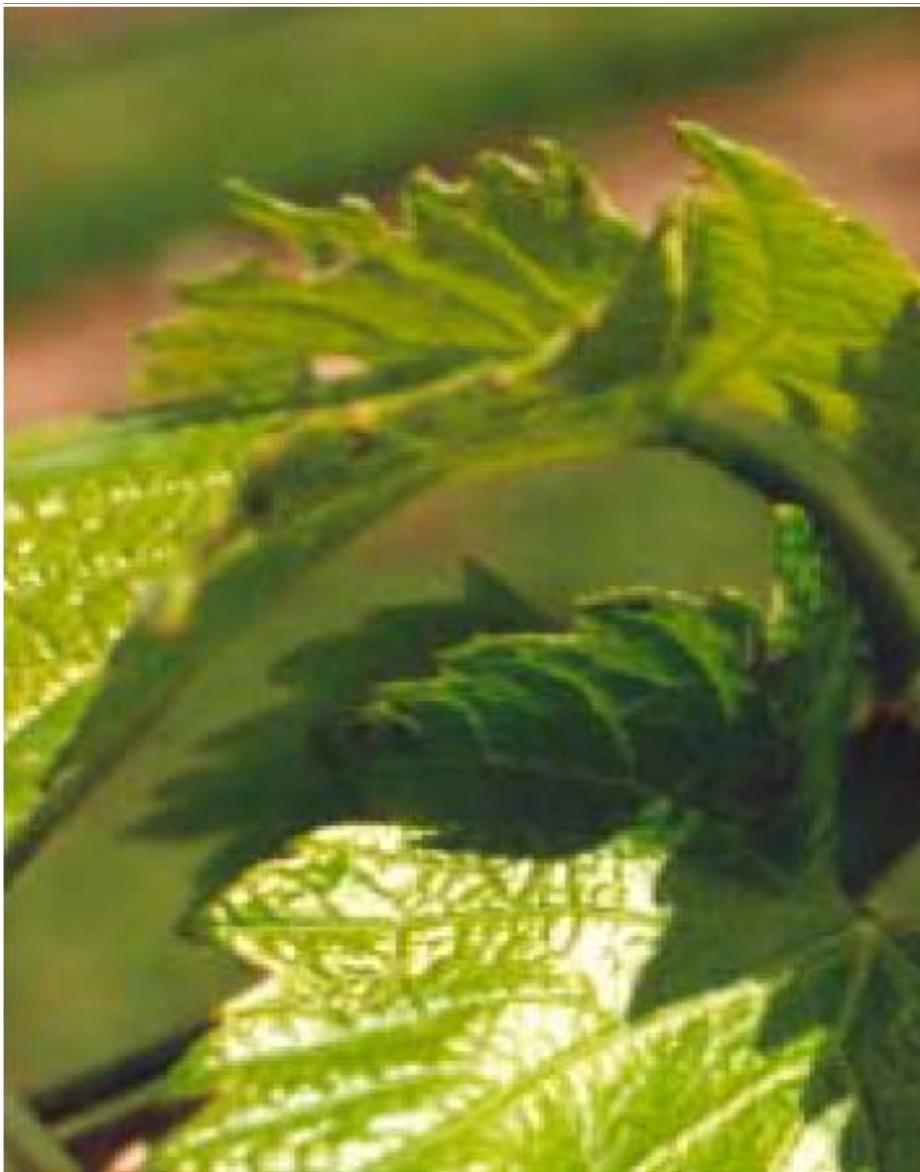


NATURAL ALTERNATIVES IN THE GARDEN



**MARLBOROUGH
DISTRICT COUNCIL**

We love to garden

New Zealanders are a nation of gardeners. Consumer surveys show we buy more gardening books than novels or books on sports and we eagerly attend garden tours, shows and fête. Television and radio surveys often show garden programmes ranked in their top 10.



Certain styles of gardening can be environmentally destructive.

Over-spraying can damage ecosystems and birds and insects that are helpful in the garden and our environment can be adversely affected.

In this pamphlet we have included some information to help you enjoy your work in the garden and protect our environment at the same time. It is not exhaustive and if you have any recipes or helpful hints we would love to hear from you.

Many commercially marketed pesticides kill insects indiscriminately, knocking out those that are helpful as well as those that are a nuisance. Insects with high concentrations of poison in their bodies are then eaten by predators (including native birds and possums). The poison can accumulate in an animal's system until it reaches a lethal concentration and the animal dies.

