

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.

Spacing - 3m x 3m

Size of Pits - 0.45 x 0.45 x 0.45m

No. of Seedlings - 1111 per ha

wage rate- 399.73 per day

Ca Area= 0.10 hector

Range- Baramati

Round- Morgaon

Beat- Morgaon

Village -Kalkhairewadi G.No.510

Abstract for Model No.5

S. N.	Year of operation	Total
1	Pre Monsoon works	27863.49316
2	First Year Operations	14828.8266
3	Second Year Operations	10992.50834
4	Third Year Operations	6284.47808
5	Fourth Year Operations	1755.57575
6	Fifth Year Operations	1755.57575
7	Sixth Year Operations	1734.904955
8	Seventh Year Operations	1735.925735
9	Eighth Year Operations	1734.904955
10	Ninth Year Operations	1734.904955
11	Tenth Year Operations	1734.904955
Total		72156.00323

Cost per plant Rs. 649.46



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

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Village - Kalkhairawadi G.No.510

Wage Rate-

wage rate Rs.399.73 per day.

Range- Baramati
Beat- Morgaon

Round- Morgaon

Sr No	Particulars of works	Man days	Wages	Material supply	Total (Rs. Per Ha.)	Sanction Letter Dt. / Model No. / Item No.	Amount in Rs For 0.10 ha			
							Man days	Wages	Material supply	Total (Rs. Per Ha.)
A. Pre Monsoon Works PPO/PYO										
1	(a) Survey and demarcation	1	399.73	91	495.5	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1a	0.1	39.973	9.1	49.073
	(b) Preparation of treatment map (100 m x 50 m grid)	1	399.73	91	495.5	Item No. 1b	0.1	39.973	9.1	49.073
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid.	0.4	159.892	0	161.8	Item No. 1c	0.04	15.9892	0	15.9892
	(d) Fixing 60cm x 0.05cm x12cm cement pillars upto 30cm deep in corner of Grid, painting with Grid No. etc complete (3 pillars, Rs.75/- for each pillars)	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	3997.3	91	4136	Item No. 1e	1	399.73	9.1	408.83
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc	31	12391.63	0	12539.5	Item No. 2	3.1	1239.163	0	1239.163
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. lead 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 spacemnt. 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs.	2.78	1111.2494	49.77	1174.28	Item No. 4	0.278	111.12494	4.977	116.10194
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	29312.2009	0	29661.99	Item No. 5	7.333	2931.22009	0	2931.22009
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1	399.73	0	404.5	Item No. 6	0.1	39.973	0	39.973
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	299.7975	25	328.37	Item No. 7	0.075	29.97975	2.5	32.47975
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	18671.3883	4825.46	23719.65	Item No. 9 20% Casualty replacement in place of 10%	4.671	1867.13883	482.546	2349.68483
Total		167.97	67142.648	193263.83	261207.69		16.797	6714.26481	19326.383	26040.64781
Contingency 3%			0		7836.23		0	0		781.2194343
Labour Welfare 4%			0		10448.3		0	0		1041.625912
Grand Total		167.97	67142.648	193263.83	279492.22		16.797	6714.26481	19326.383	27863.49316
B. First Year Operations										
1	Part 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	5916.004	1079.73	7066.33	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	1.48	591.6004	107.973	699.5734
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	7371.0212	1944.25	9403.23	Item No. 2	1.844	737.10212	194.425	931.52712
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	747.4951	2426	3182.41	Item No. 3 10% Extra Plants to be transported	0.187	74.74951	242.6	317.34951
4	Planting of 1111 seedlings (1.0 MD per 100 seedlings)	11.11	4441.0003	0	4493.99	Item No. 4	1.111	444.10003	0	444.10003
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	17764.0012	911.02	18887	Item No. 5	4.444	1776.40012	91.102	1867.50212
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	23684.0025	54395	78361.62	Item No. 7	5.925	2368.40025	5439.5	7807.90025
7	Casualty replacement (20% 222 Seedlings per ha) (2 M.D. per 100 seedlings)	4.44	1774.8012	0	1795.98	Item No. 6 20% instead of 10%	0.444	177.48012	0	177.48012
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	3105.9021	803.64	3946.6	Item No. 8 20% instead of 10%	0.777	310.59021	80.364	390.95421
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	10944.6074	0	11075.21	Item No. 9	2.738	1094.46074	0	1094.46074
10	Soil working for naturally grower plants and singling (1.15 M.D. per 100 plants)	1.15	459.6895	10	475.17	Item No. 10	0.115	45.96895	1	46.96895
11	Fire tracing	2	809	0	809	Item No. 12	0.2	80.9	0	80.9

