

Report of the Joint Inspection Team on its visit to Tripura during 1st to 5th September, 2015 to review the progress under the Mission for Integrated Development of Horticulture (MIDH)



Districts visited by J.I.T ●

1. Sephijala district
2. South Tripura district



Mission for Integrated Development of Horticulture
Ministry of Agriculture
Department of Agriculture & Cooperation
Krishi Bhawan, New Delhi-110001

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ACTIONABLE ISSUES

1. The marketing linkages should be strengthened by making the FPOs.
2. There is a need to establish processing facilities like extraction of juice & packing centre in the vegetable and fruit clusters especially in pineapple & lemon clusters for value addition.
3. Community based area expansion programmes need to be augmented in all districts of the State.
4. More area need to be brought under pineapple cultivation as the potential exists in visiting districts, accordingly training to farmers /field staff on cultivation aspects should be imparted along with technical support. The installation of drip / sprinkler needs to be supported with training on water management. Staggering technique needs to be augmented in a big way to increase the production period of pineapple.
5. Existing nurseries required accreditation for producing quality planting material especially of citrus and new hybrid varieties of coconut.
6. The farmers need to be trained at the grass root level regarding cultural practices like removal of water shoots, training and pruning of established plants and proper care for pest regulation during the initial growth period.
7. Guava plantation needs proper control measure before appearance of disease.
8. The new private nursery should also be encouraged by giving the assistance and proper guidance to produce more coconut seedlings as the demand is increasing in the State. Garden tool-kit should be provided to the farmers involved in nursery raising and cut-flower production.
9. State should arrange to upload the monthly NHM physical and financial progress of the district level on the MIDH web site on regular basis.

OBSERVATIONS

1. The farmers are resource poor and do not have funds to pool their share to get benefits of MIDH scheme. As result, per unit of operational cost is more which needs more funds.
2. Targets are not achieved under NMMI in the State.
3. Performance under Mango Cv. Amrapali is good in the state. The grower should be trained on canopy and Insect-Pest Management (IPM).
4. Mosambi cultivation has a good prospects in the State.
5. The height of grafted/budded mosambi plants should be proper at the time of distribution to avoid mortality and should be inspected properly for viral/diseases.
6. Plantation of off-season watermelon is very good and in lieu, farmers can get high price.
7. It was observed that proper training and pruning operation in Fruit crops (sweet orange, guava, mango and lemon) is not being done by the beneficiaries. The proper demonstrations and trainings should be given to beneficiaries so that the productivity of the orchards can be increased through scientific cultivation.
8. The farmers are growing the pineapple in the rainfed conditions resulting in low productivity. Drip irrigation should be introduced in the pineapple field. At present, there is no processing and value addition in the pineapple cluster. As a result, the farmers are getting lower price for their produce. Establishment of processing unit in respect of pineapple should be encouraged for value-addition.
9. The farmers are growing Gerbera, Anthurium, orchid, gladolus under protected conditions. Each shade net was 100 sqm area and the cut flowers are being sent to Agartala market.
10. There is a weak market linkage resulting into lower prices of flowers to the farmers under protected cultivation. There is no collection centre and FPOs in the cluster for flowers.
11. Community based area expansion programme of fruits like citrus, mango & guava under Panchayat land (patta) is being practised, efforts made by the horticulture Department in establishing fruit cluster are a welcome sign.

12. Under paddy land, winter vegetables are grown with the State intervention of funding for mini tube well with submersible pump irrigation in the districts. It is indeed a good work done by SHM.
13. Citrus planting material was found badly damaged with bacterial and viral disease beside insect problems.
14. Fruit canker and die back of guava is a serious problem as informed by the farmers.

Report of the Joint Inspection Team on its visit to Tripura during 1 to 5th September, 2015 to review the progress under the Mission for Integrated Development of Horticulture

The Joint Inspection Team (JIT) comprising of Dr. Om Prakash, Chief Consultant, MIDH, DAC, Govt. of India, New Delhi, Dr. B. Das, Principal Scientist (Hort.), ICAR Research Complex for NEH Regions, Tripura Centre, Lembucherra, Tripura West and Vishnu Pada Chakraborty (AD), Horticulture Department, Govt. of Tripura joined the team and coordinated the entire visit of JIT.

