

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

Rs 339.61 per day

At- Kauthali Tal north Solapur Unclss Gut no 321

(Amount in Rs.)						For 6.737 ha				
Sr.No	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.)
A. Pre Monsoon Works PPO/PYO										
1	(a) Survey and demarcation	1	339.61	91	430.61	Letter Dt. 07/03/2018 Irrigated & fencing Plantation	6.737	2287.95257	613.067	2901.01957
	(b) Preparation of treatment map (100 m x 50 m grid)	1	339.61	91	430.61	Item No. 1b	6.737	2287.95257	613.067	2901.01957
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid	0.4	135.84	0	135.84	Item No. 1c	2.6948	915.15408	0	915.15408
	(d) Fixing 60cm x 0.05cm x 12cm 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	Item No. 1d	0	0	1515.825	1515.825
	(e) Clearing of bushes and preparation of site (As per requirement)	10	3396.1	91	3487.1	Item No. 1e	67.37	22879.5257	613.067	23492.5927
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc	31	10527.91	0	10527.91	Item No. 2	208.847	70926.52967	0	70926.52967
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 2017/18 Item No. 1744	0	0	1231965.547	1231965.547
4	Alignment of pits at 3m x 3m spacing, 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs.	2.78	944.12	49.77	993.89	Item No. 4	18.72886	6360.53644	335.30049	6695.83693
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	24903.6	0	24903.6	Item No. 5	494.02421	167775.5532	0	167775.5532
6	Construction of 5.00 Rmt wide Inspection Path (M.D. per 100 Rmt	1	339.61	0	339.61	Item No. 6	6.737	2287.95257	0	2287.95257
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	254.71	25	279.71	Item No. 7	5.05275	1715.98127	168.425	1884.40627
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000	Item No. 8	0	0	33685	33685
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	15863.18	4825.46	20688.84	Item No. 9 20% Casualty replacement in place of 10%	314.68527	106870.2437	32509.12402	139379.3677
	Total	167.97	57044.29	193263.83	250308.12		1131.61389	384307.3817	1302018.423	1686325.804
	Contingency 3%		0	7509.23	7509.24		0	0	0	50589.77413
	Labour Welfare 4%		0	10012.31	10012.32		0	0	0	67453.03218
	Grand Total	167.97	57044.29	193263.83	267829.69		1131.61389	384307.3817	1302018.423	1804368.611
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	5062.23	1079.73	6105.96	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	99.7076	34104.24351	7274.14101	41378.38452
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	6262.41	1944.25	8206.66	Item No. 2	124.23028	42189.85617	13098.41225	55288.26842
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	635.07	2426	3061.07	Item No. 3 10% Extra Plants to be transported	12.59819	4278.46659	16343.962	20622.42859
4	Planting of 1111 seedlings (1.0 M.D per 100 seedlings)	11.11	3773.07	0	3773.07	Item No. 4	74.84807	25419.17259	0	25419.17259
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	15092.27	911.02	16003.29	Item No. 5	299.39228	101676.623	6137.54174	107814.1647
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	20121.89	54395	74516.89	Item No. 7	399.16725	135561.1729	366459.115	502020.2879
7	Casualty replacement (20% 222 Seedlings per ha) (2 M.D per 100 seedlings)	4.44	1507.87	0	1507.87	Item No. 6 20% instead of 10%	29.91228	10158.52019	0	10158.52019
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	2638.77	803.64	3442.41	Item No. 8 20% instead of 10%	52.34649	17777.39349	5414.12268	23191.51617
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	9298.52	0	9298.52	Item No. 9	184.45906	62644.12924	0	62644.12924
10	Soil working for naturally grower plants and singling (1.15 M.D. per 100 plants)	1.15	390.55	10	400.55	Item No. 10	7.74755	2631.13535	67.37	2698.50535
11	Fire tracing	2	679.22	0	679.22	Item No. 12	13.474	4575.90514	0	4575.90514
	Total	192.65	65425.87	61569.64	126995.51		1297.88305	441016.6182	414794.6647	855811.2829
	Contingency 3%		0	3809.87	3809.87					25674.33849
	Labour Welfare 4%		0	5079.82	5079.82					34232.45131
	Grand Total	192.65	65425.87	61569.64	135885.19		1297.88305	441016.6182	414794.6647	915718.0727

