

Series 4, Episode 3

Irene and John's Farm, Bulambuli UGANDA

This leaflet contains information on: Quality Protein Maize, Orange Flesh Sweet Potatoes, Soil fertility, supplements for cows and goats, selecting good seed



Selecting the right seed

Seed quality is the starting point for getting a good yield. If your seed quality is bad, you cannot get a good yield, even if you try as hard as you can.

Planting the seed you harvested from your last crop can make your crops smaller and more likely to get infected by pests and diseases. Using old varieties or recycled seed will also mean you are not making the most of new varieties, and can be affected badly by climate change. You must be very careful when using recycled seed that you choose the best seed, and treat it correctly.

Before choosing a new variety of seed to grow, you must know about the new variety and what it needs, and if this matches your farm – for example:

- 1- Is it drought resistant?
- 2- Does it need a certain soil type or pH?
- 3- What is the expected yield?
- 4- How do I plant the seed?
- 5- What fertiliser does the seed need?
- 6- How long from planting to harvest?
- 7- Does the market like this variety?

You can buy Hybrid or Open Pollinated Certified Seed. Certified seed means that the seed is almost 100% pure and that over 90% of the seeds will germinate. This means you can use less seed and be more sure that you will get a crop. Using certified seed can also mean you will not get as many pests or diseases attacking your crop.

Hybrid seeds can give you very good yields, but some need a lot of work, and you need to plant them exactly how the packet tells you. If you do not follow the instructions for the hybrid seed, you might not get a good yield.

Crops you planted using hybrid seed do not make seed which you can plant the next season, so you will have to buy new seed in the next season. If you plant seed you harvested from a hybrid crop, you can lose half of your crop.

Open pollinated varieties are easier to grow, and you can use the seed from your harvest to plant the next season without serious yield loss.

For more information, SMS 'SEED' to 30606

Grow Quality Protein Maize for better health

Planting Quality Protein Maize

Plant the maize like any other maize variety before the start of the rains:

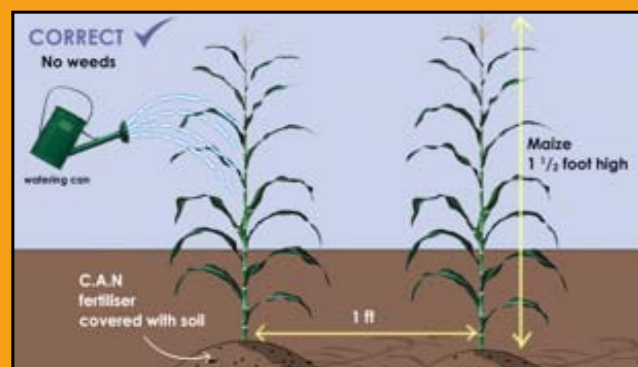
- 1- Clear the land and dig it to a fine tilth
- 2- Mark rows 1 ½ feet apart



- 3- Make planting holes 1 foot apart on each row



- 4- Add a capful of planting fertiliser to each hole with a handful of well rotted manure and mix with the soil
- 5- Add two seeds to each hole
- 6- Cover the seeds
- 7- When the plants are 1 ½ feet high:
 - a) weed and thin the plants to leave one strong plant in each hole.
 - b) Topdress by digging 1 capful of CAN into the soil around each plant



- 8- Weed and Topdress again at tasselling

For more information, SMS 'QPM' to 30606

Maize and family health

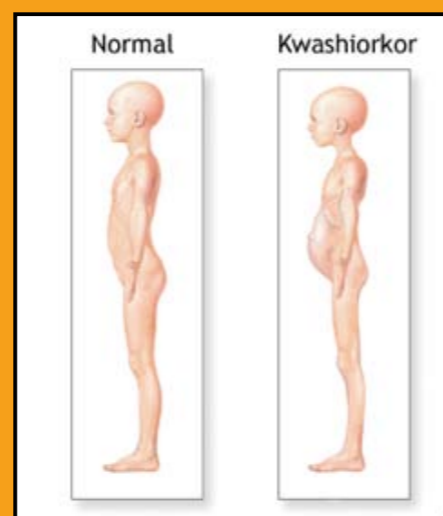
Almost all countries in Africa grow maize to eat at home. Maize is our staple diet. Maize does not have some of the proteins, minerals and vitamins that we need to grow, and for our children to stay healthy.

Children can get Kwashiorkor or weaning disease if they do not get enough protein. Feeding children on vegetables and maize does not give them the right protein to grow well.

