

**MONITORING REPORT ON MAINTENANCE  
OF HORTICULTURE HUBS  
IN MEGHALAYA**

**TAKEN UP BY THE  
DIRECTORATE OF PROGRAMME IMPLEMENTATION & EVALUATION**

## **DETAILED INSPECTION REPORT ON MAINTENANCE OF HORTI-HUBS**

Inspection on Maintenance of Horti Hubs in the State have been carried out by the officers and staff of Directorate of Programme Implementation & Evaluation in accordance with the office of the Director of Horticulture's letter No. HORT/D-453/2016-17, Dt.12-07-2016.

The main purpose of the inspection is to examine the present condition of maintenance of Horti Hubs and to suggest remedial measures. The team had collected data and information and made site inspection of each of the Horti Hubs

Detailed reports of the following Horticulture hubs highlighting the problems, findings and suggestion for remedial measures are as under:-

- |   |           |
|---|-----------|
| 1. Upper Shillong Horti-Hub (East Khasi Hills District):  | 3.2.2017  |
| 2. Mairang Horti-Hub (West Khasi Hills District):         | 8.2.2017  |
| 3. Nongstoin Horti-Hub (West Khasi Hills District):       | 14.2.2017 |
| 4. Dewlieh Horti-Hub (Ri Bhoi District):                  | 20.2.2017 |
| 5. Thadlaskein Horti-Hub (West Jaintia Hills District):   | 27.2.2017 |
| 6. Mynkre Horti-Hub (East Jaintia Hills District):        | 24.4.2017 |
| 7. Phodkylla Horti-Hub (South West Khasi Hills District): | 8.5.2017  |
| 8. Sarangma Horti-Hub (North Garo Hills District):        | 15.5.2017 |
| 9. Samgong Horti-Hub (East Garo Hills District):          | 15.5.2017 |
| 10. Sangsangre Horti-Hub (West Garo Hills District):      | 16.5.2017 |
| 11. Minneng Horti-Hub (South Garo Hills District):        | 16.5.2017 |
| 12. Zikzak Horti-Hub (South West Garo Hills District):    | 16.5.2017 |
| 13. Rongram Horti-Hub (West Garo Hills District):         | 17.5.2017 |

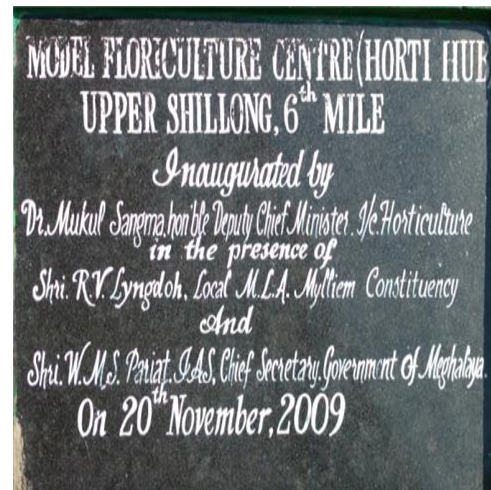
## UPPER SHILLONG HORTI HUB

1. **Date of Inspection:** 3.2.2017
2. **Location:** 5<sup>1/2</sup> Miles, Upper Shillong.
3. **District:** East Khasi Hills District
4. **Area in hectares:** 3.6 Ha. (approx) (Old area =2.1299 + New extended area = 1.5 Ha)
5. **Number of Spokes:** NA
6. **Maintenance Fund:**

Sl No		2013-14	2014-15	2015-16
1	<b>Wages</b>	4,50,000	7,54,800	8,58,160
2	<b>Materials &amp; Supplies</b>	5222,500		18,000
3	<b>Manure and fertilizers</b>	10,000 Organic and inorganic manure	1,00,000/- Organic fertilizers	
4	<b>Other Expenses</b>	80,000	12,000	
5	<b>Other Charges</b>	38,330	30,000	
		<b>11,40,000/-</b>	<b>8,96,800/-</b>	<b>8,76,160</b>



**Upper Shillong Horti-Hub**



**Foundation stone**

**7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:**

**2013-14**

Sl. No	Items	Amount Allotted (Rs.)	Achievement		Balance	
			Physical (Nos.)	Financial (Rs.)		
1	Wages	4,50,000/-	4500 days @ 100/day/per labourer	4,50,000/-	Nil	
2	Materials and Supplies	5,25,000/-	a) Gerbera standard 300 nos. @ Rs. 50/- b) 3000 nos. Gladioli bulbs @ Rs. 10/- c) 500 nos. Chrysanthemum @ Rs. 11/- d) 1002 Zantedeschia bulbs @ Rs. 150/- e) 166 bags Cocopeat @ Rs. 450/- f) 817 nos. budded roses @ Rs. 85/- g) 300 nos. Gypsophila @Rs. 105/- h) Limonium 300 nos. @ Rs. 45/-	1,50,050/- 30,000/- 5,500/- 1,50,300/- 74,700/- 69,445/- 31,500/- 13,500/-	4,79,995/- 45,000/-	5/-
3	Organic & Inorganic Fertilizers		a) 200 nos. Boon @ Rs. 73/- b) 50 kgs NPK @ Rs. 210/- c) 100 nos. Imidacel @ Rs. 120/- d) 286 pkt Indofil M-45 @ Rs. 45/- e) Cowdung 50 tonnes @ Rs. 1000/- ton	14,600/- 10,500/- 12,000/- 12,870/- 50,000/-	49,970/-	30/-
4	Office Expenses	80,000/-	1. JKAH Size paper 30 Rm 2. JK legal size 30 RM 3. HP 15 A cartridge 49 A 4. 3 nos. HP toner cartridge 49 A 5. CDRW 200 pcs 6. Pen drive 1 no. 7. Cannon Toner Cartridge 2 no. 8. DVD RW 40 pcs 9. 6 nos. HP Ink Cartridge 850 (black) 10. 6 nos. HP Ink Cartridge 854 (color ink) 11. 1 Pen drive 12. JK legal size paper (15 Rm) 13. Computer file 10x12 (23 nos.) 14. Mouse pad (2 nos.)	5520/- 6540/- 7260/- 10,740/- 2900/- 6000/- 8960/- 4800/- 7500/- 9300/- 6000/- 3770/- 1150/- 60/-	19,320/- 19,640/- 13,760/- 22,800/- 4,480/-	80,000/-

5	Other charges	38,300/-	Training on cultivation of various cut flowers w.e.f. 23.9.13 to 26.9.13 for 253 Trainees @ Rs. 100/- day as D.A.	25,300/-	38,300/-	30/-
	(a) Training					
	(b) Carrying charges		a) 3.2.14 Mawpran to Shillong for carrying of Alstroemeria (ML 05 C 3998)	2,600/-		
	b) 3.2.14 Mawpran to Shillong for dropping of Alstroemeria (ML 05 D 0268)		2,600/-			
	c) Laitkyrhong to Upper Shillong for dropping of leaf mould on 4.2.14 (ML 05 G 6938)		2,400/-			
	d) Laitkyrhong to Upper Shillong for dropping of leaf mould on 4.2.14 (ML 05 G 9366)		2,400/-			
	e) Laitkyrhong to Shillong for dropping of leaf mould on 4.2.14 (ML 05 G 5388)		2,400/-			
f) Shillong to Upper Shillong Hub for dropping of Horti. Inputs etc.	600/-					
	<b>TOTAL</b>		<b>11,93,265/-</b>			



*Cultivation of Alstroemeria*



*Cultivation of Bird of Paradise*



*Cultivation of Carnation*

2014-15

Sl. No	Items	Amount Allotted (Rs.)	Achievement		Balance	Remarks
			Physical (Nos.)	Financial (Rs.)		
1	Wages	7,08,800/-	4430 @ 160/-	7,08,800/-		
2	Materials and Supplies	35,000/-	(i) Lilium bulbs 875 nos @ 40 each	35,000/-		
3	Organic & Inorganic Fertilizers	65,000/-	(i) Bio Terminator 100 gm pkt for 50 kgs @ Rs. 46/kg (ii) Bio Shock 1 kg pkt @ Rs. 220/kg for 50 kg. (iii) Bio NPK 1 kg pkt @ Rs. 250/kg for 124 kg.	23,000/- 11,000/- 31,000/-	65,000/-	
4	Office Expenses	12,000/-	1. CFL Bulb (15 watts) 2 doz @ Rs. 3000/ doz. 2. Buckets 46 nos. @ Rs. 130 each. 3. Agarbate 1 pkt @ Rs. 20 each	6000/- 5980/- 20/-	12,000/-	
5	Other charges (a) Training  (b) Carrying charges	30,000/-	1. 3 nos. Orchids stand @ Rs. 8500 each 2. Training on floriculture on 12 <sup>th</sup> March 2015, for 28 farmers @ Rs. 160/ day D.A.	25,500/- 4480/-	29,980/-	20/-
			<b>TOTAL</b>	<b>8,50,780/-</b>		



Cultivation of Gerbera



Cultivation of Lady's Slipper Orchid



Cultivation of Chrysanthemum

**2015-16**

Sl. No	Items	Amount Allotted (Rs.)	Achievement	
			Physical (Nos.)	Financial (Rs.)
1	Wages	8,58,160/-	5048 MD @ Rs. 170	8,58,160/-
2	Materials and Supplies	18,000/-	450 nos. Asiatic Lilium @ Rs. 40/ bulb	18,000/-
3	Organic & Inorganic Fertilizers			
4	Office Expenses			
5	Other charges (a) Training (b) Carrying charges			
			<b>TOTAL</b>	<b>8,76,160/-</b>

**2016-17**

Sl. No	Items	Amount Allotted (Rs.)	Achievement	
			Physical (Nos.)	Financial (Rs.)
1	Wages	8,58,483/-	4743 MD @ 181/ day	8,58,483/-
2	Materials and Supplies	1,70,000/-	1. 3000 nos. carnations @ Rs. 25 each 2. 500 nos. Gerbera @ Rs. 50 each 3. 1000 nos. Lilium @ Rs. 40 each 4. 2000 nos. Gladioli @ Rs. 15 each	75,000/- 25,000/- 40,000/- 30,000/-
3	Organic & Inorganic Fertilizers	50,000/-	1. 35 MT cowdung @ Rs. 1300/MT 2. 3 nos. Mohkhiew @ Rs. 1000 each (big) 3. 2 nos. small Mohkhiew @ Rs. 450 each 4. 2 nos. Tari shyieng @ Rs. 300 each	45,500/- 3,000/- 900/- 600/-
4	Office Expenses			
5	Other charges (a) Training (b) Carrying charges			
			<b>TOTAL</b>	<b>10,78,483/-</b>

8. **Name of Crops grown:** Orchids, Gerbera, Carnation, Roses, Alstroemeria, Gypsophila, Chrysanthemum, Bird of Paradise, Winter Seasonal and Summer Seasonal Flower, Indoor Plant and Permanent flowering Shrubs, Pines etc.

9. **Sustainability of the Project:**

**Sale Proceed Generated Year Wise**

1. January 2010 – March 2011	=	₹	10,30,344.00
2. April 2011 – March 2012	=	₹	11,65,084.00
3. April 2012 – March 2013	=	₹	13,98,054.00
4. April 2013 – March 2014	=	₹	14,16,630.00
5. April 2014 – March 2015	=	₹	14,83,226.00
6. April 2015 – March 2016	=	₹	17,56,534.00
7. April 2016 – March August 2016	=	₹	9,48,045.00
<b>Total</b>			= ₹ 91,97,917.00
Interest in the Bank till June 2016			= ₹ 10,41,115.00
<b>Grand Total</b>			= ₹ 1,02,39,032.00

**(Rupees One Crore Two Lakhs Thirty Nine Thousand and Thirty Two) only**



**Sale Counter**



**Cymbidium Orchid being prepared for sale**



#### 10. Facilities available at the Horti Hub:

- (i) Cold Room
- (ii) Sale counter
- (iii) 24 Poly Houses

Structure	Area of the Poly House	Type of Flower Grown	Population
Polyhouse 1	500 Sq m	1. Cymbidium	1040 Nos
		2. Oncidium	81 Nos
		3. Lady' Slipper	110 N0s
		4. Cattleya	16 Nos
		5. Blue Vanda	24 Nos
		6. Seasonal and Indoor Plants	1650 Nos
Polyhouse 2	600 Sq m	1. Gerbera	2059 Nos
		2. Alstroemeria	100 Nos
Polyhouse 3	500 Sq m	1. Gerbera	2955 Nos
Polyhouse 4	375 Sq m	1. Gerbera	1504 Nos
		2. Chrysanthemum	80Nos
Polyhouse 5	225 Sq m	1. Gerbera	916 Nos
		2. Tube Rose	24 Nos
Polyhouse 6	154 Sq m	1. Gerbera	761 Nos
Polyhouse 7	500 Sq m	1. Gerbera	395 Nos
		2. Chrysanthemum	640 Nos
		3. Gypsophila	264 Nos
		4. Limonium	200 Nos
Polyhouse 8	500 Sq m	1. Gerbera	1207 Nos
		2. Chrysanthemum	607 Nos
		3. Capsicum	49 Nos
Polyhouse 9	500 Sq m	1. Carnation	2344 Nos
		2. Alstroemeria	146 Nos
Polyhouse 10	500 Sq m	1. Alstroemeria	413 Nos
		2. Gerbera	67 Nos
Polyhouse 11	400 Sq m	1. Alstroemeria	556 Nos
Polyhouse 12	200 Sq m	1. Gypsophila	466 Nos
		2. Liliium	203 Nos
Polyhouse 13	600 Sq m	1. Rose	1128 Nos
Polyhouse 14	300 Sq m	1. Bird of Paradise	345 Nos
Polyhouse 15	200 Sq m	1. Bird of Paradise	357 Nos
Polyhouse 16	200 Sq m	1. Liliium	366 Nos
		2. Statrice	181 Nos
		3. Chrysanthemum	361 Nos
Polyhouse 17	500 Sq m	1. Rose	1493 Nos
		2. Gerbera	41 Nos
		3. Statrice	92 Nos

Polyhouse 18	200 Sq m	1. Chrysanthemum	563 Nos
Polyhouse 19	200 Sq m	1. Indoor Plants	334 Pots
Polyhouse 20	60 Sq m	1. Lady's Slipper	450 Nos
Polyhouse 21	200 Sq m	1. Chrysanthemum	349 Nos
Polyhouse 22	200 Sq m	1. Alstroemeria	88 Nos
		2. Gerbera	246 Nos
Polyhouse 23	60 Sq m	1. Leather Leaf Fern	10 beds (2b ×8l) ft
Polyhouse 24	50 Sq m	1. Seedlings	90 Nos



*Cultivation of orchids in Polyhouse*



*Indoor Plants*

**11. Facilities for collection, packaging, storage, transportation and marketing of produce:**

- (i) One cold room installed for collection packaging and storage if necessary.
- (ii) No form of transport whatever is available for marketing of produce.

**12. Types of field demonstration and training given to farmers:**

- (i) All aspects regarding the cultivation of all the above types of flowers mentioned.
- (ii) Landscaping and different types of propagation for flower and fruits tree as well

**13. No. of field Demonstration and Training Given 2013 – 14, 2014 – 15, 2015 – 16:**

- (i) **2013-14:** 23.9.13 - 26.9.13: 253 Trainees were imparted training on cultivation of various varieties of cut flowers
- (ii) **2014-15:** 12.3.2015: 28 nos of Farmers were imparted a training on Floriculture
- (iii) **2016:** 23.5.2016: 32 nos of rural youth Krishi Vigyan Kendra (KVK) East Khasi Hill District were imparted training on Floriculture and Landscaping
- (iv) **2016:** 12.7.2016: 24 nos of I.A.S Officer visited the farm/Horti hub and were accordingly appraised of the different kinds of Horticulture and Floricultural activities going on.

23.8.2016: 18 nos of field functionaries viz field assistants A.D, H.D/AAI were given refresher training course on topic like landscape gardening and design for plants and flowers and cultivation of commercially grown flowers.

**14. Types of assistance given to farmers**

- (a) **In cash:** Nil
- (b) **In kind:** Nil

**15. No. of employees:**

- (i) 1 Assistant Director of Horticulture (A.D.H) /Hub Manager: Smt S. C. Kharpuri
- (ii) 3 Assistant Horticulture Inspector (A.H.I) /Demonstrator
- (iii) 14 Muster Roll

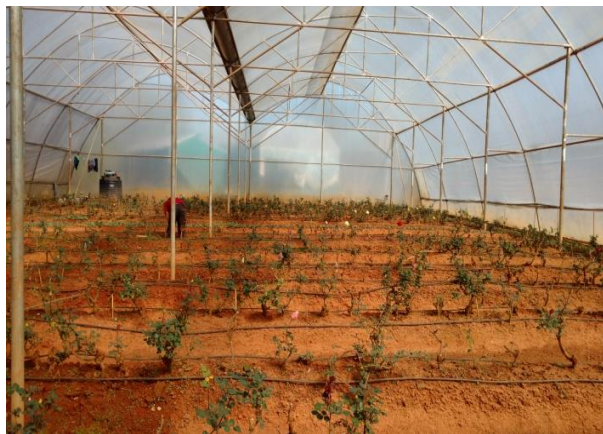
**16. Wages per worker:**

- (i) 1 No. labourer @ Rs. 203/day
- (ii) 3 Nos. labourers @ Rs. 192/day
- (iii) 11 Nos. labourers @ Rs. 181/day

**17. New Construction /Infrastructure improvement/New Facilities available at the Horti – Hub:**

At the extended area of the Hub (1.5 hectares)

- (i) Fencing constructed
- (ii) Constructed – 1 no. of Rose polyhouse of 500 sq ft.
- (iii) Constructed – 1 no. of Alstroemeria polyhouse of 400 sq ft.
- (iv) Constructed – 1 no. of Chrysanthemum polyhouse of 200 sq ft.
- (v) Constructed – 1 no. of Gypsophila polyhouse of 500 sq ft.
- (vi) Constructed – 1 no. of Lilium polyhouse of 200 sq ft.



*Rose cultivation in 500 sq ft polyhouse*

**18. Supplies and Materials Received:**

Planting materials of Orchids, Carnation, Roses, Gerbera, Bird of Paradise, Chrysanthemum, Kiwis, Golden Rod, Indoor Plants, Summer and Winter Seasonal seeds, Lilium, Alstroemeria and Gladioli bulbs. Earthen and plastic flower pots, Cocopeat Chips, Cowdung, Insecticides, Fungicides and Organic nutrient, Rice husk etc, Secateurs, Pruning saws, Watering Cans, Insecticides and Fungicides Pumps etc.

**19. Problem:**

- (i) Being a revenue generating hub, there is a urgent need for permanent Security guards/Chowkidars
- (ii) At present all three A.H.I/Demonstrator are being temporarily dispatched for duty from the Office of the District Horticulture Officer
- (iii) Since the inception/functioning of the Cafeteria trespassers and hooligans are on the rise, making fencing of the entire area of the Hub a top priority
- (iv) There is urgent need of replacing the UV plastics sheets of all polyhouses, as being too old, torn and dirty they don't serve the purpose any more
- (v) Absence of transportation of any kind slows down all farm and sale works
- (vi) Because of the increasing load of farm and office work, it is necessary to appoint more staff at the hub viz
  - 1 more Officer
  - 2 Permanent Assistant Horticulture Inspector (A.H.I): (Field)
  - 1 Peon
  - 1 Computer Operator

**20. Observation:**

- (i) The Horti-Hub was inaugurated on 20<sup>th</sup> November 2009.
- (ii) It has a ready market among the locals to whom all of its produce is sold at present.
- (iii) If more staff can be obtained it will be helpful for the maintenance of the hub.
- (iv) If some amount of the sale proceeds can be utilized for replacing/ repairing of polyhouses, it will greatly help.

## MAIRANG HORTI HUB

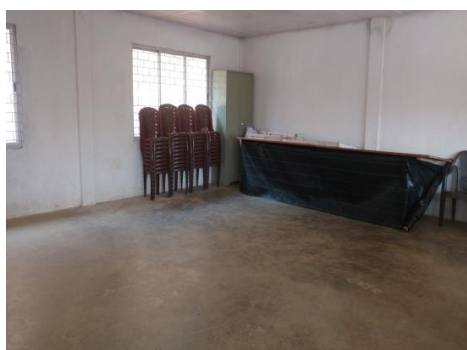
1. **Date of Inspection: 8.2.2017**
2. **Location:** Mairang
3. **District:** West Khasi Hills District
4. **Area in hectares:** 9 Ha. (approx)
5. **Number of Spokes:** Gerbera: 21 Nos  
Carnation: 15 Nos.

### 6. Maintenance Fund:

SI No		2013-14	2014-15	2015-16	2016-17
1	<b>Wages</b>	350000	442100	6,01,800	600920 (L.S)
2	<b>Materials &amp; Supplies</b> <b>Planting materials</b>	440000	20000	10000	120000
3	<b>Manure and fertilizers</b>	100000 Organic and inorganic manure fertilizers	38000 Organic manures bio fertilizers, bio pesticides etc		30000 Organic manures bio fertilizers, bio pesticides etc
4	<b>Office Expenses</b>	70000	9000		
5	<b>Other Charges</b>	38330	30000		
		<b>998330</b>	<b>539100</b>	<b>611800</b>	<b>750920</b>
	<b>Part II</b> <b>Other Administrative</b> <b>Expenses</b>	180000			



**Mairang Horti-Hub**



**Training Hall**



**Collection Center**

**7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:**

**2013-14**

Sl. No	Items	Allotment	Particulars	Quantity	Rate	Total	Saving
1	Wages	3,50,000/-	-	3500 MD	100/-	3,50,000/-	Nil.
2	Materials and Supplies	4,40,000/-	Orchids	294 Nos.	293/- & 400/-	4,39,900/-	100/-
	<b>Sub Total</b>					<b>7,89,900/-</b>	
3	Organic, inorganic manures, P.P. Chemicals, etc.	1,00,000/-	Soluble fertilizer	310.76 Kgs.	24/-	99,984/-	16/-
	<b>Sub Total</b>					<b>99,984/-</b>	
4	Office Expenses	70,000/-	LS	LS	LS	70,000/-	Nil.
	<b>Sub Total</b>					<b>70,000/-</b>	
5	Other Charges Transportation	15,000/- 23,330/-	Training Transportation	150 Nos. LS	100/- LS	15,000/- 23,330/-	Nil. Nil.
	<b>Sub Total</b>					<b>38,330/-</b>	
	<b>Grand Total</b>					<b>9,98,214/-</b>	<b>116/-</b>

**(Part-II) during 2013-14**

Sl. No	Items	Allotment	Particulars	Quantity	Rate	Total amount	Saving
1	Administrative Expenses Hospitality, Entertainment Expenses Gift etc	30,000/-	Lunch for VIP Light refreshment	115 Nos. 115 Nos.	150/- 110/-	30,000/-	Nil.
	<b>Sub Total</b>					<b>30,000/-</b>	
2	Farm works, Renovation, Repairing of old Hub, Maintenance of Generators etc	1,50,000/-	Cowdung	150 MT	1000/-	1,50,000/-	Nil.
	<b>Sub Total</b>					<b>1,50,000/-</b>	
	<b>Total</b>					<b>1,80,000/-</b>	

**2014-15**

Sl. No.	Items	Amount Allotted	Particulars	Quantity	Rate	Amount	Saving
1	Wages	4,42,100/-	Wages	2969 MD		4,42,100/-	Nil
2	Office Expenses: Cartridge, maintenance of vehicle, stationeries, POL, furniture, carpets, drape, registration and registration and insurance etc.	9,000/-	Xerox paper A-4, FS, A-3, Cellotape	10 Ream 10 Ream 6 Ream 6 Nos.	260/- 325/- 490/- 35/-	9,000/-	Nil
	<b>Sub Total</b>					<b>4,51,100/-</b>	
3	Materials and supplies: a) Planting materials etc. like seeds bulbs, corms etc. polythene sleeves/bags/polythene pipes/portrays coco peats/perlites/soilrites/ labeling tags/packing materials for cut flowers. b) Organic manure, biofertilizers, bio-pesticides etc.	20,000/-  <u>38,000/-</u> 58,000/-	Orchid  Organic Manure	50 Nos.  76 Bags	400/each  500/25 Kg	20,000/-  38,000/-	Nil  Nil
	<b>Sub total</b>					<b>58,000/-</b>	
4	Other Charges	30,000/-	Training for farmers Transportation	LS	-	30,000/-	Nil
	<b>Sub Total</b>					<b>30,000/-</b>	
	<b>Grand Total</b>					<b>5,39,100/-</b>	

