

FERTILISER SUPPLIES

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In spite of the inevitable dislocation brought about by the war it is a matter for congratulation that during 1940 there was on the whole but little difficulty in obtaining adequate supplies of fertilisers for estate use though in the latter part of the year it was found necessary to ration potash.

The position was reviewed from time to time by an informal Committee consisting of representatives of the Fertiliser Firms, the three Research Institutes, the Planters' Association of Ceylon, the Ceylon Estates Proprietary Association and the Low-Country Products Association. This Committee made recommendations in regard to the distribution of available supplies between the different industries and the utilisation of specific fertilisers. As a result each industry was, generally speaking, able to obtain the type of fertiliser most suitable to its requirements and stocks of those materials liable to be cut off were distributed equitably amongst all concerned. Moreover, by means of the voluntary scheme of rationing introduced in regard to the latter class of fertilisers, their distribution has been spread over as long a time as possible with the result that wide fluctuations in the composition and cost of mixtures have been avoided. It is a matter for satisfaction indeed that though there has inevitably been a rise in the cost of fertilisers, this has up to the present been less than might well have been expected.

Actually in 1940 imports of all three classes of fertilisers, nitrogenous, phosphoric and potassic, shewed an increase over the average figures for the previous three years. This was particularly so in the case of nitrogenous manures, some 10,900 tons of nitrogen having been imported, an increase of approximately 20 per cent over the average for the years 1937-8-9. Phosphoric acid imports were up by about 3 per cent and those of potash about 8.5 per cent. Manuring of tea estates was well maintained, and there can be little doubt that with increased prosperity in the rubber industry considerably larger quantities of fertilisers were used for rubber than had been the case previously. In short, there is every evidence that the consumption of fertilisers in 1940 reached a record figure.

Nitrogenous Manures.—Considering in more detail nitrogenous manures, while, as stated above, there was a marked increase in the total nitrogen imported, there was necessarily a considerable change in its nature. In the years 1937-8-9 ammonium sulphate provided on the average 73 per cent of the total nitrogen imported whereas in 1940 this percentage fell to about 42. This was of course due to the fact that restrictions were imposed on the export of ammonium sulphate from the United Kingdom and this material had partially to be replaced by nitrate of soda and additional imports of groundnut cake. The increasing use of the latter manure is shewn by the fact that whereas in the years 1937-8-9, organic nitrogen constituted on the average only about 17.6 per cent of the total nitrogen imported, the proportion rose to rather more than 25 per cent in 1940 and this ratio is likely to increase materially in the near future.

With regard to the use of nitrate of soda on tea estates some nervousness was at first exhibited as to possible ill-effect on the soil which it was thought might result. The Institute felt, however, able to give an assurance that such a risk was negligible, having regard to the quantities of nitrogen likely to be applied in this form and the fact that the presence of ammonium sulphate in the mixture would neutralise any harmful tendency of nitrate of soda. It is perhaps desirable to carry this recommendation a stage further in view of the fact that in the near future supplies of ammonium sulphate may no longer be available. In such circumstances the Institute would still view without alarm the use of nitrate of soda in moderate quantities, the suggestion being that where sulphate of ammonia is not included in the mixture, nitrogen in the form of nitrate of soda should not exceed about one-third of the total nitrogen applied.* It is unlikely in view of the present stock position in regard to nitrate of soda that large proportions of this manure will be included in suggested mixtures and the question may not therefore be of very much practical importance.

The question of the continued use of nitrate of soda for tea would appear, in fact, to depend entirely on the economic factor. Such information as is at present available indicates that any *future* supplies of nitrate of soda will only be available at a greatly increased cost and this manure will then be quite unable to compete in price per unit with groundnut cake. In such circumstances, since nitrate of soda possesses no special agricultural advantage which would justify a premium being paid for its use, it is suggested that when present stocks of nitrate of soda are exhausted this fertiliser should be replaced by groundnut cake provided stocks of the latter can

* In this connection see note at end of this article.—Ed.

be obtained at reasonable rates. It is realised that this will increase the bulk of mixtures and lead to increased freight charges, but, unless and until the cost of groundnut cake advances very materially, the use of the latter will prove very much cheaper than that of nitrate of soda at the rate at which new supplies of the latter are likely to be available.

It is obvious that if nitrogen formerly imported as sulphate of ammonia or nitrate of soda is in future to be obtained from groundnut cake, the quantity of the latter required will be very greatly increased. The question is whether such quantities will be available at reasonable rates. Groundnut cake is imported from India and since the war began has decreased materially in price due to the fact that India is at present cut off from her principal consumers of groundnuts and has been left with large stocks in hand. This position may well be changed in the future due to reduced sowings of groundnut. Enquiries are being made as to the probable future position and it can only be said at present that so far advices from India suggest that large stocks are still available at favourable prices.

The question will be closely watched but it must be stressed again that while groundnut cake is available at competitive rates there is, so far as the tea industry is concerned, no agricultural advantage to justify payment of a higher figure for nitrate of soda and no one will wish in these circumstances to utilise freight and foreign exchange to obtain this commodity.

Two other minor points may be referred to in regard to the use of greater quantities of groundnut cake. It is held in some quarters that weed seeds are introduced in this manure. Examination of a number of samples by the Institute lend no support to this belief and confirm similar findings made previously by the Department of Agriculture.

Another question that has been asked is whether the use of groundnut cake in place of the mineral nitrogen will temporarily slow down crop production. To this the Institute's manurial plots can supply the answer which is that in a comparison now extending over a period of several years little or no difference in availability has been found between groundnut cake and sulphate of ammonia.

So far as ammonium sulphate is concerned the ban on exports from the United Kingdom continues and stocks are now low. It is not improbable that pending exhaustion of this stock further voluntary rationing may be introduced in order that utilisation of the balance now available may be distributed over as long a period as possible.

Phosphatic Manures.—Through superphosphate is not available, adequate supplies of phosphoric acid have been obtainable though at a somewhat increased cost and no rationing has been required. It seems unlikely that the position will change materially in the near future.

Potassic Manures.—As mentioned earlier, imports of potash in 1940 were actually about 8.5 per cent higher than the average figure for the previous three years. It may therefore be asked why rationing of this material was introduced. The position is of course that the greater part of these imports were in the earlier part of the year and later supplies were restricted and the future position became more uncertain. It was therefore obviously desirable that stocks should be conserved and used with caution. There is no reason to think that the tea industry will suffer materially from the reduced quantities now allowed.

Summing up, it may be said that on the whole the position is much more favourable than might have been anticipated would be the case after eighteen months of war. So far as the tea industry is concerned it is not unlikely that there may be some reduction in the consumption of fertilisers in the near future. This, however, may be well offset under present conditions by a greater demand from the rubber industry. It seems unlikely therefore that the Island's total requirements in regard to fertilisers will be reduced. We may have some confidence, however, that these supplies will be available at a cost not too greatly in excess of that now prevailing.

Note.—Since the above was written proposals have been made to ration nitrogenous manures as follows:—

For Tea.—The allowance of inorganic nitrogen to be not more than one-third of the total nitrogen supply and not more than one-sixth of the total nitrogen to be in the form of sulphate of ammonia.

In the opinion of the writer it will be in the interests of the tea industry to accept this arrangement.—R. V. N.