

## Solar Light

### Benefits of Solar

1. It is safe, there are no harmful fumes like with kerosene that can be bad for your eyes and lungs
2. There is no risk of fire
3. It is brighter than kerosene
4. It is free as it uses energy from the sun
5. It gives you more time to study or cook with light!

D.light Design provided a solar lantern called the d.light S10 lantern.

For more information SMS the word 'DLIGHT' to 5606 or check out their website. [www.dlightdesign.com](http://www.dlightdesign.com)



## Shamba Shape Up Series 1: Episode 12

Christine Alelo's Farm - Mukumu, Kakamega,  
Joseph Wambua's Farm - Kimutwa, Machakos

This leaflet contains information on cow health, fake and real pesticides, financial planning, retention ditches, making fortified compost, solar light and rain water harvesting.

## Rain Water Harvesting

In arid and semi-arid areas like Machakos, water supply is very important for crops and for domestic use. Shamba Shape Up helped Joseph put up gutters around his house and add a water tank to store water when it rained.

### Advantages:

- Harvesting rainwater means you have water when you need it
- Adding gutters and a water tank is simple
- Once you have invested in the set up costs, the benefits of harvesting your own water will last for a long time
- The system can be built to meet your needs. Poorer households can start with a single small tank and add more when they can afford them.



## Cow health

Christine's cows needed better nutrition. An expert from Unga came to give her some advice.



### Calf Early Weaner Pellets

You can wean your calf early at 2 months (instead of at 3-4 months) by using this feed. Early weaning means you have more milk to sell and get more money!



### Dairy Meal

Cows should be given a protein supplement to increase their milk production. Dairy Meal is a good source of protein.



### High Phosphorus Mineral

Dairy cows lose a lot of calcium and phosphorus with milk, so a high phosphorus mineral is needed to improve production.

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



Tel: +254 0 20 7224450/62  
enquiries@cabi.org



Tel: +254 20 8632726  
ifdckenya@ifdc.org



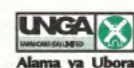
Tel: +254 20 4180612/3  
0722 209840 0734 440044  
hr@coopers.co.ke  
for more information,  
SMS 'NUTRITION' or  
'ANIMAL HEALTH' to 5606



Tel: +254 20 2712627/ 2718814/09  
info@fsdkenya.org



Tel: +254 20 2301518/20, 3560102/3  
info@kenchic.com



Tel: +254 020 6978000  
information@unga.com



Tel: +254 020 3228000  
syngenta.east\_africa@syngenta.com  
for more information,  
SMS 'DISEASES' to 5606



Tel: +254 20 2106793, 703 896996  
dlightafrica@dlightdesign.com  
for more information,  
SMS 'DLIGHT' to 5606

## Fake and Real Pesticides

An expert from Lachlan came to give tips on how to make sure you buy real products not fake ones.

1. Check the package has a security mark. A fake product might also have one, but the quality won't be as good
2. Check the quality of the packaging. Packaging for fake products will be of lower quality
3. Price. A fake product is likely to be cheaper; this should make you question whether it is real
4. Check that the seal on the top of the bottle is unbroken
5. Buy from an approved supplier.

A fake product might be dangerous to you and your crops! A fake product might be useless and not do any good and put your crops at risk!



## Financial Planning

To run your shamba like a business, financial planning is needed. An expert from **FSD** came to give Christine some advice to help her make her maize business successful.

### Investment

This is the amount of money Christine needed to put into her business. This includes inputs such as seeds, fertiliser, insecticides as well as labour costs. The FSD expert worked out she needed to invest 40,000 Kshs.

### Income

If her harvest is good, Christine can earn 50,000 Kshs from the sale of her maize.

### Profit

This is the difference between the income and the investment costs. Christine could make a 10,000 Kshs profit from her harvest by investing 40,000 Kshs.

<b>INCOME</b>	<b>50,000</b>
<b>INVESTMENT</b>	<b>– 40,000</b>
<b>PROFIT</b>	<b>10,000</b>

## One Acre Fund

Christine is a member of the One Acre Fund - a savings group. The benefits are:

- reduced production costs by working in a group
- free technical support
- inputs on credit

You must have some of your own savings before you access the Fund. You must also prepare in good time before you apply to them for a loan.

## Retention Ditches

Retention ditches are large ditches that catch water so it soaks into the ground. They are good in dry areas for trapping rain so that water seeps into the soil. They have to be looked after to make sure they don't fall down.

### Desilting

This is the process of removing silt that has been built up that stop the ditch working so well. Silt, weeds and other materials in the ditch should be scraped off with a jembe. Shovel soil back on the ridge to make it higher.



Clearing weeds from the ditch

### Strengthening the ridge

The ridge needs to be strengthened with grass so it stays strong. Plant grass 2ft apart on the ridge. Joseph was advised to plant **Africa Foxtail** grass which is good for his region and can be cut as livestock fodder. Napier grass can also be used.



Planting African Foxtail grass on the top of the ridge

## Fruit Trees

Fruit Trees can be planted in the retention ditch to make good use of the space. They also help anchor the soil. Fruit can be sold in the market to increase the income from your shamba.

- Dig holes 1m(3ft) by 1m (3ft) and 3m apart along the retention ditch
- Separate top soil from the sub-soil
- Mix the top soil with 1-2 debes of manure
- Mix in 1 glass (200gm) of DAP fertiliser
- Fill the hole with the top soil-manure-fertiliser mixture
- Plant your seedling in the middle of the hole and water immediately.



Fruit tree sapling being planted

## Making Fortified Compost

Compost is very good for crops and costs nothing to make. You can use waste from plants, the kitchen and also manure from cow dung to make it. An expert from **KARI Katumani** came to show Veronica how to make a fortified compost heap. Fortified means an inorganic fertiliser is added.

### How to make

1. Place a polythene sheet 2metres wide in the shade
2. Cut dry material into small pieces (crop residues)
3. Spread this onto the polythene until it is 30cm high
4. Add DAP fertiliser (about 150gm for every 1 metre)
5. Add manure (about 1kg for a 2 metre long compost heap)
6. Add some water on the layer
7. Add a layer of green vegetation
8. Repeat the process of adding fertiliser, manure, water until the pile is about 1.5 metres high
9. Cover the pile with a polythene bag and put sticks in the edges to hold it in place
10. After one month, turn the pile
11. Put a stick in the pile to check progress. Compost will be warm when it is decomposing
12. After 4-6 months the compost will be ready
13. You can check it is ready by putting a stick in the middle of the pile. It should now be cool and dry which shows that everything has decomposed.



Polythene being cut to size



Layers being made on the compost heap



Finished compost heap