JOINT INSPECTION TEAM (JIT) REPORT

GUJARAT

बागवानी मिशन
Horticulture Mission

NHM - Mission for Integrated Development of Horticulture (MIDH)

Ministry of Agriculture & Farmers Welfare

Department of Agriculture, Cooperation & Farmers Welfare
Krishi Bhawan, New Delhi-110001

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Review of National Horticulture Mission and other Central Schemes of Horticulture Supported programmes for Gujarat State 2015-16

The Joint Inspection Team (JIT) to visit and monitor the centrally sponsored programmes for Horticulture Development comprises following members:

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JIT Visit Schedule:

Schedule of JIT visit in Gujarat during 21-26th September, 2015							
Day	**Date**	**Place of Visit/ Dist.**	**Start time**	**Projects Covered**	**Dist. Covered**	**Scheme**	**Remarks**
1	21-Sep-15	Ahmedabad - Gandhinagar-Kutch	Morning 9:30 AM	Opening Meeting with Mission Director & Directore of Horticulture at Ahmedabad / Gandhinagar. Meeting with Cold Storage Owner for Solar Panel Decision			Ahmedabad / Gandhinagar
			2:00 PM	Departure for Kutch-Bhuj	Kutch	NHM	Night Halt at Kutch-Bhuj
2	22-Sep-15	Visit of Kutch District	9:00 AM	Visit of Dates/Mango/Pomegranate Plantation in Kutch	Kutch	NHM	Night Hold at Kutch-Bhuj
3	23-Sep-15	Kutch - Rajkot - Vadodara	8:00 AM	Departure for Vadodara Via Rajkot. Visit of GRV Cold Storage, Kuber Cold Storage, Atop Storage etc.	Vadodara	NHM	Night Halt at GGRC-Vadodara
4	24-Sep-15	Vadodara - Surat - Navasari	9:00 AM	Meeting AT GGRC-Drip Irrigation System (NMMI)-/ Banana Cultivation in NHM , Bio Control Laboratory/ PHM -SURAT DIST.	Vadodara/ Surat	NMMI-NHM-CDB	Night Halt at NAU-Navasari
5	25-Sep-15	Navasari	9:00 AM	Visit of PFDC- AAU/ Plug nursery , Mango area expansion/PHM projects, Protected Cultivation- NAVSARI Dist.	Navsari	NHM-PFDC-RKVY-NHB	Night Halt at NAU-Navasari
6	26-Sep-15	Navasari - Surat Airport	7:30 AM				Departure

Observations and Suggestions of JIT:

JIT has recorded following common observations on implementation of centrally sponsored Horticulture development programmes in the visited districts of Kutch, Rajkot, Baroda, Surat, Bharuch and Navsari in Gujarat during 21–26 September 2015. The activities covered during the visit were protected cultivation, model nursery, area under fruit & vegetable production, planting material production units (Tissue culture labs), post harvest management units like cold storage and ripening chamber, bio-control units and drip irrigation systems under GGRC, Gujarat.

- In Kutch region, area under date cultivations needs more expansion. There is need of hour to promote tissue culture units for date palm and pomegranate plantlets. It has been observed that the tissue cultured plantlets of pomegranate do not have the incidence of drying of the roots and shoots (wilting). Agricultural Universities and ICAR institutions can have a collaborative approach for solving the problems related with wilting in pomegranate farms. Training should be given to the farmers particularly pruning in pomegranate.
- Considering the area expansion of Pomegranate in Kutch and Sabarkantha districts, the demonstrations on package of practices with proper control measures to prevent wilting in pomegranate should be taken at farmers field with the help from NRC on Pomegranate.
- JIT visited Date palm and pomegranate farms that are well managed and growth is uniformed. Support is required from NHM for use of Tissue cultured planting material in Date palm as cultivation cost is about Rs. 3.00 lakh / ha.
- More training programmes need to be incorporated so that the farmers can be aware of the advanced technologies in crop production. Farmers need to be trained in cultivation practices in green houses and their management.
- For floriculture industry, hygienic condition of cut flower packing house is very important to enhance the shelf life of cut flowers because immediately after harvest there is chance of incidence of bacterial infection. The most of polyhouses visited did not have double door system which is necessary for hygiene. Training to generate awareness about the cleanliness of the pack house and scientific post harvest practices for increasing the shelf life of the flowers is essentially required among the growers.
- Farmers having floriculture unit can also have refrigerated vans under NHM, so that their products reach healthy to the outlets because flowers are highly perishable commodities. Emphasis should be given for construction of tissue culture labs for producing healthy planting material so that they should not worry for purchase the planting material from other distant places.
- Farmers whosoever facilitated cold chamber facility and ripening units, there is need to practice backward linkages so that the supply of the produce can be made available throughout the year and at the same time poor farmers can also be benefitted without taking the help of middleman.
- The GGRC is entrusted with the drip system of irrigation in the state. Farmers are facing problems of leakage in fertigation unit sometime after installation because of saline water.

Some mechanism to overcome the problem should be suggested. Use of plastic/organic mulches along with the drip system can also be thought of for loss of water.

- Farmers addressed that there is delay in receiving the subsidy from NHB, but there is provision for 60-70% of the release after getting the sanction at a time. In NHM, farmers are facing some problems particularly the authorization of land, sanctioning of the amount, but as soon as the sanction amount is approved, the release of fund is very fast and the farmers are happy with procedure followed to sanction the amount under NHM.
- It is also discussed that the initial cost of protected structure particularly net house is higher as per the specification given by NCPAH. It is suggested that the cost of net house can be reduced by adopting technology of wire and cable structure. It is decided to explore the possibilities in consultation with NCPAH.
- South Gujarat region has high rainfall and humidity which can be exploited for the cultivation of black pepper, turmeric, ginger, guava, banana etc. More nursery units should be developed to provide genuine planting material of fruits and vegetables. This will reduce the seed rate and also farmers can get the benefit of disease free planting material.
- High salt content in the water and soil is found in the Kutch and Sabarkantha districts. The salt tolerant root stock is required in mango for proper establishment of the grafts after planting in the field.
- Gerbera planting material cost is very high and NHM guide line unit cost should be revised as per market value. Green house/Net house limit up to 4000 sq.m its limit extended to 8000 sq.m.
- Bio control lab found in proper condition and produced bio fertilizers and bio pesticides. It was advised to promote activity of bio pesticide and bio fertilizer to farmers group of ATMA and Agri-Horticulture farmers also.
- Structure of Plug Trays nursery in NAU campus was completed but not in working condition. It should be started as early as possible to supply the vegetable seedlings to adjoining area of farmers.
- JIT visited plant tissue culture lab which is involved in producing banana, sugarcane and orchid plants in a year 1.5 million numbers. Laboratory is approved by DBT and work is in proper condition.
- Honey bee centres are well established and farmers are too active and enthusiastic to promote the activity. More farmers group should be prompted for bee keeping with the surrounding areas.
- Cold-chain components i.e. cold storages, ripening chambers, Integrated pack-houses may be adopted the Solar Based Energy system.
- Cold storages and integrated cold-chain system may prepare detail business model (rental, arbitrage etc.) backward, forward linkages, number of crops to be stored (month wise) for better utilization of the created capacity.
- In cold storages, air-circulation of 50 CFM/MT of Potato during the loading and pull-down period. However, during the holding period fan power is optimized by the speed reduced to almost 70% by VFD control (which will reduce fan motor power

consumption to 34%) and thereafter automatic control will maintain temperature variation within each chamber at less than ±1 °C throughout the storage period.

- Ventilation requirements in cold storage: it may range between 2 to 6 air changes per day to maintain CO_2 less than 4000 ppm. It is recommended to opt for mechanical CO_2 extractor with energy recovery system. It is a much better option than the present practice of opening the cold stores doors & hatch windows to ventilate and remove the CO_2 build-up as the later practice results in loss of energy. Inability to maintain temperature variation range of ± 1°C, wetting of product leading to product loss.
- CIPC application: For processing potatoes in general and for table potatoes if critical storage conditions equivalent to processing potatoes are adopted. CPRI recommends that due to slow pull down of temperature (0.5° C per day) in these situations, high holding temperature is built up which in turn accelerates germination of potatoes immediately after its dormancy period; therefore, CIPC application is recommended immediately after first 30 days of arrival of potatoes in cold storage. He further cautioned that rapid cooling should not be carried out for potatoes for processing purposes.

INTRODUCTION – Profile of Gujarat

Geography & Climate

The geography & climate of Gujarat is very unique and blessed with various natural resources. Gujarat is located on the west coast of India with longest sea coast of 1600 km of the Arabian Sea. It is situated between 20°1'& 24°7' North Latitude and 68°4'to 74°4'East Longitude covering geographical area of 196 lakh hectares, which is six percent of the country. State comprised of 33 Districts having 246 Taluka and 18569 villages.

Gujarat has tropical & sub-tropical climate, with temperature ranging from a minimum of 13°C to 27°C in January and maximum of 45°C in May- June. The normal annual rainfall of Gujarat State is 852mm, however there is a wide annual variation in rainfall, affecting the productivity of the crops.

The climate favours for development of fresh fruits like; Kesar- alphanso mangoes, Sapota, Banana, Aonla and Dates. The vegetables like; Okra, Beans, Cucurbits, Onion, Potato, the spices like cumin, Fennel, Chilly, Coriander, Garlic and Flowers like Rose, Lily, Marigold, Jasmine and Tuberose. Grape, Cashewnut, Medicinal & Aromatic crops like Aloevera, Palmarosa are emerging as potential new crops in suitable areas of the state.

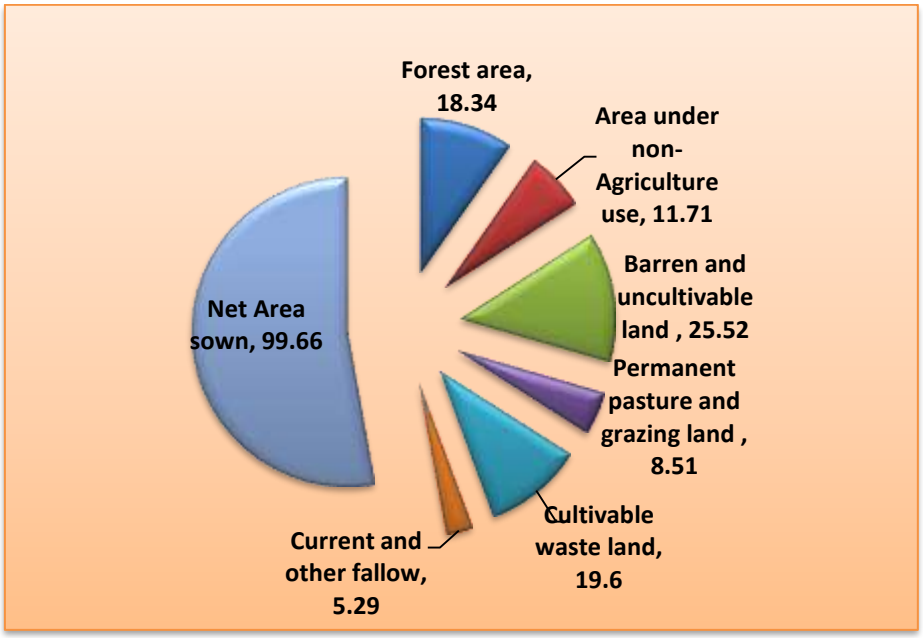
The agro-climate can be categorized as very heterogeneous as the State constitutes about 24.94 per cent of arid and 33.66 per cent of semi-arid areas of the country (Next to Rajasthan). Vast area of Saurashtra and Kutch falls under arid to semi-arid (potential evapo-transpiration 1873 mm) and rainfall is low (761 mm) and erratic (co-efficient of variation 55 per cent). Agro climate of the state divided in to eight sub regions in respect of rainfall, temperature, humidity and geographical situation. The detail information is as given in the table.

