring of insects and diseases of horticulture plants, altering the farmers' view about new findings and technology and provides timely information about the identified problems. At the plant health clinic, farmers can bring their material for diagnosis of insect, pest, disease and other problems and could find and discuss the remedial measures. With the above background it is proposed to establish one Plant Health Clinic at Jaipur district of the State and would require a sum of Rs. 20.00 lacs during 2005–06.

The requirement of funds for promotion of IPM/INM during 2005–06 is as under:

S.No.	Component	Phy. Targets	Fin. requirement (Rs. in lacs)
a.	Sanitary and Phytosanitary		200.00
b	Disease Forecasting unit	2 Nos.	8.00
c	Promotion of IPM	5000 ha.	50.00
d	Plant health clinic	1 Nos.	20.00
	Total		278.00

## 7. Organic farming

### a. Adoption of organic farming:

For promotion of organic cultivation on farmer's field, an integrated production package incorporating balanced mix of inorganic and organic inputs have been programmed and assistance is to be provided to the farmers. Organic cultivation would be promoted in following district on selected crops as under:

District	Area (ha.)	Fin. requirement (Rs. in lacs)	Crops
Kota	50	5.00	Coriander
Jhalawar	50	5.00	Coriander
Jodhpur	50	5.00	Vegetables
Jalore	50	5.00	Cumin
Barmer	50	5.00	Cumin
Chittor	50	5.00	Coriander / garlic
Baran	50	5.00	Fenugreek
Jaipur	50	5.00	Vegetables
Pali	50	5.00	Chilli / cumin
Ajmer	50	5.00	Vegetables
<b>Total</b>	<b>500</b>	<b>50.00</b>	

For this purpose a 500 ha area would bring under organic farming and an amount of Rs. 50.00 lacs would be required during 2005-06.

### b. Vermi compost unit:

The assistance for establishing vermi compost unit at farmer's field for the year 2005-06, a provision of Rs. 9.00 lacs has been kept for establishment of 30 units of vermi compost in the State. The district wise proposed establishment of vermin compost unit is as under:

S. No.	District	Vermi Compost Unit (Nos.)	Financial requirement (Rs. in lacs)
1	Ajmer	3	0.90
2	Jaipur	3	0.90
3	Jalore	3	0.90
4	Jhalawar	3	0.90
5	Jodhpur	3	0.90
6	Barmer	3	0.90
7	Kota	3	0.90
8	Pali	3	0.90
9	Chittor	3	0.90

10	Baran	3	0.90
	<b>Total</b>	<b>30</b>	<b>9.00</b>

**c. Certification:**

An assistance of Rs. 50.00 lacs is required to certify the process of organic cultivation in selected crops. The requirement of funds for promotion of organic farming during 2005–06 is as under:

S.No.	Component	Phy. Targets	Fin. requirement (Rs. in lacs)
a.	Adoption of organic farming	500 ha.	50.00
b.	Vermi compost unit	30 Nos.	9.00
c.	Certification		50.00
	<b>Total</b>		<b>109.00</b>

**8. HRD including horticulture institute:**

The details of various training programmes are given below:

Rs. in lacs

S.No	Item	Nos.	Assistance	Fin.requirement
<b>A</b>	<b>Farmers Training</b>			
1	Production Technology	5000	0.015	75.00
2	PHM, marketing and Export	500	0.015	7.50
3	Phytosanitary and Entrepreneurship	200	0.015	3.00
4	Exposure tours	750	0.025	18.75
<b>B</b>	<b>Official / Officer training</b>			
	Inside state	25	0.50	12.50
	Out side state	20	0.50	10.00
	Abroad	3	2.00	6.00
<b>C</b>	<b>Farmer friendly literature</b>			
	Literature		40.00	40.00
	Poster		1.00	1.00
	Exhibits		2.00	2.00
	Video Films/CD's		2.000	2.000
<b>D</b>	<b>Electronic/print media</b>		10.25	10.25
<b>E</b>	<b>Field days/Farmer fair</b>	3	1.00	3.00
<b>F</b>	<b>Exhibition</b>	1	2.00	2.00
<b>G</b>	<b>Seminar/ Workshop</b>	2	1.00	2.00

H	Training of Supervisors	1	5.000	5.000
	Total			200.00

To meet out the expenditure on conduction of above training progammes and also the expenditure incurred on training fee, TA, DA for training personals etc., A sum of Rs. 200.00 lacs would be required during 2005–06.

#### 9. Pollination support through Bee–Keeping:

A sum of Rs. 24.00 lacs is being proposed to provide assistance 3000 Nos. bee colonies and bee hives/ equipment among the farmers of the following potential districts.

