



# Series 6, Episode 17

Steve's Farm, Bungoma, KENYA.

*This leaflet contains information on: livestock in Conservation Agriculture, planting maize, fertilisers, storing maize, selling grain*

If undelivered, please return to The Mediae Company, PO Box 215-00502, Karen.

## Using Livestock in Conservation Agriculture

Cows can help you with **reaping** (opening your soil for planting), **subsoiling** (deep tillage) and **planting**. Cows are cheaper than tractors.

### Preparing Land with a Reaper

Get your land ready for planting early. Use oxen to pull a **reaper**. By using a reaper, you only disturb the soil in the places you will plant.

Tractors compact the soil more than oxen. This makes it harder for the roots of crops to grow. After using a reaper, roots can grow deeper into the soil to get water and nutrients. They will grow better.

Put the dung from your cows, sheep and goats in a pile. Let it rot. It will be good manure for your crops.

*Prepare your land with a reaper.*

**Conservation Agriculture** is a way of farming that looks after the soil to give you a good harvest.

You have to do these 3 things:

1. Disturb the soil as little as possible
2. Keep soil covered
3. Rotate crops.



### Planting with a Direct Seeder

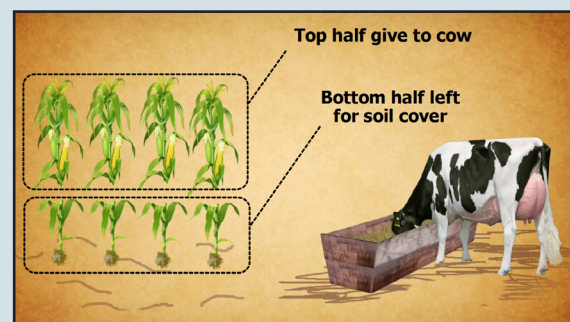
Use oxen to pull a **direct seeder**. A direct seeder digs holes, adds fertiliser and plants seeds. It even gets the spacing right.



A direct seeder makes planting your shamba very fast. You can plant 1 acre in 40 minutes!

### Growing Maize for Fodder

Take off the top half of the maize when combs are young and green. Cut it into small pieces and feed to your cows. The top half of the maize has the most nutrients. Leave the bottom half of the crop in the field to cover the soil.



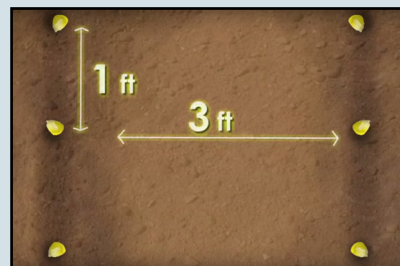
If you have too much maize fodder, make **silage**. This can be fed to your cows later. You will not need to buy as much feed for your cows so you will save money.

For more information, SMS "CONSERVATION AG" to 30606

# Planting Maize

Plant the right variety of maize for your area. You will get a better crop.  
**Seed Co** provides varieties that are good for different areas and conditions.

Buy Seed Co seeds from agrodealers. The agrodealer will have someone trained in Seed Co varieties. They will advise you on the best variety for your shamba. You can also call iShamba on 0711 082606.



Plant 1 maize seed per hole.

## Duma 43

- Ready in 3 months
- Will grow in hot dry areas
- Does not get Maize Streak Virus
- Gives 20-30 bags per acre.



## Tembo 73

- Ready in 4.5 months in Western Kenya, and 5 months in other areas
- Gives very big and very long cobs
- Grows well in wet areas
- The stems are strong so do not fall over in strong winds
- Does not get Maize Streak Virus, Grey Leaf Spot (GLS) or Common Leaf Rust
- Is good for silage
- Gives 35-58 bags per acre.



## Using Fertiliser

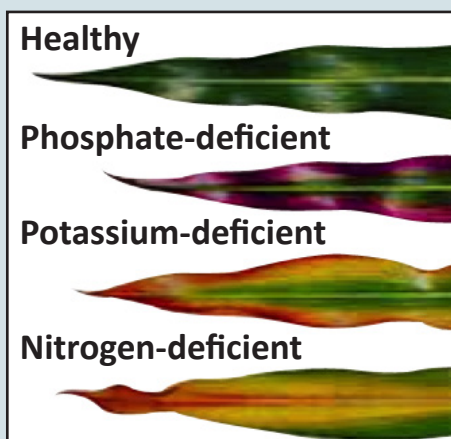
Using fertilisers correctly will give you a better crop. Do a **soil test** to find out **which** fertilisers to use, **how much** to use, and when to use them. The soil test will also tell you your **soil acidity**, or **pH**. Take the soil test report with you to your agrovet so you buy the right fertilisers.

**MEA Fertilizers** can make fertiliser blends to suit the soil on your shamba and the crop you want to grow. It is expensive to make a fertiliser blend for just one person. Form a group with your neighbours and ask **MEA** to make a special fertiliser for the group which is good for your area.

## Correcting deficiencies

Fertilisers correct deficiencies in your soil.

