

**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.
Proposed Non-Forest Gut No.108, Village - Wavarath, Taluka - Rahuri, Dist. Ahmednagar

Spacement
Size of Pits
No. of Seedlings

3m x 3m
0.45 x 0.45 x 0.45 m
1111 per ha.

Wage Rate
Proposed Area

425.96
3.270

per day
Ha.
Year - 2022-23

Sr. No.	Particulars of works	Area : 1.00 ha.			Area : 3.27 ha.			Total
		Man days	Wages	Material Supply	Man days	Wages	Material Supply	
A. Pre Monsoon Works PPO/PYO								
1	a.) Survey and demarcation	1.00	425.96	91.00	3.27	1392.89	297.57	1690.46
	b.) Preparation of treatment map (100 m x 50 m grid)	1.00	425.96	91.00	3.27	1392.89	297.57	1690.46
	c.) Digging trial pits of size 0.30 x 0.30 x 0.60 in corner of Grid.	0.40	170.38	0.00	1.31	557.16	0.00	557.16
	d.) Fixing 60cm x 0.05cm x 12 cm cement pillars upto 30cm deep in corner of Grid, painting with Grid No. etc. complete (3 pillars, Rs.75/- for each pillars)	0.00	0.00	225.00	0.00	0.00	735.75	735.75
	e.) Clearing of bushes and preparation of site (As per requirement)	10.00	4259.60	91.00	32.70	13928.89	297.57	14226.46
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc	31.00	13204.76	0.00	101.37	43179.57	0.00	43179.57
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 50mm x 50m, 8 gauge thick and fixed 75mm above ground level complete as per SSR item.No.1744 for 2017-18	0.00	0.00	182865.60	0.00	0.00	597970.51	597970.51

Sr. No.	Particulars of works	Area : 1.00 ha.				Area : 3.27 ha.			
		Man days	Wages	Material Supply	Total	Man days	Wages	Material Supply	Total
4	Alignment of pits at 3m x 3m spacement 1111 pits per ha. (0.25 per 100 pits and M&S @ Rs.2.24 per 50 pits.	2.78	1184.17	49.77	1233.94	9.09	3872.23	162.75	4034.98
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	31235.65	0.00	31235.65	239.79	102140.57	0.00	102140.57
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1.00	425.96	0.00	425.96	3.27	1392.89	0.00	1392.89
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	319.47	25.00	344.47	2.45	1044.67	81.75	1126.42
8	Providing and fixing (4 feet x 3 feet) information board each per site	0.00	0.00	5000.00	5000.00	0.00	0.00	5000.00	5000.00
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	19896.59	4825.46	24722.05	152.74	65061.85	15779.25	80841.11
Total		167.97	71548.50	193263.83	264812.33	549.26	233963.60	620622.72	854586.32
Contingency 3%				7944.37					25637.59
Labour Welfare 4%				10592.49					34183.45
Grand Total		167.97	71548.50	193263.83	283349.19	549.26	233963.60	620622.72	914407.37

Sr. No.	Particulars of works	Area : 1.00 ha.			Area : 3.27 ha.				
		Man days	Wages	Material Supply	Total	Man days	Wages	Material Supply	Total
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)	14.80	6304.21	1079.73	7383.94	48.40	20614.76	3530.72	24145.48
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	7854.70	1944.25	9798.95	60.30	25684.88	6357.70	32042.57
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	796.55	2426.00	3222.55	6.11	2604.70	7933.02	10537.72
4	Planting of 1111 seedlings (1.0 M.D. per 100 seedlings)	11.11	4732.42	0.00	4732.42	36.33	15475.00	0.00	15475.00
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	18929.66	911.02	19840.68	145.32	61900.00	2979.04	64879.03
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	25238.13	54395.00	79633.13	193.75	82528.69	177871.65	260400.34
7	Casuly replacement (20% 222 Seedlings per ha.) (2 M.D. per 100 Seedlings)	4.44	1891.26	0.00	1891.26	14.52	6184.43	0.00	6184.43
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	3309.71	803.64	4113.35	25.41	10822.75	2627.90	13450.65
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	11662.78	0.00	11662.78	89.53	38137.31	0.00	38137.31
10	Soil working for naturally grower plants and singling (1.15 M.D per 100 plants)	1.15	489.85	10.00	499.85	3.76	1601.82	32.70	1634.52
11	Fire tracing	2.00	851.92	0.00	851.92	6.54	2785.78	0.00	2785.78
Total		192.65	82061.19	61569.64	143630.83	629.97	268340.10	201332.72	469672.83
Contingency 3%					4308.93				14090.18
Labour Welfare 4%					5745.23				18786.91
Grand Total		192.65	82061.19	61569.64	153684.99	629.97	268340.10	201332.72	502549.93

