

Model Rate Structure for Compensatory Afforestation Model No.5

Model rate structure of intensive irrigated plantation on degraded areas with 18 month old seedlings (Voluntarily accepted by user agency. Undertaking of the user agency is mandatory.)

Spacement - 4.00 m x 4.00 m

Size of Pits - 0.60 x 0.60 x 0.60 m

No of Seedlings - 625 per ha

Wage Rate-

Rs.296.48 per day.

(Amount in Rs.) Area of CA- 2.26 ha.

Sr. No	Particulars of works	Man days	Wages	Material supply	Total (Rs. Per ha.)	Man days	Wages	Material supply	Total (Rs.)
A. Pre Monsoon Works (PPO/PYO)									
1	a. Survey and demarcation	1.00	296.48	50.00	346.48	2.26	670.04	113.00	783.04
	b. Preparation of treatment map (100 m x 50 m grid)	1.00	296.48	50.00	346.48	2.26	670.04	113.00	783.04
	c. Clearing of bushes and preparation of site (As per requirement)	10.00	2964.80	50.00	3014.80	22.60	6700.45	113.00	6813.45
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc	31.00	9190.88	0.00	9190.88	70.06	20771.39	00	20771.39
3	Providing chain link fencing around plantation area. 102 rmt per ha Rs.2100/- per rmt.	170.00	50401.60	171496.00	221897.60	384.20	113907.62	387580.96	501488.58
4	Alignment of pits at 5m x 5m spacement. 625 pits per Ha (0.13 M.D. per 50 pits) M&S @ Rs.2.24 per 50 pits.	1.62	480.30	28.00	508.30	3.66	1085.48	63.28	1148.76
5	Digging of pits of size 0.60 x 0.60 x 0.66 m (625 pits per ha) 36.26 M.D per 100 pits	207.88	61632.26	0.00	61632.26	469.81	139288.91	00	139288.91
	Total	422.50	125262.80	171674.00	296936.80	954.85	283093.93	387983.24	671077.17
	Contingency 3%				8908.10				20132.32
	Labour Welfare 4%				11877.47				26843.09
	Grand Total	422.50	125262.80	171674.00	317722.37	954.85	283093.93	434958.65	718052.58
B. First Year Operations									
1.	Purchase of selected seedlings 687 seedlings per ha (50% fruit bearing species) Rs.50 per seedlings	0.00	0.00	34350.00	34350.00	00	00	77631.00	77631.00
2	Refilling of pits by good quality soil (2.5 M.D per 50 pits) a) 30% soil replacement 40.50 cum per ha Rs. 300/- per cum. b) Filling 10% farm yard manure 13.50 cum per ha Rs.700/- per cum.	31.25	9265.00	21600.00	30865.00	70.63	20938.90	48816.00	69754.90

