

Soil fertility management in banana plantations

Poor soil fertility leads to soil nutrient deficiency problems in plants. After diagnosis of the deficiency symptoms, organic and inorganic fertilisers can be used to restore the soil fertility.

Nitrogen as a plant nutrient is vital for chlorophyll production, DNA and protein synthesis. Phosphorous helps in root growth, flower and seed formation while potassium helps in strong cells, transpiration, fruit filling and development of disease resistance. Magnesium is a component of chlorophyll.

Deficiency signs

Deficiency of nitrogen is noticed by leaves turning light green and later yellow with the midrib turning pink. Phosphorous deficiency is manifested by leaf margins turning scotched brown without too much yellowing. As plants become potassium deficient, the leaf margins and the tip turn yellow and eventually scotched brown. For magnesium deficiency, inter venal chlorosis occurs causing a yellow light band along the leaves.

Remedies

Different plants require different amounts of nutrients and to improve on plant nutrients, you can use organic and inorganic fertilizers. Mineral fertilisers are the fastest way to eliminate nutrient deficiency but the quality and quantity applied should depend on the nutrient deficiency identified in the field and the yield increase required. These can be applied twice a year during the first half of the rainy season and should be applied 30 to 50 cm around the plant either as granules or mixed with water.

Organic soil amendments like manure, urine, mulch and compost can also be used to amend soil nutrient deficiencies