

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- 413.69 per day

Ca Area= 1.0 hector

Range Daund

Round Daund

Beat Kurkumbh

village Khadki g.no.699

Abstract for Model No.5

S. N.	Year of operation	Total
1	Pre Monsoon works	281143.9331
2	First Year Operations	151136.0432
3	Second Year Operations	112320.4128
4	Third Year Operations	62844.7808
5	Fourth Year Operations	17555.7575
6	Fifth Year Operations	17555.7575
7	Sixth Year Operations	17954.00615
8	Seventh Year Operations	18175.3303
9	Eighth Year Operations	17954.00615
10	Ninth Year Operations	17954.00615
11	Tenth Year Operations	17954.00615
Total		732548.0397

Cost per plant Rs. 659.3591717



(Rahul Patil, IFS)

Deputy Conservator of Forests,
Pune Forest Division, Pune

Model Rate Structure for Compensatory Afforestation

Model No.5.

Fencing and Irrigated Plantations

Range Daund
Round Daund
Beat Kurkumbh
village Khadki

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

Wage Rate:
Rs 413.69 per day

g.no.699

Particulars of works		Man days	Wages	Material supply	(Amount in Rs) Total (Rs Per Ha.)	Sanction Letter Dt. / Model No. / Item No	For 1.0 ha			
r.n o							Man days	Wages	Material supply	Total (Rs Per Ha.)
Pre Monsoon Works PPO/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 Item No. 1b Item No. 1c Item No. 1d Item No. 1e	1	413.69	91	504.69
	(b) Preparation of treatment map (100 m x 50 m grid)	1	413.69	91	495.5		1	413.69	91	504.69
	(c) Digging trial pits of size 0.30x0.30x0.60 m corner of Grid	0.4	165.476	0	161.8		0.4	165.476	0	165.476
	(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 pillar)	0	0	225	225		0	0	225	225
	(e) Clearing of bushes and preparation of site (As per requirement)	10	4136.9	91	4136		10	4136.9	91	4227.9
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	31	12824.39	0	12824.39
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 boundary + 20% for transportation of ave. loc. + 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	182865.6	182865.6
4	Alignment of pits at 3m x 3m spacing. 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs.	2.78	1150.0582	49.77	1174.28	Item No. 4	2.78	1150.0582	49.77	1199.8282
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	73.33	30335.8877	0	30335.8877
6	Construction of 5.00 Rmt wide Inspection Path 1MD per 100 Rmt	1	413.69	0	404.5	Item No. 6	1	413.69	0	413.69
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	0.75	310.2675	25	335.2675
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000	Item No. 8	0	0	5000	5000
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%	46.71	19323.4599	4825.46	24148.9199
Total		167.97	69487.509	193263.83	261207.69		167.97	69487.5093	193263.83	262751.3393
Contingency 3%			0		7836.23		0	0		7882.540179
Labour Welfare 4%			0		10448.3		0	0		10510.05357
Grand Total		167.97	69487.509	193263.83	279492.22		167.97	69487.5093	193263.83	281143.9331
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	6122.612		1079.73	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	14.8	6122.612		7202.342
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		18.44	7628.4436		9572.6936
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		1.87	773.6003		3199.6003
4	Planting of 1111 seedlings (1.0 M.D. per 100 seedlings)	11.11	4596.0959		0		11.11	4596.0959		4596.0959
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		44.44	18384.3836		19295.4036
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	Item No. 7	59.25	24511.1325		78906.1325
7	Casualty replacement (20% 222 Seedlings per ha.) (2 M.D. per 100 seedlings)	4.44	1836.7836		0	Item No. 6 20% instead of 10%	4.44	1836.7836		1836.7836
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	Item No. 8 20% instead of 10%	7.77	3214.3713		4018.0113
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	11326.8322		0	Item No. 9	27.38	11326.8322		11326.8322
10	Soil working for naturally grower plants and singling (1.15 M.D. per 100 plants)	1.15	475.7435		10	Item No. 10	1.15	475.7435		485.7435

