

CHECK LIST SERIAL NUMBER: 18

**SCHEME FOR COMPENSATORY
AFFORESTATION**

**In lieu of Diversion of 44.038ha of Forest land
including 9.286ha in Safety Zone against Bainibasa
Graphite Mine of M/s Pradhan Industries, Cuttack**

**(Non Forest land selected for Compensatory
Afforestation -34.76 ha)**

Block Plantation: 17.38 ha

Bald Hill Plantation: 17.38 ha

Total area: 34.76 ha.

**By Divisional Forest Officer,
Rayagada Division.**

SCHEME FOR COMPENSATORY AFFORESTATION

1. Introduction:

The Steel & Mines Department has granted Bainibasa Graphite Mining Lease over an area of 58.704ha at Bainibasa, Tahasil: Muniguda, District Rayagada in favour of M/s Pradhan Industries, Cuttack. The ML area contains 44.038ha of Forest land. The Project Proponent has filed diversion proposal for 44.038ha of Forest land including 9.286ha forest land in safety zone. Hence Compensatory Afforestation is required over 34.752 ha. The Tahasildar, Bisamkatak has identified 34.76ha of Non Forest land at village: Sanaburahara, and Sikabandha, Tahasil: Bisamkatak, District: Rayagada vide letter no 1282 dated 21.04.2017 with a copy to Collector, Rayagada (Copy at annexure- of the DRP.)

2. Details of Non-forest land allotted for Compensatory afforestation:

The land details of Non Forest area selected and allotted for compensatory afforestation is as follows.

District: Rayagada; Village: Sanaburahara; Tahasil : Bisamkatak.

Name of Forest Division: Rayagada ; Range: Muniguda

Land Schedule:

Sl. No.	Village	Khata no.	Plot No.	Kissam	Area taken in Ac.	Total Plot Area in Ac.
1	Sanabudahada	23	106	Pahada	20.168	44.920
2		23	107	Pahada	14.454	31.870
3		23	108	Pahada	26.325	41.600
4	Sikabandha	26	313	Pahada	24.947	35.800
				Total	85.894 or 34.76 ha	154.19

Area to be afforested: 34.76ha

3. Description of Area

The land selected and allotted by the Collector, Rayagada comes within territorial jurisdiction of Muniguda Range, Bisamcuttack Section. The land is in a single patch and about 300meters away from Ghagurhipahar Proposed Reserved Forest.

Soil: The land is having a good soil depth to bear good and healthy vegetation. Soil is loamy with gravels. There is no remarkable erosion.

Topography: The land is with mixed topography of Plains with hillocks. The altitude of plains is about 360 MSL where as the highest hillock is of 420 MSL. The slope is gently to moderate.

Climate: The area experiences a tropical climate. The average rainfall is 1400mm. Summer is from March to June. The South west monsoon brings usual rain and most of the rainfall receives within July to October. Depression in Bay of Bengal brings wide spread rainfall to this region.

Vegetation: The selected area now bears thorny bushes with average height of 1- 1.5m. There are scattered trees of Salai, Mai, Bamboo culms. These are very sporadic. Average height of these trees is 2m and not in an established stage.

Biotic interference.

Though the area is poorly populated, there is a tendency to practice Shifting Cultivation in the locality. The selected area has not been affected by "Shifting Cultivation". It is required to be vigilant against such destructive practices. There is also moderate grazing pressure in nearby forest.

Villages surrounding the area. The land is surrounded by village- Sanaburahar, Pipalpanga, Sikabandha & Balakupa.

The population in these villages is as given below.

Name	No_HH	TOT_P	TOT_M	TOT_F	P_SC	P_ST
Sikabandha	67	297	145	152	68	229
Pipilipanga	69	277	141	136	74	202
Sanaburahar	10	32	16	16	0	0
Balakupa	39	139	71	68	40	72
Total	185	745	373	372	182	503

The population is mainly SC & ST. General (8.05%), SC (24.43%) & ST (67.52%). The total work force as per 2011 census is 406 (54.49%). There is availability of labour for any forestry operation.

