

STUDIES IN BLISTER BLIGHT CONTROL

III. A warning regarding the possible dangers attendant on the continued adoption of pruning into the dry weather as an agricultural control measure.

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Up-to-date one of the most successful agricultural control measures against blister blight has been that of adjusting pruning programmes so that badly attacked fields are pruned at such a season that recovery takes place during the driest and most mist-free period of the year. This practice has now been almost universally adopted, on our recommendation, by most up-country estates which suffer severely from blister blight, with the result that, in most cases, bushes recovering from pruning are able to reach the tipping stage before blister blight infection builds up. This means that the bushes start their cycle with their initial canopy of maintenance foliage more or less intact and sufficiently mature to resist infection. Consequently, however, serious an attack may build up subsequently this initial canopy will remain unaffected and although crop may suffer the bushes themselves are unlikely to be seriously endangered.

Unfortunately pruning into the dry weather has itself a number of disadvantages from an agricultural standpoint. As a result of the general pre-occupation with blister blight during the last few years it seems likely that many Superintendents may have tended to overlook the possible dangers attendant on the continued adoption of this practice. The question is one of particular importance at the present time since many fields will become due this season for their second pruning into the dry weather with the consequent likelihood of cumulative ill-effects reaching serious proportions. For this reason, therefore, it appears most advisable that the Superintendents of all estates

which are forced to prune into the dry weather, on account of serious and prolonged blister blight attack during the rest of the year, should be made fully aware of the attendant dangers and what practical steps may be taken to either minimise or overcome them.

The illeffects resulting from pruning into the dry weather are probably mainly ascribable to the following causes:—

(1) Direct Sun Scorch.

Exposure of horizontal branches to the direct rays of the sun for long continuous periods will cause intense heating of the upper surface which may bring about death of the bark and underlying cambium. These scorched patches of bark subsequently crack and permit entry of canker producing fungi. Drastic reduction of shade, such as has been carried out on many estates, will naturally accentuate this danger.

It seems probable that sun scorch is one of the principal factors responsible for bringing about the seriously cankered conditions of the St. Coombs No. 10 field, since this field is one that has been pruned continuously into the dry weather from its original planting. Furthermore, this field must have been relatively unshaded during its earlier years.

In order to reduce further damage from this cause it is suggested that all prunings should be piled back on top of the bushes and allowed to remain there for at least one month after pruning.

(2) Drought.

The effects of drought are sufficiently well known for further description to be unnecessary. However, it should be pointed out that bushes deprived of their leaves, as at pruning, are much less capable of extracting water from the soil than are bushes carrying a normal canopy of foliage. This is because the capillary pull in the vessels is destroyed with the result that an increased suction pressure has to be maintained in the roots if they are to succeed in obtaining water from the soil against the same external forces. Under drought condition, therefore, a pruned bush is likely to be capable of obtaining rather less of its water requirements from the soil than could an unpruned bush. Accordingly, the effects of drought are liable to be accentuated with pruned bushes and may be noticed in the dying back of branches from the pruning cut inwards.

The reduction in water extracting power of the pruned bush may also be expected to increase the effects of direct sun scorch, since damage from this cause is unlikely to occur if sufficient water is passing through the exposed branch.

The slowness of the recovery growth which occurs under drought conditions is, however, the factor likely to be of most immediate concern to the practical planter. Fields pruned into the dry weather may take as much as a month or more longer to reach the tipping stage, which entails the loss of a complete month's crop during the course of the cycle. This possible loss is, by itself alone, a very cogent reason for attempting to revert to our normal pruning programmes as soon as possible. In fact, a few of the least badly attacked estates have already done so, preferring to accept a possible loss of crop from blister blight rather than an almost certain loss due to delayed recovery.

(3) Forking.