	2	809	0	809	Item No. 12	2	809	0	809	
Total	192.65	79678.9985	61569.64	139496.54		192.65	79678.9985	61569.64	141248.6385	
Contingency 3%		0		4184.9					4237.459155	
Labour Welfare 4%		0		5579.86					5649.94554	
Grand Total	192.65	79678.9985	61569.64	149261.3		192.65	79678.9985	61569.64	151136.0432	
Year Operations										
1	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	1017.6774	404	1399.07	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 causality replacement 20%	2.46	1017.6774	404	1421.6774
2	Transportation of 222 seedlings for causality replacement from nursery to plantation site (including loading and unloading) wages 0.14 MD 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%	0.31	128.2439	404	532.2439
3	Planting for causality replacement 222 seedlings (2.00 MD per 100 seedlings)	4.44	1836.7836	0	1795.98	Item No. 3 20% instead of 10%	4.44	1836.7836	0	1836.7836
4	2 weedings and 1 soil working, with fertilizer application 2.5 MD. per 100 seedlings at M.S. Rs. 0.82 per seedling	27.77	11488.1713	911.02	12143.98	Item No. 4	27.77	11488.1713	911.02	12399.1913
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 MD	88.88	36768.7672	36105	72056.96	Item No. 5	88.88	36768.7672	36105	72873.7672
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Item No. 6	36.5	15099.685	0	15099.685
7	Fire tracing	2	809	0	809	Item No. 8	2	809	0	809
Total	162.36	67148.3284	37824.06	103498.67			162.36	67148.3284	37824.02	104972.3484
Contingency 3%		0		3104.96						3149.170452
Labour Welfare 4%		0		4139.94						4198.893936
Grand Total	162.36	67148.3284	37824.06	110743.57			162.36	67148.3284	37824.02	112320.4128
D. Third Year Operations										
1	1 weeding and 1 soil working (1.50 MD 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	16.67	6743.01	911.02	7554.03
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 MD	44.48	17992.16	16680	34672.16	Item No. 2	44.48	17992.16	16680	34672.16
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Item No. 3	36.5	14764.25	0	14764.25
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	2	809	25	834
5	Fire tracing	2	809	0	809	Item No. 6	2	809	0	809
Total	101.65	41117.42	17616.02	58733.44			101.65	41117.42	17616.02	58733.44
Contingency 3%		0		1762						1762.0032
Labour Welfare 4%		0		2349.33						2349.3375
Grand Total	101.65	41117.42	17616.02	62844.77			101.65	41117.42	17616.02	62844.7808
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	36.5	14764.25	0	14764.25
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	2	809	25	834
3	Fire tracing	2	809	0	809	Item No. 3	2	809	0	809
Total	40.5	16382.25	25	16407.25			40.5	16382.25	25	16407.25
Contingency 3%		0		492.21						492.2175
Labour Welfare 4%		0		656.29						656.29
Grand Total	40.5	16382.25	25	17555.75			40.5	16382.25	25	17555.7575
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	36.5	14764.25	0	14764.25
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	2	809	25	834
3	Fire tracing	2	809	0	809	Item No. 3	2	809	0	809
Total	40.5	16382.25	25	16407.25			40.5	16382.25	25	16407.25
Contingency 3%		0		492.21						492.2175
Labour Welfare 4%		0		656.29						656.29
Grand Total	40.5	16382.25	25	17555.75			40.5	16382.25	25	17555.7575
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	36.5	15099.685	0	15099.685
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	2	827.38	25	852.38
3	Fire tracing	2	827.38	0	809	Item No. 3	2	827.38	0	827.38
Total	40.5	16754.445	25	16407.25			40.5	16754.445	25	16779.445
Contingency 3%		0		492.21						503.38335
Labour Welfare 4%		0		656.29						671.1778
Grand Total	40.5	16754.445	25	17555.75			40.5	16754.445	25	17954.00615
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	36.5	15099.685	0	15099.685

al percentage Grid wise and to Note the same on Register	2	827.38	25	834	Item No. 2	2	827.38	25	852.38
er October.	2	827.38	0	809	Item No. 3	2	1034.225	0	1034.225
	40.5	16754.445	25	16407.25		40.5	16961.29	25	16986.29
Total		0		492.21					509.5887
Contingency 3%		0		656.29		40.5	16961.29	25	679.4516
Labour Welfare 4%	40.5	16754.445	25	17555.75					18175.3303
Grand Total									
Eleventh 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	36.5	15099.685	0	15099.685
	2	827.38	25	834	Item No. 2	2	827.38	25	852.38
2 Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2	827.38	0	809	Item No. 3	2	827.38	0	827.38
	40.5	16754.445	25	16407.25		40.5	16754.445	25	16779.445
3 Fire tracing		0		492.21					503.38335
Total	40.5	16754.445	25	17555.75		40.5	16754.445	25	671.1778
Contingency 3%		0		656.29					17954.00615
Labour Welfare 4%	40.5	16754.445	25	17555.75					
Grand Total									
Tenth 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	36.5	15099.685	0	15099.685
	2	827.38	25	834	Item No. 2	2	827.38	25	852.38
2 Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2	827.38	0	809	Item No. 3	2	827.38	0	827.38
	40.5	16754.445	25	16407.25		40.5	16754.445	25	16779.445
3 Fire tracing		0		492.21					503.38335
Total	40.5	16754.445	25	17555.75		40.5	16754.445	25	671.1778
Contingency 3%		0		656.29					17954.00615
Labour Welfare 4%	40.5	16754.445	25	17555.75					
Grand Total									

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