

Madhanchakkaravarthi R

Thanthai Roever Institute of Agriculture
and Rural Development (TRIARD)
Perambalur
Tamil Nadu
India - 621 115

Klinton T

Thanthai Roever Institute of Agriculture
and Rural Development (TRIARD)
Perambalur
Tamil Nadu
India - 621 115

Kishorekumar U

Thanthai Roever Institute of Agriculture
and Rural Development (TRIARD)
Perambalur
Tamil Nadu
India - 621 115

Hariharan K

Thanthai Roever Institute of Agriculture
and Rural Development (TRIARD)
Perambalur
Tamil Nadu
India - 621 115

Kamalarasan K

Thanthai Roever Institute of Agriculture
and Rural Development (TRIARD)
Perambalur
Tamil Nadu
India - 621 115

Muthuvijayaragavan R

Thanthai Roever Institute of Agriculture
and Rural Development (TRIARD)
Perambalur
Tamil Nadu
India - 621 115

Corresponding Author

Muthuvijayaragavan R
muthu.ragavan@gmail.com

Coconut Root Feeding – A Way to Realise Farmer's Dreams

The coconut tree is the only living species of the genus *Cocos* from the family *Arecaceae*. It is cultivated widely in tropical areas for its edible fruit called the coconut. The term "coconut" can refer to the whole coconut palm, the seed, or the fruit, which is botanically as drupe, not a nut. Coconut palms are found in tropical coastal areas and its being one of the most predominant crops of the tropics. The countries like Philippines, India and Indonesia are the major copra producers in the world. Coconuts are mostly cultivated for their oil. The oil is extracted from the endosperm and is used for cooking. Coconut is a source of food, beverages, medicine, natural fiber, wood and raw materials for units producing a variety of goods and items. The assessment of crop loss is necessary for sensible planning for making research and developmental policies. Coconut crop yield losses due to insect pests particularly *Opisina arenosella*, it can be as high as 45% and it will take upto 4 years to regain normal yield after heavy infestation.

INTRODUCTION

The coconut is universally recognized as "tree of life" because they are having different economic uses and importance in sustaining the livelihood of the farmer. Coconut palms are close to the sea on low-lying areas a few feet above high water where there is circulating groundwater and sufficient rainfall. Coconuts are grown in 93 countries of the world and India accounts for 34% of global production with productivity of 9687 nuts per hectare. India leads highest in the world among all the coconut growing countries in production and productivity even though the area under cultivation is less.

COCONUT ROOT FEEDING TECHNIQUE

By incorporating root feeding technique for pest control and nutrient management in coconut palms, the expenses spent on expensive

insecticides and fertilisers are considerably reduced. And farmers can feel relaxed as their income is saved, because labour requirement, insecticidal and fungicidal requirement are very minimal in this technique. This scientific approach paves the way for a farmer to realise his dream of having a better live hood and increased savings. Hence, coconut farmers to exit the layer labour dependent situation. Through the generation new technologies have rooted well into the agricultural sector. Among these new technologies which have developed over the decades, the root feeding is very efficient and this economically feasible and is scientifically proven to improve the productivity of a palm and also helps farmers to tackle the insect infestation and to sustain their productivity.

COCONUT NUTRIENT MIXTURE

It is a liquid with nutrients and growth regulators to mitigate the nutrient hunger of coconut palm by offering the other nutrients not found in the soil alone.

ROOT FEEDING

Fresh and live pencil thickness fibrous roots is selected and make a cross cut and then the roots are inserted into the bag containing a nutrient mixture solution of TNAU Coconut tonic nutrition at the rate of 200ml per palm and the bag is tied with root by cotton thread. It is on optimum cheapest and efficient approach for nutrient management.

BENEFITS

- It will rise the chlorophyll content in leaves and improves photosynthetic efficiency
- It controls button shedding and increases the yield through upsurges in numbers and size of nuts
- It increases longevity, vigour and resistance to several biotic and abiotic stresses

INSECT MANAGEMENT IN COCONUT

Coconut nut production is highly affected by red palm weevil (*Rhynchophorus ferrugineus*), slug caterpillar (*Parasa lepida*), coconut skipper (*Gangara thyrasis*), leaf caterpillars (*Turnaca acuta*), black headed Caterpillar (*Opsinia arenosella*) and eriophyid mite (*Aceria guerreronis*). The coconut black headed caterpillar is a serious pest in coastal regions. With growing opportunities for coconut growers, there are few issues that farmers should show attention. These insects reduce the

productivity and longevity of coconut palm creating hard times for the farmers. Root feeding helps sufficiently to control from these insect infestations.

COCONUT ROOT FEEDING

A method of feeding a coconut palm tree through selecting fresh and thick live root, make a slanting cut that injects, the solution containing monocrotophos 36 WSC in a polythene bag. Tie the bag with the root by using a thread and after twenty four hours, if there is no absorption, continue the same with another live root.

CONCLUSION

Coconut tree is one of the most important and predominant plantation crop cultivated mainly in tropical and subtropical regions of the world. In the world, most of the human beings are depending upon the coconut tree either directly or indirectly. Hence, the tree plays a major role in the national economy throughout the world. It will generate more employment opportunities for the rural people particularly rural women's. The tree of heaven is attacked by nearly more than 900 species of insect-pests (Abhishek and Dwivedi 2021). To control these insect-pests, farmers are mainly depends on spraying chemical formulations. Unfortunately, it involves high cost and labour intensive technique. This limitation is defeated by using low cost technology namely root feeding. With the help of root feeding techniques, the expenses spent on expensive insecticides are considerably reduced and farmers can feel relaxed as their income is saved because the procedure is very simple and does not require large number of farm workers. This scientific approach paves the way for a farmer to realise his dream of having a better live hood and increased savings.

REFERENCES

Abhishek, T.S and S.A. Dwivedi. 2021. Review on integrated pest management of coconut crop. *International Journal of Entomology Research*. 6(3): 115-120.

www.agritech.tnau.ac.in

www.coconutcommunity.org