

Deeper planting holes for banana growing

Recognize the problem

Banana performs well in highland areas with a wet cool climate. These areas are characterized with a bimodal pattern of rainfall which ensures good distribution of rain in greater parts of the year. Climate changes have brought major changes in the rain pattern, amount of rain and reliability. So, banana production is shrinking because of soil drought stress. Bananas lacking soil moisture remain small, have yellow leaves, and yield little to no fruit.

Background

Banana is well-adapted to the cool, wet climate and fertile soils of the highlands. They perform best in agro-forestry areas because they require shade and wind breakers. However, bananas are grown everywhere, even in suboptimal fields. To improve banana production in suboptimal plots, agronomic practices have to be changed. For example, deep planting holes filled with a mix of manure, crop residues and soil can improve banana growing. These holes play multiple roles which include: good anchoring of banana trees, better rain water storage in the soil, the provision of nutrients if applied, and retention of soil fertility.

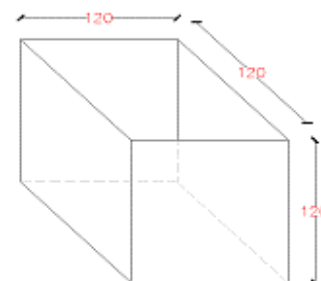
Management

- Instead of using conventional planting holes for banana (60x60x60cm), make deeper and bigger planting holes of 120x120x120cm, or even more depending on availability of manure/compost and crop residues.
- Dig the holes.
- Place the top soil layer from the dug-out soil near the hole up the slopes and the bottom soil near the hole down slope. The top soil is a fertile layer of soil that is used for refilling.
- Let the holes stand for 30 days to enhance weathering of the soils
- Mix 5-10 buckets (each 10 to 20 litres) of farmyard manure or compost with the top soil and crop residues, such as rice husks, tree leaves, dry grass, etc. But do not use banana crop residues.
- Fill the holes with the mixture
- Mark the centre, cover with mulch and let the refilled holes stand for 60 days.
- Remove the mulch, and plant clean, healthy sword suckers of bananas at a depth of 50cm (size of the sucker matters) into the filled holes.
- Cover to the original height and put the mulch back.
- Use the bottom soil to pile a ring ridge around the tree for better watering.
- The substrates in the hole around the plant can sustain the crop for 3-5 years.
- This technology is of little importance in sandy soil unless they are very much enriched with manure.

Banana plant planted in a deep hole and mulched. (Photo by Joyce G. Kessy)



Deep planting hole for bananas (120 x120 x120 cm). (Photo by Drawing by A R. Senyina)



The recommendations in this factsheet are relevant to: Tanzania



Authors: Joyce G Kessy
Moshi District Council
tel: +255 765 449 330 email: joycegkessy@yahoo.com

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