

## >> fastfacts: recipes for healthy, happy plants

>> **Healthy plants in healthy soil shouldn't generally suffer from serious insect infestations or diseases. So if you're having severe problems with either, look for reasons that your plants may already be stressed, and therefore more vulnerable to disease or insect attack. Spraying for pests should really be a last resort...**

**Ask yourself the following questions:**

- > Is my soil healthy?
- > Does the soil in my vegie garden contain lots of well-broken-down organic matter, is it open and free draining, does it have a neutral pH? (Some vegies require more alkaline or acidic conditions than others, so this may also factor in plant health)
- > Am I providing my plants with enough moisture, and using mulch to prevent evaporation and to insulate the soil against hot sun? Consistent moisture can be very important; for example, tomatoes that dry out while fruiting are very susceptible to red spider mite infestations.
- > Is my garden protected from strong wind/very hot sun?
- > Are my plants growing in the conditions they prefer? For example, cucumbers and beans both like to have shelter from very hot sun — and they ideally need something to grow up for support. Plants like eggplants and tomatoes thrive in full sun, and require many hours of direct sunlight each day to ensure maximum fruit set.

**Ok, so now that we've established that we really do have some opportunistic pests we need to deal with, here are some natural recipes that we use at the Kesho Leo farm.**

{recipe 1 of 5}

### recipe for milk spray for powdery mildew

This spray works on powdery mildew in sunflowers and also crops such as zucchinis or cucumbers. It should be applied once or twice a week, and has the added bonus of boosting the plants immune system while getting rid of the mildew.

- 2L of milk
- 18L of water

#### method

Very simple! Use one part milk to nine parts water (two litres of milk in a full 20 litre backpack sprayer), and mix with a squirt of dishwashing detergent.

{recipe 2 of 5}

### recipe for papaya insect spray

- 1kg papaya leaves
- 10L water

#### method

With a mortar and pestle, pulp the papaya leaves then put in a bucket with two litres of water. Leave to sit for two days, then strain and add the remaining water. Use at full strength, with a squirt of dishwashing detergent for best results on a range of insect pests. It can also be useful against some fungal diseases.





{recipe 3 of 5}

### recipe for compost tea

- 1 shovelful of manure (goat or cow manure usually, although you can use horse, pig, elephant, etc)
- 1 shovelful of mature compost
- A big handful of wood ash
- A couple of big handfuls of soft green weeds (Comfrey is perfect for this, if you have it – the leaves are full of minerals and micronutrients that the plant brings up from the subsoil through its deep tap root)

#### method

Put all of these ingredients into a hessian bag or sack, anything that will hold it all together while allowing water to penetrate – just like a giant teabag! Submerge the bag in a barrel of water (we use a forty-four gallon drum). Leave for two weeks and then dilute to the colour of weak tea.

This concoction can be used to reduce transplant shock in seedlings and to liquid fertilise all plants, especially heavy feeders. We use compost tea in all of our other sprays by adding it to the water part of the recipe. (If the recipe calls for nine litres of water, we mix up nine litres of the 'weak tea' coloured liquid). It foliar feeds the plant while spraying the pests, and strengthens the plant against any future attacks.

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{recipe 4 of 5}

### recipe for garlic and chilli spray

- 2 big handfuls of garlic
- 1 small handful of fresh hot chillies
- 100ml cooking oil
- 2tsp dishwashing detergent
- 1L hot water

#### method

Finely chop the garlic and chilli, put into a container and pour over the oil. Leave to sit overnight then add one litre hot water, allow to cool. Pass the mixture through a sieve into a water bottle, removing all the garlic and chilli bits. Add dishwashing detergent. Use this mixture at a ratio of 1:9 with water.

At the farm we use this spray for aphids in particular, but it can be used on a wider range of insects pests.

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{recipe 5 of 5}

### recipe for insect spray using sodom apples (Solanum incanum – these fruits grow beside the roads here in Arusha, Tanzania)

- 30-40 sodom apple fruits, ripe (yellow)
- 2L of water
- 2tsp dishwashing detergent

#### method

Cut the sodom apples in half, and put them in a bucket with a very small amount of water. Crush using a piece of wood, or whatever you have handy. Add remaining water. Leave to soak for 24 hours, strain through a sieve then add dishwashing detergent. Use at a ratio of 1:9 with water.

*Handy hint:* Any of these mixtures benefit from the addition of 50ml of neem oil for every ten litres of water. Shake mixture regularly to ensure that the oil doesn't separate out.