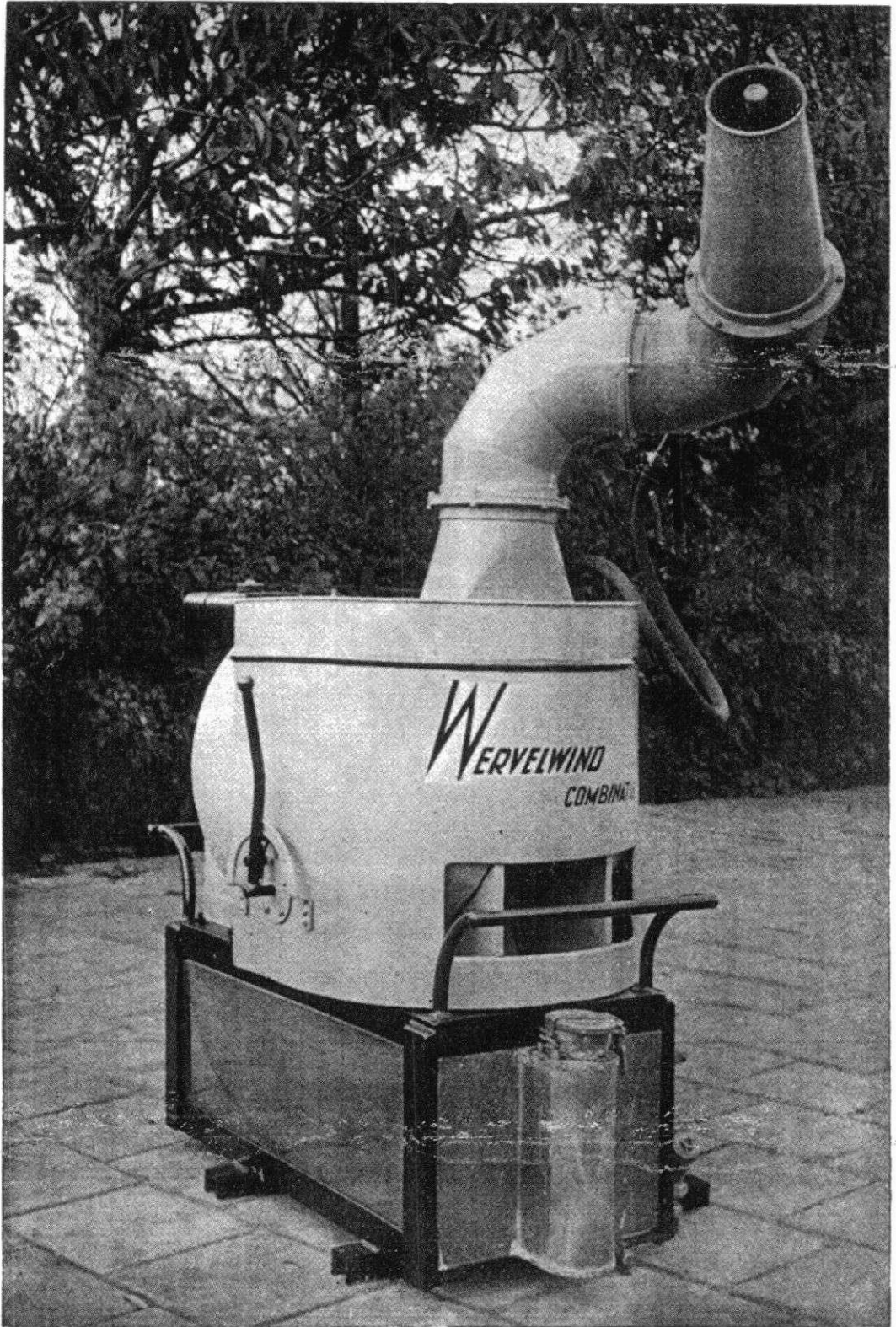
Leaf-fall is normally forked in about one month to six weeks after pruning. At the present time much of this forking must be carried out during the dry weather with the result that the soil surface is broken up and the drying out of the soil and consequent danger of drought much increased.

Recommendations.

Unfortunately such precautions as can be suggested at present, can only be considered to go some way towards minimising these dangers. They certainly do not eliminate them in their entirety. The practical steps to be taken in this matter would appear to be as follows:—

- (1) Protect pruned bushes from the direct sun by piling up prunings on top. Manna grass or jungle loppings can also be used for this purpose as has been the usual practice in N. India after a severe prune.
- (2) Do not fork in pruning leaf if there is danger of drought ensuing.
- (3) Stop any further drastic cutting out of shade trees. Shade should always be controlled, not eliminated. In this connection the type of canopy to aim at would appear to be a light feathery one which permits the penetration of broken up sunlight.

In conclusion it may be earnestly hoped that a successful outcome to our large scale spraying experiments on tea recovering from pruning will soon render it possible for estates to abandon pruning into the dry weather as a blister blight precaution and revert to their normal pre-blister blight programmes.



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