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SHORT NOTE

A NOVEL WAY TO FERTILIZE FRUIT TREES THROUGH STEM INJECTION

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The most common and traditional method of applying fertilizer to fruit trees is through the soil. This comprises digging the soil under the plant canopy, mixing fertilizer with the soil followed by irrigation. The disadvantage of this method is that it is labour intensive and has low efficiency of fertilizer use by the plant. Sometimes, the nutrients are directly sprayed on the plant foliage, from where they are absorbed by the plant. This method is also laborious as the spray operation becomes difficult in case of large and tall trees.

In the method reported here, only a small quantity of the nutrient solution is required that is all used by the plant, thus making it very economical. For fertilizing fruit trees by the stem injection method, four holes, one on each side, were drilled in the stem about a meter above the ground level at an angle of 45 degrees with the help of a gimlet (small hand drill). The debris from the holes was cleaned by inserting and pulling out the gimlet repeatedly.

The depth of holes varied (5-25 cm) according to the girth of trees. Then the desired amount of 10 per cent Hoagland and Arnon nutrient solution was divided into four parts, filled in the holes by a syringe and their openings were sealed with mud by placing a piece of leaf on them.

The nutrient solution was applied to mango and jamun trees at the rate of 100 ml per tree, whereas those of guava and citrus at 1 ml per centimeter girth of the tree. After about a week's time, the trees showed bumper growth and eventually became lush green. In case of mango, even the badly malformed trees started growing rapidly and showed a moderate fruit setting. In guava, the fruit was very healthy and of larger size and its maturity was about a week earlier as compared with that of the remaining trees in the orchard. This method of fertilization may also be extended to other tropical as well as temperate fruit trees.

The method involves efficiency of plant usage, saving of fertilizer, no harmful effect on the plant, convenience and economy of application. Moreover, when plants are attacked by insect pests, an insecticide may also be applied through the same holes. It will save labour and expenditure on spraying operations, thus making it extremely economical.