4. Plantation Model:-

It is proposed to take up plantation in two model i.e.

- i. Block Plantation @1600 plants per hectare Over 17.38 ha.
- ii. Bald Hill Plantation @1600 plants per hectare over 17.38 ha
- iii. Special Soil & Moisture Conservation
 - a) Counter bonding two rows at a distance of 20m on the low / moderate sloppy area.
 - b) Lose boulder Check dam on 1st order nalla

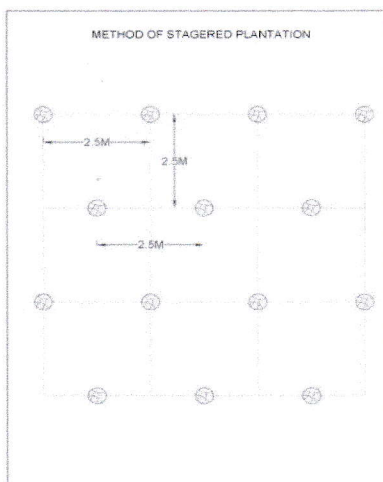
4. Schedule of Plantation Programme:-

As the area is in a compact patch and less than 50 ha it is proposed to take up the plantation work in a year and subsequent maintenance as per approved cost norm. The special Soil conservation measures are also proposed to be taken up in the 0th Year, 1st yr and 2nd yr. The Cost norm for Block plantation and Bald Hill plantation is at Annexure I & II. For activation of VSS a provision of 4.75 lakh has been provided which includes 3.75 lakh under EPA. The year wise flow of funds is as furnished below.

Year	Block Plantation		Bald Hill Plantation		Special SMC		Additional Fencing Cost.	For activation of VSS including EPA	Total amount in Lakh Rs
	Rate in Rs	For Area 17.38 ha in Lakh Rs	Rate in Rs	For Area 17.38 ha in Lakh Rs	For Contour bonding	For LBCD			
0 th	22139	3.848	78512	13.645	2.00	1.00	7.716	1.00	29.209
1 st Yr	21125	3.672	68073	11.831		1.00		1.00	17.503
2 nd Yr	12064	2.097	28836	5.012				2.00	9.109
3 rd Yr	8320	1.446	15100	2.624				0.75	4.82
4 th Yr	3600	0.626	13700	2.381					3.007
5 th Yr	3600	0.626	13700	2.381					3.007
6 th Yr	3600	0.626	13700	2.381					3.007
7 th Yr	3600	0.626	13700	2.381					3.007
8 th Yr	3600	0.626	13700	2.381					3.007
9 th yr	3600	0.626	13700	2.381					3.007
10 th Yr	3600	0.626	13700	2.381					3.007
Supervision Charges							To be done Departmentally.		
Total	88848	15.445	286421	49.779	2.00	2.00	7.716	4.75	81.690

5. Technical details:-

- General:** The plantation will be taken up in two models as stated above i.e. Block Plantation and Bald Hill Plantation mode. Under block plantation 17.38 ha will be covered which includes gentle plain land and moderately sloppy areas. Land where the slope is higher i.e. above 25° it is proposed to take up plantation in Bald Hill mode.(shown in the treatment map). The year wise activities to be implemented has been enumerated in the approved Cost norm at annexure-I & II
- Spacing:** The plant density proposed for planting is @1600 plants per ha. The spacing is 2.5mX2.5m which is generally adopted in this tract. It is suggested to have the line of planting along the contour and plant to plant in adjacent row is staggered.



This will reduce the runoff and encourage percolation of water and enrichment of vegetation.

