

BLISTER BLIGHT-PROPRIETORS' VIEWS.

G. K. NEWTON.

Approximately one year ago I was asked by the Director of the Tea Research Institute to compile a paper setting out the views held generally by members of agency houses on the effect of blister blight on tea estates in Ceylon, as affecting costs and capital value. At that time I expressed my thanks to those gentlemen associated with agency houses who had been good enough to assist me by submitting their views and once again I would like to express my appreciation for their continued co-operation in helping me to compile this paper.

Last year I indicated the generally accepted view that blight attacks on estates up to 2,000 feet in elevation were not causing apprehension, except in small areas. The mid country zone, 2,000—3,999 feet, was one where the intensity of attacks varies very considerably between estates and even between different fields of estates according to situation in relationship to mist belts, cloud formation and rainfall intensity. The upcountry zone, being tea planted at 4,000 feet and above was considered to be the most vulnerable; these general observations once again being recorded by interested parties. Irrespective of elevation it is now a recognised fact that estates situated where rainfall is recorded and mist prevails during the north east monsoon period only are less affected than properties where rain falls and there is mist during both monsoons. Last year I referred to share values reflecting this feature, which factor has been if anything emphasised over the past twelve months' transactions.

Without exception, my advice is to the effect that crop losses cannot be calculated to any degree of accuracy in terms of poundage per acre since so many varying factors have to be taken into consideration; however, there seems to be a generally accepted view that crop losses are being sustained, estimated at 5—15% on mid country estates, and for upcountry properties 5—20%, or perhaps more in the worst affected areas.

Another factor of a disturbing nature reported from several quarters is increased activity of meadow eel worm where blister blight is very active. Indications are that in areas where eel worms have always been present, their activity becomes intensified with blister blight attacks which reduce the general health of the bush, allowing the other pest to get a greater hold.

Probably the chief complicating factor is occasioned by the somewhat heavy flushes experienced following severe blight attacks, which, in some degree, offset the loss of crop but cannot compensate for the reduction in the physical condition of the bush. Loss of vitality appears to be taking place as the blight consistently

attacks, causing defoliation, after which reserves stored up in the plant itself have to be used in excess of normal requirements to assist in refoliation. This is an aspect I have no doubt scientists will be dealing with later, but one of serious concern to estate owners as reduction in the vigour of bushes can only lead to reduction in the value of the property itself, some of the more pessimistic being of the opinion that the worst affected estates may deteriorate to such an extent that eventually they become uneconomic units.

Preventive measures adopted so far have been to restrict pruning to within a few months of each year, whereby tea recovers in the dry weather period.

While tea planters, visiting agents and other authorities agree this practice is necessary under existing conditions, and its introduction on advice by the Tea Research Institute served a useful purpose, the sooner pruning into wet weather can be re-introduced the better.

There are many objections to pruning fields continually, cycle after cycle, into dry weather; the old programmes of pruning into the monsoon (or alternate dry and wet weather programmes) have proved their suitability by long usage.

Proprietary interests in many cases have adopted a policy of resting badly affected tea for varying periods; this seems to have done considerable good, but tea out of plucking is a charge, and not a revenue earner, being an added factor for production cost increase.

Some proprietors have already adopted the system of protecting tea recovering from pruning by the use of prophylactic sprays. Reports indicate they have had their reward. A few experimental areas where tea has been sprayed while in plucking show remarkable results of crop increase. So far, however, this has not become a general practice as the majority have been awaiting the result of experiments carried out under the guidance of the Tea Research Institute.

Later this morning we shall no doubt be given the latest information in regard to prophylactic sprays and dusts, which have been under examination by the Tea Research Institute, as well as various types of machines for use in crop protection.

If proprietary interests can be satisfied that their tea may be protected against blister attack by chemical means one immediately has to consider the cost of such projects. A number of figures for spraying tea have been produced, which seem to average between Rs. 2 and Rs. 3 per acre per spraying, depending much upon the terrain of the land and availability of water. The cost per pound must of course vary considerably, according to the yield per acre, but from a number of figures I have taken out it would seem to vary between 5 and 8 cents per pound per annum for spraying (for the vulnerable wet period of 6 months) pruned areas only.

