

MISCELLANEOUS NOTE

25. ROLE OF *PALAS* [*BUTEA MONOSPERMA* (LAM.) TAUB.]
LEAFSTALKS IN *BAISAKHI* STICKLAC PRODUCTION

Palas (Flame of the forest) is one of the commonest trees in the plains of India and is extensively utilised for lac cultivation. Being a deciduous species it sheds its leaves by March-April and, therefore, Glover (1937) considered its leafstalks of only negative value in lac production, since in his view the lac insects which settle on them during *baisakhi* (*rangeeni*-summer) crop also fall along with them.

Closer observations by us on heavily inoculated lac bearing trees, however, revealed that although the leaflets of the trifoliate pinnate compound leaves are shed by the end of March-April, the lac bearing leafstalks consisting of petiole and rachis, remain attached to the shoot till the end of May. These can profitably be harvested *ari* (immature) during April-May as advocated by Malhotra & Krishnaswami (1962). Average length and number per shoot was recorded to be 19.3 cm and 11.7 cm respectively (average of 100 shoots).

In order to assess the precise quantitative contribution of leafstalks, an experiment was laid out under a randomized block design on a total of 280 trees, with seven brood rates

ranging from 600 to 1800 g/tree, replicated four times with 10 trees per plot, at Kundri lac area, Palamau, Bihar. Inoculations were done in October 1973 and *ari* harvesting during the first week of May 1974. Yield record has been summarised in table 1.

It is apparent from the above table that on the average 16.5 per cent sticklac (scraped lac) has been contributed by the leafstalks (variation 10.7 to 21.8 per cent). This contribution is lost when the *baisakhi* is cropped at the time of maturity during June-July and becomes available when cropped *ari* during April-May. Malhotra & Krishnaswami (1962) recorded 41 per cent average post-April reduction in sticklac yield and thus advocated *ari* harvesting. They, however, could not satisfactorily explain the causes of this extraordinary discrepancy. The present work endeavours to point out a major source of crop loss and supports the view of cropping of lac as *ari* for the sake of sticklac production in areas of hot climate.

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TABLE 1

BAISAKHI ARI STICKLAC YIELD* FROM SHOOTS AND LEAFSTALKS

Broodlac Used per tree (g)	Average per tree yield (g)						Percent con- tributed by leafstalks		
	LAC		STICKS		SCRAPED			LAC	
	Shoots	Leaf stalks	Total	Shoots	Leaf stalks	Total			
600	1470	130	1600	502	60	562		10.7	
800	1534	232	1766	539	81	620		13.1	
1000	1580	274	1854	541	114	655		17.5	
1200	2116	370	2486	655	182	837		21.8	
1400	2255	392	2647	778	197	975		20.2	
1600	2383	400	2783	855	164	1019		16.1	
1800	2466	403	2869	965	157	1122		14.0	
Average	1972	314	2286	691	136	827		16.5	

* Average of 4 Replications.

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REFERENCES

GLOVER, P. M. (1937): Lac Cultivation in India. Proper time of harvesting for maximising yield of sticklac. *Indian J. Ent.* 24:53-57.
 Indian Lac Research Institute, Namkum, Ranchi.
 MALHOTRA, C. P. & KRISHNASWAMI, S. (1962):

... in the view of the fact that the lac insects are not only dependent on the quality of the lac but also on the quality of the wood. It is evident from the above table that on the average 18.3 per cent sticklac (scraped lac) has been obtained by the insects (yielded 10.7 to 11.8 per cent). This concentration is less than the amount of crop loss in the time of maturity during January and becomes negligible when damaged or during April-May. Malhotra & Krishnaswami (1962) recorded 41 per cent average loss/acre in sticklac in similar yield and that advocated for harvesting. They, however, could not satisfactorily explain the cause of this excessive early discarding. The present work endeavours to point out a major source of crop loss and supports the view of cropping of lac as per the rate of sticklac production in sticklac.

In order to assess the precise quantitative composition of sticklac, an experiment was carried out under a randomized block design on a total of 250 trees with seven trees per block.

Sticklac as harvested by Malhotra & Krishnaswami (1962) Average weight and number per acre was recorded to be 19.3 cm and 11.5 cm respectively (average of 100 shoots).

Class observations by us on heavily infested lac bearing trees, however, revealed that although the length of the individual pin-nac compound leaf is not affected by the infestation, the lac bearing sticklac containing of pin-nac and sticklac remains attached to the stem till the end of May. These can probably be harvested in (maturity) during April-May as advocated by Malhotra & Krishnaswami (1962). Average weight and number per acre was recorded to be 19.3 cm and 11.5 cm respectively (average of 100 shoots).

In order to assess the precise quantitative composition of sticklac, an experiment was carried out under a randomized block design on a total of 250 trees with seven trees per block.

TABLE I
 BARKHOLE FOR STICKLAC YIELD, WOOD WEIGHT AND STICKLAC YIELD

Block no.	Average per tree yield (g)						Percent loss (calculated as % of total)
	LAC		STICKS		SCRAPED		
	Shoots	Weight	Leaf	Weight	Shoots	Weight	
100	246	401	399	326	301	11.0	
150	242	400	377	304	300	12.1	
200	252	392	347	273	279	10.3	
250	216	268	228	202	207	11.3	
300	178	274	184	141	144	11.7	
350	131	176	130	108	111	17.1	
400	147	150	102	85	86	10.7	
Average	193	314	238	191	194	12.2	

* Average of 7 blockings.