

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 404.50 per day.

Gat.no.143

Range-Baramati
Round-Baramati
Beat- Shirsuphal
Village- Sabalewadi

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(Amount in Rs.)										
Sr No	Particulars of works	Man days	Wages	Material supply	Total (Rs. Per Ha.)	Sanction Letter Dt. / Model No. / Item No.	For 0.100 ha			
							Man days	Wages	Material supply	Total (Rs. Per Ha.)
A. Pre Monsoon Works PPO/PYO										
1	(a) Survey and demarcation	1	404.5	91	495.5	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1a	0.4	161.8	36.4	198.2
	(b) Preparation of treatment map (100 m x 50 m grid)	1	404.5	91	495.5	Item No. 1b	0.4	161.8	36.4	198.2
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid	0.4	161.8	0	161.8	Item No. 1c	0.16	64.72	0	64.72
	(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 pillars)	0	0	225	225	Item No. 1d	0	0	90	90
	(e) Clearing of bushes and preparation of site (As per requirement)	10	4045	91	4136	Item No. 1e	4	1618	36.4	1654.4
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc.	31	12539.5	0	12539.5	Item No. 2	12.4	5015.8	0	5015.8
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. s 20% for tribal/remote area (by 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	73146.24	73146.24
4	Alignment of pits at 3m x 3m spacing. 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs.	2.78	1124.51	49.77	1174.28	Item No. 4	1.112	449.804	19.908	469.712
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	29661.99	0	29661.99	Item No. 5	29.332	11864.796	0	11864.796
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1	404.5	0	404.5	Item No. 6	0.4	161.8	0	161.8
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	303.37	25	328.37	Item No. 7	0.3	121.348	10	131.348
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000	Item No. 8	0	0	2000	2000
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	18894.19	4825.46	23719.65	Item No. 9 20% Casualty replacement in place of 10%	18.684	7557.676	1930.184	9487.86
Total		167.97	67943.86	193263.83	261207.69		67.188	27177.544	77305.532	104483.076
Contingency 3%			0		7836.23		0	0		3134.49228
Labour Welfare 4%			0		10448.3		0	0		4179.32304
Grand Total		167.97	67943.86	193263.83	279492.22		67.188	27177.544	77305.532	111796.8913
B. Post Monsoon 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	5986.6	1079.73	7066.33	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	5.92	2394.64	431.892	2826.532
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	7458.98	1944.25	9403.23	Item No. 2	7.376	2983.592	777.7	3761.288
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	756.41	2426	3182.41	Item No. 3 10% Extra Plants to be transported	0.748	302.564	970.4	1272.912
4	Planting of 1111 seedlings (1.0 M.D. per 100 seedlings)	11.11	4493.99	0	4493.99	Item No. 4	4.444	1797.596	0	1797.596
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	17975.98	911.02	18887	Item No. 5	17.776	7190.392	364.408	7554.8
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	23966.62	54395	78361.62	Item No. 7	23.7	9586.648	21758	31344.648
7	Casualty replacement (20% 222 Seedlings per ha) (2 M.D. per 100 seedlings)	4.44	1795.93	0	1795.98	Item No. 6 20% instead of 10%	1.776	718.392	0	718.392
8	Part Nursery cost for causality 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	3142.96	803.64	3946.6	Item No. 8 20% instead of 10%	3.108	1257.184	321.456	1578.744
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	11075.21	0	11075.21	Item No. 9	10.952	4430.084	0	4430.084
10	Soil working for naturally grower plants and singling (1.15 M.D. per 100 plants)	1.15	465.17	10	475.17	Item No. 10	0.46	186.068	4	190.068
11	Fire tracing	2	809	0	809	Item No. 12	0.8	323.6	0	323.6
Total		192.65	77926.9	61569.64	149654		77.06	31170.76	24627.856	55798.616

