

These can be readily controlled by using appropriate insecticides and cultural practices such as:

- Scouting and physical removal of insect pests or affected plant
- Crop rotation
- Early planting
- Removal of volunteer plants

DISEASE CONTROL

Common groundnut diseases includes: fungal (Leaf spots, rust and wilts) and those caused by virus diseases (rosette, chlorotic rosette and green rosette virus)

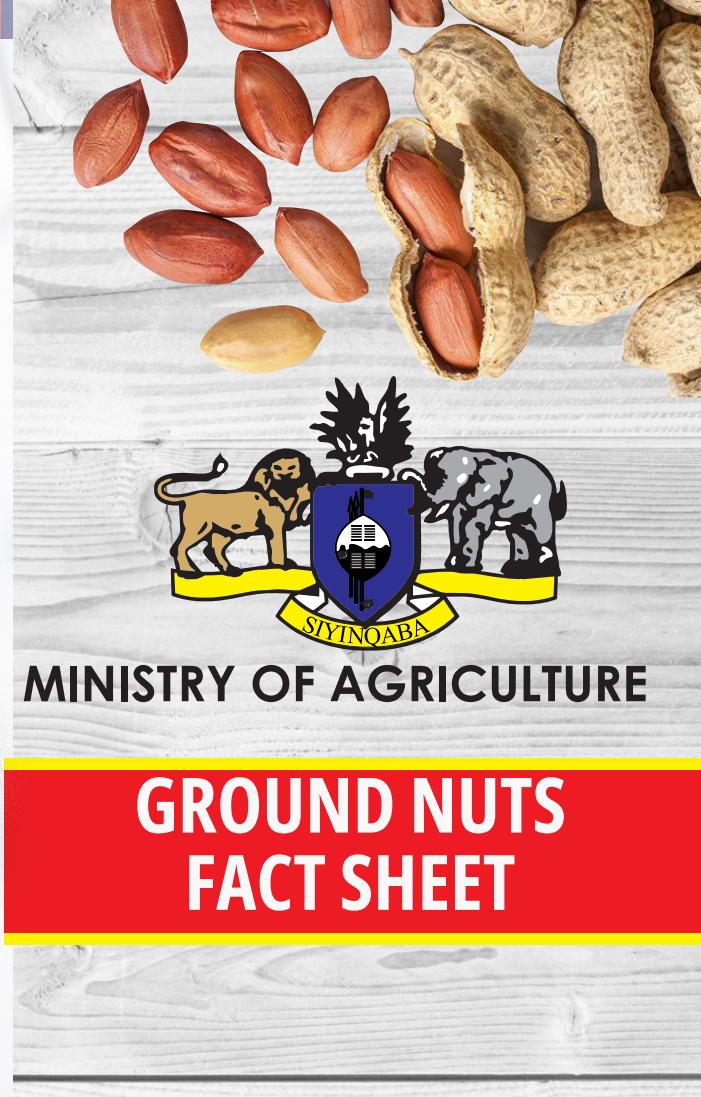
Management of diseases include physical, cultural and chemical control.

They include:

- Crop rotation
- Apply good husbandry; these include proper spacing, timely weeding and use of treated and viable seed.
- Plant early. Plant the crop when the conditions are unsuitable for the rapid multiplication of the fungi but adequate for the crop.
- Disposal of crop residues and removal of volunteer plants
- Use of appropriate fungicides as well as insecticides to control vectors for viral diseases.



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INTRODUCTION

Groundnut is a very important food crop that is widely grown in the country. The crop is a significant source of cash income in developing countries that contributes significantly to livelihoods and food security. It is widely grown in the tropics & subtropics, being important for both smallholder & large commercial producers. It is a very important source of vegetable proteins (25%), vegetable oil, minerals (esp. Phosphorus, Calcium & Iron) and calories. It is consumed boiled (shelled or unshelled), as Peanut butter, crushed and used for the groundnut oil or simply consumed as a confectionary snack roasted, salted or in sweets. It also qualifies to be a good rotational crop due to its ability to fix atmospheric nitrogen, tolerance to eelworms & witch weed of maize.

