



Green Gardening: Being Pesticide-Free

**Presented by the City of
Stratford Pesticide-Free
Education Committee**

Let's Play a Game:
Name that picture!

Answer: A Dandelion!

Did you know? Dandelions...

- provide food and shelter for beneficial insects (ladybugs) that eat garden pests, such as aphids
- play a part in the ecology of 93 different insect species
- are an important source of nectar and pollen for bees
- were used by early colonists as food and a tonic; the greens can be eaten in salads and the flowers used to make tea, wine, and coffee

Answer: An Earthworm!

Did you know? Earthworms...

- condition the soil, making it easier for roots to grow and air and water to circulate
- increase the moisture retention of soil
- bring nutrients from deep in the soil up to the top where they can be absorbed by plants
- are good food for birds in early spring!

A close-up photograph of dill flowers, showing several green stems with clusters of small, yellow, five-petaled flowers. The background is a soft, out-of-focus green. The text is overlaid on semi-transparent white boxes.

Answer: Dill!

Did you know? Dill...

- is a host plant for caterpillars of the black swallowtail butterfly, along with parsley and fennel
- is part of the umbel family of plants – the flowers attract insects that prey on the bad guys in your garden
- can act as natural pest control!

Answer: Compost!

Did you know? Compost...

- can be used as mulch to prevent weed growth and retain moisture in the soil
- can be added to the soil to provide important nutrients – this improves the soil and makes healthier plants
- is free - use kitchen scraps, grass clippings, leaves!

Answer: Dutch White Clover!

Did you know? Clover...

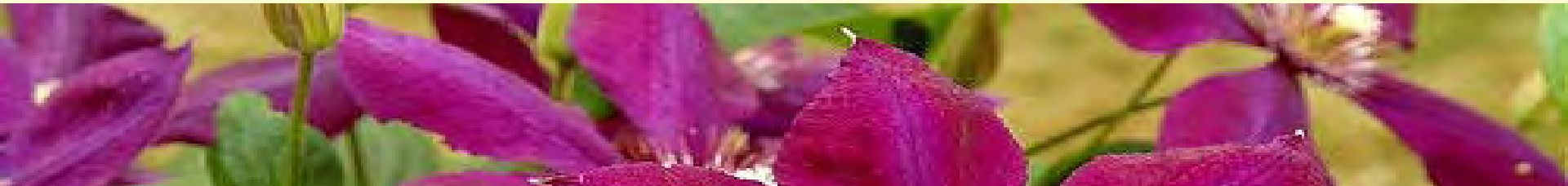
- can be planted in your grass mix to help fix the nitrogen levels in the soil
- was a natural and desired part of lawns before herbicides were introduced in the 1950s
- competes with other broad-leaf plants to minimize other weed growth
- looks pretty!

Why be pesticide-free?

It's now the law! The Cosmetic Pesticides Ban Act took effect April 22, 2009 across the province.

The Ban:

- prohibits the sale and use of pesticides for cosmetic purposes
- prohibits the sale of over 250 products and more than 80 pesticide ingredients
- makes exceptions for agriculture, forestry and golf courses, and for public health or safety issues
- supersedes existing municipal pesticide by-laws



Why else?

- To protect the health of your children, pets and family
- To save the ecosystems that makeup your residential landscape
- To explore a new approach to gardening using natural techniques and native plants

