

# Soil aeration to control rots in Pineapple

## Recognize the problem

Top and root rot in Pineapple is caused by fungi that live in the soil. These rots are also called heart rots. The disease changes the colour of leaves from light brown to red, and may become striped. Leaf edges curl backwards and may be pulled-off easily from the plant due to the rotting of their bases. The stem and stem bases also begin to rot and give out a bad smell. The plant can die.

## Background

The diseases top rot, heart rot and root rot need water for spore production and infection. Serious losses occur in heavy rainfall seasons because the diseases invade soft tops and tips of pineapples. Soil aeration allows the air in the soil to circulate freely. This enables the intake of nutrients by the plant and reduces the chance of diseases multiplying in the soil. It also helps beneficial microorganisms living in the soil. Ways of improving soil aeration include ridging, manuring and furrow construction. In contrast, soil aeration blocked by water logging leads to rots in the pineapple crop, resulting in the collapse of the plant. During a severe infection, the loss can be as high as 80% of all the plants in the field.

## Management

- Construct raised planting beds by hilling up small mountains of soil up to 23cm high
- Incorporate compost when making the raised hills/beds to reduce compaction of soil
- Depending on the pineapple variety, the spacing between the small hills should be about 60 x 60 cm up to 150 cm
- Apply mulch
- Construct a canal system of 30 to 50 cm width and 30 to 50 cm depth along the rows or at least around your field to get rid of excess water

Dead heart symptom due to rot diseases in pineapples. (Photo by Eria Bwana-Simba)



Raised hills in preparation for pineapple production. (Photo by Make fruit fair, via Flickr)



Scientific name(s) > *Phytophthora spp.*

The recommendations in this factsheet are relevant to: Tanzania



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