

Principal Chief Conservator of Forest (HoFF),
M. S. Nagpur Letter No. Desk-17/CA/Nodal Cell
/CR-40/1127/2019-20, Date 04/10/2019

Model Rate Structure for Compensatory Afforestation

Model No.5.

Fencing and Irrigated Plantations

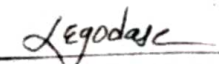
Model rate structure for plantation of mixed tree species having rainfall less than 800 mm
and medium quality, medium drained soil.
Spacement - 3m x 3m
Size of Pits - 0.45 x 0.45 x 0.45m
No. of Seedlings - 1111 per ha wage rate- 413.69 per day
Ca Area= 0.10 hector

Range Daund
Round Warvand
Beat Warvand
village Warvand g.no.2104

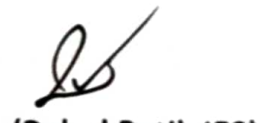
Abstract for Model No.5

S. N.	Year of operation	Total
1	Pre Monsoon works	28114.39331
2	First Year Operations	15113.60432
3	Second Year Operations	11232.04128
4	Third Year Operations	6284.47808
5	Fourth Year Operations	1755.57575
6	Fifth Year Operations	1755.57575
7	Sixth Year Operations	1795.400615
8	Seventh Year Operations	2813.491705
9	Eighth Year Operations	1795.400615
10	Nineth Year Operations	1795.400615
11	Tenth Year Operations	1795.400615
Total		74250.76265

Cost per plant Rs. 668.9257896


(Kalyani Godase)

Range Forester Officer, Daund
Pune Forest Division, Pune


(Rahul Patil, IFS)

Deputy Conservator of Forests,
Pune Forest Division, Pune

Model No. 5

Fencing and Irrigated Plantations

Structure for plantation of mixed tree species having rainfall less than 800 mm and medium quality, medium drained soil.

Spacing

- 3m x 3m

Size of Pits
No. of Seedlings

- 0.45 x 0.45 x 0.45m
- 1111 per ha

wage rate

Wage Rate:
Rs. 413.69 per day.