- c) **Choice of Species:** The suitable species for the site as indicated from the present vegetation is preferable drought hardy and pioneer species as per plant succession. Mostly indigenous species will be planted up. In the plain / moderate slope species suggested are

1. *Azadirachta indica* (neema)
2. *Artocarpus hetrophylla*.
3. *Bombax ceiba* (Simili)
4. *Cassia fistula* (Sunari)
5. *Dendrocalamus strictus*. (Baunsha)
6. *Gmelina arborea* (Gambhari)
7. *Mangifera indica* (Aamba)
8. *Peltiferum feroenium* (Radha chuda)
9. *Phyllanthus emblica* (Anla)
10. *Pongamia pinnata* (karanja)
11. *Samania saman* (bada Chakunda)
12. *Syzygium cumini* (Jamun)
13. *Tamarindus indica* (Tentuli)
14. *Terminalia tomentosa* (Asan)
15. *Ziziphus mauritiana* (Bara koli)
16. *Bauhinia vahlii* (Siali)
17. *Simaruba glauca* (Simaruba)
18. *Tectona grandish* (Saguan)

Towards uphill side and in Barren hill Plantation species of drier tract are to be preferred. These are

1. *Bombax ceiba* (Simili)
2. *Cassia fistula* (Sunari)
3. *Caesalpinia bonduc* (Gila)
4. *Clistanthus collinus*. (Karada)

5. *Terminalia tomentosa* (Asan)
6. *Ziziphus mauritiana* (Bara koli)
7. *Ficus bengalensis*, (bara)
8. *Dendrocalamus strictus*. (Baunsha)

d) Plantation Method.

d(i) Alignment, stacking and Pitting.

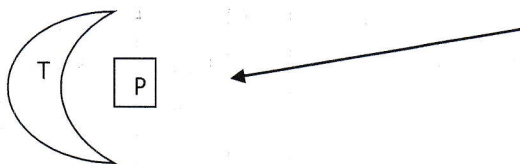
Alignment and stacking will be taken up in the month of January. Pits of size 30 cm x 30cm x 30cm are to be dugout with a spacing of 2.5mt x 2.5mt @1600 plants per hectare. Alignment will be made along the contour strictly. It is also suggested to have plants are staggered within adjacent rows to reduce runoff.

d(ii) Planting

Plantation will be done after first regular shower of monsoon and to be completed within a week. Basal dose of NPK/DAP fertilizer @30gm per plant to be given. Utmost care is to be taken to apply insecticides @5gm per pit. Casualty replacement is to be taken up during 1st year of plantation just after one month of planting. 10% causality replacement is also suggested during 2nd Year.

d(iii) Weeding, Soil working and Application of Fertilizer.

Post planting operation is most vital in success of any planting programme. It is proposed to carry out two weeding during first year. Preferable Strip Weeding along the contour will be taken up. One weeding and soil working has to be done in second year and third year of plantation. Application of 30gms of NPK/DAP to be added to the soil per plant at the time of soil working during rains during 1st & 2nd year of plantation. During second weeding, provision of Half Moon trench is suggested. This will also be repeated during 2nd year also. The design is furnished below.



T : Half moon trench

P: Plant position.

Indicates slope direction.

d(iv) Application of insecticide:

To prevent infestation of planted seedlings with diseases due to influx of insects and pests into the area, it is required to apply insecticides like Phorate at the time of planting. Foliar spraying of insecticide may be done if badly necessary.

d(v) Fire line tracing and maintenance:

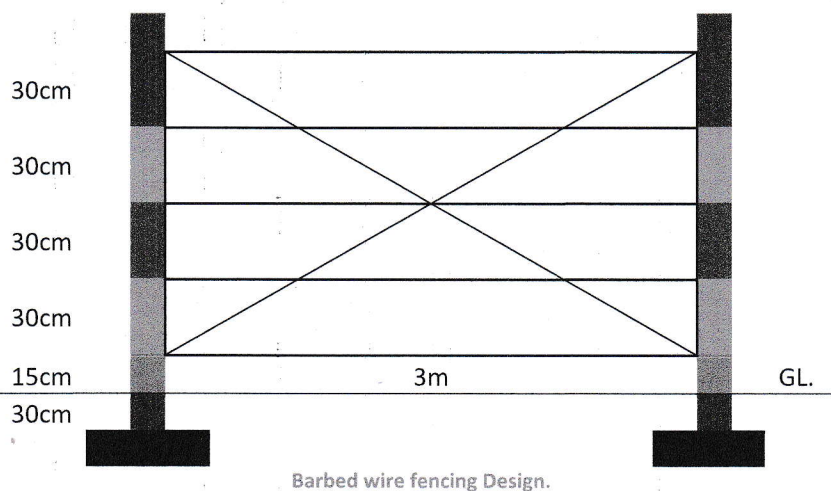
Tender seedlings planted are subject to damage by ground fire. It is required to protect the plantation and forest growth from fire hazard by tracing of fire lines. Boundary of the plantation and several internal lines need to be scrapped to a width of 2mtr during February-March. The cut back materials and dry leaves along with fire lines should be separated and dumped in pits outside the plantation area.