S. No.	District	No. of Bee Colonies	No. of Bee Hives/ Equipment	Financial Requirement (Rs. in lacs)	Crop
1	Bharatpur	1000	1000	8.00	Mustard, Citrus, Ber, Mango, Guava, Arhar, Cucurbits, Dhaincha, Neem
2	Alwar	500	500	4.00	
3	Kota	500	500	4.00	
4	Jaipur	500	500	4.00	
5	Ganganagar	250	250	2.00	
6	Baran	250	250	2.00	
	<b>Total</b>	<b>3000</b>	<b>3000</b>	<b>24.00</b>	

#### 10. Technology dissemination through Demonstrations/ Front line demonstration:

The crop wise proposed demonstration are as under:

S.No.	Crop	Nos. of demonstration	Fin. requirement (Rs. in lacs)
1	Coriander	500	40.00
2	Cumin	400	30.00
3	Garlic	100	8.00
4	Tomato	300	32.00
5	Cauliflower	200	16.00
6	Pea	200	16.00
7	Onion	100	8.00
8	Capsicum	300	24.00
9	Okra	100	8.00
	Total	2500	187.5

The detailed project proposals along with district wise target would be submitted after getting approval of State Horticulture Mission.

## B. POST HARVEST MANAGEMENT:

### a. Pack Houses:

There is absolute lack of packing stations in our State. Most of the fresh horticultural produces are packed right in the field without any pretreatment and some of them are even transported without packaging. Hence it is proposed to set up the following pack houses:

Component	Assistance	Physical target	Financial Req. (Rs. in lacs)	Proposed District
Pack House	Credit linked back-ended subsidy @ 25% of the capital cost of project limited to Rs. 0.625 lac / unit	2	1.25	Jhalawar & Ganganagar

### b. Cold Storage units:

It is recommended to provide multi-chamber cold storage facilities to the growers. For providing assistance during the year 2005-06, a sum of Rs.100.00 lacs has been kept for construction of cold storages at Jaipur and Sriganganagar.

Component	Assistance	Physical target	Financial Req. (Rs. in lacs)	Proposed District
Cold storage	Credit linked back-ended subsidy @ 25% of the capital cost of project limited to Rs. 50.00 lac / unit	2	100.00	Jaipur, Sri-Ganganagar

### c. Refrigerated vans/ Containers:

It is proposed to provide assistance on Refrigerated vans/containers in major producing areas, so that farmers could send his produce to the distant market or to the cold storages for getting better prices of the produce. For the year 2005-06, a sum of Rs. 12.00 lacs has been kept for two Refrigerated vans for Jaipur district.

Component	Assistance	Physical target	Financial Req. (Rs. in lacs)	Proposed District
Refrigerated Van/ container	Credit linked back-ended subsidy @ 25%	2	12.00	Jaipur

	of the capital cost of project limited to Rs. 6.00 lac / unit			
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**d. Mobile processing units:**

It is proposed to provide assistance on mobile processing units and for the year 2005–06, a sum of Rs. 54.00 lacs is being proposed for assisting two mobile units.

Component	Assistance	Physical target	Financial Req. (Rs. in lacs)	Proposed District
Mobile processing unit	Credit linked back-ended subsidy @ 25% of the capital cost of project limited to Rs. 6.00 lac / unit	9	54.00	Jaipur, Jalore, Jhalawar (2), Chittor, Kota, Ganganagar, Baran, Alwar

**e. Market Intelligence:**

Information on Horticultural crops for already available technologies, crop prospects, market arrivals and prices etc. are of vital importance for policy planning by the Govt. and enabling farmers to sell their produce in a market where prices are remunerative. Information center will have linkage with ICAR Institutes, SAU's, market committees and other related agencies. Information on technology, crop prospects, market price, arrivals, export, import and other relevant information like area & production etc. will be regularly collected, sorted and made available to the concerned needy agencies/ farmers. To create such type of infrastructure, 4 information centers are to be established in Jaipur, Kota, Jodhpur and Ganganagar districts of the State and for this purpose a sum of Rs. 30.00 lacs is being proposed for the year 2005–06. The detailed project proposals would be submitted after getting approval of State Horticulture Mission.

**f. Buy Back Intervention:**

A sum of Rs. 30.00 lacs is being proposed for the year 2005–06. The detailed project proposals would be submitted by the state Government after getting approval of State Horticulture Mission.

**g. Establishment of marketing infrastructure for horticultural produce in Govt./ Private/ Cooperative sector.**

- **Rural markets/ Apni Mandies/ Direct Markets:** It is proposed to develop 8 such markets, a provision of Rs.30 lacs has been kept for the year 2005–06.

