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Coconut Root Feeding

*S. Divya Dharshini, Dr. B. Guna and Mrs. S. Sandhya

Nalanda College of Agriculture, M.R. Palayam, Trichy, Tamil Nadu, India

*Corresponding Author's email: divyadharshini742004@gmail.com

Root feeding is an efficient nutrient management technique in coconut cultivation, where liquid nutrients or plant protection chemicals are directly supplied through the roots. In this method, a healthy, actively growing root is selected, cut, and inserted into a nutrient solution, allowing rapid absorption and direct translocation to the palm. Root feeding ensures quick correction of nutrient deficiencies, improves palm health, enhances nut yield and quality, and reduces nutrient loss compared to soil application. It is especially useful in drought-prone areas and for managing disorders like root wilt and micronutrient deficiencies. This eco-friendly and cost-effective method minimizes wastage, reduces environmental pollution, and promotes sustainable coconut production.



Introduction

Coconut root feeding is a highly efficient, direct-uptake technique used in palm management to deliver nutrients or pesticides directly into the root system of the palm. This method bypasses conventional soil application, making it particularly useful for addressing nutrient deficiencies, managing pests like the red palm weevil and black-headed caterpillar, and increasing yield, especially in sandy soils where nutrient leaching is high.

Procedure for Root Feeding

- ✓ Selection of Root: Identify a healthy, live, pencil-thickness fibrous root that is approximately 1-2 meters away from the trunk.
- ✓ Root Preparation: Gently expose the root and make a clean, sharp, slanting cut at an angle.
- ✓ Application: Insert the cut end of the root into a, sealed, 7 x 10 cm polythene bag containing 10 ml of water mixed with the required nutrient tonic or pesticide (e.g., 5% Calixin, 10ml Monocrotophos, or 30ml TNAU Coconut Tonic).
- ✓ Sealing: Securely tie the bag to the root using a cotton thread.
- ✓ Monitoring: After 24 hours, check if the solution has been absorbed. If not, select a different, fresh root for the process.

Benefits of Coconut Root Feeding

- ✓ Increased Productivity: Studies indicate that root feeding, especially with TNAU Coconut Tonic, can significantly increase nut yield, with reported increases of over 40%.
- ✓ Efficient Nutrient Absorption: It ensures direct, rapid delivery of micronutrients and macronutrients to the vascular system, bypassing soil fixation and leaching.
- ✓ Pest and Disease Control: It is highly effective for controlling severe infestations of pests like the red palm weevil, black-headed caterpillar, and root-wilt disease.

✓ **Reduced Costs:** It is a low-cost, low-labor alternative to, or supplement for, conventional, large-scale fertilization.

✓ **Improved Palm Health:** It boosts the chlorophyll content, reduces button shedding, and improves overall tree longevity and vigor.

When to Apply?

Nutrient Feeding (Tonic): 4-5 month intervals for sustained health.

✓ **Pest Management (Pesticide):** April-May, September-October, and January-February (for root-wilt and pest management).

Conclusion

Coconut root feeding is a scientifically proven, sustainable, and economically viable technique that directly addresses the nutrient and pest management needs of coconut palms. By directly introducing nutrients and chemicals into the tree's system, it enhances productivity, reduces costs for farmers, and mitigates environmental impacts compared to large-scale, labor-intensive, conventional methods. It is an invaluable tool for modern, efficient, and high-yielding coconut cultivation, supporting improved livelihoods for farmers.

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