Land Availability

The total geographical area of the state is 196.12 lakh hectares and reported area is 188.10 lakh hectares. According to the land utilization statistics, the net cultivated area is about 99.66 lakh hectares. The gross area sown is about 122.11 lakh ha.

Sr.	land use pattern -Particulars	Area in 'Lakh Ha.
1	Forest area	18.34
2	Area under non- Agriculture use	11.71
3	Barren and uncultivable land	25.52
4	Permanent pasture and other grazing land	8.51
5	Cultivable waste land	19.60
6	Current and other fallow	5.29
7	Net Area sown	99.66
	Area under Food crops	57.07
	Area under Non- food crops	65.05
	Gross cropped area	122.11

Graphical presentation of the land use pattern



The twin resources of soil and water have the potential to make the state leading in the area of horticulture. About half of it is net-cropped area, which has the scope for addition of about 10 % more area by bringing cultivable waste lands under cropping.

There are about 47.38 lakh operational holders operating about 99.79 lakh ha. land as per the agri-census report. According to holding classification, 34.01 lakhs are marginal

(Less than 1 ha.) 28.86 lakhs are small (1 to 2 ha.) 35.67 lakhs are semi medium and medium and 1.45 lakhs are large farmers respectively.

Potential of Horticulture:

Horticulture is a priority sector in agriculture by virtue of it's vast potential in improving the socio economic condition of the farmers. Considerable growth in area coverage and production has been observed. Area and production of horticultural crops has increased by 220 % and 330 % respectively from the year 2001-02 up to year 2013-14 after intensification of Horticulture Development program in the state. An average 20.89 % annual production growth was achieved during this period.

State contributes 10.19% share in national fruit production and 6.49 % in national vegetable production (NHB data of Year 2012-13) that has been increased from 6.20 % and 3.70 % respectively in comparison to year 2001-02. State is second leading state in spice crop production, fourth leading state in the fruit production and sixth leading state in the vegetable production in the country. Production of spices is about 8.82 lakh MT/ Annum, fruit crops is about 77.63 Lakh MT/Annum and production of vegetables crops is 100.50 Lakh MT/Annum. Gujarat state is 1st in the production of Cumin, Fennel and Date palm, 2nd in production of Banana, Papaya and lime. Productivity of Onion, Potato is highest in the country where productivity of Banana, pomegranate and sapota is 2nd highest in country

About 12% area is covered under horticultural crops in the state. However horticultural crops contribute 25-30 % in the total farm income (Including Animal husbandry). Role of Horticulture sector is remarkable in the overall agriculture growth of the state.

COMMODITY PROFILE:

Fruits	Vegetables	Medicinal & Spices	Flowers
Mango, Banana, Pomegranate, Dates, Sapota, Lime, Guava, Aonla, Papaya	Potato, Onion, Brinjal, Tomato, Okra, cabbage, Cauliflower, Cucurbitaceous vegetables	Cumin, Garlic, Isabgul, Fennel, Turmeric, Ginger, Chilli, Aloevera, Senna	Rose, Mogra, Marigold, lily, Gaillardia and Others

Gujarat state is a key producer of Onion, Potato, Banana, Mango and Pomegranate in the country. The area under such crops is increasing year after year. Adoption of "Precision

Farming Technology" in crops likes Banana, Pomegranate, Potato; Onion Capsicum, tomato is the thrust area for ensuring optimum productivity. Supports are being provided for cultivation of vegetables to ensure Nutritional security in the state. Protected cultivation technology provides multifold production of produce with internationally acceptable quality. Considerable area is covered under Green houses and Net houses in the state for protected cultivation of Dutch Roses, Gerbera, Capsicum, tomato & chives etc. Special drives have been created to boost the protected cultivation in the state through special financial incentives and capacity building support.

Establishment of Post-Harvest infrastructure facilities like On-farm pack houses, Grading Sorting lines, integrated pack houses, cold storages, Mango & Banana ripening chambers, cold chain are the key element of the Horticulture Development Program of the Government. Huge investment is being made for establishment of such infrastructures to enhance internal & overseas trade of horticulture commodities.

Looking to the flow of the investment in the horticultural sector in the state, there is needed to enhance the support by increase in the volume of the Developmental program. There is vast scope of export for some of the produces like, Pomegranate, Banana, Mango, Onion, Cumin. Along with that, there is huge demand for Onion & Potato (grown in the state) under processing sector. There is also a need to give more focus on vegetable production to ensure nutritional security.

Horticulture sector requires high-tech knowledge and precise skill. Capacity building in the sector is the priority area of the State. The centers of excellence for the vegetables crops, Mango and date palm are being promoted under Indo –Israel work plan.

Onion dehydration industry of the state is biggest in country & it comprises 80% of total dehydration units, which process nearly one lakh tones of onion annually

MANGO :

- Mango is one of the major fruit crops of Gujarat. It is being cultivated in 1.41 lakh Ha with total production of 10.04 lakh MT.
- Gujarat accounts for 6% of the total production of Mango and Gujarat is the fifth largest mango producing state in the country.
- Kesar Mango is the prominent variety of the state. State has "GI status", Gir area of saurashtra region is main cluster for Gir Kesar. Saffron colour of flash, pleasant aroma and fiberlessness attracts national and international market.

- State of the art infrastructure for packaging, grading, Sorting, ripening, pulp making and canning has been established in a cluster of the Mango.
- High Density Plantation is the emerging trend for new cultivation of mangoes to fetch the higher productivity in Mango.

BANANA :

- Gujarat is the second major Banana producing state in the country and accounts for 13.4% of the total production of banana in the country.
- In Gujarat, during the year 2013-14 banana crop is cultivated in an area of about 66496 ha. & having production of 42.25 Lakhs tons with productivity of 63.55 MT/Ha. which is highest in the country.
- Precision farming technology has been adopted to ensure good quality and highest productivity in the country, about 34 tissue culture laboratories has been established in the state that provides good planting materials. Efficient use of water and fertilizer with drip irrigation, becoming popular among the farmers of Gujarat.

DATE PALM:

- Date Palm is a unique product of arid region of the state. Known as "Kutchhi Karek "being consumed fresh. The crop tolerates saline water and arid area. It is being cultivated in 17172 ha area with production of 1.38 lakh tones.
- The recent cultivation trend is use of tissue cultured plants and micro irrigation. The elite local and Barahi variety of date palm is being exported to Gulf and European countries.

POTATO :

- Multi-national companies like McCain Foods India & Himalaya International Ltd., Balaji Wafers Pvt. Ltd., ATOP Food Products, are having their processing unit as well as they are doing contract farming of potato in large scale in Gujarat.
- During the year 2013-14, Gujarat having around 73638 hectare area under potato & having 22.67 tons of production with av. 30.79 tons of productivity/ha.
- Gujarat having the cold storage facility of about 8 Lakh MT for potato storage.

ONION :

- Gujarat is the third largest Onion producing state in the country and accounts for 10% of the total production of onion in the country.

- In India, Gujarat stands 2nd position in Onion cultivation after Maharashtra state. The productivity of Onion is 12580 kg/Ha all over the India while In Gujarat state, the productivity is highest [25.43 Tons/ha].
- During the year 2013-14, the state produces about 18.51 Lakh MT of onion from an area of 72787 ha. with productivity of 25.43 MT/ha. which is the highest in the country.
- The major onion producing belts in the state are Bhavnagar, Rajkot, Junagadh and Jamnagar.
- There is a good demand for dehydrated onions & Gujarat having the more than 80% dehydrated units of the country.

CUMIN :

- Cumin, identity of the Gujarat spice, commonly known as Jeera, (Cuminum cyminum). Cumin is mainly used in flavoring foods. It is also used in Ayurvedic medicines.
- Gujarat is the second leading producer of Seed spices. Gujarat state initiated for organic cultivation of cumin in 5000 Ha area of in north Gujarat region.
- It is cultivated in 4.55 lakh ha with total production of 3.65 lakh tonnes having productivity of 0.80 tonnes/ha during the year 2013-14.

ISABGUL :

- Isabgul is Monopoly crop of Gujarat.
- Presently, Gujarat is the largest producer as well as exporter of Isabgul and Psyllium husk in the world.
- It is cultivated in 8100 ha with total production of 10087 MT having productivity of 1.90 tonnes/ha during the year 2013-14.

GROWTH DRIVERS:

Mission mode horticulture development program is being implementing in all the districts of the state. The ultimate strategy is development of crop clusters and adopts end-to–end approach. More emphases has been made on the availability of genuine planting materials, capacity building, post-harvest management and protected cultivation, post-harvest Management and market.

1. **POST HARVEST MANAGEMENT:**

Integrated pack houses, cold storages, Mango and Banana ripening chambers, cold chain are the key elements of the Horticulture Development Program of the Government.

Huge investment is being made for establishment of such infrastructures to enhance internal and overseas trade of horticulture commodities. Couple of good integrated pack houses, air cargo complex and Gama irradiation projects has been established by Gujarat Agro Industries Corporation. Support of Government has facilitates establishment of considerable post-harvest infrastructures for perishable fruits and vegetable crops in the state. 500+ On farm Pack houses, 15 Minimal Processing units, 15 Pre cooling units,40 Ripening Chambers, 125 Cold Storages, 90 Grading, Sorting & Packing Units, 8 refer Vans has been supported.

About 40 ripening unit has been established in last 3 years with ripening capacity of 500 Mt/ Day. The main products are Banana and Mango. Post-harvest losses were reduced considerably because of proper ripening and handling. Handling process of Banana is completely changed, now crates are being filled up at farmers' fields than transported it to the ripening chambers, ripened and further transported to the markets as such in the creates. The products are getting premium prices because of good quality and Health consciousness.

About 120 clod storages have been established with the financial support of NHM in the state and a storage facility of about 5 lakh Mt. is added. The cold storages are of multi commodities but the major commodity stored is potato. Along with the conventional cold storages high-tech. storages having control atmosphere facilities were also established. Horticultural products like Pomegranate, Cabbage, Carrot, lime, Dehydrated and fresh Onion, processing varieties of potatoes can also be stored with good self-life.

