

A Successful Landscape Starts with what is Below

Many new homes often sit in a desert of disruption during construction, mounds of soil are pushed off to the sides while a myriad of contractors go about their business. Once the house is completed topsoil is re-graded over the lot, the landscape becomes instantly verdant as rolls of sod are applied as if by some stroke of a giants paintbrush. You as the owner of a new home will be justly content at this point as your thoughts are focused on the interior of your new home and may not realize what problems lie in wait for you in the months and years ahead as you begin to develop a landscape. I like to use the analogy that soil is akin in some



ways to that of an iceberg, it is the portion that you don't see that can have the most profound impact on what you experience as you begin to garden. I constantly remind my students, who often refer to the stuff around new houses as dirt and not soil, that dirt has no value while soil is one of the most important ingredients required to grow plants in the landscape. Often little thought is given to this very precious and important resource and consequently one can spend years correcting soil related problems caused during construction while trying to establish a landscape.

With new homes there are several soil problems that can be experienced after the house is built and during landscape establishment. During construction heavy equipment plays a very important role in the realization of your home, backhoes and bulldozers trenching, digging and backfilling have upset the balance of the natural soil environment while construction and

service vehicles use the bare ground as a parking lot squeezing pockets of oxygen and moisture from the soil. If conditions are moist, most often during spring construction periods and the soil is clay based then the problem of soil compaction can be personified resulting in a hard packed airless resource that is very difficult to cultivate and plant.

Compaction can mean several things when you later begin to develop a landscape around the house. The ground will feel hard and in severe cases almost like concrete, during showers and storms you may notice that water runs away from the lot instead of percolating down and in some instances soil erosion will occur. What has happened is that the pore spaces in the soil have been compressed and the water cannot travel through to the lower levels but instead runs off the sides. Liken this



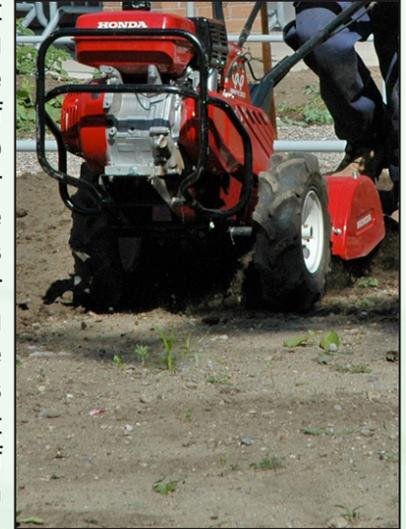
to percolating coffee; if you pack coffee into the percolator it drips out very slowly, however if you put the coffee in loosely, the water travels through it at a faster rate. Water reaching the lower levels of the soil environment is imperative in sustaining plants in periods of drought and encourages long, far-reaching, healthy root systems, this in itself will encourage plants to develop some drought resistance as the roots tap into deep pockets of unrealized soil moisture. In cases where surface irrigation is later employed, better water value is obtained if the water percolates to the lower soil horizons. In healthy soils less frequency and volume is required to sustain a healthy landscape as the soil has a greater capacity to contain it in soil pore spaces.



A partial solution to soil compaction problems is limiting as much heavy equipment activity as possible across the lot during the construction period. Fence off 'no-go' areas and designate parking areas for contractor vehicles. Since you are most likely not present for the entire construction period temporary barriers of snow fence are the best solution as they clearly limit areas immediately alerting contractors that this is a 'no-go zone'. If you suspect soil compaction ask a landscape professional for advice on how to proceed; some remedial work may be recommended such as deep cultivation of the soil around the house prior to installing the sod or gardens, either through the use of a heavy-duty rototiller or in severe cases

by employing a trencher and cutting slits into the subsoil: the depth dependent on the level of compaction. In minor cases of compaction, the freeze/thaw cycle over the winter may allow the soil to redevelop pore space through natural soil aggregation.

Soil is the most important sustaining element of the garden, its layers of topsoil are home to most of the feeder roots of plants while the underlying layers of subsoil anchor the long searching roots that quench the thirst of our plants during those difficult or neglectful times of late summer, autumn and winter.



Over many years the soil will rebalance itself however preventative actions at the construction stage can spare the cost and aggravation of lost or poorly performing plants as you begin to develop your landscape.

Michael Pascoe NDP, ODH., CLT., MSc

Originally published in The London Free Press