Total		192.65	77017.5245	61569.64	139496.54		19.265	7701.75245	6156.964	13858.71645
Contingency 3%			0		4184.9					415.7614935
Labour Welfare 4%			0		5579.86					554.348658
Grand Total		192.65	77017.5245	61569.64	149261.3		19.265	7701.75245	6156.964	14828.8266
C. Second Year Operations										
1	Part nursery cost for seedlings for causality replacement (222 seedlings per ha) labour rate @ Rs.3.77 and M.S. Rs.1.82 per seedlings.	2.46	983.3358	404	1399.07	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 causality replacement 20%	0.246	98.33358	40.4	138.73358
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	123.9163	404.04	529.43	Item No. 2 20% instead of 10%	0.031	12.39163	40.4	52.79163
3	Planting for causality replacement 222 seedlings (2.00 M.D. per 100 seedlings)	4.44	1774.8012	0	1795.98	Item No. 3 20% instead of 10%	0.444	177.48012	0	177.48012
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	11100.5021	911.02	12143.98	Item No. 4	2.777	1110.05021	91.102	1201.15221
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 / mats @Rs.25/- each replacing 111 cans / mats, supplying water @Rs.0.50/- per litre and watering 150 seedlings per M.D.	88.88	35528.0024	36105	72056.96	Item No. 5	8.888	3552.80024	3610.5	7163.30024
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	14590.145	0	14764.25	Item No. 6	3.65	1459.0145	0	1459.0145
7	Fire tracing	2	809	0	809	Item No. 8	0.2	80.9	0	80.9
Total		162.36	64909.7028	37824.06	103498.67		16.236	6490.97028	3782.402	10373.37128
Contingency 3%			0		3104.96					308.2011684
Labour Welfare 4%			0		4139.94					410.9348912
Grand Total		162.36	64909.7028	37824.06	110743.57		16.236	6490.97028	3782.402	10992.50834
D. Third Year Operations										
1	1 weeding and 1 soil working (1.50 M.D. per 100 seedlings) applying fertiliser @ 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	14590.145	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	3.65	1459.0145	0	1459.0145
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	799.46	25	834	Item No. 2	0.2	79.946	2.5	82.446
3	Fire tracing	2	799.46	0	809	Item No. 3	0.2	79.946	0	79.946
Total		40.5	16189.065	25	16407.25		4.05	1618.9065	2.5	1621.4065
Contingency 3%			0		492.21					48.642195
Labour Welfare 4%			0		656.29					64.85626
Grand Total		40.5	16189.065	25	17555.75		4.05	1618.9065	2.5	1734.904955
H. Seventh Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14590.145	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	3.65	1459.0145	0	1459.0145
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	799.46	25	834	Item No. 2	0.2	79.946	2.5	82.446

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3	Fire tracing	2	809	0	809	Item No. 3	0.2	80.9	0	80.9
	Total	40.5	16198.605	25	16407.25		4.05	1619.8605	2.5	1622.3605
	Contingency 3%		0		492.21					48.670815
	Labour Welfare 4%		0		656.29					64.89442
	Grand Total	40.5	16198.605	25	17555.75		4.05	1619.8605	2.5	1735.925735
I. Fifth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14590.145	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	3.65	1459.0145	0	1459.0145
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	799.46	25	834	Item No. 2	0.2	79.946	2.5	82.446
3	Fire tracing	2	799.46	0	809	Item No. 3	0.2	79.946	0	79.946
	Total	40.5	16189.065	25	16407.25		4.05	1618.9065	2.5	1621.4065
	Contingency 3%		0		492.21					48.642195
	Labour Welfare 4%		0		656.29					64.85626
	Grand Total	40.5	16189.065	25	17555.75		4.05	1618.9065	2.5	1734.904955
J. Ninth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14590.145	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	3.65	1459.0145	0	1459.0145
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	799.46	25	834	Item No. 2	0.2	79.946	2.5	82.446
3	Fire tracing	2	799.46	0	809	Item No. 3	0.2	79.946	0	79.946
	Total	40.5	16189.065	25	16407.25		4.05	1618.9065	2.5	1621.4065
	Contingency 3%		0		492.21					48.642195
	Labour Welfare 4%		0		656.29					64.85626
	Grand Total	40.5	16189.065	25	17555.75		4.05	1618.9065	2.5	1734.904955
K. Tenth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14590.145	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	3.65	1459.0145	0	1459.0145
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	799.46	25	834	Item No. 2	0.2	79.946	2.5	82.446
3	Fire tracing	2	799.46	0	809	Item No. 3	0.2	79.946	0	79.946
	Total	40.5	16189.065	25	16407.25		4.05	1618.9065	2.5	1621.4065
	Contingency 3%		0		492.21					48.642195
	Labour Welfare 4%		0		656.29					64.85626
	Grand Total	40.5	16189.065	25	17555.75		4.05	1618.9065	2.5	1734.904955

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

2. Plantation M.D. and M.S. component derived from rate structure as approved by PCCF (HoFF) M.S. M. S. Nagpur Letter No. Desk-17/CA/Nodal Cell /CR-40/1127/2019-20, Date 04/10/2019

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