**2015-16**

Sl. No.	Items	Allotment	Particulars	Quantity	Rate	Total Amount	Saving
1	Wages	6,01,800/-	Wages	3539 MD	170/-	6,01,770/-	30/-
2	Planting materials like bulbs, seedlings etc	10,000/-	Wild peach seeds	100 Kg	100/-	10,000/-	Nil
						<b>6,11,770/-</b>	<b>30/-</b>

2016-17

Head of Account	Items	Allotment	Particulars	Quantity	Rate	Total amount	Saving
2401- Crop Husbandary-119- Horticulture and vegetable Crops(36) Maintenance of Horti-Hubs Sixth Scheduled (Pt. II) Areas Plan 2016-17	Wages	6,00,920/-	Wages	3340 MD	181/-	6,00,800/-	120/-
	<b>Sub Total</b>					<b>6,00,800/-</b>	
	(21) Materials and Supplies: a) Planting materials etc. like seeds bulbs, corms etc. polythene sleeves/bags/polythene pipes/portrays coco peats/perlites/soil rites/labeling tags/packing materials for cut flowers.	1,20,000/-	Carnation	4800 Nos.	25/-	1,20,000/-	Nil.
	<b>Sub Total</b>					<b>1,20,000/-</b>	
	b) Organic manure, bio-fertilizers, bio-pesticides etc.	30,000/-	Cowdung	23.1 MT	1300/-	30,000/-	Nil.
	<b>Sub Total</b>					<b>30,000/-</b>	
<b>G. Total</b>						<b>7,50,800/-</b>	<b>120/-</b>



Blueberry



Raspberry



Pear



Peach



Kiwi



8. **Name of Crops grown:** **Under Green House-** Carnation, Gerbera, Cymbidium Orchid, Blue Berry, Raspberry  
**Under Open condition-** Kiwi Plantation, Temperate Mother plants, Propagation of Temperate, Strawberry cultivation & Nursery



**Cultivation of Carnation**



**Gerbera**



**Orchid**

9. **Sustainability of the Project:**

**Sale Proceeds Statement of Horti-Hub Mairang up to 31.1.2017**

		2013	2014	2015	2016	Total
<b>Carnation</b>	Production	23,500	85,667	1,40,580	17,500	<b>2,67,247</b>
	Sale Proceed	70,500	2,57,001	4,21,740	52,500	<b>8,01,741</b>
<b>Gerbera</b>	Production	-	37,560	44,769	4,500	<b>86,829</b>
	Sale Proceed	-	1,12,680	1,34,307	13,500	<b>2,60,487</b>
<b>Temperate Fruits</b>	Production	4,000	-	-	7,866	<b>11,866</b>
	Sale Proceed	1,20,000	-	-	2,35,980	<b>3,55,980</b>
<b>Total</b>	<b>Production</b>	<b>27,500</b>	<b>1,23,227</b>	<b>1,85,349</b>	<b>27,000</b>	<b>3,65,942</b>
	<b>Sale Proceed</b>	<b>1,90,500</b>	<b>3,69,681</b>	<b>5,56,047</b>	<b>2,16,000</b>	<b>14,18,208</b>

Note:

- (i) Interest up to 31.01.2017 = Rs. 31,606.00  
(ii) Bank charge for clearing = Rs. 762.00  
(iii) **Amt as per Passbook date 31.01.2017 = Rs. 14,49,052.00**  
**(Rupees Fourteen lakhs forty nine thousand and fifty two) only.**

10. Facilities available at the Horti Hub:

Structure	Type	Area/ Capacity	Crops	Variety	Population
Greenhouse I	Steel GI Pipe	1000 Sq. M	Carnation (planted, age is 2 years old)	1. Tropical Amazon 2. Carvette 3. Grancalure 4. Conefity 5. Novbles 6. Avalas 7. Dhvatta 8. Goldstride 9. Bianka	14000 Nos.
Greenhouse II	Steel GI Pipe	1000 Sq. M	Carnation	1. Siena (Red)	4360 Nos
				2. Flogo (White)	200 Nos
				3. Clotide (Pink)	240 Nos
				4. Giocle (Yellow)	2600 Nos
				5. Loris (Pink)	1360 Nos
				6. Trinidad (Red)	7520 Nos
				7. Onix	100 Nos
				8. Trudi	900 Nos
				9. Johnny (Red)	1200 Nos
	Total:	18480 Nos.			
Greenhouse III	Steel GI Pipe	1000 Sq. M	Carnation (age 2 years old crop)	Same as Greenhouse II	15500 Nos
Greenhouse IV	Steel GI Pipe	400 Sq. M	Gerbera	Miniature	
Greenhouse V	Steel GI Pipe	200 Sq. m	Cymbidium Orchid	Standard	180 Pots
Water Reservoir 1	Genap (completed)	50000 Lits	-	-	-
Water Reservoir 2	Genap (completed)	50000 Lits	-	-	-
Structure	Type	Area/ Capacity	Remarks		
Cold Room		Size: 5x3mx2.4  Capacity: 4.5 MT	Technical Problems		
Training Hall			Utilized as Grading hall for flower spokes		
Rest House	RCC Structure	-	-		
1 Chowkidar	Assam Type	-	-		

House	House		
3 Phase Electricity	-	-	Completed
Sanitary for Training Hall	-	-	Nil
Demonstration unit for Agrotextile Usages I No.	GI structure Shade net House + Crop Cover + Ground Cover	200 Sqm Shade net, 48 Sqm Crop Cover, 9 No tree for Ground Cover	<b>Service Provider:</b> SASMIRA MUMBAI (Through CTM Agro, Mumbai) <b>Outcome:</b> Ongoing experiment, after 3 yrs result.
KIWI plantation	Open field		400 Plants planted with Drip irrigation Year of Planting: 2015 Proposed Harvest: 2018
Blueberry & Raspberry	Tunnel Structure	400 SqM	<b>Crop:</b> Blueberry and Raspberry <b>Age:</b> Two Year crop <b>Propagation:</b> By cutting
Temperate Fruit			<b>Mother plant:</b> 250 Nos peach & 380 Nos plum <b>Propagation:</b> Epicotyle grafting <b>Stock Position:</b> 15000 Nos (Approx) Ready 25000 Nos to be Grafted
Open field cultivation	<b>Proposed for:</b> 1. Vegetables: 1 Ha 2. Strawberry: 1 ha		
Protected cultivation	<b>Proposed:</b> 3000 sq. m <b>Crop:</b> Lilium, Alstroemeria, Leather Leaf & Rose		



**Genap Water Reservoir**



**Rest House**



**Demonstration unit for Agrotextile Usages**

**11. Facilities for collection, packaging, storage, transportation and marketing of produce:**

Yes, done through Service Provider as per MoU.

**12. Types of field demonstration and training given to farmers:**

- (i) Training and Demonstration of Green House Construction (GC-01)

- (ii) Climate Control (CC-01)
- (iii) Green House Management (GM-01)
- (iv) Irrigation & Fertigation (IF-01)
- (v) Cultivation of Rose, Carnation, Gerbera, Orchid, Integrated Pest Nutrient Management, Post Harvest Handling and Marketing like demonstration on Grading, Bunching & Box Packaging.

**13. No. of field Demonstration and Training Given 2013 – 14, 2014 – 15, 2015 – 16:**

7 Nos. each of Field Demonstration were carried out on Major Crops like Carnation, Gerbera, Rose, Strawberry on various topics like Site Selection, Bed Preparation, Media Preparation Ratio, use of Ventury Fertigation System (as shown in the HUB), Plant density per square meter, Cultural Practices from time to time, Identify cause by Pest, Diseases and Physiological Disorder and Harvesting Index.

**14. No. of respondents attended training/demonstration:** All the members of Mairang Floriculture Association (200 Nos approx)

**15. Types of assistance given to farmers**

- (a) **In cash:** Nil
- (b) **In kind:** Nil

**16. No. of employees:**

- (i) 1 Horticulture Development Officer (H.D.O) : Shri S Kharlukhi
- (ii) 1 Horticulture Inspector (H.I) : Shri B.M. Syiemlieh
- (iii) 1 Assistant Horticulture Inspector (A.H.I) /Demonstrator : Shri L.Hujon
- (iv) 8 Muster Roll

**17. Wages per worker:** Rs. 170/- manday

**18. New Construction /Infrastructure improvement/New Facilities available at the Horti – Hub:**

Nil

**19. Supplies and Materials Received:**

Planting materials of Carnation sapling, Gerbera sapling, Cymbidium orchid, Blueberry and Raspberry, Kiwi plants, Strawberry, Temperate seed for raising Root stock. (Most of them need replacement).

**20. Problem:**

- (i) Replacement of All Carnation Beds- affected by Root Knot Nematodes.

(ii) Replacement of Miniature Gerbera with Hybrid Varieties.

(iii) Revolving Fund/ Reserved Fund for Maintenance of Green House damage due to Natural disaster like High Wind Speed during the month of Feb-April and Severe Frost during winter season for 4-5 months

(iv) Incidence of Pests and Diseases needs to be under control at the earliest, So PP chemicals and Soluble Fertilizer are a must.

(v) Marketing Problem- Minimum support price is the key note which can bring remuneration to the Floriculture Farming community.

(vi) Proposed that Horti Hub Manager be made a DDO Post



**Roof of a polyhouse damaged by strong winds**

## 21. **Observation:**

(i) The Horti-Hub was established in October 2010

(ii) Maintenance Fund is insufficient to meet the needs of the Hub.

(iii) Revolving Fund is required for better growth of the Hub. There is a need to permit utilisation of sale proceed on maintenance and various other expenditure of the Hub in addition to the given fund for maintenance of Hub.

(iv) It is also proposed that Horti Hub Manager be made a DDO Post as late approval from the Directorate increases cost for repairs.

(v) There is no permanent staff at the Horti-hub: The Horticulture Development Officer (HDO) who supervises the Horti-hub is also the Sub-Divisional Officer, Agriculture and his designation is attached to the Block Development Officer (BDO). He is assisted by a Horticulture Inspector and an Assistant Horticulture Inspectors/ Demonstrators who are temporarily dispatched for duty from the Office of the Sub-Divisional Officer

(vi) Marketing linkage is one of the most important criteria in sustaining the Hub.

(vii) At present, the produce of the Hub is sold mainly to North Bengal Floritech (NBF), Siliguri, which is the approved Service Provider. There is a need to increase the cost of the flowers as it has not been revised for many years now.

(viii) The produce is also sold to the locals and there is an effort to capture out-of-state markets as well. However, the demand is high during the celebration season which covers the winter months of December through February, when many flowers are not in bloom. Over time, the Hub is better able to capture this market but maintenance runs high as the heat in polyhouses has to be regulated during these months.

(ix) As the area is subject to severe winds, the plastic sheets of the polyhouses need to be replaced frequently. At present, they have considerable wear and tear which will

damage the plants once the rains set in. As such the cost of maintenance of polyhouse plastic films runs very high.

- (x) The region of West Khasi Hills District is favorable to Carnation. The plant grown here has a higher height which earns more profit. However they need to be replaced after a period of three years after which they are no longer commercially profitable. Due to insufficient funds, many plants have not been



replaced and most of them have been affected by rust and root knot nematodes root

**Carnation affected by Rust and Root Knot Nematode**

- (xi) Miniature Gerbera is planted in the Horti Hub. However, this variety having a diameter of 1 inch and a stem of 1 foot is not very commercially profitable except in the local market. The demand is greater for a higher stem height and hence there is a need to replace the miniature variety with a more profitable hybrid.
- (xii) Orchids are grown in the Hub, however, the market linkage is a pressing problem for these perishable products as there is no ready market for them.
- (xiii) There are 8 Muster Rolls at the Hub and more labourers are hired when the workload increases. However, it was felt that the number of Muster Roll is inadequate to tend to the Hub.
- (xiv) Most of the labour and maintenance cost goes into weeding. *Traw*, a local grass thrives persistently in the area has to be dealt with regularly as its roots chokes the crops grown in the Hub.
- (xv) Indian Council of Agricultural Research (ICAR) is currently experimenting 7 varieties of Gerberas in the Hub, under unprotected cultivation to realise a cheaper method of cultivating the flower.
- (xvi) The Horti-Hub is in collaboration with SASMIRA (Synthetic & Art Silk Mills' Research Association), Mumbai, which is linked to the Ministry of Textiles, Government of India. It has set up a demonstration centre where it is testing its products (Shade net, Ground cover, crop cover with ground net, etc). The Institute also gives farmers 90% subsidy on its agro-kits cost subject to a ceiling of Rs. 5 lakhs. There are 200 beneficiaries in Mairang who have availed benefit from this Institute. Many beneficiaries understand the advantages of the scheme however, clearance of their application is needed from the Directorate of Horticulture which delays the process.
- (xvii) To improve the performance and returns from the hub, plant propagation of flower seedlings was proposed to make it available to farmers at reasonable price

- (xviii) It was also proposed that the hub could function as a tissue lab and gene bank and collect germ plasm of indigenous crops and fruit species. This will ensure conservation of local crops that may be in danger of disappearing (eg. sohma, sohstap). It will also help earn royalty from private companies interested in propagating fruits and crops from its gene bank.
- (xix) Farmer's Hostel is needed to attend different levels of Training.
- (xx) The Hub uses Venturi Fertigation system of fertilization where Nitrates and Sulphates are given alternately, three days a week each and plain water is given once a week through drip irrigation system.



**Ventury Fertigation Tank**



**Drip Irrigation system**

## NONGSTOIN HORTI HUB

1. **Date of Inspection:** 14.2.2017
2. **Location:** Nongstoin
3. **District:** West Khasi Hills District
4. **Area in hectares:** 7.6 Ha.  
 Area under protected cultivation: 0.44 Ha.  
 Area under open cultivation: 0.21 Ha.
5. **Number of Spokes:** Carnation: 22 Nos.  
 Gerbera: 7 Nos.  
 Alstromeria: 2 Nos.
6. **Maintenance Fund:**

Sl No		2013-14	2014-15	2015-16	2016-17
1	<b>Wages</b>	480000	652000	719100	756580 (L.S)
2	<b>Materials &amp; Supplies</b>				
	<b>Planting materials</b>	440000	25000	18000	165000
3	<b>Manure and fertilizers</b>	100000	55000		45000
		Organic and inorganic manure fertilizers	Organic manures bio fertilizers, bio pesticides etc		Organic manures bio fertilizers, bio pesticides etc
4	<b>Office Expenses</b>	70000	8000		
5	<b>Other Charges</b>	38330	30000		
		<b>1128330</b>	<b>770000</b>	<b>737100</b>	<b>966580</b>
	<b>Part II</b>	340000			
	<b>Other Administrative Expenses</b>				



**Horti-Hub Map**



**Training Hall**



**7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:**

**2013-14**

Sl. No	Items	Allotment	Particulars	Quantity	Rate	Total amount	Saving
1	Wages	4,80,000/-	Wages	4800 MD	100/-	4,80,000/-	Nil
2	Materials and Supplies	4,40,000/-	Orchids	1173 Nos.	400/- & 350/-	4,40,000/-	Nil
	<b>Sub Total</b>					<b>9,20,000/-</b>	
3	Organic, Inorganic manure P.P. Chemicals	1,00,000/-	Soluble fertilizer	18.6 Lit/ 470 Kgs.	210/- & 80/-	1,00,000/-	Nil
	<b>Sub Total</b>					<b>1,00,000</b>	
4	Office Expenses	70,000/-	HP Cartridge 853 HP Cartridge 854 Cannon Toner cartridge	3 Nos. 3 Nos. 2 Nos.	1250/- 1550/- 4275/-	69,995/-	5/-
	<b>Sub Total</b>					<b>69,995/-</b>	
5	Other Charges Training for farmers Transportation	10,000/- 28,330/-	Training for farmers Transportation	100 Nos. LS	100/- LS	10,000/- 28,330/-	Nil. Nil.
	<b>Sub Total</b>					<b>38,330/-</b>	
	<b>Grand Total</b>					<b>11,28,325/-</b>	<b>5/-</b>

**(Part-II) during 2013-14**

Sl. No	Items	Allotment	Particulars	Quantity	Rate	Total amount	Saving
1	Administrative Expenses Hospitality, Entertainment Expenses Gift etc	40,000/-	Lunch for VIP Light refreshment	154 Nos. 154 Nos.	150/- 110/-	40,000/-	Nil.
	<b>Sub Total</b>					<b>40,000/-</b>	
2	Farm works, Renovation, Repairing of old Hub, Maintenance of Generators etc	3,00,000/-	Construction of Low cost polyhouse	200 Sqm.	935/-	1,87,000/-	
	<b>Sub Total</b>					<b>1,87,000/-</b>	
	<b>Grand Total</b>					<b>2,27,000/-</b>	

**2014-15**

Sl. No.	Items	Amount Allotted	Particulars	Quantity	Rate	Amount	Saving
1	Wages	6,52,000/-	Wages	4438 MD	160/-	6,51,400/-	600/-
2	<b>Office Expenses:</b> Cartridge, maintenance of vehicle, stationeries, POL, furniture, Carpets, drape, registration and registration and insurance etc.	8,000/-	HP Toner File board, file cover. Note sheet	I No. 100 Nos. 3 Ream	4620/- 30/- & 17/- 330/-	8,000/-	Nil
	<b>Sub Total</b>					<b>6,59,400/-</b>	
3	<b>Materials and supplies:</b> a. Planting materials etc. like seeds bulbs, corms etc. polythene sleeves/bags/polythene pipes/portrays coco peats/perlites/soilrites/labeling tags/packing materials for cut flowers. b. Organic manure, biofertilizers, bio-pesticides etc.	25,000/-          <u>55,000/-</u> 80,000/-	Leather leaf fern          Organic Manure	385 Nos.          68 Bags	65/-          810/-	25,000/-          <u>55,000/-</u> 80,000/-	Nil          Nil
	<b>Sub total</b>					<b>80,000/-</b>	
4	<b>Other Charges</b>	30,000/-	Transportation	LS	-	30,000/-	Nil
	<b>Sub Total</b>					<b>30,000/-</b>	
	<b>Grand Total</b>					<b>7,69,400/-</b>	<b>600/-</b>

**2015-16.**

Sl. No.	Items	Allotment	Particulars	Quantity	Rate	Total Amount	Saving
1	Wages	7,19,100/-	Wages	4229 MD	170/-	7,19,090/-	10/-
2	Planting materials like bulbs, seedlings etc	18,000/-	Gypsophila Plant	180 Nos.	100/-	18,000/-	Nil
	<b>Total</b>	<b>7,37,100/-</b>				<b>7,37,090/-</b>	<b>10/-</b>

2016-17

Head of Account	Items	Amount Alloted	Particulars	Quantity	Rates	Amount	Saving
2401- Crop Husbandary-119- Horticulture and vegetable Crops(36) Maintenance of Horti-Hubs Sixth Scheduled (Pt. II) Areas Plan 2016-17	<b>Wages</b>	7,56,580/-	Wages	4158 MD	203/181	7,56,514/-	66/-
	<b>Sub Total</b>					<b>7,56,514</b>	
	<b>(21) Materials and Supplies:</b>	1,65,000/-	Carnation	5725 Nos.	25/-	1,65,000/-	Nil.
	a. Planting materials etc. like seeds bulbs, corms etc. polythene sleeves/bags/polythene pipes/portrays coco peats/perlites/soil rites/labeling tags/packing materials for cut flowers.						
	<b>Sub Total</b>					<b>1,65,000/-</b>	
	b. Organic manure, bio-fertilizers, bio-pesticides etc.	45,000/-	Orga Hune ( Humic Acid) Vermi Orga Bio fertilizer Bio Organic	10 Lit. 250 Kgs. 51 Lits. 100 Kgs	100/ML 900/50 Kg. 250/100 ML. 70/Kg.	45,000/-	Nil.
	<b>Sub Total</b>					<b>45,000/-</b>	
<b>Grand Total</b>						<b>9,66,514/-</b>	



Alstroemeria



Carnation



Gypsophila



Gerbera

8. **Name of Crops grown: Under Protected Cultivation-** Carnation, Gerbera, Rose,  
Alstroemeria, Leather Leaf Fern,  
Orchid Cymbidium, Gypsophila  
**Under Open Cultivation-** Strawberry

9. **Sustainability of the Project:**

**Production (Crop-wise) and Sale Proceed Statement for 2013-14, 2014-15, 2015-16**

		2013-14	2014-15	2015-16	2016-17
<b>Carnation</b>	Production	180932	175743	98129	91360
	Sale Proceed	565371	500146	241151.5	285620
<b>Rose</b>	Production	10592	2800	5479	862
	Sale Proceed	33876	8400	16797	3361
<b>Gerbera</b>	Production	13750	4960	10629	14973
	Sale Proceed	45550	17730	42466	51455
<b>Strawberry</b>	Production	-	153	-	50.5
	Sale Proceed	-	2295	-	2020
<b>Leather Leaf</b>	Production	-	-	960	786
	Sale Proceed	-	-	2400	1625
<b>Alstroemeria</b>	Production	-	-	32270	24167
	Sale Proceed	-	-	135458	106936
<b>Gladiolus</b>	Production	-	-	-	199
	Sale Proceed	-	-	-	2040
<b>Chrysanthemum</b>	Production	-	-	-	140
	Sale Proceed	-	-	-	800
<b>Bouquet</b>	No.	-	-	-	8
	Sale Proceed	-	-	-	7100
<b>TOTAL</b>	<b>Production</b>	<b>205274</b>	<b>183656</b>	<b>147467</b>	<b>132537</b>
	<b>Sale Proceed</b>	<b>644797</b>	<b>528571</b>	<b>438272.5</b>	<b>460957</b>

NOTE:

Total sale proceed generated as on 06.02.2017	= Rs. 3452916.00
Total interest credited	= Rs. 419521.00
Total	= Rs. 3872437.00
Debited from the A/C	= Rs. 2043.00

**Actual sale proceeds generated as on 06.02.2017 = Rs. 3870394.00**

**(Rupees Thirty-eight lakh seventy thousand and three hundred ninety-four) only.**

**10. Facilities available at the Horti Hub:**

- (i) RCC water Reservoir of 50000 Lit Capacity.
- (ii) RINAC Cold Room of 9 MT Capacity
- (iii) 32 KVA Transformers
- (iv) Collection Centre, Training Hall, Labour Barrack
- (v) Chain link fencing of the Hub area
- (vi) ISRAEL GENAP water reservoir of 50000 Lit Capacity
- (vii) 40 KVA DG Set
- (viii) Electrical pump & Shed construction
- (ix) Water harvesting pond
- (x) Farmers' Hostel
- (xi) Green Houses (9 Nos)



*RCC Water Reservoir*



*Genap Water Reservoir*

**11. Facilities for collection, packaging, storage, transportation and marketing of produce:**

- (i) Collection Centre
- (ii) Grading Hall
- (iii) Cold Room
- (iv) Services done by buyer



*Water Harvesting Pond & Pump House*

**12. Types of field demonstration and training given to farmers:**

- (i) On Campus Training & demonstration on concept of protected cultivation, Green House Construction, Selection of low volume and high value crops under protected cultivation. Package of practices for cultivation of Carnation, Gerbera, Alstroemeria, Rose, Strawberry, Grading, Packaging, Marketing of the produce etc.
- (ii) Off Campus field demonstration on individual farmers field regarding the cultural practices of different flower crops & Identification of pest & diseases along with the control, measure to be taken.



**Farmer's Hostel**

**13. No. of field Demonstration and Training given: 10 Nos.**

14. **No. of respondents attended training/demonstration:** 100 Nos (approx) depending on the training programme

15. **Types of assistance given to farmers**

- (a) **In cash:** Nil
- (b) **In kind:** Nil

16. **No. of employees:**

- (i) 1 no. I/C Hub- Manager : Smt. A. Syndor
- (ii) 2 nos. Assistant Director of Horticulture : Smt. B. Syiem, Shri Sawkmie
- (iii) 1 no. Demonstrator
- (iv) 10-14 nos Muster Roll (Depending on work load).

17. **Wages per worker:** Rs. 181/day

18. **New Construction/Infrastructure improvement/New Facilities available at the Horti-Hub:**  
Nil

19. **Supplies and Materials Received:**

**Planting materials:** Carnation, Gerbera, Rose, Alstromeria, Leather leaf fern, Orchid Cymbidium, Strawberry



**Cymbidium orchid**



**Strawberry**

20. **Problem:**

- (i) High cost of planting materials: The rate of planting materials is increasing every year, however the Maintenance Fund allotted for procurement of planting material is very less
- (ii) Non available of fund for buying of fertilizers & P.P. chemicals.
- (iii) Lack of Special/ Reserve fund for maintenance of green houses damaged due to the natural disaster

- (iv) Marketing constraint: Cut flowers can be sold at a reasonable price in the local market however the demand is very low. Hence the produce has to be sold outside at a very low price.
- (v) The cold room is non-functional and in need of repair.

