



## There's No Match for a Native Plant Patch

The recent years' uncertainty of summer precipitation – whether too much (the rains of 2015) or not enough (the drought of 2012) - only strengthens the certainty of a champion choice when it comes to our yard and garden plantings... native plants! These hardy, indigenous plants were Ohio residents long before the pioneers and evolved over thousands of years to adapt to our soil and climate. Today, exotic ornament plants and trees are available virtually everywhere - abundant, cheap, convenient, and only an arm's reach from our shopping carts. Coming in every color and from every continent, non-native plants have redefined our natural landscapes, bringing tough competition and gaining ground on our native flora. But despite the size of their army, alien and invasive plants still remain ecologically inept to our mighty Midwestern natives. Native plants are now regaining street cred, not just as beautiful options for our garden beds, but for the countless beneficial services they provide to our communities. Though native plants could win the pageant on looks alone, it is the work they do and the functions they provide that make native plants crown-worthy. Now more than ever, these beauty queens have a lot more to do than just look pretty.

### Pollution Solutions

First and most urgently, native plants can help curb the looming harmful algal bloom forecasted to return to Lake Erie's western basin and other nearby waterways. Federal researchers predict that this summer's bloom could be among the most severe in recent years, with potential to become the second most severe behind the record-setting 2011 bloom. Because rain is a major factor in large runoff events and nutrient loading feeds these blooms, native plants reduce nutrient pollution and nonpoint source pollution in several ways. As water runs off lawns, fields, and roads, it picks up pesticides, fertilizers, oils, sediment, manure, and other nonpoint source pollutants and carries them to our nearby waterways. Native plants keep the soil undisturbed and covered, improving soil health while preventing erosion and sedimentation. Their deep root systems also increase infiltration and are able to take up nutrients and absorb pollutants from the soil and the water. And despite their beauty, native plants are actually low maintenance! They are hardy, drought-resistant, less prone to disease, and thrive without pesticides or fertilizers. The more natives planted, the less chemicals applied. Because they are perennials, they'll return effortlessly every year once established, saving time, money, water, and resources. Planting more natives - whether in gardens in our yards, buffers along our streams, or tree borders around our perimeters - will decrease our lawns, thus reducing the 80 million tons of synthetic fertilizers Americans apply to them each year. Utilizing the ability of native plants to capture, filter, and reduce pollutants will only help turn our lakes from green to clean!

### "Water" You Waiting For?

While the quality of storm water moving through our communities is one issue, the volume of this water is another. Again, native plants begin their work to alleviate storm water troubles! Reaching up to 15 feet long, the root systems of native plants are very deep and significantly



*Beyond beauty, native plants like these Gray-headed coneflowers bring many additional benefits to our yards, such as improving soil health, reducing flooding and erosion, absorbing pollutants, and providing valuable food and wildlife habitat.*

reduce water runoff. Studies have shown that native plants and trees landscaped in residential developments can decrease storm water runoff by 65%. In fact, even just one tree can absorb hundreds of gallons of storm water annually. In contrast, a typical lawn has minimal root depth, and less than 10% of the water absorption capacity of a natural woodland. Yard by yard, our American landscape has been converted into huge expanses of lawn, now covering more than 40 million acres and resulting in a major increase of suburban flooding. What a grand opportunity to reduce the size of our turf lawns by creating more wildflower gardens, letting some grass grow into meadows, planting more native trees, or installing rain gardens to capture rain water from impervious surfaces throughout our neighborhoods. Nothing can slow water movement or prevent flooding like deeply-rooted native plants and trees!

### **Growing into the Future**

Though you have probably never considered your yard to be a wildlife preserve, it truly is! Plants are the critical base of the food chain for almost all ecosystems, making food from the sun's energy, then passing that energy through chains of insects, birds, mammals, etc., as they eat and are eaten. The unique and intricate relationships within these food webs have developed over thousands of years and through thousands of generations within a community. This biodiversity is absolutely essential to the health of our planet. Unfortunately, these relationships are being disrupted by our rapid development of suburban landscapes - complete with the replacement of once common native plants with invasive non-natives. Perhaps you are thinking, "Not in my backyard!", but consider the landscape and flora changes in nearby communities within just a few decades. As an example, caterpillar populations are a critical food source to birds. If one native oak tree is capable of supporting 534 species of butterflies and moths, imagine the amount of birds that one oak tree can support in its lifetime! Likewise native cherry trees can support 456 species, followed by willows (455), and birch trees (413). When these trees fall, who is taking their place in most neighborhoods? The Bradford Pear, the common buckthorn, and countless other non-natives who, research shows support 29 times less biodiversity than our natives. Since 96 % of our terrestrial bird species rear their young on insects, it is no coincidence that our songbird populations have declined by more than 40% since 1960. The large majority of our native insects simply cannot use plant species that evolved outside of their local food webs. Indeed, what we plant on our landscapes determines what can live in our landscapes. By returning to our roots and planting natives, we'll restore critical habitats and watch the bounty of biodiversity return to our yards!

As our communities and cities continue to grow, our yards have become even more powerful and significant places to preserve Ohio's natural heritage, diverse habitats, and prized water resources. Geauga Soil and Water Conservation District can help you consider ways to incorporate more "flower power" to your landscape. From rain gardens to wildflower patches to vegetative buffers, see how native plants and trees can bring more joy (and less pollution!) to your yard.



*The native plants in this rain garden are working hard to capture, filter, and slowly release the recent rains.*