# **BEE FRIENDLY GARDENING**



Ministry for Primary Industries Manatū Ahu Matua

Sustainable Farming Fund







Figure 1. Honey bee collecting purple pollen in Hydrangea

# WHY GARDEN TO HELP BEES

Planting flowers for bees is a time honoured tradition especially now when bees need our help. We need our bees to pollinate our crops and pastures for our own food supply and honey bees give us the best natural sweetener, delicious honey.

Honey bees, bumble bees and native bees all depend on pollen for protein and nectar for carbohydrates. Habitat loss has destroyed much of the bee's food supply and pesticides threaten their health and survival. Threats from increasing pests like the devastating varroa parasite and many new diseases have more serious consequences when honey bees are starving, malnourished or poisoned.

Planting plenty of flowers for bees gives bee health a big boost. Gardeners play a significant role in helping bees because they can plant a diversity of flowers that bloom in each of the seasons throughout the year. The biggest shortages are in autumn and early spring when not many flowers are available and bees need pollen and nectar the most. Gardeners can create a high diversity of plant species with abundant pollen and copious nectar to make a big difference for all bees.

Here are some great bee plants to start with and more plants are listed in the references on the following page and on our websites.

The plants listed here are suggestions and are in addition to those listed in the Urban Trees for Bees brochure and other sources. The symbol \* = native plant.

Heights are the maximum or the range for each species group; consult Nursery catalogues for specifics.



#### **FLOWERING TREES**

- \* Pukatea (Laurelia novae-zelandiae) Spring 30 m
- \* Tarata (Pittosporum eugenioides) Spring 12 m
- \* Tawari (*lxerbia brexiodes*) Spring 17 m
  Alders (*Alnus spp.*) Spring or Autumn 20 30 m
  Chestnuts (*Castanea spp.*) Early summer 15 m
  Flowering ash (*Fraxinus spp.*) Spring 5 8 m
  Fried egg plant (*Gordonia spp.*) Autumn 3 5 m
  Linden (*Tilia cordata*) Early Summer 24 m
  Magnolias (*Magnolia spp.*) Spring 12 m
  Maples (*Acer spp.*) Spring 2 25 m
  Michelia (*Michelia spp.*) Autumn to Spring 2 20 m
  Strawberry plant (*Arbutus unedo*) Autumn 8 m
  Tulip Tree (*Liriodendron tulipifera*) Spring 36 m
  Wattles (*Acacia spp.*) Autumn, Winter, Spring 5-30m



Figure 2. Bumblebee collecting nectar in Hydrangea. The yellow pollen is from another plant.

#### FLOWERING SHRUBS

- \* Coprosma (Coprosma spp.) Spring, Autumn 2 6 m
- \* Five Finger (*Pseudopanax arboreus*) Winter Spring 6 m
- \* Korokio (Corokia cotoneaster) Spring 2 4 m
- \* Olearia (Olearia spp.) Spring, Summer or Autumn 7 m
- \* Putaputaweta (Carpodetus serratus) Spring Summer 6 10 m
- \* Wineberry (Aristotelia serrata) Spring, Summer 6 10m Honey Myrtles (Melaleuca spp.) Spring – Summer 2 – 12 m Japonica (Chaenomeles spp.) Winter – Spring 3 m Mexican Orange Blossom (Choisya spp.) Spring – Autumn 3 m Roses with single flws only, (Rosa) Spring, Summer 3 –.6 m Serviceberry (Amelanchier spp.) Early Spring 12 m Strawberry plant (Arbutus unedo) Autumn 6-8m Tagasaste (Chamaecytisus proliferus) Winter – Spring 7 m Tupelo (Nyssa spp.) Spring 15 m Viburnum (Viburnum spp.) Autumn 1-4 m Wintersweet (Chimonanthus praecox) Winter 3 m