**21. Observation:**

- (i) The Horti-Hub was established on December 2010
- (ii) There is a need to permit utilisation of sale proceed as a revolving fund for maintenance of the Horti Hub.
- (iii) In one of the 1000 sq m polyhouses, only three beds of Carnations were replaced on 24.1.2016. The rest of the plants have not been replaced since 20.19.2013 due to fund constraints. They are no longer commercially profitable



**Carnations affected by Root Knot Nematode**



**3 beds of Carnations replaced in 1000 sq m polyhouse**

- (iv) Marketing linkage is one of the factors which can lead to a better performance of the Hub.
- (v) The produce of the Hub is sold both locally and to North Bengal Floritech (NBF), Siliguri, which is the approved Service Provider. Alstroemeria is sold @ Rs. 4/- and Carnations and Gerbera @ Rs. 3/-. There is a need to increase the rate at which flowers are sold to the Company as it has not been revised for many years.
- (vi) Production of Certified planting materials within the state



**Locals buying gerbera from Horti-Hub**

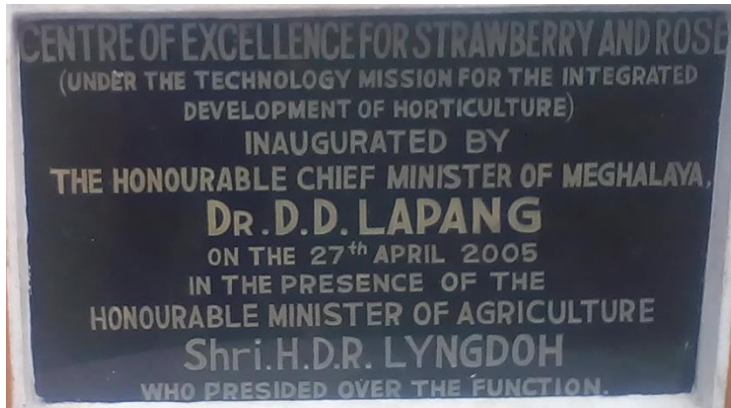
- (vii) The Horti-Hub was envisioned to be a Carnation Hub. However, due to the need for crop rotation, different varieties of plants have been introduced to the Horti-Hub.

## DEWLIH HORTI HUB

1. **Date of Inspection:** 20.2.2017
2. **Location:** Lumnongrim, Dewlieh, Umsning
3. **District:** Ri Bhoi District
4. **Area in hectares:** 8500 sq m
5. **Number of Spokes:** NA

6. **Maintenance Fund:**

Sl No		2013-14	2014-15	2015-16	2016-17
1	<b>Wages</b>	400000	506280	719100	756580 (L.S)
2	<b>Materials &amp; Supplies</b> <b>Planting materials</b>	500000	32000	18000	163637
3	<b>Manure and fertilizers</b>	100000 Organic and inorganic manure fertilizers	42000 Organic manures bio fertilizers, bio pesticides etc		43000 Organic manures bio fertilizers, bio pesticides etc
4	<b>Office Expenses</b>	80000	12000		
5	<b>Other Charges</b>	38330	30000		
		<b>1118330</b>	<b>622280</b>	<b>737100</b>	<b>963217</b>



**Foundation Stone**



**Outer view of Polyhouses**



7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:

2013-14

Sl. No	Items of the Scheme	Amount sanctioned (Rs.)	Achievement		Saving excess	Remarks
			Physical	Financial (Rs.)		
1	<b>Wages</b> @ Rs. 160/- per Manday	4,00,000.00	4000 MD	4,00,00.00		
2	<b>Materials and Supplies</b>	6,00,000.00				
(a)	1. Strawberry punnets		15600 nos	97,500		
	2. FYM		250 MT	1,75,000		
	3. Earthen pots		100 nos	2800		
	4. Decorative pots		100 nos	8300		
	5. Quick lime		200 tins	17600		
	6. CuSo4		20 kgs	3200		
(b)	7. Bone metal		1000 kgs	20000		
	8. Petunia		900 nos	900		
	9. Marigold		1628 nos	8800		
	10. Sweet William		1600 nos	400		
	11. Phlox		1700 nos	420		
	12. River sand		50 mt	35000		
	13. Inline lateral		300 mtrs	10200		
	14. Pvc pipe		20 nos	7800		
	15. End stop		500 nos	2500		
	16. Grommet		500 nos	3500		
	17. Hold tite		20 nos	3800		
	18. Teflon tape		45 nos	2200		
	19. Liliium oriental		1500 nos	75000		
(c)	20. Chrysanthemum		1500 nos	18000		
	21. Indofil M 45		40 kgs	14880		
	22. Ekalux		30 lit	15000		
	23. Rapid root		13 lit	8710		
	24. Neemshield		1 mt	50000		
	25. Wet well		10 lit	3737		
	26. Boon		20 lit	14673		
			<b>Total</b>	<b>6,00,000.00</b>		

3	<b>Other Charges</b> 1. Transportation 2. Training	38330.00	L.S. 3 nos	17300 21000		
			<b>Total</b>	<b>38300</b>	<b>30</b>	
4	<b>Office Expenses</b> 1. Maintenance of vehicle, stationeries 2. POL	80000.00	L.S L.S	69987 10000		
			<b>Total</b>	<b>79987</b>	<b>13</b>	
	<b>Total</b>	<b>11,18,330.00</b>		<b>11,18,287.00</b>		

**2014-15**

Sl. No.	Items of the Scheme	Allotment	Physical	Financial	Remarks
1	<b>Wages</b>	5,06,280/-	3393 M.D	5,06,280/-	
2	<b>Materials and supplies:</b> 1. Polythene Pipes 2. U.V. film 3. Anandham	74,000/-	300 Mtrs 42 Kg 385 kg	15,000/- 17,000/- 42,000/-	
3	<b>Other Charges:</b> 1. Transportation etc.	30,000/-	LS	30,000/-	
4	<b>Office Expenses:</b> 1. P.O.L. maintenance of vehicle etc.	12,000	LS	12,000/-	
	<b>Total</b>	<b>6,22,280/-</b>		<b>6,22,280/-</b>	

**(Rupees Six lakhs twenty-two thousand two hundred eighty) only**

**2015-16**

Sl. No	Items of the Scheme	Amount sanctioned (Rs.)	Achievement		Saving excess	Remarks
			Physical	Financial (Rs.)		
1	<b>Wages</b> @ Rs. 170/- Manday	7,19,100.00	4230 MD	7,19,100.00		
	<b>Materials and Supplies</b>	18,000.00				
	1. Mohkhiew		20 Nos.	10,000.00		
	2. Wait		10 Nos.	3,000.00		
	3. Khoh		12 Nos.	2,400.00		
	4. Star		10 Nos.	600.00		
	5. Knup		10 Nos.	2,000.00		
	<b>Total</b>	<b>Rs. 7,37,100.00</b>		<b>Rs. 7,37,100.00</b>		

**(Rupees Seven lakhs thirty seven thousand one hundred) only**

**2016-17**

Items	Amount Sanctioned (Rs.)	Physical achievement	Financial achievement (Rs.)	Saving
<b>Wages</b>	8,77,885	LS	860812	17073
	<b>Total</b>		<b>8,60,812/-</b>	
<b>21-Materials and Supplies:</b>				
Planting materials & polypipes.	1,63,637			Nil.
i) Gerbera seedlings @ 50 per plant		3200 Nos	160000	
ii) Polypipe (1" dia) @ 50/mtr		72.74 mtrs	3637	
1. Organic manure, bio-fertilizers, bio-pesticides.	43,000			Nil.
i) Stones benefit liquid compost organic manure @ 600/ltrs		20 ltrs	12000	
ii) NPK (1 Kg) @ 250/kg		20 kg	5000	
iii) Biocure F (250 ml) @ 138.75/pkg		12.5 ltrs	6937.50	
iv) Biocure B (250 ml) @ 138.75/pkg		12.5 ltrs	6937.50	
v) Nimbecidine (250 ml) @ 187.50/ pkg		16.25 ltrs	12187.50	
Discount on above items Rs 62.50				
	<b>2,06,637/-</b>	-	<b>2,06,637/-</b>	

**(Rupees Two lakh six thousand six hundred thirty-seven) only**

8. **Name of Crops grown:** Gerbera, Leather Leaf fern, Rose, Mukhra, Vanda, Dendrobium



**Cultivation of Gerbera**



**Vanda**



**Dendrobium**

9. **Sustainability of the Project:**  
**Production (Crop-wise)**

		2013-14		2014-15		2015-16
<b>Gerbera</b>	Rate (Rs.)	(i) Rs. 3/ stem	(ii) Rs. 5/ stem	(i) Rs. 3/ stem	(ii) Rs. 5/ stem	(i) Rs. 3/ stem
	Production	174790 Nos.	6574 Nos.	87280 Nos.	4201 Nos.	109200 Nos.
	Sale Proceed	5,24,370	24,290	261840	21005	205320
<b>Vanda</b>	Rate (Rs.)	-	-	(i) Rs. 20/stem	(ii) Rs. 50/stem	(i) Rs. 20/stem
	Production	-	-	1522 Nos.	203 Nos.	768 Nos.
	Sale Proceed	-	-	13739	10150	15360
<b>Dendrobium</b>	Rate (Rs.)	-	-	(i) Rs. 7/ stem		(i) Rs. 7/ stem
	Production	-	-	510 Nos.		1080 Nos.
	Sale Proceed	-	-	3570		7560
<b>Mukhra</b>	Rate (Rs.)	-	-	-	-	(i) Rs. 20/stem
	Production	-	-	-	-	172 Nos.
	Sale Proceed	-	-	-	-	3440
<b>Rose</b>	Rate (Rs.)	-	-	-	-	(i) Rs. 5/ stem
	Production	-	-	-	-	1000 Nos.
	Sale Proceed	-	-	-	-	5000

\* **Rate i – rate sold to service provider under MOU**

**Rate ii – rate sold at the farm itself.**

Income generated during 2013-14, 2014-15 and 2015-16

(i) Rs. 6,37,760.00

(ii) Rs. 11,35,892.00

(iii) Rs. 2,30,000.00

**Rs. 20,03,652.00 (Statement of the bank till 03.08.2015 = Rs. 21,10,174.00)**

**10. Facilities available at the Horti Hub:**

Centralised water tank for drip irrigation and fogging system, Polyhouses:

Sl No.	Crop.	Area. (Based on GPS reading taken on 27 <sup>th</sup> June, 2017)
1.	Gerbera	2810 Sqm. (with drip irrigation and fertigation facility)
2.	Rose	1515 Sqm. (with drip irrigation and fertigation facility)
3.	Mokhra	980 Sqm.
4.	Dendrobium	220 Sqm.
5.	Blue vanda	928 Sqm.



**Genap Water Reservoir**



**Mist fogger & fan**



**Irrigation system**

**11. Facilities for collection, packaging, storage, transportation and marketing of produce:**

At present there is a Collection centre where packaging, grading and sorting of the produce is done at the Dewlieh Horti-hub. A cold storage unit is also present although non- functioning and initiative to invite engineers to repair the same has been taken. A Mahindra pick-up truck is also attached to the hub to transport the produce to the Umsning station, from where the produce can then be sent to any desired location.



**Labourers packing strawberries for sale**

**12. Types of field demonstration and training given to farmers:**

Hands on training

**13. No. of field Demonstration and Training given:**

- (i) 2013-14 - 8 Nos.
- (ii) 2014-15 - 9 Nos.
- (iii) 2015-16 - 7 Nos.

**14. No. of respondents attended training/demonstration:**

- (i) 2013-14 - 112 Nos.
- (ii) 2014-15 - 361 Nos.
- (iii) 2015-16 - 200 Nos.

**15. Types of assistance given to farmers**

- (a) **In cash:** Nil
- (b) **In kind:** Nil

**16. No. of employees:**

- (i) 1 Agriculture Development Officer (A.D.O) in-charge
- (ii) 1 Demonstrator
- (iii) 10 Muster Rolls

**17. Wages per worker:** Rs. 225/-

**18. New Construction /Infrastructure improvement/New Facilities available at the Horti - Hub during 2013-14, 2014-15 and 2015-16:**

Nil

**19. Supplies and Materials Received during 2013-14, 2014-15 and 2015-16:**

2013-14: Liliun 1500 Nos., Chrysanthemum 1,500 Nos., Petunia 900 Nos., Marigold 1,628 Nos., Sweet William 1,600 Nos., Phlox 1,700 Nos.

**Other material supply received:** Gerbera, Vanda, Mukhra, Rose, Dendrobium, Leather Leaf Fern

**20. Problem:**

- (i) Maintenance of farm infrastructure including repair of Polyhouses, drip irrigation system, DG set, Bore well, electrical appliances like Starter pump, Cold room, etc requires an immediate requirement of fund as defect in any of these may hamper the entire production process.
- (ii) Maintenance fund should also include fund for replacement of planting material depending on the type of crop eg., Gerbera plants require replacement once in three years.
- (iii) Wages of muster rolls has increased to Rs. 225/- per manday and as such the fund under wages should also be enhanced so that additional work force can be created for better productivity.

## 21. Observation:

- (i) North Bengal Floritech (NBF) is the approved Service Provider and provides packaging materials and fertilizers. Gerbera is sold to NBF @ Rs. 3/- , Dendrobium @ Rs. 7/-, Vanda @ Rs. 30/- and Roses @ Rs. 5/-. The company provides a constant market to the Hub, but there is a need to revise the rate at which flowers are sold to it as the price offered by NBF is very low.
- (ii) The Hub has adopted organic farming for two years now. Yield has comparatively decreased in this stage of adaption. It was suggested that perhaps non-food crops like Flowers can be given chemical fertilizers for better yield.
- (iii) Insufficient Maintenance Fund compels the farm to replace Gerbera after 4 years although the flower needs to be replaced in 3 years.



**A cow kept at the Horti-hub for fresh supply of manure**

- (iv) Dendrobium orchid is grown in the Hub. However, to be commercially profitable a single branch needs to bear about 10 flowers. As the flowers are not compatible with the region, they bear only 3-4 flowers. The region is reportedly more favourable to the production of Gerbera.
- (v) There are 11 varieties of roses grown. This has the disadvantage of not being able to meet a big order for any one variety. It would be more feasible to plant a large number of roses of only 2-3 varieties.
- (vi) Strawberry is grown under open cultivation in an area of more than 6000 sq m. Strawberries are sold locally @ Rs. 80/- per packet (0.25 kg) and out-of-state @ Rs. 180/- per kg (wholesale rate).



**Open cultivation of strawberry**



**Hydroponic cultivation of strawberries**

- (vii) Strawberry is also grown hydroponically for production of strawberry runners in a 1000 sq m polyhouse. Production of berries is of secondary importance.
- (viii) The Horti-hub was revamped in 2012-13. However, maintenance of polyhouse is a continuous process as the plastic films get torn time and again by strong winds.

## THADLASKEIN HORTI HUB

1. **Date of Inspection:** 27.2.2017
2. **Location:** Thadlaskein
3. **District:** West Jaintia Hills District
4. **Area in hectares:** 2.52 Ha.
5. **Number of Spokes:**



Sl. No	Year	No. of spokes	Service provider	Crop
1.	2007	6	Zopar Pvt. Lmt.	Rose
2.	2008	8	Zopar Pvt. Lmt.	Rose
3.	2009	-	-	-
4.	2010	3 15 22	Zopar Pvt. Lmt. North Bengal Floritech Florence Flora Floritech	Rose Gerbera Carnation
5.	2011	9 17	Zopar Pvt. Lmt. North Bengal Floritech	Chrysanthemum Gerbera
6.	2012	6 16 8	Zopar Pvt. Lmt. North Bengal Floritech Florence Flora Floritech	Chrysanthemum Gerbera Fern
7.	2013	27 31	Zopar Pvt. Lmt. North Bengal Floritech	Chrysanthemum (22) & Alstromeria (5) Gerbera(21) & Alstromeria (10)
8.	2014	7	North Bengal Floritech	Gerbera (5) & Fern (2)
9.	2015	33	North Bengal Floritech	Gerbera (21) & Fern (8) & Chrysanthemum (4)
<b>Total</b>		<b>208</b>		

### 6. Maintenance Fund:

Sl No		2013-14	2014-15	2015-16	2016-17
1	<b>Wages</b>	450000	647520	739500	756580 (L.S)
2	<b>Materials &amp; Supplies Planting materials</b>	525000	30000	12000	157000
3	<b>Manure and fertilizers</b>	150000 Organic and inorganic manure fertilizers	62000 Organic manures bio fertilizers, bio pesticides etc		43000 Organic manures bio fertilizers, bio pesticides etc
4	<b>Office Expenses</b>	80000	11000		
5	<b>Other Charges</b>	38330	30000		
		<b>1243330</b>	<b>780520</b>	<b>751500</b>	<b>956580</b>
	<b>Part II Other Administrative Expenses</b>	340000			



7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:

2013-14

Sl. No	Items	Allotment	Particulars	Quantity	Rate	Total	Saving
1	Wages	4,50,000.00	Labour engaged at Thadlaskein Horti-Hub	4500 MDs	100/-	4,50,000.00	
2	Materials and Supplies	5,25,000.00	1) Vegetable Seeds 2) Knup 3) Poly Pipes 4) Poly Bags 5) Soil rite 6) Coco Husk 7) Seasonal Flowers 8) Air Circulation 9) Ruscus 10) Chrysanthemum 11) Chrysanthemum Lighting and darkening	L/S 10 nos 6 Rolls 50 kg 100 kg 630 kg 1,000 nos 1 nos 200 nos 9878 nos 500 sqmtr	- 180/- 1270/- 210/- 46/- 55/- 1250/100 nos 42,000/- 75/- 3.5/- 345/sqmtr	51,680.00 1,800.00 7,620.00 10,500.00 4,600.00 34,650.00 12,500.00 42,000.00 1,50,000.00 34,573.00 1,72,500.00	
	<b>Sub Total</b>	<b>5,25,000.00</b>				<b>5,24,999.00</b>	<b>1.00</b>
3	Organic, Inorganic manure P.P. Chemicals	1,50,000.00	1) DAP 2) Urea 3) SSP 4) MOP Handling Charge 5) Magnesium Sulphate 6) MAP 7) Slake Lime 8) Copper EDTA 9) KNo3 10) Multiplex 11) Confidor 12) Chlorpyriphos 13) Fenvelerate 14) Regent 39 15) Sparsh 16) Cowdung 17) Gloves	0.2 MT 0.2 MT 0.6 MT 0.1 L/S 20 kg 20 kg 15 bags 20 kg 20 kg 20 kg 7 Lt. 1 Lt. 1 Lt. 20 kg 5 kg 3 kg 104 MT 5 pairs	26.156/- 6088/- 9321/- 20081/- 80/-MT 55/- 205/- 170/- 1155/- 151/- 82/- 236/100ml 37/100ml 31/- 87.50/- 390/- 900/- 215/-	5,323.20 1,217.60 5,592.00 2,008.10 88.00 1,100.00 4,100.00 2,550.00 23,100.00 3,020.00 2,296.00 2,360.00 370.00 620.00 437.50 1,170.00 93,600.00 1,075.00	
	<b>Sub Total</b>	<b>1,50,000.00</b>				<b>1,49,936.50</b>	<b>63.50</b>

4	Office Expenses	80,000.00	1) Vehicle Insurance 2) Vehicle Repairing 3) United Carpet 4) Lock and keys	L/S L/S 44 mtr 4 nos	489/mtr 120/-	24,651.00 32,650.00 21,516.00 480.00	
	<b>Sub Total</b>	<b>80,000.00</b>				<b>79,297.00</b>	
5	Other Charges	38,330.00	1) Training 2) HSD	300MDs 151 Lits.	100 -	30,000.00 8325.00	
	<b>Sub Total</b>	<b>38,330.00</b>				<b>38,325.00</b>	<b>5.00</b>
	<b>Grand Total</b>	<b>12,43,330</b>				<b>12,42,557.50</b>	<b>772.50</b>

**(Part-II) during 2013-14**

Sl. No	Items	Amount Allotted	Particulars	Quantity	Rate	Amount	Savings
1	Administrative Expenses Hospitality, Entertainment Expenses Gift etc	40,000.00	Accommodation Bill pay to CTC Orchid Thadlaskein on 1) 01/07/2014 2) 10/10/2014 3) 14/10/2014 4) 28/01/2015 5) 30/07/2014	-	-	3499.00 8599.00 16,460.00 5703.00 5501.00	
	<b>Sub Total</b>	<b>40,000.00</b>				<b>39762.00</b>	<b>238.00</b>
2	Farm works, Renovation, Repairing of old Hub, Maintenance of Generators etc	3,00,000.00	Replacement of U.V. Film and Shade nets in Rose Poly house (1008 sqmt), Mini Gerbera poly house (500 sqmt), Gerbera Poly house (500 sqmt) 1. U.V Film 2. Aluminum Profile 3. Locking wiring 4. 4 GI cotton pipe 21mm 5. Cotton clamp 6. GI wire 14 gauge 7. 30% white shade net 8. 30% Black Shade net 9. Knots and bolts	200 kg 420 mtrs 750 mtrs 120 mtrs 750 nos 20 kg 900 sqmt 600 sqmtr 118 nos	800/kg 52/mtr 18/mtr 66/mtr 15/- 69/kg 55/sqmtr 55/sqmtr 11/-	1,60,000.00 22,152.00 13,500.00 7,920.00 11,250.00 1,380.00 49,500.00 33,000.00 1,298.00	
	<b>Sub Total</b>	<b>3,00,000.00</b>				<b>3,00,000.00</b>	
	<b>Grand Total</b>	<b>3,40,000.00</b>				<b>3,39,762.00</b>	<b>238.00</b>

**2014-15**

Sl. No.	Items	Amount Allotted	Particulars	Quantity	Rate	Amount	Saving
1	<b>Wages</b>	6,47,520.00	MR for March to November 2014 MR for December 2014 to February 2015	141 MD 273MD 859MD 194MD	100/- 180/- 170/- 160/-	1,41,800.00 49,140.00 1,46,030.00 3,10,400.00	
	<b>Sub Total</b>	<b>6,47,520.00</b>				<b>6,47,370.00</b>	<b>150.00</b>
2	<b>Office Expenses:</b> Cartridge, maintenance of vehicle, stationeries, POL, furniture, Carpets, drape, registration and registration and insurance etc.	11,000.00	Maintenance of vehicle Maintenance of vehicle Maintenance of vehicle Maintenance of vehicle	- - - -	L/S L/S L/S L/S	2,980.00 2,850.00 3,000.00 2,170.00	
	<b>Sub Total</b>	<b>11,000.00</b>				<b>11,000.00</b>	
3	<b>Materials and supplies:</b> a) Planting materials etc. like seeds bulbs, corms etc. polythene sleeves/ bags/ polythene pipes/portrays coco peats/ perlites/soilrites/labeling tags/packing materials for cut flowers. b) Organic manure, biofertilizers, bio-pesticides etc.	30,000.00 62,000.00	Tomato Amitab (10gm pkg) Tomato 017 (10gm pkg) Cabbage 139 (10gm pkg)  Cowdung	15 pkt 32 pkt 12 pkt  45.9MT	900/- 460/- 138/-  1,350/-	13,500.00 14,720.00 1,656.00  61,965.00	124.00 35.00
	<b>Sub total</b>	<b>92,000.00</b>				<b>91,841.00</b>	<b>159.00</b>
4	<b>Other Charges;</b> Including Transportation Charges, farmers training etc.	30,000.00	Three days farmers training at Thadlaskein Horti-Hub	100x3 days	100/MD	30,000.00	
	<b>Sub Total</b>	<b>30,000.00</b>				<b>30,000.00</b>	
	<b>Grand Total</b>	<b>7,80,520.00</b>				<b>7,80,211.00</b>	<b>309.00</b>

**2015-16.**

Sl. No.	Items	Amount Allotted	Particulars	Quantity	Rate	Total Amount	Saving
1	Wages	739500.00		435MD	170/MD	739500.00	
2	Planting materials like bulbs, seedlings etc	12,000.00	Tomato Seeds (10 gm pkg) Broccoli Seeds (10 gm pkg) Capsicum (10 gm pkg) cocopeat	10 pkt 5 pkt 2 pkt 54 kg	425/- 380/- 1,988/- 35/kg	4,250.00 1,900.00 3,976.00 1,890.00	
					<b>Total</b>	<b>7,51,516.00</b>	
					<b>R/O</b>	<b>7,51,500.00</b>	