STATE PROFILE

Tripura is one of the seven states in the north eastern part of India located between 22 degree and 56 minutes and 24 degree and 32 minutes north latitude and between 90 degree and 09 minutes and 92 degree and 20 minutes east latitude. It is bounded on the north, west, south and south-east by Bangladesh whereas in the east it has a common boundary with Assam and Mizoram. There is a common belief that the name of the State has originated from "Tripura Sundari" - the presiding deity of the land which is famous as one of the 51 pethos of Hindu Pilgrims. Apart from this traditional view, it is believed that originally the land was known as "Tuipra" meaning a land adjoining the water. It is fact that in days of yore the boundaries of Tripura were extended up to the Bay of Bengal when its rulers held sway from Garo hills to Arakan. The history of Tripura as an administrative unit dates back to the days of Maharajas when the territory was a native State. It is significant to note that all though Tripura was conquered by force of arms in 1761, no Political agents was appointed in the State till 1871 - a gap of 110 years.

The former princely state of Tripura was ruled by Maharajas of Manikya dynasty. It was an independent administrative unit under the Maharaja even during the British rule in India though this independence was qualified, being subject to the recognition of the British, as the paramount power, of each successive ruler. After independence of India, an agreement of merger of Tripura with the Indian Union was signed by the Regent Maharani on September 9, 1947 and the administration of the state was actually taken over by the Govt. of India on October 15, 1949. Tripura became a Union Territory without legislature with effect from November 1, 1956 and a popular ministry was installed in Tripura on July 1, 1963. On January 21, 1972 Tripura attained statehood.

Location	Remotest in the North East Region, 22° 56' ; 24° 32' North and 91° 09' and 92° 20' East.
Land	Total area 10.492 Sq. Km., International Border with Bangladesh-856 Km, Border with Mizoram-109 Km and with Assam-53 Km.
	60% Hilly Terrain, 60% Forest area (39% Reserve Forest)
	24% Net Sown Area
	Average size of Holding 0.56 Hectare.
	Irrigation 42% of Net Cropped area.
Climate	Temperature varies between 10 to 35 Degree Celsius,
	Average Annual Rainfall 2,200mm,
Population	Total Population 31,99,203 as per 2001 Census,
	Rural Population 26,53,453
	Urban Population 5,45,750.
	Male 16,42,225
	Female 15,56,978.
	Population Density 305 per sq. Km.,
	Schedule Caste-5,55,724 Schedule Tribe-9,93,426
	Sex ratio-948
Overall literacy rate(%)- 73.2	
Major Language	Bengali, Kakborak and English.
Economy	The economy is primarily agrarian. The primary sector (Agricultural) contributes about 64% of total employment in the state and about 23% of the State Domestic Product (SDP).
	A variety of Horticultural/ Plantation Crops are produced in Tripura like Pineapple, Orange, Cashew nut, Jackfruit, Coconut, Tea, Rubber, Forest , Plantations etc. There is ample scope for increasing the area under such plantations as well as the productivity.

Agricultural Scenario of Tripura

Area	2009 - 10
a) Total area of the State	10,491.69 SqKms
b) Altitude of Agartala	12.80 Mts
c) Location	
i) North latitude	22°56' & 24°32'
ii) East longitude	91°09' & 92°20'
iii) Extreme length	183.5 Kms
iv) Extreme width	112.7 Kms
v) Border with Bangladesh	856 Kms
vi) Border with Mizoram	109 Kms
vii) Border with Assam	53 Kms
d) Land Utilisation	
i) Total geographical area	10,43,169 ha.
ii) Net area sown	2,55,524 ha.
iii) Forest area	6,29,429 ha.
iv) Area sown more than once	1,92,968 ha.
v) Gross area sown	4,48,492 ha.
vi) Cropping intensity	176%

