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RECOMMENDED METHODS OF FERTILIZER APPLICATION FOR COCONUT PALMS

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Placement of fertilizers has been a widely discussed subject among coconut growers. There has always been a controversy about the best method of fertilizer application. Two systems that have been widely practised are the circular trench method and the broadcasting method. In the former method a circular trench, 3 feet wide and 6 inches deep is dug round the palms at a distance of 3 feet from the bole, and the fertilizer is spread uniformly in it. The soil is turned over with mammoties or mammoty forks and then covered with the top soil. Small land owners usually add leafy matter to the trench to provide green manure and finally cover the manure circle with either dried coconut fronds, or with a layer of husks. In the broadcasting method the fertilizer is spread over the entire area between rows of palms followed by the harrowing of the land to crush down the weeds and turn over the surface soil. In this method usually each square receives an amount of fertilizer equivalent to what is recommended for a single palm.

An experiment carried out by the Coconut Research Institute on a light sandy loam soil at Bingiriya has shown that the method of broadcasting is as efficient as circular trench manuring. Though the cost of application is higher in the circular trench method, yet it has been more popular than the broadcasting method, possibly because the system has been traditional.

In a recent field experiment carried out on a lateritic gravelly soil at Nattandiya, it was found that the much cheaper method of surface application of fertilizer round the palm, in a 3 foot wide circular strip, 3 feet away from the bole followed by digging it over into the soil, is as effective as the traditioal circular trench system. Under this type of soil conditions however broadcast application of fertilizer in the entire area of the plantation was found to be less efficient, than both the circular trench method and the method of spreading round the palm.

In consideration of these facts, the Soil Chemistry Division of the Coconut Research Institute recommended in 1960, that on flat or gently undulating lands, the fertilizer be spread 3 feet away from the base of the palm in a 3 feet wide circular strip and forked into the soil with mammoty forks.

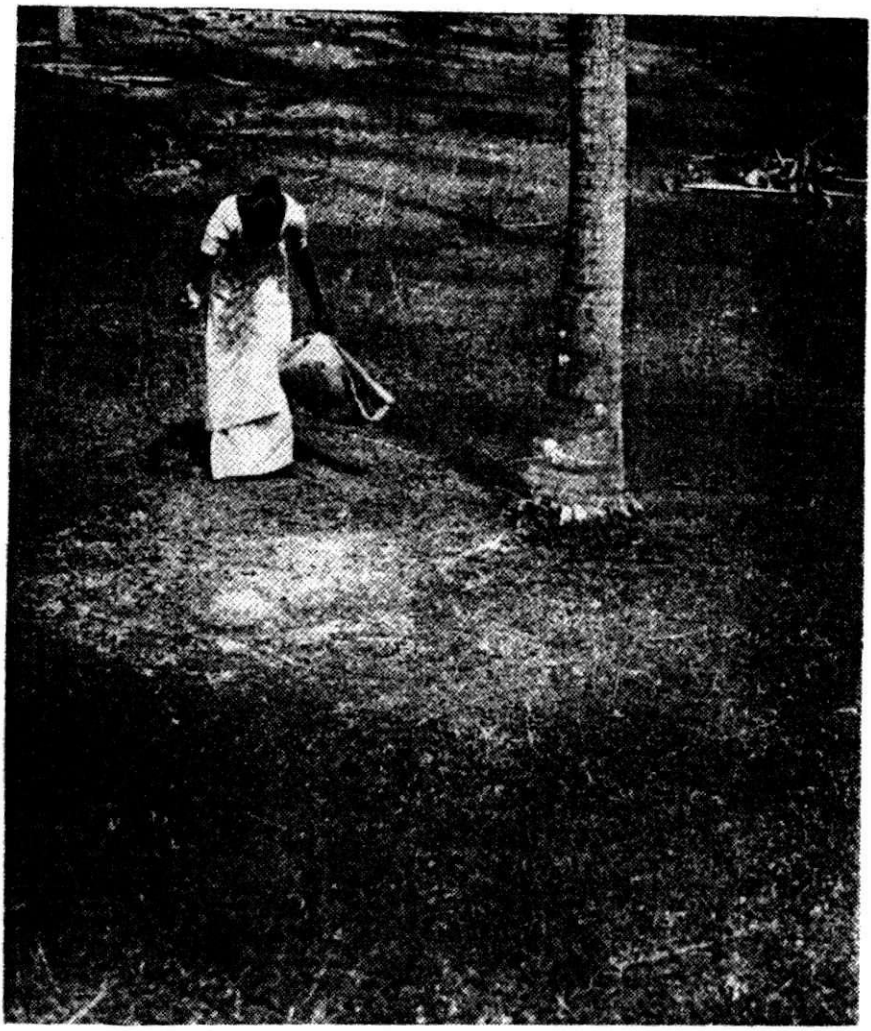
More recently, experiments on fertilizer placement were carried out using a radioactive isotope of phosphorus (P32). These experiments have shown that even on a light well drained soil which offers no impediment

