

## Capture water for your shamba

All livestock and chickens need clean, fresh water.

So does your family. With unreliable water supply, irregular rains and for many people, long distances to walk to get water, it is better to capture the water from the rain which falls on your roof than let it run away, useless.

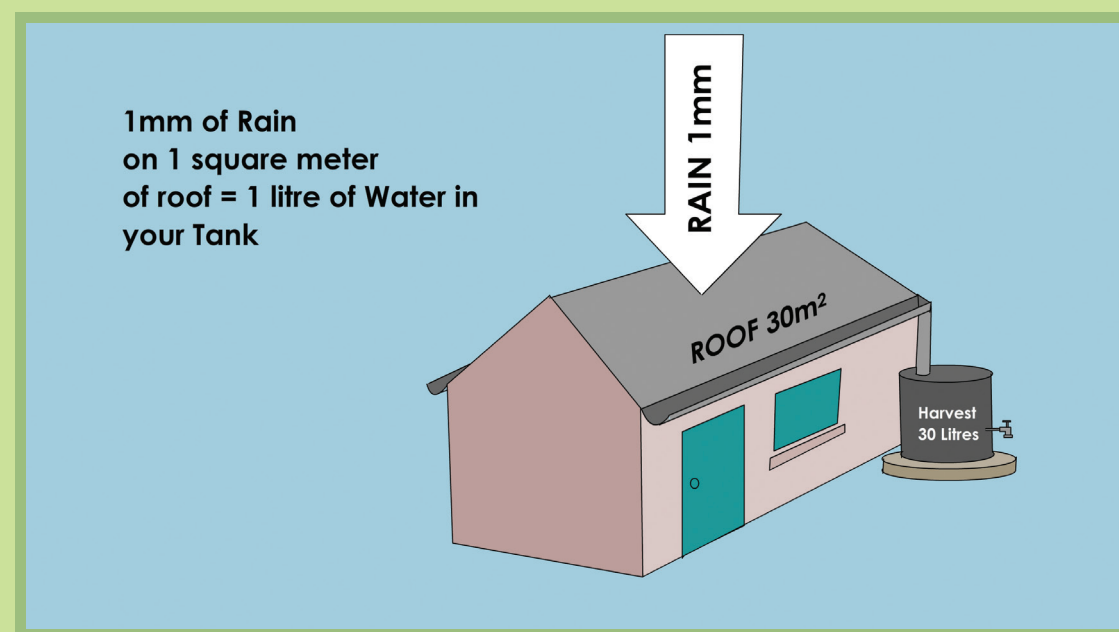
To work out how much water you can capture, and therefore the best size tank to buy, use this simple sum:

**1mm rain on 1 square meter (3 feet by 3 feet) of roof = 1 litre of water**

*So, for example :*

Joseph's house is 5 meters (about 15 feet) wide, and 6 meters (about 18 feet) long. This means his roof is about 30 square meters. Joseph lives in Nairobi, where the average annual rainfall is 900mm. So, in one year he can capture 900mm of rain on 30 square meters of roof – this means he will trap about 27,000 litres of water over the year.

You will be able to get information on the average rainfall for your area from KARI stations and online at the Kenya Meteorological Department website [www.meteo.go.ke](http://www.meteo.go.ke)



*Calculate how much water you can harvest from your roof – harvesting rainwater will save you time and money.*

*Produced by Mediae*



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## Series 2: Episode 5

George & Agnes' Farm - Rusinga

*This episode contains information on marketing groups, control of Striga weed and Maize Stem Borer by Push Pull, care of Chicks and Chickens and rainwater harvesting*

### Problems with Maize

George and Agnes' maize was not well, and was not producing any cobs. The expert from ICIPE came to see the crop and noticed that the maize had two serious problems:

#### 1. Striga infestation

First of all, the maize was full of Striga, or 'purple witch-weed'. This is a very dangerous plant, which attaches to maize roots, and steals all the nutrients. This causes a 30 to 100% drop in production. Striga seeds can stay in the soil for 20 years.

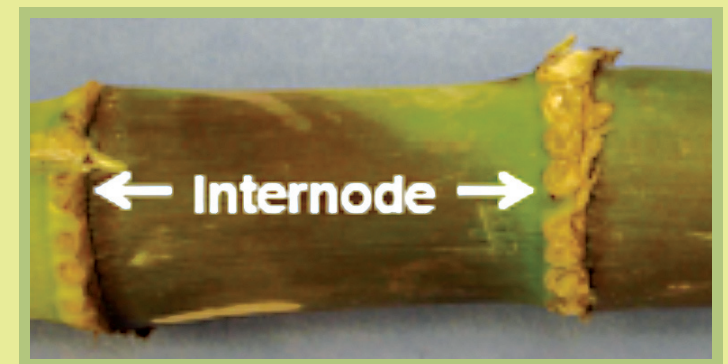
The first signs to look for are **short internodes** on plants – an internode is the section between two leaves on the stalk. When these are short, the plant is already infected, even if you cannot see the Striga plant.

