



101 Ways to Make Your Garden More Eco-Friendly

Carver/Scott County Extension Master Gardeners 2017

Here is a list of some, certainly not all, ways to make your garden more eco-friendly. Many of these subjects could have their own presentations but there isn't enough time. Therefore, this handout has lots of references. Identify a few ideas you are willing to try. Look into some other ideas.

No.	Idea
1	Grow less lawn, add hardscape and other kinds of gardens.
2	Eliminate turf in hard to grow areas like under trees, dry slopes, high traffic areas
3	Landscape hills
4	Have no lawn: gravel, mulch, astroturf, perennials, prairie grasses, etc.
5	Adjust sprinklers whether you have an irrigation system or hand placed sprinklers.
6	Conduct an Irrigation Audit. Lawns need about 1" of water per week. Use catch cans, or tuna cans, to see how much time is needed to get 1 inch of water per week.
7	Install Rain Sensors on your irrigation system, but also pay attention to weather forecasts and turn off sprinklers if rain predicted. For a low tech system, use a rain gage and stop watering .
8	Water more slowly on hillsides to avoid runoff. Sand absorbs more than clay.
9	Water in the morning between 4:00 and 8:00 a.m.
10	Water soil not plants. Saves water and decreases disease.
11	Install rainbarrels to capture roof runoff.
12	Use soaker hoses or drip irrigation.
13	Use Ollas, burried ceramic jars, that leak water to exactly where you want it.
14	Wick watering also puts water just where you want it.
15	Think beyond the sprinkler. Water in the air does no good.
16	Water less frequently, more deeply for longer, deeper roots and less water dependence.
17	Aerate your lawn. Allows water, oxygen and nutrients to get into soil for deeper root development.
18	Xeriscape. Use drought resistant plants. <u>The Best Plants for 30 Tough Sites</u> , edited by Mary Meyer available as a book or on line at http://www.extension.umn.edu/garden/yard-garden/landscaping/best-plants-for-tough-sites/ , http://www.arboretum.umn.edu/droughttolerantplants.aspx
19	Identify water problem areas like the south and west exposures. Plant something else there.
20	Use native plants. They are adapted to our climate, temperatures, insects, droughts, etc. Prairie plants have deep roots and can survive long droughts. Minnesota is in zone 4b. References: https://www.extension.umn.edu/garden/yard-garden/landscaping/native-plants-for-sustainable-landscapes/doc/7447z.pdf , http://dnr.state.mn.us/gardens/nativeplants/index.html , <u>Landscaping with Native Plants of Minnesota</u> by Lynn M. Steiner
21	Put the right plant in the right place. It will need less water, less fertilizer, less insecticide, and less care.
22	Clean your storm drain. Leaves and grass add too much phosphorous and nitrogen to our lakes.
23	Adopt a Storm Drain, get a free lawn sign! Many cities, like Prior Lake, have formal programs for this.
24	Mow high, mow frequently, 2-3 inches is recommended.
25	Leave grass clippings on lawns. If under 1 inch, clippings fall down and decompose rapidly putting nutrients back into the lawn. You may have to mow more often.
26	Keep clippings on lawn, not in street.