d(vi) Fencing.

The periphery of the patch selected is 3800 meter. There is a provision of fencing (Bamboo brush wood fencing) in the cost norm of "Bald Hill Plantation". The length for which provision has been made is over 2189.88 meter @ 126m per hectare. As there is a scarcity of bamboo for fencing it is suggested to have Barbed wire fencing all along the periphery for a well protected plantation.

Description of Barbed Wire Fencing

It is suggested to put T shaped pillars at an interval of 3m. The length of such pillar is 1.8 m. (1.5m above the ground & 0.30m below the ground.) Size 12.5cmx12.5cm. The Lower bar of inverted "T" is of 30cm including the width of the pillar. There will be 5 strands of two ply barbed wire at a height of 15cm, 45cm, 75cm, 105cm, and 135cm. Two strands will be put diagonally (connecting 15cm point to 135 cm point & 135cm point to 15cm point)



The Cost norm for barbed wire fencing is at Annexure- III. The total cost for fencing along 3.80 KM comes to Rs 9.12 lakh @2.40 lakh per KM. As Rs 1.404 lakh is inbuilt in the cost norm (@8080/- per ha), the additional amount required is Rs 9.12-1.404 = Rs 7.716 lakh.

d(vii) Watch and ward:

Watch and ward is necessary to protect the area from grazing, fire accident and other biotic interference. Necessary provisions have been made in the approved cost norm.

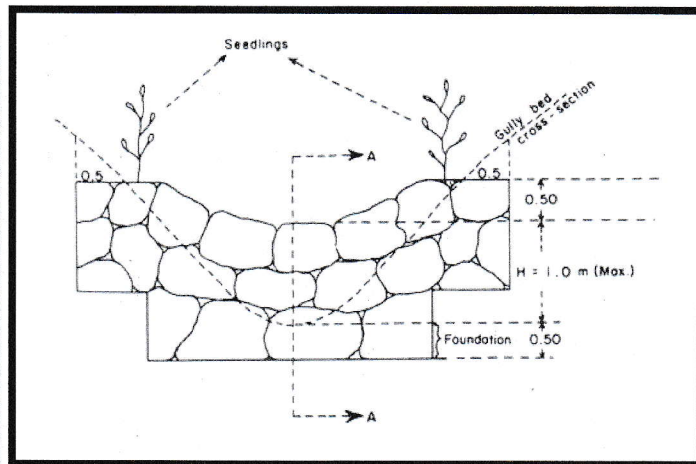
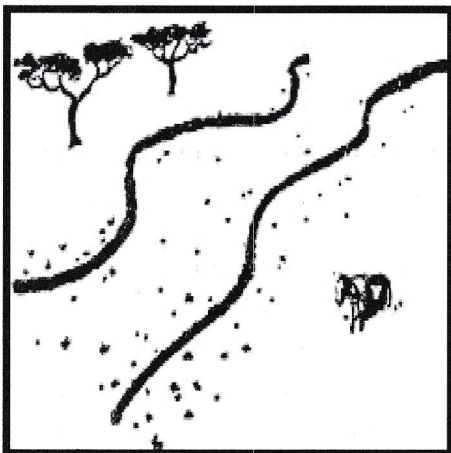
e) Soil and Moisture Conservation Works:

In order to enhance soil moisture, check run off and arrest carrying of silt in the flow water it is required to have staggered trenches (Size 2m longx0.50 m width X0.5 m Deep) along the contour. Line to line interval is to be kept at 4m or as required considering the degree of slope of the land.

