

## Solar light

Vincent's family uses kerosene lanterns which are very smoky and not safe around the children. D.light design gave them a solar lantern which can be charged outside in the day time and used at night. The d.light S250 solar lantern has up to 12 hours of light and can even be used to charge mobile phones.



d.light S250 lantern

## Mole traps

Vincent had a problem with moles eating his vegetable crops. A mole trap is easy to make using cut up bits of pipe. It consists of a pipe with circular stoppers at both ends which are held on by bolts so that they can move towards the inside when pushed. When the mole pushes the stopper it moves and the mole goes in the pipe, but the stopper stops the mole being able to get back out.



Mole trap

## Water harvesting

Rain water can be collected using gutters attached to the roof of buildings that take the water to a storage tank. The Shamba Shape Up crew helped put up gutters around the whole house, connected to a 1000 litre water storage tank. A base to put the tank on was made 2 feet above the ground so that water flowed downwards.



Water storage tank and guttering

Rain water can now be collected and used for watering the crops and for cooking and washing!



## Shamba Shape Up Series 1: Episode 9

Vincent Misigo's Farm, Makhokho, Kakamega

This leaflet contains information on bee keeping, financial record keeping, Kenbro chickens, growing Black Nightshade vegetables, trapping moles, water harvesting and solar light.

## Making a bee apiary

### Hives

Vincent had low quality hives. New modern hives can be used such as the Langstroth Hive. Hives should not be put on the ground but should be hung up on a wooden frame made of 3 posts.



### Langstroth Hive

This has 10 frames inside what is called a brooder. Each frame has wax on it to attract bees.

### Trapping the bees

The brooders should be placed on the roof of a building to trap bees. Trapping takes between 12 and 36 hours. Once bees have been trapped, they should be moved to the apiary (see below) but only at night time, not in day time.

**Always wear safety clothing when moving bees!**



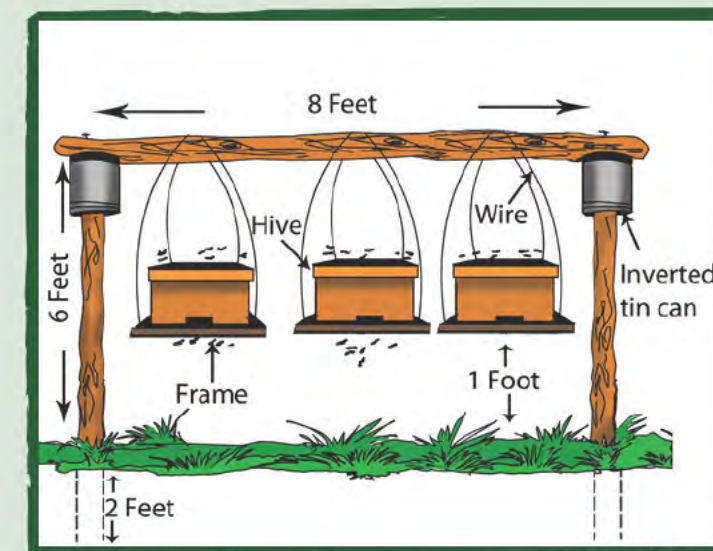
Frame and brooder



Bee trapping

## Making the wooden frames for hanging the hives

- Build somewhere shady at least 100 metres from any house
- For each frame, 3 wooden posts 8ft in length are needed
- Treat the part of the post that will be in the ground with a wood preservative to stop insects eating the wood
- Dig 2 holes, 2ft deep and 8ft apart
- Place 2 posts and secure them in the ground with stones, sand and concrete
- Put a tin can on top of each post. This stops insects (eating the wood)
- Put the other post across the 2 goal posts and nail it in place
- Hang the hives from the frame using wire
- There should be 3 hives per frame
- Hang hives 1 foot from the ground
- Make as many wooden frames as you need!



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 5606





# Financial record keeping

## Pests

Managing your finances and keeping records is very important if you want to run your shamba like a proper business and make money. There are 3 ways your business can perform **1) In profit 2) Break even or 3) At a loss.** A financial advisor from **FSD** came to give some tips to Vincent to help him make sure his shamba was **“in profit”!**

Sales	Expenses	=	Profit
100	50	=	(100 - 50 = +50)

Sales	Expenses	=	Break Even
100	100	=	(100 - 100 = 0)

Sales	Expenses	=	Loss
50	100	=	(50 - 100 = -50)

## In profit

When the amount you get from your sales is **more than** your expenses and inputs.

## Break even

When the amount you get from your sales is the **same** as what you spent on inputs.

## At a loss

When the amount you get from your sales is **less than** the amount you spent on inputs.