There are many natural alternatives to chemical pesticides that are freely available at nurseries. You can also try your own natural alternatives.

Pyrethrum spray will control aphids, white fly and many other insect pests but it is fatal to bees. Spray during the late afternoon or before dusk when the bees are not at work. The pyrethrum breaks down quickly, and will not harm the bees when they return to the sprayed plants the following day.

A saucer filled to the brim with beer is just as effective as commercial poison baits for controlling snails. They are attracted by the smell, drink greedily and then drown. A happier death than slow poisoning! A sheet of newspaper will also attract snails and slugs, which can then be

disposed of by dropping them into a bucket of heavily, salted water.

A protective circle of sawdust around new seedlings will stop snails from devouring them. Sawdust sticks to the snail's foot and stops it from slithering any further toward your plants. Don't use any pesticide that instructs you to wear protective clothing or gloves. Look for a less poisonous material.

Seaweed spray (see 'recipe') is a non-toxic organic spray that can be used to combat most fungal and bacterial plant infections. It also acts as a natural fertiliser.

Nasturtiums are a good companion plant and can be used to deter insects..

In a small garden, aphids can be dispatched simply by running your finger and thumb (encased in a garden glove) over infested branches and buds. If you can attract ladybirds to your garden, they will be your best means of aphid control as one ladybird will eat about 400 aphids a week.

Minor caterpillar invasions can be controlled by picking the offenders off by hand and stamping them briskly underfoot. However, if you have native birds in your garden, they will take care of both aphids and caterpillars.

White scale can be removed from roses by scrubbing the infested stems with a toothbrush and soapy water. Scale insects on indoor plants can be removed with a cotton bud dipped in tepid soapy water.

A homemade copper spray can be very effective and safer for the friendly insects in your garden and will help control fungal diseases. You can make your own copper spray relatively easily – refer to the recipe provided. It takes about 10 minutes. This mixture can be used with any spray equipment, but you may need to wash out the nozzle a few times to stop it clogging.

Only make up as much as you need. The spray has a short life and begins to separate after a couple of hours and loses its



effectiveness. Making up a small volume also means that there is no spray liquids left lying around for children to find.

Copper spray is generally used over the winter months, often once a month. Any more often than this and you could get a copper build up in the soil.

Use companion planting to control insects

Many plants will repel insects from attacking those that seem to be more vulnerable to attack. Perhaps the principle operating here is similar to that of monoculture on farms – a garden full of roses encourages a build-up of aphids through a plentiful food source whereas mixed planting limits their food supply.

Too often we exclude native plants and trees from our garden and, in the absence of native bird and insect life, wonder why we have to resort to chemical bug control.

An under planting of lavender, garlic, parsley, orange nasturtiums or chives will help to protect roses against aphids. Marigolds can also be used to repel leaf-eating pests in the vegetable garden.

Basil will repel white fly and pots of eau-de-cologne mint, pyrethrum and tansy placed near the back door or the barbecue area will keep flies away. Mosquitoes will also keep away from garden areas planted with garlic, tansy or southernwood. Geraniums are supposed to keep bugs away too.

Use natural fertilisers

Organic fertilisers include animal manure, liquid plant manure (made by decomposing the leaves of green plants such as comfrey in a bucket of water for several weeks), bonemeal (rich in phosphate), blood and bone (nitrogen) and wood ash an excellent source of potash.

Compost your kitchen and garden waste.

Compost is the cheapest way to enrich your soil and reduce the amount of rubbish you discard each week. Up to 40 per cent of our weekly rubbish is fruit and vege peelings and food scraps that could be put to better use in the garden.

It is tidier to make your compost in a bin or container.

The bin should be sited in a sheltered level area of the garden that has good drainage and good access. For good composting

remember this basic principle A.D.A.M.

Aliveness: in a single handful of compost there are more living organisms than there are human beings on the planet.

Diversity: the more the diverse the ingredients—the better the end product.

Aeration: the key to no smells and no flies.

Moisture: successful compost needs moisture.

Home Composting

There are a number of good modestly priced bins available at hardware shops and nurseries, or you can make your own using bricks, bales of hay or wood. If your compost is made in one of the commercial compost bins, its success depends on one simple rule –*getting the correct compost recipe*. For peak efficiency you need a good balance of these basic four ingredients.

Greens - fruit and vege scraps, lawn clippings, tea leaves, etc.

