

Coffee planting

James has problems with his coffee but doesn't like to use chemicals as they affect the bees. The types of coffee beans James uses are an older variety, so get every disease - so a new variety of coffee should be planted.

Modern varieties are disease resistant and will not get sick so easily. The expert suggests planting the new variety called Batian coffee. This type will not be affected by disease and needs no expensive or polluting chemicals which will hurt the bees.

Always check to see if there are new crop varieties available.

For more information, SMS 'COFFEE' to 30606



Using modern varieties gives you a better crop

Energy saving jikos

Energy saving jikos are a better way of cooking than an open fire which produces a lot of smoke, uses much wood and is slow. The jiko uses half the wood of an open fire and cooks much quicker!

It is also much better for your health as it stops you coughing, stops itchy eyes, and can be put on a table which will stop back ache. It will even keep your kitchen cleaner! The jiko also saves you money and time!

For more information, SMS 'JIKO' to 30606



Using an energy efficient Jiko



Series 3: Episode 2

James & Lucy's farm – EMBU

This leaflet contains information on:
Bee Keeping, Chickens, Coffee Planting, Soil Erosion
& Energy-Saving Jikos.

Soil erosion

Soil erosion is a big problem on the farm and often the rich top soil gets washed away by the floods during the rainy season. The top soil is the best for plants to grow in so it is important to try and keep it from being washed away. If this soil disappears, it will have to be replaced by costly chemical fertilisers or manure instead.

Planting Trees

Planting trees is the best way to stop soil erosion from destroying your farm. Tree roots grow deep into the soil and bind it there, stopping it from being washed away. Always plant on a slope that is past 55 degrees.

The best types of tree to plant are ones that a drought resistant. This means that they won't die if the rains are poor. Avocado trees are great for keeping soil from eroding, as well as soil conservation and stabilising the soil.



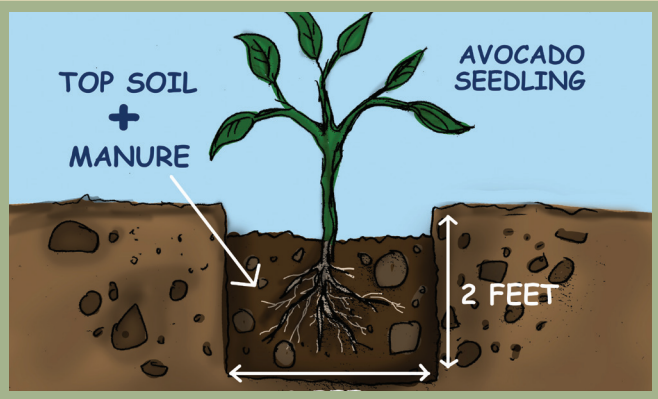
Planting avocado trees is good for retaining soil

Fruit trees are also great for planting. They retain soil well, don't need much watering and provide other benefits, such as fruit for eating and sale, wood and shade.

When planting trees to stop soil erosion it is best to start by digging a hole 2 feet by 2 feet by 2 feet, making it deep enough to provide support.

Then mix top soil with 20 grams/ 2 caps of DAP and manure to give the tree the food it needs. Then return the soil to the hole and plant the tree! Don't forget to water it well!

For more information, SMS 'EROSION' to 30606



Mix top soil and manure when planting

Terraces are often used to stop erosion, but in fact they make the soil more unstable - planting trees is a better solution to stopping soil erosion.

Produced by Mediae



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Bee keeping

James and Lucy have several bee hives, which they use to make honey to sell. Bees are useful as they help with pollination and boost production. However they are having problems with a honey badger and with weevils.

Pests



Hives are protected in a bee house

Honey badgers can destroy hives by eating honey from inside them. The best way to prevent this is to build a bee house. The bee hives must be off the ground, in the shade and at least 500m away from the house.

Geese are also a good way of stopping these pests. They make a lot of noise which scares the badger away, leaving your honey safe!