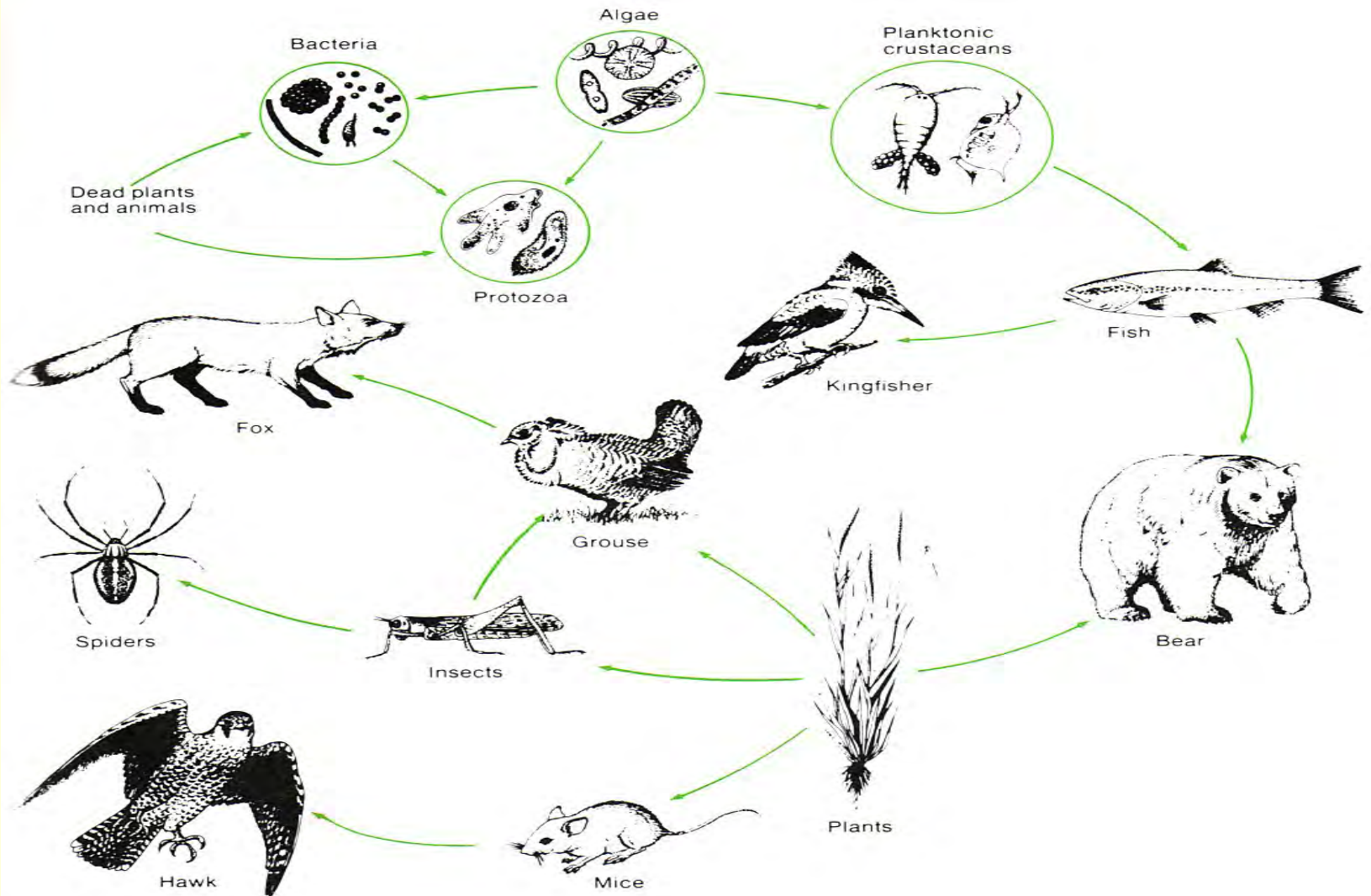
The Basis for Gardening Without Pesticides: Ecology 101

Ecology: *The science of the relationships among living organisms and between organisms and their environments*

