



Pacific Pests, Pathogens & Weeds - Fact Sheets

<https://apps.lucidcentral.org/ppp/>

PDPs (preparation & use) (056)

Relates to: **Pesticides (PDPs, labels, resistance management)**

General instructions

Do the following:

- Select fresh, healthy plant parts to use as pesticides; reject plants with moulds on them.
- Dry plant parts properly for future use. Keep in an airy container (not plastic containers) in a shady place.
- Do not use household cooking tools for preparing plant extracts, or containers used for drinking water. Clean all tools well after using them.
- Avoid contact with crude extracts during preparation; wear protective clothing when applying.
- Keep plant extracts away from children and house pets.
- Harvest all mature and ripe fruits on trees before spraying.
- Always test the plant extract on a few infested plants before large-scale spraying.
- Wash your hands after handling the plant extract and wash your clothes, too.

Preparing Natural Pesticides

Chilli: active against *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

Soursop or Custard Apple: active against *aphids*, *caterpillars* (*diamond back moth*), *planthoppers*, *grasshoppers*

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

Also:

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

Neem: active against *caterpillars*, *grasshoppers*, and many more; also *fungi* and *nematodes*

For leaves:

- Put 1 kg of leaves plus 5 litres water in a bucket and 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 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

Tobacco: active against *caterpillars, aphids, and more*

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

Garlic: active against *caterpillars, mites, thrips, and possibly some fungal diseases*

- Scrape 4 garlic cloves and 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.

Gliricidia: active against *aphids, caterpillars, whitefly*

- Grind or pound 0.5 kg leaves
- Soak overnight in water
- Make up to 20 litres 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 ever 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.

Derris: active against *caterpillars, grasshoppers, aphids, spider mites, plant hoppers; beetles*

- Take 2 roots of Derris (20 cm long and as thick as a small finger) and 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.

Marigold: active against insects and is a repellent (planted for control of nematodes)

- Collect 2.5 kg leaves/flowers; pound and mix with enough water to cover material
- Filter and make up to 18 litres water; Add soap.

Papaya: active against *thrips*

- Shake 1 kg leaves in 1 litre water and squeeze through cloth
- Add 4 litre soap solution (100 g soap/25 litres water).

Soap: active against *scale insects, mealybugs and aphids*

- 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

Ash: active against *grasshoppers and 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

Hot water: active against *ants, nematodes in yams and sterilise nursery soil*

- **ANTS** Use to destroy 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!
- **SOIL** 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.
- **YAM** Use hot water to kill nematodes in yams with dry rot before cutting and planting. Dip whole yams in hot water at 51⁰ C for 10 mins (use a thermometer and clock - do NOT guess).

White Oil: active against *powdery mildew fungi and also many sucking insects, especially scales, aphids*

- 3 tablespoons (1/3 cup) cooking oil in 4 litres water
- ½ teaspoon detergent soap
- Shake well and use.

Milk: active against *powdery mildew fungi*

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

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This fact sheet is a part of the app *Pacific Pests, Pathogens & Weeds*

The mobile application is available from the Google Play Store and Apple iTunes.