2. Area & Production of horticultural crops in Gujarat compared to Base line

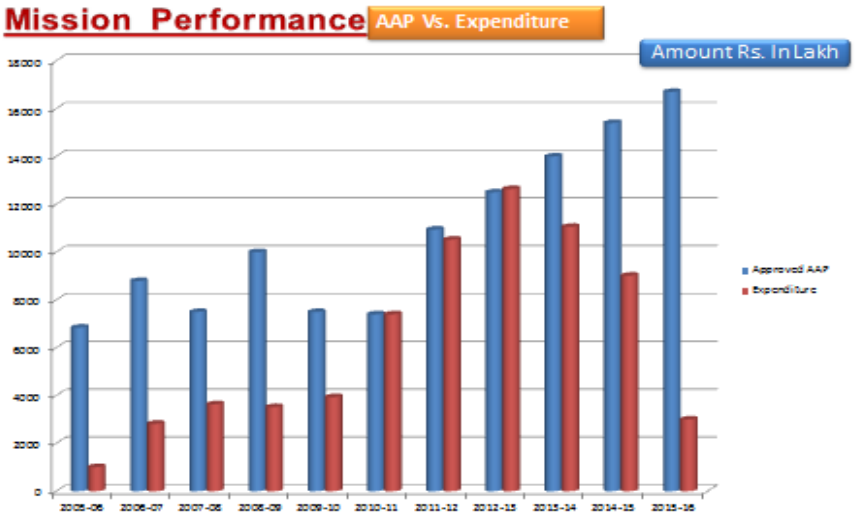
(Area- Lakh HA, Production- Lakh MT)

Year	Fruits		Vegetables		Spices & flowers		Total	
	Area	Prod.	Area	Prod.	Area	Prod.	Area	Prod.
2004-05	2.72	40.19	3.31	48.67	3.66	4.62	9.70	93.48
2005-06	2.90	46.90	3.80	63.08	4.33	5.48	11.03	115.46
2006-07	3.10	53.58	3.66	60.63	4.49	6.86	11.25	121.07
2007-08	3.29	60.20	4.12	74.03	4.95	9.67	12.46	144.73
2008-09	3.39	59.96	3.94	68.07	5.76	9.99	13.09	138.02
2009-10	3.53	69.85	4.07	72.55	5.09	10.33	12.69	152.73
2010-11	3.77	74.73	5.15	93.79	5.10	11.62	14.04	180.16
2011-12	3.82	77.63	5.18	100.49	5.87	13.03	14.87	191.15
2012-13	3.98	85.31	5.38	105.21	5.67	14.04	15.03	204.55
2013-14	3.79	80.28	5.82	115.88	6.34	11.92	15.95	208.08

CROP PROFILE: District wise Crop Matrix

Sr	District	Crop Covered under Cultivation
1	Ahmedabad	Papaya, Lime, Guava, Cumin & Fennel, Flowers Plants
2	Amreli	Mango, Papaya, Cumin & Fennel, Pomegranate, Aromatic Plants
3	Anand	Banana, Papaya, Lime, Guava, Aromatic Plants and Flowers.
4	Banaskantha	Lime, Papaya, Pomegranate, Aromatic Plants.
5	Bharuch	Banana, Papaya, Pomegranate, Lime, Flowers Plants, Aromatic Plants.
6	Bhavnagar / Botad	Mango, Banana, Papaya, Guava, Pomegranate, Lime, Cumin & Fennel, Aromatic Plants And Flowers.
7	Junagadh/ Gir	Mango, Sapota, Banana, Papaya, Cumin, Aromatice Plants.
8	Kheda/ Mahisagar	Mango, Banana, Sapota, Papaya, Lime, Flowers
9	Kutch	Datepalm, Mango, Sapota, Pomegranate, Papaya, Cumin, Aromatice Plants.
10	Mahesana	Lime, Papaya, pomegranate
11	Navsari	Mango, Banana, Sapota, Papaya, Aromatic Plants and Flowers, Cashew nut.
12	Sabarkantha/ Arrivalli	Limen, Guava, Pomegranate, Papaya, Aromatic Plants.
13	Surat	Mango, Banana, Sapota, Papaya, Aromatic Plants and Flowers, Cashew nut.
14	Tapi	Mango, Banana, Sapota, Papaya, Aromatic Plants and Flowers, Cashew nut. Pomegranate
15	Vadodara/ Chotaudepur	Banana, Papaya, Lime, Guava, Cumin, Aromatic Plants and Flowers.
16	Valsad	Mango, Banana, Papaya, Aromatic Plants and Flowers, Cashew nut. Pomegranate

Financial Performance



	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Approved AAP	6844	8796	7500	10000	7500	7400	10945	12500	14000	15400	16700
Expenditure	1011	2824	3640	3521	3940	7400	10525	12641	11060	9017	3007*

***till date**

District Profile of Kutch

Introduction:

Kutch is a largest district (45,652 km^2) of Gujarat State. It lies at 22^0 44'11" to 24^0 41'25" North Latitude and 68^0 09'46" to 71^0 54'47" East Longitude. It's an arid district of Gujarat covering 73 per cent of the total geographical area of the arid region of this state. This district shares its north and north-west boundary with the Sind province of Pakistan and the west and south-west boundary with Arabian Sea. The southern part of this district is limited by Gulf of Kachchh and Rajkot district and the eastern boundary with Patan districts. Some portion of the boundary in north-east is shared with the Rajasthan State. Administratively, the district is demarcated into ten talukas namely; Bhuj, Mandvi, Mundra, Abadasa, Gandhidham, Lakhapat, Nakhatrana, Rapar, Bhachau and Anjar. Out of the total geographical area of Kachchh district, 51 per cent (23,310 km^2) is occupied by high saline unproductive desert (Greater *Rann* of Kachchh – GRK and Little *Rann* of Kachchh - LRK). Only 7,674 km^2 area of the district is under agriculture that too faces serious problems like low annual rainfall (district average 348 mm), high rate of evaporation (2.25m/year), less surface water availability for irrigation, alarming rate of fall of ground water table (1-3.5m/year) and increasing salinity. The district supports over 1.7 million livestock (73 animal/km^2) and 1.6 million human populations (65 persons /km^2). The coastal talukas of Kachchh are witnessing aggressive maritime related industrial development and urbanization.

CLIMATE AND RAINFALL

Rainfall in Kutch is extremely erratic and variable in distribution in time and space, leading to frequent droughts, which are a recurring phenomenon in this region. Between 1901

and 1996, 57 drought years were recorded that affected the soil parameters like moisture, water balance and organic matter, thereby resulting in increased surface runoff and soil erosion. The coast of Kachchh, between Jakhau and Kandla have irregular and dissected configuration while in Mandvi and Jakhau the coast is comparatively plain and sandy in nature. The coast between Mundra and Kandla is marked by extensive tidal flats which merge with *Rann* of Kachchh to the east. Soils of Kachchh are mostly sandy to sandy loam and silty to clay-loam, and are highly salty especially in the northern and northeastern sectors where two *Ranns* are present. The coastal stretch of Kachchh district extends for about 406 km constituting the whole northern coast of Gulf of Kachchh. Mudflats and mangroves are the larger ecosystems occupying about 2500 and 775 km^2 respectively with other diverse habitats such as sandy shores and a network of creek systems. Similar to the inland talukas, annual rainfall in the seven coastal talukas of Kachchh is also poor, ranging from 250-350 mm and which is often irregular. Mean rainfall (1932 to 2001) was highest at Mundra (407 mm) while Mandvi and Abadasa talukas recorded a mean rainfall of 387 and 378 mm respectively, for this period. Rainfall during monsoon is confined to only 15-20 days and occurs as an instant downpour. Freshwater input into the near coastal waters is quite meager. Winter and summer temperatures range from 7- 48°C with an average humidity of 60 % /yr and increase to 80 % during south-west monsoon, decrease to 50% during November-December. Abadasa taluka experienced the lowest temperature of 1.3^{o} C during January, 2007. Average wind speed is 4.65 m/s/yr with a maximum wind speed of 10.61 m/s during June. The phenomenon of drought is common with 2 drought year in a cycle of 5 years. As a characteristic of arid zone, annual temperature fluctuation in the district is extreme, ranging from 4°C to 48.5 ^{o}C.

Northern coastal stretch from Kandla to Mundra in the interior gulf region is marked by narrow beaches and wide mudflats with predominantly muddy alluvial substrate. Coastal stretch from Kandla to Mundra is dissected with creek systems forming extensive mudflats. Minor seasonal streams emptying freshwater run-off during monsoon months also characterize this coastal belt. The coastal stretch from Mandvi to Pingleshwar is an open coast, characterized by sandy beaches and sand dunes. The sandy intertidal belt is marked by sedimentary rocky outcroppings

The district has 10 talukas with 886 inhabitat and 64 unin-habitat villages. Total population of the district is about 15.83 lac**.** Male population is 51.5%, while 48.5% of the populations consist of female. 11.7 % of the population belongs to scheduled caste category. However, the percentage of scheduled tribe population is 8.2 %.

Land Utilization Statistics

Total geographical area of the district is about 19.57 lac hectares. It is noteworthy to find that only 34.73% of the geographical area is under cultivation in the district. However, the coverage of forest area is 15.67%.The district has 17.31 % of their cultivable land as unutilized land, 21.07% land is waste land. Pasture land forms 3.58% of geographical area and it is not significant from the point of view of growth of animal husbandry.

Irrigated/Unirrigated land

Out of 679936 ha of cultivated land, 178029 ha (26.18%) are irrigated land. The remaining land (73.82%) is unirrigated one .Only Mundra, Bhuj and Nakhatrana taluka stands good at more than 60 % of their land under 'irrigated' category. However, in Gandhidham, only 3% of cultivable lands are irrigated. Open wells and tube wells are important source of irrigation.

Table:- 1 Area & Production of different Horticultural crops in Kutch Dist

Sr. no.	Crops	Area(ha.)	Production(MT)
1	Fruits	38782	708955
2	Vegetables	16906	288243
3	Flowers	462	3986
4	Spices	31028	27760
5	Medicinal	5626	11746

Table:- 2 Area & Production of different fruit crops in Kutch Dist

Name of Fruit crop	Year-2000-01		Year 2014-15		% Increase	
	Area (Ha.)	Prod. (M.T.)	Area (Ha.)	Prod. (M.T.)	Area (Ha.)	Prod. (M.T.)
Mango	1273	12730	9165	77850	719	611
Date palm	8973	53838	17339	151718	193	281
Papaya	380	9500	3642	302286	958	3181
Pomegranate	159	397	3437	44681	2161	11254
Banana	404	16160	1957	98690	484	610

Table:- 3 Area & Production of different Vegetable crops in Kutch Dist.

Name of Vegetable crop	Year-2000-01		Year 2015-16		% Increase	
	Area (Ha.)	Production (M.T.)	Area (Ha.)	Production (M.T.)	Area (Ha.)	Production (M.T.)
Brinjal	**1343**	**6715**	**2913**	**49521**	**216**	**737**
Okra	**493**	**2465**	**1196**	**6716**	**242**	**272**
Tomato	**498**	**2490**	**1784**	**44827**	**358**	**1800**
Cabbage	**405**	**2025**	**1041**	**14693**	**257**	**725**

Table:- 4 Area & Production of different Spices crops in Kutch Dist.