www.trees forbeesnz.org

# **BEE FRIENDLY GARDENING**

# TIPS ON HOW TO GARDEN FOR BEES

- 1. Plant each plant species in large patches or groupings (at least one square meter but preferably more) so that the bees can find the flowers. To make foraging on a plant worthwhile for the bees there has to be a sufficient area of bloom.
- 2. Plant simple flowers with lots of pollen and nectar that are easy for bees to access. Many highly bred flowers such as doubles and triples may look gorgeous but they do not have enough pollen or nectar for bees to access. Flowers with long tubes containing nectar hidden at the bottom are inaccessible to honey bees if the tube is longer than 7 mm. Some flowers are toxic to bees such as rhododendron, azalea, and karaka.
- 3. Make your garden a safe haven for bees and other pollinators by avoiding pesticide use especially when the plants are in flower and during the day time when the bees are flying.
- 4. Purchase plants with no systemic pesticides (e.g., neonicotinoids) because these chemicals get into all parts of the plant so the worker bees, the brood, and the queen will be eating contaminated pollen and nectar which harms the bees. You may need to use cuttings or grow seeds to avoid plants with systemic pesticides from nurseries.
- 5. Water is essential for cooling the interior of the hive by evaporation, so make sure there are safe shallow water sources with clean unpolluted water and a landing area such as rocks or a floating cork or stick of wood so that the bees do not drown. Honey bee colonies live in man-made hives and can fly several km to forage. But for other bees, such as bumble bees and native bees nest sites are needed closer to the flowers.
- 6. Avoid planting weedy species that will spread in your own garden or into vulnerable habitats in your area. Consult your Regional or District Council.

Figure 3: Flower bud opening on Tulip Tree (Liriodendron tulipifera)



## BOOKS

Frey K. and LeBuhn G. 2016. *The Bee-Friendly Garden*. Ten Speed Press New York, USA. 213 pp.

Leech M. *2012 Bee Friendly (Planting Guide)*. RIRDC. Canberra, Australia. This is a FREE PDF to download.

The Xerces Society. 2016. *100 Plants to Feed the Bees.* Storey Publishing, MA, USA.

### LINKS

http://pollinator.org/guides https://www.kingsseeds.co.nz https://www.southernwoods.co.nz/uploads/ content/files/Info26-PlantingforBees.pdf http://www.treecrops.org.nz/tree-information/bees/ https://xerces.org/pollinator-conservation/gardens/



#### PERENNIALS AND ANNUALS

- \* Clematis (Clematis spp.) Spring Summer Woody Climber
- \* NZ Jasmine (Parsonsia heterophylla) Spring Summer Climber
- \* Rengarenga lilly (Arthropodium cirratum) Spring Summer 1 m California Lilac (Ceanothus spp.) Spring 3.6 m
   Figwort (Scrophularia spp.) Late Spring 1.8 m
   Goldenrod (Solidago spp.) Autumn 50 cm
   Meadowfoam (Limnanthes spp.) Spring 30 cm
   Sainfoin (Onobrychis viciifolia) Late spring 75 cm
   Sedum (Sedum spp.) Summer – Autumn 50 cm
   Sweetclover (Melilotus spp.) Late spring 1.5 m
   Wallflower (Cheiranthus/Erysimum) Spring – Winter 30 cm



Figure 4: Honey bee collecting pollen on Cork Tree (Phellodendron sp.)

## **KITCHEN AND HERBS**

Blackberry (*Rubus spp.*) Spring, Summer 3.7 m Chestnut edible (*Castanea sativa*) Spring – Summer 10 m Giant Hyssop (*Agastache spp.*) Summer 1.8 m Hazelnut (*Corylus avellana*) Winter – Spring 4 m Hyssop (*Hyssopus officinalis*) Summer 60 cm Oregano (*Origanum spp.*) Summer 60 cm Pineapple Sage (*Salvia elegans*) Winter – Spring 1.5 m Passionfruit (*Passiflora edulis*) Spring Woody Climber Quince (*Cydonia oblonga*) Spring 4 m Thyme (*Thymus spp.*) Summer 20 cm

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