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TABLE IV Observations on fecundity and longevity of *Rodolia cardinalis* adults at Kodaikanal

Serial number of Pairs	Date of emergence	Age of female at first egglaying in days	Total No. of eggs laid	Daily average during period of fecundity	Maximum number of eggs laid per day	Longevity of adults		Duration of fecund period (days)
						Male (in days)	Female (in days)	
1	13-7-42	5	557	10	29	44	72	58
2	14-7-42	4	447	4·5	33	108	95	90
4	24-7-42	4	406	4·2	19	91	95	90
5	24-7-42	6	517	5·7	19	97	97	89
6	27-7-42	8	369	5·2	20	86	87	71
22	3-2-43	5	563	8·7	30	12	79	63
24	5-2-43	5	897	12·5	31	45	77	73
25	13-2-43	7	389	10·3	25	168	44	38
26	13-2-43	—	Nil	—	—	2	129	Nil
27	25-2-43	5	567	5·6	24	120	101	92
31	3-4-43	—	Nil	—	—	4	97	Nil
34	1-5-43	5	366	3·7	20	86	99	84
36	1-5-43	11	250	2·5	14	81	116	99
39	1-5-43	11	406	4·6	16	123	98	88
42	5-6-43	8	297	3·0	16	122	107	89
46	1-7-43	11	269	4·5	19	151	72	60
48	4-7-43	8	310	3·3	12	41	79	62

Babul Planting in Tank Beds

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Timber for agricultural purposes and fuel are in short supply and are getting scarce, while the demand for them is on the increase, consequently the price of timber and fuel is tending to soar high and in some cases beyond the capacity of the poorer people. Transport is at present restricted, no doubt, but that alone is not the only factor contributing to the scarcity. Wood is being used at a faster rate than the forests and the village sites can cope with. It is therefore necessary to think of methods of increasing the supply of wood immediately. The obvious remedy is planting trees. The trees selected should preferably be capable of growing without much of attention and cultivation, in lands that could not be cultivated economically. It is suggested that Babul (*Acacia arabica*) would answer the purpose and be ideal.

Babul is able to stand extreme droughty conditions and is classed as a xerophyte The tree has a deep root system and the leaf and leaflets are small and the amount of water transpired through the leaves is therefore limited and naturally the tree makes only slow growth. The tree is also able to stand water stagnation to a considerable extent as is evidenced by its growth in many tank beds in the southern districts, particularly Ramnad, and this is rather a curious trait. The babul wood is hard and makes excellent agricultural implements and first class fuel. The babul fruits, that is the pods, contain about 16 % of protein on a dry basis and are good

cattle feed. Gum exuding from the bark is largely used as a paper paste and in medicine. The bark has a little tannin.

Site suitable for planting Tank beds, tank and canal bunds and water ways may be sown to babul in December-January when water recedes to the low lying portions of the tank near the bund. The planting may be commenced on the forshore and extended gradually inward. Planting on the canal and tank bunds may be done just before the rainy season.

Sowing The seeds have a hard coat and require to be abraded before sowing. The seed may be mixed with 30% of its weight of sand, spread over a hard floor and a thin stone slab, like Cuddapah slab, moved over it to lightly abrade the surface. The seeds may be further soaked in water for 24 to 36 hours just before sowing as an additional precaution. Small holes may be made in the ground 10 feet apart, 2 to 3 seeds laid there and covered. No preparatory or after cultivation is necessary. When the plants are about 6 months old, the seedlings may be thinned out, leaving a plant in each hole. No irrigation is necessary, though pot watering during the first summer season would be helpful. The plantations should be guarded against goats which nip off the young plants and prevent them from establishing and making growth. The plantations begin to yield pods from the 4th year onward and fuel and timber from the 10th to 15th year. The growth of the plantation depends on the fertility of the soil and its depth. When the growth is vigorous alternate rows of young trees could be removed in the 8th year and space allowed for the spread of the remaining trees. The thinnings would provide a small quantity of fuel. The plantation may be ready for cutting in 15 to 20 years. It is realised that babul is a slow grower and for immediate requirements quick growing trees should be the preference.

Plantations could be easily raised in most of the tank beds which are likely to be dry for a part of the year at least and where during the season the depth of water standing would not be considerable. The cost of raising and maintaining the plantations is negligible and there are vast possibilities waiting to be explored. Such plantations would in course of time be able to meet the large demand for timber for agricultural implements, door frames, fuel etc. A good quantity of valuable pods would also be available during the period of growth. The plantations would not interfere with the storage of water in the tanks. The plantations would afford shade in summer for cattle grazing in the tank beds. The plantations would yield additional revenue, where none existed before.

Most of the tank beds, tank and canal bunds suitable for plantations are Government property and the departments in charge may be entrusted with the task of raising the plantations. Where suitable village panchayats or grama-sangams are functioning, they could take up the planting and maintenance work and the concessions granted for the planting of trees in porombokes may be extended also to the planting of trees in tank beds, tank bunds etc.