

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- Katphal Compt. No 91 Sy. No 260 Area 6.7122 Ha.

(Amount in Rs.)						For 6.7122 ha				
Sr.No	Particulars of works	Man days	Wages	Material supply	Total (Rs. Per Ha.)	Sanction Letter Dt. / Model No. / Item No.	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	6.7122	2279.530242	610.8102	2890.340442
	(b) Preparation of treatment map (100 m x 50 m grid)	1	339.61	91	430.61	Item No. 1b	6.7122	2279.530242	610.8102	2890.340442
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid.	0.4	135.84	0	135.84	Item No. 1c	2.68488	911.785248	0	911.785248
	(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	1510.245	1510.245
	(e) Clearing of bushes and preparation of site (As per requirement)	10	3396.1	91	3487.1	Item No. 1e	67.122	22795.30242	610.8102	23406.11262
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	208.0782	70665.4375	0	70665.4375
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	1227430.48	1227430.48
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	18.659916	6337.122264	334.066194	6671.188458
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	492.205626	167157.9439	0	167157.9439
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1	339.61	0	339.61	Item No. 6	6.7122	2279.530242	0	2279.530242
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	5.03415	1709.664462	167.805	1877.469462
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000	Item No. 8	0	0	33561	33561
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%	313.526862	106476.8368	32389.45261	138866.2894
	Total	167.97	57044.29	193263.83	250308.12		1127.448234	382892.6833	1297225.48	1680118.163
	Contingency 3%		0	7509.23	7509.24		0	0	0	50403.54489
	Labour Welfare 4%		0	10012.31	10012.32		0	0	0	67204.72652
	Grand Total	167.97	57044.29	193263.83	267829.69		1127.448234	382892.6833	1297225.48	1797726.434
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%	99.34056	33978.70021	7247.363706	41226.06391
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	123.772968	42034.5484	13050.19485	55084.74325
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	12.551814	4262.716854	16283.7972	20546.51405
4	Planting of 1111 seedlings (1.0 M.D per 100 seedlings)	11.11	3773.07	0	3773.07	Item No. 4	74.572542	25325.60045	0	25325.60045
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	298.290168	101302.3347	6114.948444	107417.2831
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	397.69785	135062.1501	365110.119	500172.2691
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%	29.802168	10121.12501	0	10121.12501
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	2638.77	803.64	3442.41	Item No. 8 20% instead of 10%	52.153794	17711.95199	5394.192408	23106.1444
9	Watch and ward (10 months – 1 watcher per 10 ha)	27.38	9298.52	0	9298.52	Item No. 9	183.780036	62413.52594	0	62413.52594
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	7.71903	2621.44971	67.122	2688.57171
11	Fire tracing	2	679.22	0	679.22	Item No. 12	13.4244	4559.060484	0	4559.060484
	Total	192.65	65425.87	61569.64	126995.51		1293.10533	439393.1638	413267.7376	852660.9014
	Contingency 3%		0	3809.87	3809.87					25579.82704
	Labour Welfare 4%		0	5079.82	5079.82					34106.43606
	Grand Total	192.65	65425.87	61569.64	135885.19		1293.10533	439393.1638	413267.7376	912347.1645

C. Second Year Operations					Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	16.512012	5607.640368	2711.7288	8319.369168
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				
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%	2.080782	706.660416	3418.389216
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%	29.802168	10121.12501	10121.12501
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	186.397794	63302.55683	69417.50528
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	596.580336	202604.6694	444948.6504
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 6	244.9953	83202.88739	83202.88739
7	Fire tracing	2	679.22	0	679.22	Item No. 8	13.4244	4559.060484	4559.060484
Total		162.36	55139.08	37824.06	92963.14		1089.792792	370104.5999	253882.387
Contingency 3%			0	2788.89	2788.89				18719.60961
Labour Welfare 4%			0	3718.53	3718.53				24959.47948
Grand Total		162.36	55139.08	37824.06	99470.56		1089.792792	370104.5999	253882.387
D. Third Year Operations					Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	111.892374	37999.77786	6114.948444	44114.7263
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	Item No. 2	298.558656	101393.4864	213352.9824
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				
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 3	244.9953	83202.88739	83202.88739
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	13.4244	4559.060484	4726.865484
5	Fire tracing	2	679.22	0	679.22	Item No. 6	13.4244	4559.060484	4559.060484
Total		101.65	34521.36	17616.02	52137.38		682.29513	231714.2726	118242.2494
Contingency 3%			0	1564.12	1564.12				10498.69566
Labour Welfare 4%			0	2085.5	2085.5				13998.26088
Grand Total		101.65	34521.36	17616.02	55787		682.29513	231714.2726	118242.2494
E. Fourth Year Operations					Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	244.9953	83202.88739	0	83202.88739
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 2	13.4244	4559.060484	4726.865484
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				
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.4244	4559.060484	4559.060484
Total		40.5	13754.21	25	13779.21		271.8441	92321.00836	167.805
Contingency 3%			0	413.38	413.38				2774.664401
Labour Welfare 4%			0	551.17	551.17				3699.552534
Grand Total		40.5	13754.21	25	14743.75		271.8441	92321.00836	167.805
F. Fifth Year Operations					Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	244.9953	83202.88739	0	83202.88739
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 2	13.4244	4559.060484	4726.865484
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				
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.4244	4559.060484	4559.060484
Total		40.5	13754.21	25	13779.21		271.8441	92321.00836	167.805
Contingency 3%			0	413.38	413.38				2774.664401
Labour Welfare 4%			0	551.17	551.17				3699.552534
Grand Total		40.5	13754.21	25	14743.75		271.8441	92321.00836	167.805
G. Sixth Year Operations					Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	244.9953	83202.88739	0	83202.88739
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 2	13.4244	4559.060484	4726.865484
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				
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.4244	4559.060484	4559.060484
Total		40.5	13754.21	25	13779.21		271.8441	92321.00836	167.805
Contingency 3%			0	413.38	413.38				2774.664401
Labour Welfare 4%			0	551.17	551.17				3699.552534
Grand Total		40.5	13754.21	25	14743.75		271.8441	92321.00836	167.805
H. Seventh Year Operations					Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	244.9953	83202.88739	0	83202.88739
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 2	13.4244	4559.060484	4726.865484
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				
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.4244	4559.060484	4559.060484
Total		40.5	13754.21	25	13779.21		271.8441	92321.00836	167.805
Contingency 3%			0	413.38	413.38				2774.664401
Labour Welfare 4%			0	551.17	551.17				3699.552534
Grand Total		40.5	13754.21	25	14743.75		271.8441	92321.00836	167.805
I. Eighth Year Operations					Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	244.9953	83202.88739	0	83202.88739
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 2	13.4244	4559.060484	4726.865484
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				
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.4244	4559.060484	4559.060484
Total		40.5	13754.21	25	13779.21		271.8441	92321.00836	167.805
Contingency 3%			0	413.38	413.38				2774.664401
Labour Welfare 4%			0	551.17	551.17				3699.552534
Grand Total		40.5	13754.21	25	14743.75		271.8441	92321.00836	167.805