to the development of extensive root systems, the density of active absorbing root surface is highest in the area immediately surrounding the base of adult palms, up to a radius of 5½ feet from the bole. Application of fertilizers in this area should therefore help to increase the efficiency of fertilizer uptake by the palm. These experiments have also shown that fertilizer application in the entire area round the palm up to a distance of 5½ feet from the bole can lead to an uptake efficiency as much as 100% more than either the application in centres of squares, or in a 3 foot wide circular strip, 3 feet away from palm.

It has also been found that application in full circles is about 40% more efficient than half circle applications.

Circular Trench method of fertilizer application

Fig. 2



Spreading Fertilizer round the Palm up to a distance of 5½ feet from the bole

Recommendations

In view of these recent findings, the Soil Chemistry Division of the Coconut Research Institute has now revised the recommendations on fertilizer placement. It is now recommended that for maximum economy and uptake efficiency, fertilizers should be uniformly spread on the surface in the entire area round the palm up to a distance of 5½ feet from the bole and then dug over into the soil with mammoties or mammoty forks. Unless weed growth is excessive, it is not necessary to weed round the palm before the application of fertilizers. The area on which the fertilizer has been applied may be given a surface mulch of dried fronds and husks, to assist in the suppression of weed growth.

On steep lands, which are subject to considerable surface run-off, the trench method of fertilizer application is recommended. This will help to reduce the risk of fertilizer being lost through surface wash-off.

The application of fertilizers should always be done in wet weather preferably during the early stages of the South-West and North-East Monsoons. In areas where the South-West Monsoon is uncertain, such as Batticaloa, Jaffna, Mannar and Puttalam districts, it is advisable to apply fertilizers during the North-East Monsoon. It is also recommended that on light sandy soils, or steep slopes without adequate soil conservation measures, and on poorly drained soils liable to be water logged, fertilizers be applied after the heavy rains are over.

JOLLY TIPPLERS OF THE SOUTH

"Of the hundreds of uses proverbially claimed by Sinhalese tradition for their beloved palm, few coconut trees in this locality (Beruwala) are permitted to fruit. They are tortured and put to greatest use to yield the sap from their beautiful flower. Connoisseurs know this to be a sweet and pleasant beverage when first drawn from the tree. When fermented, it becomes a highly intoxicating toddy; and when distilled, the potent spirit, arrack. A cocktail, made by the simple process of mixing the sweet toddy with arrack, produces a "heady drink", on which a man can get exceedingly drunk on very small money.

If it should strike you that the people in the localities where the toddy-tapper operates appear more languorous in movement, you may be sure that this is well within the traditions of the age-old saying : "Opportunity makes the thief". Many get exceedingly drunk with no outlay of money at all—a characteristic which is shared by the pub-crawling crow and the squirrel by day, and by the flying-fox by night. These jolly tipplers take their fill of the fermented sap from the small clay chattie, or the gourd which is hung under the bleeding flower, in the crown of the tree."

R. L. BROHIER—Seeing Ceylon. p. 129.