2016-17

Head of Account	Items	Amount Alloted	Particulars	Quantity	Rates	Amount	Saving
2401- Crop Husbandary-119- Horticulture and vegetable Crops(36) Maintenance of Horti-Hubs Sixth Scheduled (Pt. II)Areas Plan 2016-17	<b>(02)Wages</b>	7,56,580.00	-	4180 MD	181/MD	7,56,580.00	
	<b>Sub Total</b>	<b>7,56,580.00</b>				<b>7,56,580.00</b>	
	<b>(21) Materials and Supplies:</b>	1,57,000.00	Rose planting materials (Budded)	1366 nos	115/-	1,57,090.00	
	a) Planting materials etc. like seeds bulbs, corms etc. polythene sleeves/bags/polythene pipes/portrays coco peats/perlites/soil rites/labeling tags/packing materials for cut flowers.						
	<b>Sub Total</b>	<b>1,57,000.00</b>				<b>1,57,090.00</b>	
	b) Organic manure, bio-fertilizers, bio-pesticides etc.	43,000.00	1) Cowdung 2) Ananda Gold 3) Azotobacter 4) Rhizobium 5) Speed 6) Vericorn-L	10 MT 20 bags 50 kg 50 kg 24 nos 81 nos	1300/- 500/- 85/- 85/- 260/50ml 65/250ml	13,000.00 10,000.00 4,250.00 4,250.00 6,240.00 5,265.00	
	<b>Sub Total</b>	<b>43,000.00</b>				<b>43,005.00</b>	
<b>Grand Total</b>	<b>9,56,580.00</b>					<b>9,56,595.00</b>	
					<b>Less 95 =</b>	<b>9,56,580.00</b>	



Cymbidium orchid



Alstroemeria



Ruscus



Chrysanthemum

8. **Name of Crops grown:** Gerbera, Rose, Alstroemeria, Ruscus, Leather leaf Fern, Asparagus Fern, Chrysanthemum, Cymbidium, Lilium, Cattleya



**Leather Leaf Fern**



**Asparagus Fern**

9. **Sustainability of the Project -**

**Production and Income generated (from 2010 to 2015)**

Sl. No	Crops	Target and Achievement (Nos.)	Income generated (in Rs.)
1.	Gerbera	224942	679117.58
2.	Rose	65342	227618.47
3.	Alstroemeria	16351	97503.24
4.	Ruscus	4777	28663
5.	Leather Leaf Fern	123940	235529
6.	Chrysanthemum	22308	98421

**Sale Proceed Statement from September to March 2016**

**a. Local sale**

Sl No	Date	Items	Quantity	Rate	Amount (Rs.)
1	19.10.2015	Gerbera	200 nos	10	2,000
		Rose	200 nos	10	2,000
		Chrysanthemum	5 bundles	200	1,000
		Leather Leaf Fern	200 nos	5	1,000
		Ruscus	150 nos	10	1,500
2	4.11.2015	Alstromeria	50 nos	10	500
		Leather leaf Fern	100 nos	5	500
		Gerbera	100 nos	10	1,000
3	20.01.2016	Radish	33 kg	4	134
		Broccoli	7 kg	28	200
		Cabbage	14 kg	10	140
		Packchoi	10 kg	8	80
		Cauliflower	3 kg	18	54
		Gerbera	200 nos	10	2,000
		Chrysanthemum	5 bundles	200	1,000

		Cymbidium	2 nos	1000	2,000
4	30.03.2016	Gerbera	500 nos	10	5,000
		Alstromeria	30 nos	10	300
		Ruscus	100 nos	10	1,000
		Ruscus	400 nos (third grade)	6	240
		Leather Leaf Fern	300 nos	5	1,500
		Cymbidium (cut flowers)	100 nos	17	1,700
<b>Total=</b>					<b>24,848</b>

**b. Sale to Service Providers/other organization**

Sl. No.	Service Provider	Bill No	Amount
1	Principal BATC, Shillong	01	3,000
2	Spice Board, Shillong	02	500
3	North Bengal Floritech	03	42,712
4	North Bengal Floritech	04	8,987
5	Florence Flora	05	24,000
6	Zopar Export Pvt. Ltd	06	1,54,234
7	Secretary Marketing Board	07	3,200
<b>Total=</b>			<b>2,36,633</b>
<b>Grand Total (A+B)=</b>			<b>2,61,481</b>

**(Rupees Two Lakhs sixty one thousand four hundred eighty one) only**

**Sale Proceed Statement from April 2016 to February 2017**

Sl No	Date	Particulars	Quantity	Rate	Amount
1	08.04.2016	Cymbidium	5	1,000	5,000
2	11.04.2016	Tomato plug seedlings	11,333	1.5	17,000
		Alstroemeria	60	10	600
		Gerbera	450	10	4,500
		Fern	56	5	280
		Cymbidium	5	20	100
		Cymbidium	2	1,000	2,000
3	02.05.2016	Tomato plug seedlings	6,267	1.5	9,400
4	01.06.2016	Tomato plug seedlings	7,800	1.5	11,700
		Cabbage	330 kg	10	3,300
5	09.06.2016	Fern	32	5	160
		Cymbidium cut flowers	127	10	1,270
		Alstroemeria	25	15	375
		Gerbera	516	10	5,160
		Ruscus	69	10	690
		Rose	130	10	1,300
		Vanda	9	50	450
		Cattleya	7	15	105

		Gladiolus	40	10	400
		Asparagus	2	5	10
		Lilium	10	10	100
		Ring	2	80	160
6	22.06.2016	Chrysanthemum	13	200	2,600
		Alstromeria	142	15	2,130
		Gerbera	564	8	4,512
		Fern	564	5	2,820
		Bouquets	4	400	1,600
7	22.07.2016	Gerbera	182	10	18,200
		Gerbera (open)	18	5	90
		Alstromeria	59	10	590
		Chrysanthemum	55	20	1,100
		Fern	34	5	170
		Asparagus	40	5	200
		Rose	340	10	3,400
		Lilium	17	10	170
		Ruscus	50	10	500
8	10.08.2016	Chrysanthemum	3	100	300
		Gerbera	48	10	480
		Rose	70	20	1,400
		Cattleya	67	10	670
		Asparagus	32	5	160
		Lilium	10	10	100
		Fern	32	5	160
		Alstroemeria	15	10	150
		Vanda	15	10	150
		Ring with foam	2	115	230
		Cabbage plug seedlings	1630	1	1,630
		Broccoli plug seedlings	400	1.5	600
		Dwarf pine	3	50	150
		Christmas tree	4	180	720
		Ruscus	20	10	200
		Kiwi cuttings	1	50	50
		Raja chili seedlings	2	15	30
9	17.08.2016	Tomato plug seedlings	10166	1.5	15,250
10	09.09.2016	Alstroemeria	64	10	640
		Rose	115	10	1,550
		Gerbera	223	12	2,796
		Gerbera (open)	20	5	100
		Fern	442	5	2,210
		Asparagus	20	5	100
		Curcuma	10	10	100

		Ruscus	26	10	260
		Cattleya	20	10	200
		Vanda	20	15	300
		Catleya plants	2	800	1,600
		Alstromeria (plantlets)	20	25	500
11	20.10.2016	Rose	260	10	2,600
		Gerbera	235	10	2,350
		Fern	4	5	20
		Ruscus	98	10	980
		Asparagus	42	5	210
		Alstroemeria	82	10	820
		Vanda	7	30	210
		Chrysanthemum	175	10	1750
		Gerbera (open)	16	5	80
		Bouquet	2	350	700
12	10.11.2016	Gerbera	206	10	2,060
		Chrysanthemum	130	10	1,300
		Rose	100	10	1,000
		Fern	209	5	1,045
		Asparagus	191	5	955
		Ruscus	101	10	1,010
		Alstroemeria	85	10	850
		Gerbera	140	5	700
		Cattleya	4	20	80
		Bouquet	6	500	3,000
		Floral Foam	60	50	3,000
13	15.11.2016	Chrysanthemum	60	10	600
		Fern	80	5	400
		Asparagus	100	5	500
14	30.11.2016	Ruscus rhizome	520	25	13,000
15	12.01.2017	Gerbera	486	10	4,860
		Rose	93	10	930
		Fern	606	3	1,818
		Chrysanthemum	289	10	2,890
16	01.02.2017	Gerbera (open)	226	5	1,130
		Gerbera	50	10	500
		Gladiolus	41	5	205
		Ruscus	72	10	720
		Asparagus	142	5	710
		Asparagus	14	10	140
		Fern	48	5	240
		Alstroemeria	157	15	2,355



17	14.02.2017	Tomato plug seedlings	6667	1.5	10,000
		Floral Foam	65	51	3,275
		Broccoli	363	1.5	435
		Cabbage	129.5 kg	10	1,295
		Broccoli	51.5 kg	20	1,030
		Chili	19	50	950
		Capsicum	10 kg	20	200
		Cucumber	35.7 kg	10	357
		Radish	70 kg	10	700
		Tomato	63.5 kg	24	1,524
		Brassica	87 bundles	5	435
					<b>1,90,780</b>

#### Sale to service providers/other organization

Sl No.	Service Provider	Bill No	Amount	Remarks
1	North Bengal Floritech	08	26,980	Payment not yet realize
2	M/S W. Bamon	09	1,340	
3	Zopar Export Ltd	11	45,375	
		<b>Total:</b>	<b>73,695</b>	
		<b>Grand Total (A+B):</b>	<b>2,64,475</b>	

#### 10. Facilities available at the Horti Hub -

Sl. No.	Poly Houses	Area m <sup>2</sup>	Year of creation	Remarks
1	Rose	1000	5 <sup>th</sup> August 2009	Performance has declined, high time to replant
2	Gypsophylla	500	14 <sup>th</sup> August	Change into Chrysanthemum in 2015
3	Orchid Cattleya	500	1 <sup>st</sup> September 2009	
4	Orchid Cattleya	500		
5	Carnation	500	10 <sup>th</sup> December 2009	Because of poor performance change to gerbera in January 2017
6	Gerbera	500	17 <sup>th</sup> July 2010	It's getting old and replaced in 4 beds during February 2017
7	Mini Gerbera	500	-	Still ok
8	Leather Leaf Fern	500	8 <sup>th</sup> September 2009	Still ok
9	Ruscus	200	30 <sup>th</sup> May 2010	Plants are in good condition but the poly houses need minor repair.
10	Ruscus	100	23 <sup>rd</sup> September 2015	
11	Orchid Cymbidium	200	30 <sup>th</sup> December 2010	Plants are in good condition
12	Orchid Cymbidium	100		
13	Chrysanthemum	500		

			29 <sup>th</sup> May 2011	In all the poly houses plants are in good conditions
14	Chrysanthemum	500		
15	Chrysanthemum	500		
16	Lilium	500	9 <sup>th</sup> September 2011	Now change to leather leaf fern
17	Lilium	300	10 <sup>th</sup> October 2015	Plants in good condition
18	Plug seedlings	420	July 2010	Well maintained
19	Alstromeria	200	30 <sup>th</sup> Aug 2011	
20	Asparagus	200		
	<i>Others</i>			
	Low cost polyhouse for production of vegetables plug seedlings	220	July 2010	
	Collection Center		2009	Functioning
	Cold storage	5 tonnes capacity	2010	Functioning
	Training Hall	150 people capacity	2009	Properly maintained
	Reception center		June 2010	
	Propagation Unit		2013	
	Farmer's Hostel		2014	



**Training Hall**



**Reception Center**



**Production of vegetables plug seedlings in low cost polyhouse**



**Cold Room**

**11. Facilities for collection, packaging, storage, transportation and marketing of produce -**

Produce are collected and packed in the collection center and marketed by the service provider.

**12. Types of field demonstration and training given to farmers**

- (i) Preparation of plug seedlings
- (ii) Training on maintenance
- (iii) Management of floriculture



**Collection Center**

**13. No. of field Demonstration and Training given:**

Nil (But the Horti-Hub acts as a venue for training once a year, given by various organizations like Spice Board of India, Khadi Industries, etc.)

**14. No. of respondents attended training/demonstration -**

100

**15. Types of assistance given to farmers**

(a) **In cash:** Nil

(b) **In kind:** Fertilizer, horticulture implements and planting materials

**16. No. of employees:**

(i) 1 Horticulture Development Officer (H.D.O): Shri. Akbar Mallang

(ii) 12 Muster Roll (more workers are hired depending on the workload)

**17. Wages per worker –**

(i) Rs. 170/- for unskilled

(ii) Rs. 181/- for semi skilled

(iii) Rs. 191/- for skilled labour.

**18. New Construction /Infrastructure improvement/New Facilities available at the Horti – Hub during 2013-14, 2014-15 and 2015-16:**

**19. Supplies and Materials Received during 2013-14, 2014-15 and 2015-16**

Seedlings- Chrysanthemum Gerbera, Alstromeria, Roses

Seeds- Tomato, broccoli, cabbage

Corm- gladiolus, tube rose

**Other materials/supply:** Cow dung, organic fertilizers, sprayers, brush cutter, *knup*, *khoh* and *star*, kudali, dao etc.

**20. Problem -**

- Insufficient fund received from the Government regarding the repairing of poly houses.

**21. Observation:**

(i) The Horti-Hub was established on February 2009.

(ii) The sale proceed for the years 2013-14, 2014-15 was not available as the documents were reportedly not made available by the previous officer to the current D.H.O.

(iii) As North Bengal Floritech did not clear the outstanding dues to the Horti-hub, the produce has been sold locally as well as to flower sellers in Shillong and Kseh Bilat for over a year now. The transport cost is borne by the buyers themselves. Gerbera is sold @ Rs. 4/-, Cymbidium @ Rs. 10/-, Alstroemeria @ Rs. 4/- in Shillong and @ Rs. 10/- in

the hub, Ruscus @ Rs. 6/- in Shillong and @ Rs. 10/- in the hub, Leather Leaf Fern @ Rs. 1.50/-, Asparagus @ Rs. 1.50/-, Chrysanthemum @ Rs. 10/-

- (iv) Surrounding the Horti-Hub there are spokes managed by the flower growers. The flower growers are able to bring their produce to the collection center for grading, packing and aggregate marketing. An agreement between North Bengal Floritech and farmers binds the farmers to sell their produce to NBF. Gerbera is sold @ Rs. 2/-.
- (v) The Horti-Hub serves as an outlet for producing high grade vegetable plug seedlings catering the needs of local farmers with positive response and result oriented package. At present, tomato is being propagated and its seedlings are sold to farmers @ Rs. 1.50/-
- (vi) The Horti-hub serves as a venue for various training programmes conducted by Spice Board of India, Khadi Industries, etc. However, the Hub itself has not conducted training for the farmers as there is no scheme for the same.
- (vii) Most of the plants like Rose and Gerbera were planted in 2009 and have not been replaced since. Due to fund constraint, only a few beds of plants can be replaced at a time. Moreover, many new plants like roses, carnations, cymbidium were proposed to be purchased.



**Rose**



**Gerbera**



**Cattleya orchid**

- (viii) Cattleya is grown in the hub but has not been harvested since October 2016 as it has stopped bearing flowers. The region is not favourable to the variety as it is a tropical flower. Moreover, the market for it is reportedly not very large. The flower was planted in 2010 and has not been replaced since.
- (ix) Single Chrysanthemums are grown in the hub and sold at Rs. 10/-. Growing Double Chrysanthemum instead was suggested as the demand for it is higher and may fetch a higher price.
- (x) Ventury Fertigation is carried out in the hub.
- (xi) It was suggested that utilization of Sales Proceed be permitted so as to enable the firm avail funds for immediate expenses.

## MYNGKRE HORTI HUB

1. **Date of Inspection:** 24.4.2017
2. **Location:** Silchar Road, Myngkre
3. **District:** East Jaintia Hills District
4. **Area in hectares:** 1.5 Ha.  
(Polyhouse only= 0.393225 Ha)
5. **Number of Spokes:** Gerbera: 11 Nos., Leather Leaf Fern: 1 No., Chrysanthemum: 1 No
6. **Maintenance Fund:**

Sl No		2013-14	2014-15	2015-16	2016-17
1	<b>Wages</b>	350000	421140	620500	600920 (L.S)
2	<b>Materials &amp; Supplies Planting materials</b>	440000	25000	10000	120000
3	<b>Manure and fertilizers</b>	100000 Organic and inorganic manure fertilizers	38000 Organic manures bio fertilizers, bio pesticides etc		30000 Organic manures bio fertilizers, bio pesticides etc
4	<b>Office Expenses</b>	80000	9000		
5	<b>Other Charges</b>	38330	30000		
		<b>1008330</b>	<b>523140</b>	<b>630500</b>	<b>750920</b>
	<b>Part II Other Administrative Expenses</b>	180000			



**7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:**

**2013-14**

SI No.	Items	Allotment	Particulars	Quantity	Rate	Total Amount	Saving	Remarks
1.	Wages	3,50,000/-	M/R of labourer engaged at Horti Hub, Mynkre	3500 MD	100/-	3,50,000/-		
2.	Materials & Supplies	4,40,000/-	1. Vandas 2. Gerbera plants 3. Phalaenopsis	9200 nos. 2500 nos. 415 nos.	900/- 50/- 325/-	1,80,000/- 1,25,000/- 1,34,875/-		
<b>Sub Total</b>						<b>4,39,875/-</b>	<b>125/-</b>	
3.	Organic, inorganic manures, P.P. Chemicals etc.	1,00,000/-	1. Decomposed cowdung 2. MgSO <sub>4</sub> 3. MgNO <sub>3</sub> 4. 19:19:19 5. Boron	87 MT 100 kgs 50 kgs 50 kgs 6 kgs	900/- 698/-25 kgs 3500/-25 kgs 3560/-25 kgs 190/-25 kgs	78,300/- 2,792/- 7,000/- 7,120/- 4,560/-		
<b>Sub Total</b>						<b>99,772/-</b>	<b>228/-</b>	
4.	Office Expenses	80,000/-	1. Vehicle insurance 2. Jeep tyre 3. Cartridges etc 4. Vehicle repair	L/S 4 nos. L/S L/S	4754/-	29,063/- 18,980/- 4,580/- 27,370/-		
<b>Sub Total</b>						<b>79,993/-</b>	<b>7/-</b>	
5.	Other Charges	38,330/-	Training	381 MD	100/-	38,100/-		
<b>Sub Total</b>						<b>38,100/-</b>	<b>230/-</b>	
<b>G/ Total</b>						<b>10,07,740/-</b>	<b>590/-</b>	
		<b>10,08,330.00</b>						

**(Rupees Ten Lakh Seven Two Thousand Seven Hundred Forty) only**

**(Part II) during 2013-14**

SI No.	Items	Amount Alloted	Particulars	Quantity	Rate (Rs.)	Amount (Rs.)	Saving
i	Administrative Expenses Hospitality, Entertainment Expense, Gift etc	30,000.00	i. Biofertilizer ii. Khoh iii. Star iv. Wait v. Mohkiew	185 kgs 10 nos. 10 nos. 10 nos. 6 nos.	85.00 kg 200/ No 60/ No 600/ No 950/ No	15,700.00 2000.00 600.00 6000.00 5700.00	-
<b>Sub Total</b>		<b>30,000</b>	-	-	-	<b>30,000.00</b>	-
ii	Farm works, Renovation, Repairing of old Hub, maintenance of Generators etc	1,50,000	Repair of Poly houses in Mynkre Horti-Hub	-	-	1,50,000.00	-
<b>Total</b>		<b>1,80,000</b>	-	-	-	<b>1,80,000.00</b>	-

**(Rupees One lakh Eighty Thousand) only**

**2014 -2015**

Sl No.	Items	Amount Alloted	Particulars	Quantity	Rate	Amount	Saving
1.	Wages	4,21,140/-	MR for March – November 2014 MR for December 2014 – February 2015	331 MD 2324 MD 90 MD	100/- 160/- 180/-	33,100/- 3,71,840/- 16,200/-	-
	<b>Sub Total</b>					<b>4,21,140/-</b>	
2.	<b>Office Expenses:</b> Cartridge, maintenance of vehicle, stationeries, POL, furniture, carpets, drape, registration and insurance etc	9,000/-	Maintenance of Vehicle Maintenance of Vehicle Maintenance of Vehicle	L/S L/S L/S	- - -	3,000/- 2,980/- 2,990/-	30/-
	<b>Sub Total</b>	<b>9,000/-</b>				<b>8,970/-</b>	<b>30/-</b>
3.	<b>Materials &amp;Supplies:</b> a. Planting materials like seeds, seedlings, bulbs, corns etc polythene/ sleeve/ bag/ Polythene pipes/ portrays/ cocopeat/ Perlite/ soil rite/ labeling tags/ packing material for cut flowers etc. b. Organic manures, biofertilizers, biopesticides etc	25,000/- 38,000/-	1. Protrays – 48 holes and multi use  Cowdung	151 nos. 28.1 MT	165/- 1,350/-	24,915/- 37,935/-	85/- 65/-
	<b>Sub Total</b>	<b>63,000/-</b>				<b>62,850/-</b>	<b>150/-</b>
4.	<b>Other Charges:</b> Including transportation charges farmer training etc.	30,000/-	Three days farmers training at Mynkre Horti Hub	100 x 3 days	100/- day	30,000/-	
	<b>Sub Total</b>	<b>30,000/-</b>				<b>30,000/-</b>	
	<b>G/ Total</b>	<b>52,340/-</b>				<b>5,22,960/-</b>	<b>180/-</b>

**(Rupees Five Lakh Twenty Two Thousand Nine Hundred Sixty) only**

**2015 -2016**

Sl No.	Items	Amount	Expenditure	Quantity	Rate	Total amount	Saving
1.	Wages	6,20,500	MR of labourer engaged at Horti-Hub Mynkre	3500 MD	170	6,20,420.00	80
2.	Planting materials like bulb, seedling etc	10,000	Young Gerbera seedling	167 nos	60	10,000.00	-
	<b>Total</b>	<b>6,30,500</b>			<b>Total</b>	<b>6,30,420.00</b>	<b>80</b>

**(Rupees Sixty lakh thirty thousand four hundred twenty) only**

**2016-2017**

<b>Head of Account</b>	<b>Items</b>	<b>Amount Alloted</b>	<b>Particulars</b>	<b>Quantity</b>	<b>Rate (Rs.)</b>	<b>Amount (Rs.)</b>	<b>Saving (Rs.)</b>	<b>Remarks</b>
2401- Crop Husbandry- 119- Horticulture & Vegetable Crops (36) – Maintenance of Horti-hub Sixth Scheduled (Pt-II) Areas Plan 2016-2017	(02) Wages	6,00,920.00	M.R. for the month of March – August 2016	1104 MD	170/day	1,87,600.00		
			DA of MR for April – August 2016	-	-	10,098.00		
			M.R. for the month of September – November 2016	546 MD	181/ day	98,826.00		
			-do-	91 MD	203/day	18,473.00		
			M.R. for the month of December – February 2017	90 MD	207/day	18,630.00		
			-do-	1452 MD	184/day	2,67,168.00		
	<b>Sub Total:-</b>	<b>6,00,920.00</b>		<b>3283 MD</b>	<b>-</b>	<b>6,00,875.00</b>	<b>45.00</b>	
	(21) Supplies & materials	1,20,000.00	Young Gerbera Plants	2000 Nos	60.00/ plant	1,20,000.00	-	
	a) Planting materials, seeds, seedlings, bulbs, corms, etc polythene sleeve/bags/poly-thane pipe/portrays/ Loco peat/ per lite/ Soil rite/ Labeling tags/ packing materials for cut flowers etc.							
	<b>Sub Total:-</b>	<b>1,20,000.00</b>	<b>-</b>	<b>2000 Nos</b>	<b>-</b>	<b>1,20,000.00</b>	<b>-</b>	
	b) Organic Manure, bio-fertilizer, Bio- Pesticide, etc.	30,000.00	i) Cowdung	16 MT	1200/MT	19,200.00		
			ii) Ampelomyces quisqualis	2 lits	1550/lits	3100.00		
iii) 100 % Powder (100 ml pkg)			1 lit	510/100 pkg	5100.00			
iv) Crane (Bio- Fungicide)			1.6 Kgs	325/200 gms	2600.00			
<b>Sub Total:-</b>	<b>30,000.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>30,000.00</b>	<b>-</b>		
<b>Grand Total:-</b>	<b>7,50,920.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7,50,875.00</b>	<b>45.00</b>		



8. **Name of Crops grown:** Gerbera, Roses, Leather leaf Fern, Chrysanthemum, Orchids – Vanda, Catteleya, Phaelonopsis



