

## Extension Fact Sheet 56: Plant-Derived Pesticides

- *Only select healthy plant parts to use as pesticides;*
- *When storing plant parts for future use, make sure that they are properly dried and are stored in an airy container (never use plastic containers), away from direct sunlight. They should be free from moulds before using them;*
- *Use utensils for extraction that are not used for food preparation or as water containers. Clean all the utensils properly after using them;*
- *Keep crude extracts away from your body during preparation and application;*
- *Make sure that you place the plant extract out of reach of children and house pets while leaving it overnight;*
- *If spraying fruit trees, harvest all the mature and ripe fruits before spraying;*
- *Always test the plant extract on a few infested plants before large-scale spraying;*
- *Wear protective clothing while applying the extracts;*
- *Wash your hands after handling the plant extract and wash your clothes, too.*

### **Chilli (ants, aphids, caterpillars, mealybugs)**

- Take one cup dry or 2 cups fresh chillies;
- Smash to a fine paste;
- Put into bucket with 1 litre water and rub with hands (cover hands with plastic bag);
- Soak of at least 1 hour;
- Squeeze and strain;
- Make up to 1 litre with water;
- Add 1 teaspoon of soap.

### **Soap (scale insects and mealybugs) – test on 1-2 plants first; it can ‘burn’ the foliage!**

- Use soap (pure soap, not detergent);
- 5 tablespoons of soap in 4 litres water;
- **OR**
- 2 tablespoons of dish washing liquid in 4 litres water.

### **Fou (*Barringtonia*) – this is the tree with the 4-corner fruit growing near the sea**

- Scrape one seed;
- Add 1 litre water;
- Leave overnight;
- Make up to 2 litres with water;
- Strain, and add 4 teaspoons soap.

### **Tobacco (caterpillars, aphids, and more)**

- Use 5 large leaves;
- Smash;
- Add 1 litre water;
- Leave overnight;
- Make up to 2 litres with water;
- Strain, and add 4 teaspoons of soap.

### **Garlic (caterpillars, thrips, possibly some fungal diseases)**

- Scrape 4 garlic cloves;
- Soak in small amount of vegetable oil;
- Leave overnight;
- Make up to 2 litres with water;
- Strain, and add 4 teaspoons soap;

Also, scrape 4 cloves in hot water; add several ground chillies, and 2 tablespoons pure soap. Use spray when water is cool.

### **Derris (caterpillars, grasshoppers, aphids, spider mites, planthoppers; beetles)**

- Take 2 roots of Derris (20 cm long and as thick as a small finger);
- Smash well;
- Put roots in a bucket overnight and cover with water;
- Make up to 2 litres with water;
- Strain, and add 4 teaspoons soap.

### **Gliricidia (aphids, caterpillars, whitefly)**

- Grind or pound 0.5 kg leaves;
- Soak overnight in water;
- Make up to 20 liters with water;
- Strain, and add 10 teaspoons soap.

**Note:** *Gliricidia* is also a rat poison. Mix the amounts above with boiled rice. But may need to make up fresh every day. Place the 'food' in a bamboo to protect it from children, pets and domestic animals. Bacterial action converts chemicals in the leaves to brodifacoum-like substances.

### **Neem (caterpillars, grasshoppers, and many more; even fungi and nematodes)**

For leaves:

- 1 kg of leaves plus 5 litres water in a bucket;
- Leave overnight;
- Remove the leaves, retain the water and pound the leaves;
- Squeeze the leaves and add the 5 litres of water used for soaking them overnight;
- Add about 20 ml of diluted soapy water and use.

For mature seeds:

- Wash and remove the husk, and allow to dry;
- Take 12 handfuls of dry seeds (or use 500 grams per 10 litres water);
- Grind them into a fine powder;
- Mix the powder in 12 litres water and soak overnight;
- Strain, and add 4 teaspoons soap

### **Milk (powdery mildew fungi)**

- Use milk, diluted to 10% (1 part milk, 9 parts water);
- Add soap if milk does not spread over leaf surface.

### **Soursop or custard apple (aphids, caterpillars, planthoppers, diamond back moth, grasshoppers)**

- Take 500 g of fresh leaves;
- Boil leaves in 2 litres water until water is 0.5 litre;
- Dilute to 10 litres with water;
- Strain, and add 10 teaspoon soap.

Also:

- Take two handfuls of seeds;
- Grind into a fine powder;
- Mix with 4 litres of water and soak overnight;
- Strain, and add 4 teaspoons soap

### **Hot water (ants, nursery soil, nematodes in yams)**

- Use to destroy ants' nests, but be careful not to pour hot water onto the roots of small plants that might be growing close to the nests. You will kill the plants!
- Use hot water to sterilise soil: pour over the soil that you have placed in seed boxes or soil spread thinly on the ground containing the nursery soil;
- Use hot water to kill nematodes in yams with dry rot before cutting and planting. Dip whole yams in hot water at 51°C for 10 mins (use a thermometer and clock – do NOT guess).

### **Ash (grasshoppers, beetles)**

- Take ash from fire (make sure it is cool!);
- Beat to make fine;
- Put in coarse cloth or into a strainer;
- Shake thinly over each leaf.