

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- Nall Gut no 19 Area 4.80 Ha.

(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 4.80 ha			
							Man days	Wages	Material supply	Total (Rs. Per Ha.)
A. Pre Monsoon Works PFO/PYO										
1	(a) Survey and demarcation	1	339.61	91	430.61	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Item No. 1b Item No. 1c Item No. 1d Item No. 1e	4.8	1630.128	436.8	2066.928
	(b) Preparation of treatment map (100 m x 50 m grid)	1	339.61	91	430.61		4.8	1630.128	436.8	2066.928
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid	0.4	135.84	0	135.84		1.92	652.032	0	652.032
	(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		0	0	1080	1080
	(e) Clearing of bushes and preparation of site (As per requirement)	10	3396.1	91	3487.1		48	16301.28	436.8	16738.08
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	148.8	50533.968	0	50533.968
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 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 201718 Item No. 1744	0	0	877754.88	877754.88
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	13.344	4531.776	238.896	4770.672
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	351.984	119537.28	0	119537.28
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1	339.61	0	339.61	Item No. 6	4.8	1630.128	0	1630.128
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	3.6	1222.608	120	1342.608
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000	Item No. 8	0	0	24000	24000
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%	224.208	76143.264	23162.208	99305.472
	Total	167.97	57044.29	193263.83	250308.12		806.256	273812.592	927666.384	1201478.976
	Contingency 3%		0	7509.23	7509.24		0	0	0	36044.36928
	Labour Welfare 4%		0	10012.31	10012.32		0	0	0	48059.15904
	Grand Total	167.97	57044.29	193263.83	267829.69		806.256	273812.592	927666.384	1285582.504
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% Item No. 2	71.04	24298.704	5182.704	29481.408
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		88.512	30059.568	9332.4	39391.968
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	8.976	3048.336	11644.8	14693.136
4	Planting of 1111 seedlings (1.0 M.D per 100 seedlings)	11.11	3773.07	0	3773.07	Item No. 4	53.328	18110.736	0	18110.736
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	213.312	72442.896	4372.896	76815.792
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	284.4	96585.072	261096	357681.072
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%	21.312	7237.776	0	7237.776
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%	37.296	12666.096	3857.472	16523.568
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	9298.52	0	9298.52	Item No. 9	131.424	44632.896	0	44632.896
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	5.52	1874.64	48	1922.64
11	Fire tracing	2	679.22	0	679.22	Item No. 12	9.6	3260.256	0	3260.256
	Total	192.65	65425.87	61569.64	126995.51		924.72	314216.976	295534.272	609751.248
	Contingency 3%		0	3809.87	3809.87					18292.53744
	Labour Welfare 4%		0	5079.82	5079.82					24390.04992
	Grand Total	192.65	65425.87	61569.64	135885.19		924.72	314216.976	295534.272	652433.8354

Year Operations									
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 causality replacement 20%	11.808	4010.112	1939.2	5949.312
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%	1.488	509.344	1939.2	2444.544
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%	21.312	7237.776	0	7237.776
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	133.296	45268.656	4372.896	49641.552
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	426.624	144885.792	173304	318189.792
6 Watch and ward 12 months -1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 6	175.2	59499.696	0	59499.696
7 Fire tracing	2	679.22	0	679.22	Item No. 8	9.6	3260.256	0	3260.256
Total	162.36	55139.08	37824.06	92963.14		779.328	264667.632	181555.296	446222.928
Contingency 3%		0	2788.89	2788.89					13386.68784
Labour Welfare 4%		0	3718.53	3718.53					17848.91712
Grand Total	162.36	55139.08	37824.06	99470.56		779.328	264667.632	181555.296	477458.533
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	5661.3	911.02	6572.32	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	80.016	27174.24	4372.896	31547.136
2 Watering 556 seedlings in November, December, January and June 1 time each and February to May 2 times each total 12 times 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	213.504	72508.08	80064	152572.08
3 Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 3	175.2	59499.696	0	59499.696
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	9.6	3260.256	120	3380.256
5 Fire tracing	2	679.22	0	679.22	Item No. 6	9.6	3260.256	0	3260.256
Total	101.65	34521.36	17616.02	52137.38		487.92	165702.528	84556.896	250259.424
Contingency 3%		0	1564.12	1564.12					7507.78272
Labour Welfare 4%		0	2085.5	2085.5					10010.37696
Grand Total	101.65	34521.36	17616.02	55787		487.92	165702.528	84556.896	267777.5837
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	175.2	59499.696	0	59499.696
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	9.6	3260.256	120	3380.256
3 Fire tracing	2	679.22	0	679.22	Item No. 3	9.6	3260.256	0	3260.256
Total	40.5	13754.21	25	13779.21		194.4	66020.208	120	66140.208
Contingency 3%		0	413.38	413.38					1984.20624
Labour Welfare 4%		0	551.17	551.17					2645.60832
Grand Total	40.5	13754.21	25	14743.75		194.4	66020.208	120	70770.02256
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	175.2	59499.696	0	59499.696
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	9.6	3260.256	120	3380.256
3 Fire tracing	2	679.22	0	679.22	Item No. 3	9.6	3260.256	0	3260.256
Total	40.5	13754.21	25	13779.21		194.4	66020.208	120	66140.208
Contingency 3%		0	413.38	413.38					1984.20624
Labour Welfare 4%		0	551.17	551.17					2645.60832
Grand Total	40.5	13754.21	25	14743.75		194.4	66020.208	120	70770.02256
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	175.2	59499.696	0	59499.696
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	9.6	3260.256	120	3380.256
3 Fire tracing	2	679.22	0	679.22	Item No. 3	9.6	3260.256	0	3260.256
Total	40.5	13754.21	25	13779.21		194.4	66020.208	120	66140.208
Contingency 3%		0	413.38	413.38					1984.20624
Labour Welfare 4%		0	551.17	551.17					2645.60832
Grand Total	40.5	13754.21	25	14743.75		194.4	66020.208	120	70770.02256
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	175.2	59499.696	0	59499.696
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	9.6	3260.256	120	3380.256
3 Fire tracing	2	679.22	0	679.22	Item No. 3	9.6	3260.256	0	3260.256
Total	40.5	13754.21	25	13779.21		194.4	66020.208	120	66140.208
Contingency 3%		0	413.38	413.38					1984.20624
Labour Welfare 4%		0	551.17	551.17					2645.60832
Grand Total	40.5	13754.21	25	14743.75		194.4	66020.208	120	70770.02256
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	175.2	59499.696	0	59499.696

