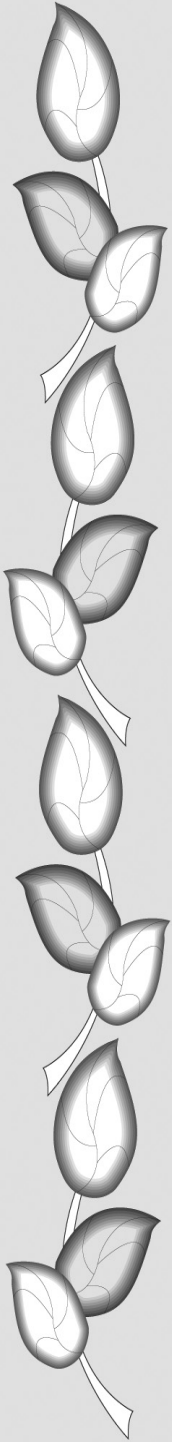



# Green Gardening with Stratford, Naturally




# **GREEN GARDENING**

*with*

## **STRATFORD, NATURALLY**



*Nature is a circle, with everything in it, including humans, dependent on something else. Our ecosystem is fragile. When we add toxins to the environment, we upset parts of the system - which in the long run affects the entire system. By "re-learning" how to work with natural systems, we will all benefit.*



To garden naturally, use the helpers that are above, beside and beneath your garden:

- Birds
- Beneficial Insects
- Helpful worms, bacteria and fungi in soil.

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## 1. Why Not Pesticides?

- The potential health threats associated with using pesticides far outweigh the benefits of having a weed-free lawn and garden.
- In recent years, scientists have observed associations between pesticide exposures and adverse effects on reproductive and neurological health, and some forms of cancer.
- Infants, fetuses, children, prospective parents and the elderly may be more susceptible to developing health effects from exposure to pesticides.
- Pesticides are not necessary. It is not worth the risk to the health of our children, our pets and our environment.



## A New Approach

- Approach gardening in a new way – without using chemicals. This is the best way to ensure that we protect our health and our environment.
- Using pesticides upsets the balance of nature. Spraying lawns and gardens kills *good* forms of life as well as “pests.” Eventually the area is dependent on chemicals for survival and can no longer sustain the natural balance that keeps it healthy.
- Let’s turn things around! By not using pesticides we can rebuild ecosystems and see our lawns and gardens filled with bees, songbirds and butterflies...not to mention healthy grass, plants and flowers.
- Inspire your neighbours. Garden naturally and encourage others in your neighbourhood to do so, too.

## 2. Build Your Lawn from the Ground Up

- Aim for healthy soil. Avoid adding substances that kill organisms in the fragile soil ecosystem (even vinegar) if you can.
- Aerate your soil. Once it's healthy, the earthworms will do the job for you.
- Overseed with grass. Use a three-way mixture:
  - Perennial Rye Grass
  - Creeping Fescue
  - Kentucky Blue
- Consider adding White Dutch Clover. As a legume, it will provide critically important Nitrogen fixing in your soil.
- Enrich your soil with organic matter. Topdress with compost.
- Set your mower high. Cut to a height of 3" (cm) Grass is a plant and its blades need to absorb sunlight and carbon dioxide. Short grass stresses the plant and the soil, leaving it open to pest infestation.
- Leave grass clippings on the lawn. They provide natural compost.

See [www.stratfordnaturally.ca](http://www.stratfordnaturally.ca) for more lawn tips.



### 3. The Soil Beneath Your Feet

Good soil is rich in life. It's filled with organisms—such as earthworms that mix and aerate the soil and digest much organic material—and also with micro-organisms—such as beneficial fungi and bacteria. These continually turn organic material (e.g. clippings, dead leaves) into soluble nutrients, such as carbon, nitrogen and phosphorus.

Stratford soil is challenging due to its high clay content, yet in its natural state is one of the planet's richest. To turn your lawn and garden soil into highly productive biologically active soil that will allow your plants to flourish, you can:

- Add sand and cured manure annually to start.
- Add compost yearly, digging it in or top-dressing.
- Mulch plants to add organic matter and retain moisture, as well as control weeds.
- Leave grass clippings on lawns.
- Leave plant matter and leaves in flower beds. They will decompose, releasing important nutrients and carbon. Once the new growing season begins, cut off stalks and add to the garden. The remaining plant material and stalks will soon disappear into the soil.
- Grow plants from the legume family, such as lupines, laburnums or redbuds, since most species in this plant family have bacteria living in their roots that draw nitrogen from the air and eventually build it into the soil.