3	Transport of seedlings from nursery to plantation site (including loading & unloading) Wages 1.00 md per 55 seedlings and M&S Rs.300/- per 55 seedlings	12.49	3703.04	3747.00	/450.03	28.23	8368.87	8468.22	16837.09
4	Planting of seedlings 625 seedlings (2.01 M.D per 50 seedlings)	25.13	7450.54	0.00	7450.54	56.79	16838.22	00	16838.22
5	Planting for 10% casualty replacement (2.00 M.D per 100 seedlings)	1.26	373.56	0.00	373.56	2.85	844.25	00	844.25
6	3 weedings and 2 soil workings (3.40 M.D per 50 seedlings) fertilizer application Rs.0.45 per seedling	42.50	12601.25	281.00	12882.25	96.05	28478.82	635.06	29113.88
7	Watering the plants 4 times form oct to march (20 litre per 100 plants (As per Govt. Resolution EGS 28 dt.9/11/2009)	30.88	9155.30	0.00	9155.30	69.79	20690.98	00	20690.98
8	Water supply to plantation site by tanker and material supply as tanks, pipes etc.	0.00	0.00	10000.00	10000.00	00	00	22600.00	22600.00
9	Watch and ward (10 months – 1 watcher per 10 ha)	30.00	8894.40	0.00	8894.40	67.80	20101.34	00	20101.34
10	Fire tracing	2.00	592.96	0.00	592.96	4.52	1340.09	00	1340.09
11	Special technical works		00	9000.00	9000.00	00	00	20340.00	20340.00
	Total	175.51	52036.05	78978.00	131014.04	396.65	117601.47	178490.28	296091.75
	Contingency 3%	00	0.00		3930.42	00	00	8882.75	8882.75
	Labour Welfare 4%	00	0.00		5240.56	00	00	11843.66	11843.66
	Grand Total	175.51	52036.05	78978.00	140185.02	396.65	117601.47	199216.69	316818.16
C. Second Year Operations									
1	3 weedings and soil workings (3.40 M.D per 50 plants) fertilizer application Rs. 0.45 per plant.	42.50	12600.40	281.00	12881.40	96.05	28476.90	635.06	29111.96
2	Watering the plants 5 times (20 litre per 100 plants) As per Govt. Resolution EGS 28 dt. 9/11/2009	38.50	11414.48	0.00	11414.48	87.01	25796.72	00	25796.72
3	Water supply to plantation site by tanker and material supply as tanks, pipes etc	00	00	10000.00	10000.00	00	00	22600.00	22600.00
4	Fire tracing	2.00	592.96	0.00	592.96	4.52	1340.09	00	1340.09
5	Special technical works	00	00	9000.00	9000.00	00	00	20340.00	20340.00
	Total	83.00	24607.84	19281.00	43888.84	187.58	55613.71	43575.06	99188.77
	Contingency 3%	00	0.00		1316.66	00	00	00	2975.66
	Labour Welfare 4%	00	0.00		1755.55	00	00	00	3667.55
	Grand Total	83.00	24607.84	19281.00	46961.05	187.58	25613.71	43575.06	106131.97
D. Third Year Operations									
1	3 weedings and soil working (3.40 M.D per 50 plants) fertilizer application Rs. 0.45 per plants	42.50	12600.40	281.00	12881.40	96.05	28476.90	635.06	29111.96
2	Watering the plants 5 times (20 litre per 100 plants) As per Govt. Resolution EGS 28 dt. 9/11/2009	15.38	4559.86	0.00	4559.86	34.76	10305.28	00	10305.28
3	Water supply to plantation site by tanker and material supply as tanks, pipes etc	00	00	10000.00	10000.00	00	00	22600.00	22600.00

4	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	10821.52	0.00	10821.52	82.49	24456.63	00	24456.63
5	Fire tracing	2.00	592.96	0.00	592.96	4.52	1340.09	00	1340.09
	Total	96.38	28574.34	10281.00	38855.74	217.82	64578.00	23235.06	87813.96
	Contingency 3%		0.00		1165.67				2634.41
	Labour Welfare 4%		0.00		1554.22				3512.55
	Grand Total	96.38	28574.34	10281.00	41575.63	217.82	64578.00	23235.06	93960.92
E. Fourth Year Operations									
1	Fire Tracing	2.00	592.96	0.00	592.96	4.52	1340.09	00	1340.09
2	Watch and ward 12 months-1 watcher per 10.00 ha	36.50	10821.52	0.00	10821.52	82.49	24456.63	00	24456.63
	Total	38.50	11414.48	0.00	11414.48	87.01	25796.72	00	25796.72
	Contingency 3%		0.00		342.43				773.90
	Labour Welfare 4%		0.00		456.58				1031.86
	Grand Total	38.50	11414.48	00	12213.49	87.01	25796.72	00	27602.48
F. Fifth Year Operations									
1	Fire Tracing	2.00	592.96	0.00	592.96	4.52	1340.09	00	1340.09
2	Watch and ward 12 months-1 watcher per 10.00 ha	36.50	10821.52	0.00	10821.52	82.49	24456.63	00	24456.63
	Total	38.50	11414.48	0.00	11414.48	87.01	25796.72	00	25796.72
	Contingency 3%		0.00		342.43		00	00	773.90
	Labour Welfare 4%		0.00		456.58		00	00	1031.86
	Grand Total	38.50	11414.48	00	12213.49		25796.72	00	27602.48
G. Sixth Year Operations									
1	Fire Tracing	2.00	592.96	0.00	592.96	4.52	1340.09	00	1340.09
2	Watch and ward 12 months-1 watcher per 10.00 ha	36.50	10821.52	0.00	10821.52	82.49	24456.63	00	24456.63
	Total	38.50	11414.48	0.00	11414.48	87.01	25796.72	00	25796.72
	Contingency 3%		0.00		342.43		00	00	773.90
	Labour Welfare 4%		0.00		456.58		00	00	1031.86
	Grand Total	38.50	11414.48	00	12213.49		25796.72	00	27602.48
H. Seventh Year Operations									
1	Fire Tracing	2.00	592.96	0.00	592.96	4.52	1340.09	00	1340.09
2	Watch and ward 12 months-1 watcher per 10.00 ha	36.50	10821.52	0.00	10821.52	82.49	24456.63	00	24456.63
	Total	38.50	11414.48	0.00	11414.48	87.01	25796.72	00	25796.72
	Contingency 3%		0.00		342.43		00	00	773.90
	Labour Welfare 4%		0.00		456.58		00	00	1031.86
	Grand Total	38.50	11414.48	00	12213.49		25796.72	00	27602.48

