

Theme 1: Forage production and pasture management

GROWING MAIZE FOR FODDER

Level 1

Topic	Training & information Content
1.1	Planning of fodder/feed requirements for the dry season
1.2.1	Integrated soil fertility management I
1.2.2	Integrated soil fertility management II
1.3	Use of natural resources, compost making, farmyard manure, manure storage and use
1.4	Growing maize and sorghum for fodder and estimating time of harvest and yield
1.5	Brachiaria, Panicum, & Napier (cut and carry) grass management
1.6	Growing fodder trees and use of feed
1.7	Estimating of dry matter content, feeding value and yield of various fodder crops
1.8	Guidelines for Tropical pasture management and grazing management
1.9	Scaled mechanization of forage production and pasture management (harvesting practices)
1.10	Operating farm equipment and self-propelled tractors
1.11	Mechanization of feeding management
1.12	Economics of forage and pasture production



Growing Maize for Fodder (Level 1)

Learning Activities – You will learn about:

- How to grow maize as fodder - for making Silage

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Background

- Forage maize forage is used in feeding animals in many dairy farms in Uganda
- Here are guidelines on growing maize



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Land Preparation

Land/Soil tillage

- Prepare the land well using machinery or by hand. Machines are fast, effective and efficient but can damage soil structure or fertility if not well used
- Mix crop residues with soil
- If available, mix manure/compost with the soil
- Remove weeds before they flower
- Practice minimum tillage
- Keep the seedbed not deeper than (2-4 cm)



Tip: 2.5kgs – Good and fertile seedbed can be obtained by correct tillage



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Seed Selection

- Use certified hybrid seeds only. Do not reuse/farm retained maize seeds
- Ask for a variety with good cob to stem ratio



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Planting

- Plant on or just before onset of long rains. Use about 12Kg of seed per acre. A hectare (ha) can have 70,000 plants (equals 7 plants per square meter)
- Apply DAP or SSP or NPK

Drop seeds 2-4 cm into the soil, 6 cm when soil is dry



Maize seed

*Distance in the row
(between seeds 18-20cm)*

Maize seed



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Fertilizer/Manure Application

Total amount of fertilizer to apply

- Use fertilizers/manures to fertilize the soil.
- Fertilize the soil before planting and after harvesting.



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i. Farmyard Manure (FYM)

- Farmyard manure is fertilizer from farm animals e.g. Cow manure
- Apply decomposed FYM directly before or after planting maize



- Make furrows no deeper than 10 cm next to the row of maize seeds.
- Pour farmyard manure in the furrows
- Cover the furrow with soil immediately

Furrow for FYM

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ii. Inorganic fertilizer

- Its advisable have soil analyzed first to make the right choice of fertilizer
- During planting, use DAP or NPK (23:23:0)
- Do not apply fertilizer directly on the maize seed. Make a separate furrow
- During top-dressing use CAN (26:0:0) or Urea (46:0:0)
- Rate of application 50-75 kg per acre.



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Soil improvement – from Soil analysis

- Depending on the soil analysis report the pH (acidity) of the soil may need to be corrected. This is by liming to increase the pH of the soil



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Weeding

- Can be manual or by use of chemical herbicides



Manual



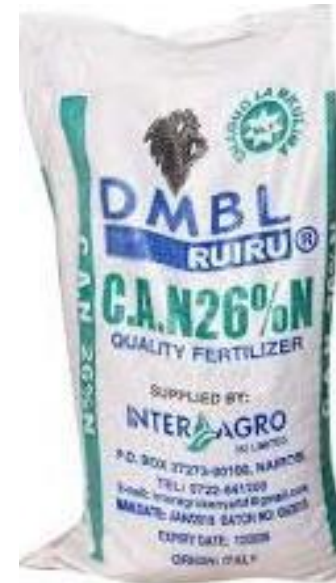
By Herbicides

- Pre/Before germination of maize – Use Pre-emergence herbicide
- Post/After germination of maize – Use Post-emergence herbicide

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Fertilizer: Top Dressing (after weeding)

- Top dress using CAN or Urea
- Apply small amounts close to each plant at 50 kg/acre (equals to $50 * 27\% = 13.5$ kg pure N)
- Apply when maize plants are at knee height (45-60cm) and soil is moist enough to dissolve the fertilizer - preferably after some rain



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Pests in maize field

- Common pests in a maize field include:



Cut worm



Stem and stalk borer



Fall Army Worm

Control: Always monitor your field and apply pesticides



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Diseases in a maize field



Ear Rot

Maize Lethal Necrosis



Head Smut

Tips for Pest and disease control

- Always use certified seeds
- Check frequently (every week) for damage or insects
- Practice crop rotation
- Mix crop residues with soil



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Harvesting

- Maize is ready for harvesting for ensiling (silage making) at dough ripe stage
- Stage R3-R4 is milk stage - not for harvesting since the kernel is not hard enough



Corn kernels