*Adopt the pace of nature: her secret is patience.*

*-Ralph Waldo Emerson*

#### 4. Lawn Problems?

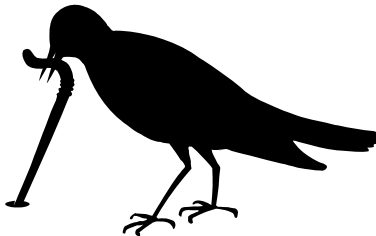
##### Chinch Bug:

- Build that healthy soil and lawn. Rake, overseed, topdress and mow high.
- Situation critical? Soapy solutions can be applied but remember that any foreign substance will also kill the important soil organisms you want to keep.
- Bring on the bugs; big-eyed bugs, tiny wasps, ladybugs, lacewings, and praying mantis will be delighted to help. See the section on how to attract insect helpers.

##### Grub Worm:

- As above, build that healthy soil and lawn. Grubs are there because the soil and lawn are stressed.
- Situation Critical? Obtain and apply nematode powder (tiny worms that will infest the grubs and kill them) according to the instructions.
- Bring on the birds. Robins love grubs. See the section on how to attract bird helpers.

See [www.stratfordnaturally.ca](http://www.stratfordnaturally.ca) for more information.



## 5. Pollinators

Many flowers need pollinators to reproduce. No pollinators, no beautiful flowers...

No flowers, no fruits, no vegetables, no grains!

### No pollinators, no food:

Bees are pollinators. True. So are *millions* of other important insects.

- Bees
- Flies
- Moths
- Butterflies
- Wasps
- Beetles
- Hemiptera (sometimes)



(What's an hemiptera? The "true bugs" such as cicadas, aphids, planthoppers and shield bugs.)

Native pollinators are in danger through loss of habitat, pesticide use and diseases.

### Help Pollinators:

- Avoid the use of pesticides and chemicals
- Plant to provide habitat and food for pollinators.
- Bring on the bugs!

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

## 6. Bring on the Pollinators and the Helpers

Insects can be your best helpers. Approximately 99% of insects are beneficial.

Add plants to your garden that will attract insects. Provide a feast for the pollinators and for the beneficial insect predators. As an added bonus, they'll bring butterflies (which are also pollinators).

### Native Perennials:

#### Sun:

- Gray-headed Coneflower (*Ratibida pinnata*)
- Black-eyed Susan (*Rudbeckia hirta*)
- Canada Goldenrod (*Solidago canadensis*) *This is a native plant – It blooms at the same time as ragweed, so is often blamed for allergies. Ragweed is definitely an allergen!*
- Evening Primrose (*Oenothera biennis*)
- Butterfly Milkweed (*Asclepias tuberosa*)
- New England Aster (*Aster novae-angliae*)
- Ironweed (*Vernonia missurica*)
- Swamp Milkweed (*Asclepias incarnata*)
- Tickseed (*Coreopsis lanceolata*)
- Joe Pye Weed (*Eupatorium maculatum*)
- Bergamot (Beebalm) (*Monarda fistulosa*)
- Dense Blazing Star (*Liatris spicata*)



***Did you know that monarch butterflies must have a milkweed plant for their larvae?***



## Native Perennials:

### Shade:

- Foamflower (*Tiarella cordifolia*)
- Canada Anemone (*Anemone Canadensis*)
- Cranesbill (wild geranium) (*Geranium maculatum*)
- Woodland Sunflower (*Helianthus divaricatus*)
- Jack-in-the-pulpit (*Arisaema triphyllum*)
- Wild Ginger (*Asarum canadense*)
- Virginia Bluebells (*Mertensia virginica*)

**Native plants are accustomed to our climate and seldom need watering once they're established.**

### Non-Native Perennials

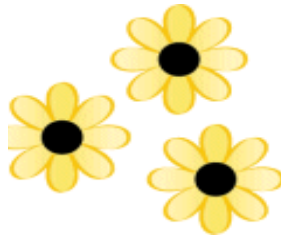
- Lavender
- Checker mallow
- Fleeceflower
- Cornflower
- Gladiola
- Shasta daisy

### Annuals

- Cosmos
- Marigold
- Zinnia
- Dill
- Petunia
- Phlox

### Shrubs:

- Dogwood
- Witch Hazel
- Serviceberry



For additional suggestions, see the fact sheets on [www.stratfordnaturally.ca](http://www.stratfordnaturally.ca)

## 7. Bring on the Birds



For birds, provide water, nesting sites, and shelter from predators. Most of all, keep your cat indoors!

