*USING UREA

E. M. Chenery

At the request of the Ministry of Agriculture the TRI is passing on the following provisional recommendations on the use of urea as a nitrogenous fertilizer for tea. Planters are strongly advised to give urea a fair trial because it has every prospect of being cheaper than other nitrogenous fertilizers. The cost per unit of N is less, transport and storage costs are halved and the cost of application should also be halved. The theoretical limit of acidification of soil is 50% of that produced by sulphate of ammonia but it takes a great deal longer to reach this acidity. Provided the precautions listed below are taken it can be expected that the response of tea to nitrogen as urea will be the same as for nitrogen as sulphate of ammonia.

Urea is the nitrogenous fertilizer of the future and vast new factories have been built for its manufacture in the USA, UK, Western Germany and Japan. The technology of its use on most crops has now been worked out but for tea in Ceylon it is only one stage beyond preliminary trials. The TRI has 30 experiments comparing urea with sulphate of ammonia and calcium ammonium nitrate, scattered throughout the tea districts of Ceylon and when these have run for a pruning cycle, firm recommendations will be made. So far, yield responses for the first year in 15 experiments show no differences between urea and other forms of nitrogen and the five-year-old experiment at St Coombs confirms this.

Apply urea in the same way as for CAN (Chenery 1966) using one 100 lb bag of urea for each 200 lb of CAN, but with the additional precautions of —

1—not applying soil-wise to tea less than two years old,

2—not applying to old tea until at least six months after pruning,

3—not applying in doses of more than 50 lb N per acre — One 100 lb bag per acre of urea can be evenly applied to tea bushes by experienced labourers under good supervision,

4—using only prilled urea,

5—applying only in showery or moderately wet weather **never** during a drought — Urea is rapidly converted to ammonium carbonate on contact with soil and if the soil be hot and dry this decomposes and some of the nitrogen is lost as ammonia gas,

6—dispensing from thick polythene bags.

It is suggested that about ten per cent of the estate acreage be treated with urea, preferably in fields paired for comparison with sulphate of ammonia or CAN. The urea prills should be broadcast below the bushes ; they need not be forked in.

Urea is widely used as a foliar feed and solutions of one pound of urea per ten gallons water are quite safe, if applied in dull weather with copper sprays. It is not worthwhile spraying urea specially, because no advantage accrues over ground applications ; but during wet weather when much anti-blister-blight spraying is done then the cost of at least one soil application of urea might be saved.

Reference

CHENERY, E. M. (1966). Introducing calcium ammonium nitrate (CAN). *Tea Q.* **37** : 51-55.

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