Component	Assistance	Physical target	Financial Req. (Rs. in lacs)	Proposed District
Rural markets/ Apni Mandies/ Direct Markets	Credit linked back-ended subsidy @ 25% of the capital cost of project limited to Rs. 3.75 lac / unit	8	30	Ajmer, Baran Jaipur, Jodhpur (2) Jhalawar, Ganganagar, Nagaur

▪ **Functional Infrastructure for collection, grading etc.**

A sum of Rs. 56.25 lacs is being proposed for the year 2005-06.

Component	Assistance	Physical target	Financial Req. (Rs. in lacs)	Proposed District
Functional Infrastructure for collection, grading etc.	Credit linked back-ended subsidy @ 25% of the capital cost of project limited to Rs. 3.75 lac / unit	15 Nos.	56.25	Ajmer (2), Nagaur, Alwar, Jaipur (2), Jodhpur (2), Kota (2), Pali, Sriganganagar Jhalawar, Chittor, Barmer

**h. Extension, quality awareness & Market led Extension activities for fresh processed products:**

Market led extension system establishes its position by helping the farmers for getting higher returns of his produce, minimization of production costs, improvisation in product value and marketability. Information technology, electronic and print media, product promotional campaign, field publicity and propaganda through Doordarshan, Product promotion fairs etc. need to be harnessed to disseminate the production and market information. For all the market development promotional activities, a sum of Rs. 100.00 lacs is being proposed for the year 2005-06. The detailed project proposals would be submitted after getting approval of State Horticulture Mission. The requirement of funds for post harvest management during 2005-06 is as under:

S.No.	Component	Phy. Targets	Fin. requirement (Rs. in lacs)
a.	Pack House	2 Nos.	1.25
b	Cold storage units	2 Nos.	100.00

c	Refrigerated vans /containers	2 Nos.	12.00
d	Mobile processing units	29Nos.	54.00
e	Market intelligence		30.00
f	Buy back interventions		30.00
g	Rural/ Direct markets/Apni mandies	8 Nos.	30.00
h	Functional Infrastructure for collection, grading	15 Nos	56.25
i	Market led extension		100.00
	Total		413.5

### C. PROCESSING AND VALUE ADDITION:

A small quantity of fruits and vegetables harvested are commercially processed; however state has surplus produce available for processing and value addition. The surplus horticulture produce may be processed in different form as under:

Crop	Process able products
Mandarin (Orange)	Juice, Concentrate, Marmalade
Kinnow	Juice
Aonla	Powder, Pickle, Preserve, Squash, RTS Beverages, Candy, Ayurvedic medicines, oils
Mango	Sliced, canned & frozen mango products, Papad, Beverages, Squash, Juice, Pickle, Jam
Guava	Jam, Jelly
Ber	Squash
Tomato	Sauce, Ketchup, Soups, Chutney, Powder
Onion	Powder, Pickle, Onion flakes, Canned onion
Pea	Canned pea, Dried pea, Pickles
Potato	Flakes
Chilly	Oleoresin, Paste
Coriander	Powder, Oils
Cumin	Seeds, Oils
Garlic	Dehydrated powder, Garlic paste, Flakes
Fennel	Seeds, Oils
Rose	Gulkand, rose water, essence, dry petals etc.
Isabgol	Husk
Aswagandha	Powder, Ayurvedic medicines
Sonamukhi	Powder, Ayurvedic medicines

#### D. MISSION MANAGEMENT:

##### a. State & District Mission Structure including additional manpower and project preparation cost:

State horticulture Mission's programmes will be implemented through State Horticulture Mission Agency (Registered Society) and its district agencies. The programmes will be implemented in identified areas of various horticultural crops spread over the state.

There would be requirement of additional manpower to percolate the mission programmes up to the grass root level and for this purpose service of qualified personals, agriculture qualified youth (10+2/graduate/post graduate), need be hired on contractual basis to achieve the goals. Similarly area/crop based field surveys, feasibility study, etc. would also be carried out for preparation of macro and micro level projects. Similarly evaluation and other studies on various aspects of horticulture depending on need and emerging requirement would also be carried out time to time.

For State and District Mission structure, additional manpower, project preparation cost, evaluation and other studies a provision of Rs. 140.00 lacs is being proposed during 2005-06.

##### b. Support to cooperative for infrastructure requirement:

It is recommended to strengthen cooperative infrastructure through efficient cooperative marketing system development and linking co-operatives with rural primary markets, go downs, post harvest management facilities and other infrastructure. For this purpose, a sum of Rs. 30.00 lacs is being proposed during 2005-06.

##### c. Institutional Strengthening, hire, purchase of vehicles, hardware/software:

The Department of Horticulture is already implementing various horticulture development schemes in the State. Districts offices are required to be equipped with computers internet, scanner, photocopier, fax machine, printer for enhancing working efficiency and also proper and effective monitoring of the schemes/activities. Two Divisional Offices (Kota & Jodhpur) are also proposed to be equipped with the same. Besides, fax machine, computers, laptop, photocopier, color printer etc are also required to install at Directorate level for proper monitoring of schemes.