Name of Spices crop	Year-2000-01		Year 2014-15		% Increase	
	Area (Ha.)	Production (M.T.)	Area (Ha.)	Production (M.T.)	Area (Ha.)	Production (M.T.)
Cumin	2843	1422	13415	7378	471	518
Coriander	140	145	2135	4675	1525	3224

Table:- 5 Establishment of High-tech Horticulture in Kutch Dist.

High-tech	Year-2000-01	Year 2014-15
Green House (Sq.m.)	0	68800
Net House (Sq.m.)	0	190000
Cold Storage (No.)	0	8
Ripening Chamber (No.)	0	4
Tissue. Lab. (No.)	1	2
Cumin Processing Unit (No.)	0	1
Cashew nut Processing Unit	0	1
Area covered under Mulching (Ha.)	0	800
Area Covered Under Drip Irrigation (Lakh Ha.)	0	0.35
Oil extraction unit	0	2

District Profile of Bharuch

Introduction

Bharuch district is an important district in South Gujarat region and one of the major industrialized zone of the Gujarat. It is flanked by the Arabian Sea on the west, new district Narmada in East, Vadodara in North and in South Surat district of the state.

The total geographical area of the district is 6527 km^2. For administrative convenience, the district has been divided into 8 talukas and 543 gram panchayats with 663 villages. Agriculture is still the main source of livelihood for the rural people of the district.

The district lies between 21.30° to 22.00° N latitude and 72.45° to 73.15° E longitudes situated at 16.5 m above sea level and bounded by Arabic sea in the west.

CLIMATE AND RAINFALL

The district has semi-arid climate with three distinguished seasons i.e. *kharif* (June to September), winter (October to January) and summer (February to May). The district receives the rainfall through South-West monsoon which normally starts from middle of July, August and September are the months of heavy rainfall. The average rainfall varies from 900 mm to 1100 mm. however, scanty and uneven rainfall pattern is also common. The temperature varies from 8.9°C to 43.2°C. The average minimum temperature is 10.7°C and maximum temperature 41.4°C. The December and January are the coldest months while April and May are the hottest months of the year. Relative humidity is higher in coastal areas. The wind velocity varies from 5.35 km/hr to 7.28 km/hr. The summers are very hot when temperature ranges from 38° to 44°C for couple of days. Table 1 shows the weather of different taluka places of the Bharuch district, whereas Table 2 shows distribution of rainfall during monsoon, which mainly impacts kharif and rabi cropping seasons.

Physiography & Soils

Bharuch district can be divided into three regions geographically, topographically and economically as well as from the resources point of view. The three regions are as under:

(1) Eastern Region:-

This portion of the district comprise of Jhagadia (AES - III) and Valia (AES - I) talukas. The region is partly covered with forests and has also a mountain range. It is inhabited by scheduled tribes and is declared as tribal areas. The region is having good agriculture potential.

(2) Western Region:-

The western Region known as "BHARAVIBHAG" consists of Jambusar (AES - IV), Vagra (AES - V) and Amod (AES - V) talukas. This Region has 54 miles coastal line at the Gulf of Cambay.

(3) Central Region:-

The central Region of the district covers Ankleshwar (AES - III), Bharuch (Dahej as a chemical zone) (AES-V) taluka which are industrially well developed. The oil fields of Ankleshwar (AES - III) and Vagara (Gandhar) (AES-V) have put Gujarat on the oil map of India. The black soil of this region is very fertile and is conducive to cotton and pigeonpea crop production.

According to climate, topography, soil characteristics and cropping pattern Bharuch district lies in South Gujarat Agro Climatic Zone II, the zone is further classified into four Agro Ecological situations, mainly on the basis of Physiography and soil texture.

District at a Glance

No. of blocks	08
Total villages	663
No. of gram Panchayats	543
Total Population	1370656
Male population	713676
Female population	655957
SC/ST population	505534
SC./ST male population	272431
SC/ST Female population	233103
Total literacy (%)	74.05
Male (%)	83.00
Female (%)	65.10
Total geographical area (ha)	524683
Net cultivated area (ha)	287263
Gross cropped area (ha)	301213
Cropping intensity (%)	112
No. of farm families	126053
Marginal farmers (0-1 ha)	39828
Small farmers (1-2 ha)	32475
Semi medium to Large farmers	53750

The cropping intensity of the district is 112% that appears to be less because large portion of cultivable area is under rainfed farming. Appendix 1 and 2 depict maps of wasteland and watershed activities respectively of the district. The area under forests in the district is around 4.7 % that is mostly on the western parts of the district.

General Statistics

General information of cropped area and productivity of crops taken in the district are enlisted in from Table 1 to Table 6.

Table 1: Area under cultivation under major crops of the district

Major crops	Area (ha)
Hybrid Cotton	45592
Other Cotton	80345
Sugarcane	20900
Paddy	14600
Wheat Irrigated	11400
Wheat Rainfed	10000
Jowar Kharif	8900
Jowar Rabi	21900
Pigeonpea	56000
Total Irrigation area (ha)	125878
Irrigation by canal (ha)	66217
Irrigation by Tube well (ha)	18100

Table 2: Estimated area, production and productivity of Vegetables (Year 2013-14)

Sr No	Vegetables	Area (Ha)	Production (M.T.)	Productivity (M.T./Ha)
1	Onion	25	506	20.24
2	Brinjal	1620	26892	16.60
3	Cabbage	155	2483	16.02
4	Okra	2420	22990	9.50
5	Tomato	585	11993	20.50
6	Cauliflower	45	675	15
7	Clusternean	564	5471	9.70
8	Cowpea	760	6460	8.50
9	Cucurbits	3940	60085	15.25
10	Others	5756	109364	19
	Total	15870	246919	15.56

Table:-3 Estimated area, production and productivity of fruits (Year 2013-14)

Sr No	Fruits	Area (Ha)	Production (M.T.)	Productivity (M.T./Ha)
1	Mango	3020	22348	7.40
2	Chiku	535	4280	8
3	Citrus	215	2838	13.20
4	Ber	610	6863	11.25
5	Banana	15130	1059100	70
6	Guava	402	6131	15.25
7	Pomegranate	165	1238	7.50
8	Datepalm	2	0	0
9	Papaya	1007	57399	57
10	Custardapple	55	413	7.50
11	Aonla	120	766	6.38
12	Cashewnut	27	61	2.25
13	Coconut	30	231	7.70
14	Others	45	306	6.80
	Total	21333	1161742	54.46

Table:- 4 Estimated area, production and productivity of spices (Year 2013-14)

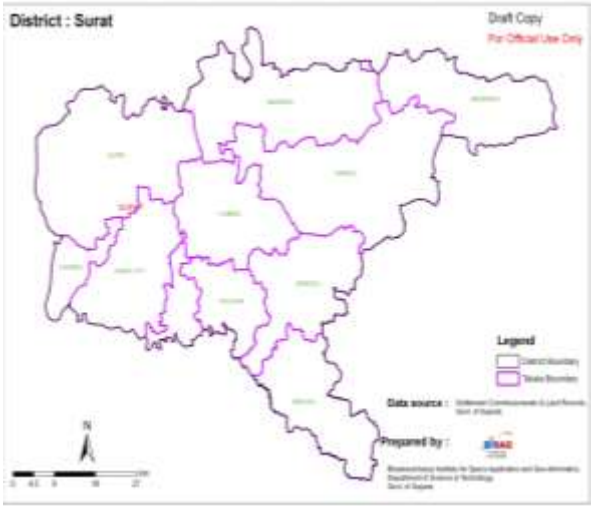
Sr No	Spices	Area (Ha)	Production (M.T.)	Productivity (M.T./Ha)
1	Coriander	169	240	1.42
2	Ginger	210	2541	12.10
3	Turmeric	40	371	9.28
4	Fenugreek	205	453	2.21
5	Ajwan	5	8	1.60
	Total	629	3613	5.74

Table:- 5 Estimated area, production and productivity of flowers (Year 2013-14)

Sr No	Flowers	Area (Ha)	Production (M.T.)	Productivity (M.T./Ha)
1	Rose	623	5607	9
2	Marigold	495	4455	9
3	Mogra	202	1919	9.50
4	Others	140	1050	7.50
	Total	1460	13011	8.93

District Profile of Surat

Introduction



Surat district situated between 21.21° to 23.10° N latitude and 72.38° to 74.23° E longitudes and at 25-30 m AMSL (above mean sea level), flanked by the Arabian Sea on the west, newly created Tapi district to its East, Bharuch and Navsari districts in the North and South respectively. Surat, a historical port city, is the fourth fastest developing city of the world, it being an industrial hub of the country with flourishing business of diamond, textile, and petrochemicals, has encroached upon the agricultural lands of neighboring taluka's. The city is not only employing locals or people from Gujarat but migrants from all over India. This resulted in heavy urbanization. Due to industries and urbanization affluent is also very high.

The total geographical area of the district is 4327 km^2. For administrative convenience, the district has been divided into 9 talukas and 567 gram panchayats with 760 villages. Agriculture is still the main source of livelihood for the rural people of the district.

CLIMATE AND RAINFALL

The district has semi-arid climate with three distinguished seasons i.e. *kharif* (June to September), winter (October to January) and summer (February to May). The district receives the rainfall through South-West monsoon which normally starts from middle of June. July and August are the months of heavy rainfall. The average rainfall varies from 1500 mm to 1700mm. however, scanty and uneven rainfall pattern is not uncommon. The temperature varies from 13°C to 43°C. The December and January are the coldest months while April and May are the hottest months of the year. Relative humidity is higher in coastal areas. The wind velocity varies from 4.0 km/hr to 10 km/hr. The summers are very hot when temperature ranges from 40° to 46°C for couple of days. Table 1 shows the weather of different taluka places of the Surat district, whereas Table 2 shows distribution of rainfall during monsoon, which mainly impacts *kharif* and *rabi* cropping seasons.

Phsiography & Soils

On the basis of physiographic the district can be divided into three sub zones (i) Piedmont slope (2 -5 % slope) and valley plains in the east, (ii) Alluvial mid lands and (iii) Coastal plains gently sloping towards west. Soils of Surat district can be broadly classified as (i) Medium black in east (ii) Deep black in mid plains and (iii) Coastal alluvium along the coast. Soils in the eastern region are highly permeable with moderate slopes towards west. Soils of the mid plains are deep to very deep with slight slope towards west except in river borders where they are undulating. Due to high clay content, moisture holding capacity is high and crakes during dry seasons. Drainable character of mid lands varies from moderately good to poor at some places and permeability is medium to very low. Due to improper water management practices and water logging, secondary salinization is observed in mid plains. Soil series along the coastal alluvial plains are generally salt affected, they are saline or saline – sodic in nature with slight slopes towards west. The major soil related problems are erosion susceptible in the eastern parts, coast and along the rivers; water logging and secondary salinization in canal irrigated mid plains and coastal salinity along the coast.

According to climate, topography, soil characteristics and cropping pattern Surat district lies in South Gujarat Agro Climatic Zone II, the zone is further classified into four Agro Ecological situations, mainly on the basis of Physiographic and soil texture.