Besides the provisions available in the cost norm, as the tract is hilly and two rivulets are passing through it is suggested to have Loose Boulder Check Dam on the dry seasonal nalla to check soil erosion and enhance ground water recharge. It is also suggested to have two row of contour bonding at an interval of 20m. Special provision for Contour bonding Rs 2.00 lakh and for LBCD Rs 3.00 lakh has been made.



Staggered trench.



f) Protection (Fencing, Watch man, People's Participation etc.):

In order to provide protection to plantation so raised, Provision for Fencing, watchman has been made and discussed and elaborated in foregoing paragraphs.

In respect of people's participation, it is proposed to constitute and strengthen the VSS in Sanabudahada village and to constitute VSS in other Village i.e. Sikabandha, Pipilipanga and Balakupa . For constitution & motivation of VSS Rs1.00 lakh has been provided during 0th year and 3.75 lakh has been provided in 1st, 2nd and 3rd year for EPA (Entry Point Activities)/ Vocational training.

g) Proposed Monitoring Mechanism:


Implementation of the planting programme will be monitored by the DFO, Rayagada and RCCF, Koraput periodically. As other technical facilities / tools are now available at the hands of supervising authority and KML file along with Coordinates available it can be easily monitored from Satellite imagery / Google earth maps.

h) Any other information:

The villagers are mostly tribal's and they have a liking for fruit bearing trees i.e. tamarind, Mango, Jack Fruit and Jamun. It should be our endeavor to plant more fruit bearing trees (about 15%) to encourage their participation. Periodical interaction with VSS will go a long way in its success.

Total Project Cost under Compensatory Afforestation comes to Rs 81.690lakh.

- Encl: 1. Topo sheet showing area for CA, (Plate-I)
 2. Cadastral Map of the CA area. (Plate-II)
 3. Treatment Map (Plate-III)
 4. Annexure- I,II & III.
 5. Undertaking to deposit cost of Compensatory afforestation as per approved scheme. (Check list No 12)


 Divisional Forests Officer
 Rayagada Forest Division.
Divisional Forest Officer
Rayagada Division

Full Title of the Project: BAINIBASA GRAPHITE MINE
File No. : F. No 8-60/2016-FC of MoEF & CC, New Delhi.
Date of Proposal: 15.03.2017

COST NORM FOR BLOCK PLANTATION @ 1600 PLANTS PER HECTARE (Annexure-I)						
For ten year maintenance.						
Wage rate- @Rs200/-.						
Sl.No.	Item of Work	Preferable period of Execution	Person days	Labour (Rs)	Material (Rs)	Total (Rs)
0th Year (Advanced work) Pre planting operation						
1	Survey, Demarcation and Pillar Posting	Nov/ Dec	2	400	0	400
2	Site Preparation	Nov/ Dec	8	1600	0	1600
3	Alignment and stacking of pits	Jan/ Feb	2	400	0	400
4	Digging of pits (30cm cube)	Feb/ Mar	40	8000	0	8000
5	Nursery cost (6 months old seedling) balance part @ Rs 9.45/- seedling (Rs 6.67 in 0th year+ Rs 2.78 in 1st year) for 1760 seedlings (1600+160)	Jan-Mar	44	8800	2939	11739
	Sub Total		96	19200	2939	22139
1st Year/Planting Year						
1	Nursery cost (6 months old seedling) balance part @ Rs 2.78 for 1760 seedlings	Apr- Jul	21.5	4300	593	4893
2	Carriage and planting, Casualty Replacement and application of insecticides, manure etc	July/Aug	21	4200	0	4200
3	Cost of insecticide and fertilizer (a) NPK @50gm/plant as basal dose =80kg @Rs24/- per kg =Rs 1920.00 (b) Urea @ 70gms/plant in two subsequent doses @Rs 6/- per kg = Rs672.00 (c) Granular Insecticide (Themet, Forate etc) @5gm/plant@Rs80/- per kg =Rs 640		0	0	3232	3232
4	1st weeding (Complete weeding)	Aug /Sep	7	1400	0	1400
5	Manuring Urea 35gm	Aug /Sep	5	1000	0	1000
6	2nd weeding (Complete weeding)	Sep/Oct	5	1000	0	1000
7	Soil working (50cm Radius around plants)& manuring Urea 35gms per plant	Sep/Oct	7	1400	0	1400
8	Soil conservation measures in the form of staggered trenches of size 2m x 0.5m x 0.5m @30 no per ha	Sep/Oct	10	2000	0	2000
9	Fire line tracing and inspection path	Feb/ Mar	3	600	0	600
10	Watch & Ward	Aug-Mar	7	1400	0	1400
	Sub Total		86.5	17300	3825	21125
2nd Year Maintenance						
1	Casualty Replacement (10%) with Nurcery cost	Jul/Aug	4	800	1512	2312
2	weeding (Complete weeding)	Sep/Oct	6	1200		1200

