Simple Ways to Reduce Pesticide Use Around the Home

What are pests?

Pests are living organisms (plant and animal), that occur where they are not wanted and can cause damage or nuisance to people, plants (ornamental and food) and animals (pets and livestock).

The following pests may be found around your home:

- Weeds such as broadleaf weeds in lawns or grass weeds in gardens.
- Insects such as roaches, ants and termites.
- Other bugs such as millipedes and centipedes.
- Rodents such as mice and rats.
- Micro-organisms such as fungi, bacteria and viruses.

What are pesticides?

Pesticides are any substance or mixture of substances that are used for preventing pest infestations, repelling or destroying pests or mitigating pest problems.

Common pesticides that may be found in the home include:

- weed killers
- rat and rodent poisons
- roach traps and ant sprays
- kitchen, laundry and bath disinfectants that kill mould and mildew
- flea and tick products used on pets.

Why should pesticide use be reduced?

While pesticides may be very effective at controlling pests around your home, they can potentially have an effect on the environment or your health.

With that in mind there are a number of alternative ways to control pests other than using pesticides.

Simple ways to reduce herbicide use and control weeds

Preventative Health Care for Turf Areas and Garden Beds

Developing a healthy soil profile that has the right pH balance, key nutrients, wetting properties and good texture will assist you greatly in reducing pests in your lawn and garden – fewer pests means less pesticides. You can buy easy-to-use soil analysis kits at your local home improvement centre or online.

Choose a type of plant/grass that grows well in your climate. The best grasses for the Perth Region are warm season grasses such as Couch, Kikuyu and Buffalo. Local native plants and their cultivars are ideally adapted to Perth climatic conditions and soils.

Mow turf high, mow often and ensure the lawn mower blades are sharp. Grass that is of an adequate length (around 25mm to 50mm) will be strong and healthy. Weeds have a hard time taking root and growing when grass is an adequate length.

Turf thatch is a layer of dead plant material between the grass blades and the soil. When thatch gets too thick (deeper than 20mm), it prevents water and nutrients from getting into the soil and reaching the roots of the grass. Overusing synthetic fertilizer can create a heavy layer of thatch. Some varieties of grass (such as Buffalo) are also prone to thatch build-up. Remove excess thatch by raking the lawn or using a dethatching rake.

Water is critical to plant and turf, health and survival. The Perth Region has a ban on sprinkler irrigation throughout winter months and a restriction of two days of irrigation per week throughout summer. As a result, it is critical to maximise water uptake by plants and turf. The best method to do this is to apply wetting agents as often as required. When water pools on the surface of your soil it is time to apply a wetting agent. Incorporating clay and organic material into your soil will assist it in retaining moisture once the wetting agent allows it to penetrate the surface.

In healthy lawns and gardens earthworms, spiders, millipedes and a variety of microorganisms help keep the dead material (thatch, woody debris) in balance by breaking it up and using it for food. This in turn releases nutrients into the soil. Topdressing with a thin layer of organic topsoil or compost will greatly increase the rate of decomposition, which in turn provides nutrients for the plants.

Even healthy lawns and gardens will almost always have a form of weed and insect pest but they will also have beneficial insects and other organisms such as earthworms that keep pests under control. Improper use of pesticides can kill these beneficial organisms.

Using mulch in garden bed areas

Applying mulch to open soils is the best method to suppress weed growth in a garden bed. The application of mulch reduces sun light that weeds require to grow.
Accordingly, weeds which do germinate are easier to remove. An additional benefit of applying mulch is moisture retention.

There are generally three types of mulch options:

- **Feeding mulch** (pea straw, lupin mulch) - breaks down rapidly to feed the soil and needs topping up frequently. These are best suited for fruit trees, vegetable gardens and flowering plants which tend to be ‘hungry’.