Divisional Forest Officer
Hingoli

Range Forest Officer
(T.) Hingoli

Abstract for Model No.5 (Amount in Rupees)

Sr. No.	Year of operation	Man days	Wages	Material supply	Total	Other expenses	Total	Total amount (rounded off)	Total	Total amount (rounded off)
1	Pre Monsoon works	422.50	125262.80	171674.00	296936.80	20785.57	317722.37	317722	671077.17	718052.55
2	First Year Operations	175.51	52036.05	78978.00	131014.04	9170.98	140185.02	138185	296091.75	316818.16
3	Second Year Operations	83.00	24607.84	19281.00	43888.84	3072.21	46961.05	46961	99188.77	106131.97
4	Third Year Operations	96.38	28574.34	10281.00	38855.74	2719.89	41575.63	41576	87813.96	93960.92
5	Fourth Year Operations	38.50	11414.48	0.00	11414.48	799.01	12213.49	12213	25796.72	27602.48
6	Fifth Year Operations	38.50	11414.48	0.00	11414.48	799.01	12213.49	12213	25796.72	27602.48
7	Sixth Year Operations	38.50	11414.48	0.00	11414.48	799.01	12213.49	12213	25796.72	27602.48
8	Seventh Year Operations	38.50	11414.48	0.00	11414.48	799.01	12213.49	12213	25796.72	27602.48
Total		931.39	276138.95	280214	556353.34	38944.69	595298.03	593296.00	1257358.53	1345373.52

Cost per plant Rs. 951.92

Note :- 1. The rates indicated are as per item No.3 of Government of Maharashtra resolution No. MREGS-2011/F.No. 85/ EGS-1, Planning department, EGS division dt.3/11/2011. The rates for item No. 4 & 5 of premonsoon works and item No.2 of FYO are as per model No.7.

2. Special technical works includes application of improved technology in nursery & plantations, irrigation as per requirement and site condition, additional SMC works, creation of waterholes, Soil replacement in pits, application of biofertilizers, micro nutrients etc.

Range Forest Officer
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Divisional Forest Officer
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Divisional Forest Officer
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Model Rate Structure for Compensatory Afforestation Model No.4

Model rate structure for plantation of mixed tree species/ Medicinal Plants /Bamboo etc. in areas with medium density having natural regeneration to some extent.

(Aided Natural Regeneration)

Spacement - 4.00 m x 4.00 m

Size of Pits- 0.45 x 0.45 x 0.45m

No of Seedlings - 400 per ha,

Wage rate Rs.per day.= 296.48

Area= 0.169 Ha (Amount in Rs.)

