



SUSTAINABILITY BRIEF

Native Planting, Cultivars and Turf Grass

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Below are lists of the pros and cons of planting these different types of plants in your yard. Native plants are defined as the original, non-hybrid variety of the native species that grew in this region before the settlers came. Purple Coneflower is one example. Cultivars are defined as hybrids or cultivated varieties that have been created by horticulturists for the garden trade. They can be created from native or non-native species. Meadowbrite Coneflower, the orange hybrid version of purple coneflower created by the Chicago Botanic Garden, is one example of a native-based cultivar. Daffodils are an example of a non-native-based cultivar. Turf grass is defined as any species of grass that is grown as lawn. Kentucky Bluegrass is one example.

Native Plants

Native plants are sustainable, because they are well-suited to the climate and soil conditions of the area where they are found naturally--they are grown successfully with little effort. They are adapted to extreme temperatures, blustery winds, and intense sunlight. They are drought resistant--once established, after 2-3 years, they need no supplementary water--ever. The roots of prairie plants grow deep into the earth--some as much as 15' where water is available. (The root systems make up 2/3 of the plants' biomass). In addition, the surfaces of the leaves may be hairy, deflecting sun and wind, or thick and leathery or waxy to minimize transpiration (water loss).

They are easy to tend. They do not need to be divided--they like to grow close together. They seed themselves about, making them bountiful beyond belief. If this is undesirable, they will tolerate dead-heading to remove unwanted seeds. The growing point of prairie plants is just below the surface, making them resistant to fire, unlike exotic species. An annual controlled burn, where legally permitted, fertilizes the plants with its ash and keeps woody plants and Eurasian weeds at bay. In areas where burning is not allowed, dormant season mowing can be used, although it loses the benefits of ash fertilization. Nothing needs to be brought into the garden, nothing has to be taken out.

Native plants contribute to the overall quality of the environment by improving soil, water, and air qualities. 1/3 of the dense root systems of prairie grasses and sedges decompose every year, enriching the soil with organic matter and increasing its water -holding capacity. The longer roots of forbs draw water deep into the earth, replenishing the shallow aquifer. This water infiltration and holding capacity prevents runoff, erosion, and flooding. In addition, deep-rooted plants have the ability to sink carbon, contributing to control of greenhouse gases.

Native plants support biodiversity by providing food for native insects that in turn are eaten by native birds--96% of birds eat insects. Native landscapes and gardens provide habitat for birds, butterflies, bees, grasshoppers, crickets, and other insects; frogs, toads, and salamanders; and they offer fascinating places for children to play.

Native plant garden beds add variety and color to your yard, making it more visually interesting than an unbroken area of lawn. Native landscapes celebrate the character, history, and identity of a particular community and region.

Cultivars

Native-based cultivars are somewhat sustainable, because many of them retain many of the same characteristics as their parent, native plants. However, it depends on exactly how the cultivar was bred. Some retain very few native characteristics. The ones retaining most characteristics will still be hardy in this region, meaning they can tolerate extreme weather, are drought-resistant and pest-resistant, and need little if any watering.

The long-term maintenance is often the same as with natives. Native-based cultivars are usually still fire tolerant and benefit from annual burns. Mowing and dead-heading can be used as desired. Native-based cultivars are beneficial for the soil, water, and air, just like natives, although some hybrids have shallower roots, so the benefits are reduced.

Native-based cultivars contribute to biodiversity in similar ways as natives, although some insects will not be able to feed on or pollinate cultivars of their native host plants. Therefore, biodiversity may be reduced in gardens with only cultivars.

Non-native cultivars need to be carefully evaluated to make sure that they are hardy in this region. Non-hardy varieties should be planted and treated as annuals as they will likely last only one growing season. The less hardy the plant, the more maintenance in terms of watering and fertilizing the plant will require.

Some cultivars will seed themselves around similar to native plants, but their seeds may not breed true, meaning the color of the flower often reverts to the original parent plant color. Dead-heading is usually suggested to prevent this from happening.

Cultivars often provide much more variety in blooms than native plants. Cultivars are bred to be showier, so they are bred to have more color options and larger blooms than natives. The blooming period may be extended. They also may have more appealing foliage in terms of leaf shape, color, and size.

Similar to native plant garden beds, cultivars can be used to add variety and color to your yard, making it more visually interesting than an unbroken area of lawn. They combine well with native plants, giving you more options in the garden to increase this visual appeal.

Turf Grass - also called Lawn Grass

Turf grass is not sustainable. It requires quite a bit of maintenance, including regular mowing, watering, fertilizing, and weed control. Left alone, it cannot sustain itself. Weeds will come in and replace the lawn, eventually greatly reducing or eliminating the grass. Mowing is very detrimental to air quality. Most mowers are gas powered, emitting many pounds of greenhouse gases per season. Electric and battery powered mowers are a more sustainable choice, although the electricity still has to be generated, and the batteries still have to be produced and eventually disposed of. Watering reduces groundwater and turns it into surface water, thereby wasting a regional resource. In poorly maintained lawns, watering often increases run-off. This run-off water carries some of the fertilizers and weed control pesticides into nearby streams, degrading water quality. Turf grass can stress trees by competing with them for water and nutrients, as most of the fine, water absorbing roots of trees are in the top 6 inches of soil.

Turf grass does have a lot of visual appeal. A well-maintained lawn looks neat and appealing.

Turf grass is the best option for open play areas in the yard. It holds up well to foot traffic and grows evenly, making a fine field for soccer and other children's games. While some native and cultivar groundcovers will handle some foot traffic, they can't hold up to sustained traffic like a maintained lawn can.

Use the right plant in the right place

The best option for sustainability is to use the right plant in the right place. Choose trees, shrubs and garden plants that can tolerate our weather. Natives and native-based cultivars are best for this, with natives being the most tolerant. Carefully chosen cultivars that are hardy in this region are also good choices. Plant turf grass only where needed, such as in pathways between garden beds or in play areas for children. By following these guidelines, you can reduce the time you spend on yard maintenance, reduce the negative environmental impacts from mowing and weed control, and increase the visual interest

For a copy of this report and more information about Elgin's sustainability initiatives please visit www.cityofelgin.org/green.