



UC Master Gardeners of Napa County

Top Ten Regenerative ‘To Dos’ for the Home Gardener

1. **Stop using chemical pesticides and fertilizers.** They kill the soil organisms that allow the soil to do its job of keeping our planet healthy and fed. Instead, keep the ground covered with plants, mulches, weed-eat leaving roots in soil.
2. **Make and use compost** to increase SOM (Soil Organic Matter)
3. **Keep the ground covered** with plants or mulches (leaves, straw, tree bark, chips, bean hulls, grass clippings, etc)
4. **Plant multiple cover crops** (Green Mulch) to protect, feed the soil and soil organisms with the roots and with green manure; increase fertility; retain moisture in the ground; prevent leaching of the soil minerals. (vetch, favas, daikon radish, rye grass, mustards, weeds)
5. **Practice companion planting/intercropping** to increase diversification of soil organisms, increase beneficial insects, bring pollinators, attract pesky insects away from crops. Weeds can even be an intercrop between rows!
6. **NO TILL** - Use soil friendly cultivation-minimize digging and let the plant roots, cover crops, and soil organisms do the work.
7. **Improve soil tilth** by aerating soil, no walking on soil, increase Soil Organic Matter (SOM), give adequate water, add decomposing organic matter, plant perennials and a diversity of plants to create diversity of organisms underground.
8. **Rotate crops** to avoid depleting soil of nutrients; utilize different layers in the soil by rotating plants that have roots in different root zones; avoid disease by repeated plantings of the same crop in the same place.
9. **Respectful water use** by effectively wisely managing it: swales, barrels, drip irrigation, plant to minimize erosion, plant trees, mulch, plant wind blocks. Water is a precious, non-renewable resource.
10. **Sequester Carbon in the soil** by doing all of the above.

REFERENCES:

-David R. Montgomery and Anne Bikle *'The Hidden half of Nature'* W. W. Norton & Company; 1 edition (November 15, 2016) ISBN-13: 978-0393353372

-UC IPM website <http://ipm.ucanr.edu/>

-Kiss the Ground <https://kisstheground.com/>

-Natural Resources Conservation Service USDA *Healthy soils are: Covered all the time*
<https://www.google.com/url?sa=t&source=web&rct=j&url=https://nrcspad.sc.egov.usda.gov/DistributionCenter/pdf.aspx%3FproductID%3D1026&ved=2ahUKewiM6aTO1eHnAhVCljQIHT1EAI8QFjABegQIBhAH&usg=AOvVaw1nGDngEDDQVNzAeyvDchnE>

-USDA National Resource Conservation Service Pennsylvania
<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/pa/soils/health/?cid=nrcseprd1200408>

-UC Davis-*Tillage or no-tillage: Impact on mycorrhizae*
<https://escholarship.org/uc/item/6bv5h1ny>

-Arizona State Univ-*Soil erosion study*
<https://asunow.asu.edu/content/rain-rain-bombs-away-study-makes-impact-soil-erosion-thinking>

-Iowa State Univ.-*Heavy rain, Soil erosion & Nutrient loss*
<https://crops.extension.iastate.edu/cropnews/2008/06/heavy-rain-soil-erosion-and-nutrient-losses>
ScienceDirect Publication-*Runoff and Soil erosion under rainfall*
<https://www.sciencedirect.com/science/article/abs/pii/S0341816201001485>

-Regeneration international.crg <https://regenerationinternational.org/>

-George Tyler Miller (1 January 2004). *Sustaining the Earth: An Integrated Approach*. Thomson/Brooks/Cole. pp. 211–216.
ISBN 978-0-534-40088-0.

Lareen, A., Burton, F. & Schäfer, P. Plant root-microbe communication in shaping root microbiomes. *Plant Mol Biol* 90, 575–587 (2016). <https://doi.org/10.1007/s11103-015-0417-8>

UC Master Gardeners of Napa County are available to answer your home gardening questions. We encourage you to bring your questions or plant samples!

Drop-in:

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