Item	Scale per Unit	No.	Financial Req.	Destination
Institutional Strengthening			25.00	HQ & Districts
Purchase of Vehicles	5.00 –7.00	3	17.00	HQ
		2	10.00	District HQ
Hiring of Vehicles	–	15	6.50	District HQ

Computers, Hardware, Xerox & Fax	1.00	20	20.00	HQ & Districts
Laptop	1.00	2	2.00	HQ
Color Printer	0.75	2	1.50	HQ
Digital camera	0.50	1	0.5	HQ
2 STD line with fax for mission control room	1.25	2	2.50	Mission Control Room
Total			85.00	

To meet out the expenditure to be incurred on above all three aspects a provision of Rs. 85.00 lacs is proposed for 2005-06.

**d. Technical support group (TSG) institutional strengthening:**

The different activities under national horticulture mission is proposed to be implemented in the State during 2005-06 which will address all the linkages from planting material to value addition and marketing. To facilitate the process of implementation of NHM a technical support group of eminent retired scientist and experienced departmental personals would be established with the financial assistance of Rs. 10.00 lacs. The requirement of funds for Mission management during 2005-06 is as under:

S.No.	Component	Fin. requirement (Rs. in lacs)
a.	Mission structure	140.00
b.	Support to co-operatives	30.00
c.	Institutional strengthening	75.00
d.	TSG	10.00
	Total	255.00

▪ **Mode of implementation:**

- State horticulture Mission's programmes will be implemented through State Horticulture Mission Agency (Registered Society) and its district agencies. The programmes will be implemented in identified areas of various horticultural crops spread over the state.
- There would be a registered society at the state level known as State Horticulture Mission Agency (Rajasthan Horticulture Development Society), which will have an Executive Council. The Rajasthan Horticulture Development Society has been registered on 8.07.2005.
- The State Level Executive Committee consist of following members:-

1	Principal Secretary Agriculture, GOR, Jaipur	Chariman
2	Secretary Cooperative, GOR, Jaipur	Member
3	Administrator, Rajasthan State Agriculture Marketing Board, Jaipur	Member
4	Director Agriculture, Rajasthan, Jaipur	Member
5	Director, State Institute of Agriculture Management, Durgapura, Jaipur	Member
6	Director, Rajasthan State Seed Certification Agency, Jaipur	Member
7	General Manager, Rajasthan State Seed Corporation Limited, Jaipur	Member
8	Farmer's representative	Member
9	Joint Director Horticulture (Nur.), Jaipur	Member
10	Director Horticulture, Rajasthan, Jaipur	State Mission Director & Member Secretary

- Beside above members, following are the permanent member of the Society:
  1. Representative of Commissioner Horticulture, GOI, New Delhi
  2. Secretary, Industry, GOR, Jaipur
- Overall supervision and monitoring by the Director of Horticulture as State Mission Director.
- At the district level, the constitution of District Mission Committee (DMC) is under process, which would be responsible for implementation and monitoring of Mission Development Programme in the district. DMC would be constituted under the Chairmanship of District Collector.
- At State Level the different development the Officers of planning cell through concerned scheme in charges will monitor activities under Mission.
- State would like to focus on implementation of programmes in identified villages based on agro climatic situations in potential districts. For this, five to ten villages in cluster have been selected in potential district of the State. In these selected villages, suitable horticulture crops would be promoted in such a manner so that the demonstration effect could be visualized.

#### **E. Research and Development:**

Researchable issues pertaining to refinement in the field application of agronomical and production practices, evaluation of varieties, effective post harvest management practices, processing, value addition, marketing research and market intelligence issues on all groups of horticultural crops will be undertaken through the assistance of State Agriculture Universities/ATC/KVK etc. as the not much work is being initiated by the

S.A.U.s to develop the Horticultural varieties specially vegetables and spices. Further S.A.U.s are not having much research work on area specific problems raised by the Department. The reason behind this is paucity of funds with the Research Institutes. It is therefore proposed to provide the financial assistance to the SAU's, ATC's, KVK's etc. on area specific varietal development / testing and need based problems on project basis.

**F. New interventions:**

**a Horticulture Equipments :**

For increasing production, productivity and efficiency, assistance for improved Horticulture farm implements like backpack sprayer, power sprayer, Foot sprayer, tractor/trolley mounted power sprayer etc. will be provided to the farmers. By using these equipments, farmer can spray the insecticide/pesticide in their fruit/vegetable/spices gardens to increase the productivity of the crops. The local make implement if recommended in the State and have been proved to be effective for mechanization in Horticulture crops can also be considered. The assistance will be given @ 50% of total cost of equipment subject to ceiling of Rs. 10000/- per beneficiary. During the year 2005–06, a financial provision of Rs. 37.26 lacs has been kept for distribution of equipments.

