Success of plants directly related to soil

Gardening takes several elements working together to ensure success. While proper care, irrigation and light are important, don’t forget about the basics – soil. Good soil is vital to a prosperous garden.

People often think of soil as, well, just dirt. But did you know soils are alive? They’re filled with plant roots, bugs, earthworms, bacteria and fungi. They’re basically a whole ecosystem underground.

Ideally, soil is composed of half solids, including minerals and organic matter, along with pore space, which is filled with air or water. A lot of the soil found in Oklahoma is compacted red clay soil. Hard, compacted soil like this has lost pore space due to compression. Plant roots need oxygen, water and space to grow, and compacted soils don’t allow for this. Healthy soils provide adequate water and nutrients to plants and protect against losses due to runoff and erosion.

Gardeners who are dealing with clay and compacted soils should incorporate organic matter into the soil. Organic matter is decomposed plants that holds nutrients and water, loosens the soil and feeds the life in the soil.

For those who have already planted a fall garden but are still dealing with less-than-desirable soil, start adding organic material once the last of the fresh produce is picked later this year. You might even want to start a compost pile or bin to create rich, organic material that can be used next spring. It won’t be long till those fall leaves hit the ground and they are good for the compost bin, too. Also, toss in any organic material you may remove from the garden following the last fall harvest.

Another tip to help with compacted soil is to use a ground cover. Having plants on the soil surface prevents erosion, soil crusting and compaction. It also helps reduce pesky weeds.

It’s important to know what is beneath the soil, especially if you live in a newer neighborhood. Soil is often changed during construction. The site is graded, filled, compacted and possibly contaminated. It’s always a good idea to have a soil test done through the local Oklahoma State University Extension county office. Once gardeners know what type of soil they’re dealing with, plan and plant accordingly.