Agriculture

a) Production of crops	
i) Rice	6,40,034 MT
ii) Wheat	1,323 MT
iii) Maize	2,030 MT
iv) Pulses	4323 MT
Total Foodgrains	6,47,710 MT
v) Sugar cane	44,913 MT
vi) Cotton (Bale =170 kg)	1,438 Bales
vii) Jute (Bale =180 kg)	4,139 Bales
viii) Mesta (Bale =180 kg)	6,522 Bales
ix) Total oil seeds	2,483 MT

x	Potato	94,554 MT
b	Fertilizer consumption	35133 MT
c	Per hectare use of fertilizer (NPK)	42 Kg/Ha
d	Bio-fertilizer distribution	17 MT
e	Farmers trained	70,000 Nos.
f	Regulated agricultural markets	21
g	Cropping intensity (%)	176%
h	Jhum productivity	991 Kg/Ha
i	Cold Storage	10 Nos.
j	Mango	11,924.35 MT
k	Pineapple	1,08,009 MT
l	Orange	20,383 MT
m	Jackfruit	2,52,384 MT
n	Coconut	7,882 MT
o	Summer vegetable	1,43,665.66 MT
p	Others winter vegetable	1,62,602.05 MT
q	Kisan Credit Card issued	30,469 Nos
r	Amount disbursed	Rs. 84.96 Crores

Climate

a	Normal annual rainfall	2,169.40 mm
b	Average actual annual rainfall	1,961.80 mm
c	Normal rainy days	99.2
d	Actual rainy days	82.5

Irrigation

a	Cultivable area	2,79,050 ha.
b	Irrigable area	1,17,000 ha.
c	Potential created	10,4995 ha.
d	Potential utilized	68,085 ha.

STATUS OF HORTICULTURE IN TRIPURA

Tripura produces about 1.50 m MT of horticulture produce from an area of 0.12 m ha. Major horticulture produce comprises fruit (46.4%) and vegetables (50.1%).

Mission for Integrated Development of Horticulture (MIDH)

The Centrally Sponsored Scheme of Horticulture Mission for North East and Himalayan States (HMNEH) is being implemented in Tripura since 2001-02. From April, 2014 onwards, HMNEH has been subsumed under Mission for Integrated Development of Horticulture (MIDH) for holistic growth of the horticulture sector covering fruits, vegetables, root and tuber crops, mushrooms, sp[ices, flowers, aromatic plants and plantation crops.

Implementation of Horticulture Mission for North East and Himalyan States (HMENH) in Tripura

The Centrally Sponsored Scheme of Horticulture Mission for North East and Himalayan States (HMNEH) is being implemented in all the districts of the state thereby covering important horticulture crops.

Progress till 2014-15

Salient physical progress till 2014-15 is as follows:-

- An additional area of 97803 ha of identified horticulture corps have been covered.
- In all, 197 nurseries have been established for production of quality planting material.
- An area of 8785 ha has been covered under rejuvenation of old and senile orchards.
- Setting up of 4 IPM/INM infrastructure facilities such as Leaf tissue analysis labs, diseases forecasting units.

- Organic farming has been adopted in an area of 2298 ha for promotion of organic cultivation of horticultural crops. Besides, 6682 vermi compost units have been set up.
- An area of 6.37 ha has been covered under protected cultivation.
- 52277 farmers have been trained under various horticulture activities.
- Work to be initiated for establishment of Centre of Excellence (CoE0).

An amount of Rs. 267.07 crore was released to the State till 2014-15 and the State Government has reported an expenditure of Rs. 256.41 crore.

Progress during 2014-15

- An outlay of Rs. 54.00 crore has been approved for the State to implement HMNEH related activities of NHM during 2014-15. Funds to the tune of Rs. 37.00 crore have been released. Out of which, an expenditure of Rs. 26.44 crore has been reported.
- Outlay of Rs. 6.41 crore earmarked for PHM and Market during 2014-15. In this regard, progress is awaited.

Programme during 2015-16

- An outlay of Rs. 75.00 crore including GOI share of Rs. 37.50 crore (50% of total outlay) has been earmarked for Tripura during 2015-16. Funds to the tune of Rs. 18.75 crore have been released during the current financial year.