Sr. No	Particulars of works	Man days	Wages	Material supply	Total	Man days	Wages	Material supply	Total
A. Pre Monsoon Works (PPO/PYO)		per Ha.	per Ha.	per Ha.	per Ha.				
1	a. Survey and demarcation	1	296.48	50.00	346.48	0.17	50.11	8.45	58.56
	b. Preparation of treatment map (100 m x 50 m grid)	1	296.48	50.00	346.48	0.17	50.11	8.45	58.56
	c. Clearing of bushes and preparation of site (As per requirement)	10	2,964.80	50.00	3,014.80	1.69	501.05	8.45	509.50
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc	31	9,190.88	0.00	9,190.88	5.24	1,553.26	0.00	1,553.26
3	Digging of Trench cum mound (TCM) of size 1.90 x 0.60 x 1.00 m along the periphery of plantation area including spreading/ stacking the excavated soil as directed in 1 m width and 1 M height. Length 102 Rmt per Ha (127.50 cum per ha)	82.57	24,480.35	50.00	24,530.35	13.95	4,137.18	8.45	4,145.63
4	Counting of gridwise valuable species & applying colour bands	3.5	1,037.68	0.00	1,037.68	0.59	175.37	0.00	175.37
5	Singling of coppices, cut back operation, debudding, climber cutting & soil working around natural regeneration	10	2,964.80	0.00	2,964.80	1.69	501.05	0.00	501.05
6	Part nursery cost for raising 750 seedlings per ha in polybags of size 12.50 x 25 cm Rs.10.56 per plant	26.29	7,794.46	1,320.00	9,114.46	4.44	1,317.26	223.08	1,540.34
7	Alingment of pits at 4 x 4 m spacement (Wages 0.13 M.D and MS. Rs. 2.24 per 50 pits)	1.62	480.30	28.00	508.30	0.27	81.17	4.73	85.90
8	Digging of pits 625 pits per ha (6.60 M.D/Per 100 pits)	41.25	12,229.80	0.00	12,229.80	6.97	2,066.84	0.00	2,066.84
Total		208.23	61,736.03	1,548.00	63,284.03	35.19087	10,433.39	261.61	10,695.00
Contingency 3%					1,898.52				320.85
Labour Welfare 4%					2,531.36				427.80
Grand Total		208.23	61736.0304	1548	67,713.91	35.19087	10,433.39	261.61	11,443.65
B. First Year Operations									
1	Part Nursery cost for maintainance of 750 seedlings per ha Rs. 2.64 per seedling (Wages Rs.2.20, M & S Rs. 0.44)	6.57	1,947.87	330	2,277.87	1.11	329.19	55.77	384.96
2	Refilling of pits with good quality soil & single super phosphate Rs. 0.96 per pit (1.66 M.D per 100 pits)	10.38	3,077.46	600	3,677.46	1.75	520.09	101.40	621.49
3	Planting of agave suckers in 3 rows on TCM (306 suckers per ha @ Rs.3 per suckers)	1	296.48	918	1,214.48	0.17	50.11	155.14	205.25
	Transport of seedlings from nursery to plantation site (including loading & unloading) Rs.1.00 per seedling Wages 0.14 md per 100 seedlings	1.05	311.30	750	1,061.30	0.18	52.61	126.75	179.36
5	Planting of 625 seedlings (1.5 M.D per 100 seedlings)	9.38	2,780.98	0	2,780.98	1.59	469.99	0.00	469.99
6	Causality replacement(20% 125 seedling per ha)(2 M.D per 100 seedlings)	2.5	741.20	0	741.20	0.42	125.26	0.00	125.26
7	3 weedings and 2 soil workings (3.50 M.D per 100 seedlings) fertilizer application Rs.0.45 per seedling	42	12,452.16	472.5	12,924.66	7.10	2,104.42	79.85	2,184.27
8	Part Nursery Cost for raising seedling for causality replacement in SYO. (125 seedlings per ha.) Rs. 10.56 per plant.	4.38	1,298.58	220	1,518.58	0.74	219.46	37.18	256.64
9	Watch and ward (9 months) -1 watcher per 10 ha	30	8,894.40	0	8,894.40	5.07	1,503.15	0.00	1,503.15
10	Fire tracing	2	592.96	0	592.96	0.34	100.21	0.00	100.21
Total		109.26	32,393.40	3,290.50	35,683.90	18.46	5,474.49	556.09	6,030.58
Contingency 3%					1,070.52				180.92
Labour Welfare 4%					1,427.36				241.22
Grand Total		109.26	32,393.40	3,290.50	38,181.78	18.46	5,474.49	556.09	6,452.72