Table 1: Area under cultivation under major crops of the district

Major crops	Area (ha)
Sugarcane (ha)	95000
Paddy (TP) (ha) Paddy (Drill) (ha)	34359 12085
Pulses	19054
Soybean (ha)	12724
Sorghum (ha) Rabi sorghum (ha)	5041 21000
Fruits – Mango, Sapota, Papaya (ha)	9600
Wheat (ha)	6250
Cotton	2645
Groundnut	1323
Total Irrigation area (ha)	225166
Irrigation by canal (ha)	148722
Irrigation by Tube well (ha)	76231

Table 2: Productivity of major crops of the district

Crop	Average yield (q/ha.)
Sugarcane	716.10
Paddy (summer)	35.10
Paddy (Kharif)	28.00
Wheat	36.75
Sorghum	18.54
Castor	18.90
Groundnut	16.30
Cotton	22.68
Land holdings	
Total farm families	131799
Marginal farmers (0-1 Ha)	49933 (38 %)
Small farmers (1-2 Ha)	35889 (27 %)
Large farmers	45917 (35 %)

- **AREA UNDER HORTICULTURE CROPS :**

Looking into the area under cultivation Horticulture crops occupies around 20 to 21% of the cultivated area which is around 50000 to 55000 ha.

- Area under Horticulture: Maximum in Mahuva 25.30% (12182Ha.)

Minimum in Umrpada 1.16% (940 ha)

Main crop in Surat district is Sugarcane and Paddy, while Mango, banana, okra and Cucurbitaceous Vegetable are the major crops under horticulture sector .

Table: 3 Main Horticulture Crpos in Surat District

SR. NO	TALUKA	MAIN FRUIT CROPS	MAIN VEGETABLE CROPS	MAIN FLOWER CROPS
1	Kamrej	Banana, Sapota	Cucurbitaceae Vegetable, Okra	Gerbera and Dutch Rose In Poly House
2	Olpad	Mango, Guava	Cucurbitaceae Vegetable, Little gourd, Pointed gourd, Indian Been	Gerbera In Poly House

			, Okra	
3	Mahuva	Mango, Banana, Papaya	Cucurbitaceae Vegetable, Little gourd, Pointed gourd, Indian Been , Okra	Gerbera In Poly House and Lily and Marigold in open filed
4	Bardoli	Mango, Banana, Papaya	Okra, Brinjal, Chilli	Gerbera and Capsicum In Poly House
5	Palsana	Mango, Banana, Papaya	Okra, Brinjal, Chilli	Gerbera In Poly House and Marigold in open filed
6	Mandvi	Mango, Banana, Papaya	Okra, Cluster Been, Snake gourd	Gerbera and Capsicum In Poly House
7	Mangrol	Mango, Banana, Papaya	Okra, Pointed Gourd	Gerbera and Capsicum In Poly House
8	Chorasi	Mango, Banana, Sapota	Cucurbitaceae Vegetable,	-
9	Umarpada	-	Indian been	-

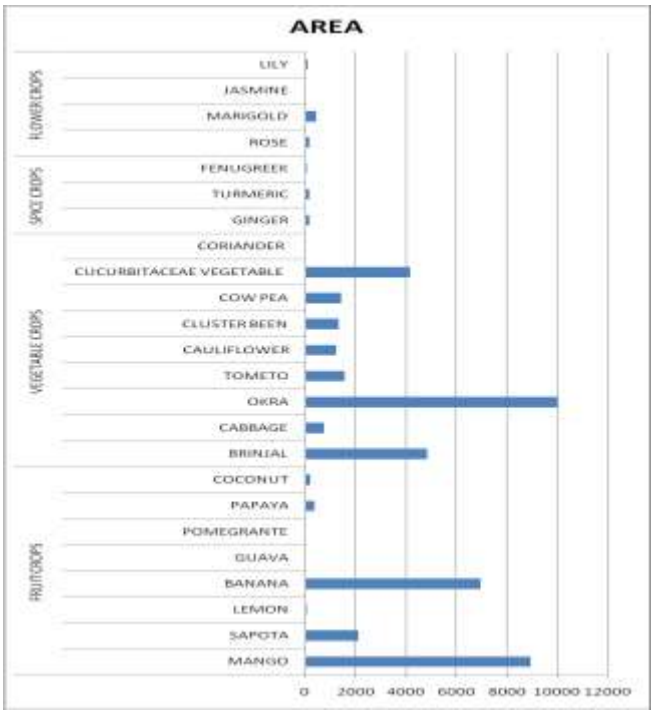
NUMBER OF FARMERS AND AREA ACCORDING TO TALUKA WISE

- Total number of farmers: 140002
- Total Occupied Area: **228517 Ha.**
  - Marginal Farmers : 44.05 % and area: 11.36% (24294 Ha.)
  - Small Farmers : 47.23 % and area: 57.43 %(50885 Ha.)
  - Big Farmers : 08.72 % and area: 31.21% (148526 Ha)

IRRIGATED AND NON IRRIGATED AREA

- Total irrigated area 77%
- Maximum irrigated area palsana taluko: 12664 ha. (97.89%)

CULTIVATION AREA OF HORTICULTURE CROPS



- Main Flower crops :

  Marigold

  Area: 448 Ha.

  Productivity: 9.90 Ton. /Ha.
- Main Spice crops :

  Turmeric

  Area: 167 Ha.

  Productivity: 17.18 Ton. /Ha.
- Main Vegetable crops :

  Okra

  Area: 10010 Ha.

  Productivity: 12.50 Ton. /Ha.

Introduction Of new crops

- Village of Umarpada taluka , which is dominated by tribal farmers.
- Mashroom : started in kanthraj village of olpad taluka with 900 Sq.Ft
- Pomogranet: cultivation of 7.5 ha in mangrol and 4 ha in bardoli taluka
- Oil Palm : cultivation of 189.22 ha with 14035 Kg Production in year 20
- Apple Ber : cultivation of 6.65 ha in Kamrej and 0.75 ha in Palsana taluka
- Guava :Around 10 ha in olpad taluka

Work Done By Horticulture Department (up to 2015)

- Protected Cultivation
  - Green House : 178
  - Area: 621603 Sq. Mt
  - Subsidy : 1940.23 lac
  - Crops cultivated : Gerbera, Capsicum, Rose, cucumber etc
  - Net House : 81
  - Area: 119500 Sq. Mt
  - Subsidy : 272.36 lac
  - Crops cultivated : Tomato, Capsicum, , cucumber etc
  - Plug Nursery : 10
  - Ripening Chamber : 5
  - Bio Control Lab : 6
  - Subsidy : 148 lac
  - Cold Storage : 5

Table 4: Estimated area, production and productivity of vegetables (Year 2013-14)

Sr no	Vegetables	Area (ha)	Prod(MT)	Pvty(MT/Ha)
1	Brinjal	4856	92264	19.00
2	Cabbage	745	13783	18.50
3	Okra	10010	125125	12.50
4	Tomato	1568	36064	23.00
5	Cauliflower	1220	24400	20.00
6	Clustrbean	1315	9863	7.50
7	Cowpea	1425	17100	12.00
8	Cucurbits	4150	56025	13.50
9	Others	3811	70504	18.50
	Total	29100	445128	15.30

Table 5: Estimated area, production and productivity of fruits (Year 2013-14)

Sr No	Fruits	Area (ha)	Prod(MT)	Pvty(MT/Ha)
1	Mango	8931	75914	8.50
2	Chiku	2118	22345	10.55
3	Citrus	66	521	7.90
4	Banana	6968	473824	68.00
5	Guava	30	345	11.50
6	Pomegranate	32	304	9.50
7	Papaya	366	20862	57.00
8	Coconut	219	1840	8.40
9	Others	30	225	7.50
	Total	18541	594340	32.06

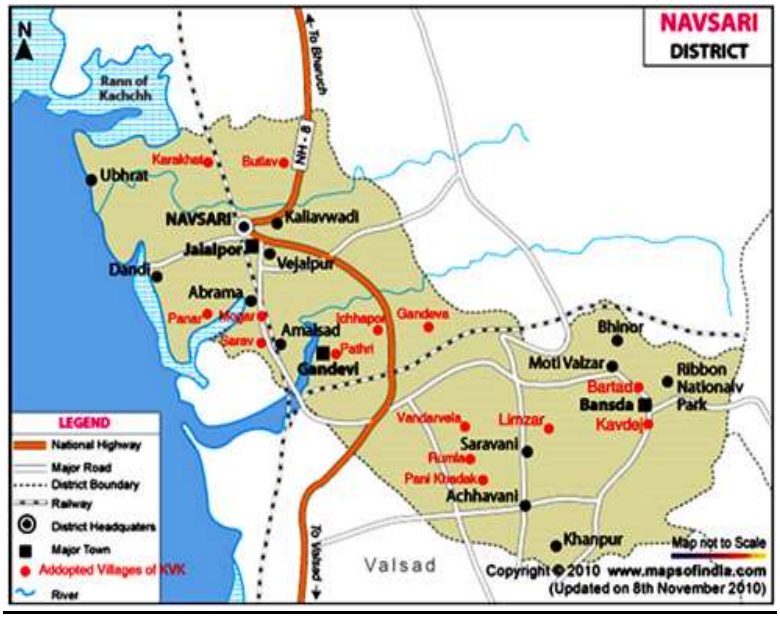
Table 6: Estimated area, production and productivity of spices (Year 2013-14)

Sr no	Spices	Area (ha)	Prod(MT)	Pvty(MT/Ha)
1	Coriander	25	45	1.80
2	Ginger	167	2869	17.18
3	Turmeric	168	2856	17.00
4	Fenugreek	76	114	1.50
	Total	436	5884	13.50

Table 7: Estimated area, production and productivity of flowers (Year 2013-14)

Sr no	Flowers	Area (ha)	Prod(MT)	Pvty(MT/Ha)
1	Rose	613	5824	9.50
2	Marigold	815	8028	9.85
3	Mogra	270	2646	9.80
4	Lily	150	1485	9.90
	Others	121	1089	9.00
	Total	1969	19071	9.69

District Profile of Navsari



GENERAL DESCRIPTION OF THE DISTRICT

Introduction

Navsari district come in existence by bifurcation of Valsad district on 2nd October 1997, Navsari city is very old and have a strong historic background. Navsari city is 2000 years old. The well known Grecee Geologist Telecom in his book, in year 150 narrated about Navsari part. On the ancient world mad it was narrated as "Narshima" Navsari is also well known by place Dandi the historical "Salt Agitation" by our father of nation Mahatma Gandhi.

The Navsari district situated between 20^0 45'-21^0 00' N latitude and 72^0 45' – 73^0 15' E longitude is consisting of five talukas *viz*., Navsari, Jalalpore, Gandevi, Chikhali and Vansada. It is flanked by Arabian sea in the West, Surat district in the North and Valsad district in the South. The geographical area of district is 2196 km^2 with total population of 12.29 lakh and density of 556 persons/km^2 (Population Census, 2001). Ofcourse, talukawise population density ranges from as high as 771 persons/km^2 in Gandevi taluka to as low as 290 persons/km^2 in Vansada taluka. With respect to land holding, about 78 per cent farmers have less than 2 ha land and the remaining 22 per cent hold between 2-4 ha of land. It is surprising to note that there are no medium (4+10 ha) and large (>10 ha) farmers in Navsari district (Table-10).

