

Life giving manure pit

HIGHLIGHTS

- Maintaining manure pits gives soil fertility and 150 nuts/year in coconut.
- Coconut can be intercropped with Arecanut, papaya, pomegranate, sweet orange (sathugudi), or lemon.

Every year water enters my coconut garden and removes the top soil. Now the roots are exposed. What can I do to manage this asks Saravanakumar, of Pattukkottai, Thanjavur. To answer his question two experts reach his farm. They are Mr. Kumaravelu and Mr. Karthikraja. Kumaravelu is an organic coconut cultivation from Vedaranyam. Karthikraja is a graduate in Forestry and is working as in an NGO working for Palani Hills Conservation.

Saravanakumar's coconut field was a devastating sight. The top soil has been completely removed. The soil was dry. Coconut roots were exposed. The palms looked very weak, as if falls in a strong wind. They had holes and crevices too.

Karthikraja advocated that each palm base should be covered with soil. Kumaravelu suggested yet another measure which conserves soil as well as enriches it to maximize the yield. Manure pits that reduces soil erosion as well as conserve rain water was his suggestion. This helps to improve the growth of beneficial microorganisms. For this manure pits should be dug. The removed soil can be used to refill the palm bases. Manure pits are dug in alternate lines within the coconut rows. Each manure trench should be 3ft wide and 3ft deep. Such trenches reduce the velocity of the water as well as collects them.

The coconut pith waste got free of cost can be applied @ 5tonnes/ 25coconut trees. Moreover coconut leaves farm wastes, Glyricidia, Jatropha the manure pit; It should be trenched with 'Amutha Karaisal'(Amutha spray mixture) Panchakavya. It is should be continued once in 15 days for a year.

Earthworm should be released 40 days after the formation of manure pits, 2kg of earthworm is required for 10trees. Mix 1kg curd, jaggrey-1kg, moist cowdung-1kg and make balls out of it. They should be kept at intermittent intervals for proper multiplication and growth of earthworms. These earthworms can be used for the adjacent manure trenches. Cover the trenches with coconut fronds to avoid. The drying of Panchagava and 'Amudha Karaisal'. Cover immediately after use, 60days after the formation of manure pits, sow 'navadhaniyangal' (pulses) over them. After flush growth, cut back these crops into the manure pits. This improves the soil health, as well as coconut growth. In the remaining space, grow subabul and Glycirdia leaving a gap of 3feet. This enriches the soil and also feeds cattle.

Saravanakumar keenly noted down the experts advice and said that his coconut farm yielded only 40 nuts/year. He had 700coconut trees in his 9acre crop land. He asked 'How to increase his coconut yield?' Kumaravelu suggested that he should turn to organic farming. He assured him of 140-170 nuts/tree/annum. Saravanan was not satisfied. He said that he was using only Farm Yard Manure for the past 7years yet he did not get the desired result. Kumaravelu immediately responded 'Yes, all the top soil is washed away'. Manure pits will show improvement in soil health for the first year, from the third year the coconuts are sure to bear 150 nuts/tree.

When asked about intercropping,

Kumaravelu suggested crops like arecanut, papaya, pomegranate, lemon and sweet orange. It was also suggested that barrier crops be established around the farm. Firstly soil should be dug around the farm and it should be heaped throughout. Over, this crops should be grown in three rows system. Firstly palmyra should be grown with a spacing of 5feet. Pandanus can be grown in between these crops. The

roots of these crops are dense hence they control erosion and also reduce the speed of water. In between Palmyra and Pandanus, agave can also be grown.

II Tier of crops : About 3feet gap should be allowed between I and II tier crop. In this tier, thorny crops may be grown. Eg. Notchi, Ber and Kiluvai (Hill Balsam, Balsamo dendron caudatum). These trees reduce soil erosion.

III Tier of crops: This should be established after leaving a gap 5ft; In this trees like Malai vembu(Melia azedarach), Savuku(Casuarina), Subabul, Dalbergia sisoo can be grown. These trees acts as barriers as well as they add Nitrogen to the soil. Growing Glycirdia in the last tier will add more Nitrogen as well as feed for cattle. Casuraina and Subabul gives economic yield within 3years while other trees in 3rd tier gives economic yield within 10-15 years. They may be cut to yield profits.Meanwhile the trees in the second tier grow densely and prevent soil erosion. Growing of suitable trees in different tiers not only prevents soil erosion but also gives profit while conserving and improving the soil health.

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