



ORCHARDS IN SCHOOLS SPRING 2022 NEWSLETTER

Latest Updates From
Co-ordinator, Rachel Oliver

Welcome.

The Canterbury Horticultural Society is proud of its legacy project that connects children with how to grow their own food. We provide traditional life long skills and food resilience. The programme is now in its 8th year, with nearly 40 schools within the greater Christchurch area involved.

Orchards in Schools highlights where food comes from by providing a connection to food production. Through exploring nature and its processes (e.g. pollination) tamariki will understand the interconnected role of every living thing. The practical, outdoors, hands on style of the programme suits a broad range of learners.

The programme helps schools identify a suitable location within the school grounds, provide the fruit trees, support teachers and caretakers, provide a trained teacher who works alongside students to maintain their orchard with three visits a year (Spring, Autumn and Winter). All sessions are outside in the orchard observing and interacting with the trees; from dissecting blossoms and thinning fruit in Spring to learning how to handle tools and pruning the trees appropriately in Winter. The programme can be tailored to any age from new entrants to high school horticultural students.



Templeton planting the understorey



Time to thin the fruit - Waitakari students remove the smallest fruitlets and leave 2-3 of the biggest on each cluster!

Join Us.

Become part of the Orchards in Schools whanau for Winter 2023.

We will be establishing new orchards from June and welcome new schools.

Contact orchards@chsgardens.co.nz for application details.

The Orchard Understorey.

Hamish Kelland of the Biological Husbandry Unit (BHU) Organic College shares his extensive knowledge of managing orchards using organic principles and the power of companion planting.

Below is a table which can be used to select suitable flowering species to include in an understorey seed mix.



Fruit trees can be targeted by a range of pests and diseases. Together they can impact tree health and fruit quality. Nature has mechanisms to negate many of these by ensuring there are enough bugs and microbes to balance each other out. For this to happen in an orchard we must provide a habitat and food supply to encourage the proliferation of beneficial insects and other organisms.

According to the late Ecology Professor Steve Wratten understorey planting of flowering species around the base of the fruit trees can provide all the essentials: **S N A P**

Shelter – from the wind, rain, sun, cold temperature

Nectar – a good source of sugars

Alternate - an alternate prey or host (a non plant pest species)

Pollen – a source of protein

Herbs such as oregano, rosemary, lavender, thyme, hyssop, lemon balm and garlic are useful inclusions as their strong scent acts to confuse and deter plant pests.

BENEFICIAL INSECTS	TARGET PESTS	FEEDING PLANTS FOR BENEFICIAL INSECTS
Hoverfly	Aphid	Phacelia, cow parsley, mustard, feverfew
Lacewing	Aphid, spider mite	Angelica, buckwheat, canola, mustard, coreopsis, pak choi
Lady bird	Aphid, spider mite	Angelica, buckwheat, coreopsis, coriander, dill, fennel
Aphid parasitoid wasp	Aphid, leaf roller	Canola, coreopsis, cow parsley, alyssum, Queen Anne's lace, mustard, pak choi, zinnia
Chalcid	Codling moth et al	Canola, cow parsley, mustard, pak choi Queen Anne's lace
Tachinid flies	Leaf roller	Anthemis tinctoria
Predatory Ground Beetles	Grass grub, spider mite, slugs, snails	Crop residue, grasses, old branches and logs

Establishment.

The best time for planting is Spring or Autumn. Lightly cultivate to avoid damaging tree roots or close mow and scuff the surface with a rake, broadcast the seed mixture and cover with sieved compost. Periodic watering may be needed for Spring sowings. A range of weed species can be allowed to colonise the planting as these can provide additional benefits.

Cleavers are an excellent source of organic matter

Red, white and subterranean **clover** protect the soil surface and fix nitrogen

Plantain readily forms mycorrhizal associations to assist with nutrient availability

Deep rooting weeds like chicory and carrot weed mine nutrients deep in the soil profile bringing them within reach of the orchard trees

Note: avoid grasses, especially with young trees, as these are especially strong competitors



Californian poppies under an apple at Addington School

Popular with children, lady birds target aphids and spider mites. Attract some by planting readily available herbs like coriander or fennel.



