

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= 1.00 hector

Range Indapur

Round Indapur

Beat Kati

village sarafwadi

g.no.94

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	17954.00615
6	Fifth Year Operations	17954.00615
7	Sixth Year Operations	17954.00615
8	Seventh Year Operations	17954.00615
9	Eighth Year Operations	17954.00615
10	Nineth Year Operations	17954.00615
11	Tenth Year Operations	17954.00615
Total		733123.2129

Cost per plant Rs. 659.8768793



(Rahul Patil, IFS)

Deputy Conservator of Forests,
Pune Forest Division, Pune

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

Wage Rate:
Rs 413.69 per day

Range Indapur

Round Indapur
Beat Kati
village sarafwadi

Sl. No.	Particulars of works	Man days	Wages	Material supply	(Amount in Rs.)		Sanction Letter Dt. / Model No. / Item No.	Beat Kati village sarafwadi g.no 94			
					Total	(Rs. Per Ha)		For 1.00 ha			
A. Pre Monsoon Works PPO PLO								Man days	Wages	Material supply	Total (Rs. Per Ha.)
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	1	413.69	91	504.69
	(b) Preparation of treatment map (100 m x 50 m grid)	1	413.69	91	495.5		Item No. 1b	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		Item No. 1c	0.4	165.476	0	165.476
	(d) Fixing 60cm x 0.05cm x 12cm corner 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	225	225
	(e) Clearing of bushes and preparation of site (As per requirement)	10	4136.9	91	4136		Item No. 1e	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 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 50mmx50mm, 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 2017/18 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 1174.28)	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) 0.60 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 1 M.D 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 5%			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	7066.33		Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	14.8	6122.612	1079.73	7207.342
2	Refilling of pits by good quality soil including application of single super phosphate (1.60 M.D per 100 pits)	18.44	7628.4436	1944.25	9403.23		Item No. 2	18.44	7628.4436	1944.25	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	3182.41		Item No. 3 Extra Plants to be transported	1.87	773.6003	2426	3199.6003
4	Planting of 1111 seedlings (1.0 M.D per 100 seedlings)	11.11	4596.0959	0	4493.99		Item No. 4	11.11	4596.0959	0	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	18887		Item No. 5	44.44	18384.3836	911.02	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 / maka @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	59.25	24511.1325	54395	78906.1325
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%	4.44	1836.7836	0	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	3946.6		Item No. 8 20% instead of 10%	7.77	3214.3713	803.64	4018.0113
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	11326.8322	0	11075.21		Item No. 9	27.38	11326.8322	0	11326.8322
10	Soil working for naturally grown plants and singling (1.15 M.D per 100 plants)	1.15	475.7435	10	475.17		Item No. 10	1.15	475.7435	10	485.7435
11	Fire tracing	2	809	0	809		Item No. 12	2	809	0	809

37/13

Total		192.65	79678.9985	61569.64	139196.54		192.65	79678.9985	61569.64	141248.6385
Contingency 3%				0	4184.0					4237.459155
Labour Welfare 4%				0	5570.86					5649.94554
Grand Total		192.65	79678.9985	61569.64	149261.3		192.65	79678.9985	61569.64	151136.0432
C. Second Year Operations										
1	Part nursery cost for seedlings for casualty replacement (222 seedlings per ha) labour rate @ Rs 3.77 and M.S. Rs 1.82 per seedlings.	2.46	1017.6774	404	1199.07	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	2.46	1017.6774	404	1421.6774
2	Transportation of 222 seedlings for casualty 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%	0.31	128.2439	404	532.2439
3	Planting for casualty replacement 222 seedlings (2.00 M.D. 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 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	27.77	11488.1713	911.02	12359.1913
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 / maka @Rs 25/- each replacing 111 cans / maka, supplying water @Rs 0.50/- per litre and watering 150 seedlings per M.D.	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	37824.06	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	37824.06	112320.4128
D. Third Year Operations										
1	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	16.67	6743.01	911.02	7654.03
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 M.D.	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					2349.3376
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	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
F. Fifth 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
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
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

1	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					503.3833%
	Labour Welfare 4%		0		656.29					671.1778%
	Grand Total	40.5	16754.445	25	17555.74		40.5	16754.445	25	17954.00615%
I. Eighth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt: 07/04/2018 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					503.3833%
	Labour Welfare 4%		0		656.29					671.1778%
	Grand Total	40.5	16754.445	25	17555.74		40.5	16754.445	25	17954.00615%
J. Ninth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt: 07/04/2018 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					503.3833%
	Labour Welfare 4%		0		656.29					671.1778%
	Grand Total	40.5	16754.445	25	17555.74		40.5	16754.445	25	17954.00615%
K. Tenth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt: 07/04/2018 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					503.3833%
	Labour Welfare 4%		0		656.29					671.1778%
	Grand Total	40.5	16754.445	25	17555.74		40.5	16754.445	25	17954.00615%

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

2. Plantation M.D. and M.S. component derived from rate structure as approved by PCCF (H&F) M.S. M.S. Nagpur Letter No. Desk-177C/A/Nodal Cell /CR-49/1127/2019-20, Date 04/10/2019

(Signature)

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