- 27 Learn good bugs from bad bugs. Many insects are beneficial and eat other pests. Know what you have before you decide to kill it. References: [Insects of the North Woods, by Jeffrey Hahn.](#)
<http://www.extension.umn.edu/garden/insects/>
- 28 Hand pick insects. Yes, it is disgusting, but it is efficient for many pests.
- 29 Put up with cosmetic damage.
- 30 Follow **Integrated Pest Management** principles. Look at the whole system to remedy plant diseases, pests, or problems. Is it the right plant for the location? Does it have good light, water and air circulation? Proper sanitation? Is there a biological solution or a physical solution (like row covers). If a chemical solution is necessary, what is the lowest impact possible? This download is a good explanation for home gardeners: <https://store.extension.iastate.edu/Product/rg201-pdf>
- 31 Sanitation. Remove insect infested plants, diseased plants, rotten fruit, etc. to reduce further exposure.
- 32 Rotate crops as some pathogens overwinter in the soil. <http://hort.uwex.edu/articles/using-crop-rotation-home-vegetable-garden-0/>
- 33 Don't crowd. Air helps keep plants pest and disease free.
- 34 When using any garden chemicals, read the label. Will it work for your particular disease or insect? Your particular plant? Look at safety, especially for food. What about harm to pets, bees and other beneficial insects?
- 35 After reading the label, follow the instructions! It is a violation of Federal law to misuse pesticides.
- 36 Use insecticidal soap for small soft bodied insects. Considered "non-toxic" but actually can be harmful to bees. (Many recipes on line. Requires true soap with fatty acids. Recipe from University of Hawaii: 1Tbs mild dishwashing soap (real soap, not detergent), 1C vegetable oil mixed. Take 1-2 Tbs of the concentrate to a cup of water and spray on plants.)
- 37 Water works to get rid of aphids.
- 38 "Organic" does not always mean safe. Some are more toxic than synthetic chemicals.
- 39 Be skeptical with the internet, Facebook posts, etc. (Yes, fire and boiling water can kill plants, but they may not kill the root it may return. Household vinegar is not as strong as herbicidal vinegar. Salt kills plants, but may stay in the soil.)
- 40 Look for research based information. ".edu" in web address. Start your Google search with **site:.edu** and then your search term. (example site:.edu neem oil) Never trust a site that is selling something.
- 41 Compost kitchen scraps and garden waste. Improves your soil and adds nutrients.
<http://www.extension.umn.edu/garden/yard-garden/soils/composting-and-mulching-guide/>
- 42 Direct composting is put in a hole or a trench, covered and left. Toss out your coffee grounds.
- 43 Vermicompost involves using worms in plastic tubs to eat and digest food scraps.
<https://content.ces.ncsu.edu/worms-can-recycle-your-garbage>
- 44 Use your local yard waste compost sites. Some trash haulers will pick it up, others have drop off locations. State law bans yard waste from garbage collection and disposal in landfills.
- 45 Support municipal organics composting for things like meat, bread, dairy products, food papers, facial tissue, paper plates, etc. as being done in many cities.
- 46 Garden pots can be recycled. Check with your trash hauler. Some nurseries will take them back.
- 47 Use mulch. It retains moisture, controls weeds, and maintains a more consistent soil temperature. Do not put plastic sheets under mulch. Landscape fabric can be used under rock mulch. Organic mulch needs nothing. It rots and amends the soil.
- 48 Use groundcovers for living mulch.
http://www.extension.umn.edu/garden/landscaping/maint/ground_covers
<http://www.extension.umn.edu/garden/yard-garden/landscaping/ground-covers-for-rough-sites>
- 49 Raingardens keep stormwater runoff from entering the sewer system, lakes, and rivers. Specifically chosen plants purify the water and let it return to groundwater. They do not breed mosquitos. Curb cuts add street runoff to the raingarden. <http://blog-yard-garden-news.extension.umn.edu/2009/05/rain-gardens.html>, <http://www.blue-thumb.org/>

- 50 Pull weeds by hand.
- 51 Smother weeds. Lasagna method uses layers of newspaper or cardboard (which will decompose) under mulch. Need many layers - up to 1/2 inch. Then cover with several inches of mulch or compost, or soil depending on your purpose. Kills weedy patches or excess lawn.
- 52 Instead of black plastic edging, try an English edge with lasagna newspaper. Easy to expand when you eliminate more lawn.
- 53 To kill some weeds chemicals may be necessary. Example: Japanese knotweed. The arboretum prefers to use chemicals for buckthorn eradication as it doesn't tear up the soil and create environments for other invasives like garlic mustard.
- 54 Clover, rye, vetch. Cover crops, or green manure, hold the dirt, keep out weeds, and can be turned over into the garden as organic matter in the spring. <http://www.extension.umn.edu/garden/yard-garden/vegetables/green-manure-cover-crops-for-minnesota/>
- 55 Start your own seeds. Greater variety of vegetables and flowers plus you control chemicals used.
- 56 Buy disease resistant plants. Example VF, VFN, VFNT tomatoes. However, these are hybrids and not heirlooms. Scab resistant crabapples: http://blog-yard-garden-news.extension.umn.edu/2014/11/the-best-crabapples-for-minnesota_3.
- 57 Several tips from the Audubon Society: Plant shrubs with berries (or crab apples) for the birds.
- 58 Leave perennial seed heads on plants overwinter for birds.
- 59 Plant evergreens or dense hedges for bird shelters.
- 60 Plant spiky shrubs for bird protection and defense.
- 61 Plant, or leave, milkweed for monarch butterflies.
- 62 Reduce use of gas mowers. Gas mowers contribute nearly 5% of the national air pollution. One hour of mowing equal one hour of running 11 newer cars.
- 63 Don't spill fuel. 17 million gallons spilled each year according to EPA.
- 64 Use a reel lawnmower.
- 65 Use a cordless electric. New ones are going to be solar powered.
- 66 Plant a no mow lawn. <http://www.extension.umn.edu/garden/landscaping/maint/ts-selecting-cool-season.htm>, <http://www.extension.umn.edu/garden/yard-garden/landscaping/ground-covers-for-rough-sites>
- 67 Add fescue to your lawn. Drought tolerant deeply rooted grass. <http://www.extension.umn.edu/garden/landscaping/maint/ts-selecting-cool-season.htm>
- 68 Use a broom instead of a leaf blower.
- 69 Properly dispose of left over garden chemicals. Usually worthless after one year.
- 70 Stabilize your shoreline. Do not mow, do not fertilize, plant native long rooted plants for a 15-25 foot buffer. www.dnr.state.mn.us/rys/index.html
- 71 Get a soil test for \$17.00 per sample. <http://soiltest.cfans.umn.edu/>
- 72 Use only appropriate amounts of fertilizer. Use less if you leave grass clippings on lawn. Soil test will tell you what you need.
- 73 Sweep up spilled fertilizer so that it doesn't wash away into stormwater and lakes. Never fertilize on frozen ground as it will wash off.
- 74 Do not automatically use Weed and Feed products. Do you really need the herbicide? Is it the proper time to apply? For broad leaf weeds like dandelions applications need to be when actively growing.
- 75 Pre-emergent crabgrass killers kill seedlings only as they start growing. Timing is critical and depends more on the weather than the calendar. Remember, you can't seed your lawn or bare spots after application of a pre-emergent herbicide.
- 76 Seriously, lower your lawn standards! A couple dandelions and a little creeping charlie won't kill you.
- 77 Phosphorous not allowed on lawns in Minnesota. It is rarely necessary and it destroys lakes and rivers.
- 78
- On the other hand, thick healthy lawns prevent weeds from developing and help with run off issues.

