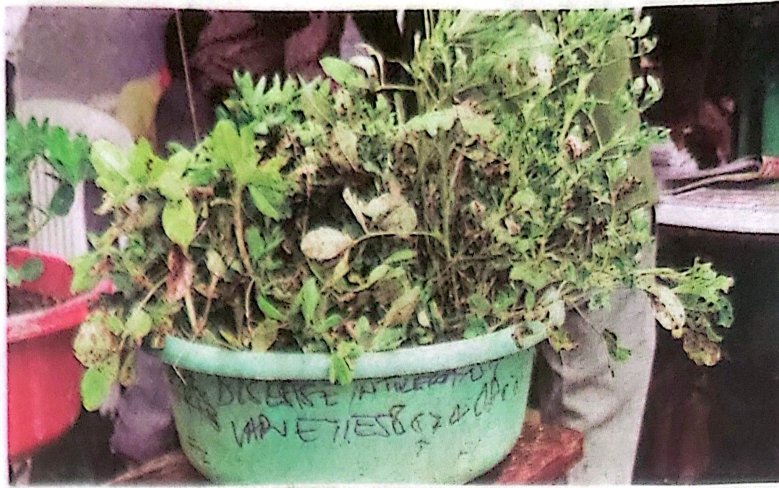




Groundnuts infested with the leaf spot disease. PHOTO BY MICHAEL KAKUMIRIZI

How to combat groundnut diseases

Groundnuts are exposed to pests and diseases that reduce yield, quality and increase in the cost of production wherever the crop is grown, writes David Okello Kalule.

A number of fungal, viral, nematode and bacterial diseases have been reported in groundnuts. Most of these are widespread; but a few are economically important on a regional basis.

Major diseases in this region include groundnut rosette, early leaf spot (*C. arachidicola*), late leaf spot (*Phaeoisariopsis personata*), rusts (*Puccinia arachidis*) and aflatoxin (caused by *Aspergillus Niger*, *Aspergillus flavus*).

Groundnut rosette disease

Groundnut rosette disease is a viral disease of groundnuts widespread in sub-Saharan Africa and its offshore islands. It is the major disease of groundnuts in Uganda transmitted by aphids feeding on the crop.

There are two types of symptoms seen in the crops: green and yellow or chlorotic. The plants affected by this disease look stunted and presents a bushy appearance. There is a marked reduction in size of the leaflets and mottling becomes visible.

Yellow or chlorotic symptoms initially develop a faint mottle (spotting) on young leaves. Subsequently, leaflets are yellow with green veins. Plants infected when

young produce progressively smaller distorted, curled and yellow leaflets.

When older plants are infected, the symptoms are generally restricted to a few branches or the apical portion of the plant.

Green rosette disease shows middle mottling on young leaflets with some leaf curling but leaves are not distorted. Plants infected when young are severely

2-14

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stunted and dark green in colour.

Total yield losses have been reported in susceptible varieties. Uganda has three known hot spots (at NaSARRI Serere, Nakabango in Jinja and Ikiiki in Budaka) where disease appears as two weeks post emergence.

Early infected plants produce no yield and there is no control once a plant is infected. A 100 per cent loss in pod yield due to either chlorotic or green rosette disease may result if infection occurs before flowering. Control of aphids will prevent further spread of the disease.

Management

After planting your

groundnuts, to realise a good harvest, you must do the following:

Chemical control

- Spray whole plant with insecticides such as dimethoate 14 days after emergence (usually five millilitres per two litres of water but read the label for instructions). Then at 10-day intervals for a total of four sprays.

Cropping practices

- Timely planting as soon as there is enough moisture in the soil.
- For erect/bunch groundnut varieties (Serenut 4T, 6T, RedBeauty), plant 45 centimetres between the rows and 10 to 15 centimetres between the plants. For spreading types (Serenut 2, Serenut 8R and Serenut 7T) plant 45 centimetres between the rows and 7.5 to 10 centimetres between the plants.
- Early sowing and close spacing of rows reduce disease infestation.
- Intercropping with beans or sorghum is effective in reducing the disease incidence.

Host plant resistance

Resistant varieties exist such as Serenut 2-14 series and Igola 1. These are available from Naro, NaSARRI, seed companies and selected farmers across the country.

— Next week we will look at early and late leaf spot diseases, ground nut rusts and aflatoxins

The writer heads the national groundnut improvement programme at Naro/NaSARRI