The second thing to look for is the **pretty purple flowers** in your maize field. These mean your crop is infested with Striga. To make sure it is Striga, you can pull up a maize plant next to a purple flower, and look at the roots.

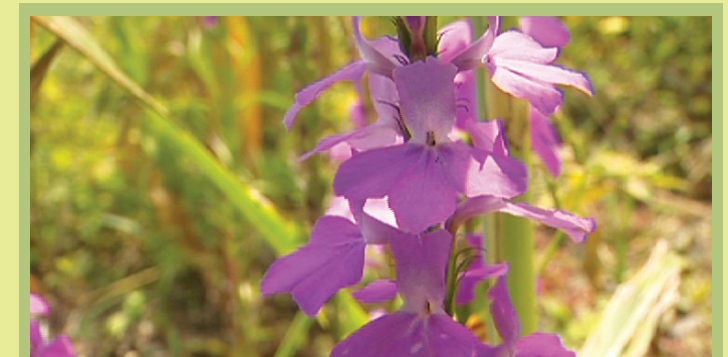
#### 2. Maize Stem or Stalk Borer

Maize stem borer is a caterpillar goes into the stalk, eating the inside. This makes the plant weak and reduces your yield by about 50%. Remove any stems that have borers.

Controlling stem borer by pouring insecticide down the funnel of the maize plant is expensive.



*When internodes are short, Striga is there*



*When Striga grows, you can see the purple flowers all over your field.*



*Stem borers destroy the inside of the maize stalks*



## Control Striga and Stem Borer easily with Push Pull

Striga and stem borer can be controlled easily, without any chemicals. Napier grass planted around the maize and Desmodium between the maize push and pull the pests away from the maize. Desmodium and Napier can also be fed to your livestock. Desmodium improves your soil fertility.

Striga	Stem borer
When Desmodium is planted between the maize, Striga is ‘pulled’ to grow in the Desmodium instead of the maize. The Desmodium does not allow Striga to continue to grow, and it dies. The maize plants are not affected.	The stem borer moths do not like the smell of Desmodium, and are ‘pushed’ away from maize. The moths are ‘pulled’ to lay their eggs on the Napier grass, which kills any caterpillars that hatch.

### Planting Napier grass around the maize

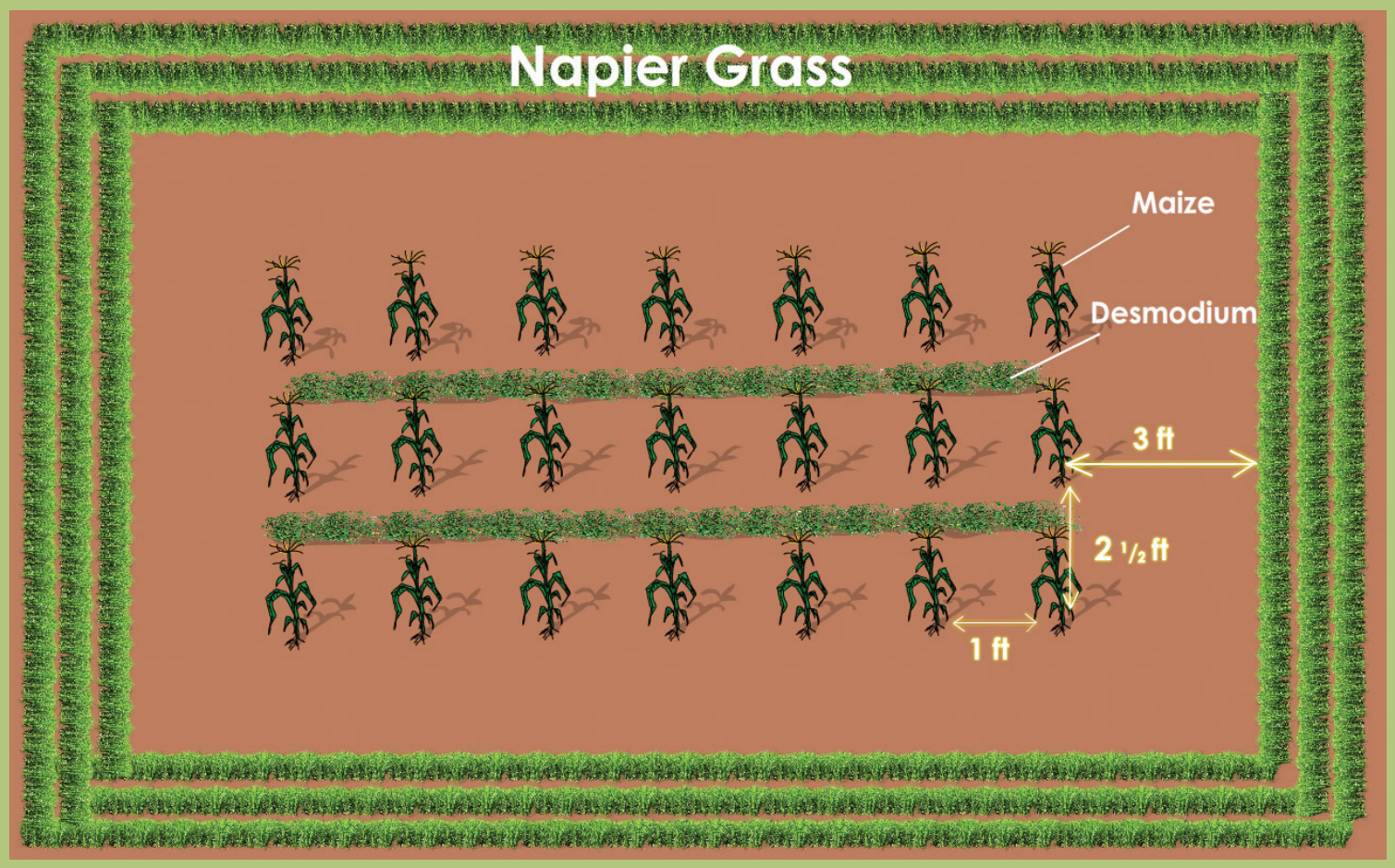
Plant 3 rows of Napier 2 1/2 feet apart, 3 feet away from the maize, all around the field. Make holes every 2 1/2 feet. Add 2 handfuls manure, mix with the soil, then plant a Napier cane in the hole, burying 2 nodes in the soil.