Sr. No.	Particulars of works	Area : 1.00 ha.				Area : 3.27 ha.			
		Man days	Wages	Material Supply	Total	Man days	Wages	Material Supply	Total
C. Second Year Operations									
1	Part nursery cost for seedlings for causality replacement (222 seedlings per ha) labour rate @Rs. 3.77 M.S Rs.1.82 per seedlings.	2.46	1047.86	404.00	1451.86	8.04	3426.51	1321.08	4747.59
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	132.05	404.04	536.09	1.01	431.80	1321.21	1753.01
3	Planting for causality replacement 222 seedlings (2.00 M.D. per 100 seedlings)	4.44	1891.26	0.00	1891.26	14.52	6184.43	0.00	6184.43
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	11828.91	911.02	12739.93	90.81	38680.53	2979.04	41659.57
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	37859.32	36105.00	73964.32	290.64	123799.99	118063.35	241863.34
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.50	15547.54	0.00	15547.54	119.36	50840.46	0.00	50840.46
7	Fire tracing	2.00	851.92	0.00	851.92	6.54	2785.78	0.00	2785.78
Total		162.360	69158.87	37824.06	106982.93	530.92	226149.49	123684.68	349834.17
Contingency 3%					3209.49				10495.03
Labour Welfare 4%					4279.32				13993.37
Grand Total		162.36	69158.87	37824.06	114471.73	530.92	226149.49	123684.68	374322.56

Sr. No.	Particulars of works	Area : 1.00 ha.			Area : 3.27 ha.			Total	Total
		Man days	Wages	Material Supply	Man days	Wages	Material Supply		
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	7100.75	911.02	54.51	23219.46	2979.04	8011.77	26198.50
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	18946.70	16680.00	145.45	61955.71	54543.60	35626.70	116499.31
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	15547.54	0.00	119.36	50840.46	0.00	15547.54	50840.46
4	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	851.92	25.00	6.54	2785.78	81.75	876.92	2867.53
5	Fire tracing	2.00	851.92	0.00	6.54	2785.78	0.00	851.92	2785.78
	Total	101.65	43298.83	17616.02	332.40	141587.19	57604.39	60914.85	199191.57
	Contingency 3%							1827.45	5975.75
	Labour Welfare 4%							2436.59	7967.66
	Grand Total	101.65	43298.83	17616.02	332.40	141587.19	57604.39	65178.89	213134.98
E. Fourth Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	15547.54	0.00	119.36	50840.46	0.00	15547.54	50840.46
2	Counting of survival percentage Grid wise and Specie wise and to Note the same on Register in May and October.	2.00	851.92	25.00	6.54	2785.78	81.75	876.92	2867.53
3	Fire Tracing	2.00	851.92	0.00	6.54	2785.78	0.00	851.92	2785.78
	Total	40.50	17251.38	25.00	132.44	56412.01	81.75	17276.38	56493.76
	Contingency 3%							518.29	1694.81
	Labour Welfare 4%							691.06	2259.75
	Grand Total	40.50	17251.38	25.00	132.44	56412.01	81.75	18485.73	60448.33
F. Fifth Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	15547.54	0.00	119.36	50840.46	0.00	15547.54	50840.46
2	Counting of survival percentage Grid wise and Specie wise and to Note the same on Register in May and October.	2.00	851.92	25.00	6.54	2785.78	81.75	876.92	2867.53
3	Fire Tracing	2.00	851.92	0.00	6.54	2785.78	0.00	851.92	2785.78
	Total	40.50	17251.38	25.00	132.44	56412.01	81.75	17276.38	56493.76
	Contingency 3%							518.29	1694.81
	Labour Welfare 4%							691.06	2259.75
	Grand Total	40.50	17251.38	25.00	132.44	56412.01	81.75	18485.73	60448.33