Range

Daund

Round

Beat

Warvand

Warvand

g.no.2104

Sr.No	Particulars of works	Man days	Wages	Material supply	Total (Amount in Rs.)	Sanction Letter Dt. / Model No. / Item No.	Man days	Wages	Material supply	Total (Rs. Per Ha.)
A. Pre Monsoon Works PFO/PYO										
1	(a) Survey and demarcation	1	413.69	91	495.5	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1a	0.1	41.369	9.1	50.469
	(b) Preparation of treatment map (100 m x 50 m grid)	1	413.69	91	495.5	Item No. 1b	0.1	41.369	9.1	50.469
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid	0.4	165.476	0	161.8	Item No. 1c	0.04	16.5476	0	16.5476
	(d) Fixing 60cm x 0.05cm x 12cm cement pillars upto 30cm deep in corner of Grid, painting with Grid No. etc complete (3 pillars, Rs. 75/- for each pillar)	0	0	225	225	Item No. 1d	0	0	22.5	22.5
	(e) Clearing of bushes and preparation of site (As per requirement)	10	4136.9	91	4136	Item No. 1e				
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc	31	12824.39	0	12539.5	Item No. 2	3.1	1282.439	0	1282.439
3	Providing and fixing chain link fencing, 102 Rmt per ha (With one gate + two wickets gates for one site) (Rs.1494/- per Rmt of basic rate + 20% for transportation of ave. plus 20% for tribal/remote area (by tender process.) (Rs.1494+149+149=1792/- per Rmt (1.60 Rmt height with G.I. Chain link size 50mmx50m, 8 gauge thick and fixed 75mm above ground level complete as per SSR item No.1744 for 2017-18)	0	0	182865.6	182865.6	As per SSR rates 201718 Item No. 1744	0	0	18286.56	18286.56
4	Alignment of pits at 3m x 3m spacing. 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs. 1111 per Ha)	2.78	1150.0582	49.77	1174.28	Item No. 4	0.278	115.00582	4.977	119.98282
5	Digging of pits of size 0.45 x 0.45 x 0.45 m (1111 pits per ha) 6.60 M.D per 100 pits Note :- As per local conditions provision for mechanized digging can be made.	73.33	30335.8877	0	29661.99	Item No. 5	7.333	3033.58877	0	3033.58877
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1	413.69	0	404.5	Item No. 6	0.1	41.369	0	41.369
7	Enumeration of all valuable plant species at plantation site and grid wise counting and providing color band and recording the same in Register (0.75 M.D.) per 100 plants	0.75	310.2675	25	328.37	Item No. 7	0.075	31.02675	2.5	33.52675
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000	Item No. 8	0	0	500	500
9	Part Nursery cost of raising 1333 seedlings per ha (including 20% casualty replacement) in polygons of size 12.50 x 25.00 cm (Wages Rs.11.90 and M & S Rs.3.62 per plant)	46.71	19323.4599	4825.46	23719.65	Item No. 9 20% Casualty replacement in place of 10%	4.671	1932.34599	482.546	2414.89199
	Total	167.97	69487.509	193263.83	261207.69		16.797	6948.75093	19326.383	26275.13393
	Contingency 3%		0		7836.23		0	0		788.2540179
	Labour Welfare 4%		0		10448.3		0	0		1051.005357
	Grand Total	167.97	69487.509	193263.83	279492.22		16.797	6948.75093	19326.383	28114.39331
B. Post Monsoon Operations										
1	Nursery cost for maintenance of 1333 seedling per ha Rs. 3.77 per seedling (Wages Rs.2.69, M & S Rs. 0.81)	14.8	6122.612	1079.73	7066.33	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	1.48	612.2612	107.973	720.2342
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	7628.4436	1944.25	9403.23	Item No. 2	1.844	762.84436	194.425	957.26936
3	Transportation of 1333 seedlings from Nursery to plantation site including loading & unloading (0.14 M.D. per 100 seedlings & M.S. Rs.1.82 per seedlings)	1.87	773.6003	2426	3182.41	Item No. 3 10% Extra Plants to be transported	0.187	77.36003	242.6	319.96003
4	Planting of 1111 seedlings (1.0 M.D per 100 seedlings)	11.11	4596.0959	0	4493.99	Item No. 4	1.111	459.60959	0	459.60959
5	3 seedlings (1 Rmt circular) and 2 soil workings (4.00 M.D per 100 seedlings) fertilizer application Rs.0.82 per seedling	44.44	18384.3836	911.02	18887	Item No. 5	4.444	1838.43836	91.102	1929.54036
6	Watering 1111 seedlings November and December 1 time each, January to March 2 times each per seedlings 5 litre water, purchase of 1111 plastic can of 5 litre / matka @Rs.25/- each and 100 litre capacity 11 drums @Rs.400/- each for supplying water and water supply at @Rs.0.05 per litre and wages for watering 1 M.D. for 150 seedlings.	59.25	24511.1325	54395	78361.62	Item No. 7	5.925	2451.11325	5439.5	7890.61325
7	Casualty replacement (20% 222 Seedlings per ha) (2 M.D. per 100 seedlings)	4.44	1836.7836	0	1795.98	Item No. 6 20% instead of 10%	0.444	183.67836	0	183.67836
8	Part Nursery cost for casualty replacement in SYO (222 seedlings per ha.) (wages Rs. 11.90 and material supply Rs.3.62 total Rs.12.55 per seedling)	7.77	3214.3713	803.64	3946.6	Item No. 8 20% instead of 10%	0.777	321.43713	80.364	401.80113
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	11326.8322	0	11075.21	Item No. 9	2.738	1132.68322	0	1132.68322
10	Soil working for naturally grower plants and singling (1.15 M.D. per 100 plants)	1.15	475.7435	10	475.17	Item No. 10	0.115	47.57435	1	48.57435
11	Fire tracing	2	809	0	809	Item No. 12	0.2	80.9	0	80.9

