

EXPLOITATION AND STIMULATION RECOMMENDATIONS IN SRI LANKA

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In Sri Lanka nearly 60% of the rubber plantations are still under clone PB 86 while the balance consists of newly recommended RRIC 100, 102 and 121 clones. However, in our Grade 1 recommendation for estates which are mainly under the management of private companies since July 1992, we recommend the planting of PB 28/59 and PB 217 as well. In the case of all clones except PB 28/59 and PB 217 the normal recommendation for exploitation is S2, d2 tapping system from the second year of tapping. So far, we have not recommended any exploitation method to extract latex from the rubber tree at an intensity above 100%. This is because the Hevea tree is also a biological specimen and hence the availability of latex in the tree for regular extraction is limited. When exploited over 100% intensity, even with the application of extra fertilizer, the tree will be over exhausted and undergo tapping panel dryness. Further, during the 1st year of tapping, S2.d/3 (67% intensity) tapping is recommended for all clones, except PB 86.

Stimulation

The climatic condition in Sri Lanka does not favour stimulation of trees with Ethrel. The director, Rubber Research Institute of India mentioned in one of his speeches that they get a dry spell of 8 months under the climatic conditions in India. But in Sri Lanka we have 2 Monsoons during May/June and October/November months and hence chances of the Ethrel getting washed away is rather high, thereby, giving poor results.

The national recommendation for Ethrel application is strictly limited to C & D Panels of rubber trees and never on the virgin panel. Frequency of application is 4 rounds/year of 2.5% or 2 rounds/year using 5% Ethrel. The tapping system under these circumstances is also S/2, d/2 as in the normal case.

Shortage of tappers

This problem is very acute even in Sri Lanka today and hence in order to minimize this effect, RRISL recently recommended S/2, d/3 tapping system for group 1 RRIC clones. This is allowed as a special measure to overcome the above problem where 2.5% Ethrel is applied four times a year even on the virgin panel. If it is

calculate carefully, this method extracts the same quantity of latex given by S/2, d/2 tapping system without stimulation. In other words this special recommendation too does not extract any latex over and above the conventional 1/2S d/2 exploitation method. However, it must be emphasised here that this exercise is meaningless if rain guards are not fitted to the plantation because if a days crop is lost in this S/2, d/3 tapping system the real loss is as large as the loss of 1 1/2 days crop under the normal S/2, d/2 tapping system. When the tree is rain guarded even the chances of Ethrel getting washed away by rain water is reduced.

HLE technique

A stimulation technique known as Hyperdermic Latex Extraction was tried out by a Malaysian Company under the guidance of RRISL scientists in the Dartonfield Estate owned by the RRISL. In this technique instead of Ethrel, Ethylene Gas is used on the bark of the tree by means of a rubber Jacket fitted to the tree and the tree is to be puncture tapped once in 7 days. When this experiment was conducted in Dartonfield estate by a representative of the Company, it was a complete failure. During this experiment not only the recommended dose of Ethylene Gas but even 4-5 times of that was used by them to obtain the expected high yields from the trees. but the results were very disappointing and:

- a. After a trial period of about 6 weeks it was observed that the gas treated area of the bark infected and dead and there were even maggots on this affected area.
- b. The yields recorded were little better, during the first 2-3 weeks. But, declined drastically since then and were even below the yields recorded by the unstimulated conventionally tapped trees.
- c. The method was not economical and the dosage of Ethylene gas used even to get these results was far in excess to what was recommended in their advertisement.

On a request made by a Plantation Management Company, who were interested in importing large number of these units into Sri Lanka, a decision was taken at Ministry of Plantation Industries to permit them to carry out a slightly modified trial of the technique in one of their estates on 200 rubber trees only, with the RRISL monitoring the yields. the results of this experiment after a period of nearly 12 months was also unsatisfactory and twenty seven of the HLE stimulated trees were found to be trunk-snapped due to the attack of the fungus *Fistulina* which is normally attacking deadwood. The yields recorded were as bad as in the above case and hence this experiment has now been terminated by this Company. Hence I re-iterate here that the

HLE technique is neither recommended by the RRISL for rubber plantations nor used in the rubber plantation anywhere in Sri Lanka on commercial scale.

If any member country seek our stimulation recommendation published in leaflet form please do not hesitate to request me for a copy.

With regard to exploitation at a girth below 50 cm (20"). I wish to inform you that all the trials carried out by RRISL during the past few years have shown very clearly that opening up of trees at a girth of below 50 cm at a height of 48" from the union is not economical. After a short period the yield declines and the girthing of the tree is badly affected. Hence the RRISL does not recommend opening up of trees below 50 cm girth. However, in order to recover crop losses due to rain interference a maximum of 6 days recovery tapping is allowed in high yielding months of the year. Even this is not recommended near wintering time and under drought conditions. These are the only exploitation and stimulation procedures followed by the rubber estates in Sri Lanka and I assure you that anything more than this is not recommended by the RRISL or allowed to be used in plantations in Sri Lanka.