

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 - Rs.339.61 per day.

(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 41.00 ha			
							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	41	13924.01	3731	17655.0
	(b) Preparation of treatment map (100 m x 50 m grid)	1	339.61	91	430.61	Item No. 1b	41	13924.01	3731	17655.01
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid.	0.4	135.84	0	135.84	Item No. 1c	16.4	5569.44	0	5569.44
	(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	9225	9225
	(e) Clearing of bushes and preparation of site (As per requirement)	10	3396.1	91	3487.1	Item No. 1e	410	139240.1	3731	142971.1
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	1271	431644.31	0	431644.31
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	7497489.6	7497489.6
4	Alignment of pits at 3m x 3m spacement. 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs.	2.78	944.12	49.77	993.89	Item No. 4	113.98	38708.92	2040.57	40749.49
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	3006.53	1021047.6	0	1021047.6
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1	339.61	0	339.61	Item No. 6	41	13924.01	0	13924.01
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	30.75	10443.11	1025	11468.11
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000	Item No. 8	0	0	205000	205000
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%	1915.11	650390.38	197843.86	848234.24
	Total	167.97	57044.29	193263.83	250308.12		6886.77	2338815.89	7923817.03	10262632.92
	Contingency 3%		0	7509.23	7509.24		0	0		307878.9876
	Labour Welfare 4%		0	10012.31	10012.32		0	0		410505.3168
	Grand Total	167.97	57044.29	193263.83	267829.69		6886.77	2338815.89	7923817.03	10981017.22
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%	606.8	207551.43	44268.93	251820.36
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	756.04	256758.81	79714.25	336473.06
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	76.67	26037.87	99466	125503.87
4	Planting of 1111 seedlings (1.0 M.D per 100 seedlings)	11.11	3773.07	0	3773.07	Item No. 4	455.51	154695.87	0	154695.87
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	1822.04	618783.07	37351.82	656134.89
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	2429.25	824997.49	2230195	3055192.49
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%	182.04	61822.67	0	61822.67
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%	318.57	108189.57	32949.24	141138.81
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	9298.52	0	9298.52	Item No. 9	1122.58	381239.32	0	381239.32
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	47.15	16012.55	410	16422.55
11	Fire tracing	2	679.22	0	679.22	Item No. 12	82	27848.02	0	27848.02
	Total	192.65	65425.87	61569.64	126995.51		7898.65	2683936.67	2524355.24	5208291.91
	Contingency 3%		0	3809.87	3809.87					156248.7573
	Labour Welfare 4%		0	5079.82	5079.82					208331.6764
	Grand Total	192.65	65425.87	61569.64	135885.19		7898.65	2683936.67	2524355.24	5572872.344

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%	100.86	34253.04	16564	50817.04
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%	12.71	4316.48	16564	20880.48
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%	182.04	61822.67	0	61822.67
4	2 weedings 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	1138.57	386669.77	37351.82	424021.59
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	3644.08	1237566.14	1480305	2717871.14
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 6	1496.5	508226.57	0	508226.57
7	Fire tracing	2	679.22	0	679.22	Item No. 8	82	27848.02	0	27848.02
Total		162.36	55139.08	37824.06	92963.14		6656.76	2260702.69	1550784.82	3811487.51
Contingency 3%			0	2788.89	2788.89					114344.6253
Labour Welfare 4%			0	3718.53	3718.53					152459.5004
Grand Total		162.36	55139.08	37824.06	99470.56		6656.76	2260702.69	1550784.82	4078291.636
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	683.47	232113.3	37351.82	269465.12
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	1823.68	619339.85	683880	1303219.85
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 3	1496.5	508226.57	0	508226.57
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	82	27848.02	1025	28873.02
5	Fire tracing	2	679.22	0	679.22	Item No. 6	82	27848.02	0	27848.02
Total		101.65	34521.36	17616.02	52137.38		4167.65	1415375.76	722256.82	2137632.58
Contingency 3%			0	1564.12	1564.12					64128.9774
Labour Welfare 4%			0	2085.5	2085.5					85505.3032
Grand Total		101.65	34521.36	17616.02	55787		4167.65	1415375.76	722256.82	2287266.861
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	1496.5	508226.57	0	508226.57
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	82	27848.02	1025	28873.02
3	Fire tracing	2	679.22	0	679.22	Item No. 3	82	27848.02	0	27848.02
Total		40.5	13754.21	25	13779.21		1660.5	563922.61	1025	564947.61
Contingency 3%			0	413.38	413.38					16948.4283
Labour Welfare 4%			0	551.17	551.17					22597.9044
Grand Total		40.5	13754.21	25	14743.75		1660.5	563922.61	1025	604493.9427
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	1496.5	508226.57	0	508226.57
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	82	27848.02	1025	28873.02
3	Fire tracing	2	679.22	0	679.22	Item No. 3	82	27848.02	0	27848.02
Total		40.5	13754.21	25	13779.21		1660.5	563922.61	1025	564947.61
Contingency 3%			0	413.38	413.38					16948.4283
Labour Welfare 4%			0	551.17	551.17					22597.9044
Grand Total		40.5	13754.21	25	14743.75		1660.5	563922.61	1025	604493.9427
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	1496.5	508226.57	0	508226.57
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	82	27848.02	1025	28873.02
3	Fire tracing	2	679.22	0	679.22	Item No. 3	82	27848.02	0	27848.02
Total		40.5	13754.21	25	13779.21		1660.5	563922.61	1025	564947.61
Contingency 3%			0	413.38	413.38					16948.4283
Labour Welfare 4%			0	551.17	551.17					22597.9044
Grand Total		40.5	13754.21	25	14743.75		1660.5	563922.61	1025	604493.9427
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	1496.5	508226.57	0	508226.57
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	82	27848.02	1025	28873.02
3	Fire tracing	2	679.22	0	679.22	Item No. 3	82	27848.02	0	27848.02
Total		40.5	13754.21	25	13779.21		1660.5	563922.61	1025	564947.61
Contingency 3%			0	413.38	413.38					16948.4283
Labour Welfare 4%			0	551.17	551.17					22597.9044
Grand Total		40.5	13754.21	25	14743.75		1660.5	563922.61	1025	604493.9427
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	1496.5	508226.57	0	508226.57
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	82	27848.02	1025	28873.02
3	Fire tracing	2	679.22	0	679.22	Item No. 3	82	27848.02	0	27848.02
Total		40.5	13754.21	25	13779.21		1660.5	563922.61	1025	564947.61
Contingency 3%			0	413.38	413.38					16948.4283
Labour Welfare 4%			0	551.17	551.17					22597.9044
Grand Total		40.5	13754.21	25	14743.75		1660.5	563922.61	1025	604493.9427