Total		192.65	79678.9985	61569.64	139496.54		19.265	7967.89985	6156.964	14124.86385
Contingency 3%			0		4184.9					423.7459155
Labour Welfare 4%			0		5579.86					564.994554
Grand Total		192.65	79678.9985	61569.64	149261.3		19.265	7967.89985	6156.964	15113.60432
Year Operations										
1	Nursery cost for seedlings for causality replacement (222 seedlings per ha) labour rate @ Rs 1.77 and M.S. Rs 1.82 per seedlings.	2.46	1017.6774	404	1399.07	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 causality replacement 20%	0.246	101.76774	40.4	142.16774
2	Transportation of 222 seedlings for causality replacement from nursery to plantation site (including loading and unloading) wages 0.14 M.D Per 100 Seedling & M.S. Rs.1.82 per seedlings	0.31	128.2439	404.04	529.43	Item No. 2 20% instead of 10%	0.031	12.82439	40.4	53.22439
3	Planting for causality replacement 222 seedlings (2.00 M.D. per 100 seedlings)	4.44	1836.7836	0	1795.98	Item No. 3 20% instead of 10%	0.444	183.67836	0	183.67836
4	2 seedlings and 1 soil working, with fertilizer application 2.5 M.D. per 100 seedlings at M.S. Rs. 0.82 per seedling	27.77	11488.1713	911.02	12143.98	Item No. 4	2.777	1148.81713	91.102	1239.91913
5	Watering 1111 seedlings in November, December, January and June 1 time each and in February to May 2 times each total 12 times 5 litre per seedlings, replacing 10% plastic can / matka @Rs.25/- each replacing 111 cans / matka, supplying water @Rs.0.50/- per litre and watering 150 seedlings per M.D.	88.88	36768.7672	36105	72056.96	Item No. 5	8.888	3676.87672	3610.5	7287.37672
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Item No. 6	3.65	1509.9685	0	1509.9685
7	Fire tracing	2	809	0	809	Item No. 8	0.2	80.9	0	80.9
Total		162.36	67148.3284	37824.06	103498.67		16.236	6714.83284	3782.402	10497.23484
Contingency 3%			0		3104.96					314.9170452
Labour Welfare 4%			0		4139.94					419.8893936
Grand Total		162.36	67148.3284	37824.06	110743.57		16.236	6714.83284	3782.402	11232.04128
D. Third Year Operations										
1	Seedling and 1 soil working (1.50 M.D per 100 seedlings) applying fertilizer @ Rs.0.82 per plant.	16.67	6743.01	911.02	7654.03	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1.667	674.301	91.102	765.403
2	Watering 556 seedlings in November, December, January and June 1 time each and February to May 2 times each total 12 times per seedlings 5 litre, water supply @Rs.0.50/- litre and watering 150 seedlings per M.D.	44.48	17992.16	16680	34672.16	Item No. 2	4.448	1799.216	1668	3467.216
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Item No. 3	3.65	1476.425	0	1476.425
4	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	809	25	834	Item No. 5	0.2	80.9	2.5	83.4
5	Fire tracing	2	809	0	809	Item No. 6	0.2	80.9	0	80.9
Total		101.65	41117.42	17616.02	58733.44		10.165	4111.742	1761.602	5873.344
Contingency 3%			0		1762					176.20032
Labour Welfare 4%			0		2349.33					234.93376
Grand Total		101.65	41117.42	17616.02	62844.77		10.165	4111.742	1761.602	6284.47808
E. Fourth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	3.65	1476.425	0	1476.425
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	809	25	834	Item No. 2	0.2	80.9	2.5	83.4
3	Fire tracing	2	809	0	809	Item No. 3	0.2	80.9	0	80.9
Total		40.5	16382.25	25	16407.25		4.05	1638.225	2.5	1640.725
Contingency 3%			0		492.21					49.22175
Labour Welfare 4%			0		656.29					65.629
Grand Total		40.5	16382.25	25	17555.75		4.05	1638.225	2.5	1755.57575
F. Fifth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	3.65	1476.425	0	1476.425
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	809	25	834	Item No. 2	0.2	80.9	2.5	83.4
3	Fire tracing	2	809	0	809	Item No. 3	0.2	80.9	0	80.9
Total		40.5	16382.25	25	16407.25		4.05	1638.225	2.5	1640.725
Contingency 3%			0		492.21					49.22175
Labour Welfare 4%			0		656.29					65.629
Grand Total		40.5	16382.25	25	17555.75		4.05	1638.225	2.5	1755.57575
G. Sixth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	3.65	1509.9685	0	1509.9685
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	827.38	25	834	Item No. 2	0.2	82.738	2.5	85.238
3	Fire tracing	2	827.38	0	809	Item No. 3	0.2	82.738	0	82.738
Total		40.5	16754.445	25	16407.25		4.05	1675.4445	2.5	1677.9445
Contingency 3%			0		492.21					50.338335
Labour Welfare 4%			0		656.29					67.11778
Grand Total		40.5	16754.445	25	17555.75		4.05	1675.4445	2.5	1795.400615
H. Seventh Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	3.65	1509.9685	0	1509.9685
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	827.38	25	834	Item No. 2	0.2	82.738	2.5	85.238