State and Scheme wise Targeted area of Different Fruits Plants During 2015-16

	Name of fruit crops	MGNREGA 2015-16	State Plan 2015-16	HMNEH Spillover	MIDH Spillover	MIDH 2015-16	RADP 2015-16	Total Targeted Area
State	Mango (AP)	295.35	726.51	35.45	251.80	65.00	64.00	1438.11
	Orange	471.00	0.00	50.00	29.28	47.00	10.00	607.28
	Areacanut	457.00	0.00	3.00	0.00	0.00	15.00	475.00
	Mosambi	158.00	0.00	99.50	61.48	35.00	3.00	356.98
	Coconut	5.00	233.55	26.83	0.00	0.00	0.00	265.38
	Lime/ Lemon	114.90	0.00	0.00	176.95	137.00	29.00	457.85
	Cashewnut	20.00	0.00	0.00	0.00	0.00	0.00	20.00
	Guava	0.00	0.00	25.00	10.70	0.00	0.00	35.70

Papaya	0.00	0.00	7.00	155.82	84.00	4.00	250.82
Black pepper	0.00	0.00	7.00	155.82	84.00	4.00	250.82
Pineapple	566.00	0.00	76.62	0.00	41.00	27.00	710.62
Banana	985.50	0.00	48.50	0.00	85.00	55.00	1174.00
Beetlevine	7.20	0.00	0.00	0.00	0.00	0.00	7.20
Litchi	0.00	0.00	0.00	2.00	0.00	31.00	33.00
Jackfruit	0.00	0.00	3.00	0.00	0.00	10.00	13.00
Ber	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Block Total	3079.95	960.06	379.03	688.03	524.00	248.00	5879.07

State and Scheme wise Targeted area of Different Fruits Plants during 2015-16

Sl. No.	Name of fruit crops	Requirement (Nos)	Availability		
			Govt. Orchard	Private Nursery	Total
1.	Mango (AP)	440718	22870	1179100	1201970
2.	Orange	218712	2875	237125	240000
3.	Areacanut	578400	78276	832500	910776
4.	Mosambi	160900	3100	271500	274600
5.	Coconut	45500	1870	48130	50000
6.	Lime/ Lemon	166555	64595	695500	760095
7.	Cashewnut	5560	4000	2000	6000
8.	Guava	6265	3482	28518	32000
9.	Papaya	577117	108900	0	108900
10.	Black pepper	81400	144850	80000	224850
11.	Beetlevine	220000	0	300000	300000
12.	Litchi	1440	39049	20000	59049
13.	Jackfruit	2175	3870	0	3870
14.	Ber	278	1000	0	1000
15.	Coconut seedling	40000	-	40000	40000
	Total	2505020	478737	3694373	4173110

SEPHIJALA DISTRICT

1. Geographical area:-104358 ha.
2. Cultivable land:- 47456 ha.
3. Actual cultivable land: 44855 Ha.
4. Single crop area: 8182 ha.
5. Double crop area: 24802 Ha.
6. Triple crop area:- 11871 ha.
7. Total area under cultivation:-93399 ha.
8. Cropping intensity:- 108%
9. Total area under Vegetable: 5748 ha .
- 10.Total area under Fruit: 5109 Ha.
- 11.Total area under Plantation crop:- 1615 Ha.
- 12.Total area under Spices:-658 Ha.

Vegetables: Cabbage, cauliflower, tomato, Brinjal, Potato

Fruits: Mango, Pineapple, Banana, Lemic Lemon

Sephijala district

S. No.	Name of the Beneficiary	Address	Crop / Component	Year of Plantation / Start	Area in Ha./ Unit	Total unit planted	Survival as on date /status	Remark
1.	Vinay Das	Bhati Larma, Sephijala	Minideep Tube well with submersible pump 200 ft. deep	2014-15	1.5 area covered in winter vegetables			<ul style="list-style-type: none"> Rs. 90,000 subsidy given to beneficiary. Tube well in used during winter when vegetables are grown.
2.	Harandra Sarkar	Village, Kashba & Panchayat Sephijala	Minideep Tube well with submersible pump 200 ft. deep	2014-15	1.5 area covered			<ul style="list-style-type: none"> Rs. 90,000 subsidy given to beneficiary. Tube well in used during winter when vegetables are grown.
3.	Mohm. Haneef Miyan	Baidyar Dighi Panch, Sephijala	Pine apple & Guava, Sweet orange 300 (Nos)	2012-13	1.5 3.5	-	-	<ul style="list-style-type: none"> Pine apple (40,000 Nos) are grown on Hillock. Guava local variety is grown but infested with canker disease. Sweet orange is having bacterial canker disease and advised

