Tips to Improve Soil Health

Spring

- ❑ Increase Soil Organic Matter, Add Compost
- ❑ Keep Soil Covered, Apply Mulch

Summer

- ❑ Practice Judicious Water Use, Drip Irrigation
- ❑ Avoid Synthetic Fertilizers & Chemicals

Get More Information

- ❑ Reduce Energy Use

Fall

- ❑ Maximize Living Roots, Plant Cover Crops
- ❑ Increase Plant Diversity

Winter

- ❑ Minimize Soil Disturbance, No Till
- ❑ Avoid Soil Compaction

UC Master Gardeners of Napa County

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources
UC Master Gardener Program

Soil Tips Sheet Talking Points

Carbon is Essential to Life

Carbon is Good, it's a primary component of **all known life on Earth**: in our bodies, plants, soils and oceans; but it has become out of balance in our ecosystems.

Earth's Carbon Sinks:

- Oceans store 93%
- Soils hold 75%
- Trees and plants contain 19%

Increase Soil Organic Matter

- Add compost throughout our gardens
- Even one application of compost persists in the soil to increase carbon levels.
- More organic matter in your soil attracts and feeds soil organisms doing much of the work for you.

Avoid Synthetics & Chemicals

- For every 1 targeted pest, you could be killing upwards of 120 or more beneficial soil organisms!
- Over 98% of sprayed insecticides and 95% of herbicides reach a destination other than their target.
- Research has shown crops grown organically have a higher nutritional quality and when consumed our gut health relationship is improved by the diversity of bacteria.

Maximize Living Roots

- Our soil IS alive with living organisms that need to be fed carbon and that carbon comes from living plants' roots through that miraculous process of photosynthesis.

- Every time we leave the soil bare, or we use chemicals and artificial fertilizers, we are losing the opportunity to use the sun's energy to build and develop our soil organism community and pull carbon into the soil through living roots.

No Till

- Double-digging or rototilling was once considered the hallmark of a dedicated home gardener.
- We now know that all those practices are like carpet-bombing a countryside or turning Godzilla loose in a city.
- They slash into the soil aggregate, **flattening the structures**, making it difficult for the normal processes of life to continue, and requiring a rebuilding of soil aggregate and microbial infrastructure **each time** the soil is disturbed.

Increase Plant Diversity

- Greater diversity above the ground yields greater diversity below the ground.

Practice Judicious Water Use

- Bare dry soil resists absorbing water.
- Soil microbes need water to move and function.
- No life on the soil means no life in the soil.