If you wish to join our programme contact Rachel Oliver at orchards@chsgardens.co.nz

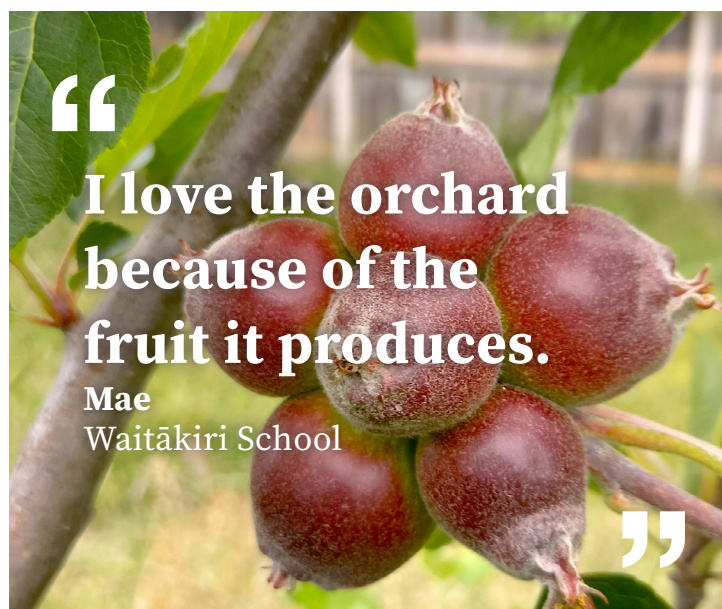


Canterbury Horticultural Society

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Maintenance.

Understorey plantings can compete with fruit trees and taller species may shade the lower tree canopy so periodic cutting down is useful. This should be done after flowering. Certain species proliferate and others decline over time so be prepared to oversow every few years.



“
I love the orchard
because of the
fruit it produces.”

Mae
Waitākiri School

Powdery Mildew.

If you start to notice the new leaves of your apple trees are warped and covered in a white flour like coating you may have powdery mildew (*Podospora leucotricha*). It can be a serious disease of apples in drier areas of New Zealand with severe infestations stunting trees. You can remove infected growth or create an organic spray with your students using one of these recipes.



Powdery Mildew on apple tree

Rob Mugford, caretaker at Wigram Primary School shows off his extensive seed collection including seed he has saved himself. It includes a selection of flowers to attract beneficial insects to around the base of the fruit trees.



Something to make with the Tamariki.

Baking Soda Spray

Mix up a solution of baking soda and water and spray onto the infected plant. About half a teaspoon of baking soda to one litre of water. Too much baking soda will burn the leaves.

Milk Spray

A weekly spray of skim milk (1 part milk, 9 parts water — the low-fat content means there is less chance of odour) will reduce the severity of powdery mildew by up to 90%. Milk is believed to be a natural germicide; it contains a certain amount of salts and amino acids which powdery mildew is sensitive to, and also acts as a foliar fertiliser, boosting the plant's immune system.

*From the Royal New Zealand Institute of Horticulture
www.rnzih.org.nz*

Participating Schools.

Planted 2021: Rowley School, Cashmere High School, Templeton School, Paparoa Street School, Bromley School and Halswell Residential College who are sharing trees with Sommerfield School.

Planted 2020: Belfast School, Hillmorton High School, Kaiapoi North School, Kirkwood Intermediate

and Knights Stream School.

Planted 2019: Breens Intermediate, Bishopdale School, Wigram School, Marshland School, South New Brighton School.

Planted 2018: Burnside Primary School, Hornby Primary School, South Hornby School, Russley School and Avonhead School.

Planted 2017: Isleworth School, Haeata Community Campus, Fendalton

Open-air School, Elmwood Normal Primary School, Wairakei School, Chisnallwood Intermediate.

Planted 2016: Waitakiri Primary School, Rāwhiti School, Riccarton Primary School, Wharenui School, Cobham Intermediate, Casebrook Intermediate and Kaiapoi Borough School.

Planted 2015: St Martins School, Gilberthorpe School, Northcote School, Addington School and Oaklands School.