### Planting maize

Make rows 2 1/2 feet apart, starting 3 feet from the Napier grass. Dig holes 1 foot apart on the rows. Mix 1 spoon of superphosphate fertiliser (TSP) with the soil in each hole. Plant one maize seed in each hole, and water well.

### Planting desmodium

Plant the desmodium seeds (you will need 1kg per acre) or stalks between the maize rows. Trim the desmodium after 3 and 6 weeks and keep it from growing within the maize plants.  
Remember to weed, water and fertilise your maize crop well. The Push Pull method works well if it is cared for.



## Chicken rearing

Agnes was rearing chicks with her group. Their chickens were not healthy and were not putting on enough weight.

### Selecting chicks

It is important to select chicks from good parents, which are healthy. Chicks from unhealthy parents will not be healthy. If you buy chicks from Kenchic, you can trace which chickens are the parents of your chicks.

### The Brooding House

A brooding house should be clean, warm, have curtains over the air holes for the night, a warming light or jiko, and enough feeders and drinkers for the chicks.

### Brooding pen shape

The brooding pen should not have corners – chicks huddle together and the one in the corner can get squashed and die. Make your brooder a round shape.

### Brooding pen hygiene

Chicks need to be kept in a clean healthy environment. Firstly the walls, ceiling and floors of the pen need to be disinfected with a good disinfectant. Dilute the disinfectant according to the instructions on the bottle. Whenever you are spraying chemicals, wear protective clothing. You will also need a footbath to clean your shoes whenever you go in or out of the brooding house. You can use the same disinfectant, and a karai for this. Use wood chips on the floor of the pen to soak up the faeces; these will also keep the chicks warm.

### Feeding for healthy chickens

Your chickens should be ready to sell after 6-8 weeks (1.5 to 3kg). This depends on if they are healthy and well fed.

## Women’s groups – improving incomes

Agnes is a member of a women’s group. The group of 12 women works together to produce and market chickens. Working as a group makes producing and marketing crops and livestock easier and more profitable. Usually, profits are divided among the group depending on how much investment each group member gives. The investment can be money, time working or amount of produce. If you are not already part of a group, there may be one in your area that you can join. Or you can form your own group with your neighbours and friends. There is no limit to the number of people in a group, and you can work on anything – from chickens to tomatoes, from cooking to cows. Remember, it is easier to break a single stick than a bundle of sticks tied together!

For more information on groups, SMS ‘market groups’ to 30606



The brooding pen should be round, warm and with enough drinkers and feeders.



Keep your brooding house free from diseases by using a foot bath



Store feed off the floor to keep it clean and dry