## Book Keeping

In order to know if you are making a profit, breaking even or making a loss, you need to keep records of all your sales and expenses.

## Cash Sales Receipt Book

A cash sale receipt is given to the customer who buys from the farm. It shows what they bought and how much they paid.

## Invoice Book

If you supply someone and they need to pay you, you give them an invoice.

## Delivery Note

To record deliveries made from the farm, for example to the cereal board. The person receiving the goods should sign the delivery note and you give them a copy.

## Petty Cash Voucher

This is for any payments you make at farm level.

## Cash Book

All the money going out (payments) and money coming in must then be recorded in a cash book so you can check whether you are in profit each month.

RECEIPT BOOK SAMPLE / CASH SALE

Receipt No. 214 \_\_\_\_\_ Date .20/1/2012

Received From: *Iguku Hospital Catering department* \_\_\_\_\_

Being Payment for- *Supply of Vegetables* \_\_\_\_\_

Cash/ Cheque  With Thanks

Cash Sales Receipt Book

CASHBOOK FOR VINCENT – FARMING BUSINESS IN KENYA SHILLINGS				
DATE	PARTICULARS	IN (RECEIVED)	OUT (SPENT)	BALANCE
1/10/2011	Balance b/f	-	-	30
2/10/2011	Sold Maize	20,000		20,030
2/10/2011	Paid casuals		1,500	18,530
3/10/2011	Bought fertilizer		8,400	10,130
4/10/2011	Sold vegetables	500		10,630
5/11/2011	Allowance to Vincent		4,000	6,630
6/11/2011	Paid casuals		3,000	3,630
7/11/2011	Airtime		150	3,480

Cash Book example

## Banking

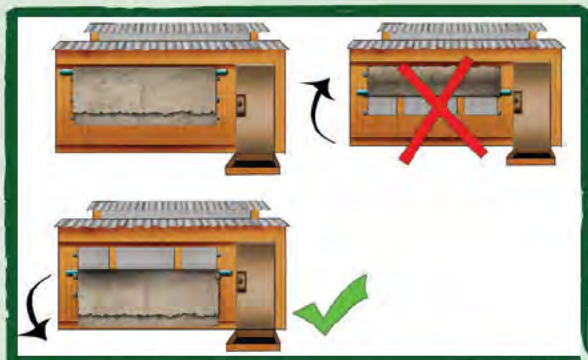
- It is important to keep money in a bank or other financial institution for the following reasons:
- It is safer than keeping money at home
  - It will help you save money
  - It will help you build a good relationship with the financial institution for the future.

# Kenbro Chicken Keeping

Kenbro chickens are good for both laying eggs and for selling as meat.

## Housing

- For 50 chicks Vincent needed a chicken house 10ft by 5ft (1 square foot per chick)
- Ventilation should be on two sides of the house to make sure enough air gets to the chicks
- Remember to hang the curtain on the outside, opening from the top down.



Curtain opening from the top

## Brooder

- Chicks should be kept in a round brooder to stop them crowding in sharp corners where they can get squashed
- Put a jiko, feeders and drinkers inside the brooder
- Make sure you watch the chicks to check that they are not too hot or too cold. If they huddle together you may need to put more heat in the jiko. If they run to the edges, away from the jiko, it might be too hot.



Brooder, jiko, feed tray and drinker

## Food and drink

- The best feed for chicks is ‘Unga Fast Grow Starter Mash’ (until the chicks are 3 weeks old) and then ‘Unga Fast Grow Finisher Mash’ (from 3 weeks old to 6 weeks old)
- Fresh, clean water should be given daily. You can even give chicks **Vitamin Water**
- After six weeks they can be let out to scavage and only given supplementary feed in the evening.



Vitamin Water

# Growing Black Nightshade Vegetables

## Soil testing

Vincent’s soil was tested and was found to be too acidic. The pH level was too low. He needed to put lime on it 6-8 weeks before planting. Lime is not expensive and can really help improve your crop yield if your soil is acidic. Manure and compost are also very good if your soil is acidic as they contain calcium and magnesium.

## Land preparation

Prepare land early in the season before it rains. The land should then be harrowed to have a fine surface (fine tilth).

## Where to buy seeds

- Kenya Seed Company
- You can prepare your own seed if you are already growing the crop
- From neighbours who grow Black Nightshade



Agricultural Lime

## Fertiliser

Vincent was given advice to use **Mavuno** fertiliser which is made especially for green leafy vegetables. Add a bottle top of fertiliser to the holes with a handful of manure when planting and then add a little soil on top before adding the seed so that the fertiliser does not scorch the seed.



Mavuno Fertiliser