**Gerbera**



**Leather Leaf Fern**



**Vanda**

9. **Sustainability of the Project:**

**Production (Crop-wise) and Sale Proceed Statement for 2013-14, 2014-15, 2015-16**

		<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17 (June 2016)</b>
<b>Gerbera</b>	Production	14,290	6,042	25,883	28,707
	Sale Proceed	42,870.00	15,105.00	78,387.00	86,121.00
<b>Rose</b>	Production	4,460	13,260	35,571	18,005
	Sale Proceed	13,380.00	53,040.00	1,06,653.00	54,015.00
<b>Vanda</b>	Production	3283	1316	2285	660
	Sale Proceed	65,660.00	26,320.00	45,840.00	13,200.00
<b>Licianthas</b>	Production	-	-	-	-
	Sale Proceed	-	-	-	-
<b>Gypsophila</b>	Production	10,660	3010	-	-
	Sale Proceed	31,980.00	15,050.00	-	-
<b>Leather Leaf</b>	Production	5960	33770	46,960	33,000
	Sale Proceed	5960	42,212.50	46,960	33,000
<b>Catteleya plants</b>	Production	-	-	-	-
	Sale Proceed	-	-	-	-
<b>Vanda plants</b>	Production	-	-	-	-
	Sale Proceed	-	-	-	-
<b>Chrysanthemum</b>	No.	-	-	19310	-
	Sale Proceed	-	-	67,585.00	-
<b>TOTAL</b>	<b>Production</b>	<b>38,653</b>	<b>57,308</b>	<b>1,30,009</b>	<b>80,372</b>
	<b>Sale Proceed</b>	<b>1,59,850.00</b>	<b>1,51,727.50</b>	<b>3,45,625.00</b>	<b>1,86,336.00</b>

Note:-

Total sale proceed generated as on June 2016	= Rs. 20,24,353.10/-
<u>Total interest credited (from June 2015 to Sept. 2016)</u>	<u>= Rs. 88,511.90/-</u>
Actual sale proceed generated as on June 2016	= Rs. 21,12,865.00/-

**(Rupees Twenty One Lakhs Twelve Thousand Eight Hundred Sixty Five) only**

**Sale Proceed Statement of Horti-Hub, Myngkre during the year 2016-2017 under the Office of District Horticulture Officer, East Jaintia Hills, Khliehriat**

Sl No.	Items	Quantity	Rate (Rs)	Amount (Rs)	Remarks
1.	Gerbera flowers	49,381 Nos.	3.00/ No	1,48,143.00	
2.	Rose flowers	53,800 Nos.	3.00/ No	1,61,400.00	
3.	Leather Leaf Fern	46,150 Nos.	1.00/ No	46,150.00	
4.	Vanda	864 Nos.	20.00/ No	17,280.00	
5.	Gypsophila	270 Nos.	3.50/ No	945.00	
	<b>Total:-</b>	<b>1,50,465 Nos.</b>	<b>-</b>	<b>3,73,918.00</b>	

**(Rupees Three Lakh Seventy Three Thousand Nine Hundred Eighteen) only**

**10. Facilities available at the Horti Hub:**

(i) Green Houses – 7 Nos. –

- Rose: Capacity: 1800 m<sup>2</sup>
- Vanda: Capacity: 480 m<sup>2</sup>
- Leather Leaf Fern: Capacity: 1800 m<sup>2</sup>
- Gerbera 2 poyhouses: Capacity: 500 m<sup>2</sup> each
- Cattleya: Capacity: 850 m<sup>2</sup> each

(ii) Genab Tank – 2 Nos. (49,500 ltr. Capacity each)

(iii) Pre cool chamber cum collection centre

(iv) Control unit



**Facilities for collection, packaging, storage, transportation and marketing of produce:**

- (i) Collection Centre
- (ii) Cold Room
- (iii) Packaging done by Labourers
- (iv) Marketing done by Service Provider

**11. Types of field demonstration and training given to farmers -**

- (i) Lecture
- (ii) Discussions
- (iii) Field visit

**12. No. of field Demonstration and Training given:**

3 times

**13. No. of respondents attended training/demonstration -**

100

**14. Types of assistance given to farmers**

- (a) **In cash:** Nil
- (b) **In kind:** Nil

**15. No. of employees:**

- (i) 1 No Hub Manager: Shri W Rymbai
- (ii) 1 Assistant Horticulture Inspector: Shri D. Momin
- (iii) 6-10 Nos Muster Roll

**16. Wages per worker – 170/day**

**17. New Construction /Infrastructure improvement/New Facilities available at the Horti – Hub during 2013-14, 2014-15 and 2015-16:**

Nil

**18. Supplies and Materials Received during 2013-14, 2014-15 and 2015-16**

Young Gerbera Seedlings – 167 Nos.

**19. Problem -**

- (i) No fund is available for purchase of manure, fertilizer and chemicals
- (ii) The maintenance fund for purchase of planting materials is very less
- (iii) The price of the flowers fixed by the Service Provider is very low

**20. Observation:**

- (i) The Horti-Hub was inaugurated in 2015 after bifurcation of East and West Jaintia Hills District

- (ii) At the time of inspection, only the Horticulture Development Officer in-charge of the Horti-Hub and the Assistant Horticulture Inspector were present. The District Horticulture Officer was not present although prior intimation had been given about the inspection.
- (iii) There are reportedly no regular visits made by the officers at Khliehriat to the Horti-Hub.
- (iv) Low Maintenance Fund is a problem faced by the Hub. In 2015-16 only Rs. 10,000/- was granted for Maintenance and no supplies of organic manure etc was made.
- (v) There is a need to enable utilization of Sale Proceed generated by the Hub for maintenance
- (vi) The Hub faces difficulty in increasing its sale proceeds. North Bengal Floritech, the Service Provider is the only constant market for its Roses and Gerbera. However, the price at which North Bengal Floritech buys flowers is very low (@ Rs. 3/-).
- (vii) As the hub is located in a remote area, there is no ready market among the locals.
- (viii) Vanda orchid is also grown in the hub but there is great difficulty in finding buyers. The flower was displayed in recent Horticulture Exhibitions, but no sale could be made.
- (ix) Beside Vanda, Cattleya and Phalaenopsis are also grown. However, the hub faces difficulty in maintaining them due to the lack of expert knowledge. No sale has been made of Cattleya till date.



**Cattleya**



**Phalaenopsis**



***Multiplex Chamber***

- (x) A multiplex chamber was constructed for multiplying Cattleya orchids. However, as the orchid flowers are not healthy, they cannot be multiplied and the polyhouse is now disused.
- (xi) Organic farming practice using manure and bio-NPK fertilizer is done at the Hub. However, the plants cannot resist disease and grow well without synthetic fertilizers.

**Rose plants affected by downy mildew**



- (xii) Rose plants are badly affected by downy mildew and attacked by mites. Previously, Ridomil Fungicide was used to treat the problem. However, since adoption of organic farming, the Hoti-Hub now uses organic fertilizers like Bio-NPK, but reportedly has little effect on treating the disease.
- (xiii) Many polyhouse plastic sheets are torn and damaged by strong winds. The Service Provider estimated that repair would cost approx. Rs.12 lakhs. However, the hub has no fund to replace them.



**Holes in Polyhouse roofs repaired with cellotape**



**Dirty poly sheets need to be replaced**

- (xiv) There is no chowkidar at the Horti-Hub.
- (xv) Water supply is available, but pipes need repair. At present, rubber tubes are used to convey water to the Hub.

## PHODKYLLA HORTI HUB

1. **Date of Inspection:** 8.5.2017
2. **Location:** Phodkylia
3. **District:** South West Khasi Hills District
4. **Area in hectares:** 0.34 Ha.
5. **Number of Spokes:** Nil
6. **Maintenance Fund:**

Sl No		2013-14	2014-15	2015-16	2016-17
1	<b>Wages</b>	4,00,000	42,700 (427 MD @ 100) 2,93,920 (1837 MD @ 160)	6,01,800 (3540 MD)	5,99,110
2	<b>Materials &amp; Supplies Planting materials</b>	4,20,000	18,000	10,000	1,20,000
3	<b>H meter/ EC meter Rain gauge etc</b>	40,000			
4	<b>Manure and fertilizers</b>	1,00,000 Organic and inorganic manure fertilizers	30,000 Organic manures bio fertilizers, bio pesticides etc		30,000 Organic manures bio fertilizers, bio pesticides etc
5	<b>Tools &amp; Implements</b>	50,000			
6	<b>Office Expenses</b>	1,00,000	9,000		
7	<b>Other Charges</b>	39,330	30,000		
		<b>11,49,330</b>	<b>4,23,620</b>	<b>6,11,800</b>	<b>7,49,110</b>
	<b>Part II Other Administrative Expenses</b>	30,000			

7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:

2014 -2015

Sl No.	Items	Allotment	Expenditure 2014-15			Remarks
			Physical	Rate	Financial	
I	<b>02-Wages</b> (i) @ 100/- & 160/-	3,36,620/-	2848 MD	100 & 160/-	4,20,000/-	Exceeded by 83,380
	<b>Total</b>	<b>3,36,620/-</b>			<b>420000/-</b>	
I	<b>13-Office Expenses:</b> Cartridge, maintenance of vehicle, stationeries, POL, furniture, carpets, drape, registration and insurance etc. j) Xerox Toner Cartridge 3116 ii) JK A4 Size iii) JK Legal Size	9,000/-	1 No 10 Reams 12 Reams	4550/- 184/- 218/-	4550/- 1840/- 2616/-	
	<b>Total</b>	<b>9,000/-</b>			<b>9,000/-</b>	
II	<b>Materials &amp;Supplies:</b> a) Planting materials like seeds, seedlings, bulbs, corns etc polythene/ sleeve/ bag/ Polythene pipes/ portrays/ cocopeat/ Perlite/ soil rite/ labeling tags/ packing material for cut flowers etc. i) Cocopeat washed & decompost unsterilized brick of 5kg ii) Polybags UV iii) Nylon pipes 40 mm	18,000/-	50 kg 40 kg 28 Rm	35/- 260/- 210/-	1,750/- 10,400/- 5,880/-	Blanket Drawal
	<b>Total</b>	<b>18,000/-</b>			<b>18,000/-</b>	
b)	Organic manures, bio fertilizers, bio pesticides, etc. i) FYM (Cowdung) ii) Vermicompost	30,000/-	10 MT 900 kg	1200/- 500/25 kg	12,000/- 18,000/-	
	<b>Total</b>	<b>30,000/-</b>			<b>30,000/-</b>	
III	<b>50-Other Charges:</b> Including transportation charges farmer training etc.	30,000/-	L.S	L.S	30,000/-	
	<b>Sub Total</b>	<b>30,000/-</b>			<b>30,000/-</b>	
	<b>G/ Total</b>	<b>4,23,620/-</b>			<b>5,07,000/-</b>	

(Rupees Five Lakh Seven Thousand) only

**Allotment** = **Rs. 4,23,620/-**  
**Expenditure** = **Rs. 5,07,000/-**  
**Balance** = **Rs. 83,380/-**

2015 -2016

Sl No.	Items	Allotment	Expenditure 2015-16			Remarks
			Physical	Rate	Financial	
1	<b>02-Wages</b> @ 170/- MD	6,01,800/-	3540 MD	170/- MD	6,01,800/-	
2	<b>Materials &amp; Supplies</b> Purchase of 2. Poly Bags 3. Coco peats	10,000/-	11 kg 204 kg	260/kg 35/kg	2,860/- 7,140/-	Payment has to be made
					<b>10,000/-</b>	
	<b>Total</b>	<b>6,11,800/-</b>			<b>6,11,800/-</b>	

(Rupees Six Lakh Eleven Thousand Eight Hundred) only

**Allotment** = **Rs. 6,11,800/-**  
**Expenditure** = **Rs. 6,11,800/-**  
**Balance** = **NIL**



**Tropical Vanda**



**Anthurium**



**Dendrobium**



**2016 -2017**

Sl No.	Items	Allotment	Expenditure 2016-17			Remarks
			Physical	Rate	Financial	
I	<b>02-Wages</b>	5,99,110			5,99,110/-	
	<b>TOTAL</b>	<b>5,99,110</b>			<b>5,99,110/-</b>	
2	<b><u>21-Materials &amp; Supplies</u></b> a) Planting materials like seeds, seedlings, bulbs, corms, etc, polythene/ sleeves/ bags/ polythene pipes/ portrays/ cocopeat/ perlite/ soil rite/ labeling tags/ packing materials for cut flowers etc. i) Cocopeat ii) Polythene Pipe 1” size	1,20,000			60,025/- 60,000/-	Payment has to be made
			1715 kgs 1200 mtr	35/- 50/-		
				Less	25	
	<b>Total</b>	<b>1,20,000</b>			<b>1,20,000/-</b>	
	b) Organic manures, bio fertilizers, bio pesticides, etc i) Bio cure F ( 250 ml Pack) ii) Bio Power (250 ml Pack) iii) Nimbecidine (250 ml Pack) iv) Bio NPK (1 kg Pack) v) Anandham (5 kg Pack)	30,000	10 ltr 10 ltr 4 ltr 20 kg 100 kg	138.75 138.75 187.50 250 550	5,550/- 5,550/- 3,000/- 5,000/- 11,000/-	
	<b>Total</b>	<b>30,000</b>			<b>30,000/-</b>	
	<b>Grand Total</b>	<b>7,49,110</b>			<b>7,49,110/-</b>	

**(Rupees Seven Lakh Forty Nine Thousand One Hundred and Ten) only**

**Allotment = Rs. 7,49,110/-**  
**Expenditure = Rs. 7,49,110/-**  
**Balance = NIL**

8. **Name of Crops grown:** Anthurium, Dendrobium, Vanda

9. **Sustainability of the Project:**

**Production (Crop-wise) and Sale Proceeds Statement for 2013-14, 2014-15, 2015-16**

		2013-14	2014-15	2015-16	2016-17
Anthurium	Production	723	1704	3789	3970
	Sale Proceed @ Rs. 15	10845	25560	56835	39700 @ Rs. 10
Gypsophila	Production	1722	2691	1327.8	-
	Sale Proceed @ Rs. 30	51660	80730	39835	-
Dendrobium	Production	-	-	170	100
	Sale Proceed @ Rs. 100	-	-	17000	10000
Vanda	Production	-	-	-	71.4
	Sale Proceed @ Rs. 100	-	-	-	7140
<b>Total Sale Proceed (Rs.)</b>		<b>62505</b>	<b>106290</b>	<b>113670</b>	<b>56840</b>

Note:

Total Sale Proceed Generated as on 4.11.2016: Rs. 4,84,400

Total Interested Credited: Rs. 3195

Actual Sale Proceed Generated as on 4.11.2016: Rs. 4,87,595

**(Rupees Four Lakhs, eighty seven thousand, five hundred and ninety five only)**

10. **Facilities available at the Horti Hub -**

Sl. No.	Structure	Area/ Capacity	Crops
1.	3 Polyhouses	1300 sq. m (500 sq. m + 300 sq. m + 500 sq. m)	Anthurium
2.	2 Polyhouses	925 sq. m (500 sq. m + 425 sq. m)	Gypsophila
3.	1 Polyhouse	200 sq. m	Vanda
4.	1 Polyhouse	200 Sq. M	Dendrobium
5.	Drip Irrigation System for flowers		
6.	Misting/ fogger System for Orchids		
7.	Fertigation Unit		
8.	Power Generator		
9.	2 Water Tanks		
10.	Pump House		



**Outer view of Polyhouse constructed under RKVY Polyhouse**



**Mist fogger system in Anthurium Polyhouse**

**11. Facilities for collection, packaging, storage, transportation and marketing of produce:**

Nil

**12. Types of field demonstration and training given to farmers:**

Nil (But organized by the D.H.O Mawkyrwat)

**13. No. of field Demonstration and Training given: Nil**

**14. No. of respondents attended training/demonstration: Nil**

**15. Types of assistance given to farmers**

- a. **In cash:** Nil
- b. **In kind:** Nil

**16. No. of employees:**

- (i) 1 Horticulture Development Officer (H.D.O) : Shri D Pariat
- (ii) 1 Horticulture Inspector (H.I)
- (iii) 1 Assistant Horticulture Inspector (A.H.I)
- (iv) 6-10 Muster Roll

**17. Wages per worker: Rs. 170/- man day**

**18. New Construction /Infrastructure improvement/New Facilities available at the Horti – Hub during 2013-14, 2014-15 and 2015-16:**

Sl. No.	Name of Infrastructure	No.	Name of scheme with year under which infrastructure was established	Remarks
1.	Polyhouse for Anthurium Flowers (500 sq. m)	1	Horticulture Mission (2012-13)	Initiated while still under the Administration of the District Horticulture officer, West Khasi Hill, Nongstoin
2.	Polyhouses:		RKVY (2012-2013)	
	a) Polyhouse for Anthurium Flowers (300 sq. m & 500 sq. m)	2		
	b) Polyhouse for Gypsophila Flowers (500 sq. m)	1		
	c) Polyhouse for Vanda Orchid (200 sq. m)	1		
3.	Polyhouse for Gypsophila Flowers (425 sq. m)	1	Horticulture Mission (2013-14)	
4.	Polyhouse for Dendrobium Orchid (200 sq. m)	1	Floriculture Dev. Scheme (2013-14)	
	<b>TOTAL</b>	<b>7</b>		

**19. Supplies and Materials Received during 2013-14, 2014-15 and 2015-16**

Adjusted from Fund received

Sl. No	Planting Material (Seedlings)	Nos.
1.	Anthurium	2000
2.	Gypsophila	4400
3.	Vanda	1000
4.	Dendrobium	1700

**20. Problem:**

- (i) Low funds
- (ii) Marketing problem and transportation

**21. Observation:**

- (i) Phodkylia Horti-Hub was established in the year 2012-13 under the aegis of the then Horticulture Mission (2012-13) and R.K.V.Y (2012-13) and encompasses an area of 0.34 Ha. Subsequently, the Floriculture Development Scheme (2013-14) and again the Horticulture Mission (2013-14) gave a further boost to the already existing infrastructure.

- (ii) The Horti-Hub was established after bifurcation of West Khasi Hills District. No infrastructure investment was made at the time of creation of hub and only wages were given. The polyhouses were constructed under the initiative of the District Horticulture Officer, Nongstoin while still under the administration of the office at West Khasi Hill.
- (iii) There is no electricity at the Horti-Hub. Facilities like Misting/ fogger System for Orchids and Drip Irrigation System for flowers are available but due to unavailability of electricity they cannot be utilized. The Hub requires funds to acquire their own transformer.
- (iv) The infrastructure at the Horti-Hub belongs to the adjoining Farm. No separate infrastructure was created for the Hub.
- (v) The amount sanctioned as Maintenance Fund is very low.
- (vi) The polyhouses are prone to damage by high speed winds. Repairs are usually carried out by supplementing the Maintenance Fund with funds from the District, Central funds and from the adjoining farm as the former alone is inadequate to meet the need.
- (vii) There is a need to allow utilization of sales proceed for Maintenance of the Horti-Hub to meet unforeseen expenses.
- (viii) The area is sandy which makes production of crops difficult especially in winter when the soil becomes very dry.
- (ix) The approach road to the Horti-Hub is in poor condition. The District Horticulture Officer informed that he had placed the matter before the grievance committee but no repair work was done as it is a border road.
- (x) North Bengal Floritech is the approved Service Provider. However, as the price offered by NBF is very low, the Hub sells its flowers to retailers in Shillong. At present the major source of income of the Hub is the sale of cut flowers of Anthurium and Orchids (Dendrobium and Vanda) apart from Anthurium seedlings.
- (xi) The transportation cost is deducted from the price of flowers.
- (xii) The feasibility of having their own retail outlet for selling cut flowers was expressed so as to earn more profit.
- (xiii) Organic farming is practiced at the Horti-Hub. However, the need was felt to allow use of synthetic fertilizers for inedible crops like flowers for better yield.

## SARANGMA HORTI HUB

1. **Date of Inspection:** 15.5.2017
2. **Location:** Sarangma
3. **District:** North Garo Hills District
4. **Area in hectares:** 5 Ha.
5. **Number of Spokes:** 20 Nos.
6. **Maintenance Fund:**

Sl No		2013-14	2014-15	2015-16	2016-17
1	<b>Wages</b>	400000	531300	604520	599110 (L.S)
2	<b>Materials &amp; Supplies</b> <b>Planting materials</b>	440000	28000	10000	120000
3	<b>Manure and fertilizers</b>	100000 Organic and inorganic manure fertilizers	37000 Organic manures bio fertilizers, bio pesticides etc		30000 Organic manures bio fertilizers, bio pesticides etc
4	<b>Office Expenses</b>	80000	9000		
5	<b>Other Charges</b>	38330	30000		
		<b>10,58,330</b>	<b>6,35,300</b>	<b>6,14,520</b>	<b>749110</b>



**Anthurium**



**Gerbera**



**Dendrobium orchid**

**7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:**

**2013-14**

Sl. No.	Items	Allotment	Particulars	Quantity	Rate (Rs.)	Total Amount (Rs.)	Saving
1	Wages	4,00,000/-	Skilled	730 MD	140	102200.00	-
			Un Skilled	2978 MD	100	297800.00	
<b>Sub Total</b>						<b>400000.00</b>	
2	Materials & Supplies	4,40,000/-	a) Gerbera	6000 nos.	36 /-	216000.00	-
			b) Antherium	200 nos.	134 /-	26800.00	
			c) Leather leaf fern	400 nos.	75 /-	30000.00	
			d) Marigold Seeds	20 pkts.	500 /-	10000.00	
			e) Chrysantemum	2620 plants	6 /-	15720.00	
			f) Cocopeat	1316 nos.	30 /-	39480.00	
			g) Anthurium Box Set	155 nos.	400 /-	62000.00	
			h) Water Sprinkler (5 lit. cap)	82 nos.	300 /-	24600.00	
			i) Water Sprinkler (10 lit.cap)	44 nos.	350 /-	15400.00	
<b>Sub - Total</b>						<b>440000.00</b>	
3	Organic, inorganic manures, P.P. Chemicals etc	100000/-	a) 19 all	4 bags	3300/-	13200.00	3.00
			b) Bavistin	8 kgs	598/-	4784.00	
			c) Actra	11 kgs	445/-	4895.00	
			d) Ridomil	14 kgs	677/-	9478.00	
			e) Caftaf	10.5 kgs	1330/-	13965.00	
			f) Multiplex Booster	116 lts.	300 /-	34800.00	
			g) Streptocyclin	79 lts	125/-	9875.00	
			h) FYM	20 kgs	450/-	9000.00	
<b>Sub - Total</b>						<b>99997.00</b>	<b>3.00</b>
4	Office Expenses	80,000/-	Office Materials	LS		79872.00	128.00
<b>Sub - Total</b>						<b>79872.00</b>	<b>128.00</b>
5	Other Charges	38330/-	a) Training	200 nos.	100 /- per head	20000.00	22.00
			b) POL	LS		18308.00	
<b>Sub - Total</b>						<b>38308.00</b>	<b>22.00</b>
<b>GRAND TOTAL</b>						<b>1058177.00</b>	<b>153.00</b>

**(Part-II) during 2013-14**

Sl. No.	Items	Amount Allotted	Particulars	Quantity	Rate (Rs.)	Amount (Rs.)	Saving
1	Administrative Expenses Hospitality, Entertainment Expense, Gift etc.	-	-	-	-	-	-
	<b>Sub Total</b>	-	-	-	-	-	-
2	Farm works, Renovation, Repairing of old Hub, maintenance of Generators etc.	-	-	-	-	-	-
	<b>Total</b>	-	-	-	-	-	-

**2014-15**

Sl. No.	Items	Allotment	Particulars	Quantity	Rate	Total Amount	Saving
1	Wages	<b>531300.00</b>	Skilled	<b>250 MD</b>	170/-	399480.00	131820.00
			Un Skilled		160/-		
	<b>Sub Total</b>					<b>399480.00</b>	<b>131820.00</b>
2	<b>Office Expenses:</b> cartridge, maintenance of vehicle, stationary, POL, furniture, carpets, drape, registration and insurance etc.	<b>9000.00</b>	Cartridge	8 nos.	1125/-	9000.00	-
	<b>Sub Total</b>					<b>9000.00</b>	
3	<b>Materials &amp; Supplies:</b> <b>a.</b> Planting materials like seeds, seedlings, bulbs, corns etc. polythene/sleeves/ bag/ Polythene pipes/ portrays/ cocopeat/ Perlite/ soil rite/ labeling tags/ packing materials for cut flowers etc.	<b>28000.00</b>	a) Falcon Garden Rake	21	140/-	2940.00	-
			b) Secateur	20	698/-	13960.00	
			c) Garden Spade	37	300/-	11100.00	
	<b>b.</b> Organic manures, bio-fertilizers, biopesticides etc.	<b>37000.00</b>	a) FYM	37 MT	1000/-	37000.00	
	<b>Sub Total -</b>					<b>65000.00</b>	-
4	Other Charges: including transportation charges, farmer training etc.	<b>30000.00</b>	a) POL	186 lts.	53.75	10000.00	-
			b) Training	200 nos.	100/- per head	20000.00	
	<b>Sub Total</b>	<b>30000.00</b>				<b>30000.00</b>	-
	<b>Grand Total</b>					<b>503480.00</b>	<b>131820.00</b>