- **Woody mulch** (woodchip or chipped tree waste) - are better suited to deep root, hardy plants like shrubs and trees. One of the most effective general purpose mulches for shrubs, trees, fruit trees is the coarse wood chipped tree pruning mulch. Coarse mulches are preferable as the open structure allows for easy water penetration down to the soil. Finer mulches tend to matt together and may absorb water themselves rather than allowing water to penetrate through.

- **Permanent mulch** (pebbles and stones) - are mainly used for landscaping effects and include pebbles and crushed brick or stone. They assist moisture retention in the soil and are best suited to plants that don’t drop many leaves (e.g. succulents).

Please note: pebbles and stones are not permissible treatments for residential property verges.

**General Tips for Mulching**

Always water your soil well before putting down mulch.

Mulch is best applied at the end of the winter or the beginning of spring while the ground is still reasonably moist and cool.

Ensure mulch is applied to an acceptable depth, for example 100mm is ideal for woody mulch to achieve the desired outcome. However, be careful that the mulch you use has been properly treated to kill or remove weed seeds and pathogens.

**Other ways to reduce herbicide use**

- Hand weed garden bed areas.
- Use a line trimmer to cut weeds before they set seed (flower).
- Use steam to control shallow rooted annual weeds in hardstand areas and garden beds.
- Hoeing: If you have weeds in your vegetable garden, hoeing into the soil will eliminate the problem and return nutrients back into the soil.

**Simple ways to reduce insecticide use and control insects**

**Inside the home**

Remove water sources

All living things need water for survival, including pests. Fix leaky plumbing to stop water accumulating in or around your home. For example, try not to leave any water in trays under your houseplants, under your refrigerator or in buckets overnight. Remove or dry out water damaged and wet materials. Dampness and high humidity can attract pests.

Remove food

Store your food in sealed glass or plastic containers and keep your kitchen clean and free from cooking grease and oil. Try not to leave food in pet bowls on the counter or floor for extended periods of time. Put food scraps or refuse in tightly covered animal-proof containers and empty your garbage frequently.

Remove or block off indoor pest hiding places.

Fill cracks and crevices to control pest access. Bathe pets regularly and wash any mats or surfaces they lie on to control fleas. Avoid storing newspapers, paper bags and boxes for long periods of time. Additionally, check for pests in packages or boxes before carrying them into your home.

**Outside the home**

**Block pest entryways.**

Install screens on all floor drains, windows and doors to discourage crawling and flying pests from entering your home. Make sure any passage ways through the floor are blocked. Place weather stripping on doors and windows and seal openings in walls and keep doors shut.

Remove or destroy outdoor pest hiding places.

Remove piles of wood from under or around your home to avoid attracting termites and carpenter ants. Remove diseased plants, tree pruning’s and fallen fruit that may harbor pests. Rake fallen leaves and keep vegetation, shrubs and wood mulch at least 18 inches away from your house.

Remove breeding sites.

Clean up pet droppings from your yard; they attract flies that can spread bacteria. Refrain from accumulating litter or garbage; it draws mice, rats, and other rodents. Drain off or sweep away standing puddles of water; water is a breeding place for mosquitoes and other pests. Make sure drain pipes and other water sources drain away from your house.

Take proper care of all outdoor plants

Good plant health care reduces pest control needs; healthy plants resist pests better than weak plants. Plant at the best time of year to promote healthy growth. Use mulch to reduce weeds and maintain even soil temperature and moisture and water adequately. Native flowers, shrubs, and trees often are good choices as they adapt well to local conditions and require minimal care.

**Further information**

For further information, please contact the City's Landscaping and Conservation Services on 9400 4593.

Alternatively, information is available at the City's Customer Services Centre's and provided on the City's website at joondalup.wa.gov.au

For information on being WEEDwise, please refer to the following brochures produced by the City which are available via the City’s website:

- Garden Escapees in the City of Joondalup
- Environmental Weeds in the City of Joondalup

You may also wish to visit the following website for further information at agric.wa.gov.au