

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

Ca Area= 0.30 hector

wage rate- 413.69 per day

Range Daund
Round Yawat
Beat Rahu
village Rahu

g.no.1244

Abstract for Model No.5

S. N.	Year of operation	Total
1	Pre Monsoon works	84343.17992
2	First Year Operations	45340.81296
3	Second Year Operations	33696.12384
4	Third Year Operations	18853.43424
5	Fourth Year Operations	5386.201845
6	Fifth Year Operations	5386.201845
7	Sixth Year Operations	5386.201845
8	Seventh Year Operations	5386.201845
9	Eighth Year Operations	5386.201845
10	Ninth Year Operations	5386.201845
11	Tenth Year Operations	5386.201845
Total		219936.9639

Cost per plant Rs. 660.471363



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

Model Rate Structure for Compensatory Afforestation

Model No.5.
Fencing and Irrigated Plantations

- 3m x 3m

- 0.45 x 0.45 x 0.45m

- 1111 per ha

wage rate

Wage Rate:
Rs 413 69 per day

Range

Daund

Round

Yavat

Beat

Rahis

village

Rahis

g no 1244

For 0.30 ha.

Particulars of works	Man days	Wages	Material supply	Total (Rs Per Ha)	Sanction Letter Dt / Model No / Item No	Man days	Wages	Material supply	Total (Rs Per Ha)
Preparation of treatment map	1	413.69	91	495.5	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1a	0.3	124.107	27.3	151.407
Preparation of pits of size 0.30x0.30x0.60 in	0.4	165.476	0	161.8	Item No. 1b	0.3	124.107	27.3	151.407
Preparation of pits of size 0.30x0.30x0.60 in	0	0	225	225	Item No. 1c	0.12	49.6428	0	49.6428
Preparation of pits of size 0.30x0.30x0.60 in	10	4136.9	91	4136	Item No. 1d	0	0	67.5	67.5
Preparation of pits of size 0.30x0.30x0.60 in	31	12824.39	0	12539.5	Item No. 1e	3	1241.07	27.3	1268.37
Preparation of pits of size 0.30x0.30x0.60 in	0	0	182865.6	182865.6	Item No. 2	9.3	3847.317	0	3847.317
Preparation of pits of size 0.30x0.30x0.60 in	0	0	182865.6	182865.6	As per SSR rates 201718 Item No. 1744	0	0	54259.68	54259.68
Preparation of pits of size 0.30x0.30x0.60 in	2.78	1150.0582	49.77	1174.28	Item No. 4	0.834	345.01746	14.931	359.94846
Preparation of pits of size 0.30x0.30x0.60 in	73.33	30335.8877	0	29661.99	Item No. 5	21.999	9100.76631	0	9100.76631
Preparation of pits of size 0.30x0.30x0.60 in	1	413.69	0	404.5	Item No. 6	0.3	124.107	0	124.107
Preparation of pits of size 0.30x0.30x0.60 in	0.75	310.2675	25	328.37	Item No. 7	0.225	93.08025	7.5	100.58025
Preparation of pits of size 0.30x0.30x0.60 in	0	0	5000	5000	Item No. 8	0	0	1500	1500
Preparation of pits of size 0.30x0.30x0.60 in	46.71	19323.4599	4825.46	23719.65	Item No. 9 20% Casualty replacement in place of 10%	14.013	5797.03797	1447.638	7244.67597
Preparation of pits of size 0.30x0.30x0.60 in	167.97	69487.509	193263.83	261207.69		50.391	20846.25279	57979.149	78825.40179
Preparation of pits of size 0.30x0.30x0.60 in				7836.23		0	0		2364.762054
Preparation of pits of size 0.30x0.30x0.60 in				10448.3		0	0		3153.016072
Preparation of pits of size 0.30x0.30x0.60 in				279492.22		50.391	20846.25279	57979.149	84343.17992
Preparation of pits of size 0.30x0.30x0.60 in	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%	4.44	1836.7836	323.919	2160.7026
Preparation of pits of size 0.30x0.30x0.60 in	18.44	7628.4436	1944.25	9403.23	Item No. 2	5.532	2288.53308	583.275	2871.80808
Preparation of pits of size 0.30x0.30x0.60 in	1.87	773.6003	2426	3182.41	Item No. 3 10% Extra Plants to be transported	0.561	232.08009	727.8	959.88009
Preparation of pits of size 0.30x0.30x0.60 in			0	4493.99	Item No. 4	3.333	1378.82877	0	1378.82877
Preparation of pits of size 0.30x0.30x0.60 in	11.11	4596.0959	911.02	18887	Item No. 5	13.332	5515.31508	273.306	5788.62108
Preparation of pits of size 0.30x0.30x0.60 in	44.44	18384.3836	54395	78361.62	Item No. 7	17.775	7353.33975	16318.5	23671.83975
Preparation of pits of size 0.30x0.30x0.60 in	59.25	24511.1325							
Preparation of pits of size 0.30x0.30x0.60 in	4.44	1836.7836	0	1795.98	Item No. 6 20% instead of 10%	1.332	551.03508	0	551.03508
Preparation of pits of size 0.30x0.30x0.60 in	7.77	3214.3713	803.64	3946.6	Item No. 8 20% instead of 10%	2.331	964.31139	241.092	1205.40339
Preparation of pits of size 0.30x0.30x0.60 in				11075.21	Item No. 9	8.214	3398.04966	0	3398.04966
Preparation of pits of size 0.30x0.30x0.60 in	27.38	11326.8322	0	475.17	Item No. 10	0.345	142.72305	3	145.72305
Preparation of pits of size 0.30x0.30x0.60 in	1.15	475.7435	10						