Sr. No.	Particulars of works	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 (500 seedlings per ha)	1.1	326.13	55	381.13	0.19	55.12	9.30	64.41
2	Transportation of seedlings for causality replacement from nursery to plantation site (including loading and unloading) wages 0.14 M.D Per 125 Seedling	0.18	53.37	125	178.37	0.03	9.02	21.13	30.14
3	Causality replacement (125 seedling per ha) 2 M.D per 100 seedling	2.5	741.20	0	741.20	0.42	125.26	0.00	125.26
4	2 weedings and 1 soil working, with fertilizer application at Rs. 0.45 per seedling	26.5	7,856.72	281.25	8,137.97	4.48	1,327.79	47.53	1,375.32
6	Fire tracing	2	592.96	0	592.96	0.34	100.21	0.00	100.21
Total		32.28	9,570.37	461.25	10,031.62	5.46	1,617.39	77.95	1,695.34
Contingency 3%					300.95				50.86
Labour Welfare 4%					401.26				67.81
Grand Total		32.28	9,570.37	461.25	10,733.84	5.46	1,617.39	77.95	1,814.02
D. Third Year Operations									
1	Singling, Cut back operations, debudding, Climber cutting and Soil working for natural regeneration.	10	2,964.80	0	2,964.80	1.69	501.05	0.00	501.05
2	One weeding. (1 m.d. per 100 seedlings)	6.25	1,853.00	0	1,853.00	1.06	313.16	0.00	313.16
3	Collection and sowing of seeds of Valuable species	1	296.48	0	296.48	0.17	50.11	0.00	50.11
4	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	10,821.52	0	10,821.52	6.17	1,828.84	0.00	1,828.84
	Fire tracing	2	592.96	0	592.96	0.34	100.21	0.00	100.21
Total		55.75	16,528.76	0.00	16,528.76	9.42	2,793.36	0.00	2,793.36
Contingency 3%					495.86				83.80
Labour Welfare 4%					661.15				111.73
Grand Total		55.75	16,528.76	0.00	17,685.77	9.42	2,793.36	0.00	2,988.90
E. Fourth Year Operations									
1	Fire Tracing	2	592.96	0	592.96	0.34	100.21	0.00	100.21
2	Watch and ward 12 months-1 watcher per 10.00 ha	36.5	10,821.52	0	10,821.52	6.17	1,828.84	0.00	1,828.84
Total		38.50	11,414.48	0.00	11,414.48	6.51	1,929.05	0.00	1,929.05
Contingency 3%					342.43				57.87
Labour Welfare 4%					456.58				77.16
Grand Total		38.50	11,414.48	0.00	12,213.49	6.51	1,929.05	0.00	2,064.08
F. Fifth Year Operations									
1	Fire Tracing	2	592.96	0	592.96	0.34	100.21	0.00	100.21
2	Watch and ward 12 months-1 watcher per 10.00 ha	36.5	10,821.52	0	10,821.52	6.17	1,828.84	0.00	1,828.84
Total		38.50	11,414.48	0.00	11,414.48	6.51	1,929.05	0.00	1,929.05
Contingency 3%					342.43				57.87
Labour Welfare 4%					456.58				77.16
Grand Total		38.50	11,414.48	0.00	12,213.49	6.51	1,929.05	0.00	2,064.08
G. Sixth Year Operations									
1	Fire Tracing	2	592.96	0	592.96	0.34	100.21	0.00	100.21
2	Watch and ward 12 months-1 watcher per 10.00 ha	36.5	10,821.52	0	10,821.52	6.17	1,828.84	0.00	1,828.84
Total		38.50	11,414.48	0.00	11,414.48	6.51	1,929.05	0.00	1,929.05
Contingency 3%					342.43				57.87
Labour Welfare 4%					456.58				77.16
Grand Total		38.50	11,414.48	0.00	12,213.49	6.51	1,929.05	0.00	2,064.08
H. Seventh Year Operations									
1	Fire Tracing	2	502.42	0	502.42	0.34	84.91	0.00	84.91
2	Watch and ward 12 months-1 watcher per 10.00 ha	36.5	9169.17	0	9,169.17	6.17	1,549.59	0.00	1,549.59
Total		38.50	9,671.59	0.00	9,671.59	6.51	1,634.50	0.00	1,634.50
Contingency 3%					290.15				49.03
Labour Welfare 4%					386.86				65.38
Grand Total		38.50	9,671.59	0.00	10,348.60	6.51	1,634.50	0.00	1,748.91