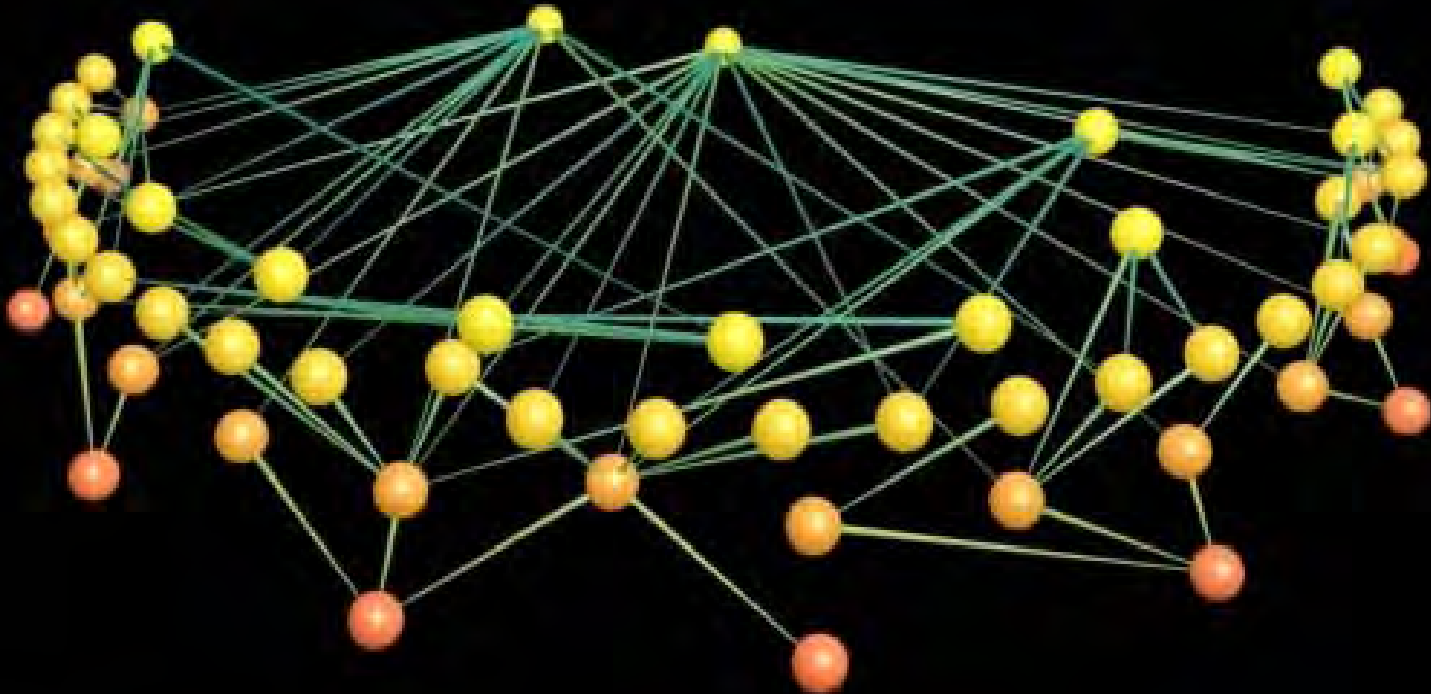
- Gardens are interlinked with the larger landscape – a healthy garden is a collection of healthy parts!
- When we disrupt garden ecology, such as with pesticides, we kill more than weeds – we upset the whole ecosystem



Simple Food Web



When one tugs at a single thing in nature, he finds it attached to the rest of the world. -John Muir



Where do I start?

The Dirt on Dirt

Poor soil = chronic pest and disease problems

- Boost the humus content of your soil:
 - Keep the grass clippings on the lawn
 - In the fall, run the mower over fallen tree leaves to help break them up so they can decompose in the soil
 - Work compost into your flowerbeds and on your lawn
- Stratford soil tends to be basic, rather than acidic, with high clay content. You may want to amend the soil with manure and sand
- Use only organic fertilizers like blood meal, bone meal, kelp meal and fish emulsion
- Cover bare soil with an organic material, such as bark mulch

Where do I start?

What to plant?

- Many garden problems result from an inappropriate choice of plants
- In Stratford we can grow plants in Zones 2 to 5b
- Use **Native Plants** - evolved in our region, and are adapted to our soils and climate; do not disrupt local ecology
- Ask for native plants at your local garden centre and seek out local native plant nurseries

Where do I start?

What's up with watering?

- Water only when necessary! Put in-ground watering on manual control to save water. Only water in early morning.
- Timelines: For new plants - every few days; for an older garden - a deep drink every week or two if necessary.
- Use drip hoses or soaker hoses and rainwater from a rain barrel where possible.

Note: Native plants often do not need any watering!

Note: Lawns with clover and some diversity in plants stay green longer in dry conditions!

Where do I start?