3	Cost of insecticide and fertilizer (NPK @70gm/plant (Rs 24/- per kg & Insecticide @5gm/plant for 160 plants 800gms @Rs80/- per kg		0	0	2752	2752
4	Soil working (50cm Radius around plants)	Oct/Nov	7	1400	0	1400
5	Application of Fertilizer & Insecticide	Sep/Oct	4	800	0	800
6	Fire line tracing (2m wide fire line over 400m long)	Feb/ Mar	3	600	0	600
7	Watch & Ward	Apr-Mar	15	3000	0	3000
	Sub Total		39	7800	4264	12064
3rd Year Maintenance						
1	Weeding and application for fertilizer	Aug /Sep	7	1400	0	1400
2	Cost of fertilizer (NPK @ 50gms/plant) Rs 24/- per kg		0	0	1920	1920
3	Soil working (50cm Radius around plants) application of fertilizer	Oct/Nov	7	1400	0	1400
4	Fire line tracing (2m wide fire line over 400m long) & Cultural operation	Feb/ Mar	3	600	0	600
5	Watch & Ward	Apr-Mar	15	3000	0	3000
	Sub Total		32	6400	1920	8320
4th Year Maintenance						
1	Fire line tracing (2m wide fire line over 400m long) & Cultural operation	Feb/ Mar	3	600	0	600
2	Watch, Ward & Pruning	Apr-Mar	15	3000	0	3000
	Sub Total		3	3600	0	3600
5th Year Maintenance						
1	Fire line tracing (2m wide fire line over 400m long) & Cultural operation	Feb/ Mar	3	600	0	600
2	Watch, Ward & Pruning	Apr-Mar	15	3000	0	3000
	Sub Total		3	3600	0	3600
6th Year Maintenance						
1	Fire line tracing (2m wide fire line over 400m long) & Cultural operation	Feb/ Mar	3	600	0	600
2	Watch, Ward & Pruning	Apr-Mar	15	3000	0	3000
	Sub Total		3	3600	0	3600
7th Year Maintenance						
1	Fire line tracing (2m wide fire line over 400m long) & Cultural operation	Feb/ Mar	3	600	0	600
2	Watch, Ward & Pruning	Apr-Mar	15	3000	0	3000
	Sub Total		3	3600	0	3600
8th Year Maintenance						
1	Fire line tracing (2m wide fire line over 400m long) & Cultural operation	Feb/ Mar	3	600	0	600
2	Watch, Ward & Pruning	Apr-Mar	15	3000	0	3000

	Sub Total		3	3600	0	3600
9th Year Maintenance						
1	Fire line tracing (2m wide fire line over 400m long) & Cultural operation	Feb/ Mar	3	600	0	600
2	Watch, Ward & Pruning	Apr-Mar	15	3000	0	3000
	Sub Total		3	3600	0	3600
10th Year Maintenance						
1	Fire line tracing (2m wide fire line over 400m long) & Cultural operation	Feb/ Mar	3	600	0	600
2	Watch, Ward & Pruning	Apr-Mar	15	3000	0	3000
	Sub Total		3	3600	0	3600