**G. Integrated development of horticulture in tribal / hilly areas:**

For integrated development of horticulture in tribal areas of Rajasthan, 3 districts viz. Banswara, Sawai Madhopur and Karauli has been identified by GOI. The scheme for integrated development of horticulture is already being implemented in Banswara through SDA–Association of Retired Members of Rajasthan Agriculture Service whereas in Karauli and Sawai Madhopur district SDA have been identified and Rs. 2.75 lacs have been released to each district for conducting techno economic feasibility study. The developmental activities would be undertaken after submission of feasibility study report.

As the above scheme subsumed under NHM, therefore the horticulture development works would be carried out in the tribal districts of the State through funds made available in NHM. The proposed budget is Rs. 200 lacs.

The total budget as per the action plan recommended is Rs. 41.02 Crores. The summary of the plan is as follows:

## National Horticulture Mission - Annual Action Plan (2005-06)

Rs. In lacs

S. No.	Name of Scheme/Component	Unit	Phy. Target	Req. of funds	Destination
<b>A</b>	<b>Plantation Infrastructure &amp; Development</b>				
<b>1</b>	<b>Production of planting material</b>				
<b>a</b>	<b>Development of Nurseries</b>				
i	Public Sector				
	Model Nursery (4ha.)	Nos.	5	90.00	Ganganagar, Jaipur, Kota, Jodhpur, Alwar
ii	Private Sector				
	Model Nursery (4ha.)	Nos.	1	9.00	Ajmer
	Small Nursery (1 ha.)	Nos.	10	15.00	Jaipur, Ajmer (2), Alwar, Jodhpur, Chittor, Pali, Ganganagar, Jhalawar, Kota
	<b>Total</b>			<b>114.00</b>	
<b>b</b>	<b>Vegetable Seed Production</b>				
	Public Sector	Ha.	50	25.00	Jaipur, Jodhpur, Ajmer, Kota, Chittor
	Private Sector	Ha.	100	25.00	Jaipur, Sirohi, Jalore, Ajmer, Kota, Jodhpur, Chittor
	<b>Total</b>			<b>50.00</b>	
<b>c</b>	<b>Seed Infrastructure</b>				
	Public Sector			<b>40.00</b>	
	Private Sector			<b>40.00</b>	
	<b>Total</b>			<b>80.00</b>	
<b>2</b>	<b>Establishment of New gardens</b>				
a	Fruits	Ha.	8000	900.00	As per the clusters recommended
b	Flowers				
i	Cut Flowers				As per the clusters recommended
	a) Small & Marginal Farmers	Ha.	10	3.50	
	b) Other Farmers	Ha.	40	9.24	
ii	Bulbous Flowers				
	a) Small & Marginal Farmers	Ha.	5	2.25	
	b) Other Farmers	Ha.	20	5.94	
iii	Loose Flowers				

	a)Small & Marginal Farmers	Ha.	200	24.00	
	b)Other Farmers	Ha.	800	63.36	
c	Spices, M&A Plants	Ha.	7500	843.75	As per the clusters recommended
	<b>Total</b>			<b>1852.04</b>	
<b>3</b>	<b>Rejuvenation/replacement of senile plantation</b>	<b>H.a</b>	<b>200</b>	<b>30.00</b>	Kota, Jodhpur, Jhalawar, Sriganganagar
<b>4</b>	<b>Creation of Water resources sources</b>	<b>Nos.</b>	<b>20</b>	<b>200.00</b>	Jalore, Jodhpur, Barmer, Jaipur, Ajmer, Pali, Ganganagar
<b>5</b>	<b>Protected cultivation</b>				
a	Green House				
i	Small & Marginal Farmers	Sq. Mtr.	2000	6.50	Jaipur, Alwar, Ajmer, Chittor, Kota, Jhalawar, Baran, Ganganagar
ii	Other Farmers	Sq. Mtr.	18000	38.70	
b	Mulching	Ha.	100	7.00	Sriganganagar, Jaipur, Jodhpur, Pali, Alwar, Barmer, Jalore, Chittor, Kota
c	Shade Net	Sq. Mtr.	100000	7.00	20 shade nets of 500 sq. mtr. In Jaipur, Kota, Ganganagar and 10 shade net in other 13 districts
d	Plastic tunnel	Sq. Mtr.	50000	2.50	5000 sq. mtr. In 10 districts each.
	<b>Total</b>			<b>61.70</b>	
<b>6</b>	<b>Promotion of INM/IPM</b>				
a	Sanitary and Phytosanitary (Public Sector)			200.00	Jaipur/Jodhpur/Kota/Ganganagar
b	Disease Forecasting units	Nos.	2	8.00	Jaipur/ Kota
c	Promotion of IPM	Ha.	5000	50.00	In 13 districts of the State
d	Plant health clinic (Public Sector)		1	20.00	Jaipur
	<b>Total</b>			<b>278.00</b>	
<b>7</b>	<b>Organic Farming</b>				
a	Adoption of organic farming	Ha.	500	50.00	50 ha. In 10 district each.
b	Vermi compost units	Nos.	30	9.00	3 unit in 10 district each.
c	Certification			50.00	In selected districts.
	<b>Total</b>			<b>109.00</b>	
<b>8</b>	<b>HRD including horticulture institute</b>			<b>200.00</b>	
<b>9</b>	<b>Pollination support through bee-keeping</b>	<b>Nos.</b>	<b>3000</b>	<b>24.00</b>	Bharatpur, Alwar, Kota, Ganganagar, Jaipur, Baran

