Prevention of nitrogen deficiency in potatoes

Recognize the problem
Nitrogen deficiency in potato results in reduced yields. The problem of nitrogen deficiency is common in many parts of Malawi. Symptoms of nitrogen deficiency in the soil are lighter coloration of the foliage and in severe cases, leaves are pale yellow or chlorotic, especially lower leaves, and the leaf mass is reduced.

Background
Nitrogen helps the plant to make its food which determines the amount of yield it will produce. Nitrogen gets depleted in the soil through uptake by plants and leaching. Sometimes yellowing from nitrogen deficiency may be mistaken for viral infection. However, viruses produce asymmetric (not uniform) chlorosis.

Management
Nitrogen deficiency can be managed by applying the following:

- Use of manure such as khola manure and well-decomposed compost. Apply 12.5 tonnes of khola and 12.5 tonnes of compost per hectare. Use one or two 20 L tins of manure to broadcast every 8 meters along the grooves (8 steps).
- Use of inorganic fertilizers such as D compound, at a rate of 200 kg/Ha using cup No.5 (equal sizing to a drink bottle lid). Three to four weeks following planting, top dress the soil with CAN at a rate of 150 kg/Ha. Apply the CAN fertilizer along the ridge of plant rows before covering with the soil.

The recommendations in this factsheet are relevant to: Malawi

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