ABSTRACT.				
Year	Person days	Labour Component	Material Component	Total
0th Yr	96	19200	2939	22139
1st yr	86.5	17300	3825	21125
2nd Yr	39	7800	4264	12064
3rd Yr	32	6400	1920	8320
4th Yr	3	3600	0	3600
5th Yr	3	3600	0	3600
6th Yr	3	3600	0	3600
7th Yr	3	3600	0	3600
8th Yr	3	3600	0	3600
9th Yr	3	3600	0	3600
10th Yr	3	3600	0	3600
Total	274.5	75900	12948	88848

Cost Norm for Bald Hill Plantation @1600 plants per Hectare (annexure-II)						
(Labour cost @Rs200/- per manday)						
Sl.No.	Item of Work	Preferable period of Execution	Person days	Labour cost @Rs200/- per day	Material cost per ha in (Rs)	Total cost per ha (Rs)
0th Year						
1	Survey and demarcation	June	2	400	0	400
2	Fencing (i) For an average of 126 meters/ha @ Rs.56.57/- per meter for bamboo twigs and bamboo thorn fencing (L:M=40:60) (ii) To be strengthened by planting of bamboo and other seedlings in two rows. Bamboo to be planted at 2 meters spacing in staggered manner on the two rows, and the rest of the species to be planted at 1/2 meter spacing along the two rows, the rows being 2m apart. Thus 500 plant (125 bamboo and 375 others) to be planted in two rows to cover 126 m of periphery/Ha by the vegetative fence (Bamboo seedlings @ Rs.9.45 per seedling X 125 = Rs.1181.00, Agave seedling @ Rs.3.50 per seedling X 375 = Rs.1312.00)	June-Sept	19	3800	4280	8080
		June-Sept	11	2200	2493	4693
3	Pitting (1600 per ha) each pit-45 cm ³	Nov-Dec	128	25600	0	25600
4	Soil and water conservation measures (a) Staggered trench along the contour @ 300 per ha (2.5mx0.5 m x0.5m), digging of percolation pits @ 600 per ha in lieu of staggered trenches, gully plugging and Drainage line treatment, half moon trench on the uphill side of each planting pit (100 MD for staggered trench / percolation pits and 30 MD for gully plugging, drainage line treatment and half moon trench).	Sept-Nov	130	26000	0	26000
	(b) Site clearance- 8 MD, alignment and staking of contour lines on ground, planting pits, contour trenches / percolation pits and check dam sites, etc.- 2 MD	July-Aug	10	2000	0	2000

5	Raising of seedlings in poly bags-(minimum 60 cm high) @ Rs.9.45/- seedling (Rs.6.67 in 0th year) Part (1760 saplings to be raised for one hectare from January-March @ Rs.11739/-)	Oct-Mar	44	8800	2939	11739
	Sub Total		344	68800	9712	78512
Planting Operation(1st Year)						
1	Cost of sapling (balance) from April-June/July @ Rs 2.78 per seedling for 1760 seedlings= Rs4893/-	Apr- Jul	21.5	4300	593	4893
2	Freshening of pits -64 MD, filling with fertile soil and farm yard manure (FYM) -24 MD, application of insecticide and planting of 60 cm tall saplings including carriage of plants- 21 MD	June-July	109	21800	0	21800
3	Cost of Fertile Soil 0.25 cft @ Rs.8 per cft/FYM 0.25cft @ Rs.15 per cft per pit		0	0	9200	9200
4	Sowing of seeds on dug out earth of trench	June	6	1200	200	1400
5	Carriage -6 MD, Planting including Casualty replacement-6 MD, fertilizer application- 5 MD, 1st weeding-7 MD, 2nd weeding -5 MD, soil working- 7 MD	July-Aug	36	7200	0	7200
6	cost of Fertilizer and insecticide (Granular Insecticide @ 5 gms/plant @ Rs.80/- per kg=Rs.640.00, NPK 100 gms/plant in two doses @ Rs.24 per kg= 3840		0	0	4480	4480
7	Repair and maintenance of bamboo fence including material cost	Aug-Oct	15	3000	2540	5540
8	Maintenance of soil and Moisture Conservation measures (20% of cost)	Oct-Dec	26	5200	0	5200
9	Closure to grazing fire and other biotic interference by engaging watch & ward	April-Mar	30	6000	0	6000
10	Fire tracing and control, display board construction, painting / writing, other miscellaneous cost	Jan-Feb	10	2000	360	2360
	Sub Total		253.5	50700	17373	68073
Maintenance operation (2nd Year)						
1	Casualty replacement- 6 MD including seedling cost @Rs.9.45 per seedling and its transportation	June-July	10	2000	1512	3512
2	Soil working- 7 MD, 1st weeding-6 MD, 2nd weeding -6 MD and fertilizer application -4 MD	Aug-Oct	23	4600	0	4600