								accordingly.
4.	Mohm. Haneef Miyan	Baidyar Dighi Panch, Sephijala	Vermi compost (7x1.5 m)	2014-15	7x1.5 m			<ul style="list-style-type: none"> • Work completed yet to make vermi compost, advised to take vermi wash.
5.	Littan Debnath	Raghunathpura, Bidhalgarh, Sepayjala	Net house (Orchard cultivation Dendrobium)	2013-14	-	1000 Nos	-	<ul style="list-style-type: none"> • Total cost of units is 2.17 lac. including planting material, farmer is doing well.
6.	Bimal Chakraborty	Raghunathpur, Bidhalgarh	Net HOUSE (100 Sqm) orchid cultivation	2013-14	1000 Nos	-	-	<ul style="list-style-type: none"> • Good cultivation • Sold @ 7 to 8 per spike.
7.	Bamal Chakraborty	Raghunathpur, Bidhalgarh	Net house, Gerbera	2015-16	650 Nos	100 sqm.	-	<ul style="list-style-type: none"> • Total cost of unit is 1.48 lac with material and maintenance upto ½ year • Sold @ Rs. 5-6

South Tripura district

S. No.	Name of the Beneficiary	Address	Crop / Component	Year of Plantation / Start	Area in Ha./ Unit	Total unit planted	Survival as on date /status	Remark
1.	Yusuf miyan	Amjad Nagar Baspadua Panchayats (WT) (Bangladesh Border)	Mango Amrapali with block gram in Rabi	2013-14	1.0	200	-	<ul style="list-style-type: none"> • Anthracnose, red rust leaf midge and thrips noticed. Advised to control the pests. • Orchard was maintained nicely.
2.	Tapas Dabnar	Basupadua Panchayat (WT)	Guava (L-49), 5x5 M,	2013-14	1.0	400	-	<ul style="list-style-type: none"> • Owner informed that guava plant die due die back after 5-6 years.
3.	Tapos Dabnor	Basupadua, Panchayat, Hrishya-Mukha, R. D. block (WT)	Mixed mango (Amrapali) banana(sabri) pineapple (cv. Queen)	2014-15	1.5	-	-	<ul style="list-style-type: none"> • Banana having disease like cigatoka, mango leaves were affected with midge and Anthracnose disease
4.	Topas Dabnar	Basupadua, Panchayat, Hrishya-Mukha, R. D. block (WT)	Banana & Guava	2014-15	1.0	-	-	<ul style="list-style-type: none"> • Training is required at an initial stage. • Bounding is required around banana sucker.
5.	Sahadul Islam	Hrishyamukha R. D. block, Basupadua (WT)	Mixed-Guava, Aonla, mango, sweet orange, citrus,	1.0	-	-	-	<ul style="list-style-type: none"> • Coming up well Advised to plant more than one cultivar of Aonla old Aonla fruiting

			pomegranate					well.
6.	Sahadul Islam	Hrishyamukha R. D. block, Basupadua (WT)	sweet orange (1500 Nos)	2015-16	3.0	(1500 Nos)	-	<ul style="list-style-type: none"> Budded plants were very small about (6-7"). Bacterial canker and viral diseases are noticed. Graft union planted below the soil. Advised to replace the small plants and viral infected plants.
7.	Manik Debanar	Saroshime G. P. (W.T)	Guava, Papaya as inter crop (cv. Honey dew)	2014-15	2.0			<ul style="list-style-type: none"> Training & staking is required. Less water is needed in papaya crop.
8.	Balai Das / Pulin debanar	Haripur, G.P (W.T)	Water melon (off season crop)	2015-16 (Sugar Queen & NS 34 cv)	2.0	-	-	<ul style="list-style-type: none"> Growing well but there is problem of stem blight in melon during October.
9.	Babul Mitra	Haripur Panchayal (Border Road)	Water melon under Rubber plantation	2015	0.5			<ul style="list-style-type: none"> Grown under Rubber plantation. Pan (Betel vine) is also grown under Rubber plantation.

PHOTOGRAPHS

JIT Tripura



Area expansion of mango



Area expansion of banana



Discussion with Mohd. Haneef Miyan, grower



Intercrop in mango



Sweet orange in fruiting