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	9.6	3260.256	120	3380.256
Fire tracing	2	679.22	0	679.22	Item No. 3	9.6	3260.256	0	3260.256
Total	40.5	13754.21	25	13779.21		194.4	66020.208	120	66140.208
Contingency 3%		0	413.38	413.38					1984.20624
Labour Welfare 4%		0	551.17	551.17					2645.60832
Grand Total	40.5	13754.21	25	14743.75		194.4	66020.208	120	70770.02256
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	175.2	59499.696	0	59499.696
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	9.6	3260.256	120	3380.256
3 Fire tracing	2	679.22	0	679.22	Item No. 3	9.6	3260.256	0	3260.256
Total	40.5	13754.21	25	13779.21		194.4	66020.208	120	66140.208
Contingency 3%		0	413.38	413.38					1984.20624
Labour Welfare 4%		0	551.17	551.17					2645.60832
Grand Total	40.5	13754.21	25	14743.75		194.4	66020.208	120	70770.02256
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	175.2	59499.696	0	59499.696
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	9.6	3260.256	120	3380.256
3 Fire tracing	2	679.22	0	679.22	Item No. 3	9.6	3260.256	0	3260.256
Total	40.5	13754.21	25	13779.21		194.4	66020.208	120	66140.208
Contingency 3%		0	413.38	413.38					1984.20624
Labour Welfare 4%		0	551.17	551.17					2645.60832
Grand Total	40.5	13754.21	25	14743.75		194.4	66020.208	120	70770.02256

Abstract for Model No.5

S. N.	Year of operation	Man days	Wages	Material supply	(Amount in Rupees)			Man days	Wages	Material supply	Total
					Total	Other expenses	Total amount				
1	Pre Monsoon works	167.97	57044.29	193263.83	250308	17521.57	267829.69	For 4.80 ha.			
2	First Year Operations	192.65	65425.87	61569.64	126996	8889.69	135885.19	806.256	273812.592	927666.384	1285582.504
3	Second Year Operations	162.36	55139.08	37824.06	92963	6307.42	99470.56	924.72	314216.976	295534.272	652433.8354
4	Third Year Operations	101.65	34321.36	17616.02	52137	3649.62	55787	779.328	264667.632	181555.296	477458.533
5	Fourth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	487.92	165702.528	84556.896	267777.5837
6	Fifth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	194.4	66020.208	120	70770.02256
7	Sixth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	194.4	66020.208	120	70770.02256
8	Seventh Year Operations	40.5	13754.21	25	13779	964.54	14743.75	194.4	66020.208	120	70770.02256
9	Eighth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	194.4	66020.208	120	70770.02256
10	Ninth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	194.4	66020.208	120	70770.02256
11	Tenth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	194.4	66020.208	120	70770.02256
	Total	908.13	308410.83	310448.55	618859	43320.1	662178.68	4359.024	1480541.184	1490152.848	3178642.614
Cost per plant Rs 596.02											

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 load.
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.

Dhairyashil Patil

(Dhairyashil Patil)

Deputy Conservator of Forests,
Solapur Forest Division, Solapur