3	Cost of fertilizer @ 50 gms NPK per plant @ Rs.24/- per kg for 1600 plants =Rs.1920.00 Insecticide @ 5 gm per plant for 160 nos. of plants @ Rs. 80 per KG = Rs. 64.00		0	0	1984	1984
4	Repair and maintenance of bamboo fence including material cost	Aug-Oct	15	3000	2540	5540
5	Maintenance of Soil and Moisture Conservation measures (20% of cost)	Aug-Oct	26	5200	0	5200
6	Fire tracing and control and other miscellaneous cost	Feb-Mar	10	2000	0	2000
7	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	30	6000	0	6000
	Sub Total		114	22800	6036	28836
Maintenance operation (3rd Year)						
1	Repair and maintenance of fence-15 MD/ (in case of barbed wire fencing Rs.9000/- for repair), SMC measures (Renovation)-26 MD and maintenance of plantation-14 MD as per requirement	April-Mar	55	11000	500	11500
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	April-Mar	18	3600	0	3600
	Sub Total		73	14600	500	15100
Maintenance operation (4th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	48	9600	500	10100
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3600	0	3600
	Sub Total		66	13200	500	13700
Maintenance operation (5th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	48	9600	500	10100
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3600	0	3600
	Sub Total		66	13200	500	13700
Maintenance operation (6th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	48	9600	500	10100
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3600	0	3600

	Sub Total		66	13200	500	13700
Maintenance operation (7th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	48	9600	500	10100
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3600	0	3600
	Sub Total		66	13200	500	13700
Maintenance operation (8th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	48	9600	500	10100
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3600	0	3600
	Sub Total		66	13200	500	13700
Maintenance operation (9th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	48	9600	500	10100
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3600	0	3600
	Sub Total		66	13200	500	13700
Maintenance operation (10th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	48	9600	500	10100
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3600	0	3600
	Sub Total		66	13200	500	13700
	Grand Total		1247	249300	37121	286421

ABSTRACT.				
Year	Person days	Labour Component	Material Component	Total
0th Yr	344	68800	9712	78512
1st yr	253.5	50700	17373	68073
2nd Yr	114	22800	6036	28836
3rd Yr	73	14600	500	15100
4th Yr	66	13200	500	13700
5th Yr	66	13200	500	13700
6th Yr	66	13200	500	13700
7th Yr	66	13200	500	13700
8th Yr	66	13200	500	13700
9th Yr	66	13200	500	13700
10th Yr	66	13200	500	13700
Total	1246.5	249300	37121	286421

Annexure-III		
Cost Norm for Barbed wire fencing. (for one Kilometer)		
5 strand (two ply) with two Cross strand		
Labour Rate Rs200/- per Day. (Unskilled)		
Labour rate Rs 250/- Per day (Semi Skilled)		
Work Description	Rate	Estimated Cost.
Cost of Pillar	250	83500
Fixing cost including transportation	150	50100
Cost of Barbed wire 7.5qts	9000	67500
Fixing of wire	50	16700
Sub Total		217800
Unforeseen	10%	21780
G. Total		239580 or 2.40 lakh
(Rupees Two lakh forty thousand only)		