### **Select native shrubs and trees that provide cover, nest sites, and food:**

Eastern Red Cedar  
Flowering Crab Apple  
Flowering Dogwood  
Red Pine  
American Beech  
Staghorn Sumac

*Add a birdbath. Birds need fresh water for drinking and bathing. Change the water every few days.*

### **Annuals that provide seeds:**

Marigold  
Zinnia  
Foxglove  
Sunflower

*Add birdfeeders:*

*Safflower  
Niger  
Mixed Seed  
Oranges*

### **Nectar plants for hummingbirds:**

Foxglove  
Phlox  
Trumpet vine

*Provide safe perches nearby.*

See "Gardening for Wildlife" at [www.stratfordnaturally.ca](http://www.stratfordnaturally.ca)

## 8. Alternative Ground Covers

Does it have to be all grass? Consider converting some of your lawn to flower beds to bring in the helpers. Compost and mulch enrich plants and block weeds.

### How about an alternative ground cover?



- Cotoneaster (Cotoneaster spp.) – deciduous to semi evergreen shrub, small glossy leaves, pink-white flowers, red berries, ideal for slopes, full sun to partial shade.
- Dwarf Junipers (Juniperus spp.) – low-maintenance, evergreen, require well-drained rich soil, excellent for hot, sunny, dry places.
- Sedums (Sedums spp.) – drought tolerant, do well in thin, poor soil, tolerate sun and part shade.
- Thyme (Thymus spp.) – full sun, well drained soil, many species to choose from that create mounds, foliage scented, some species can withstand moderate foot traffic.
- Wild Ginger (Asarum canadense) – native species, slow spreader, good for shady slopes, large heart shaped leaves.
- Canada Violet (Viola Canadensis) - grows to 1 foot (30 cm), white flowers in early spring, looks lovely in mass plantings.

**Note:** Both Periwinkle (*Vinca*) and Goutweed are frequently used as groundcovers. They are both on lists of invasive plants. If you use either, make sure they are well contained by sidewalks, driveways or walls. They will spread with great enthusiasm to your garden and your neighbour's!

See [www.stratfordnaturally.ca](http://www.stratfordnaturally.ca) for more ideas.

## 9. Garden Tips

- Make a mix of garlic powder and cayenne pepper from a bulk food store. Use as a repellent around plants.
- Put coffee grounds and crushed eggshells around plants troubled by slugs. Powdered ginger is also a good repellent.
- To prevent cutworms from cutting stems of newly planted seedlings, place a collar (half a toilet paper roll) around seedling stems and push 1" into the ground.
- Sometimes a blast of water is enough to knock insects off plants.
- Discourage fungal diseases by providing adequate air circulation around plants and watering before noon so leaves will dry out.
- When pruning in the spring, save longer, multi-branched woody stems to act as props for peonies and phlox as they start to grow.
- Welcome toads into the bug patrol. Provide a "house" and a flat tray of water to encourage migrant toads to stay. Don't try to transplant them, they'll hop back home. Cutting doors in a plastic container works, or you can buy special terra cotta toad homes.



## 10. A Rose is a Rose

Aim for natural controls if possible, or plant native rose species. If you have planted flowers nearby to attract insects, your aphid patrol is in place and ready to work.



### Situation Critical?

- To kill green aphids and whiteflies on roses, spray with a mixture of equal parts water and three percent hydrogen peroxide (drugstore). Apply weekly during dry weather and twice weekly during wet weather. The peroxide also promotes bud sprouting and deepens leaf colour.
- To control black spot diseases on rose leaves, spray rose foliage every seven to 10 days with a solution of one tbsp. each of baking soda and liquid soap dissolved in one gallon of water.

## 11. Avoid West Nile – Cover Up!

Your chances of being bitten by an infected mosquito and becoming seriously ill are very low. Here are some suggestions for reducing them even further:

- Clean up standing water around your home at least once a week. Even a saucer can be a breeding ground. Change birdbaths, toad or butterfly water, wading pools and pet bowls frequently.
- Apply insect repellent and cover up with long sleeves, pants and light-coloured clothing when outdoors.
- Take extra protection measures between dusk and dawn when mosquitoes are most active.

## 12. Dandelions: The Good, the Bad and the Beautiful

### Amazing!

- **Dandelions** are rich in vitamins C, D and B-complex and minerals, such as magnesium, iron, copper, phosphorus, zinc, potassium and manganese.
- **Dandelions** have the highest Vitamin A levels of all the greens.
- **Dandelions** are used in natural medicine therapies throughout the world.