Contingency 3%			0	4184.9					1673.95848	
Labour Welfare 4%			0	5579.86					2231.94464	
Grand Total		192.65	77926.9	61569.64	149261.3		77.06	31170.76	24627.856	59704.519
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	995.07	404	1399.07	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 causality replacement 20%	0.984	398.028	161.6	559.6
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	125.39	404.04	529.43	Item No. 2 20% instead of 10%	0.124	50.156	161.6	211.756
3	Planting for causality replacement 222 seedlings (2.00 M.D. per 100 seedlings)	4.44	1795.98	0	1795.98	Item No. 3 20% instead of 10%	1.776	718.392	0	718.392
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	11232.96	911.02	12143.98	Item No. 4	11.108	4493.184	364.408	4857.592
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	35951.96	36105	72056.96	Item No. 5	35.552	14380.784	14442	28822.784
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Item No. 6	14.5	5905.7	0	5905.7
7	Fire tracing	2	809	0	809	Item No. 8	0.8	323.6	0	323.6
Total		162.36	65674.61	37824.06	103498.67		64.944	26269.844	15129.608	41399.452
Contingency 3%			0		3104.96					1241.98356
Labour Welfare 4%			0		4139.94					1655.97808
Grand Total		162.36	65674.61	37824.06	110743.57		64.944	26269.844	15129.608	44297.41364
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	6.668	2697.204	364.408	3061.612
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	17.792	7196.864	6672	13868.864
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Item No. 3	14.6	5905.7	0	5905.7
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	0.8	323.6	10	33.6
5	Fire tracing	2	809	0	809	Item No. 6	0.8	323.6	0	323.6
Total		101.65	41117.42	17616.02	58733.44		40.66	16446.968	7046.408	23493.376
Contingency 3%			0		1762					704.80128
Labour Welfare 4%			0		2349.33					939.73504
Grand Total		101.65	41117.42	17616.02	62844.77		40.66	16446.968	7046.408	25137.91232
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	14.6	5905.7	0	5905.7
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	0.8	323.6	10	33.6
3	Fire tracing	2	809	0	809	Item No. 3	0.8	323.6	0	323.6
Total		40.5	16382.25	25	16407.25		16.2	6552.9	10	6562.9
Contingency 3%			0		492.21					196.887
Labour Welfare 4%			0		656.29					262.516
Grand Total		40.5	16382.25	25	17555.75		16.2	6552.9	10	7022.303
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	14.6	5905.7	0	5905.7
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	0.8	323.6	10	33.6
3	Fire tracing	2	809	0	809	Item No. 3	0.8	323.6	0	323.6
Total		40.5	16382.25	25	16407.25		16.2	6552.9	10	6562.9
Contingency 3%			0		492.21					196.887
Labour Welfare 4%			0		656.29					262.516
Grand Total		40.5	16382.25	25	17555.75		16.2	6552.9	10	7022.303
G. Sixth 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	14.6	5905.7	0	5905.7
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	0.8	323.6	10	33.6
3	Fire tracing	2	809	0	809	Item No. 3	0.8	323.6	0	323.6
Total		40.5	16382.25	25	16407.25		16.2	6552.9	10	6562.9
Contingency 3%			0		492.21					196.887
Labour Welfare 4%			0		656.29					262.516
Grand Total		40.5	16382.25	25	17555.75		16.2	6552.9	10	7022.303
H. Seventh 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	14.6	5905.7	0	5905.7
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	0.8	323.6	10	33.6
3	Fire tracing	2	809	0	809	Item No. 3	0.8	323.6	0	323.6

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Total	40.5	16382.25	25	16407.25		16.2	6552.9	10	656
Contingency 3%		0		492.21					196.8
Labour Welfare 4%		0		656.29					262.516
Grand Total	40.5	16382.25	25	17555.75		16.2	6552.9	10	7022.303
I. Eighth 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	14.6	5905.7	0	5905.7
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	0.8	323.6	10	333.6
3 Fire tracing	2	809	0	809	Item No. 3	0.8	323.6	0	323.6
Total	40.5	16382.25	25	16407.25		16.2	6552.9	10	6562.9
Contingency 3%		0		492.21					196.887
Labour Welfare 4%		0		656.29					262.516
Grand Total	40.5	16382.25	25	17555.75		16.2	6552.9	10	7022.303
J. Ninth 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	14.6	5905.7	0	5905.7
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	0.8	323.6	10	333.6
3 Fire tracing	2	809	0	809	Item No. 3	0.8	323.6	0	323.6
Total	40.5	16382.25	25	16407.25		16.2	6552.9	10	6562.9
Contingency 3%		0		492.21					196.887
Labour Welfare 4%		0		656.29					262.516
Grand Total	40.5	16382.25	25	17555.75		16.2	6552.9	10	7022.303
K. Tenth 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	14.6	5905.7	0	5905.7
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	0.8	323.6	10	333.6
3 Fire tracing	2	809	0	809	Item No. 3	0.8	323.6	0	323.6
Total	40.5	16382.25	25	16407.25		16.2	6552.9	10	6562.9
Contingency 3%		0		492.21					196.887
Labour Welfare 4%		0		656.29					262.516
Grand Total	40.5	16382.25	25	17555.75		16.2	6552.9	10	7022.303

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 38.896 ha.			
1	Pre Monsoon works	167.97	67943.86	193263.83	261207.7	18284.53	279492.22	67.188	27177.544	77305.532	111796.8913
2	First Year Operations	192.65	77926.9	61569.64	139496.5	9764.76	149261.3	77.06	31170.76	24627.856	59704.51912
3	Second Year Operations	162.36	65674.61	37824.06	103498.7	7244.9	110743.57	64.944	26269.844	15129.608	44297.41364
4	Third Year Operations	101.65	41117.42	17616.02	58733.44	4111.33	62844.77	40.66	16446.968	7046.408	25137.91232
5	Fourth Year Operations	40.5	16382.25	25	16407.25	1148.5	17555.75	16.2	6552.9	10	7022.303
6	Fifth Year Operations	40.5	16382.25	25	16407.25	1148.5	17555.75	16.2	6552.9	10	7022.303
7	Sixth Year Operations	40.5	16382.25	25	16407.25	1148.5	17555.75	16.2	6552.9	10	7022.303
8	Seventh Year Operations	40.5	16382.25	25	16407.25	1148.5	17555.75	16.2	6552.9	10	7022.303
9	Eighth Year Operations	40.5	16382.25	25	16407.25	1148.5	17555.75	16.2	6552.9	10	7022.303
10	Ninth Year Operations	40.5	16382.25	25	16407.25	1148.5	17555.75	16.2	6552.9	10	7022.303
11	Tenth Year Operations	40.5	16382.25	25	16407.25	1148.5	17555.75	16.2	6552.9	10	7022.303
	Total	908.13	367338.54	310448.55	677787.1	47445.02	725232.11	363.252	146935.416	124179.404	290092.8574

Cost per plant Rs 652.77

Note:-

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

2. P.M.D. and M.S. component derived from rate structure as approved by PCCF (HoFF) M.S. vide letter No.Desk-1/EGS/CR-10/2282/2017-18/Nagpur, Dated 07/03/2018.

(Rahul Patil, IFS)

Deputy Conservator of Forests,
Pune Forest Division, Pune