Sr. No.	Particulars of works	Area : 1.00 ha.				Area : 3.27 ha.			
		Man days	Wages	Material Supply	Total	Man days	Wages	Material Supply	Total
G. Sixth Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	15547.54	0.00	15547.54	119.36	50840.46	0.00	50840.46
2	Counting of survival percentage Grid wise and Specie wise and to Note the same on Register in May and October.	2.00	851.92	25.00	876.92	6.54	2785.78	81.75	2867.53
3	Fire Tracing	2.00	851.92	0.00	851.92	6.54	2785.78	0.00	2785.78
	Total	40.50	17251.38	25.00	17276.38	132.44	56412.01	81.75	56493.76
	Contingency 3%			0.00	518.29			0.00	1694.81
	Labour Welfare 4%			0.00	691.06			0.00	2259.75
	Grand Total	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33
H. Seventh Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	15547.54	0.00	15547.54	119.36	50840.46	0.00	50840.46
2	Counting of survival percentage Grid wise and Specie wise and to Note the same on Register in May and October.	2.00	851.92	25.00	876.92	6.54	2785.78	81.75	2867.53
3	Fire Tracing	2.00	851.92	0.00	851.92	6.54	2785.78	0.00	2785.78
	Total	40.50	17251.38	25.00	17276.38	132.44	56412.01	81.75	56493.76
	Contingency 3%			0.00	518.29			0.00	1694.81
	Labour Welfare 4%			0.00	691.06			0.00	2259.75
	Grand Total	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33
I. Eight Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	15547.54	0.00	15547.54	119.36	50840.46	0.00	50840.46
2	Counting of survival percentage Grid wise and Specie wise and to Note the same on Register in May and October.	2.00	851.92	25.00	876.92	6.54	2785.78	81.75	2867.53
3	Fire Tracing	2.00	851.92	0.00	851.92	6.54	2785.78	0.00	2785.78
	Total	40.50	17251.38	25.00	17276.38	132.44	56412.01	81.75	56493.76
	Contingency 3%			0.00	518.29			0.00	1694.81
	Labour Welfare 4%			0.00	691.06			0.00	2259.75
	Grand Total	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33

Sr. No.	Particulars of works	Area : 1.00 ha.			Area : 3.27 ha.				
		Man days	Wages	Material Supply	Total	Man days	Wages	Material Supply	Total
J. Nine Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	15547.54	0.00	15547.54	119.36	50840.46	0.00	50840.46
2	Counting of survival percentage Grid wise and Specie wise and to Note the same on Register in May and October.	2.00	851.92	25.00	876.92	6.54	2785.78	81.75	2867.53
3	Fire Tracing	2.00	851.92	0.00	851.92	6.54	2785.78	0.00	2785.78
	Total	40.50	17251.38	25.00	17276.38	132.44	56412.01	81.75	56493.76
	Contingency 3%			0.00	518.29			0.00	1694.81
	Labour Welfare 4%			0.00	691.06			0.00	2259.75
	Grand Total	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33
K. Tenth Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	15547.54	0.00	15547.54	119.36	50840.46	0.00	50840.46
2	Counting of survival percentage Grid wise and Specie wise and to Note the same on Register in May and October.	2.00	851.92	25.00	876.92	6.54	2785.78	81.75	2867.53
3	Fire Tracing	2.00	851.92	0.00	851.92	6.54	2785.78	0.00	2785.78
	Total	40.50	17251.38	25.00	17276.38	132.44	56412.01	81.75	56493.76
	Contingency 3%			0.00	518.29			0.00	1694.81
	Labour Welfare 4%			0.00	691.06			0.00	2259.75
	Grand Total	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33

Prepared By

 (Y. J. Pacharane)
 Range Forest Officer
 Rahuri

Technically and arthmetically checked by

 (Arnoo Garkal)
 Asst. Coservator of Forests
 (Plantation & Wildlife) Rahuri


 (Suvama Mane)
 Deputy Conservator of Forests,
 Forest Division, Ahmednagar

**Abstract for Model No. 5
Fencing and Irrigated Plantations
Model Rate Structure for Compensatory Afforestation**

Sr. No.	Year of Operation	Area : 1.00 ha. @ wage rate Rs. 425.96/day					Area : 3.27 ha.				
		Man days	Wages	Material Supply	Total	Man days	Wages	Material Supply	Total		
1	Pre Monsoon Works	167.97	71548.50	193263.83	283349.19	549.26	233963.60	620622.72	914407.37		
2	First Year Operations	192.65	82061.19	61569.64	153684.99	629.97	268340.10	201332.72	502549.93		
3	Second Year Operations	162.36	69158.87	37824.06	114471.73	530.92	226149.49	123684.68	374322.56		
4	Third Year Operations	101.65	43298.83	17616.02	65178.89	332.40	141587.19	57604.39	213134.98		
5	Fourth Year Operations	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33		
6	Fifth Year Operations	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33		
7	Sixth Year Operations	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33		
8	Seventh Year Operations	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33		
9	Eighth Year Operations	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33		
10	Ninth Year Operations	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33		
11	Tenth Year Operations	40.50	17251.38	25.00	18485.73	132.44	56412.01	81.75	60448.33		
	Total	908.13	386827.05	310448.55	746084.90	2969.59	1264924.47	1003816.76	2427553.11		

Prepared By
(Signature)
(Y. J. Pacharane)
Range Forest Officer
Rahuri

Technically and arithmetically checked by
(Signature)
(Amol Garikal)
Asst. Conservator of Forests
(Plantation & Wildlife) Rahuri

(Signature)
(Suvanna Mane)
Deputy Conservator of Forests,
Forest Division, Ahmednagar