<b>10</b>	<b>Technology dissemination through demonstration/Front line demonstration</b>			<b>187.50</b>	In selected districts.
<b>B</b>	<b>Post Harvest Management</b>				
a	Pack House	Nos.	2	1.25	Jhalawar, Ganganagar
b	Cold Storage units	Nos.	2	100.00	Jaipur, Ganganagar
c	Ref. Vans/ Containers	Nos.	2	12.00	Jaipur
d	Mobile processing units	Nos.	9	54.00	Jhalawar (2), Jalore, Jaipur, Chittor, Kota, Ganganagar, Baran, Alwar
e	Market intelligence	Nos.		30.00	On project basis
f	Buy Back intervention	Nos.		30.00	On project basis
g	Rural markets/Apni Mandies/ Direct markets	Nos.	8	30.00	Ajmer, Baran, Jaipur, Jodhpur(2), Jhalawar, Ganganagar, Nagaur
h	Functional infrastructure for collection, grading etc.	Nos.	15	56.25	Kota (2), Nagaur, Jodhpur (2), Pali, Jaipur (2), Ajmer (2), Chittor, Ganganagar, Barmer, Alwar, Jhalawar
i	Extension, quality awareness & market led extension activities for fresh processed products			100.00	
	<b>Total</b>			<b>413.50</b>	
<b>C</b>	<b>Processing and Value addition</b>				
	<b>Sub Total</b>			<b>3599.74</b>	
<b>D</b>	<b>Mission Management</b>				
a	State & District Mission Structure including additional manpower & project preparation cost			140.00	
b	Support to cooperatives for infrastructural requirement			30.00	On project basis
c	Institutional Strengthening, hire, purchase of vehicles, hardware/software			85.00	
d	Technical support group(TSG) institutional strengthening			10.00	On project basis
	<b>Total</b>			<b>265.00</b>	
<b>E</b>	<b>Research and Development</b>				
<b>F</b>	<b>New Interventions</b>				
a	Horticulture equipments			37.26	
	<b>Total</b>			<b>37.26</b>	

<b>G</b>	Integrated Development of Horticulture in Tribal and Hilly Areas			200.00	
	<b>Total</b>			<b>200.00</b>	
	<b>Grand Total</b>			<b>4102.00</b>	

## Chapter 7

### Prospective Action Plan under National Horticulture Mission during 2006-07 & 2007-08

The prospective plans for year 2006-07 & 2007-08 are prepared to build upon the actions proposed for the first year. The plans are as follows:

#### 7.1 Plan for Year 2006-07

##### National Horticulture Mission - Annual Action Plan (2006-07)

S. No.	Name of Scheme/Component	Unit	Phy. Target	Req. of funds
<b>A</b>	<b>Plantation Infrastructure &amp; Development</b>			
<b>1</b>	<b>Production of planting material</b>			
<b>a</b>	<b>Development of Nurseries</b>			
	i Public Sector			
	Model Nursery (4ha.)	Nos.	4	72.00
	Small Nursery (1 ha.)	Nos.	2	6.00
	Rehabilitation of existing tissue culture unit	Nos.	2	16.00
	ii Private Sector	Nos.		
	Model Nursery (4ha.)	Nos.	4	36.00
	Small Nursery (1 ha.)	Nos.	15	22.50
	<b>Total</b>			<b>152.50</b>
<b>b</b>	<b>Vegetable Seed Production</b>			
	Public Sector	Ha.	100	50.00
	Private Sector	Ha.	200	50.00
	<b>Total</b>			<b>100.00</b>
<b>c</b>	<b>Seed Infrastructure</b>			
	Public Sector			<b>75.00</b>
	Private Sector			<b>75.00</b>
	<b>Total</b>			<b>150.00</b>
<b>2</b>	<b>Establishment of New gardens</b>			
	a Fruits	Ha.	12000	1710.00
	b Flowers			
	i Cut Flowers			