If you do not get enough protein, you are more likely to get sick with diseases like TB or stomach illnesses.

ASARECA and its partners have developed a new type of maize which has more protein than normal maize. This **Quality Protein Maize** gives you enough protein to grow and stay healthy. Quality Protein Maize varieties were made using normal plant breeding.

Eating a cupful of Quality Protein Maize can give your children enough protein every day to make them grow stronger and faster, and for the whole family to avoid TB or stomach problems. Adults need 2 or 3 cupfuls every day to get the right amount of protein. If you can drink milk or eat eggs or meat, you can eat less Quality Protein Maize.



Kwashiorkor or weaning disease is easy to see, and is caused by lack of protein

QPM varieties available in East Africa are:
 Uganda
 - LONGE 5 Obatanpa POP 63 QPM
 Kenya
 - KH 613Q
 - EMB 204
 Tanzania
 - Lishe H1, H2 and K1, TAN H611, K6Q, MAMS H913
 Others
 - LISHE H1, LISHE H2, LISHE K1

Orange Flesh Sweet Potato for health and wealth

OFSP for health

Orange Flesh Sweet Potato (OFSP) is a healthy type of sweet potato which has an orange centre. The local varieties are usually white or yellow in the centre.

The orange flesh varieties give you more **Vitamin A**, which is needed to grow, stay healthy and for good eyesight.

There are many varieties of OFSP. You can get them from your neighbour, KARI, NARO or any research centre. Ask for Kapote, Viva, Jumla, or Kakamega.

Controlling OFSP pests and diseases

Weevils

OFSP weevils lay their eggs at the base of the vines. The young can travel down the vine to the root and damage it. Weevil damage looks like this:



To control weevils, fill up any cracks in the soil. Cut off any vines which have weevil damage. These will have purple leaves which are smaller than normal. **Rotate your OFSP patch** – do not ever plant OFSP in a plot where it was grown in the last season.

Sweet Potato Virus

The SP virus disease is spread by **white fly** and **aphids**. Control these pests by spraying or keeping your crop clean.

Plants which are infected with the virus will have small leaves which are yellow or brown, and will not make good roots.



'Plants affected by the virus have smaller, yellower leaves (left) than healthy plants (right)'

To avoid the virus, use **clean cuttings** and **rotate the SP patch** – do not plant OFSP in the same plot as the last season.

OFSP for wealth

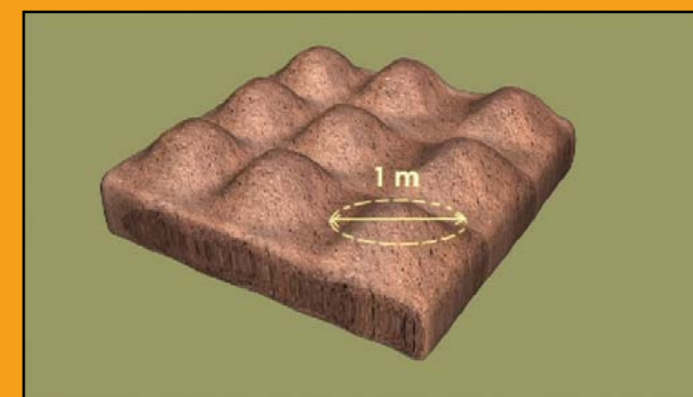
You can get 7 tons of OFSP per acre if you grow it correctly. OFSP varieties do best on sandy soils with a pH of 5.5 to 7.0 and only need water for the first **two months** after planting. They are ready to harvest after just **three to four months**.

Medium size roots are best for the market. Keep large roots to give to the animals and smaller ones to eat at home.

Planting OFSP in mounds

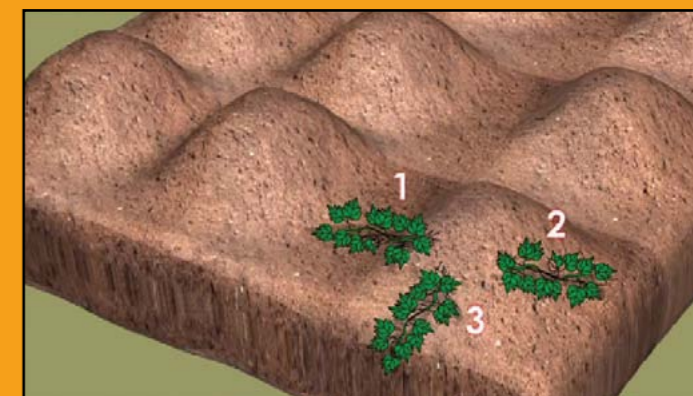
You can plant OFSP in mounds or in rows. To plant in mounds:

- 1- **Make mounds 1 metre (3 feet) across**, and 1 foot apart. The mounds should be 1 – 2 feet high.