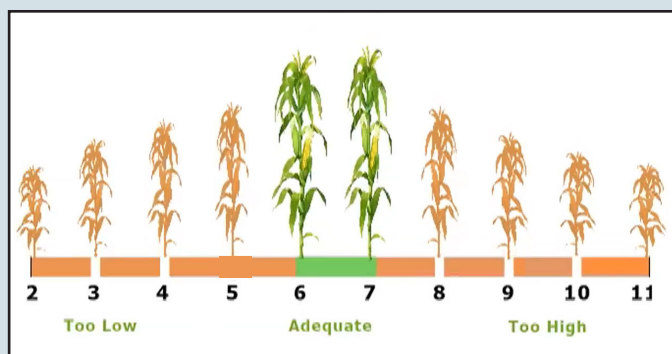
**A deficiency is when your soil does not have enough of a nutrient for your crop to grow well.** You can tell if your soil has a deficiency by looking at the plant.



A healthy maize plant should have green leaves. If the leaves are brown, yellow or purple, the plant is missing nutrients.

## Soil Acidity

Maize and other crops grow best at pH 6-7.



A **high pH** means your soil is **alkaline**. A **low pH** means your soil is **acidic**.

Some fertilisers can make soil more acidic.

Reduce soil acidity. Dig **Agrilime** into soil 1 month before planting.

For more information, SMS "FERTILIZER" to 30606



# Storing Maize

Prepare your maize for storage:



1. Dry your maize on the cobs for 2–3 weeks.



2. Shell the maize with a **maize sheller**.



3. Dry again for 2–3 weeks.



4. Test to see if the maize is dry. Bite a grain. It will make a cracking sound if it is dry.

## Why shell maize by hand?

Some farmers beat their maize with sticks to shell it. This can damage the maize seeds. Weevils can easily attack broken seeds. You will have less breakages if you use a **hand sheller**.

**If the maize is not completely dry, it can become poisonous to humans and can make you sick.**

## PICS bags

Store your maize, or other grains, in a **PICS bag**.

PICS bags have 3 layers: an outer sack layer and 2 inner plastic layers. The plastic layers mean that you do not need to dust with chemicals to stop pests.

When used properly, PICS bags can store your grain for upto 5 years. You can use them more than once, as long as there are no holes.

Buy PICS bags from agrovets, or call *iShamba* on 0711 082606 to find out more.



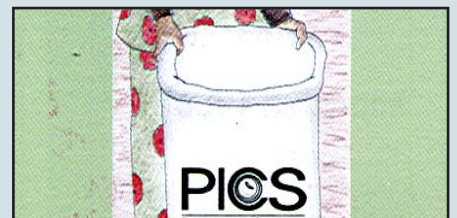
## How to use a PICS bag



1. Make sure your grain is dry and clean.



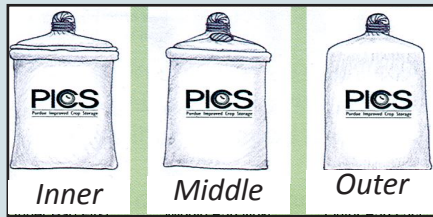
2. Check the 2 inside bags for any holes or tears. Do not use bags with holes or tears.



3. Put the 2 liner bags into the outside bag. Fold over the top.



4. Fill the inner bag with grain. Pack the bag tightly to remove air.



5. Twist the top of the inner bag and fold it over. Tie firmly with strong string. Repeat for the middle bag, then the outer bag



6. Store PICS bags in a cool, clean store. There must be good airflow. Stack on pallets 5 inches above the floor. Leave 1m between the bags and the wall.

# Selling Grain

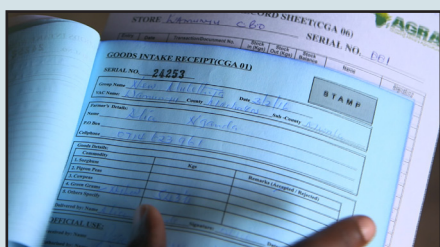
Form a group with other farmers. You will be able to access larger markets. You can get better prices for your grain if you sell as a group.

## The Cereal Growers Association (CGA)

The CGA offers training to farmers on grades and standards of grain. This will help you get top prices at the market.

Sell your crop through a **Grain Aggregation Centre**.

1. Take your crop to a certified CGA warehouse.
2. Your crop will be checked for quality, such as moisture and broken grains. Then it is weighed and stored.
3. You will get a receipt of the grain you have left at the warehouse.
4. Experts will look after your grain.
5. When prices are better, you can ask the warehouse to sell your grain.



*Make sure you get a receipt. It will tell you how much grain you have stored at the warehouse and what grade it is.*

PRICE DISPLAY BOARD				
WAMUNYU Grain Aggregation Centre				
Average Price (Ksh) 90kg bag for week ending .....				
MAJOR MARKETS				
TYPES OF COMMODITIES	MACHAKOS	WOTE	NAIROBI	MOMBASA
COW PEAS	40-60¢	50-70¢	60-70¢	70-100¢
GREEN GRAMS	70-100¢	60-100¢	80-140¢	90-150¢

*Go to a Grain Aggregation Centre to find out what the market prices are.*

Try growing **cowpeas**. They are good for selling and for feeding your family. They have lots of protein.

# Harvest Rainwater



If your roof is made of tiles, metal sheets or plastic, you can catch rainwater and store it for future use.

Put **guttering** on your roof to catch rainwater. Store the water in containers. Use the water for your family, your animals, or even your crops.

You will not need to collect or buy water as often. You will save time and money!

**Always boil water before drinking.**

*Produced by Mediae*



Watch us on Citizen TV on:  
Saturday 1.30pm (English)  
Sunday 1.30pm (Kiswahili)

For another leaflet  
or more information,  
SMS 30606