**2015-16**

Sl. No.	Items	Allotment	Particulars	Quantity	Rate (Rs.)	Total Amount (Rs.)	Saving
1	Wages	6,04,520.00	604472.00	250 MD	Skill @191/-	604472.00	48.00
					Un Skill @ 170/-		
<b>Sub Total</b>						<b>604472.00</b>	<b>48.00</b>
2	Planting materials like bulb, seedling etc. (M/s)						
	a) FYM	10,000.00	9990.00	6.66 MT	1500/-	9990.00	10.00
<b>Sub Total</b>						<b>9990.00</b>	<b>10.00</b>
<b>Grand Total</b>		<b>6,14,520.00</b>	<b>614462.00</b>		<b>Total</b>	<b>614462.00</b>	<b>58.00</b>

**2016-17**

	Items	Allotment	Particulars	Quantity	Rate (Rs.)	Total Amount (Rs.)	Saving	
2401- Crop Husbandary-119- Horticulture & Vegetable Crops (36) - Maintenance of Horti-Hub Sixth Scheduled (Pt-II) Areas Plan 2016-17.	(02) Wages	5,99,110.00	Skilled	3310 MD	203/-	599070.00	40.00	
			Un Skilled		181/-			
	<b>Sub Total :-</b>						<b>599070.00</b>	<b>40.00</b>
	(21) Supplies & materials: a) Planting materials, seeds, seedlings, bulbs, corns, etc. polythene sleeves/ bags/ plythene pipe/portrays/Loco peat/ per lite/ Soil rite/ Labeling tags/ packing materials for cut flowers etc.	1,20,000.00		a) Polythene Sleeves	500 kgs.	180/-	90000.00	-
				b) Secateur	42 nos.	350/-	14700.00	
				c) Cocopeat	340 nos.	45/-	15300.00	
	<b>Sub Total :-</b>						<b>120000.00</b>	<b>-</b>
	b) Organic Manure, bio-fertilizer, Bio-Pesticides, etc.	30000.00		FYM	20 MT	1500/-	30000.00	-
	<b>Sub Total :-</b>						<b>30000.00</b>	<b>-</b>
	<b>GRAND TOTAL:-</b>		<b>749110.00</b>				<b>749070.00</b>	<b>40.00</b>

8. **Name of Crops grown:** Orchid, Anthurium, Fern, Kurkuma and Gerbera

9. **Sustainability of the Project:**

**Production (Crop-wise)**

2013-14	2014-15	2015-16
Records are not available as it was under District Horticulture Officer, East Garo Hills, Williamnagar	Dendrobium = 1424	Dendrobium = 3800

Income generated:

2013-14	2014-15	2015-16
It was under District Horticulture Officer, East Garo Hills, Williamnagar	14240	30,633

10. **Facilities available at the Horti Hub:**

- (i) Over Head Tank
- (ii) Cold Chamber but not functional
- (iii) Godown (under construction)
- (iv) Grading Hall
- (v) Hardening Chamber (not functional)
- (vi) 6 Polyhouses:
  - Gerbera
  - 2 Dendrobium
  - Anthurium
  - Leather Leaf Fern
  - Experiment cultivation by Agro-textiles



**Godown**



**Cold Chamber (left in the picture above) and Grading Hall**



**Outer view of Polyhouses**

11. **Facilities for collection, packaging, storage, transportation and marketing of produce:**

Not Functional

**12. Types of field demonstration and training given to farmers:**

Maintenance and cultivation of orchids

**13. No. of field Demonstration and Training Given 2013 – 14, 2014 – 15, 2015 – 16:**

(i) **2014-15:** 20 Trainees were imparted training on Maintenance and cultivation of orchids

**14. Types of assistance given to farmers**

(b) **In cash:** Nil

(c) **In kind:** Nil

**15. No. of employees:**

(i) 2 Skilled Labourers

(ii) 8 Unskilled Labourers

**16. Wages per worker –**

	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>
Unskilled	100/-	160/-	170/-
Skilled	140/-	180/-	191/-

**17. New construction/ infrastructure improvement/ new facilities available at Horti-hub during 2013-14, 2014-15 and 2015-16**

2014-15:

(i) Overhead Tank

(ii) Cold chamber

(iii) Anthurium under Poly House

**18. Supplies and Materials received during 2013-14, 2014-15 and 2015-16:**

	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>
<b>Planting materials etc. like seeds, seedlings, bulbs, corms, etc</b>	(i) Anthurium: 200 Nos. (ii) Fern: 400 Nos.		
<b>Any other materials/ supply received</b>	(i) 19 all= 4 Qtls (ii) FYM= 2 MT	(i) Secateurs= 20 Nos. (ii) Spade= 37 Nos. (iii) Rake= 21 Nos.	(i) FYM= 6.60 MT

**19. Problem -**

(i) No farm manager to look after day to day farm activities.

(ii) Marketing of goods is yet to be established.

**20. Observation:**

- (i) Lack of manpower – there is no Hub-Manager, no Inspector and no Assistant Inspector at the hub and the day to day affairs of the hub is looked after by the Senior most skilled labourer.
- (ii) Wages of labourers are paid quarterly since funds are released once in a quarter.
- (iii) Some polyhouses were damaged by hail and storm but could not be repaired properly as funds received for maintenance is very less
- (iv) Cooling Chamber had been constructed but could not be utilized since sufficient power supply has not been provided in the building. The Chamber requires three-phases electricity connection whereas the present power supply to the building is a temporary single-phase.
- (v) Hardening chamber is not functioning due to lack of electricity.



**Leather Leaf Fern Polyhouse damaged by storm**



**Outer and inner view of Hardening Chamber**

- (vi) Due to less maintenance funds, coco peat could not be procured and this has badly affected anthurium cultivation.
- (vii) New planting material was not available in one Hub where Dendrobium used to be grown. At present it is lying vacant.

**Vacant Polyhouse. Seen in picture is coconut husk without any crops planted**



- (viii) The Hub sells its produce locally, in Tura and some are sold in Guwahati.

## SAMGONG HORTI HUB

1. **Date of Inspection: 15.5.2017**
2. **Location -** Samgong, Williamnagar
3. **District -** East Garo Hills District
4. **Area in hectares -** 13.3 Ha.
5. **Number of Spokes -** 23 Nos.

6. **Maintenance Fund:**

Sl No		2013-14	2014-15	2015-16	2016-17
1	<b>Wages</b>	400000	506280	604520	600920 (L.S)
2	<b>Materials &amp; Supplies</b> <b>Planting materials</b>	440000	30000	10000	120000
3	<b>Manure and fertilizers</b>	100000 Organic and inorganic manure fertilizers	40000 Organic manures bio fertilizers, bio pesticides etc		30000 Organic manures bio fertilizers, bio pesticides etc
4	<b>Office Expenses</b>	80000	10000		
5	<b>Other Charges</b>	38330	30000		
		1058330	616280	614520	750920
	<b>Part II</b> <b>Other Administrative Expenses</b>	230000			



**Foundation stone**



**Outer view of Polyhouse**

**7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:**

**2013-14**

SI No.	Items	Allotment	Particulars	Quantity	Rate	Total Amount	Saving
1	02-Wages	399900	02-Wages	3999 MD	100	399900	
2	Materials & Supplies	770000					
			Cocohusk	5 MT	18000	90000	
			Irrigation System	1000 sqm	46625	46625	
			UV film repairing tape	21 Rolls	1950/-	3900	
			UV film repairing tape	21 Rolls	1950/-	3900	
			UV film repairing tape	21 Rolls	1950/-	3900	
			UV film repairing tape	21 Rolls	1950/-	3900	
			UV film repairing tape	21 Rolls	1950/-	3900	
			UV film repairing tape	21 Rolls	1950/-	3900	
			UV film repairing tape	21 Rolls	1950/-	3900	
			UV film repairing tape	21 Rolls	1950/-	3900	
			UV film repairing tape	21 Rolls	1950/-	3900	
			UV film repairing tape	21 Rolls	1950/-	3900	
			Cotton Swaps 500gms	10Kgs	250/-	5000	
			Cotton Swaps 500gms	10Kgs	250/-	5000	
			Cotton Swaps 500gms	10Kgs	250/-	5000	
			Cotton Swaps 500gms	10Kgs	250/-	5000	
			Cotton Swaps 500gms	10Kgs	250/-	5000	
			Shade net	50 Kgs	76	3800	
			UV film 200 m	50 sqm	96	4800	
			Coco peat (25 Kgs. Packing)	225 kgs	675	6075	
			Shade net	50 kgs	76	3800	
			UV film 200 m	50 sqm	96	4800	
			Coco peat (25 Kgs. Packing)	225 kgs	675	6075	
			Shade net	50 kgs	76	3800	
			UV film 200 m	50 sqm	96	4800	
			Coco peat (25 Kgs. Packing)	225 kgs	675	6075	
			Shade net	50 kgs	76	3800	
			UV film 200 m	50 sqm	96	4800	
			Coco peat (25 Kgs. Packing)	225 kgs	675	6075	
			Shade net	50 kgs	76	3800	

		UV film 200 m	50 sqm	96	4800
		Coco peat (25 Kgs. Packing)	225 kgs	675	6075
		Shade net	50 kgs	76	3800
		UV film 200 m	50 sqm	96	4800
		Coco peat (25 Kgs. Packing)	225 kgs	675	6075
		Cocopeat (25 Kgs Pck)	175 kgs/ 25 Kg	675	4725
		Cocopeat (25 Kgs	185 kgs/25 kg	675	4995
		Wooden Post	30 Nos	300	9000
		Thatch grass	300	15	4500
		Brick	42585	7	29995
		Chips	160 boxes	900	144000
		Sands	10 truck	4250	42500
<b>Sub Total</b>					<b>528390</b>
3	Organic, inorganic manures, P.P. Chemicals etc.				
		Sulphate of potash	50 kgs	3000/2	60000
		Magnesium	200 kgs	2000/5	80000
		Borax	50 kgs	5250/5	5250
		Zinc Sulphate	50 kgs	3850/5	3850
		Copper Sulphate	50 kgs	10900/	10900
		Sodium molybdate	5 Kgs	3950	19750
		Manganese	100 Kgs	690/50	1380
		Ammonium Nitrate	150 Kgs	2000/5	6000
		Chloropyriohos	8 ltr	300	2400
		Kersdix-F	5 ltr	387	1935
		Amistar	2 ltr	1100	2200
		Econeem (500ml Pkts)	1 ltr	269	538
		Captap	10 kgs	665	6650
		Bavistin	2 kgs	598/-	1196
		Bavistin	13 kgs	598	7774
		Quintal 50 Wp	2 kgs	3290	6580
		Actara	1.9 Kgs	445	8455
		Streptocycline	9 Pkts	125	1125
		Cowdung Manure	5 Mt	1000	5000
		Cowdung Manure	6 Mt	1000	5000
		Cowdung Manure	7 Mt	1000	5000

			Cowdung Manure	8 Mt	1000	5000	
			Cowdung Manure	9 Mt	1000	5000	
			Cowdung Manure	10 Mt	1000	5000	
			Cowdung Manure	11 Mt	1000	5000	
			Cowdung Manure	12 Mt	1000	5000	
			Cowdung Manure	1.0 Mt	1000	1000	
			Cow dung	1000 MT	1000	100000	
						<b>Sub Total</b>	<b>366983</b>
4	Office Expenses	80000					
			Bill Book	6 Nos	400	2400	
			Delivery Challan	1 Book	600	600	
			Prime cellotape	10 Pc	10	1000	
			Ball Pen blue	10 Nos	30	300	
			Lead Pencil	3 Nos	5	15	
			Rubber	1 Nos	5	5	
			Boun Register No 10	10 Nos	12	1200	
			Office Tag	6 bundle	60	360	
			Four folding file	11 Nos	40	440	
			Pen stand 4 Pen with pen big	1 Nos	1200	1200	
			Dot Pen blue	10 Nos	30	300	
			Four folding file	10 Nos	40	400	
			PVCwire	1 Roll	1900	1900	
			CFL bulb	2 Nos	325	650	
			Tube light	2 Nos	75	150	
			Electronic Chalk	2 Nos	450	900	
			Harpic	1 Nos	70	70	
			Surf excel	1/2 Kg	95	95	
			White Phenyl	2 bottles	90	180	
			Lock & Key	3 Nos	180	540	
			Cnadle Stick	5 Pkt	55	275	
			Dettol (Liq)	1 Nos	90	90	
			Pad ring (Leather)	6 Nos	150	900	
			Enamel Paint	1/2 kg	50	50	
			Paint Brush	1 Nos	50	50	
			Lock & Key	6 NOS	260	1560	
			Scale Steel	1 Nos	60	60	



		Rubber	2 Pkt	300	600
		Envelope	50 Nos	145	73
		Bound Register No 2	2 Nos	12	48
		Ball Pen blue	10 Nos	30	300
		PVC Wire	1 Roll	1900	1900
		Cross line	60 Pkt	30	1800
		Computer ink black	1 Nos	1900	1900
		Rubber pipe	80 Mtr	25	2000
		Rubber Pipe	80 Mtr	25	2000
		Plastic bucket	1 Nos	860	860
		Cross line	36 Nos	30	1080
		Rubber pipe	80 mtr	25	2000
		Wall clock	1 Nos	750	750
		Cup set	1 set	600	600
		Computer ink black	1 Nos	1900	1900
		Computer ink black	1 Nos	1900	1900
		Computer ink black	1 Nos	1900	1900
		Computer ink black	1 Nos	1900	1900
		Computer ink black	1 Nos	1900	1900
		Pendrive	1 Nos	2000	2000
		Pen drive	1 Nos	2000	2000
		A4 Paper	6 Reams	290	1740
		Legal Size paper	6 Reams	330	1980
		Envelope big Plastic	90 Nos	20	1800
		Envelop Big plastic	90 Nos	20	1800
		Envelop Big plastic	91 Nos	20	1800
		Poper flog note stick Pad	6 Pkt	300	1800
		Poper flog note stick Pad	7 Pkt	300	1800
		Pad letter (Leather)	12 Nos	150	1800
		Key ring (Latter Pad)	6 Nos	150	900
		Plastic Tube	2 Nos	250	500
		Rubber pipe	80 Mtr	25	2000
		Rubber Pipe	80 Mtr	25	2000
		Rubber Pipe	81 Mtr	25	2000
		Rubber Pipe	82 Mtr	25	2000
		Bound Register No.10	5 Nos	12	600

			Lock & Key	6 Nos	260	1560	
			PVC Wire 2.5	1 Roll	1900	1900	
			Hellogen light Bulb	3 Nos	500	1500	
			CFL bulb	5 Nos	325	1625	
						<b>Gross Total</b>	<b>76206</b>
						<b>Vat 5%</b>	<b>3794</b>
						<b>Sub Total</b>	<b>80000</b>
5	Other Charges	38000					
			Fuel tank overhauling	-	-	450	
			Front brake pad changing	2 sides	150	300	
			Rear brake liner changing	2 sides	250	500	
			Wheel alignment-	-	-	150	
			U-bolt checked	4 nos	50	200	
			Changing diesel filter	-	-	350	
			Rear bumper silencer welding	350		350	
			Silencer mount changing	100		100	
			Rear spring alignment	350		350	
			Shackle pin greasing	200		200	
			front wheel check-nut fixed	2 sides	150	300	
			Clutch checked fixed	150		150	
			Rear spring tempering	2 sides	700	1400	
			Proller cross	1 nos	200	200	
			Rear wheel cylinder repair	1 nos	200	200	
			Rear brake liner change	2 stes	250	500	
			Body mount fixed			200	
			Fuek pump tuning			350	
			Fan belt alignment			100	
			Door alignment lock			150	
			U-bolt change	2 sets	200	400	
			propeller cross changed	2 nos	200	400	
			propeller cross changed			200	
			propeller cross changed			150	
			propeller cross changed			150	
			propeller cross changed			100	
			propeller cross changed	2 sides	600	1200	
			propeller cross changed			1800	

			propeller cross changed	4 sides	200	800
			propeller cross changed	2 sides	200	400
			propeller cross changed	2 nos	300	600
			propeller cross changed	-	-	800
			propeller cross changed	4 sides	200	800
			propeller cross changed	2 sides	200	400
			propeller cross changed	2 nos	250	500
			propeller cross changed	1Set	300	300
			propeller cross changed	2 sides	250	500
			propeller cross changed			150
			propeller cross changed			400
			propeller cross changed	2 nos	300	600
			propeller cross changed	2 sets	600	1200
			propeller cross changed	2 Nos	80	160
			propeller cross changed	2Sides	250	500
			propeller cross changed	4 sides	150	600
			propeller cross changed	2 sides	200	400
			propeller cross changed			120
			propeller cross changed			800
			propeller cross changed	2 nos	150	300
			propeller cross changed	2 sides	250	500
			propeller cross changed			350
			Axle bearing change	1 nos	300	300
			Brake liner change	2 sets	250	500
			Engine mount change			400
			Silencer gasket change			80
			Silencer clamp fixing welding			200
			Four wheel lever fixed			350
			Electonic choke (Bajaj)	3 Nos	450	1350
			40 Wt Tube rod	5 Nos	75	375
			Batten holder	1 nos	45	45
			Main switch rep.	1Nos	230	230
			Tube light holder	4 Nos	20	80
			D.B Rep	1 NOs	150	150
			Power plug rep	2 Nos	100	200
			CFL spiral 27 Wt	2 NOs	550	1100

		Calling bell push indicator	1 Nos	80	80
		63 Amp cut out	1 Nos	265	265
		63 Amp cut out	2 NOs	30	60
		Pendent Holder	1 Nos	25	25
		5 pi-Socket	1 Nos	40	40
		Energy mater 5-10A	1 Nos	1265	1265
		Musical calling bell	1 Nos	565	565
		Switch box rep	1 Nos	170	170
		CFL spiral 42Wt	1 Nos	800	800
		Four electrician charge		1150	1150
		Transportation Charge	2 Tuckload	1800	3600
		Loading& unloading	4 times	635	2540
<b>Sub Total</b>					<b>38000</b>
<b>G/ Total</b>					<b>1413273</b>

**Rs. 14,13,273/- (Rupees Forteen lakhs thirteen thousand two hundred seventy three) only**

**(Part II) during 2013-14**

SI No.	Items	Amount Allotted	Particulars	Quantity	Rate (Rs)	Amount (Rs)	Saving
1	Administrative Expenses Hospitality, Entertainment Expense, Gift etc	Nil			0	0	0
	<b>Sub Total</b>						
2	Farm works, Renovation, Repairing of old Hub, maintenance of Generators etc	Nil			0	0	0
	<b>Total</b>	<b>Nil</b>	<b>Nil</b>	<b>Nil</b>	<b>0</b>	<b>0</b>	<b>0</b>

2014-15

Sl. No	Items	Amount allotted	Particulars	Quantity	Rate	Amount	Saving
1	Wages	535110	02-Wages	5351	100	535110	
	<b>Sub Total</b>					<b>535110</b>	0
<b>Cheque Received amount Rs. 2,26,070/-</b>							
2	Office Expenses :	10000				0	
			Ball Pen blue	10 Nos	30	300	
			Dot Pen blue	10 Nos	30	300	
			Four folding file	10 Nos	40	400	
			Register No 10	10 Nos	12	1200	
			Four folding file	10 Nos	40	400	
			Computer ink black	1 Nos	1900	1900	
			Computer ink black	1 Nos	1900	1900	
			A4 Paper	6 Reams	290	1740	
			Envelope big Plastic	90 Nos	20	1800	
			Scale Steel	1 Nos	60	60	
	<b>Sub Total</b>					10000	
3	Materials & Supplies:	146070				0	
			UV film repairing tape	2 Rolls	1950/-	3900	
			UV film repairing tape	2 Rolls	1950/-	3900	
			UV film repairing tape	2 Rolls	1950/-	3900	
			UV film repairing tape	2 Rolls	1950/-	3900	
			UV film repairing tape	2 Rolls	1950/-	3900	
			UV film repairing tape	2 Rolls	1950/-	3900	
			UV film repairing tape	2 Rolls	1950/-	3900	
			UV film repairing tape	2 Rolls	1950/-	3900	
			UV film repairing tape	2 Rolls	1950/-	3900	
			UV film repairing tape	2 Rolls	1950/-	3900	
			UV film repairing tape	2 Rolls	1950/-	3900	
			Cotton Swaps 500gms	10 Kgs	250/-	5000	
			Cotton Swaps 500gms	10 Kgs	250/-	5000	
			Cotton Swaps 500gms	10 Kgs	250/-	5000	
			Shade net	50 Kgs	76	3800	
			Shade net	40 Kgs	76	3040	
			UV film 200 m	50 sqm	96	4800	
			Irrigation System	800 sqm	46625	46625	

			UV film 200 m	50 sqm	96	4800	
			UV film 200 m	49 Sqm	96	4705	
			Coco peat (25 Kgs. Packing)	225 kgs	675	6075	
			Cocopeat (25 Kgs Pck)	225kgs	675	6075	
			Cocopeat (25 Kgs	225kgs	675	6075	
			Cocopeat (25 Kgs Pck)	225 kgs	675	6075	
	<b>Sub Total</b>					<b>146070</b>	0
	Organic,Manure bio fertilizer bio pesticides etc						
			Cowdung Manure	5 Mt	1000	5000	
			Cowdung Manure	5 Mt	1000	5000	
			Cowdung Manure	5 Mt	1000	5000	
			Cowdung Manure	5 Mt	1000	5000	
			Cowdung Manure	5 Mt	1000	5000	
			Cowdung Manure	5 Mt	1000	5000	
			Cowdung Manure	5 Mt	1000	5000	
			Cowdung Manure	5 Mt	1000	5000	
	<b>Sub Total</b>					<b>40000</b>	0
<b>4</b>	<b>Other Charges</b>	<b>30000</b>				0	
			Spring bush charging greasing	4 sides	200	800	
			Hander bush (rubber) change	2 sides	200	400	
			Steering cross change	2 nos	300	600	
			Fuel tank overhauling	-	-	800	
			Spring bush charging greasing	4 sides	200	800	
			Hanger rubber bush charging	2 sides	200	400	
			Proller crossess charging	2 nos	250	500	
			Balance machine rep.	1Set	300	300	
			Glass machine repairing	2 sides	250	500	
			Name plate fixing			150	
			Ignition switch fitting			400	

			Steering cross change	2 nos	300	600	
			Rear spring tempering	2 sets	600	1200	
			Shocker bush changing	2 Nos	80	160	
			Hub greasing	2Sides	250	500	
			Spring pin bush changing	4 sides	150	600	
			Brake pad changing	2 sides	200	400	
			Air cleaner reconditioning			120	
			Rear crown oil seal change			800	
			U.J cross change	2 nos	150	300	
			Spring rubber bush change	2 sides	250	500	
			Balance rod change			350	
			Axle bearing change	1 nos	300	300	
			Brake liner change	2 sets	250	500	
			Engine mount change			400	
			Silencer gasket change			80	
			Silencer clamp fixing welding			200	
			Axle bearing change	1 nos	300	300	
			Electronic choke (Bajaj)	3 Nos	450	1350	
			40 Wt Tube rod	5 Nos	75	375	
			Batten holder	1 nos	45	45	
			Main switch rep.	1Nos	230	230	
			Tube light holder	4 Nos	20	80	
			D.B Rep	1 NOs	150	150	
			Power plug rep	2 Nos	100	200	
			CFL spiral 27 Wt	2 NOs	550	1100	
			Calling bell push indicator	1 Nos	80	80	
			63 Amp cut out	1 Nos	265	265	
			63 Amp cut out	2 NOs	30	60	
			Pendent Holder	1 Nos	25	25	
			5 pi-socket	1 Nos	40	40	
			Energy mater 5-10A	1 Nos	1265	1265	

			Musical calling bell	1 Nos	565	565	
			Switch box rep	1 Nos	170	170	
			CFL spiral 42Wt	1 Nos	800	800	
			63 Amp cut out	1 Nos	265	265	
			63 Amp cut out	2 NOs	30	60	
			Pendent Holder	1 Nos	25	25	
			5 pi-Socket	1 Nos	40	40	
			5 pi-Socket	1 Nos	40	40	
			Musical calling bell	1 Nos	565	565	
			Switch box rep	1 Nos	170	170	
			CFL spiral 42Wt	1 Nos	800	800	
			Main switch rep.	1Nos	230	230	
			Tube light holder	4 Nos	20	80	
			D.B Rep	1 NOs	150	150	
			Power plug rep	2 Nos	100	200	
			Power plug rep	2 Nos	100	200	
			Pendent Holder	1 Nos	25	25	
			Four electrician charge		1150	1150	
			Power plug rep	1 Nos	100	100	
	Reimburse Bill		Transportation Charge	2 Truckload	1800	3600	
			Loading& unloading	4 times	635	2540	
	<b>Sub Total</b>					<b>30000</b>	
	<b>Grant Total</b>					<b>761180</b>	