Bugs can be your best friends

- Most insects are beneficial in the garden, approximately 80%.
- Allow some leaf-munching insects
- Previously, if you applied insecticides that wiped out all insects, usually the plant-eaters rebounded more quickly than the predators (because the herbivores tend to reproduce more rapidly)

Natural Pest Control

- Prevention! A healthy, diverse garden eco-system has its own balance system
- Attract beneficial insects
- companion planting
- Birds can also help – put nesting boxes out
- **Use Low-Hazard Pest Controls only as a Last Resort** (i.e. soap and water; hot pepper sauce; baking soda)

Weeds, weeds, wonderful weeds!

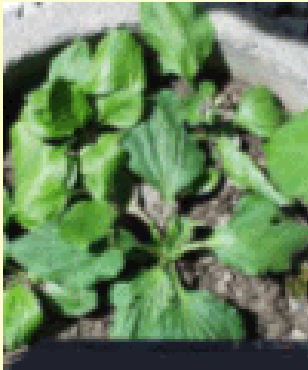
A pesticide-free lawn doesn't mean a lawn full of weeds!

- A large weed population often indicates an unhealthy or stressed lawn
- **Cut your grass to no less than 3 inches.** You will shade out weeds, and allow the grass to develop deeper, healthier roots. There will be less need to water!
- Lawns that have relied on artificial pesticides are less likely to have healthy soil ecosystems with the natural checks and balances on “pest” species.

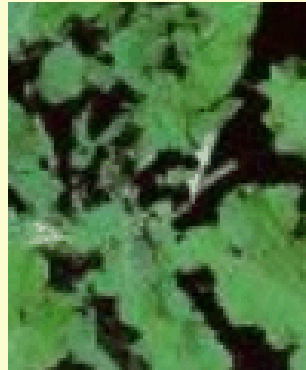
Adopt the pace of nature; her secret is patience -Ralph Waldo Emerson

Weeds, weeds, wonderful weeds!

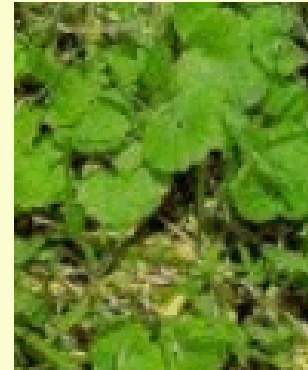
Common weeds



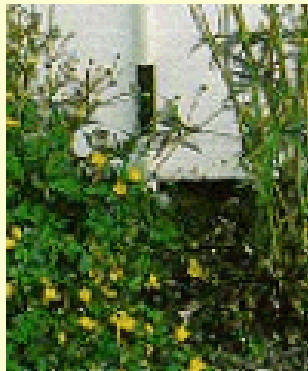
**Broadleaf
Plantain**



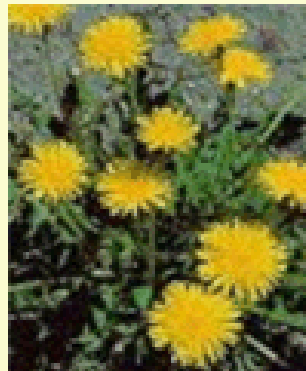
Burdock



**Creeping
Charlie**



**Creeping
Buttercup**



Dandelion



Goutweed

Weeds, weeds, wonderful weeds!

How to combat them:

- Your best defense: a thick lawn!
- Feed your soil. Leave grass clippings on the lawn
- Add nutrients to your soil with compost
- Pull the weeds (whole root)
- Over-seed (ideally in the fall)
- Mow high (7cm / 3")
- Aerate
- Be tolerant of broad-leaved plants

Green Business Sense

- Instead of a high maintenance lawn surrounding your business or housing project, think natural!
- Do your part to help the environment, and gain consumer good will in the process:
- Plant native perennials for pollinators- no watering, no mowing, no fall clean-up once the plants are established- and they look lovely!
- If you need lawn, add clover to the grass mix. It provides Nitrogen naturally, doesn't require as much watering, and withstands drought better- as well as providing flowers for pollinators!
- Advertise your green approach!

Let's Recap!

Work with nature...not against it!

By creating a healthy and diverse environment in your backyard you will be rewarded with more than just healthy plants: but also a wonderful variety of visitors, from toads to butterflies to birds

Your goal is for a “green” garden, one with diversity, vibrant ecosystems, healthy soils, and everything in balance

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Let's chat!

For more Green Gardening tips, visit:

www.stratfordnaturally.ca

Thank you!