Over the Garden Fence

(Happy New Earth)

By Brian David (U.C. Master Gardener, Mariposa)

This new year welcomes us into its vibrancy. Air, water; sand, clay and silt pulse with wiggling earth worms, dancing bacteria and exercising fungi. From the soil's fertile womb our earth births seeds into plants and covers her modest bare ground with carpets green and brown.

Three fourths of all plant roots interact in mutually beneficial relationships with soil fungi. One-quarter teaspoon of precious soil can house up to four billion bacteria, one million fungi, and three hundred thousand algae. Earth worms aerate around the root zone and convert organic materials to humus releasing nutrients to micro-organisms and plant roots.

*L*ike space is an essential component in music and art creating meaningful expressions of sight and sound. Soil components require space between their parts to create lush vegetation. Space shares a 50/50 ratio with soil. The space between soil particles fills with air or water.

Gardeners and growers broadcasting cover crop seeds like alfalfa, clover, vetch, bell beans and peas provide good cool weather cover crops that increase soil fertility.

Covering bare soil with organic mulch helps preserve and protect soil health. For soils not overlaid with cover crops try mixing in vermiculite or perlite to

improve soil arability water holding capacity. Good compost, (comprised of equal parts of decayed green and brown vegetation), will boost soil vitality. Power shots of blood meal and bone meal can be added to your compost for a fortified mix.

Healthy soil promotes wholesome plants that can ward off pests and disease. If you add in fertilizer to your soil mix it in several weeks to a month or more so it will have time to integrate into the underground community of living organisms prior to putting seed in.

Soil minerals fall into three categories: sand, silt and clay; the list goes from the largest particles to the smallest. The predominate particle type determines the soil's character and name. Loam is a balanced combination of sand, clay, silt and decayed organic matter known as humus. To get a feel for your soil type, moisten a soil sample and rub it between your forefinger and thumb. Sandy soil will feel gritty. Silty soil feels silky and slippery. *C*lay soil feels sticky and is shapeable.

Sandy soils heat up fast and drain water quickly. Silty soils warm up slower but hold more water than sandy soils. Clay soils have a high water holding capacity and the smallest area for air. Each soil type has pros and cons for gardening. A good garden soil will be a loam mixture of all three soil types with plenty of humus.

May your new year be full of days running your hands through vibrant soils eager to embrace new seeds and seedlings. Happy new earth!

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