	2	809	0	809	Item No. 12	0.6	242.7	0	242.7
Total	192.65	79678.9985	61569.64	139496.54		57.795	23993.69955	18470.892	42374.59155
Contingency 3%		0	0	4184.9					1271.237147
Labour Welfare 4%		0	0	5579.86					1596.983617
Grand Total	192.65	79678.9985	61569.64	149261.3		57.795	23993.69955	18470.892	45346.81296
Year Operations									
1. Nursery cost for seedlings for causality replacement (222 seedlings per ha) labour rate @ Rs 1.77 and M.S. Rs 1.82 per seedlings.	2.46	1017.6774	494	1399.07	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 causality replacement 20% Item No. 2 20% instead of 10%	0.738	305.35322	121.2	426.55322
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	128.2439	404.04	529.41		0.593	38.47317	171.2	159.67317
3. Fertilizer for causality replacement 222 seedlings (2.00 M.D. per 100 seedlings)	4.44	1836.7836	0	1795.98	Item No. 3 20% instead of 10%	1.332	551.53578	0	551.53578
4. 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	8.331	3446.45139	273.866	3719.75739
5. Watering 1111 seedlings in November, December, January and June 1 time each and February to May 2 times each total 12 times per seedlings, replacing 10% plastic can 5 litre per seedlings, replacing 111 cans / maska @Rs 2% each replacing 111 cans / maska supplying water @Rs 0.50/- per litre and watering 150 seedlings per M.D.	88.88	36768.7672	36105	72056.96	Item No. 5	26.664	11030.63016	10831.5	21862.13016
6. Watch and ward 12 months -1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Item No. 6	10.95	4529.9055	0	4529.9055
7. Fire tracing	2	809	0	809	Item No. 8	0.6	242.7	0	242.7
Total	162.36	67148.3284	37824.06	103498.67		48.708	20144.49852	11347.296	31491.79452
Contingency 3%		0	0	3104.96					944.751356
Labour Welfare 4%		0	0	4139.94					1259.568281
Grand Total	162.36	67148.3284	37824.06	110743.57		48.708	20144.49852	11347.296	33696.12384
Year Operations									
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	273.366	2296.269
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	5064	10461.648
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	17520.032
Contingency 3%		0	0	1762					528.60096
Labour Welfare 4%		0	0	2349.33					704.80128
Grand Total	101.65	41117.42	17616.02	62844.77		30.495	12335.226	5284.806	18853.43424
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	10.95	4529.9055	0	4529.9055
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	0.6	248.214	7.5	255.714
3. Fire tracing	2	827.38	0	809	Item No. 3	0.6	248.214	0	248.214
Total	40.5	16754.445	25	16407.25		12.15	5026.3335	7.5	5033.8335
Contingency 3%		0	0	492.21					151.015005
Labour Welfare 4%		0	25	656.29					201.35334
Grand Total	40.5	16754.445	25	17555.75		12.15	5026.3335	7.5	5386.201845
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	10.95	4529.9055	0	4529.9055
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	0.6	248.214	7.5	255.714
3. Fire tracing	2	827.38	0	809	Item No. 3	0.6	248.214	0	248.214
Total	40.5	16754.445	25	16407.25		12.15	5026.3335	7.5	5033.8335
Contingency 3%		0	0	492.21					151.015005
Labour Welfare 4%		0	25	656.29					201.35334
Grand Total	40.5	16754.445	25	17555.75		12.15	5026.3335	7.5	5386.201845
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	10.95	4529.9055	0	4529.9055
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	0.6	248.214	7.5	255.714
3. Fire tracing	2	827.38	0	809	Item No. 3	0.6	248.214	0	248.214
Total	40.5	16754.445	25	16407.25		12.15	5026.3335	7.5	5033.8335
Contingency 3%		0	0	492.21					151.015005
Labour Welfare 4%		0	25	656.29					201.35334
Grand Total	40.5	16754.445	25	17555.75		12.15	5026.3335	7.5	5386.201845
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	10.95	4529.9055	0	4529.9055
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	0.6	248.214	7.5	255.714
3. Fire tracing	2	827.38	0	809	Item No. 3	0.6	248.214	0	248.214
Total	40.5	16754.445	25	16407.25		12.15	5026.3335	7.5	5033.8335
Contingency 3%		0	0	492.21					151.015005
Labour Welfare 4%		0	25	656.29					201.35334
Grand Total	40.5	16754.445	25	17555.75		12.15	5026.3335	7.5	5386.201845
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	10.95	4529.9055	0	4529.9055
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	0.6	248.214	7.5	255.714
3. Fire tracing	2	827.38	0	809	Item No. 3	0.6	248.214	0	248.214
Total	40.5	16754.445	25	16407.25		12.15	5026.3335	7.5	5033.8335
Contingency 3%		0	0	492.21					151.015005
Labour Welfare 4%		0	25	656.29					201.35334
Grand Total	40.5	16754.445	25	17555.75		12.15	5026.3335	7.5	5386.201845
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	10.95	4529.9055	0	4529.9055
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	0.6	248.214	7.5	255.714
3. Fire tracing	2	827.38	0	809	Item No. 3	0.6	248.214	0	248.214
Total	40.5	16754.445	25	16407.25		12.15	5026.3335	7.5	5033.8335
Contingency 3%		0	0	492.21					151.015005
Labour Welfare 4%		0	25	656.29					201.35334
Grand Total	40.5	16754.445	25	17555.75		12.15	5026.3335	7.5	5386.201845