Costings

Bees can be costly to start with, such as buying the bee suits and building your bee house, but once the first costs are over maintenance is very little.

Start Up Costs

- Two bee suits (you will need a helper)
- A smoker
- Bee hives
- Rope
- Bees

Before beehive shape up

4 bee hives + a honey badger = 108 kg honey & profit of **72,000 ksh a year**

After bee hive shape up!

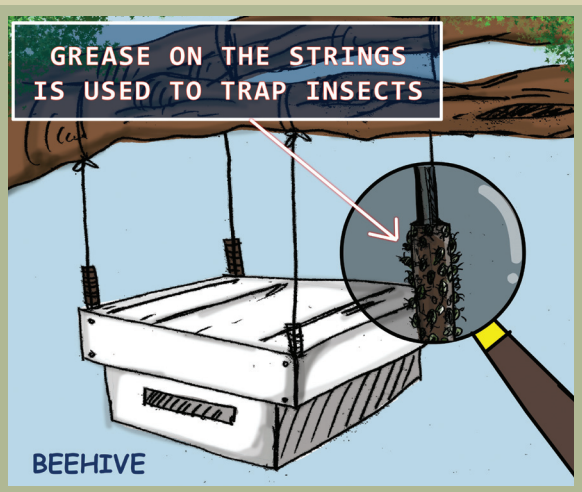
14 hives – a honey badger = 300 kg honey & a profit of **200,000 ksh a year!**

Bee Care

It is important to keep bees and their hives clean and well looked after. Do this at least once a week to keep an eye on the bees and make sure they are healthy. James and Lucy are given some other tips to help them:

- Always keep the hive in the shade to keep cool and 500m away from the house.
- Bees need water nearby to make honey so always provide some, keeping it fresh and clean.
- Collect the honey at night, when the bees are sleepier. This means you use less smoke to calm them, which gives the honey a better taste.
- Honey is in high demand in Kenya, but low in production so is a good way to make money because of a sure market.

For more information, SMS ‘BEE’ to 30606



Cover the wire with grease to pevent weevils

Insects can cause huge problems in a hive. They eat the wood, causing it to rot away and killing the bees. To stop them causing damage, first get rid of the insects by using a bee-friendly pesticide. To stop them returning, cover the ropes or poles holding the hives in a thick layer of grease. This prevents them from getting into the new hive.

Always leave honey for the bees; otherwise they will leave the hive!

Chicken care

James and Lucy are having problems looking after their chickens. Many of them are getting ill and are not producing as well as they can.

Environment

Chickens need a healthy and clean environment to grow and produce well. A dirty or badly looked after chicken house often causes illness and poor production

These are what to look for in a good chicken house:

- Ventilation – some air moving through the chicken house
- Clean – no dust, no cobwebs
- No dung on the floor – causes disease
- Clean water and feeding trays
- Add a jiko for heat for chicks.

Feeding & Vaccines

Feeding your chickens properly is a key way to having healthy chickens and good produce. All this will lead to a profit on your shamba. Unga Mash is a good starter feed for the chicks.

Clean water is also very important for chickens. Make sure there is always a fresh supply in a clean container.

To vaccinate your chicks against Gumboro, add the vaccine to the chicks water, mixing it in with skimmed milk powder. It is important that the vaccine is kept cold, away from sunlight and used within the expiry date.

Always read the instructions and the dosage and add the mix under the water.

Health

To stop Lucy’s chickens dying, the expert suggests cleaning the chicken house to help the chickens become more healthy.

- Keep the chicken house clean by disinfecting it before you put in new chickens
- All chickens the same age in one chicken house – mixing sizes and ages causes disease and fatalities.
- Only one type of chickens in chicken house – choose either broilers or layers.
- Give your chickens space to grow - each chicken needs 1 square foot of space.

For more information, SMS ‘CHICKEN’ to 30606



Adding a Jiko can heat the house



Mix the vaccine with milk powder to prepare



Disinfecting the house prevents disease spreading