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	82	27848.02	1025	28873.02
3 Fire tracing	2	679.22	0	679.22	Item No. 3	82	27848.02	0	27848.02
Total	40.5	13754.21	25	13779.21		1660.5	563922.61	1025	564947.61
Contingency 3%		0	413.38	413.38					16948.4283
Labour Welfare 4%		0	551.17	551.17					22597.9044
Grand Total	40.5	13754.21	25	14743.75		1660.5	563922.61	1025	604493.9427
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	1496.5	508226.57	0	508226.57
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	82	27848.02	1025	28873.02
3 Fire tracing	2	679.22	0	679.22	Item No. 3	82	27848.02	0	27848.02
Total	40.5	13754.21	25	13779.21		1660.5	563922.61	1025	564947.61
Contingency 3%		0	413.38	413.38					16948.4283
Labour Welfare 4%		0	551.17	551.17					22597.9044
Grand Total	40.5	13754.21	25	14743.75		1660.5	563922.61	1025	604493.9427
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	1496.5	508226.57	0	508226.57
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	82	27848.02	1025	28873.02
3 Fire tracing	2	679.22	0	679.22	Item No. 3	82	27848.02	0	27848.02
Total	40.5	13754.21	25	13779.21		1660.5	563922.61	1025	564947.61
Contingency 3%		0	413.38	413.38					16948.4283
Labour Welfare 4%		0	551.17	551.17					22597.9044
Grand Total	40.5	13754.21	25	14743.75		1660.5	563922.61	1025	604493.9427

Abstract for Model No.5

(Amount in Rupees)

S.	Year of operation	Man days	Wages	Material supply	Total	Other expenses	Total amount	Man days	Wages	Material supply	Total
								For 41.00 ha.			
1	Pre Monsoon works	167.97	57044.29	193263.83	250308	17521.57	267829.69	6886.77	2338815.89	7923817.03	10981017.22
2	First Year Operations	192.65	65425.87	61569.64	126996	8889.69	135885.19	7898.65	2683936.67	2524355.24	5572872.344
3	Second Year Operations	162.36	55139.08	37824.06	92963	6507.42	99470.56	6656.76	2260702.69	1550784.82	4078291.636
4	Third Year Operations	101.65	34521.36	17616.02	52137	3649.62	55787	4167.65	1415375.76	722256.82	2287266.861
5	Fourth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	1660.5	563922.61	1025	604493.9427
6	Fifth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	1660.5	563922.61	1025	604493.9427
7	Sixth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	1660.5	563922.61	1025	604493.9427
8	Seventh Year Operations	40.5	13754.21	25	13779	964.54	14743.75	1660.5	563922.61	1025	604493.9427
9	Eighth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	1660.5	563922.61	1025	604493.9427
10	Ninth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	1660.5	563922.61	1025	604493.9427
11	Tenth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	1660.5	563922.61	1025	604493.9427
	Total	908.13	308410.03	310448.55	618859	43320.1	662178.68	37233.33	12646289.28	12728388.91	27150905.66

Cost per plant Rs.596.02

Note:-

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. vide letter No.Desk-1/EGS/CR-10/2282/2017-18/Nagpur, Dated 07/03/2018.

(Sreelakshmi A.)

Deputy Conservator of Forests,
Pune Forest Division, Pune