A REVISED FERTILIZER MIXTURE FOR NURSERIES-T 55

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At the present moment nursery fertilizer experiments are in progress, but unfortunately we are compelled by reasons beyond our control to revise the familiar T 65 mixture (Tolhurst and Visser, 1961) before results of experiments can be assessed. Ammonium phosphate is reported to have become so scarce that we must issue advice incorporating alternative forms of phosphate.

Suggested schemes are:

1 A partly soluble mixture including superphosphate and with a higher proportion of sulphate of ammonia than T 65.

Formulations of this type have been sold by several firms for some time past and are in use on many estates. We still have reservations about the ease of use and the risk of damage to plants, with a suspension of gypsum masking the completeness of solution of other components.

2 For preference we suggest splitting the fertilizer programme; phosphate to be mixed with the nursery soil in the preparatory stages, with other nutrients applied in solution. This method has been in use on a few estates in Ceylon for several years, and the inclusion of phosphate in the soil mixture has been shown in East Africa (Green 1964) to have a marked beneficial effect on rooting efficiency. An additional advantage from mixing is that the soil itself is more likely to be broken into crumbs and freed from stones. Our observation over the years has shown that there is room for considerable improvement in the treatment of nursery soils. If it is accepted routine to compost nursery soils with tea fluff, *etc*, or to fumigate with a nematicide, then phosphatic fertilizer can be mixed with no extra effort in the frequent turning operations already entailed.

TRI Nursery fertilizer scheme

Phosphate:

6 – 12 oz superphosphate per cubic yard; or 1 – 2 oz per square yard, mixed to a depth of 6″. It is probable that the lower rate would suffice for the richer soils, *eg* jungle or patana, and for soil from adequately fertilized guatemala grass clearings, *etc.*

N, K, Mg:

Sulphate of ammonia	35 parts
Sulphate of potash	10 parts
Epsom salts	10 parts

This may be known as T 55.

Application of T 55.

Observation suggests that the rates given in the 1961 note were generous. T 55 has a higher proportion of N than the earlier mixture, and it is suggested that the rates be reduced in the early stages, particularly for clones known to be below average vigour.

1 ½ oz/gallon/square yard/fortnight, after rooting.

2 1 oz when growth enters the stage of rapid development.

3 2 oz in the last one or two months.

The usual precautions must be taken, with particular reference to ensuring complete washing of fertilizer from the foliage and free drainage of fertilizer solution from the base of polythene sleeves/bags and from the soil surface of the nursery site itself. Washing fern shade free from fertilizer solution is not a simple operation and requires considerable care if drip from concentrated solution is to be avoided.

Experiments are in hand to investigate the effectiveness of mixing fertilizers other than phosphatic types into the nursery soil. It may be that recommendations could soon be issued leading to a drastic reduction in the quantity of soluble salts to be watered on to the growing plants.

References

GREEN, M. J. (1964) Tea Research Institute East Africa, Pamphlet No 20.

TOLHURST, J. A. H. & VISSER, T. (1961) Manuring of nurseries: 2. TRI Nursery Manure: a completely soluble inorganic mixture. *Tea Quart.* **32**: 220.