Range Forest Officer
(T.) Hinnoli

Divisional Forest Officer
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Abstract for Model No.4

Sr. No.	Year of operation	Man days	Wages	Material supply	Total	Other expenses	Total	Total amount	Man days	Wages	Material supply	Total	Other expenses	Total	Total amount
1	Pre Monsoon works	208.23	61,736.03	1,548.00	63,284.03	4,429.88	67,713.91	67,714	35.19	10,433.39	261.61	10,695.00	748.65	11,443.65	11,444
2	First Year Operations	109.26	32,393.40	3,290.50	35,683.90	2,497.87	38,181.78	38,182	18.46	5,474.49	556.09	6,030.58	422.14	6,452.72	6,453
3	Second Year Operations	32.28	9,570.37	461.25	10,031.62	702.21	10,733.84	10,734	5.46	1,617.39	77.95	1,695.34	118.67	1,814.02	1,814
4	Third Year Operations	55.75	16,528.76	0.00	16,528.76	1,157.01	17,685.77	17,686	9.42	2,793.36	0.00	2,793.36	195.54	2,988.90	2,989
5	Fourth Year Operations	38.50	11,414.48	0.00	11,414.48	799.01	12,213.49	12,213	6.51	1,929.05	0.00	1,929.05	135.03	2,064.08	2,064
6	Fifth Year Operations	38.50	11,414.48	0.00	11,414.48	799.01	12,213.49	12,213	6.51	1,929.05	0.00	1,929.05	135.03	2,064.08	2,064
7	Sixth Year Operations	38.50	11,414.48	0.00	11,414.48	799.01	12,213.49	12,213	6.51	1,929.05	0.00	1,929.05	135.03	2,064.08	2,064
8	Seventh Year Operations	38.50	9,671.59	0.00	9,671.59	677.01	10,348.60	10,349	6.51	1,634.50	0.00	1,634.50	114.41	1,748.91	1,749
	Total	559.52	164,143.60	5,299.75	169,443.35	11,861.03	181,304.38	181,304	94.56	27,740.27	895.66	28,635.93	2,004.51	30,640.44	30,640

Amount in Rs.

Note :- 1. The rates indicated are as per item No.3 of Government of Maharashtra resolution No. MREGS-2011/F.No. 85/ EGS-1, Planning department, EGS division dt.3/11/2011. The rates for item No. 4 & 5 of premonsoon works and item No.2 of FYO are as per model No.7.

Cost per plant in Rs.

453.26096

2. Rubble bunds of size bottom width 1.00 m, top width 0.60 m and height 1.00 m should be constructed wherever digging of TCM is not possible.

Range Forest Officer
(T.) Hingoli

Divisional Forest Officer
HINGOLI