**Rs. 7,61,180/- (Rupees Seven lakhs sixty one thousand one hundred eighty) only**



2015-16

Sl.No	Items	Amount allotted	Particulars	Quantity	Rate	Amount	Saving
1	Wages	603990	02-Wages	3552	170	603840	150
	<b>Sub Total</b>					603840	
2	Office Expenses :	Nil				0	
	<b>Sub Total</b>						
3	Materials & Supplies:					0	
		10000					
			UUV Stabilized byer deffused (White/yellow Colour)			10000	
	<b>Sub Total</b>					10000	
4	Other Charges	Nil				0	
	<b>Sub Total</b>					613840	150

**Rs. 6,13,840/- (Rupees Six lakhs thirteen thousand eight hundred forty) only**



**Anthurium**



**Bird of Paradise under open cultivation**



**Chrysanthemum**



**Gerbera**

**2016-17**

<b>Head of Account</b>	<b>Items</b>	<b>Amount allotted</b>	<b>Particulars</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>	<b>Saving</b>	
<b>2401-Crop Husbandry-119-Horticulture &amp; Vegetable Crops (36)-Maintenance of Horti-Hub .....Sixth Schedule (Pr-II) Area Plan 2016-17</b>	02-Wages	622718	02-Wages	3319 MD	181	600739	21979	
	<b>Sub Total</b>					600739		
	Office Expenses :	Nil				0		
	<b>Sub Total</b>							
	Materials & Supplies:					0		
		150000						
			Coco Peat (25 kg Pkt)	105	675	70875		
			Tuflex	112.5	160	18000		
			Hot Pepper F1 Anolchi	100 gm	485	4850		
			Bitter gourd F1	110 gm	80	880		
			Cumcumber US6125	110	200	2200		
			Broccoli Imperial	50 gm	945	4725		
			Cabbage F1	100	285	2850		
			Marigold F1 Gold	1000	3120	3120		
			Marigold F1 Orange	1000	3120	3120		
			Marigold F1 Yellow	1000	3120	3120		
			Marigold F1Yellow	1000	3120	3120		
			Marigold F1Yellow	1000	3120	3120		
	<b>Sub Total</b>						119980	20
		Organic Manure, bio fertilizer Bio Pesticide etc.						
				FYM (Cowdung Manure)	2 MT	2500	30000	
<b>Sub Total</b>								
<b>Grand total</b>						630739	21999	

**Rs. 6,30,739/- (Rupees Six lakhs thirty thousand seven hundred thirty nine) only**

8. **Name of Crops grown** - Anthurium, Gerbera, Xanadu, Leather Leaf Fern, Orchid, Chrysanthemum (grown during winter), Bird of Paradise (under unprotected cultivation)



**Xanadu**



**Dendrobium**



**Leather Leaf Fern**

9. **Sustainability of the Project** –

**Production: crop-wise-**

		<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>
Anthurium	Target	10000		
	Achievement		6638	
Gerbera	Target	13000		
	Achievement		9838	
Xanadu	Target	1200		
	Achievement		960	
Leather Leaf Fern	Target	30000		
	Achievement		21800	
Orchid	Target	200		
	Achievement		139	
Chrysanthemum	Target	1800		
	Achievement		1635	
Bird of Paradise	Target	20		
	Achievement		4	
Areca Palm	Target	94		
	Achievement		74	
Araucaria cookie	Target	320		
	Achievement		233	
Alstroemeria	Target	99		
	Achievement		66	
Golden Bottlebrush	Target	1800		
	Achievement		1480	
Lilium	Target	230		
	Achievement		95	
Calla Lily	Target	120		
	Achievement		25	
Draceana Leaf	Target	80		

	Achievement		4	
Tuberose	Target	75		
	Achievement		3	
Cycas Leaf	Target	30		
	Achievement		10	

Income generated during 2013-14, 2014-15 and 2015-16

Sl.No.	Year	Amount (Rs.)	Remarks
1.	2013-2014	Rs. 3,30,892.00	Good Production of gerbera. Both the greenhouses were replanted
2.	2014-2015	Rs. 3,07,098.00	
3.	2015-2016	Rs. 2,17,671.00	

#### 10. Facilities available at the Horti Hub -

- (i) Grading Hall cum Office
- (ii) Training Hall: 2 Nos.
- (iii) Labourer's Barrack
- (iv) Irrigation and Fertigation chamber
- (v) Water tanks (Cap.: 3,00,000) lits.: 3 Nos.
- (vi) 62.5 KVA Silent Generator
- (vii) Cold rooms (3 MT Caps.)
- (viii) Mist Chamber
- (ix) Soil sterilizer
- (x) Pick Up Van
- (xi) TATA ACE
- (xii) Power Tiller
- (xiii) Bike
- (xiv) Shade Houses: 3 Nos.
- (xv) Hi-tech Green Houses: 12 Nos.



**Training Hall**



**Tomato seedling propagated in Polyhouse**

Sl No.	Structure	Crops	Area/ Capacity	No. of plants
1	Polyhouse	Anthurium	1000 Sq m	2000 Nos.
2	Polyhouse	Anthurium	1200 Sq m	5000 Nos.
3	Polyhouse	Anthurium	1200 Sq m	-
4	Polyhouse	Anthurium	1000 Sq m	4000 Nos.
5	Polyhouse	Chili & Tomato	1000 Sq m	Chili 1100 Nos. Tomato 590 Nos.
6	Polyhouse	Gerbera	1000 Sq m	3200 Nos.
7	Polyhouse	Chrysanthemum		1050 Nos.
8	Polyhouse	Chrysanthemum		1050 Nos.
9	Polyhouse	Tomato seedling		
10	Polyhouse	Tomato plantation		
11	Polyhouse	Trial unit for Dendrobium		
12	Polyhouse	Ready for sale plants		970 Plants

13	Shade House	Tube rose		
14	Shade House	Xanadu		
15	Shade House	Leather Leaf Fern	1000 Sq m	

**11. Facilities for collection, packaging, storage, transportation and marketing of produce -**

- (i) Grading Hall cum Office
- (ii) Cold rooms (3 M.T. capacity)

**12. Types of field demonstration and training given to farmers -**

- (i) Nursery Management
- (ii) Planting of different crops
- (iii) Nutrient management
- (iv) Pest and disease management
- (v) Inter culture operations
- (vi) Harvesting practices and Post-harvest management

**13. No. of field Demonstration and Training Given 2013 – 14, 2014 – 15, 2015 – 16 -**

- 2013-14: 4 Nos.
- 2014-15: 4 No.
- 2015-16: 2 Nos.

**14. No. of respondents attended training/demonstration -**

- 2013-14: 100 Nos.
- 2014-15: 100 No.
- 2015-16: 50 Nos.

**15. Types of assistance given to farmers**

- (a) **In cash:** Nil
- (b) **In kind:**

**16. No. of employees:**

- 2 H.D.O. & Assistant Horticulture Inspector

**17. Wages per worker –**

- (i) Skilled: Rs. 191/ day
- (ii) Semi Skilled: Rs. 181/ day
- (iii) Unskilled: Rs. 170/ day

**18. New construction/ infrastructure improvement/ new facilities available at Horti-hub during 2013-14, 2014-15 and 2015-16**

Nil

**19. Supplies and Materials Received:**

2013-14	2014-15	2015-16
4000 Gerbera, 200 MT Cowdung, 1 unit irrigation system, 300 sq m shade net, 200 sq m U.V. Film, 20 rolls cotton swaps, 168 kgs. (NPK) Fertilizers, 16/57/150 (Its./kgs/pkt), 171 P.P.Equipment	414 Gerbera, 20 MT Cowdung, 6 MT cocohusk, 178 sq m U.V. Film, 26 kgs. Fertilizers.	28.75gs U.V. Film

**20. Problem -**

- (i) Refer Van is required
- (ii) Fund for management of polyhouses (Repair & Renovation, etc)
- (iii) Replanting of old planting materials especially Anthurium
- (iv) Transportation problem
- (v) Absence of pucca godowns for storage of fertilizers and materials
- (vi) Absence of farmers' dormitory
- (vii) Fund for wages of labourers

**21. Observation:**

- (i) The Hub is the only Horticultural Hub in and around Williamnagar. It acts as a demonstration unit to the farmers and functions as a training cum Gardeners' Centre. The Hub is doing very well and has been awarded the Centre of Excellence for Anthurium.
- (ii) Renovation and repair of Polyhouses is required urgently
- (iii) Training Hall is very old and needs to be replaced by new concrete building.
- (iv) Godown for storage of various inputs is required.
- (v) Wages could not be paid to the labourers monthly, since allotment of fund is received only once in a quarter.
- (vi) Coco peat – the planting medium for anthurium could not be procured sufficiently due to less maintenance funds allotted.
- (vii) Market linkage needs to be established at the Hub. Due to communication and transportation problem, the Hub does not have a constant buyer. Moreover, as it relies on public transport system like night buses, it cannot deliver its produce on demand to buyers in Guwahati, etc. At present, it sells its produce locally which results in wastage during the off-season.
- (viii) Anthurium is sold @ Rs. 7/- to Rs. 25/- depending on the size, Fern @ Rs. 2/-

- (ix) Sale proceed generated by the Horti-Hub is around Rs. 23,00,000/-. The Hub had requested to allow utilization of sale proceed on maintenance of the Hub and payment of electricity bill but has not received permission for the same. At present, the pending electricity bill is around Rs. 1,40,000/-
- (x) Approach road to the hub needs to be black-topped as the existing kutchra road is very rough and muddy, especially in the rainy season.



**Approach road to Samgong Horti-Hub**

### **SANGSANGGRE HORTI HUB**

1. **Date of Inspection:** 16.5.2017
2. **Location:** Sangsanggre
3. **District:** West Garo Hills District
4. **Area in hectares:** 15 Ha.
5. **Number of Spokes:** Nil



**Outer view of Polyhouse**

**6. Maintenance Fund:**

	<b>2015-16</b>	<b>2016-17</b>
<b>Wages</b>	7,88,400	600920
<b>Supplies &amp; Materials</b>	5,43,400	100000
<b>Total</b>	<b>13,31,800</b>	<b>700920</b>

**7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:**

**2016-17**

**Allotment: Rs 7,00,920.00**

SI No.	Items/ Particulars	Achievement	
		Physical	Financial
1.	<b>Wages</b>	5489 Mds	599371
2.	<b>Supplies &amp; Materials</b>		
	1. Gerbera plants @ 45/-	-	-
	2. Polysleeves @ 220/-	318 kg	69960
3.	Organic Manures, biofertilizers, bio pesticides etc		
	1. FYM	30 MT	30000
	<b>Total:-</b>		<b>699331</b>

**8. Name of Crops grown:** Anthurium, Orchids, Strawberry, Gerbera, Rose, Cherry Tomato



**Anthurium**



**Roses**



**Dendrobium**



**9. Sustainability of the Project –  
Production (Crop-wise)**

Sl. No.	Name of the crops	Target (Nos.)	Achievement (Nos.)
1.	Anthurium	12000	8500
2.	Orchids	6400	4000
3.	Gerbera	40000	30000
4.	Rose	20000	16000
5.	Cherry Tomato	1200 kg	800 kgs

Income generated:

During the year 2015-16: Rs. 72000.00

**10. Facilities available at the Horti Hub**

- (i) Grading Hall
- (ii) Cold Storage
- (iii) Mist chamber
- (iv) Polyhouses



**Mist chamber: (Left) outer view & (Right) Asparagus seedlings propagated in Mist chamber**

**Generator**

Sl No.	Structure	Crops	Area/ Capacity	No. of plants
1	Polyhouse	Anthurium	800 Sq m	1134 Nos.
2	Polyhouse	Dendrobium	200 Sq m	1600 Nos.
3	Polyhouse	Strawberry	200 Sq m	600 Nos.
4	Polyhouse	Cherry Tomato	200 Sq m	-
5	Polyhouse	Cherry Tomato	200 Sq m	-
6	Polyhouse	Rose	800 Sq m	2400 Nos.
7	Polyhouse	Gerbera	200 Sq m	750 Nos.
8	Polyhouse	Gerbera	200 Sq m	600 Nos.
9	Nursery	Asparagus Fern	-	-

**11. Facilities for collection, packaging, storage, transportation and marketing of produce -**

- (i) Grading Hall
- (ii) Cold Storage

**12. Types of field demonstration and training given to farmers - Nil**

**13. No. of field Demonstration and Training Given 2013 – 14, 2014 – 15, 2015 – 16 - Nil**

14. **No. of respondents attended training/demonstration** - Nil

15. **Types of assistance given to farmers**

- a. **In cash:** Nil
- b. **In kind:** Nil

16. **No. of employees:**

- (i) 1 Hub Manager: Smti Paunette. A Sangma
- (ii) 8 (Eight) Labourers

17. **Wages per worker** –

- (i) Skilled: Rs. 191/- per day (2 Nos)
- (iii) Semi-skilled: Rs. 181/- per day (2 Nos)
- (iv) Un-skilled: Rs. 170/- per day (4 Nos)

18. **New construction/ infrastructure improvement/ new facilities available at Horti-hub during 2013-14, 2014-15 and 2015-16**

Nil

19. **Supplies and Materials received during 2013-14, 2014-15 and 2015-16:**

Nil

20. **Problem** -

- (i) Insufficient funds for Maintenance of Horti-Hub

21. **Observation:**

- (i) The Hub started only a few years back (2014-15) and is doing well in Anthurium and Dendrobium orchids.
- (ii) Labour shed is required. There are 8 labourers but there is no Labour shed for them.
- (iii) Fencing is required at the Hub. The absence of fencing leads to encroachment of cattle from nearby villages. At present crops cannot be planted under unprotected cultivation.
- (iv) Training Hall is required at the Horti-Hub.
- (v) Wages could not be paid to the labourers monthly, due to irregular receipt of fund.
- (vi) Approach road to the Hub is very narrow and in a bad condition. It requires widening and urgent repairs.



**Approach road to Horti-Hub**



**Cherry Tomato**



**Strawberry**



**Gerbera**

- (vii) Many plants had been replaced depending on market demand and suitability of the region. Leather Leaf Fern was replaced with Strawberry and Gerbera, Colored Capsicum with Cherry Tomato.
- (viii) Rose production 16000 stems. Its price is constant during all seasons at Rs. 8/-. It is one of the most productive flowers at the Hub.
- (ix) Anthurium is sold @ Rs. 5/-, Dendrobium @ Rs.8/-, Gerbera @ Rs. 5/-

## MINNENG HORTI HUB

1. **Date of Inspection:** 16.5.2017
2. **Location:** Minneng, Gasuapara
3. **District:** South Garo Hills District
4. **Area in hectares:** 9.5 Ha.
5. **Number of Spokes:** 3 Nos.
6. **Maintenance Fund:**

*Training Hall*

Sl No		2013-14	2014-15	2015-16	2016-17
1	<b>Wages</b>	4,00,000	5,06,280	7,14,000	7,56,580 (L.S)
2	<b>Materials &amp; Supplies</b>				
	<b>Planting materials</b>	4,40,000	29,000	18,000	1,65,000
3	<b>Manure and fertilizers</b>	1,00,000	38,000		45,000
		Organic and inorganic manure fertilizers	Organic manures bio fertilizers, bio pesticides etc		Organic manures bio fertilizers, bio pesticides etc
4	<b>Office Expenses</b>	80,000	9,000		
5	<b>Other Charges</b>	38,370	30,000		
		<b>10,58,370</b>	<b>6,12,280</b>	<b>7,32,000</b>	<b>9,66,580</b>



**Cattleya orchid**



**Dendrobium**



**Vanda**

**7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:**

**2013-14**

<b>Sl No.</b>	<b>Items</b>	<b>Allotment</b>	<b>Particulars</b>	<b>Quantity</b>	<b>Rate</b>	<b>Total Amount</b>	<b>Saving</b>
1.	Wages	Rs. 4,00,000/-		400 MDs	100/-	Rs.4,00,000/-	Nil
<b>Sub Total</b>							
2.	Materials & Supplies	Rs.4,00,000/-	i. UV Film ii. Shade Net iii. L.D Polythene bags/sleeves iv. Brush Cutter MBC v. Sprinkler Irrigation System vi. Drip Irrigation Syatem	7 qtls. 2500 sqm 1 qtl. 1 no. 100 sq.m 100 sq.m	Rs. 285/- per kg Rs. 47/- per sq.m Rs. 190/- per kg Rs. 20,500/- Rs. 47,000/- per 100 sq.m Rs. 36,500/- per 100 sq.m	Rs. 1,99,500/- Rs. 1,17,500/- Rs. 19,000/- Rs. 20,500/- Rs. 47,000/- Rs. 36,500/-	
<b>Sub Total</b>						Rs. 4,00,000.00	
3.	Organic, inorganic manures, P.P. Chemicals, etc.	Rs.1,40,000/-	a. Karathane (Dinocarp 48%EC) b. Keradix F (Humic Acid 10%) c. Lannate (Methomyl 40%SP) d. 13:40:13 Master Valgro (Italy) e. 19:19:19 NPK ALL f. Megafol g. FYM	10 lits. 10 lits. 10 lits. 50 kgs. 25 kgs. 1 lit. 60 MT	Rs. 2925/- per lit. Rs. 387/- per lit. Rs. 2248/- [per lit. Rs. 5250/- per 25 kgs. Rs. 3300/- per 25 kgs. Rs. 600/- per lit. Rs. 500/- per MT	Rs. 29,250/- Rs. 3,870/- Rs. 22,480/- Rs. 10,500/- Rs. 3,300/- Rs. 600/- Rs. 30,000/-	
<b>Sub Total</b>						Rs. 1,40,000.00	
4.	Office Charges	Rs. 40,000/-	i. Repairing of computer and purchase of accessories ii. Purchase of fuel/POL			Rs. 31,000/- Rs.49,000/-	
<b>Sub Total</b>						Rs. 80,000/-	
5.	Other Charges	Rs. 38,370/-	a. Transportation of FYM b. Training expenses			Rs. 15,000/- Rs. 23,370/-	
<b>Sub Total</b>						<b>Rs. 38,370.00</b>	
						<b>Rs. 10,58,370.00</b>	

**2014-15**

SI No.	Items	Allotment	Particulars	Quantity	Rate	Total Amount	Saving
1.	Wages	Rs.5,06,280/-		3164 MDs	160/-	Rs.5,06,280/-	Nil
<b>Sub Total</b>							
2.	Materials & Supplies	Rs. 29,000/-	1. Cocopeat			Rs. 29,000/-	
<b>Sub Total</b>						<b>Rs. 29,000.00</b>	
3.	Organic, inorganic manures, P.P. Chemicals, etc	Rs. 38,000/-	FYM	38MT	Rs. 1000/- per MT	Rs. 38,000/-	Nil
<b>Sub Total</b>						<b>Rs. 38,000.00</b>	
4.	Other Charges	Rs. 30,000/-	POL	-	-	Rs. 30,000/-	
<b>Sub Total</b>						<b>Rs.30,000 .00</b>	
						<b>Rs.6,12,280 .00</b>	

**2015-16**

SI No.	Items	Allotment	Particulars	Quantity	Rate	Total Amount	Saving
1.	Wages	Rs. 7,14,000/-		4200 MDs	Rs.170/-	Rs. 7,14,000/-	Nil
<b>Sub Total</b>						<b>Rs. 7,4,000.00</b>	
2.	Materials & Supplies	Rs. 18,000/-	i. Dendrobium	150 No.s	Rs. 120/-	Rs. 18,000/-	Nil.
<b>Sub Total</b>						<b>Rs. 18,000.00</b>	
						<b>Rs. 7,32,000.00</b>	

**2016-17**

SI No.	Items	Allotment	Particulars	Quantity	Rate	Total Amount	Saving
1.	Wages	Rs. 7,56,680/-		4450 MDs	-	Rs. 7,56,580/-	Nil
<b>Sub Total</b>						<b>Rs. 7,56,580.00</b>	
2.	Materials & Supplies	Rs.1,65,000/-	a. Dendrobium Tissue Culture b. Gerbera var. Preesman c. Poly sleeve All sizes d. Alluminium labelling tags	500 nos. 1225 nos. 350kgs 1,900 nos.	Rs.80/- Rs.40/- Rs. 190/- Rs.5/-	Rs. 40,000.00 Rs. 49,000.00 Rs. 66,500.00 Rs. 9,500.00	
<b>Sub Total</b>						<b>Rs. 1,65,000.00</b>	
3.	Organic, inorganic manures, P.P. Chemicals, etc.	Rs.1,40,000/-	a. Vermi Compost b. Bio Potash c. Antigostic Fungus 1% d. Neem (Azadirachtan 15000 ppm)	6 Qtls. 1.8 Qtls 0.59 Qtls. 10 lits.	Rs. 990/- per 40 kgs Rs. 800/- per 10 kgs Rs. 200/- per kg Rs. 395/- per lit	Rs. 14,850.00 Rs. 14,400.00 Rs. 11,800.00 Rs. 3,950.00	
<b>Sub Total</b>						<b>Rs. 45,000.00</b>	
						<b>Rs. 9,66,580.00</b>	

8. **Name of Crops grown:** Dendrobium, Vanda, Cattleya, Leather Leaf Fern & Xanadu, Anthurium



**Leather Leaf Fern & Xanadu**



**Gerbera**



**Anthurium**

9. **Sustainability of the Project:**

**Production: (Crop-wise)**

		2013-14	2014-15	2015-16	2016-17
Dendrobium	Production	25000	18000	3500	2000
	Sale Proceed @ Rs. 15	150000	108000	35000	20000
Gerbera	Production	-	1250	2000	746
	Sale Proceed @ Rs. 30	-	12500	20000	7460
Leather Leaf Fern	Production	50000	70000	5936	5000
	Sale Proceed @ Rs. 100	28000	35000	2968	5000
Xanadu	Production	50000	50000	10000	-
	Sale Proceed @ Rs. 100	28000	27000	5000	-
Vanda	Production	-	500	1000	1000
	Sale Proceed @ Rs. 100	-	12500	25000	25000
Other Flowers	Production	Flower seedlings and potted plants 4000	Anthurium 1000	Anthurium 1000	-
		Anthurium 1200			
	Sale Proceed @ Rs. 100	18000	10000	10000	-
Vegetables/ Other crops/ Anthurium	Production	Vegetables 1.5 tonnes	-	-	-
		Vegetable Seedlings 5000 Nos.			
	Sale Proceed @ Rs. 100	30000	-	-	-
		10000			
<b>Total Sale Proceed (Rs.)</b>		<b>276000</b>	<b>205000</b>	<b>97968</b>	<b>57,460</b>

Total Sale Proceed generated = Rs. 19,51,797.00  
 Total Interest credited = Rs. 1,65,686.00  
**Total = Rs. 21,17,483.00**

**10. Facilities available at the Horti Hub:**

- (i) Training Hall
- (ii) Farmer's Hostel
- (iii) 2 Mist Chambers  
(500 Sq m each)
- (iv) Polyhouses



**Outer & Inner view of Mist Chamber destroyed by storm**

<b>Sl No.</b>	<b>Structure</b>	<b>Area of the Poly House</b>	<b>Type of Flower Grown</b>	<b>Population</b>
1	Polyhouse	500 Sq m	Cattleya	2175 Nos.
2	Polyhouse	1000 Sq m	Anthurium	350 Nos.
3	Polyhouse	750 Sq m	Xanadu	2000 Nos.
4	Polyhouse	500 Sq m	Leather Leaf Fern	NA
5	Polyhouse	1000 Sq m	Dendrobium	9708 Nos.
6	Polyhouse	500 Sq m	Dendrobium	4924 Nos.
7	Polyhouse	1000 Sq m	Dendrobium	9656 Nos.
8	Polyhouse	1000 Sq m	Dendrobium	9656 Nos.
9	Polyhouse	1000 Sq m	Vanda	4975 Nos.
10	Polyhouse	1000 Sq m	Gerbera	3201 Nos.

**11. Facilities for collection, packaging, storage, transportation and marketing of produce:**

Available

**12. Types of field demonstration and training given to farmers:**

Packaging and practices of growing Dendrobium, Anthurium and Vegetables

**13. No. of field Demonstration and Training Given 2013 – 14, 2014 – 15, 2015 – 16:**

2013-14: 3 Nos.

2014-15: 1 No.

2015-16: 2 Nos.



**14. No. of respondents attended training/demonstration:**

2013-14: 30 Nos.

2014-15: 10 No.

2015-16: 20 Nos.