Costs for protecting tea recovering from pruning are calculated without the requirement to recruit more labour, but when protection for the whole area is made a requirement additional labour has to be considered. I have taken out figures in very close detail in respect of this factor, to which I will not refer here as too much time will be taken up. My calculations are based on the employment of an additional 1/8th male adult per acre as a requirement for the work of spraying to be done. Spraying will be for a period of, say, 6 months only, but employment has to be found for the additional labour over the balance of the year, and the wives and children of the labourers concerned require to be employed. This requirement amounts to a somewhat formidable figure taking into consideration additional statutory requirements given under:—

- (i) Medical aid.
- (ii) Feeding children.
- (iii) Education.

(iv) Maternity benefits.

(v) Holiday pay.

Using calculations for recently increased rates of pay, the employment of men on spraying only would amount to 17 cents per lb. The employment of these men over a whole year will amount to 21 cents per pound, and the employment of the men with their wives will amount to 30 cents over the year on estate producing 600 lbs. per acre. In addition to this, I calculate another Rs. 500 per acre as a capital requirement for the construction of additional accommodation on Government Plan No. 91.

My intention in quoting figures without allowance for protection increasing yields is to draw attention to the additional cost proprietors have to face if they wish, or find it necessary, to protect their tea for the future, and it must be borne in mind that these calculations are based on labourers' wages at existing rates. In addition to the preventive methods by spraying with machines operated by labourers, we have the alternative of the use of a dust blown out by a mechanically driven machine. Whatever method is adopted additional cost has to be faced, if crops and capital values are to be maintained for an area of 100,000 acres of Ceylon Tea estimated to be severely affected, and up to 300,000 acres less severely affected. I previously mentioned the generally accepted view that crop is being lost, and probably the last south west monsoon period has been the most severe so far.

Last year I gave Ceylon's production figures from 1944 to 1948, this year I can record 1949 and in round millions they are —

1944	—	273	millions.
1945	—	230	..
1946	—	290	..
1947	—	287	..
1948	—	296	..
1949	—	298	..

Artificial manure applications must have assisted greatly in maintaining the Island's crop level, after the arrival of blister blight in 1946, and it is interesting to note that imports of artificial manures into Ceylon were; for 1946, 1.2 million cwt., 1947, 1.3, 1948, 1.6, 1949, 1.7, and 1950, 1.6. All these artificials did not go into the tea of course, but the increase from 1947 goes to illustrate higher applications following decontrol, which might have resulted in heavier tea crops for the Island, but for the limitations of the blight.

This season there was the promise of a record output from Ceylon, production to the end of June being 173 millions; with the average monthly output of 28.8 millions. After the arrival of the south west monsoon however, crops from the blight affected areas fell off to an alarming extent, July output being 17.7 millions, August 18.4 millions, and September 18.8 millions.

During these three months on estates where the yield per acre was reduced in extreme cases on some fields to 7—10 lbs. an acre, there are records of monthly cost of production showing up to as much as Rs. 5. per pound or more. This of course levels out over the whole year, but cannot be ignored as a cost-increasing factor.

Since the industry has been going through a period of prosperity, recent results have been favourable, and boards and proprietors have been able to set by adequate reserves as well as taking profits. Had it not been for this fortuitous circumstance I am afraid the position for many producer interests would have been entirely different.

Without doubt blister blight is affecting capital values and production costs. Some producer interests favour abstaining from chemical protection as being

only a palliative; they want their estates replanted in blight-resisting clonal material. The cost of such a project is worthy of close study before crop protection of our existing tea is rejected. Many estates have cropped tea for well over half a century where it seems doubtful if the soil can sustain replanting, without a long period of rest and building up.

Investigations into blight-resisting types have not been extensive, as the majority of working planters have their hands full with current estate affairs, without such additional work. However, where experiments are being carried out results are promising. Tea supplying by methods practised in the past has been almost entirely suspended, protection of young plants dotted about here and there being impossible in practice; where large areas have been replanted protection by spraying has been done and the supplied areas successfully established; Systematic replanting has maintained the capital value of tea properties in the past and unless it can be recommended we have another factor affecting capital values.

I know I am voicing the feelings of all those who have interests in the Industry either as agents or working planters and I say we are anxiously awaiting the pronouncements by the Tea Research Institute, which will enable those who wish to protect their tea to go ahead with programmes which have been found suitable during recent experiments carried out with the Institute's guidance.