Climatically the Gandevi and Chikhali talukas are categorized as humid and the Navsari/Jalalpore and Vansda talukas as subhumid (dry/moist). Relatively higher rainfall of 2197 mm is received in Gandevi taluka while minimum of 1493 mm rainfall is received in Navsari/Jalalpore taluka. The potential evapo-transpiration ranges from 1538 mm in Chikhali to 1637 in Vansda taluka. of the geographical area, 67 per cent area is under cultivation and cropping intensity is 109 per cent. As far as irrigated area is concerned, Gandevi taluka rank first with 82 per cent followed by 64 per cent in Navsari/Jalalpore, 45 in Chikhali and least in Vansda taluka (16%). The contribution of surface water in irrigated area is maximum in Navsari/Jalalpore taluka (92%) and it is minimum in Vansda taluka. At district level, 60 per cent area is irrigated by surface water and the rest is by ground water.

The district has 5 talukas with 4 cities, 391 villages. Out of this 366 independent village panchayat and 4 municipality (Nagar Panchayat). According to the census of 2001, total population of district is 12,29461 lakhs. Among this 51% share held by male population i.e. 628988 and 49% by women i.e. 600473 nearby 73% of the population are staying in rural area and 27% of them are staying in urban area (Table-4). The population density of the district is 556 person/sq.km. The male to female ratio is 1000/955. According to the cast wise distribution 48% of the population belongs to ST, 3.2% belongs to SC and 48.8% belongs to General and other casts. The overall literacy rate of the district was 75.98%.

Agriculture produce marketing infrastructure developed mainly for rice and fruit crops. At co-operative institution basis which pools the produce in domestic market of various states. But value addition of agriculture produce process is just initiated it needs to be enhance for income generation. Because the district has no industrial unit.

Phsiography & Soils

Physiographically, Navsari district is divided in to four units *i.e.* coastal plain on western side of Jalalpore and Gandevi talukas, alluvial plain in Navsari/Jalalpor, Gandevi and western stripe of Chikhali taluka, piedmont slope in Chikhali and Vansda talukas and hill slope in Vansda taluka. The soil series vary with the physiographic unit.

District at a Glance

No. of blocks	5
Total villages	391
No. of gram panchayats	366
Total population	1229463
Male population	628988

Female population	600475
SC/ST population	630738
SC./ST male population	317040
SC/ST Female population	313698
Total literacy (%)	75.98
Male (%)	72.51
Female (%)	60.45
Total geographical area (ha)	220077
Net cultivated area (ha)	147588
Gross cropped area (ha)	162116
Cropping intensity (%)	109
No. of farm families	119212
Marginal farmers (0-1 ha)	76938
Small farmers (1-2 ha)	21215
Semi medium farmers (2-4 ha) Medium farmers (4-10 ha) Large farmers (> 10 ha)	- - 21059

Horticultural Assets of Navsari District

- Horticulture Crops Area : 61384.65 ha.
- Protected Cultivation
  1. Green House-93
  2. Net House – 187
- Cold Storage-5
- Cold Room-1
- Refervans-2
- Ripening Chamber-3

Table:- 1 Estimated area, production and productivity of vegetables(Year 2013-14)

Sr No	Vegetables	Area (Ha)	Production (MT)	Pvty(MT/Ha)
2	Brinjal	2307	44247	19.18
3	Cabbage	162	3661	22.60
4	Okra	4743	59287	12.50
5	Tomato	1050	24150	23.00
6	Cauliflower	115	2243	19.50
7	Clusternean	690	6072	8.80

8	Cowpea	783	6459	8.25
9	Cucurbits	6350	109538	17.25
10	Others	1258	15851	12.60
	Total	17458	271508	15.55

Table:- 2 Estimated area, production and productivity of fruits (Year 2013-14)

Sr No	Fruits	Area (Ha)	Production (MT)	Pvty(MT/Ha)
1	Mango	24188	210436	8.70
2	Chiku	6384	76863	12.04
3	Citrus	6	66	11.00
4	Ber	4	36	9.00
5	Banana	2300	116150	50.50
6	Guava	2	24	12.00
7	Pomegranate	2	18	9.00
9	Papaya	273	17199	63.00
10	Cashewnut	270	1080	4.00
11	Coconut	460	3818	8.30
12	Others	116	800	6.90
	Total	33545	422672	12.60

Table:- 3 Estimated area, production and productivity of spices (Year 2013-14)

Sr No	Spices	Area (Ha)	Prod(MT)	Pvty(MT/Ha)
1	Coriander	64	115	1.80
2	Ginger	97	1786	18.41
3	Turmeric	658	13252	20.14
4	Ajwan	35	23	0.66
	Total	854	15176	17.77

Table:- 4 Estimated area, production and productivity of flowers (Year 2013-14)

Sr No	Flowers	Area (Ha)	Prod(MT)	Pvty(MT/Ha)
1	Rose	65	572	8.80
2	Marigold	554	5429	9.80
3	Mogra	5	43	8.50
4	Lily	1029	10290	10.00
5	Others	130	1138	8.75
	Total	1783	17471	9.80

Joint Inspection Team visit at various places (Day wise)

Day-I

Date	Place of Visit/ Dist.	Program
21-Sep-15	Ahmedabad - Gandhinagar-Kutch	Opening Meeting with Mission Director & Other Mission Staff
		Seminar cum Meeting on Use of Solar penal in Cold Storage
		Departure for Kutch-Bhuj

A meeting was held at the Office of the State Horticulture Mission with mission director, & related officers and the members of the committee. Presentation on pre - and post development in overall horticulture sector was made by the Mission Director.

Following points were highlighted and discussed in the meeting.

- Share of horticultural crops in total cropped area is 11 % where contribution in the farm income is about 25%
- Over all three fold gain in production of horticultural crops compared to base line year (2004-05) because of NHM and state programs
- Banana & Kesar Mango are the prominent fruit crops of the state, where as area under Pomegranate & papaya is increasing. Date palm is the monopoly crops of the state and cultivation through Tissue cultured plants is increasing with support of RKVY scheme.
- Onion and potato are the major vegetable crops of the state and cultivation of process sable varieties has increased with forward integration with processing industries.
- Cumin and fennel are the major seed spice crops and cultivation of coriander has increased in recent years
- Farmers are now adopting mulching, Micro irrigation and protected cultivation.

- Considerable units of grading sorting, on farm pack houses; cold Storage and ripening

Seminar on Solar Penal In Cold Storage, Date. 21/09/2015

chambers have been established with support of NHM in the state. Good projects of cold chain are coming up now.

- State is promoting infrastructures for tissue culture, plug nurseries and model nurseries to ensure good planting material.

Seminar cum Meeting on Use of Solar Penal in Cold Storage

About 70 participants including the chairman of the cold storage association from 57 firms of cold storages have attended the seminar of use of solar energy in the cold storage. Chief consultant of NHM and Representative of NCCD have made Presentation on the technology and MIDH schemes on solar penal. Case study was also discussed for the successful project. It was also informed that now state government has decides for net metering the project viability shall be achieved earlier than the projected. The seminar was found very much useful for the Cold storage owners. The seminar was concluded with hope for good numbers of projects.

Place - Gujarat Horticulture Mission, Krushi Bhavan, Gandhinagar

Sr. No.	Benificiary Name	Name of Cold Storage & Address	Capacity M/T	Mobile no & E-mail
1	Vardhaji Motaji Madi	Shree Ajanta Cold Storage,	12,500	9824031586
2	Sonaji Malaji Madi	Navdurga Cold Storage,	7500	9825050791
3	Mafatlal Gilaji Madi	Rajeshree Cold Storage,	9000	9825422175
4	Vithhalbhai Shamjibhai Patel	Balram Cold Storage,	6000	9428134326
5	Vithhalbhai Shamjibhai Patel	Balram (C.A)	1500	9428134326
6	Sukhdev Vaktaji Madi	Mahadev Cold Storage,	12500	9825096744
7	Chandrabhai R. Patel	Amardeep Cold Storage,	11000	9825791377
8	Rameshbhai Madi	Somnath Cold Storage,	10000	9824014176

		Banaskantha		
9	Patel Ajaybhai Chandubhai	Shree Nath Cold Storage, Arvalli	7500	8140787702 / ajay.patel11070@gmail.com
10	Madi Babubhai Gigaji	Rajeshree Cold Storage, Banaskantha	10000	9824038975
11	Bharatkumar Lalji Madi	Jay Satima Cold Storage, Jorapura	8000	9824200171
12	Ramjibhai V. Chaudhari	Shree Ganesh Cold Storage, Banaskantha	7000	9426598703
13	Jayesh D. Barot	(Under construction), Mehsana	5000	9624603437 / jayesh3437@yahoo.com
14	Patel Kiritkumar Rajabhai	Pavan Cold Storage, Sabarkantha	5000	9427353308 / pavancoldidar@gmail.com
15	Valkesh Patel	Storeex Prv.Ltd, Mehsana	5000	9879104223 / Info@storeex.co.in
16	Chabildas Patel	Dharti Cold Storage, Arvalli	5000	9427059640
17	Vinodbhai Suthar	Padmavati Cold Storage, Ahmedabad	2500	9825413611 / padmavaticold@gmail.com
18	Patel Kiritbhai H. and Patel Nilesh M.	Ekta Cold Storage, Arvalli	9000	982514501 / ektacold@gmail.com
19	Ajay J. Patel	J.K.Agriculture Cold Storage, Mehsana	5000	9825384563 / ajay_k2@yahoo.co.in
20	Patel Malpesh K.	Ladol Cold Storage, Mehsana	9000	9924110001 / malpeshkpatel@yahoo.com
21	Dixit R. Patel	Keshav Cold Storage, Mehsana	5000	9624379707 / dixitpatelk10@gmail.co

				m
22	Vishnu S. Patel and Dilip M. Patel	Vinayak Cold Storage, Mehsana	5000	9898451190 / shubhamfinance07@gmail.com
23	Hiren K. patel	Ram Jyoti Shitalay Prv. Ltd, Gandhinagar	9000	9327003897 / ramjyotiinfo@gmail.com
24	Parth R. Shah	Shiv Ganga Cold Storage, Gandhinagar	12500	9327003897 / shivgangainfo@gmail.com
25	Mitesh Darji	-	-	-
26	Pinakin Anandjiwala	Shree Krishna Cold Storage, Gandhinahgar	22500	9327681373
27	Chunilal K. Patel	Vinayak Cold Storage, Gandhinagar	18000	9825246810 / chunilalkpatel@gmail.com
28	Karshanbhai H. Nakum	Nakum Cold Storage, Jamnagar	5000	9426953226
29	Satish M. Nakum	Mother Shree Cold Storage, Ahmedabad	5000	9998736872
30	Patel Vasantbhai B.	Deep Cold Storage, Sabarkantha	5000	9428134488 / deepminerals.khed@gmail.com
31	Dipak N. Gelot	Nutan Cold Storage, Banaskantha	5000	9824194864 / deepkgelot@gmail.com
32	Vijay K. Kacha	Shree Laxmi Narayan Cold Storage, Junagadh	5000	9727571758 / vijaykkacha@gmail.com
33	Vajubhai Patel	Rajendra Cold Storage, Naroda	7000	9099020502 / rajendraindustries@gmail.com