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	0.6	248.214	7.5	255.714
Free tracing	2	827.38	0	809	Item No. 3	0.6	248.214	0	248.214
Total	40.5	16754.445	25	16407.25		12.15	5026.3335	7.5	5033.8335
Contingency 3%		0		492.21					151.015005
Labour Welfare 4%		0		656.29					201.35334
Grand Total	40.5	16754.445	25	17555.75		12.15	5026.3335	7.5	5386.201845
Year Operations	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1	10.95	4529.9055	0	4529.9055
Watch and ward 12 months 1 watcher per 100 ha					Item No. 1				
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	0.6	248.214	7.5	255.714
Free tracing	2	827.38	0	809	Item No. 3	0.6	248.214	0	248.214
Total	40.5	16754.445	25	16407.25		12.15	5026.3335	7.5	5033.8335
Contingency 3%		0		492.21					151.015005
Labour Welfare 4%		0		656.29					201.35334
Grand Total	40.5	16754.445	25	17555.75		12.15	5026.3335	7.5	5386.201845
Year Operations	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1	10.95	4529.9055	0	4529.9055
Watch and ward 12 months 1 watcher per 100 ha					Item No. 1				
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	0.6	248.214	7.5	255.714
Free tracing	2	827.38	0	809	Item No. 3	0.6	248.214	0	248.214
Total	40.5	16754.445	25	16407.25		12.15	5026.3335	7.5	5033.8335
Contingency 3%		0		492.21					151.015005
Labour Welfare 4%		0		656.29					201.35334
Grand Total	40.5	16754.445	25	17555.75		12.15	5026.3335	7.5	5386.201845
Year Operations	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1	10.95	4529.9055	0	4529.9055
Watch and ward 12 months 1 watcher per 100 ha					Item No. 1				
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	0.6	248.214	7.5	255.714
Free tracing	2	827.38	0	809	Item No. 3	0.6	248.214	0	248.214
Total	40.5	16754.445	25	16407.25		12.15	5026.3335	7.5	5033.8335
Contingency 3%		0		492.21					151.015005
Labour Welfare 4%		0		656.29					201.35334
Grand Total	40.5	16754.445	25	17555.75		12.15	5026.3335	7.5	5386.201845

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

Estimation 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