	a) Small & Marginal Farmers	Ha.	10	3.50
	b) Other Farmers	Ha.	40	9.24
ii	Bulbous Flowers			
	a) Small & Marginal Farmers	Ha.	10	4.50
	b) Other Farmers	Ha.	40	11.88
iii	Loose Flowers			
	a) Small & Marginal Farmers	Ha.	250	30.00
	b) Other Farmers	Ha.	900	71.28
c	Spices, M&A Plants	Ha.	10000	1125.00
	<b>Total</b>			<b>2965.40</b>
<b>3</b>	<b>Rejuvenation/replacement of senile plantation</b>	<b>H.a</b>	<b>300</b>	<b>45.00</b>
<b>4</b>	<b>Creation of Water resources sources</b>	<b>Nos.</b>	<b>20</b>	<b>200.00</b>
<b>5</b>	<b>Protected cultivation</b>			
a	Green House			
i	Small & Marginal Farmers	Sq. Mtr.	2000	6.50
ii	Other Farmers	Sq. Mtr.	18000	38.70
b	Mulching	Ha.	100	7.00
c	Shade Net	Sq. Mtr.	100000	7.00
d	Plastic tunnel	Sq. Mtr.	50000	2.50
	<b>Total</b>			<b>61.70</b>
<b>6</b>	<b>Promotion of INM/IPM</b>			
a	Sanitary and Phytosanitary (Public Sector)			100.00
b	Disease Forecasting units	Nos.	2	8.00
c	Promotion of IPM	Ha.	7500	75.00
d	Plant health clinic (Public Sector)		1	20.00
e	Bio control lab			
	a) Public sector	Nos.	1	80.00
	b) Private sector	Nos.	1	40.00
	<b>Total</b>			<b>323.00</b>
<b>7</b>	<b>Organic Farming</b>			
a	Adoption of organic farming	Ha.	1000	100.00

b	Vermi compost units	Nos.	50	15.00
c	Certification			50.00
	<b>Total</b>			<b>165.00</b>
<b>8</b>	<b>HRD including horticulture institute</b>			<b>200.00</b>
<b>9</b>	<b>Pollination support through bee-keeping</b>	<b>Nos.</b>	<b>5000</b>	<b>40.00</b>
<b>10</b>	<b>Technology dissemination through demonstration/Front line demonstration</b>			<b>187.50</b>
<b>B</b>	<b>Post Harvest Management</b>			
a	Pack House	Nos.	5	3.13
b	Cold Storage units	Nos.	2	100.00
c	Ref. Vans/ Containers	Nos.	5	30.00
d	Mobile processing units	Nos.	5	30.00
e	Market intelligence	Nos.		50.00
f	Buy Back intervention	Nos.		25.00
g	Wholesale markets	Nos.	1	1000.00
h	Rural markets/Apni Mandies/ Direct markets	Nos.	5	18.75
i	Functional infrastructure for collection, grading etc.	Nos.	20	75.00
j	Extension, quality awareness & market led extension activities for fresh processed products			100.00
	<b>Total</b>			<b>1431.88</b>
<b>C</b>	<b>Processing and Value addition</b>			
	<b>Sub Total</b>			<b>6021.98</b>
<b>D</b>	<b>Mission Management</b>			
a	State & District Mission Structure including additional manpower & project preparation cost			150.00
b	Support to cooperatives for infrastructural requirement			50.00
c	Institutional Strengthening, hire, purchase of vehicles, hardware/software			100.00
d	Technical support group(TSG) institutional strengthening			10.00
	<b>Total</b>			<b>310.00</b>
<b>E</b>	<b>Research and Development</b>			<b>0.00</b>
<b>F</b>	<b>New Interventions</b>			
a	Horticulture equipments			50.00
	<b>Total</b>			<b>50.00</b>
<b>G</b>	<b>Integrated Development of Horticulture in Tribal and Hilly Areas</b>			<b>200.00</b>
	<b>Total</b>			<b>200.00</b>
	<b>Grand Total</b>			<b>6581.98</b>

