



The Many Benefits of Trees

by Kent County Master Gardener Kathy Doyle

Trees are extraordinary multitaskers. Most people are aware that trees are the reason we can breathe. People might be less aware of the impact trees have on our health, the local economy, waterways, climate, and even crime.

According to the CDC, asthma has been steadily increasing since the 1980s. It doubled between 1980 and 2000, and doubled again between 2001 and 2009, with rates rising the most among Black children. Research shows that levels of asthma are lower in places where tree density is higher. Regions where the emerald ash borer has destroyed ash trees have seen a rise in cardiovascular and respiratory diseases.



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A Study Published

A study published in *Landscape and Urban Planning* in 2015 found that increased tree canopy in urban areas led to decreases in both violent and property crimes. “A 10% increase in tree canopy was associated with a 15% decrease in violent crime and a 14% decrease in property crime” in New Haven, Ct. (Kathryn Gilstad-Hayden, et al.)

Trees planted along city sidewalks

Trees planted along city sidewalks provide both health-related and economic benefits. Trees help reduce the impact of ultraviolet rays. Both common sense and research tell us that it takes longer to get a sunburn in the shade than in direct sunlight. People are more inclined to shop in downtowns that have trees. “Shoppers in business districts with robust tree canopy will spend 9 to 12% more for products, travel further and spend more time there.” (Wolf, Mainstreet News, 2009.)

Weather Events

Recent years have brought more instances of severe weather events which have included faster rainfalls and more flooding. Flooding occurs when the rain falls faster than the land can absorb. This leads to stormwater ultimately finding its way to local waterways, carrying with it excess nitrogen and phosphorous that it has collected from lawns and pet waste.

Trees can absorb, through their roots, tremendous quantities of water while filtering “up to 80% of phosphorous out of stormwater, preventing it from reaching waterways.” (Bratieres, <https://pubmed.ncbi.nlm.nih.gov/18710778>.) The same study found that planting a fifty-foot strip of trees along streams (a riparian buffer) can “reduce nitrate concentrations in streams by 75%.”

Deforestation has a direct impact on climate change. Some deforestation is actually caused by climate change (increased temperatures, fires, floods), but deforestation is also caused by logging, expanded agricultural production, and development. A simple, low-tech solution is to plant trees. The World Economic Forum’s “One Trillion Trees” initiative is based on studies such as one carried out by Thomas Crowther of the Swiss Federal Institute of Technology which found that planting one trillion trees could get rid of up to “two-thirds of the excess carbon already produced by human activity.”



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Anyone Can Help

Anyone can help implement this simple solution on their own property or encourage their friend, family, civic organizations and churches to do so. Citizens can also ask their local and state officials to add more trees to their downtowns, parks and other green spaces. Further Information



Kathy Doyle, author and Kent County Master Gardener

For more information about Master Gardener workshops, garden helplines, presentations, becoming a Master Gardener Volunteer, or other activities, please visit these websites.

UD Website - <https://www.udel.edu/academics/colleges/canr/cooperative-extension/environmental-stewardship/master-gardeners/>

DSU Website- <https://cast.desu.edu/cooperative-extension/agriculture-natural-resources/delaware-master-gardeners>