DODDER MENACE : A THREAT TO RUBBER PLANTATIONS

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A large number of plant species belonging to different genera and families are plagued by the parasitic infestation of the noxious weed Dodder (Cuscuta sp. belonging to Convolvulaceae). Of late it has been observed that the flowering plant parasite has encroached into the rubber plantations also infesting the

cover crop *Pueraria Phaseoloides* and rubber tree *Hevea brasiliensis*.

Close observation of plantations with young rubber may reveal thick meshes of entangled leafless vines with golden yellow colour, growing over the thick bed of Pueraria growth. This apparently

in nocuous growth is nothing but the noxious parasitic weed 'Dodder' or 'Cuscuta'. This plant is devoid of leaves and roots and is a total stem parasite having a wide host range including many cultivated species and few plantation crops. The Pueraria vines and petioles are held firmly together in a langled mass. The parasitic colony circular in outline at first will grow outwards increasing in circumference. As the colony advances towards the periphery, the central portion dies out along with the host. The growing tip of the parasitic vine entwines the Pueraria vines and petioles as if for support and once it comes into contact with the host it coils repeatedly around it so that the host tissue is not visible outside. Once the vine comes into contact with the host, on the surface facing the host large number of tooth like projections or prohaustoria are produced which later pierce the host tissue, reach the vascular elements and absorb assimilates, water and minerals from it. The

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enough heat to the sheets for drying. Every daydried sheets are removed from the lowest rack allowing systematic shifting of sheets from the top to bottom. During this process, vacant rows at the top are filled with wet sheets. Firewoods of rubber, small wooden pieces, coconut husk and about 8 to 10 coconut shells etc are the fuels normally used. These compact driers can be easily accommodated either in the open courtyard or even on terrace. It can even be put on the floor specially made for it in the rubber plantation. Sufficient precaution is essential to avoid water logged areas. Usually sheets are satisfactorily dried in three or four days.

The modern driers are the results of five years' continuous research by its manufactures m/s. Low Heat Driers (p) Ltd., Kizhakkambalam, Ernakulam, Kerala. Rubber Board has completed its evaluation and approved the marketing on a commercial scale. The Board has also sanctioned subsidy at the rate of Rs. 3,000/- each for the two models viz., RRSD160 and RRSD 240.

NEW MODELS

If any manufacturing defect is detected, it will be rectified free of cost. The manufacturers have a very effective network of after sales service. Formalities have been completed for the approval of two new models viz., RRSD 96 and RRSD 320. The new model RRSD 96 developed recently by them will be of much help to the small rubber growers.

Though new to the rubber plantation sector, this novel experiment will pave the way to large scale production of good quality sheets. The modern drier can well be defined as 'mobile' as it has the added advantage of shifting it to anywhere in the plantation. Only very little space is required for its accommodation.

Through we speak very high of fuel saving now-a-days, it is a fact that a project like this which developed a fuel saving technique is denied of any financial assistance by any nationalised bank. Imposing tax on a fuel efficient smoke house does not augur well. Conventional smoke houses are exempted from taxes and at the same time these modern driers which are designed and developed for the same purpose are subjected to taxation.

The manufacturers have sofar marketed more than 50 driers. They claim that all their customers are highly satisfied with the turn-out. It is even claimed that not a single smoke house is kept idle due to malfunctioning or manufacturing defect. ●

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host gradually dies out. During April-May the parasitic vines flowers profusely. The seeds germinate and help in the spread of the plant.

The rubber tree infestation was noticed mostly on the green stem and petioles on the lower branch on the border of rubber estate. The vine coiled round green stem, petioles and the small stalks of the three leaflets. The vines adhere firmly on the host tissue sending haustoria or sucking roots into it. The affected leaves do not fall, but remain on the plant providing nourishment to the parasite for long.

CONTROL MEASURES TO BE ADOPTED

1. Against Dodder on Pueraria

The colonies of the parasitic plant are to be traced as early as possible, anyway before commencement of flowering. The growth along with Pueraria from top to ground level has to be cut including healthey Pueraria upto 0.75 m width alround, the whole has to be heaped in the centre and burnt after sprinkling a little kerosene. Bits of Parasitic vines may not be allowed to fall in other parts, so as to check spread to healthey areas.

2. Aganist Dodder on rubber

The lower branches of trees on the border of estates with other hosts of Dodder like Mallotes sp. (in Malayalam - Vatta) sp. coffee plants etc. growing nearby and young trees in plantations with Pueraria as cover crop are to be examined throughly well for the persence of any infestation by Dodder. If the vines yellow or greenish yellow in colour are traced then the whole of the green shoots with the parasite are to be cut and removed and burnt in a safe place taking care not to contaminate other healthy plants or Pueraria. No trace of the parasite should be left on the host lest it may grow again from it. ●