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	13.4244	4559.060484	167.805	4726.865484
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.4244	4559.060484	0	4559.060484
	Total	40.5	13754.21	25	13779.21		271.8441	92321.00836	167.805	92488.81336
	Contingency 3%		0	413.38	413.38					2774.664401
	Labour Welfare 4%		0	551.17	551.17					3699.552534
	Grand Total	40.5	13754.21	25	14743.75		271.8441	92321.00836	167.805	98963.0303
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	244.9953	83202.88739	0	83202.88739
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	13.4244	4559.060484	167.805	4726.865484
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.4244	4559.060484	0	4559.060484
	Total	40.5	13754.21	25	13779.21		271.8441	92321.00836	167.805	92488.81336
	Contingency 3%		0	413.38	413.38					2774.664401
	Labour Welfare 4%		0	551.17	551.17					3699.552534
	Grand Total	40.5	13754.21	25	14743.75		271.8441	92321.00836	167.805	98963.0303
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	244.9953	83202.88739	0	83202.88739
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	13.4244	4559.060484	167.805	4726.865484
3	Fire tracing	2	679.22	0	679.22	Item No. 3	13.4244	4559.060484	0	4559.060484
	Total	40.5	13754.21	25	13779.21		271.8441	92321.00836	167.805	92488.81336
	Contingency 3%		0	413.38	413.38					2774.664401
	Labour Welfare 4%		0	551.17	551.17					3699.552534
	Grand Total	40.5	13754.21	25	14743.75		271.8441	92321.00836	167.805	98963.0303

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 6.7122 ha.											
1	Pre Monsoon works	167.97	57044.29	193263.83	250308	17521.57	267829.69	1127.448234	382892.6833	1297225.48	1797726.434
2	First Year Operations	192.65	65425.87	61569.64	126996	8889.69	135885.19	1293.10533	439393.1638	413267.7376	912347.1645
3	Second Year Operations	162.36	55139.08	37824.06	92963	6507.42	99470.56	1089.792792	370104.5999	253882.387	667666.076
4	Third Year Operations	101.65	34521.36	17616.02	52137	3649.62	55787	682.29513	231714.2726	118242.2494	374453.4786
5	Fourth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	271.8441	92321.00836	167.805	98963.0303
6	Fifth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	271.8441	92321.00836	167.805	98963.0303
7	Sixth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	271.8441	92321.00836	167.805	98963.0303
8	Seventh Year Operations	40.5	13754.21	25	13779	964.54	14743.75	271.8441	92321.00836	167.805	98963.0303
9	Eighth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	271.8441	92321.00836	167.805	98963.0303
10	Ninth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	271.8441	92321.00836	167.805	98963.0303
11	Tenth Year Operations	40.5	13754.21	25	13779	964.54	14743.75	271.8441	92321.00836	167.805	98963.0303
	Total	908.13	308410.03	310448.55	618859	43320.1	662178.68	6095.550186	2070351.778	2083792.489	4444934.366

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-I/EGS/CR-10/2282/2017-18/Nagpur, Dated 07/03/2018.

Dhairyashil Patil
(Dhairyashil Patil)

Deputy Conservator of Forests,
Solapur Forest Division, Solapur

Deputy Conservator Of Forests
Solapur Forest Dn. Solapur.