**15. Types of assistance given to farmers:**

a. **In cash:** Nil

b. **In kind:** Vegetable seeds, planting materials, fertilizers, organic manure

**16. No. of employees:**

(i) Hub Manager: Smt. F.R. Momin

**17. Wages per worker:**

(i) Skilled workers: Rs. 191/-

(ii) Unskilled workers: Rs. 170/-

**18. New construction/ infrastructure improvement/ new facilities available at Horti-hub during 2013-14, 2014-15 and 2015-16:**

2013-14: Mist Chamber – 2 Nos. (500 sq. m each) (MIDH)

2014-15: a. Dendrobium units: 1500 sq. m (MIDH & RKVY)

b. Vanda unit: 1000 sq. m (MIDH & RKVY)

c. Cattleya unit: 500 sq. m (MIDH & RKVY)

d. Genap tank: (RKVY)

e. Gerbera: 1000 sq. m (MIDH)

**19. Supplies and Materials Received:**

2013-14	2014-15	2015-16
UV films, Shadenets, fertilizers, etc. purchased under the scheme	Cocopeat and organic manure purchased under the scheme	150 Nos. of purchased to replace damaged/old plants

**20. Problem:**

(i) Communication is the main problem which hampers the work as well as the transportation of produce from the hub.

(ii) Frequent power failures which occur several times in a day and sometimes for days results in loss of produce and high maintenance cost.

(iii) Theft- Being on the border area, there is frequent theft of materials and machineries like pumps, pipes, etc.

- (iv) No service providers are willing to commit for buying the products due to communication problems as well as the inconveniences prevailing due to the location of the hub.

## 21. Observation:

- (i) The Hub is situated very close to the Bangladesh border and every time a cyclone occurs in Bangladesh, the poly houses are subject to severe damage by storms. Hence repairs and maintenance are required to be taken up every year. In the previous year alone the polyhouse in which Cattleya orchids are grown had to be repaired on 3 separate instances. One of the Mist Chambers was also severely damaged and can no longer be used.



**Anthurium plants, roof of Dendrobium polyhouse and Mist Chamber destroyed by storm**

- (ii) The roof of poly houses for anthurium, dendrobium and gerbera plants were damaged by the storm and the plants are left exposed to heat and rain. Most of the plants have died.
- (iii) Funds are required for repairs and replacement of plants.
- (iv) Marketing of the produce is another problem as no firms or vendors are willing to come to the area due to very bad road condition.
- (v) There is a shortage of labourers in the Hub.

## ZIKZAK HORTI HUB

1. **Date of Inspection:** 16.5.2017
2. **Location:** Zikzak-Mahendraganj Road, Zikzak Block
3. **District:** South West Garo Hills District
4. **Area in hectares:** 7 Ha.
5. **Number of Spokes:** 112 Nos.
6. **Maintenance Fund:**

SI No		2013-14	2014-15	2015-16	2016-17
1	<b>Wages</b>	400000	602680	773500	756580 (L.S)
2	<b>Materials &amp; Supplies Planting materials</b>	540000	32000	18000	165000
3	<b>Manure and fertilizers</b>	100000 Organic and inorganic manure fertilizers	55000 Organic manures bio fertilizers, bio pesticides etc		45000 Organic manures bio fertilizers, bio pesticides etc
4	<b>Office Expenses</b>	80000	12000		
5	<b>Other Charges</b>	38330	30000		
		<b>1158330</b>	<b>731680</b>	<b>791500</b>	<b>966580</b>



**Gerbera**



**Anthurium**

7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:

2013-14

Sl. No	Particulars	Achievements		Remarks
		Physical	Financial	
1	Wages	4000 mds	400000	-
2	Materials and Supplies			
	i. Gerbera @ 36/-	4300	1,54,800	
	ii. Chrysanthemum @ 3.5/-	38000	1,33,000	
	iii. Cocopeat @ 30/-	1000 nos.	30,000	
	iv. U.V Film 200 micron @ 380/- per kg	190 kgs	72,200	
	v. Packaging materials (L.S)	L.S.	80,000	
	vi. Shade net 35% @ 33/sqm	2000 sqm	70,000	
		<b>Total</b>	<b>5,40,000</b>	
3	Manures & Fertilizers			
	a) 19 all @ 3300/- per 25 kg	25 kg x 12 bags	39,600	
	b) Bavistin @598/- per kg	20 kg	11,960	
	c) Caftaf @665/- per 500 gm	500 gm x 15	9,975	
	d) Streptocyclin @ 125/- per 6 gm	6 gm x 20	2,500	
	e) Spyce (xpert) @ 215/- per 500 ml	500 ml x 40	8,600	
	f) M-45 @ 450/-	15 kg	6,750	
	g) Ridomil 2677/- per kg	15 kg	10,115	
	h) Multiplex booster @ 150/- 500 ml	500 ml x 70	10,500	
		<b>Total</b>	<b>1,00,000</b>	
4	Office Expenses			
	1. Paper, cartridges, file with boards etc and P.O.L	L.S	80,000	
5	Other Charges			
	Ff.Y.M and straw mulch	L.S	38,330	
		<b>Grand Total</b>	<b>11,58,330</b>	

(Rupees Eleven Lakh Fifty Eight Thousand Three Hundred Thirty) only

2014-15

Sl. No.	Particulars	Achievement		Remarks
		Physical	Financial	
1	Wages a. @ Rs. 100/- per day b. @ Rs. 160/- per day	886 MD 3213 MD	88600 514080	
	<b>Sub Total</b>		<b>602680</b>	
2	<b>Office Expenses:</b> (1) H.P 12 A @ Rs 4376/- each P.O.L	2 48.35 lt	8752 3248	
	<b>Sub Total</b>		<b>12000</b>	
3	<b>Materials and supplies:</b> i. Planting materials 1. Gerbera @ Rs. 40/- each 2. Lilium bulb Oriented @ Rs. 32/-  ii. Organic Manure, biofertilizers 1. Caftab @ Rs.665/- per 500 pkt 2. Striptocycline @ Rs. 125/- per pkt	500 nos. 375 nos.  42 pkt 215 pkt	20000 12000  27930 26875	
	<b>Sub total</b>		<b>86805</b>	
4	<b>Other Charges</b> (1) Farmers Training (2) Transportation of Agril input	1	20000 10000	
	<b>Sub Total</b>		<b>30000</b>	
	<b>Grand Total (1+2+3+4)</b>		<b>731485</b>	

**Total Allotment = 731680.00**

**Expenditure = 731485.00**

**Balance = (-) 195.00**

2015-16.

Sl. No.	Particulars	Achievement		Remarks
		Physical	Financial	
I	02- Wages @ 170/- MD	4550 MD	773500	
II	21- Supplies & Materials			
	Gerbera @ 40/-	450 nos.	18000	
	<b>Grand Total</b>		<b>791500</b>	

**Total Allocation** = **791500.00**  
**Expenditure** = **791500.00**  
**Balance** = **Nil**



**Coconut seedlings**



**Dendrobium**



**Outer view of Dendrobium polyhouse**

8. **Name of Crops grown** - Dendrobium, Anthurium, Gerbera

9. **Sustainability of the Project** –

**Production: crop-wise-**

Name of crops	2013-14	2014-15	2015-16
Dendrobium	22058	16560	10910
Gerbera	4040	4633	25742
Anthurium			14543

Income generated: Rs. 9,73,852

10. **Facilities available at the Horti Hub** -

- (i) Office cum collection and Grading Hall
- (ii) Water Tank: 4 Lakhs litre capacity
- (iii) Staff Quarters
- (iv) Godown
- (v) 62 Kva Generator
- (vi) Power Tiller
- (vii) Tata Ace Vehicle
- (viii) Irrigation Facility
- (ix) Shade Net House
- (x) Mist Chamber Etc
- (xi) Poly Houses



Outer and Inner view Mist Chamber (fan & pad system yet to be fitted)

Sl No.	Structure	Area of the Poly House	Type of Flower Grown	Population
1	Polyhouse	1000 Sq m	Dendrobium	10000 Nos. (Plants can no longer be revived)
2	Polyhouse	1000 Sq m	Dendrobium	10000 Nos.
3	Polyhouse	2000 Sq m	Gerbera	6500 Nos.
4	Polyhouse	1000 Sq m	Dendrobium	10000 Nos.
5	Polyhouse	1000 Sq m	Anthurium	-
6	Polyhouse	-	Seedling & vegetables	-
7	Polyhouse	-	Coconut nursery	-
8	Polyhouse	-	Areca nut seedlings	Already sold. New plant will be sown after germination

11. **Facilities for collection, packaging, storage, transportation and marketing of produce** - Grading Hall

**12. Types of field demonstration and training given to farmers -**

The farmers are trained in different subjects like cultivation of cut flowers, pest and disease management, management of poly/shade net houses and irrigation system etc. The hub is also used for imparting trainings on different departmental related subjects.

**13. No. of field Demonstration and Training Given 2013 – 14, 2014 – 15, 2015 – 16 -**  
15

**14. No. of respondents attended training/demonstration -**  
350

**15. Types of assistance given to farmers**

- (a) **In cash:** Nil
- (b) **In kind:** Nil

**16. No. of employees:**

- (i) 1 Horticulture Development Officer
- (ii) 1 Horticulture Inspector
- (iii) 1 Assistant Horticulture Inspector
- (iv) 13 Labourers

**17. Wages per worker –**  
Rs. 170/-

**18. New construction/ infrastructure improvement/ new facilities available at Horti-hub during 2013-14, 2014-15 and 2015-16**  
Nil

**19. Supplies and Materials Received:**  
Nil

**20. Problem -**

- (i) The fund allocation for the hub is insufficient for proper production and maintenance
- (ii) Urgent need for replacement of growing media for Dendrobium Orchid
- (iii) Due to insufficient funds, proper fertilizer and nutrients cannot be supplied to the plants.
- (iv) Cold Storage facility is required

**21. Observation:**

- (i) The Horti-Hub was established in 1<sup>st</sup> January 2012
- (ii) It is the only Hub in the State with coconut nursery.



(iii) There is no planting medium in the 1000 Sq m polyhouse for Dendrobium due to lack of funds. The plant itself is now more than 8 years whereas it needs to be replaced after 5 years. Moreover, although the coco blocks can generally be used for five years, but due to heavy rain and high moisture content the planting medium at the Horti-Hub can no longer be used after three years.



**Old Dendrobium plants that need to be replaced**

(iv) Maintenance fund received is not sufficient to buy fertilizers, planting materials and other requirements for the Hub.

(v) There is a need to enable utilization of sale proceed for maintenance of fund.

(vi) Electricity is very irregular and power is mostly supplied through the generator. The Maintenance Fund for the year 2015-16 was used to purchase a new battery for generator.

(vii) The roof of the polyhouse in which Gerbera is grown was damaged by a storm the night before inspection was conducted and is in need of repairs.



**Gerbera Polyhouse and Anthurium Polyhouse damaged by storm**

(viii) The polyhouse for Anthurium has been in need of repairs for almost a year but no funds are available for it. The polyhouse was observed to be slanting and is unsafe for use. The polyhouse requires very urgent repairs.

(ix) A shade house is being converted into a Mist Chamber by installing fan and pad cooling system

(x) Dendrobium is sold @ Rs. 8.5/-, Anthurium is sold @ Rs. 22/- (jumbo size)

(xi) Produce is sold locally and to C.T. Flora and in Tura. Collection and grading is done in the Hall which is then packed and sent to Tura in public transport systems.

## RONGRAM HORTI HUB

1. **Date of Inspection:** 17.5.2017
2. **Location:** Rongram
3. **District:** West Garo Hills District
4. **Area in hectares:** 3.5 Ha. (1 Ha. under Polyhouses)
5. **Number of Spokes:** 102 Nos.
6. **Maintenance Fund:**

SI No		2013-14	2014-15	2015-16	2016-17
1	<b>Wages</b>	400000	574000	773500	756580 (L.S)
2	<b>Materials &amp; Supplies Planting materials</b>	600000	31000	18000	157000
3	<b>Manure and fertilizers</b>	100000 Organic and inorganic manure fertilizers	50000 Organic manures bio fertilizers, bio pesticides etc		43000 Organic manures bio fertilizers, bio pesticides etc
4	<b>Office Expenses</b>	80000	10000		
5	<b>Other Charges</b>	38330	30000		
		<b>12,18,330</b>	<b>6,95,000</b>	<b>7,91,500</b>	<b>9,56,580</b>
	<b>Part II Other Administrative Expenses</b>	340000			



**Anthurium**



**Dendrobium**

**7. Achievement Report both Physical and Financial of Maintenance of Horti Hub:  
2013-14**

**Allotment:- Rs.12,08,590.00**

SLNo	Particulars	Achievements		Remarks
		Physical	Financial	
<b>1</b>	<b>Wages:-</b>	<b>4187 Mds</b>	<b>418740.00</b>	<b>Rs 4,00,000 for wages is not enough at all hence there was exceeds in the items</b>
<b>2</b>	<b>Materials &amp; Supplies.</b>			
i.	Coco Peat @ 675/-	2600 kg	70200.00	
ii.	Weed mat @ 400/-	200 kg	80000.00	
iii.	U.V.Film 200 micron @ 96/-.	1000 sqmt	96000.00	
iv.	Polythene Sleeve 1 bag @ 250/-	100 kg	25000.00	
v.	Watering Can (10 lit Cap. @ 2390/-)	44 nos	17160.00	
vi.	Cavity trays (50 cavity) @ 60/-	1000 nos	60000.00	
vii.	Perlite @ 200/-	100 kg	20000.00	
viii.	Shade net (50%) @ 68/-	1000 kg	68000.00	
ix.	Shade net (70%) @ 76/-	500 kg	38000.00	
x.	Marigold Fl yellow @ 2525/-	28gm	20000.00	
xi.	Manual backpack sprayer @ 7200/-	10 nos	72000.00	
xii.	Packaging		33640.00	
			<b>6,00,000.00</b>	
<b>2</b>	<b>Organic &amp; inorganic manure, fertilizers, micro nutrients, soluble fertilizers, rooting hormones.P.P.chemicals etc</b>			
i.	Multiflex @ 150/-	35 lit	10500.00	
ii.	Acephate @ 700/-	30 kg	21000.00	
iii.	Orchid grow @ 900/-	13 lit	11500.00	
iv.	Flint (native) @ 3000/- 500gm	5 kg	30000.00	
v.	Systhane @ 300/-100 gm	50pkt	15000.00	
vi.	Tricoderma @ 120/-	100 kg	12000.00	
			<b>1,00,000.00</b>	
<b>3</b>	<b>Office Expenses:- Cartridge, Maintenance of Vehicle, stationeries, P.O.L, furniture, carpets, carpet, registration insurances etc.</b>		79689.00	
4	Others charges:- including transportation charges farmers training etc.		38330.00	
	<b>Total-</b>		<b>8,18,019.00</b>	
	<b>Grand Total (1+2+3+4)</b>		<b>12,36,759.00</b>	

- 1 LOA Received: Rs. 12,08,590.00
- 2 Expenditure: Rs. 12,36,759.00  
Excess (-) Rs. 28,169.00

**2013-14**

SI No.	Particulars	Achievement		Remarks
		Physical	Financial	
<b>1.</b>	<b>20- Other Administrative expenses</b>			
a)	Hospitality Entertainment expenses		40,000.00	
<b>2</b>	<b>27 – Minor works</b>			
a)	Repairing of polyhouses, godowns, maintenance of generators etc.	3	3,00,000.00	
	<b>Total:-</b>		<b>3,40,000.00</b>	

**2014-15**

SI No.	Particulars	Achievement		Remarks
		Physical	Financial	
1.	<b>Wages</b>	7345 Md	734530.00	<b>Exceed in Wages items</b>
2	<b>Materials &amp; Supplies</b>			
	3. Gerbera @ 40/-	775 nos	31000.00	
3.	<b>Organic Manure</b>			
	a) 19 All @ 347/- Kg	144 Kgs	50000.00	
4.	Other charges:- including transportation charges, farmers training, etc		30000.00	
	<b>Grand Total:-</b>		<b>8,55,530.00</b>	

**Rupees Eighty Lakh Fifty Five Thousand Five Hundred Thirty only**

**2015-16**

**Allotment: Rs 7,91,500.00**

SI No.	Items/ Particulars	Achievement	
		Physical	Financial
1.	<b>Wages</b>	4544 Md	7,72,552.00
2.	<b>Supplies &amp; Materials</b>		
	Planting materials etc like seeds, seedlings, bulbs, corms etc		
	1) Lilium bulb var. Asiatic @ 24/-	750 nos	18000.00
	<b>Total:-</b>		<b>7,90,552.00</b>

Total LOA received: Rs. 7,91,500.00

Total Expenditure: Rs. 7,90,552.00

Balance: Rs. 948.00

2016-17

Allotment: Rs 9,56,580.00

Sl No.	Items/ Particulars	Achievement	
		Physical	Financial
1.	<b>Wages</b>	4227 Mds	7,55,657
2.	<b>Supplies &amp; Materials</b>		
	1. Gerbera plants @ 45/-	3488 plants	156960
	2. Polysleeves @ 220/-	-	-
3.	Organic Manures, biofertilizers, bio pesticides etc		
	1. FYM	43 MT	43000
	<b>Total:-</b>		<b>955617</b>

8. Name of Crops grown: Anthurium, Orchid, Leather Leaf Fern, Gerbera, Rose, Chrysanthemum



Leather Leaf Fern



Roses



Gerbera

9. Sustainability of the Project:

Production (Crop-wise) and Sale Proceed Statement for 2013-14, 2014-15, 2015-16

		2013-14	2014-15	2015-16
<b>Gerbera</b>	Production	1,15,469	1,55,089	74,740
<b>Leather Leaf</b>	Production	90,500	1,01,100	54,100
<b>Chrysanthemum</b>	Production	11,490	12,485	5,000
<b>Orchids</b>	Production	2,913	2,570	510
<b>Anthrimum</b>	Production	2,785	4,273	3,480
<b>Lilium</b>	Production	520	-	790
<b>Vegetables</b>	Production	LS	LS	-
<b>Rose</b>	Production	-	383	66
<b>Strawberry</b>	Production	-	200 kg	
	<b>Sale Proceed</b>	<b>Rs. 7,79,368</b>	<b>Rs. 7,30,112</b>	<b>Rs. 3,75,390</b>

## 10. Facilities available at the Horti Hub:

- (i) Training Hall
- (ii) Guest House
- (iii) Grading Hall & Packing Hall
- (iv) Cold storage
- (v) 9 Poly Houses



**Mist/Hardening Chamber**



**Fertilizer Godown**



**Security & Fertigation House**



**Fertigation device**



**Water tank**



**Generator set**

<b>Structure</b>	<b>Area of the Poly House</b>	<b>Type of Flower Grown</b>	<b>Population</b>
Polyhouse 1	1000 Sq m	Anthurium	8000 Nos.
Polyhouse 2	2600 Sq m	Gerbera	6000 Nos.
Polyhouse 3	-	Gerbera and Rose	8000 Nos.
Polyhouse 4	500 Sq m	Dendrobium	3000 Nos.
Polyhouse 5	-	Orange seedling (to convert to Mokara orchid)	-
Polyhouse 6	1000 Sq m	Leather Leaf Fern	12000 Nos.
Polyhouse 7	1000 Sq m	Chrysanthemum	8000 Nos.
Polyhouse 8	1000 Sq m	Gerbera	8000 Nos.
Polyhouse 9	-	-	-

**11. Facilities for collection, packaging, storage, transportation and marketing of produce:**

- (i) Cold storage
- (iii) Grading Hall



**Grading & Packaging Hall**

**12. Types of field demonstration and training given to farmers:**

Training given for protected cultivation under Poly House of flowers & vegetables

**13. No. of field Demonstration and Training Given 2013 – 14, 2014 – 15, 2015 – 16:**

50

**14. No. of respondents attended training/demonstration:**

200 farmers

**15. Types of assistance given to farmers:**

- (a) **In cash:** Nil
- (b) **In kind:** Nil

**16. No. of employees:**

- (i) 1 Horticulture Development Officer (FP), DHO, Tura/Hub Manager: Smt Salma G Momin
- (ii) 1 Horticultural Inspector: Shri. Pinno D Shira
- (iii) 1 Assistant Horticultural Inspector: Shri Cryton T Sangma
- (iv) 9 Labourers (3 skilled, 1 semi-skilled, 5 unskilled)

**17. Wages per worker –**

- (i) Skilled: Rs. 191/ day (3 Nos.)
- (ii) Semi Skilled: Rs. 181/ day (1 No.)
- (iii) Unskilled: Rs. 170/ day (5 Nos.)

**18. New construction/ infrastructure improvement/ new facilities available at Horti-hub during 2013-14, 2014-15 and 2015-16**

Nil

**19. Supplies and Materials Received:**

Nil

## 20. Problem:

- (i) Insufficient fund for the maintenance of Horti-Hub.
- (ii) Plants like Gerbera, Dendrobium, etc. are very old needs to be replaced to get economical yield.
- (iii) The poly houses are to be renovate and drip irrigation system are to be repaired

## 21. Observation:

- (i) The Horti-Hub was established in 2008-09. Most polyhouses have rusted and some have been damaged by storms and need urgent repairs and renovation.
- (i) Insufficient fund for maintenance have adversely affected the hub with Rs. 5.72 lakhs electricity bill lying unpaid resulting in disconnection of power supply to the Hub. At present the Hub uses a diesel generator to generate electricity. 7 litres of diesel is needed per hour.
- (ii) The Horti-Hub was directed to reduce the number of labourers engaged. However, this will reportedly adversely affect productivity of the Hub.
- (iii) The Horti-hub practices organic farming but it is reportedly expensive and difficult to achieve a productive yield.
- (iv) The Hub is situated on the side of the Highway and has easy access for marketing of the produce.
- (v) A productive variety of Anthurium is grown in the Hub and propagated by division of suckers as the variety is no longer available in the market. However, the polyhouse where it is planted needs to be repaired as it is a shade loving plant and will be destroyed in direct sunlight.
- (vi) 3000 roses have been planted on a trial basis.
- (vii) Most of the plants like gerbera and dendrobium have outlived their utility and needs replacement for better production.
- (viii) Approximately 10 lakhs flowers have already been harvested from the 2600 Sq m polyhouse alone. However, since the price of gerbera can fall as low as 50 paise off-season, a proposal was made to replace half of gerbera with roses as the price of rose is constant throughout the year.
- (ix) Most of the produce of the Horti-Hub is sold to North Bengal Floritech. Anthurium is sold at wholesale rate of Rs. 10/- to Rs.15/- depending on the size, dendrobium and roses are sold @ Rs. 8/-.
- (x) The highest price for Leather Leaf Fern is earned from Shillong where it is sold Rs. 1.50/- to Rs. 2/- during winter season.
- (xi) Chrysanthemum was a high earning crop in the Hub. However, without electricity, heat and light could not be regulated, hence at present the flower is no longer grown in the poly house. Now, there is a proposal to replant it with orchid and new chrysanthemum on availability of funds.



- (xii) A polyhouses with orange seedlings is proposed to be replaced with mokara orchids subject to availability of funds, as farmers prefer budded orange plants to seedlings. There are eight polyhouses where budding of over 30,000 Nos. of khasi mandarin (oranges) is being done in the Hub.



**Chrysanthemum Polyhouse lying vacant**



**Orange seedlings proposed to be replaced with Mokara**

## **Conclusion:**

After having taken cognizance of all the facts and findings of the site inspection of all Horti Hubs pertaining to maintenance, the inspection team unanimously concluded as follows:-

- ❖ The Maintenance Fund received by the Hubs is insufficient to meet all of the expenses adequately and in most cases unforeseen expenses like damage to polyhouse need to be addressed at the earliest before cost of repairs escalate even more. Therefore, it is suggested that each year 10-20% of sale proceed generated may perhaps, be allowed to be utilized for maintenance of the Hub and meeting contingent expenses, electricity bills, procurement of proper fertilizer and nutrients etc.
- ❖ Most of the facilities like Mist/fogger System for Orchids and Drip Irrigation System for flowers are run by electricity. However, most of the Hubs face difficulty in payment of electricity bill, while Phodkylia and Rongram Horti-Hub do not have their own transformer. There is a need to address the issue so that these Hubs can run efficiently.
- ❖ Hubs were set up for helping the farmers/ beneficiaries. It is suggested that power subsidy may be considered for the Hubs as being done with factories/ industries.
- ❖ It is suggested that release of funds for wages may be done on a monthly basis instead of the existing Quarterly release. This will greatly help the labourers who have to provide for their families through their daily earnings.
- ❖ Approach roads to Phodkylia, Samgong and Sangsanggre Horti-Hubs need widening, blacktopping and urgent improvement.
- ❖ The produce of most of the Horti-Hubs and spokes is sold mainly to North Bengal Floritech (NBF), Siliguri, which provides a constant market. Hence, selling to North Bengal Floritech is the only option for marketing of most of the produce even at a very low price which has not been revised for many years now. Therefore, more market options may be explored rather than depend on one firm acting as a monopoly in terms of marketing of the produce.