Browns - paper, tree clippings, cabbage stalks, cereal boxes, leaves, etc.

Water and Air - then apply the A.D.A.M. principle.

Avoid composting meat, fish, dairy products and fats as these create odour and fly problems.

Always start with a coarse 100 - 150 mm layer of material then add a bucketful of greens with a bucket load of browns, with a little water if the material is dry. Then mix to create a hard working compost stew. The compost needs to be moist with the consistency of a well squeezed out sponge. Within a few days the bin will heat up and begin to shrink. This is the start of the composting process. Fill the bin as quickly as possible and cover with straw, soil, old sacks or similar materials. Finally fit the



lid and leave the compost to mature, start another bin or collection area. If possible check the bin after three to four weeks to make sure it has not dried out, add water if required and if possible mix or turn to speed up the composting process.

After about six weeks, if the weather is warm, your compost should be ready.

Autumn leaves make great compost. However, if your street or garden is thickly planted with deciduous trees and there are far too many leaves for the compost bin, you can leave them to rot down in a pile in a sunny spot in the garden. Rake them into a tidy heap, sprinkle with lime or dolomite and cover tightly with a sheet of black plastic.

Grow your own vegetables if possible

Growing your own vegetables is a therapeutic and cost saving hobby. You can 'go organic' and have spray-free foods, or at least know what sprays you have put on your plants. You also benefit from the convenience of harvesting your own food just a few steps away from the kitchen.



Time is saved (less trips to the supermarket) and you get the food really fresh.

In Marlborough the climate is so good you get quick results.

All you need is a sunny spot about 3.0 metres square to supply an average family of four people with a year round supply of home grown vegetables. Even a much smaller space, like a sunny corner of a garden bed will enable you to grow enough vegetables to keep a household of one or two people supplied with home grown produce.

If you live in a flat with a sunny balcony, you can grow vegetables such as tomatoes, eggplants, capsicums, lettuce and radishes in pots. Buy a bag of good potting mix and a bag of animal manure from a nursery and mix the two together to make a suitable planting mix for your vegetable seedlings.

If you have sufficient space in your backyard for a vegetable garden, measure out your plot and begin by digging over the topsoil. Add organic material such as animal manures, straw, mushroom compost or sawdust. Rake the soil out and leave the bed to rest for about a week.

Your vegetable garden is then ready to plant.

Grow your own herbs in pots or in the garden

Herbs have many household uses other than cooking and can help reduce our consumption of chemical pest controls.

Many easily grown herbs can be used as natural insect repellents. Try to find Balm of Gilead, Citronella or Lemon Balm.

Lemon Balm has lemon scented leaves, which act as a mosquito repellent when rubbed on the skin.

Lavender can be used instead of mothballs to repel moths in linen cupboards and wardrobes.

Pennyroyal repels fleas and is an effective deterrent when planted around dog kennels or chopped and sprinkled in pet baskets. Fennel is also another useful herbal flea repellent. Pick a piece of fennel and squash it to make the juice flow, then rub your dog down with it. Dogs are not perturbed by the pungent aniseed smell but fleas can't bear it. Cats don't seem to like or respond well to this herbal method of flea control but they don't seem to mind pennyroyal.



Recipes for a Healthy Garden

Copper Spray

Organic copper spray can be made from blue copper sulphate (bluestone) and calcium hydroxide (brickie's lime). Both are available at hardware stores. Don't try to substitute agricultural lime, as the mixture won't work. Also, make sure the hydrated lime is from an unopened bag – once it is exposed to air it becomes carbonated and won't neutralise the copper sulphate. The resulting mixture could harm your plants.

Mix 90 gm of blue copper sulphate with 6½ litres of water in a non-metallic container – a plastic bucket is fine. In a second bucket, mix 125 gm of brickies' lime with cold water. Mix the two together and stir vigorously, making sure there are no lumps in the mixture. Test by dipping a steel nail into the mixture for about 30 seconds. If the nail comes out coated in a distinctly blue mixture, you need to add more lime.

Seaweed Spray

Seaweed spray is extremely easy to make – all it requires is seaweed gathered on the beach and a bucket of water. Wash the seaweed to remove any excess salt, put it in a bucket of water, cover the bucket and leave it to soak for several days until the water turns pale brown. Use the water with any spray equipment. Simply add more water to the bucket as needed. Once the seaweed loses its effectiveness it can be used as excellent garden mulch.



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