ADAPTABILITY

Groundnuts are a warm crop that requires frost-free period to reach maturity. They grow well in the Middleveld, Lowveld & Lubombo plateau; the Highveld is not conducive due to disease pressure. They also require plenty of sunshine and warmth for proper development and are sensitive to frost.

CLIMATIC AND SOIL REQUIREMENTS

- Rainfall – optimal rainfall requirement is at least 550 mm light, well-distributed throughout the vegetative, flowering and pod-formation stages
- Temperatures - good germination is obtained when temperatures are around 18°C or above but optimum temperatures are 20 – 30°C. above 33°C, flowers abort
- Soils – ideal soils are well-drained, light sandy loam or loam sandy soils with low clay content (25% or less) to facilitate peg development and harvesting.

CULTIVATION PRACTICES

VARIETIES

Groundnut differs in several ways; there are runner and bunch types.

The bunch types are further divided into three:

A) Spanish Types: usually two-seeded, with small roundish seeds covered with a reddish-brown skin, growing on a low bush. They are recommended for their adaptability, early maturing, high yields & high oil-content. ICG 221 takes 100 – 120 days to maturity while Natal common takes 110 – 120 days;

B) Valencia Type: Pods usually 3 - 4 or more seeded, seed is covered with bright-red, Pinkish or white skin. This variety has higher production when compared to the Spanish and takes 120 – 135 days to maturity. Examples: ICG 11215 – red in colour and sometimes white.

C) Virginia Type: Pods usually two-seeded or sometimes three (constricted at centre). Large seed size and late maturing (has high moisture requirement), Ready for harvest 130 -150 days from planting

LAND PREPARATION

Groundnuts require a loose friable soil to enable the pegs to penetrate the soil easily. This also prevents excess losses of pods at harvesting. The seedbed should be deep, without compaction layers, to accommodate the groundnut plants root system. Shallow soils must be avoided due to the low water retention capacity, as well as the possibility of water logging.

PLANTING

Planting should be done when soil temperature is constant at around 18 - 20°C for 5 days .When there is enough moisture in the soil and should not be too early in the morning, but rather to let the soil warm up. Planting is mainly determined by the onset of rains (October to early December).

Seed rate depend on variety and also agro-ecological zone (80 – 110kg/ha) Plant spacing is 60 - 75 cm between rows and 10 cm between plants. Planting can be done by hand in opened row at a depth of about 5cm.

FERTILIZER APPLICATION

Soil test results will determine recommended lime applications, type and amount of fertilizers required. In the absence of soil test results, the following can be used:



100 - 300kg/ha of 2:3:2 (22) or 90 – 250 kg/ha of 2:3:2 (37) (fertilizers increase with an increase in rainfall). On the sandier soils up to 400kg/ha and 150kg/ha of 2:3:2 (22) fertilizer for the Highveld and Lowveld respectively

NB: soil analysis is a requirement in groundnut production due to some essential elements like Calcium & Potassium, as well as some trace elements like Boron & Molybdenum

CROP PROTECTION

WEED CONTROL

Crop should be weed-free for the first six (6) weeks after planting since groundnut is a poor competitor. Weeding is vital to reduce competition for nutrients, water, sunlight and space. Weeds harbour pests and diseases and roots of weeds trap some pods during harvesting, resulting in reduced yields. Weeds can be controlled chemically, mechanically or with a combination of the two. However, the ultimate choice depends on the species of weeds involved and the level of infestation and size of field. Herbicides such as Treflan, Dual and Basagran can be used

INSECT PESTS CONTROL

Groundnuts are attacked by several insects pest. These include American Bollworm, Aphids, Cutworms and various leaf hoppers.