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RESTING OF TEA FIELDS

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The pruning of a tea bush is a very drastic operation that subjects the plant to a tremendous state of stress. Recovery from such an operation is dependent on the state of the health of the plant, as well as on the amount of reserves the bush had built up over a period of time. A tea bush that is in a healthy state would store a certain amount of the products of photosynthesis as reserve food, for times of stress. A bush that is in a normal healthy state could put away adequate reserves, despite the normal harvesting operations that goes on at approximately weekly intervals. The continued harvesting of the flush by itself subjects the tea plant to a small degree of stress and the lighter the plucking, the lighter would be this degree of stress.

The amount of reserves that the bush is capable of storing is dependent on the rate of growth of the bush, which is in turn determined by climatic factors. Tea fields at low elevations grow faster and consequently, the demand on the synthesized food for growth and maintenance is greater with only a very small proportion left to be stored as reserves. At low elevations, tea leads a "hand to mouth existence" than in the cooler regions. On the other hand, tea fields at higher elevations grow slowly and their demands on the synthesized food for growth and maintenance is less and a relatively greater proportion is left to be stored as reserves. Thus, there is a reasonable amount of reserve material stored by bushes at higher elevations and consequently, these withstand pruning better than those at lower elevations, which have marginal reserves to fall back during the recovery process following pruning. This is so, as long as the tea bushes are in a normal and healthy state.

Over 60% of our tea plantations are around 70 years old, if not older. Such fields have become "tired" due to natural process of ageing as well as due to various deficiencies in management inputs and thus have reached a stage where "the old work horse cannot be kept flogged to do the same old task any longer". Many such fields are being continued to be harvested, most often plucked hard and then subjected to a drastic prune, without any intervening rest. Further, those fields are subjected to such treatment, with the bare minimum of the care and attention they deserve. It has now become very critical to view this situation seriously and consider the resting of such tea fields for varying periods of time, prior to pruning. The style of pruning itself has been too drastic and too low, especially in the mid and high elevation tea growing districts and tipping heights too have been far too low. With the result, there has been hardly a chance for good frame development.

When tea bushes are subject to various other additional forms of stress, such as exposure to prolonged periods of drought, or to the incidence of pests and diseases, they would not be in a position to accumulate even the limited quantity of reserves, as would be possible under normal conditions. This is also the case with tea bushes that had suffered set-backs at earlier prunes, as wrong timing of the prune leading

to excessive die-back, or sun-scorch damage that would have led to the subsequent setting in of wood-rot on the frame, etc. Both the wrong timing of the pruning operation as well as sun-scorch damage would lead to the setting in of wood-rot that would gradually debilitate the frame wood. Under such conditions, bud-break following pruning would be less and the consequent frame that develops would be a smaller one, compared to the earlier size. Shot-hole borer damage could also likewise lead to avenues for wood-rot entry and lead to the debilitation of frame wood. Tea bushes that have been subject to such forms of stress have to be handled very carefully. Having gone through such stress conditions, the tea bushes would naturally not be in a fit condition to store adequate quantities of reserves to help recover in the normal manner following pruning. The leaving of lungs at the time of pruning would help to some extent; however, this by itself may not be adequate. The situation is even worse when the bushes have been plucked hard. Under such conditions, it is absolutely essential to rest the fields for appropriate periods, prior to pruning.

A tea field that has gone through a heavy cropping period (commonly referred to as the rush crop period), is in a state of "exhaustion". If the field is pruned soon after such a heavy cropping period, the recovery can be affected even further. One should never attempt to prune a field soon after such a heavy cropping phase. Even for normal healthy fields that are due for pruning, it is recommended to put off such an operation by a minimum period of six weeks, during which period the fields may be continued to be harvested in the normal manner. In the case of fields that are not in a vigorous state of health, this postponement after a rush by itself may not be adequate for a healthy recovery following pruning. Under such circumstances, it is best to rest the field completely, without harvesting, until the time of pruning. This complete rest period could range from as short as 4 weeks to as long as 12 weeks, depending on the condition of the field.

A tea bush that is being continuously harvested is subject to some degree of stress. Every flush that is harvested is a unit that had removed a certain amount of the products of photosynthesis of the plant for its own development, but is harvested before it could return back what it had earlier removed during its growth phase. At the same time, when this flush is plucked, it stimulates the growth of its axillary bud into another unit of flush, which is again harvested before it could give back its own products of photosynthesis for the maintenance of the bush. Thus there is a continuous removal of the products of photosynthesis, leaving little to be channeled as reserves. As pointed out earlier, this situation would not have any significant impact, if the bush is in a healthy state. Those that have been subject to various forms of stress will necessarily require the period of rest, so that a reasonable amount of the products of photosynthesis during such periods of rest could be channeled away as reserves.

There are quite a number of debilitated tea fields that are in this state of stress. The "man on the spot" should be able to detect such fields and allow these to rest adequately, prior to pruning. One will realize that for a field that is continuously harvested for years, the rest period of about 4 to 12 weeks is not a great sacrifice. This is particularly so when one considers the capital asset — the individual tea bush — that should continue to remain viable for several years. One should not be foolish to be tempted by the immediate returns in the form of some crop that one could get during this period of 4 to 12 weeks. This "loss" is amply rewarded by the recovery of a healthy bush that will bring in far greater returns over subsequent cycles.

One should also seriously consider resting of fields, after the prune. One should not rush into tipping a field and bringing it into bearing too early. If one is to look at the physiological processes of recovery and growth, one will realize the importance of not subjecting the tea bush into an early harvest, because if left undisturbed and allowed to grow freely, the newly formed branches, particularly the young primary branches, would be given the opportunity of undergoing adequate secondary thickening. If on the other hand the bush is brought into harvest too early, whatever products of photosynthesis manufactured by the foliage formed on the bush, would go mostly into flush production and relatively less amounts would become available for the thickening of branches and other growth requirements and development of frame. Any process checking the free growth of a shoot will retard the thickening of its stem. Tipping is the first of a series of checks that is applied to the shoots throughout the plucking cycle. As a result, the thickness of the new stems produced upon a bush that is tipped and plucked in the normal manner is smaller than upon a bush that is rested after pruning. Therefore, at this very early stage in the pruning cycle, it is preferable for the products of photosynthesis to be channeled towards the development of the frame and then bring the field into harvest gradually. This is again a specific recommendation for those fields that had been subject to various forms of stress over the past cycles and where the frames have got badly debilitated. This recommended strategy would permit the recovering bush to reform a reasonable frame and maintenance foliage and thus remain productive for years to come. The suggested rest period is to delay harvest by approximately six to eight weeks, compared to the normal healthy fields.

As an initial step, the worst fields that have been debilitated on the estate should be permitted to undergo this rest phase, both prior to pruning as well as following pruning. Pruning should not be too drastic and when necessary, the cuts should be just below the "knots" ("Kolunthu mudichchi"). Tipping should be done about four to six leaves above the prune level. One should also ensure that a balanced fertilizer mixture is provided to help re-build a good frame with adequate maintenance foliage. A simultaneous infilling programme should be adopted, preferably in blocks, having removed the weaklings and passengers. It is preferable to identify such patches early, so that the bushes could be uprooted on time and the block planted to a suitable grass for at least two years.