34	Kamlesh Vardhan	Shree Raj Agro Cold Storage, Junagadh	5000	9825950436 / shreerajagrocoldstorage @gmail.com
35	Rajubhai Halvani	Shiv Shakti Cold Storage, Junagadh	7500	7878547474
36	Bharat Punjabi	Govind Cold Storage, Junagadh	4000	942820587
37	Ashok M. Patel	Swagat Cold Storage, Degam	5000	9825025133 / ashokpatel25133@gmail. com
38	Shailesh D. Patel	Kalika Cold Storage, Nadi	4500	9979895500 / kalikacoldstorage@gmail .com
39	Kalpesh B. Patel	Yamuna Cold Storage,	5000	9825061738
40	Hasmukh B. Patel	Nil Kanth Cold Storage,	4250	9825332604
41	Kamlesh B. Patel	Shreenathji Cold Storage,	4500	9879332511
42	Badiyani Surabh	H. R. Cold Storage, Jamnagar	9500	9909912323 / badiyanisaurabh@gmail. com
43	Rajan M. Patel	Keshav Greens, Himmatnagar	5500	9978825627 / keshavgreen@gmail.com
44	Kalpesh B. Patel	Kedar Vegetable Ripenning Chember	5 Chambers	9909400100 / kb_merja@yahoo.in
45	Ashwin L. Sankhala	Bhagya Laxmi Cold Storage, Deesa	7500	9998054115 / ashivinshankarlal@yaho o.co.in
46	Sumant R. Patel	Kisan Cold Storage, Modasa	3500	9426589314 / sumant.1494@gmail.com
47	Ashwin R. Patel	Aditya Cold Storage, Arvalli	6500	9825220552 /ashvinaditya@gmail.co m

48	Dinesh M. Mali	G.G.Cold Storage, Deesa	6000	9898091675 / tank_dinesh@yahoo.com
49	Tulsibhai H.	Laxmi Cold Storage, Modasa	4000	9825322431
50	Chandulal K.	Hari Om Cold Storage, Sabarkantha	7500	9426365826
51	C.A. Dinesh D. Sankhala	-	-	9428136360 / dineshsankhala@yahoo.com
52	Mitul Patel	Tulsi Cold Storage, Himmatnagar	7500	9427590741 / limbani.mitul@gmail.com
53	Nitin A. Patel	Brahmani Cold Storage,	4000	9998676676
54	Shashikant	Madhusudan Cold Storage, Arvalli	5000	9427609013
55	Bharat Kubchandani	Ganesh Cold Storage, Jamnagar	4000	9824298243 / bharat999@gmail.com
56	Patel Jayantibhai B.	Shayam Cold Storage, Deesa	5000	9427379751
57	Harshadbhai P. Prajapati	Dwarkesh Cold Storage, Degam	5000	9925617093

Day –II Visit of Kutch District

DATE 22-Sep-15

JIT TEAM AT BHUJ, DIST. KUTCH

Visit of Pomegranate orchards in Village Chapradi Ta. Bhuj, Dist. Kutch

Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Date 22/09/2015

1.	Name and address of beneficiary whose field visited :	**Haribhai Galal, at. chapradi,ta.Bhuj, Dist.Kutch**
2.	Total land available with the beneficiary(ha.) :	8.0 ha.
3.	Crop cluster under which cover :	Pomegranate
4.	Name and variety of crop planted :	Bhagva (Sinduri)
5.	Source of planting material :	Nursery Maharashtra(Shirdi)
6.	Number of plants planted :	5000 plants
7.	Date of planting :	2009-10
8.	Number of plants which survived : (Also indicate percentage survival)	5000 plants
9.	Total amount of subsidy assistance due to the : beneficiary as (Rs.)	Around 45,000/-
10.	Amount paid and date of payment :	2009-10, 27,000/-
11.	Mode of payment :	Cheque & RTGS
12.	Source of irrigation water :	Bore well with drip
13.	Whether Drip, Sprinkler, system in use :	Drip
14.	Other inputs provided :	Organic manure, fungicide, pesticides, fertilization at various schedule
15.	Whether assistance availed for organic farming :	
16.	If so, area covered :	
17.	Assistance availed :	45,000/-
18.	Available marketing facility for the crop :	Self on farm & export
19.	Other infrastructure available in the vicinity :	No
20.	General upkeep of the farm : (Very good/good/average/poor)	Very good
21.	Any other relevant observation by the J.I.T. :	Nematods & Wilt
22.	Whether NHM Logo displayed :	yes

Visit of Date palm plantation, Pomegranate orchard, large scale cultivation of vegetables and farm of Mango cultivation at Kukma, Ta. Bhuj, Dist: Kutch

Visit of Date palm, Pomegranate and guava by small farmers in taluka Mandavi. Bhuj, Dist : Kutch

Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Date 22/09/2015

1.	Name and address of beneficiary whose field visited :	Bhogilal C. Parekh, Vavdi, Ta.Bhuj, Dist.Kutch
2.	Total land available with the beneficiary(ha.) :	5.0 ha. About
3.	Crop cluster under which cover :	Pomegranate
4.	Name and variety of crop planted :	Bhagva (Sinduri)
5.	Source of planting material :	Nursery Maharashtra(Shirdi)
6.	Number of plants planted :	2300 plants
7.	Date of planting :	2013-14
8.	Number of plants which survived : (Also indicate percentage survival)	2300 plants
9.	Total amount of subsidy assistance due to the : beneficiary as (Rs.)	Around 46,530/-
10.	Amount paid and date of payment :	34,900/- 04/04/14 11,630/- 27/12/14
11.	Mode of payment :	RTGS
12.	Source of irrigation water :	Bore well with drip
13.	Whether Drip, Sprinkler, system in use :	Drip
14.	Other inputs provided :	Organic manure, DAP, Cow urine
15.	Whether assistance availed for organic farming :	
16.	If so, area covered :	
17.	Assistance availed :	
18.	Available marketing facility for the crop :	Action on farm by self
19.	Other infrastructure available in the vicinity :	Pack house, Water tank
20.	General upkeep of the farm : (Very good/good/average/poor)	Average
21.	Any other relevant observation by the J.I.T. :	Nematodes
22.	Whether NHM Logo displayed :	yes

Activities under Rashtriya Krishi Vikas Yojana (RKVY) by Joint Inspection Team

Date 22/09/2015

1.	Name and address of beneficiary whose field visited :	Dipaliben H. chambe, Vavdi, Ta.Bhuj, Dist.Kutch
2.	Total land available with the beneficiary(ha.) :	20.0 ha.
3.	Crop cluster under which cover :	Tissue DatePalm
4.	Name and variety of crop planted :	Barahee
5.	Source of planting material :	Import
6.	Number of plants planted :	500 plants
7.	Date of planting :	2013-14
8.	Number of plants which survived : (Also indicate percentage survival)	500 plants
9.	Total amount of subsidy assistance due to the : beneficiary as (Rs.)	6,97,000/-
10.	Amount paid and date of payment :	2013-14
11.	Mode of payment :	Cheque
12.	Source of irrigation water :	Bore well with drip
13.	Whether Drip, Sprinkler, system in use :	Drip
14.	Other inputs provided :	Organic manure, Fertilizer as per Recommendation
15.	Whether assistance availed for organic farming :	
16.	If so, area covered :	
17.	Assistance availed :	
18.	Available marketing facility for the crop :	Local & Export
19.	Other infrastructure available in the vicinity :	Pack house
20.	General upkeep of the farm : (Very good/good/average/poor)	Very good
21.	Any other relevant observation by the J.I.T. :	Lake of cold chain
22.	Whether NHM Logo displayed :	yes

Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Date 22/09/2015

1.	Name and address of beneficiary whose field visited :	**Patel Sureshbhai A., At. Talvana, Ta.Mandavi, Dist.Kutch**
2.	Total land available with the beneficiary (ha.) :	4.0 ha.
3.	Crop cluster under which cover :	Pomegranate
4.	Name and variety of crop planted :	Bhagva (Sinduri)
5.	Source of planting material :	Nursery Maharashtra
6.	Number of plants planted :	400 plants
7.	Date of planting :	2012-13
8.	Number of plants which survived : (Also indicate percentage survival)	400 plants
9.	Total amount of subsidy assistance due to the : beneficiary as (Rs.)	28,800/-
10.	Amount paid and date of payment :	2013-14, 28,800/-
11.	Mode of payment :	RTGS
12.	Source of irrigation water :	Bore well
13.	Whether Drip, Sprinkler, system in use :	Drip
14.	Other inputs provided :	Organic manure, Fertilizer,
15.	Whether assistance availed for organic farming :	-
16.	If so, area covered :	-
17.	Assistance availed :	-
18.	Available marketing facility for the crop :	Action on farm by self
19.	Other infrastructure available in the vicinity :	-
20.	General upkeep of the farm : (Very good/good/average/poor)	Very good
21.	Any other relevant observation by the J.I.T. :	-
22.	Whether NHM Logo displayed :	yes

Tissue Cultured Pomegranate

Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Date 22/09/2015

1.	Name and address of beneficiary whose field visited :	**Patel Viththalbhai A., At. Talvana, Ta.Mandavi, Dist.Kutch**
2.	Total land available with the beneficiary (ha.) :	2.0 ha.
3.	Crop cluster under which cover :	Tissue DatePalm
4.	Name and variety of crop planted :	Barahee
5.	Source of planting material :	Manthan Nursery
6.	Number of plants planted :	25 plants
7.	Date of planting :	2013-14
8.	Number of plants which survived : (Also indicate percentage survival)	25 plants
9.	Total amount of subsidy assistance due to the : beneficiary as (Rs.)	34,800/-
10.	Amount paid and date of payment :	34,800/-, 04/04/14
11.	Mode of payment :	RTGS
12.	Source of irrigation water :	Bore well
13.	Whether Drip, Sprinkler, system in use :	Drip
14.	Other inputs provided :	Organic manure, Fertilizer, Tissue culture plants as per schedule
15.	Whether assistance availed for organic farming :	-
16.	If so, area covered :	-
17.	Assistance availed :	-
18.	Available marketing facility for the crop :	Action on farm by self
19.	Other infrastructure available in the vicinity :	
20.	General upkeep of the farm : (Very good/good/average/poor)	Very good
21.	Any other relevant observation by the J.I.T. :	-
22.	Whether NHM Logo displayed :	yes