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	835.44	404	1239.44	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	16.57302	5628.35928	2721.748	8350.10728
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	105.28	404.04	509.32	Item No. 2 20% instead of 10%	2.08847	709.27136	2721.748	3431.01936
3	Planting for causality replacement 222 seedlings (2.00 M.D. per 100 seedlings)	4.44	1507.87	0	1507.87	Item No. 3 20% instead of 10%	29.91228	10158.52019	0	10158.52019
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	9430.97	911.02	10341.99	Item No. 4	187.08649	63536.44489	6137.54174	69673.98663
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	30184.54	36105	66289.54	Item No. 5	598.78456	203353.246	243239.385	445592.631
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 6	245.9005	83510.30249	0	83510.30249
7	Fire tracing	2	679.22	0	679.22	Item No. 8	13.474	4575.90514	0	4575.90514
Total		162.36	55139.08	37824.06	92963.14		1093.81932	371472.0493	254820.4227	626292.4721
Contingency 3%			0	2788.89	2788.89					18788.77416
Labour Welfare 4%			0	3718.53	3718.53					25051.69888
Grand Total		162.36	55139.08	37824.06	99470.56		1093.81932	371472.0493	254820.4227	670132.9451
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	5661.3	911.02	6572.32	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	112.30579	38140.1781	6137.54174	44277.71994
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	15105.85	16680	31785.85	Item No. 2	299.66176	101768.1115	112373.16	214141.2715
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 3	245.9005	83510.30249	0	83510.30249
4	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2	679.22	25	704.22	Item No. 5	13.474	4575.90514	168.425	4744.33014
5	Fire tracing	2	679.22	0	679.22	Item No. 6	13.474	4575.90514	0	4575.90514
Total		101.65	34521.36	17616.02	52137.38		684.81605	232570.4023	118679.1267	351249.5291
Contingency 3%			0	1564.12	1564.12					10537.48587
Labour Welfare 4%			0	2085.5	2085.5					14049.98116
Grand Total		101.65	34521.36	17616.02	55787		684.81605	232570.4023	118679.1267	375836.9961
E. Fourth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	245.9005	83510.30249	0	83510.30249
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2	679.22	25	704.22	Item No. 2	13.474	4575.90514	168.425	4744.33014
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.474	4575.90514	0	4575.90514
Total		40.5	13754.21	25	13779.21		272.8485	92662.11277	168.425	92830.53777
Contingency 3%			0	413.38	413.38					2784.916133
Labour Welfare 4%			0	551.17	551.17					3713.221511
Grand Total		40.5	13754.21	25	14743.75		272.8485	92662.11277	168.425	99328.67541
F. Fifth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	245.9005	83510.30249	0	83510.30249
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2	679.22	25	704.22	Item No. 2	13.474	4575.90514	168.425	4744.33014
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.474	4575.90514	0	4575.90514
Total		40.5	13754.21	25	13779.21		272.8485	92662.11277	168.425	92830.53777
Contingency 3%			0	413.38	413.38					2784.916133
Labour Welfare 4%			0	551.17	551.17					3713.221511
Grand Total		40.5	13754.21	25	14743.75		272.8485	92662.11277	168.425	99328.67541
G. Sixth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	245.9005	83510.30249	0	83510.30249
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2	679.22	25	704.22	Item No. 2	13.474	4575.90514	168.425	4744.33014
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.474	4575.90514	0	4575.90514
Total		40.5	13754.21	25	13779.21		272.8485	92662.11277	168.425	92830.53777
Contingency 3%			0	413.38	413.38					2784.916133
Labour Welfare 4%			0	551.17	551.17					3713.221511
Grand Total		40.5	13754.21	25	14743.75		272.8485	92662.11277	168.425	99328.67541
H. Seventh Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	245.9005	83510.30249	0	83510.30249
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2	679.22	25	704.22	Item No. 2	13.474	4575.90514	168.425	4744.33014
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.474	4575.90514	0	4575.90514
Total		40.5	13754.21	25	13779.21		272.8485	92662.11277	168.425	92830.53777
Contingency 3%			0	413.38	413.38					2784.916133
Labour Welfare 4%			0	551.17	551.17					3713.221511
Grand Total		40.5	13754.21	25	14743.75		272.8485	92662.11277	168.425	99328.67541
I. Eighth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	245.9005	83510.30249	0	83510.30249

Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	679.22	25	704.22	Item No. 2	13.474	4575.90514	168.425	4744.33014
Fire tracing	2	679.22	0	679.22	Item No. 3	13.474	4575.90514	0	4575.90514
Total	40.5	13754.21	25	13779.21		272.8485	92662.11277	168.425	92830.53777
Contingency 3%		0	413.38	413.38					2784.916133
Labour Welfare 4%		0	551.17	551.17					3713.221511
Grand Total	40.5	13754.21	25	14743.75		272.8485	92662.11277	168.425	99328.67541
J. Ninth Year Operations									
1 Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	245.9005	83510.30249	0	83510.30249
2 Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	679.22	25	704.22	Item No. 2	13.474	4575.90514	168.425	4744.33014
3 Fire tracing	2	679.22	0	679.22	Item No. 3	13.474	4575.90514	0	4575.90514
Total	40.5	13754.21	25	13779.21		272.8485	92662.11277	168.425	92830.53777
Contingency 3%		0	413.38	413.38					2784.916133
Labour Welfare 4%		0	551.17	551.17					3713.221511
Grand Total	40.5	13754.21	25	14743.75		272.8485	92662.11277	168.425	99328.67541
K. Tenth Year Operations									
1 Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	245.9005	83510.30249	0	83510.30249
2 Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	679.22	25	704.22	Item No. 2	13.474	4575.90514	168.425	4744.33014
3 Fire tracing	2	679.22	0	679.22	Item No. 3	13.474	4575.90514	0	4575.90514
Total	40.5	13754.21	25	13779.21		272.8485	92662.11277	168.425	92830.53777
Contingency 3%		0	413.38	413.38					2784.916133
Labour Welfare 4%		0	551.17	551.17					3713.221511
Grand Total	40.5	13754.21	25	14743.75		272.8485	92662.11277	168.425	99328.67541

Abstract for Model No.5

(Amount in Rupees)

S. N.	Year of operation	Man days	Wages	Material supply	Total	Other expenses	Total amount	Man days	Wages	Material supply	Total
For 6.737 ha.											
1	Pre Monsoon works	167.97	57044.29	193263.83	250308	17521.57	267829.69	1131.61389	384307.3817	1302018.423	1804368.611
2	First Year Operations	192.65	65425.87	61569.64	126996	8889.69	135885.19	1297.88305	441016.6182	414794.6647	915718.0727
3	Second Year Operations	162.36	55139.08	37824.06	92963	6507.42	99470.56	1093.81932	371472.0493	254820.4227	670132.9451
4	Third Year Operations	101.65	34321.36	17616.02	52137	3649.62	55787	684.81605	232570.4023	118679.1267	375836.9961
5	Fourth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	272.8485	92662.11277	168.425	99328.67541
6	Fifth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	272.8485	92662.11277	168.425	99328.67541
7	Sixth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	272.8485	92662.11277	168.425	99328.67541
8	Seventh Year Operations	40.5	13754.21	25	13779	964.54	14743.75	272.8485	92662.11277	168.425	99328.67541
9	Eighth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	272.8485	92662.11277	168.425	99328.67541
10	Ninth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	272.8485	92662.11277	168.425	99328.67541
11	Tenth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	272.8485	92662.11277	168.425	99328.67541
	Total	908.13	308410.03	310448.55	618859	43320.1	662178.68	6118.07181	2078001.241	2091491.612	4461357.353

Cost per plant Rs 596.02

Note:-

- Rates of chain linked fencing derived from SSR-2017-18 with addition for area difference and transportation lead.
- Plantation M.D. and M.S. component derived from rate structure as approved by PCCF (HoFF) M.S. vide letter No Desk-I/EGS/CR-10/2282/2017-18/Nagpur, Dated 07/03/2018.

Rupesh
(Dhanyashil Patil)

Deputy Conservator of Forests
Solapur Forest Division, Solapur