

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- 399.73 per day

Ca Area= 0.30 hectore

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	83590.47947
2	First Year Operations	44486.4798
3	Second Year Operations	32977.52502
4	Third Year Operations	18853.43424
5	Fourth Year Operations	5266.72725
6	Fifth Year Operations	5266.72725
7	Sixth Year Operations	5204.714865
8	Seventh Year Operations	5207.777205
9	Eighth Year Operations	5204.714865
10	Ninth Year Operations	5204.714865
11	Tenth Year Operations	5204.714865
Total		216468.0097

Cost per plant Rs. 649.46



(Rahul Patil, IFS)

Deputy Conservator of Forests,
Pune Forest Division, Pune

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Spacing - 3m x 3m

Size of Pits - 0.45 x 0.45 x 0.45m

No. of Seedlings - 1111 per ha

Village - Kalkhairwadi 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	(For 1.00 ha.)	Sanction Letter Dt. / Model No. / Item No.	Amount in Rs.				
						(Rs. Per Ha.)		For 0.30 ha				
A. Pre Monsoon Works PPO/PYO								Man days	Wages	Material supply	Total	(Rs. Per Ha.)
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	0.3	119.919	27.3	147.219	
	(b) Preparation of treatment map (100 m x 50 m grid)	1	399.73	91	495.5		Item No. 1b	0.3	119.919	27.3	147.219	
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid.	0.4	159.892	0	161.8		Item No. 1c	0.12	47.9676	0	47.9676	
	(d) Fixing 60cm x 0.05cm x12cm cement pillars upto 30cm deep in corner of Grid, pointing with Grid No. etc complete (3 pillars, Rs 75/- for each pillar)	0	0	225	225		Item No. 1d	0	0	67.5	67.5	
	(e) Clearing of bushes and preparation of site (As per requirement)	10	3997.3	91	4136		Item No. 1e	3	1199.19	27.3	1226.49	
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	9.3	3717.489	0	3717.489	
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 leadplus 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	54859.68	54859.68	
4	Alignment of pits at 3m x 3m spacing. 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs.	2.78	1111.2494	49.77	1174.28		Item No. 4	0.834	333.37482	14.931	348.30582	
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	21.999	8793.66027	0	8793.66027	
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1	399.73	0	404.5		Item No. 6	0.3	119.919	0	119.919	
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	0.225	89.93925	7.5	97.43925	
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000		Item No. 8	0	0	1500	1500	
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%	14.013	5601.41649	1447.638	7049.05469	
Total		167.97	67142.648	193263.83	261207.69			50.391	20142.79443	57979.149	78121.94343	
Contingency 3%			0		7836.23			0	0		2343.658303	
Labour Welfare 4%			0		10448.3			0	0		3124.877737	
Grand Total		167.97	67142.648	193263.83	279492.22			50.391	20142.79443	57979.149	83590.47947	
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%	4.44	1774.8012	323.919	2098.7202	
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	5.532	2211.30636	583.275	2794.58136	
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	0.561	224.24853	727.8	952.04853	
4	Planting of 1111 seedlings (1.0 M.D. per 100 seedlings)	11.11	4441.0003	0	4493.99		Item No. 4	3.333	1332.30009	0	1332.30009	
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	13.332	5329.20036	273.306	5602.50636	
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	17.775	7105.20075	16318.5	23423.70075	
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%	1.332	532.44036	0	532.44036	
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%	2.331	931.77063	241.092	1172.86263	
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	10944.6074	0	11075.21		Item No. 9	8.214	3283.38222	0	3283.38222	
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	0.345	137.90685	3	140.90685	
11	Fire tracing	2	809	0	809		Item No. 12	0.6	242.7	0	242.7	

