

Series 4, Episode 8

Cecilia and Moses' Farm, NYERI

This leaflet contains information on: Soil testing, Biofix fertiliser for beans, cow sheds, minerals for cattle, dairy cow feeding, harvesting rainwater, planting tomatoes



Soil testing

A soil test will tell you how healthy your soil is and how much fertiliser to use. It will also tell you if you need to use more manure, and which type of fertiliser is best for your farm and your crops. Take a soil test **every 3 years**.

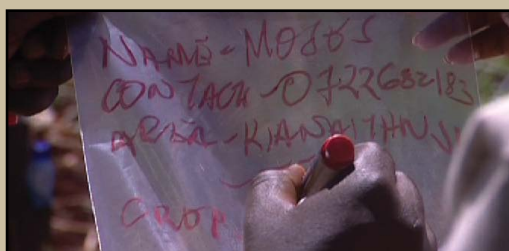
To take a soil test, first dig up the subsoil from 5 places around your shamba.



Then, mix the soil samples with each other.



Put 4 handfuls in a soil sample bag or plastic bag.



Label the bag with your name, address, location, phone number and the crops you want to grow. Send the sample to:

Mea Ltd Laboratory
PO Box 1018 Nakuru
Stanley Mathenge Road
054 2212220

Water harvesting

Harvesting rain water from your roof is a good way to save time and money.

For every inch of rain on a house roof, you can catch 300 litres of water.

Make sure your gutters are clean and free from rust. The gutters should slope very slightly towards the tank so that the water runs to the tank.

Run a chain from the end of the gutter to the tank if you do not have a down pipe.

Keep your tank clean, rust free and make sure it does not leak.



Transplanting tomatoes

To get a good crop of tomatoes, first select a good seed variety, like **Kilele F1** which is disease resistant, resistant to Fusarium Wilt, high yielding and you can harvest for 2-3 months, unlike other varieties which only harvest for 1 month.

Transplant tomatoes at 21-28 days.

To transplant tomatoes, first **spray the nursery bed with Actara and Ridomil** to protect the seedlings from pests and diseases.

Then, in the tomato field which should be level and well dug, make **rows 2 feet apart**. Dig **planting holes 2 feet apart** on each row. The holes should be ½ **foot deep**.

Then, water the tomato bed where you will plant the tomatoes.



Drench each hole with **Actara** to control soil pests before planting the seedlings. Remember to **wear protective gear** when using chemicals.



Then mix a handful of **manure** and a **capful of planting fertilizer** with the soil in each hole.

Plant the seedlings upright in each hole. Firmly replace the soil around each seedling and water well.

For more information, SMS ‘TOMATO’ to 30606

Improve your soil Carbon and Nitrogen

When your soil Carbon (C) and Nitrogen (N) are low, the plant will not be able to grow roots or leaves well, and will be weak. To give your soil more C and N, dig well rotted **farmyard manure** into your fields. Manure will also help your soil to hold more water, have more air and encourage worms to work the soil.

Do not use fresh manure. Heap the manure from your animals in a shaded place on the farm. After 3 months you can use the manure to dig into your shamba.

Improve your soil pH

Kenya soils are acidic. Acidic soils can reduce root growth and reduce nutrient availability. This means the crop will not be able to use the nutrients in the soil, so the fertilizer will be wasted.

If your soil is acidic, you can reduce the acidity by using **agricultural lime** or a fertilizer which does not acidify the soil, like **Mea Mazao 23.23.0**. Fertilizers which are good for acid soils have calcium in them.

Fertilizer for beans - Biofix

Beans and other legumes like groundnuts have **nodules** on the roots which **fix Nitrogen** and release it into the soil for the plants to use. This will give the crop more Nitrogen for them to produce more beans. It will also give any intercropped maize more Nitrogen to produce more maize.

Mea has made a fertilizer for beans which increases the number of **nodules** on the bean roots. This is a cheap way to improve the nutrients in your soil, and means you do not have to use DAP, Urea and other fertilizers.

How to use Biofix

First, take 15Kg of seed and pour into a large container
Then mix the white powder which is a glue with **300ml water**.



Third, mix the black powder, which is the Biofix, with the seeds and stir until each seed is coated.



Second, stir the water mixture into the seeds.



Then dry the seeds in the shade. Plant immediately.



For more information, SMS ‘SOIL’ or ‘BIOFIX’ to 30606

Minerals for cows

To make sure your cows are in good condition, follow this mineral supplement program. This will help your heifers come on heat on time, stay healthy as they calve and produce good quality milk.

Age	Supplement	Amount
0-6 months	MacLik Mineral Brick	One brick
6 - 18 months	MacLik Plus with Heat Enhancement	200g per day
Milking cow	MacLik Super	4 tablespoons in the morning and the evening
Milking cow	Kupa Kula Gold	100g to start, then increase slowly as milk volume increases.
All ages	Mineral Brick	

Feeding dairy cows

All dairy cows need concentrates as well as mineral supplements to help them stay in good condition, come on heat, produce good calves and lots of milk.

Follow this schedule for feeding your cows:

Age	Feed	Amount	Benefit
3-8 months	Unga Young Stock Pencils	As per package	Increase body weight to be a bulling heifer
8 months until reaches 350kg	Unga Afya Meal	1kg per 100kg body weight up to 3.5kg per day (350kg body weight) - use a weigh band to measure the weight of your heifer	Improve body condition and put on weight to maintain bulling heifer
Milking cow	Fugo Dairy Meal	1kg for every 2 litres of milk above 5 litres each day	Maintain body condition and produce milk

For more information, SMS 'DAIRY FEED' to 30606

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Saturday 1.30 - 2.00pm (English)
Sunday 1.30 - 2.00pm (Kiswahili)

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