

Eco-Friendly Landscaping

by Lauren Rama, 2008

Why choose natural landscaping methods?

Landscaping is having a major impact on the natural environment. Forty to seventy percent of the treated water consumed in major North American cities is used in watering yards, particularly lawns. Water used in landscaping absorbs pesticides and fertilizers, and returns those to the streams and rivers of our watershed. Alberta government testing shows that water drawn out of the Bow River at Cochrane has excellent water quality and this deteriorates to “fair” east of Calgary.

Ecosystems in streams, rivers and along the waterways are altered by the chemicals that wash from yards into the storm sewer system and run untreated into the rivers. Some species, such as certain algae, thrive on the nitrates in fertilizers and crowd out other species. While other species die from the pesticides.

Pesticides are synthetic chemicals used to control so-called pests. This includes herbicides (for killing plants), insecticides (for killing insects), fungicides (for controlling fungus on plants), and rodenticides (for killing rodents such as gophers). Although, pesticides may provide quick fixes to get rid of so-called “pests”, from an ecological point of view they do more harm than good to the ecosystem. Pesticides are often responsible for killing the micro-organisms that live in the soil and on leaf surfaces. As a necessary ingredient in a healthy eco-system, these micro-organisms decompose organic matter and digest nutrients, making those nutrients available to plants.

All elements in the eco-system are interdependent, so when you remove one part such as a group of insects, there is definitely going to be a counter effect. Pesticides kill the insects that keep other insects in balance as well as pollinating insects. Inadvertently, we start to kill off the birds and wildlife who are dependent on these insects as a source of food. Flowers and plants that rely on insects for their pollination may also start to die off, and so it goes.

Natural landscaping methods that preserve the environment and build the health of our yards offer a better alternative. A leader among municipalities, the City of Calgary has been promoting responsible use of water resources, encouraging homeowners and business owners through advertising campaigns and a comprehensive web-site to “use water wisely.” They have also encouraged citizens to use alternative methods to chemicals in landscaping. Recently, the City Council voted to direct administration to draft a bylaw and supportive policies for late 2009, that will restrict the cosmetic use of pesticides in Calgary. This represents an important step forward in promoting responsible practices that support healthy environments and quality of life.

In reporting to the Standing Policy Committee on Utilities and Environment, David Day, the Director of Environment and Safety Management at the City of Calgary,

recommended that the City expand education and awareness in an effort to promote the use of native species and natural landscaping as a way to complement phase out reliance on pesticides for cosmetic and other appearance concerns. Day suggested that the City follow the model of Toronto, which has developed an extensive web-site and promotional campaign to complement their bylaw implemented in 2004. Day also recommended that the City approach the province to urge a ban on the sale of products that add pesticides to comprehensive fertilizer applications, promoting spot treatment where other means of controlling invasive weeds have proven unsuccessful.

Humans are part of the ecosystem and if we thought of playing our part in ways that most enrich and enliven the ecosystem we would “use” natural resources more wisely. We can landscape in ways that are least taxing on our natural water resources and that preserve, restore, and even improve the natural ecosystem.

The typical big box North American nursery plants and Kentucky Bluegrass lawns promoted in most gardening magazines don't fit well into Calgary's natural ecosystem. Calgary has cool evenings and mornings from being on the eastern slopes of the Rocky Mountains, chinook winds that come through and dry plants such as evergreens out in mid-winter and really dry air. And many places in Calgary (e.g. parts of Silver Springs) didn't even have soil before they were developed. They were simply rock piles from ancient glacial moraines upon which was put a thin layer of topsoil when the houses were built.

How can we support the natural ecosystem in our yards?

- 1) Minimize your lawn area which requires the most maintenance and resources of any type of landscape. Replace this with hardy-in-Calgary tree, shrub and perennial flower beds that need little watering. Ideally the plants would be native to this area to support native pollinators, such as bees and birds. Beds absorb more water than lawn returning water through the ground to aquifers and preventing storm water runoff.
- 2) Overseed to change the grass type to low-maintenance grasses that don't require as much water and are easier to grow, lessening the need for fertilizer.
- 3) Spread lots of compost over your lawn and beds to bring in more micro-organisms, like beneficial bacteria, to the soil. This adds organic matter and the micro-organisms that break down organic matter, providing nutrients to your plants. Actively aerated compost tea is one of the cheapest ways to add micro-organisms. Fall is an ideal time to do all of these.

Laureen Rama runs Eco-Yards™, a healthy landscape design and installation business. Eco-yards also offers Eco-yards™Spray - spraying compost tea on yards. For more information check out www.eco-yards.com or look for a copy of Laureen's new book, *Eco-yards: Simple steps to earth-friendly landscapes*.