Total		192.65	77017.5245	61569.64	139496.54		57.795	23105.25735	18470.892	41576.14935
Contingency 3%			0		4184.9					1247.284481
Labour Welfare 4%			0		5579.86					1663.045974
Grand Total		192.65	77017.5245	61569.64	149261.3		57.795	23105.25735	18470.892	44486.4798
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%	0.738	295.00074	121.2	415.20074
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%	0.093	37.17489	121.2	158.37489
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%	1.332	532.44036	0	532.44036
4	2 weeding 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	8.331	3330.15063	273.306	3603.45663
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	35528.0024	36105	72056.96	Item No. 5	26.664	10658.40072	10831.5	21489.90072
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	14590.145	0	14764.25	Item No. 6	10.95	4377.0435	0	4377.0435
7	Fire tracing	2	809	0	809	Item No. 8	0.6	242.7	0	242.7
Total		162.36	64909.7028	37824.06	103498.67		48.708	19472.91084	11347.206	30820.11684
Contingency 3%			0		3104.96					924.6035052
Labour Welfare 4%			0		4139.94					1232.804674
Grand Total		162.36	64909.7028	37824.06	110743.57		48.708	19472.91084	11347.206	32977.52502
D. Third Year Operations										
1	1-weeding 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	5.001	2022.903	273.306	2296.209
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	13.344	5397.648	5004	10401.648
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Item No. 3	10.95	4429.275	0	4429.275
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	0.6	242.7	7.5	250.2
5	Fire tracing	2	809	0	809	Item No. 6	0.6	242.7	0	242.7
Total		101.65	41117.42	17616.02	58733.44		30.495	12335.226	5284.806	17620.032
Contingency 3%			0		1762					528.60096
Labour Welfare 4%			0		2349.33					704.80128
Grand Total		101.65	41117.42	17616.02	62844.77		30.495	12335.226	5284.806	18853.43424
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	10.95	4429.275	0	4429.275
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	0.6	242.7	7.5	250.2
3	Fire tracing	2	809	0	809	Item No. 3	0.6	242.7	0	242.7
Total		40.5	16382.25	25	16407.25		12.15	4914.675	7.5	4922.175
Contingency 3%			0		492.21					147.66525
Labour Welfare 4%			0		656.29					196.887
Grand Total		40.5	16382.25	25	17555.75		12.15	4914.675	7.5	5266.72725
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	10.95	4429.275	0	4429.275
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	0.6	242.7	7.5	250.2
3	Fire tracing	2	809	0	809	Item No. 3	0.6	242.7	0	242.7
Total		40.5	16382.25	25	16407.25		12.15	4914.675	7.5	4922.175
Contingency 3%			0		492.21					147.66525
Labour Welfare 4%			0		656.29					196.887
Grand Total		40.5	16382.25	25	17555.75		12.15	4914.675	7.5	5266.72725
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	10.95	4377.0435	0	4377.0435
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	0.6	239.838	7.5	247.338
3	Fire tracing	2	799.46	0	809	Item No. 3	0.6	239.838	0	239.838
Total		40.5	16189.065	25	16407.25		12.15	4856.7195	7.5	4864.2195
Contingency 3%			0		492.21					145.926585
Labour Welfare 4%			0		656.29					194.56878
Grand Total		40.5	16189.065	25	17555.75		12.15	4856.7195	7.5	5204.714865
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	10.95	4377.0435	0	4377.0435
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	0.6	239.838	7.5	247.338

3	Fire tracing	2	809	0	809	Item No. 3	0.6	242.7	0	242.7
	Total	40.5	16198.605	25	16407.25		12.15	4859.5815	7.5	4867.0815
	Contingency 3%		0		492.21					146.012445
	Labour Welfare 4%		0		656.29					194.68326
	Grand Total	40.5	16198.605	25	17555.75		12.15	4859.5815	7.5	5207.77205
I. Eighth 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	10.95	4377.0435	0	4377.0435
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	0.6	239.838	7.5	247.338
3	Fire tracing	2	799.46	0	809	Item No. 3	0.6	239.838	0	239.838
	Total	40.5	16189.065	25	16407.25		12.15	4856.7195	7.5	4864.2195
	Contingency 3%		0		492.21					145.926585
	Labour Welfare 4%		0		656.29					194.56878
	Grand Total	40.5	16189.065	25	17555.75		12.15	4856.7195	7.5	5204.714865
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	10.95	4377.0435	0	4377.0435
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	0.6	239.838	7.5	247.338
3	Fire tracing	2	799.46	0	809	Item No. 3	0.6	239.838	0	239.838
	Total	40.5	16189.065	25	16407.25		12.15	4856.7195	7.5	4864.2195
	Contingency 3%		0		492.21					145.926585
	Labour Welfare 4%		0		656.29					194.56878
	Grand Total	40.5	16189.065	25	17555.75		12.15	4856.7195	7.5	5204.714865
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	10.95	4377.0435	0	4377.0435
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	0.6	239.838	7.5	247.338
3	Fire tracing	2	799.46	0	809	Item No. 3	0.6	239.838	0	239.838
	Total	40.5	16189.065	25	16407.25		12.15	4856.7195	7.5	4864.2195
	Contingency 3%		0		492.21					145.926585
	Labour Welfare 4%		0		656.29					194.56878
	Grand Total	40.5	16189.065	25	17555.75		12.15	4856.7195	7.5	5204.714865

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