- 79 Use permeable hardscape surfaces with spaces for water to enter soil. Good examples at the Savage Environmental Learning Center and the Scott Cocunty Fairground teaching gardens.
- 80 Reduce compacted soil. Water runs off, roots can't penetrate and plants can't grow. Add organic matter to compacted soil and don't drive on it, don't walk on it, and don't work it when wet.
- 81 Evergreens for winter windbreak
- 82 Shade the house. Deciduous trees shade in the summer (can save 50% of airconditioning) and let sun heat in winter.
- 83 Shade the airconditioner in the summer.
- 84 Plant trees! Absorb CO2 and air pollutants, give off oxygen, cool streets and cities, saves water, prevents soil erosion, and can provide food. Adds psychological benefits too.
- 85 Plant a Bur Oak, *Quercus macrocarpa*. Supports 518 insects for bird food. Native trees have the larva that birds need to feed their young.
www.saintpaulaudubon.org/sites/default/files/GoNativeBooklet.pdf
- 86 More trees good for birds: White Oak 518, Chokecherry 429, Red Maple 287, Sugar Maple 287, White Pine 191, Hawthorn 150, Hazelnut 124, and Serviceberry 119.
- 87 Protect pollinators. There are more than just honeybees.
 88 have something blooming all season for the bees. Suggestions for pollinators: March-May, Large beardtongue, Pussy willow, Wild geranium, Hawthorn tree. March - July, Lanceleaf coreopsis, Virginia waterleaf, Wild lupin. July - July, Goatsbeard, Blue lobelia, Purple coneflower, Slender mountain mint. June-September, Alsike cover, Anise hyssop, Autumn joy sedum, Beebalm, Bicolor thistle, Borage, Carmint, Comon boneset, Culvers root, Cup plant, Ironweed, Jewelweed, Joepye weed, Oregano, Partridge pea, Purple prairie clover, Tough blazing star, Sunflowers, Swamp milkweed, Yellow coneflower. More at: https://www.beelab.umn.edu/sites/beelab.umn.edu/files/plants_mn_bees.pdf
- 89 Visit the Arboretum's new bee lab. <http://www.beelab.umn.edu/>
- 90 Avoid the systemic insecticide neonicotinoid in products with these names: Actamiprid, Clothianidin, Dinotefuran, Imidacloprid, Nitenpyram, Thiocloprid, and Thiamethoxam. Many store-bought plants have been dosed with these insecticides.
- 91 Even "organic" insecticides can harm bees. Apply late in the evening or at night and follow the instructions.
- 92 Provide habitat for bees to overwinter. Native bees use ground litter.
- 93 Leave some bare patches of soil, without mulch, for groundnesting bees.
- 94 Protect bumble bee nests.
- 95 Provide bee nests
- 96 Protect swarming bees. First, stay away and leave it alone. Then call 651-436-7915 for advice and possible collection. <https://www.mnbeekeepers.com/help/honey-bee-swarms>
- 97 Grow your own food or buy local.
- 98 Learn to preserve food by canning, drying, freezing, etc. Do it safely.
<http://www.extension.umn.edu/food/food-safety/preserving/canning/canning-basics>
- 99 Use a portable fan to keep mosquitos away. Move it around the garden with you.
- 100 Use lake water to water your lawn? Check your local municipality. Encouraged in the City of Prior Lake.
- 101 Check with your city, county, or watershed district for local initiatives. Some even have graant money for rain gardens, permeable paver projects, shoreline restortion etc. Many areas have tree sales with great prices.

Common Themes

Use native plants

Conserve use of water and energy

Minimize use of chemicals

Recycle garden waste

Provide habitat for birds, bees, butterflies, etc.

