

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= 1.00 hectore

Range- Indapur

Round- Bhigwan

Beat- Bhigwan

Village -Nirgude G.No.371

Abstract for Model No.5

S. N.	Year of operation	Total
1	Pre Monsoon works	278634.9316
2	First Year Operations	148288.266
3	Second Year Operations	109925.0834
4	Third Year Operations	62844.7808
5	Fourth Year Operations	17555.7575
6	Fifth Year Operations	17555.7575
7	Sixth Year Operations	17349.04955
8	Seventh Year Operations	17359.25735
9	Eighth Year Operations	17349.04955
10	Ninth Year Operations	17349.04955
11	Tenth Year Operations	17349.04955
Total		721560.0323

Cost per plant Rs. 649.468976

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

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Size of Pits - 0.45 x 0.45 x 0.45m
 No. of Seedlings - 1111 per ha
 Village - Nigude G.No.371

Wage Rate:
 wage rate Rs.399.73 per day

Range-Indapur
 Beat- Bhigwan
 Round- Bhigwan

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 1.00 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	1	399.73	91	490.73
	(b) Preparation of treatment map (100 m x 50 m grid)	1	399.73	91	495.5		1	399.73	91	490.73
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid.	0.4	159.892	0	161.8		0.4	159.892	0	159.892
	(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	3997.3	91	4136		10	3997.3	91	4088.3
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	31	12391.63	0	12391.63
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	182865.6	182865.6
4	Alignment of pits at 3m x 3m spacement. 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs.	2.78	1111.2494	49.77	1174.28	Item No. 4	2.78	1111.2494	49.77	1161.0194
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	73.33	29312.2009	0	29312.2009
6	Construction of 5.00 Rmt wide Inspection Path (M.D. per 100 Rmt	1	399.73	0	404.5	Item No. 6	1	399.73	0	399.73
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	0.75	299.7975	25	324.7975
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	18671.3883	4825.46	23719.65	Item No. 9 20% Casualty replacement in place of 10%	46.71	18671.3883	4825.46	23496.8483
	Total	167.97	67142.648	193263.83	261207.69		167.97	67142.6481	193263.83	260406.4781
	Contingency 3%		0		7836.23		0	0		7812.194343
	Labour Welfare 4%		0		10448.3		0	0		10416.25912
	Grand Total	167.97	67142.648	193263.83	279492.22		167.97	67142.6481	193263.83	278634.9316
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%	14.8	5916.004	1079.73	6995.734
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		18.44	7371.0212	1944.25	9315.2712
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		1.87	747.4951	2426	3173.4951
4	Planting of 1111 seedlings (1.0 M.D. per 100 seedlings)	11.11	4441.0003	0	4493.99		11.11	4441.0003	0	4441.0003
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		44.44	17764.0012	911.02	18675.0212
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	59.25	23684.0025	54395	78079.0025
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%	4.44	1774.8012	0	1774.8012
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%	7.77	3105.9021	803.64	3909.5421
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	10944.6074	0	11075.21	Item No. 9	27.38	10944.6074	0	10944.6074
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	1.15	459.6895	10	469.6895
11	Fire tracing	2	809	0	809	Item No. 12	2	809	0	809

Total		192.65	77017.5245	61569.64	139496.54		192.65	77017.5245	61569.64	138587.1645
Contingency 3%				0	4184.9					4157.614935
Labour Welfare 4%				0	5579.86					5543.48658
Grand Total		192.65	77017.5245	61569.64	149261.3		192.65	77017.5245	61569.64	148288.266
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%	2.46	983.3358	404	1387.3358
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%	0.31	123.9163	404	527.9163
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%	4.44	1774.8012	0	1774.8012
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	27.77	11100.5021	911.02	12011.5221
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	88.88	35528.0024	36105	71633.0024
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	14590.145	0	14764.25	Item No. 6	36.5	14590.145	0	14590.145
7	Fire tracing	2	809	0	809	Item No. 8	2	809	0	809
Total		162.36	64909.7028	37824.06	103498.67		162.36	64909.7028	37824.02	102733.7228
Contingency 3%				0	3104.96					3082.011684
Labour Welfare 4%				0	4139.94					4109.348912
Grand Total		162.36	64909.7028	37824.06	110743.57		162.36	64909.7028	37824.02	109925.0834
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	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	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	14590.145	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.5	14590.145	0	14590.145
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	2	799.46	25	824.46
3	Fire tracing	2	799.46	0	809	Item No. 3	2	799.46	0	799.46
Total		40.5	16189.065	25	16407.25		40.5	16189.065	25	16214.065
Contingency 3%				0	492.21					486.42195
Labour Welfare 4%				0	656.29					648.5626
Grand Total		40.5	16189.065	25	17555.75		40.5	16189.065	25	17349.04955
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	36.5	14590.145	0	14590.145
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	2	799.46	25	824.46

3	Fire tracing	2	809	0	809	Item No. 3	2	809	0	809
	Total	40.5	16198.605	25	16407.25		40.5	16198.605	25	16223.605
	Contingency 3%		0		492.21					486.70815
	Labour Welfare 4%		0		656.29					648.9442
	Grand Total	40.5	16198.605	25	17555.75		40.5	16198.605	25	17359.25735
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	36.5	14590.145	0	14590.145
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	2	799.46	25	824.46
3	Fire tracing	2	799.46	0	809	Item No. 3	2	799.46	0	799.46
	Total	40.5	16189.065	25	16407.25		40.5	16189.065	25	16214.065
	Contingency 3%		0		492.21					486.42195
	Labour Welfare 4%		0		656.29					648.5626
	Grand Total	40.5	16189.065	25	17555.75		40.5	16189.065	25	17349.04955
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	36.5	14590.145	0	14590.145
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	2	799.46	25	824.46
3	Fire tracing	2	799.46	0	809	Item No. 3	2	799.46	0	799.46
	Total	40.5	16189.065	25	16407.25		40.5	16189.065	25	16214.065
	Contingency 3%		0		492.21					486.42195
	Labour Welfare 4%		0		656.29					648.5626
	Grand Total	40.5	16189.065	25	17555.75		40.5	16189.065	25	17349.04955
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	36.5	14590.145	0	14590.145
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	2	799.46	25	824.46
3	Fire tracing	2	799.46	0	809	Item No. 3	2	799.46	0	799.46
	Total	40.5	16189.065	25	16407.25		40.5	16189.065	25	16214.065
	Contingency 3%		0		492.21					486.42195
	Labour Welfare 4%		0		656.29					648.5626
	Grand Total	40.5	16189.065	25	17555.75		40.5	16189.065	25	17349.04955

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