Prevention of nitrogen deficiency in maize

Recognize the problem
Nitrogen is one of the limiting nutrients in maize production. Its deficiency results in reduced yields and this is a common problem in many parts of Malawi. Symptoms of nitrogen deficiency are stunted growth of maize plants and yellowing (then death) of leaves which start from the bottom of the plant.

Background
Nitrogen helps the plant to make its food which then determines the yield it will produce. Nitrogen gets depleted in the soil through continuous uptake by plants and leaching through rain and irrigation.

Management
Nitrogen deficiency can be managed by applying the following:

- Manure e.g. well decomposed compost manure made from plants. Apply 12.5 tonnes/ha at least five weeks before planting maize. This can be achieved by applying an equivalent of 20 L tin of manure (16-18 kg) by broadcasting every 8 metres /steps. If manure is not adequate, apply 2 handfuls (0.5-1.5 kg) per planting station and mix with the soil before planting.
- Apply inorganic fertilizers such as 23:21:0+ 4S at the rate of 100 kg/ha using a bottle top from a 300 ml soda bottle with lining inside in between the planting stations i.e one-one planting as basal dressing. At approximately three weeks (21 days) after planting, top dress with 150 kg/ha of Urea.

The recommendations in this factsheet are relevant to: Malawi

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Edited by Plantwise.