


Wind Damage In Rubber Plantations: Preventive Methods.

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ind damage is a very serious problem of rubber plantations. Some clones like Tjir 1, RRIM 605, RRIM 623, PB 311 are inherently prone to wind damage. Clones like P B 86, PR 107, PB 5/51 and GT 1 are reported to be comparatively wind fast. Wind damage is observed in rubber plants of all age groups. The growth of young plants in exposed and wind-lashed areas becomes very much stunted. The leaves of plants in such locations are observed to be lacerated and crinkled and the crown becomes sparse and open.

The wind damage occurring in older plantations is mainly grouped under four heads viz. uprooting, trunk-breaking, branch-snapping and slanting of trees.

1. Complete up-rooting of plants

It is noticed that complete uprooting of plants by wind-action is generally

happening owing to improper development of the tap root. In order to prevent it, selection of plants at the time of planting is a must. Plants with healthy and straight-growing tap-root should only be accepted for planting. The plants with multiple roots, bent-roots etc. should be rejected. In the case of polybag plants the tap root has to be examined at the time of planting and the bent/coils, if any, should be removed carefully with least shock to the soil-core. The polybag plants should be planted in the pit only thereafter.

In certain pits after the recommended standard depth of 75 cms, hard lateritic stoney layer is noticed. In such cases the depth can be increased to 90 or 120 cm by using a crow-bar and the bottom of the pit can be tapering like a bucket. This provides congenial soil conditions for the proper down ward growth of the tap-root.

Generally under normal conditions of stress it is seen that no plant is uprooted which has a well developed strong and deep penetrated tap-root and properly developed laterals.

2. Breaking of main trunk

The breaking of main trunk happens due to weak points arising out of insect-attacks, holes, inherent wood characteristics of the clone and defects developed due to belated pruning of side branches during the course of development in the main trunk. If timely pruning of the unwanted side-shoots in the early years of development, with proper disease control measures is undertaken this type of wind damage can be eliminated to a considerable extent.

If the breakage occurs in the tapping panel region, as in the case of clone PB 311 the tree is beyond repairs. The other clones sus-

ceptible to trunk-snap are RRIM 501, RRIM 603, RRIM 605, RRIM 614 and RRIM 623.

3. Branch snapping

Branch snapping is rare in plantation having plants with a well balanced canopy with circlet of branches in a spiral form. The main trunk should grow straight and must have comparatively, more vigour and dominance than the side branches. In this context, the practice of branch induction by leaf-cap method when the plants attain 2.5 to 3.00m height is stressed. "Y" type branching, if any, formed due to shoot-rot or suppression of the growth of terminal bud or any other reason should be correctively pruned off in the early years itself for the proper shaping of the canopy, otherwise severe branch-snapping will occur in future.

In case, where 'Y' type branches are developed bracing using iron/wooden rods etc is a practice in certain estates, but this is an expensive task.

4. Slanting of trees

Due to wind action slanting of trees is of common occurrence. In such trees the root-system will be much damaged and thereby results in reduction in yield.

Unbalanced canopy, improper root anchorage, slushy nature of soils are the reasons for occurrence of this type of damages. If drainage is improved this type of damage can be minimized to an extent.

In the case of slanted trees propping can be done.

Excessive fertilizer application should be avoided.

Clones like RRIM 105 respond positively by vegetative growth to nitrogenous fertilizers. The leaf size is also seen expanded considerably compared to the normal and the branches etc. become pendant. Such plants even though exhibit a higher volume of biomass are prone to wind damages in rainy seasons. Hence excessive application of fertilizer should be avoided. As far as possible soil and leaf should be tested and fertilizer application should be based on the analytical results. In case where it is difficult to adopt this, blanket recommendation can be followed. Pruning of the canopy to maintain a regular canopy balance may also be attempted.

Wind belt

Wind belts are made by planting of wind-resisting,

tall-growing trees in one or two lines (avenues) along the border of the plantation, one or two years ahead of starting of rubber plantation in areas which are exposed to excessive wind. The tall growing trees selected should be of such types like *Ailanthus triphysa* (Pongalyam), *Casuarina equisetifolia*, *Tectona grandis* (Teak) *Leucaena luciciphala* (Subabul) silver oak etc. which are having a vertical growing habit. Planting of such trees in one or two lines which form a barrier may reduce the impact of wind to a considerable extent in such plantations.

Growing of intercrops like banana is also observed to reduce the damage to young plants due to strong winds.

Insurance of rubber plantations

Insuring of the rubber plantations under the insurance scheme drawn-up by the Rubber Board in collaboration with the National Insurance Company Ltd. compensates the irrevocable damages as per the schedule of compensation fixed. For this purpose the concerned regional offices of the Rubber Board may be contacted.