Tissue cultured Datepalm

Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Date 22/09/2015

1.	Name and address of beneficiary whose field visited :	Mavji Naran Mukhi,at. Kukama,Ta.Bhuj Dist.Kutch
2.	Total land available with the beneficiary (ha.) :	3.5 ha.
3.	Crop cluster under which cover :	Mango
4.	Name and variety of crop planted :	Kesar
5.	Source of planting material :	Ashapura Nursery
6.	Number of plants planted :	1200 plants
7.	Date of planting :	2013-14
8.	Number of plants which survived : (Also indicate percentage survival)	1200 plants
9.	Total amount of subsidy assistance due to the : beneficiary as (Rs.)	41,860/-
10.	Amount paid and date of payment :	31,400/- 2013-14 10,460/- 2014-15
11.	Mode of payment :	RTGS & cheque
12.	Source of irrigation water :	Bore well, Drip
13.	Whether Drip, Sprinkler, system in use :	Drip
14.	Other inputs provided :	Organic manure, Fertilizer
15.	Whether assistance availed for organic farming :	-
16.	If so, area covered :	-
17.	Assistance availed :	-
18.	Available marketing facility for the crop :	Local
19.	Other infrastructure available in the vicinity :	-
20.	General upkeep of the farm : (Very good/good/average/poor)	good
21.	Any other relevant observation by the J.I.T. :	Dai back
22.	Whether NHM Logo displayed :	yes

Post Harvest Management (J.I.T) (Cold Storage/ CA Storage)

Date 22/09/2015

Sr. No.	Details	Remarks
1.	Name of the project	Thaim Cold Storage
2.	Year of Implementation	2015-16
3.	Project period	September-2014 to August-2015
4.	Name of Implementing agency	Thaim Cold Storage
5.	Location of project	Village- Durgapur Ta- Mandvi Dist- Kutch
6.	Total project cost	230 Lakh
7.	Amount released by DAC	
8.	Expenditure incurred	230 Lakh
9.	Status of project	
	• Capacity of unit	2000 M.T
	• Commodity	Datepalm and Potatoes etc.
	• Condition of infrastructure	Completed (Minor insulation wall is awaited)
	• Whether NHM logo displayed	Yes
	• Whether funds disbursed	No

Day –III Visit of Rajkot District

DATE 23-Sep-15

Place of Visit/ Dist.
Kedar Ripening Chamber and Atop cold Storage in Morbi Taluka of Tankara Districts Kutch –Tankara- Rajkot - Vadodara

Post Harvest Management (J.I.T)

(Pack House/ Cold Storage/ CA Storage / Ref. Van/ Primary/mobile Processing Unit)

Date 23/09/2015

Sr. No.	Details	Remarks
1.	Name of the project	Kedar vegetable ripening chamber
2.	Year of Implementation	2013-14 to 2014-15
3.	Project period	1 year
4.	Name of Implementing agency	Kedar vegetable ripening
5.	Location of project	Village- Lajai Ta- Tankara Dist- Morbi
6.	Total project cost	85.20 Lakh
7.	Amount released by DAC	17,23,771/- Date.31/01/2014
8.	Expenditure incurred	86 Lakh
9.	Status of project	
	• Capacity of unit	50 M.T
	• Commodity	Banana
	• Condition of infrastructure	Very Good
	• Whether NHM logo displayed	Yes
	• Whether funds disbursed	Yes, Rs. 17.24 Lakh

Intercropping with Datepalm

Local Spray Tool Machine by Farmer

Post Harvest Management (J.I.T)

(Pack House/ Cold Storage/ CA Storage / Ref. Van/ Primary/mobile Processing Unit)

Date 23/09/2015

Sr. No.	Details	Remarks
1.	Name of the project	**Atop food products Pvt. Ltd**
2.	Year of Implementation	2014-15
3.	Project period	
4.	Name of Implementing agency	SHM, Gujarat
5.	Location of project	Morbi-Rajkot High way Village- Lajai Ta- Tankara Dist- Morbi
6.	Total project cost	577 Lakh
7.	Amount released by DAC	141.98 Lakh
8.	Expenditure incurred	
9.	Status of project	
	• Capacity of unit	5000 M.T
	• Commodity	Potato
	• Condition of infrastructure	Very Good
	• Whether NHM logo displayed	Yes
	• Whether funds disbursed	Yes

Place of Visit/ Dist.	Program	Remarks/ observation
Visit of GRV Cold storage At. Taluka Gondal, Dist Rajkot		

Post Harvest Management (J.I.T)

(Pack House/ Cold Storage/ CA Storage / Ref. Van/ Primary/mobile Processing Unit)

Date 23/09/2015

Sr. No.	Details	Remarks
1.	Name of the project	**M/S GRV Agro Products**
2.	Year of Implementation	2014-15
3.	Project period	1 year
4.	Name of Implementing agency	SHM, Gujarat
5.	Location of project	Village- Bhojapara Dist- Rajkot
6.	Total project cost	1201.24 Lakh
7.	Amount released by DAC	171.04 Lakh
8.	Expenditure incurred	

9.	Status of project	
	• Capacity of unit	2500 M.T
	• Commodity	Apple, Vegetable, Potato
	• Condition of infrastructure	
	• Whether NHM logo displayed	Yes
	• Whether funds disbursed	Yes

Day –IV Visit of Vadodra District

DATE 24-Sep-15

Place of Visit/ Dist.	Program	Remarks/ observation
Visit of Vadodara District Presentation at GGRC- Vadodara for Drip Irrigation System (NMMI)-/		

Visit of Bharuch District

Place of Visit/ Dist.	Program	Remarks/ observation
Visit of Green House (Naturally ventilated), Gerbera plating material and Pack house in village Sajod, Ta. Ankleshwar, Dist. Bharuch		

Date 24/09/2015

Sr. No.	Details	Remarks
1	Name and Address of beneficiary whose field visited	**Yashvantbhai Naranbhai Prajapati**
2	Total land available with beneficiary	At- Sajod Ta- Ankleshwar Dist- Bharuch 24 Acres
3.	Type of protected cultivation activity (Hi-Tech/Normal GH, Shade net, Plastic tunnel)	**Normal Green House (Naturally ventilated)**
4.	Year of establishment	2012-13
5.	Size of structure (sq.m)	4000
6.	Total cost	57 Lakh
7.	Agency involved in fabrication and installation	IGPL
8.	Total subsidy paid and date of payment	18.89 Lakh
9.	Crop being grown	Gerbera
10.	Condition of structure	Excellent
11.	Condition of crop	Excellent
12.	Tie up with market	Delhi, Bhopal, Jaipur, Indor, Hydrabad, Surat
13.	General upkeep(Very good/Good/Average/Poor)	Very Good
14.	Any other reverent observation by JIT	

Place of Visit/ Dist.
Visit of Asia Green Bio Crops Science. In Udhyognagar, At. Kani, Ta. Mahuva, Dist. Surat

IMP/INM Infrastructure (J.I.T)

Date 24/09/2015

Sr. No.	**Details**	**Remarks**
1.	Name of the project	**Asia Green Bio Crops Science**
2.	Year of Implementation	2014-15
3.	Project period	5 year
4.	Name of Implementing agency	NHM, Gujarat
5.	Location of project	Village- Tarsadi Ta- Mahuva Dist- Surat
6.	Total project cost	74.36 Lakh
7.	Amount released by DAC	34.65 Lakh
8.	Expenditure incurred	90.00 Lakh
9	Whether trained manpower employed	Yes

10	Arrangements made to meet recurring cost	-
11	Current status	Good in running Condition
	Bio control lab/ Leaf tissue analysis	Bio control Lab
	Name of agent produced	PSB,KMP,RZAYO Zinc solution. Azosprilim, Rhizobium, Azotobacter
	Quantity produced	15341 ltr
	Quantity sold	10376 ltr
	Amount realized through sale	About Rs. 15.00 lakh
	Number of sample analysed	7 product
	Rate of analysis per sample	-
	Amount realized through analysis	-
12	General condition of lab during the time of inspection	Good in running condition
13	Whether funds disbursed	Already Disbursed

Day V - Visit of Navsari District

DATE 25-Sep-15

Place of Visit/ Dist.
NAU, Field Visit, Plug Nursery, RKVY

Place of Visit/ Dist.	Program	Remarks/ observation
Visit of Protected Cultivation of Gerbera in Mohanpur Ta. Gandevi, Dist. Navsari.		

Place of Visit/ Dist.
Visit of Tissue culture Laboratory (Banana Plants) **At. Vanzna, Ta. Chikhli, Dist. Navsari**

Place of Visit/ Dist.
Visit of Ripening Chamber (Banana)and Per-cooling Chember **At. Gholar, Ta. Chikhli, Dist. Navsari**

Post-harvest management (J.I.T)

(Pack House/ Cold Storage/ CA Storage / Ref. Van/ Primary/mobile Processing Unit)

Date 25/09/2015

Sr. No.	Details	Remarks
1.	Name of the project	Ripening Chamber
2.	Year of Implementation	2015-16
3.	Project period	1 year
4.	Name of Implementing agency	Jay Ambe Ripening chamber
5.	Location of project	At. Gholar Ta. Chikhli Dist. Navsari
6.	Total project cost	45.96 lakh
7.	Amount released by DAC	34.18 lakh
8.	Expenditure incurred	45.96 lakh
9.	Status of project	
	• Capacity of unit	48 tonnes
	• Commodity	Working condition
	• Condition of infrastructure	Working condition
	• Whether NHM logo displayed	Yes
	• Whether funds disbursed	Yes

Place of Visit/ Dist.
Visit of Refrigerated van and vegetables in green house **At. & Ta. Khergam, Dist. Navsari**

Post-harvest management (J.I.T)

(Pack House/ Cold Storage/ CA Storage / Ref. Van/ Primary/mobile Processing Unit)
Date. 25/09/2015

Sr. No.	Details	Remarks
1.	Name of the project	Refrigerated Van
2.	Year of Implementation	2015-16
3.	Project period	1 year
4.	Name of Implementing agency	Bharat Benz Company
5.	Location of project	At. Khergam Dist. Navsari
6.	Total project cost	25.39 lakh
7.	Amount released by DAC	15.23 lakh (Under process)
8.	Expenditure incurred	25.39 lakh
9.	Status of project	
	• Capacity of unit	4 tonnes
	• Commodity	Working
	• Condition of infrastructure	Working condition
	• Whether NHM logo displayed	Yes
	• Whether funds disbursed	15.23 Lakh Under Process

Place of Visit/ Dist.
Visit of Honey Bee Breeder in Soladhra village, Dist. Navsari

Organic farming/ Vermi composting Units/ Honey bee (J.I.T)

Date. 25/09/2015

Sr. No.	Details	Remarks
1.	Name of the project	**Honey bee breeder**
2.	Year of Implementation	2012-13
3.	Project period	3 year
4.	Name of Implementing agency	NHM
5.	Location of project	At. Soladhra Ta. Chikhli Dist. Navsari
6.	Total project cost	3.50 lakh
7.	Amount released by DAC	1.50 lakh
8.	Expenditure incurred	3.50 lakh
9.	Status of project	
	• Capacity of unit	Honey bee extractor
	• Commodity	10
	• Condition of infrastructure	Done
	• Whether any certificated issued	No
	• Whether funds disbursed	NHM 50% 1.50 Lakh