	0		492.21						
4%	68.5	16754.445	25	656.29					
Total				17885.79					
12 months 1 watcher per	36.5	15099.681	0	14764.25	Letter Dt: 07/03/2018				
					Irrigated & fencing				
usage of survival percentage Grid wise and	2	827.38	25	834	Plantation Model no: 1 Item				
acres wise and to Note the same on Register					No: 1				
May and October	2	827.38			Item No: 2				
tracing	2	827.38	0	809	Item No: 3				
Total	48.5	16754.445	25	16487.25					
Contingency 3%		0		492.21					
Labour Welfare 4%		0		656.29					
Grand Total	48.5	16754.445	25	17885.79					
Year Operations									
12 months 1 watcher per	36.5	15099.681	0	14764.25	Letter Dt: 07/03/2018				
usage of survival percentage Grid wise and	2	827.38	25	834	Irrigated & fencing				
acres wise and to Note the same on Register					Plantation Model no: 1 Item				
May and October	2	827.38			No: 1				
tracing	2	827.38	0	809	Item No: 2				
Total	48.5	16754.445	25	16487.25	Item No: 3				
Contingency 3%		0		492.21					
Labour Welfare 4%		0		656.29					
Grand Total	48.5	16754.445	25	17885.79					
Year Operations									
12 months 1 watcher per	36.5	15099.681	0	14764.25	Letter Dt: 07/03/2018				
usage of survival percentage Grid wise and	2	827.38	25	834	Irrigated & fencing				
acres wise and to Note the same on Register					Plantation Model no: 1 Item				
May and October	2	827.38			No: 1				
tracing	2	827.38	0	809	Item No: 2				
Total	48.5	16754.445	25	16487.25	Item No: 3				
Contingency 3%		0		492.21					
Labour Welfare 4%		0		656.29					
Grand Total	48.5	16754.445	25	17885.79					
Year Operations									
12 months 1 watcher per	36.5	15099.681	0	14764.25	Letter Dt: 07/03/2018				
usage of survival percentage Grid wise and	2	827.38	25	834	Irrigated & fencing				
acres wise and to Note the same on Register					Plantation Model no: 1 Item				
May and October	2	827.38			No: 1				
tracing	2	827.38	0	809	Item No: 2				
Total	48.5	16754.445	25	16487.25	Item No: 3				
Contingency 3%		0		492.21					
Labour Welfare 4%		0		656.29					
Grand Total	48.5	16754.445	25	17885.79					

of chain linked fencing derived from SSR-2017-18 with addition for area difference and transportation lead

ion M.D. and M.S. component derived from rate structure as approved by PCCT (Hoff) M.S. M.S. Nagpur Letter No. Dusk-17CA/Nodal Cell CTR-40/1121/2019-20, Date 04/10/2019

Legodase
(Kalyani Godase)
Range Forester Officer, Daund
Pune Forest Division, Pune

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(Rahul Pote, IFS)
Deputy Conservator of Forests,
Pune Forest Division, Pune