- 2- At the start of the rains, get your cuttings by cutting off the top 1 foot of young, healthy vines.

- 3- Plant **three cuttings** on top of the mound. Leave **1 foot** between cuttings. Plant the first three nodes of the cutting into the soil



- 4- As the vines grow, cut off the roots of the creeping vines. This will mean that the main roots will grow better, and give you a better harvest

- 5- Fill up the cracks in the mound as the plants grow; this will stop **weevils** damaging the crop

For more information, SMS 'Sweet Potato' or 'OFSP' to 30606

Soil fertility and getting better crops

Using the same fertiliser every year, using the wrong type, or not using fertiliser, can ruin the soil.

If you use the same fertiliser, like **DAP** every year for more than four years, you can make your soil so acidic that your crops will fail or be very poor. If your soil is **acidic**, the plants will not be able to take up the nutrients in the soil as the soil will hold on to them.

To know the correct fertiliser to use, you must do a soil test. A **soil test** will tell you

- how healthy your soil is,
- what nutrients it has or does not have,
- the pH
- instructions on which fertiliser to use and how much
- which crops you can grow

You need to know your **soil type** before choosing a **seed variety** and buying any fertiliser.

You can buy fertilisers which do not make your soil acidic – ask your agro dealer for **blends** for your area, for planting or topdressing.

To take a soil test sample

First dig up some sub soil in 5 places around your shamba.

Mix the sub soil from all the different places together.

Put 5 handfuls of the soil in a soil container or plastic bag.

Label the sample with your name, address and location, and the crop you are growing.

Send the soil sample to:

Mea Limited Laboratory
Stanley Mathenge Road, Nakuru
054 221 2220

mea-laboratory@mea.co.ke

Or ask your agro dealer to help you.

For more information, SMS 'SOIL' to 30606

Minerals for better animals

Cows and goats need minerals to help them come on heat on time and produce healthy calves or kids with strong bones. To help the heifers and goats come on heat, use **MacLik Plus** in the trough every day. The animals will eat what they want.

Use a **CKLEExtra mineral brick** for young animals to lick until they are 6 months old.

To get bigger animals, use protein supplements like **KupaKula** with fodder.

Give pregnant animals about to give birth extra supplements like **KupaKula Gold** to increase milk and maintain health.

To increase the amount and quality of milk, feed your cows **MacLik Super** which is a calcium and phosphorous supplement. Making milk takes a lot of minerals so it is important to give them back to the cow.

To make sure the cows use all the food they eat to get strong and make milk, add **Diamond V** digestion enhancers to the feed.

For more information, SMS 'MINERALS' to 30606

Water for the animals

Milk uses a lot of water. You need to give the cows/goats plenty of clean water every day. This can be difficult if you are not near a river or have a well.

Gutters and tanks let you trap rainwater at your house, saving your family time from collecting water. Rainwater is clean, and free.

Produced by Mediae



Watch us on Citizen Television on

Saturday 1.30 - 2.00pm (English)

Sunday 1.30 - 2.00pm (Kiswahili)

For another leaflet or more information SMS 30606

Sponsors



+254 (0) 715831853
info@galvmed.org



RESEARCH PROGRAM ON
Climate Change, Agriculture and Food Security



+254 020 6978000 +254 (20) 3675 000 +254 (703) 033 000
ccaafs@cgiar.org info@agra.org



+254 20 4223725
aatf@aatf-africa.org



+254 722 734 468
pmuthangya@eucord.org



+254 020 6978000
cip.nbo@cgiar.org



+256 41 4320556 / 4321885
asareca@asareca.org



+254 (20) 4223633
cip-nbo@cgiar.org



+254 (0) 722 734 468
pmuthangya@eucord.org



+254 20-3754333/4/5/7
ke-com@tns.com



+254 (0) 722365784
ifad@ifad.org



+254 20 420 6000
info@coopers.co.ke



+254 724 253 312 | +254 735 440 267
info@mea.co.ke



+254-020-6978000
information@unga.com



+254 20 322 8000
syngenta.east_africa@syngenta.com



+254 20 2301518/20
info@kenchic.com



+243 20 210 6793 / 0703 896996
dlightafrica@dlightdesign.com