## 7.2 Plan for Year 2007–08

## National Horticulture Mission - Annual Action Plan (2007-08)

S. No.	Name of Scheme/Component	Unit	Phy. Target	Req. of funds
<b>A</b>	<b>Plantation Infrastructure &amp; Development</b>			
<b>1</b>	<b>Production of planting material</b>			
<b>a</b>	<b>Development of Nurseries</b>			
i	Public Sector			
	Model Nursery (4ha.)	Nos.	4	72.00
	Small Nursery (1 ha.)	Nos.	4	12.00
	Rehabilitation of existing tissue culture unit	Nos.	2	16.00
ii	Private Sector	Nos.		
	Model Nursery (4ha.)	Nos.	6	54.00
	Small Nursery (1 ha.)	Nos.	15	22.50
	<b>Total</b>			<b>176.50</b>
<b>b</b>	<b>Vegetable Seed Production</b>			
	Public Sector	Ha.	150	75.00
	Private Sector	Ha.	300	75.00
	<b>Total</b>			<b>150.00</b>
<b>c</b>	<b>Seed Infrastructure</b>			
	Public Sector			<b>100.00</b>
	Private Sector			<b>100.00</b>
	<b>Total</b>			<b>200.00</b>
<b>2</b>	<b>Establishment of New gardens</b>			
a	Fruits	Ha.	15000	2767.50
b	Flowers			
i	Cut Flowers			
	a) Small & Marginal Farmers	Ha.	10	3.50
	b) Other Farmers	Ha.	40	9.24
ii	Bulbous Flowers			
	a) Small & Marginal Farmers	Ha.	10	4.50
	b) Other Farmers	Ha.	40	11.88

iii	Loose Flowers			
	a)Small & Marginal Farmers	Ha.	250	30.00
	b)Other Farmers	Ha.	900	71.28
c	Spices, M&A Plants	Ha.	10000	1125.00
	<b>Total</b>			<b>4022.90</b>
<b>3</b>	<b>Rejuvenation/replacement of senile plantation</b>	<b>H.a</b>	<b>500</b>	<b>75.00</b>
<b>4</b>	<b>Creation of Water resources sources</b>	<b>Nos.</b>	<b>30</b>	<b>300.00</b>
<b>5</b>	<b>Protected cultivation</b>			
a	Green House			
i	Small & Marginal Farmers	Sq. Mtr.	2000	6.50
ii	Other Farmers	Sq. Mtr.	18000	38.70
b	Mulching	Ha.	100	7.00
c	Shade Net	Sq. Mtr.	100000	7.00
d	Plastic tunnel	Sq. Mtr.	50000	2.50
	<b>Total</b>			<b>61.70</b>
<b>6</b>	<b>Promotion of INM/IPM</b>			
a	Sanitary and Phytosanitary (Public Sector)			100.00
b	Disease Forecasting units	Nos.	2	8.00
c	Promotion of IPM	Ha.	10000	100.00
d	Plant health clinic (Public Sector)		1	20.00
e	Bio control lab			
	a) Public sector	Nos.	1	80.00
	b) Private sector	Nos.	1	40.00
	<b>Total</b>			<b>348.00</b>
<b>7</b>	<b>Organic Farming</b>			
a	Adoption of organic farming	Ha.	1500	150.00
b	Vermi compost units	Nos.	100	30.00
c	Certification			50.00
	<b>Total</b>			<b>230.00</b>
<b>8</b>	<b>HRD including horticulture institute</b>			<b>300.00</b>
<b>9</b>	<b>Pollination support through bee-keeping</b>	<b>Nos.</b>	<b>5000</b>	<b>40.00</b>

<b>10</b>	<b>Technology dissemination through demonstration/Front line demonstration</b>			<b>187.50</b>
<b>B</b>	<b>Post Harvest Management</b>			
a	Pack House	Nos.	5	3.13
b	Cold Storage units	Nos.	5	250.00
c	Ref. Vans/ Containers	Nos.	5	30.00
d	Mobile processing units	Nos.	5	30.00
e	Market intelligence	Nos.		50.00
f	Buy Back intervention	Nos.		25.00
g	Wholesale markets	Nos.	1	1500.00
h	Rural markets/Apni Mandies/ Direct markets	Nos.	5	18.75
i	Functional infrastructure for collection, grading etc.	Nos.	20	75.00
j	Extension, quality awareness & market led extension activities for fresh processed products			100.00
	<b>Total</b>			<b>2081.88</b>
<b>C</b>	<b>Processing and Value addition</b>			
	<b>Sub Total</b>			<b>8173.48</b>
<b>D</b>	<b>Mission Management</b>			
a	State & District Mission Structure including additional manpower & project preparation cost			200.00
b	Support to cooperatives for infrastructural requirement			50.00
c	Institutional Strengthening, hire, purchase of vehicles, hardware/software			100.00
d	Technical support group(TSG) institutional strengthening			10.00
	<b>Total</b>			<b>360.00</b>
<b>E</b>	<b>Research and Development</b>			<b>0.00</b>
<b>F</b>	<b>New Interventions</b>			
a	Horticulture equipments			150.00
	<b>Total</b>			<b>150.00</b>
<b>G</b>	Integrated Development of Horticulture in Tribal and Hilly Areas			200.00
	<b>Total</b>			<b>200.00</b>
	<b>Grand Total</b>			<b>8883.48</b>