

Rosebud Community Garden



Pests, Predators and Pesticides

Pesticides

I do not want to state categorically – never use any pesticide. It can certainly be said that the massive use of pesticides that has and is occurring is very detrimental to the health of the environment and that includes us. We should certainly eliminate the systematic use of pesticides and look to less toxic alternatives. We should not be looking to exterminate anything – animal or vegetable.

To start from the perspective of, 'How shall we kill it?' is to start in the wrong place. The 'pest' is there for a reason. Even if you take exception to that reason, it is necessary to identify the creature, find out what it is doing, observe and, if necessary, read about its place in the ecosystem.

Pesticides or more specifically **insecticides**, **fungicides** and **herbicides** (killing words) all have many harmful effects, often killing pests and predators and other beneficial organisms such as bees, birds, water life, soil life and even humans. While the chemically synthesised pesticides are the most potentially harmful, even some of the botanicals such as derris, pyrethrum and nicotine can disturb the balance.

Attaining balance

General conditions that will provide a healthy environment for plants and will reduce pest damage to tolerable levels include:

- building a healthy soil that is well structured and has a wide and balanced range of nutrients and minerals
- providing an environment which includes a lot of diversity of plants and their age and even genes and which includes 'companion' plants
- utilising genetically resistant plants – this can be assisted locally by seed saving
- crop rotation, garden hygiene, stress avoidance and good monitoring.

The use of traps, lures, baits and barriers, and providing predator habitat can also reduce pest numbers.

Weed control

There are many possibilities depending on the context and I won't cover the full range here:

- For weeds spread by seed it is important to stop seed-set so timing is important (seed/flower removed).
- Hand weeding or mechanical disturbance.
- Burning.
- Mulching.

Again the aim is control, not eradication. Weeds can be turned to advantage: they can indicate soil imbalance and water logging; they supply nutrients, organic matter and nectar; and they can reduce

moisture loss. For difficult weed problems, some may choose to resort to glyphosate, which is argued to be relatively non-toxic.

Companion planting

There are many like/dislike lists associated with companion planting, probably based mainly on the allelopathic (chemicals given off) effect of plants. There is much general benefit of companion planting relating to diversity and the provision of predator habitat, and all of the benefits attributed above to weeds. Plants that are particularly beneficial in this regard are the aromatic herbs such as tansy, southernwood, wormwood, sage, lavender, marigolds, thyme and garlic, which confuse pests and give off disliked aromas. To have umbelliferae/apiaceae permanently flowering is good for keeping hoverflies and wasps in the garden, and they are good predators.

Traps and barriers

- Use boards, rocks, sacks, plastic bags or cardboard on the ground to collect snails, slugs and slaters. (These same materials can also be used to provide habitat for frogs, lizards centipedes and spiders.)
- As a barrier to snails and slugs, lay a border of sharp sand, sawdust, wood ash or lime etc.
- Use a beer trap, again for snails and slugs.
- Wrap collars/bands of paper, cardboard or hessian on tree trunks.
- Use nets.

Sprays etc

Always ask the question – do I really need to do this?

- **Insecticides** – Pyrethrum, nicotine, woodash, Diatomaceous earth, garlic, Dipel, Derris, borax, bug juice
- **Fungicides** – Bordeaux, baking soda, liquid seaweed, rhubarb, chives, Epsom salts, sulphur
- **Herbicides** – Ammonium sulphamate, lime, salt
- **Recipe for a general spray.** Gather equal quantities of geranium leaves, rhubarb leaves, tomato haulms and a few garlic bulbs. Cover with water, boil and dilute 1:1 with water.

These notes are by no means comprehensive; they have been mainly derived from a booklet of the same name – *Pests, Predators and Pesticides*, produced by the Organic Growers Association WA.

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