### Useful!

- **Dandelions** bloom earlier than most flowers, and are prized by bees and other pollinators.
- **Dandelion** roots are so long they bring up nutrients into your soil and aerate the soil.
- **Dandelion** roots can be dried and ground for a natural coffee, The greens can be used in salads (but only absolutely pesticide free!).
- **Dandelion** blossoms can be added to make a soothing bath. Pretend they're rose petals!



### Who Knew?

- **Dandelions** were once called Dente de lions- "Tooth of the Lion" in French, because of their deeply-toothed leaves...hence dand-de-lions!
- **Dandelions** are the exact same colour as Calendula, a lovely yellow traditional marigold.

### Not Convinced?

- **Dandelions** can be crowded out by a closely planted grass mix. Pull any that appear by hand. There are great dandelion diggers in stores. –Or, just mow them regularly during their bloom season.



### 13. Leave Your Leaves

- **Who cleans up the forest in the fall?** No one. Leftover leaves and plants have important jobs!
- **Dead plants and leaves decompose** with the help of microorganisms in the soil to make nature's own fertilizer and compost. All for free!
- **Dead leaves on grass make great mulch** for your lawn. Chop them up with your (walking) lawn mower to help them decompose.
- **Dead plants and leaves hold moisture** in your soil ready for your plants in the spring.
- **Dead plants and leaves are critical shelter for helpful insects.** Butterflies often hibernate or leave their chrysalises in garden litter.
- **Dead plants and leaves provide shelter for birds** in winter, and places to forage.
- **Dead flowers provide food** for finches, cardinals and chickadees. Plant sunflowers, coneflowers, goldenrod and black-eyed susans and watch the winter show!
- **Dead plants and leaves protect your soil** from erosion until next year's garden takes over.
- **Dead leaves and plants *DISAPPEAR!*** At the start of spring, you can still see them, but in a few weeks, they are gone! In their place: healthy new plants, thanks to the nutrients provided by the dead plants and leaves that you left in your garden. This cycle imitates nature.

## 14. Glossary of Terms

**Aerate:** Removing plugs of soil from the lawn to create space for air, water and nutrients to penetrate the soil.

**Ecosystem:** A community of living things (plants, animals, micro-organisms) that interact with each other.

**Fertilizer:** Any material, natural or manufactured, which may be added to the soil to supply nutrients.

**Habitat:** Food and shelter for a living organism.

**Native plants:** Plants that evolved naturally in Canada before humans introduced other plants.

**Natural Gardening:** Creating a garden using native plants and without using chemicals (pesticides, chemical fertilizers); recreating a natural ecosystem specific to your local area.

**Organic:** Plants that are grown without the use of conventional pesticides and artificial fertilizers.

**Pesticide:** A chemical or mixture of chemicals that is used for preventing, repelling, or killing living organisms deemed as pests:

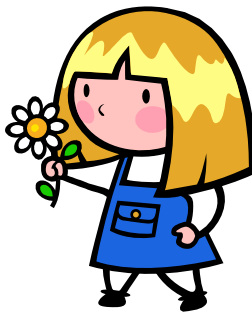
- Fungicides for the control of fungi and moulds;
- Herbicides for the control of weeds; and
- Insecticides for the control of insects.

**Pollinators:** Bees, birds, bats, insects and other animals that play a crucial role in flowering plant reproduction and in the production of most fruits and vegetables. Without the help of pollinators, most plants cannot produce fruits and seeds.



## 15. Games Children Played

- **Making Dandelion (or Clover or Daisy) Necklaces** - slits would be made in the flower stems, and another stem inserted - and then another stem would be inserted into the new stem- and so on until you had a necklace- or a crown
- **Daisy Game**- He loves me, he loves me not- pulling off the petals to find out- Last one out gives the verdict
- **Buttercup Game**- a buttercup would be held underneath your chin. If your chin reflected yellow, you liked butter!
- **Bouquets**- weed flowers were gathered by young ones for a bouquet. Mum's first bouquet was often dandelions- cheerful, bright yellow, and in the eyes of a child, beautiful.
- **Dandelion Parachutes**- blowing dandelion wisps into the breezes to watch them dance
- **Grass Whistles**- cupping a long blade of grass in your hand and blowing through it.





**LET'S BE PESTICIDE FREE FOR A HEALTHY FUTURE!**

Look deep into nature, and then you will understand everything better.

*~Albert Einstein*

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