

10 good reasons or more to plant a tree - Fiann Ó Nualláin

There is the old saying "The best time to plant a tree is twenty years ago. The second best time is now." So here are some good reasons to act now.

1. Trees produce oxygen: We learn in school that trees are the lungs of the world, how through the process of photosynthesis they produce oxygen. Well a single garden tree will over an average 50-year lifetime, generate almost €25,000 worth of oxygen and will replenish the atmosphere with enough good O₂ to support two human beings for a year.

2. Trees act as Carbon sinks: Another Part of the process of photosynthesis is the intake of Co₂ to make food. So trees remove excess Co₂ from the atmosphere but we don't need a forest in the backyard to make a contribution. A single garden tree over an average 50-year lifetime or the equivalent of a fast-growing forest tree in a community garden or park, can potentially absorb up to 48 pounds of Co₂ over a single year; approximately ten tons per acre of urban wooded park – that is enough to offset the Co₂ output produced by driving a car 33796 kilometres. The equatorial circumference of the earth is 40075km. So planting some trees does offset the footprint of the road trip of your life.

3. Trees clean atmospheric pollution: Tree foliage intercepts airborne particulates, from dust to soot and pollen, thus cleaning the physical content of air but further, trees absorb along with carbon dioxide during photosynthesis other atmospheric gases, many the by-products of exhaust fumes and industrial processes. Amongst the atmospheric pollutants that trees absorb are carbon monoxide, sulphur dioxide, and nitrogen dioxide. It is estimated that a single garden tree, over an average 50-year lifetime, can deliver in excess of €48k worth of air pollution control. Different trees perform differently - If you live on a busy road just think that a single Sugar Maple (*Acer saccharum*) will remove in a single growing season 5200mg lead, 60mg cadmium, 140mg chromium and 820mg nickel from the environment. While our native Whitebeam (*Sorbus aria*) is one of the best trees at removing harmful particulates from the atmosphere. Poor air quality and in particular particulate content is linked to respiratory disease, cardiovascular disease, neurological side effects and an increase in chemical sensitivity and allergies.

4. Trees are efficient sound barriers: A tall wall or fence often invites negative reactions from neighbours and commercially constructed sound barriers alongside new motorways attract the same criticism from residents : restriction of views, ugly, feeling of confinement, loss of sunlight and lighting, loss of air circulation, etc. Well nature as usual has the solution, barring biophobia, trees and tall shrubs supply more effective boundaries, socially and aesthetically. But do they really work? Some argue that all trees do is introduce a distraction from background noise via rustling foliage and bird song etc that psychologically redirects the brain's perception so that it appears the noise has been reduced. Well nothing wrong with that!

Others, like myself who work in the field are first hand witnesses to how foliage and branch surfaces physically muffle noise. Sound travels, by its very nature, but nature in the form of trees, by its nature can provide absorption and reflection. A hedgerow, if it is high enough and dense enough will suppress traffic noise. Similarly a stand of trees with thick undergrowth will decrease noise levels. It is estimated that 30 meters of dense vegetation can reduce noise by five decibels. It's a matter of scale. A single tree will play its part with bird song and rustling, a hedgerow or stand will physically dampen.

5. Trees make effective windbreaks: Again here it is scale, a single tree will block and filter/slow wind and wind speed to a degree, a stand or hedgerow increases performance. A shelterbelt can account for up to a 50-percent wind reduction, translating economically as up to a 25-percent reduction in heating consumption. Trees or other living windbreaks will reduce wind speeds for a distance of 30 times the height of the windbreak on the downwind side. The other advantage of living screens is that any wind barrier that permits a percentage of wind penetration is more effective than a solid barrier such as a wall of fence because the 'let through' provides a larger area of protection on the leeward side.

6. Trees aid energy conservation: The windbreak action and sheltered microclimate of a single 7.5 meter tree has the potential to reduce a typical home's heating demand by a minimum of 5 percent and for buildings that require air-conditioning in summer, that tree will reduce cooling costs by a similar amount.

7. Trees prevent soil erosion: The roots of trees retain soil, and the trees themselves act as a physical barrier to wind erosion of soil. Trees too lessen erosion by water run off and storm waters. Cities without trees would need to increase sewage and storm water drains to handle the increased water runoff. Trees prevent sedimentation spilling on to streets and into water courses.

8. Trees for wildlife: The importance of trees to attracting and sustaining wildlife especially the feathered kind is well known. The physical structure of trees provide a habitat for nesting, cover and perching, but trees also provide food via associated insects and via their seeds and fruiting as food production. Birch and Willow attract many species of birds while Alders notably draw goldfinches. The acorns from Oaks feed wood pigeons and jays. Not to forget the berries from Rowan trees are often a Red Cross parcel to birds over the later seasons.

9. Trees increase property values: A property with a healthy and proportioned tree, offering aesthetic 'kerbside appeal' and providing, shade, wind shelter etc is valued higher than property without. Both real estate agents and home buyers assign monetary value to the presence of trees to the extent that mature garden trees can add between 10 and 25 percent of the value of a residence.

10. Trees promote business: Urban and street planted trees enhance economic stability of localities and community by attracting businesses and tourists. People are known to linger and shop longer along tree-lined streets.

Businesses leasing office spaces in developments planted with trees find that kerbside appeal works to woo new clients and those tree lined developments will have higher occupancy rates than treeless 'industrial parks'. Trees have a psychological impact on human motivation and sense of wellbeing and so employers in such developments find their workers are more productive and that absenteeism is reduced.

11. The Spinal tap effect: YES this top ten does go all the way to 11: because significantly that single maturing or mature tree will recycle almost €30k worth of water over its lifespan. It can be watered with grey water from the home, filtering out chemicals and pollutants in the process. It will similarly cleanse rainfall, run off rainwater and flood waters that otherwise would enter the water table less filtered, leaving reservoirs and water table supplies cleaner.

More trees planted could translate into less processing of tap water and less contaminated groundwater. The knock-on effect to health in a boosted confidence in drinking water sources would be immense. Remember that water stored in the spinal column supports 75 percent of the body weight with the remaining 25 percent supported by the fibrous material around the disks and all the time hydration is key... And you will want a healthy back now that you have read this article and decided to put it into planting a tree next weekend. Your health, your pocket and the planet will thank you!