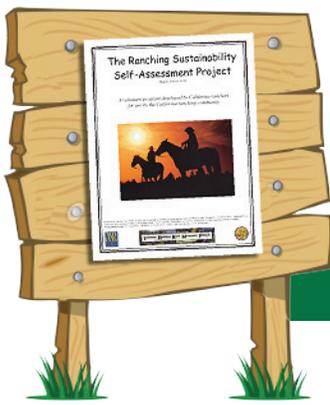


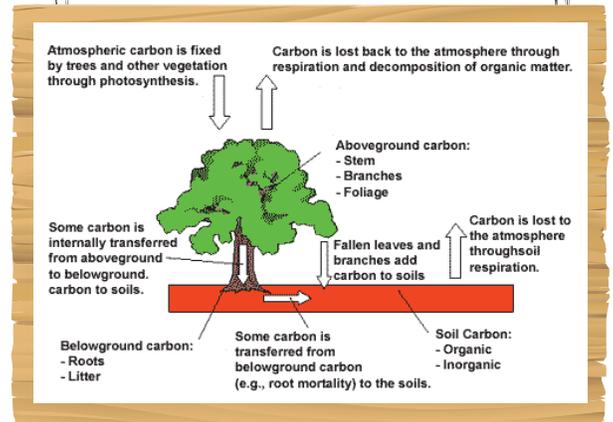
Carbon Sequestration

RANCHING SUSTAINABILITY ANALYSIS QUICK TIPS

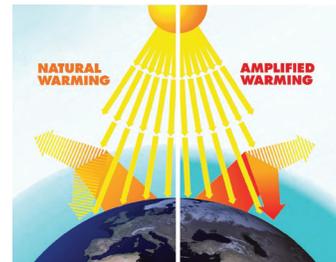


What is it?

Carbon sequestration is the long-term storage of carbon in soils and living plants, which absorb carbon dioxide (CO₂) from the air and store the carbon in their roots, stems, and leaves. Soil microbes and dead or dying plant material add organic carbon to the soil.



Why is it important?



CO₂ is the primary greenhouse gas contributing to global climate change. Sequestering carbon from the air can partially offset anthropogenic

emissions of greenhouse gases, including methane (CH₄) and nitrous oxide (N₂O) from livestock production, and help slow climate change.

What can I do?

- Manage grazing for diverse range plants, especially perennials
- Distribute livestock for even grazing pressure and manure deposition
- Improve herd grazing efficiency by culling underperforming animals
- Sow native perennials or other productive plant species
- Add organic matter and build soil
- Optimize ground cover and minimize erosion
- Conserve trees, shrubs, and woodlands
- Plant hedgerows for habitat or agroforestry
- Restore riparian areas

A Perspective from the UK Soil Association

Grassfed livestock have a critical role to play in minimizing carbon emissions from farming and this must be set against the issue of methane emissions from cattle and sheep. Grasslands for grazing livestock, whether permanent pasture or temporary grass on mixed farms (which account for most UK organic cultivated land), represent vitally important soil carbon stores.

Gundula Azeez In *Soil Carbon and Organic Farming*

www.soilassociation.org/LinkClick.aspx?fileticket=SSnOCMaqrXs%3d&tabid=574



Where can I get more information?

Agroforestry: Working Trees for Sequestering Carbon on Agricultural Lands

www.srs.fs.usda.gov/pubs/ja/ja_schoeneberger002.pdf

California Riparian Habitat Restoration Handbook, California Riparian Habitat Joint Venture

www.riverpartners.org/reports-and-articles/Restoration_Handbook_FINAL.pdf

Grazing Management for Healthy Soils
managingwholes.com/grazing-soils.htm

Hedgerows for California Agriculture: A Resource Guide, Community Alliance With Family Farmers

www.caff.org/hedgerow.pdf
<http://www.caff.org/programs/farmscaping/Hedgerow.pdf>

Landowner's Guide to Native Grass Enhancement and Restoration, Coastal California, UC-Berkeley Hastings Natural History Reserve
www.hastingsreserve.org/NativeGrass/GrassManageIntro.html

Objective Development of Grazing Strategies, Range Beef Cow Symposium, University of Nebraska-Lincoln
digitalcommons.unl.edu/rangebeefcowsymp/85

Rangelands, Soils, and Carbon, UC Agriculture and Natural Resources

groups.ucanr.org/RangeSoilsCarbon/index.cfm

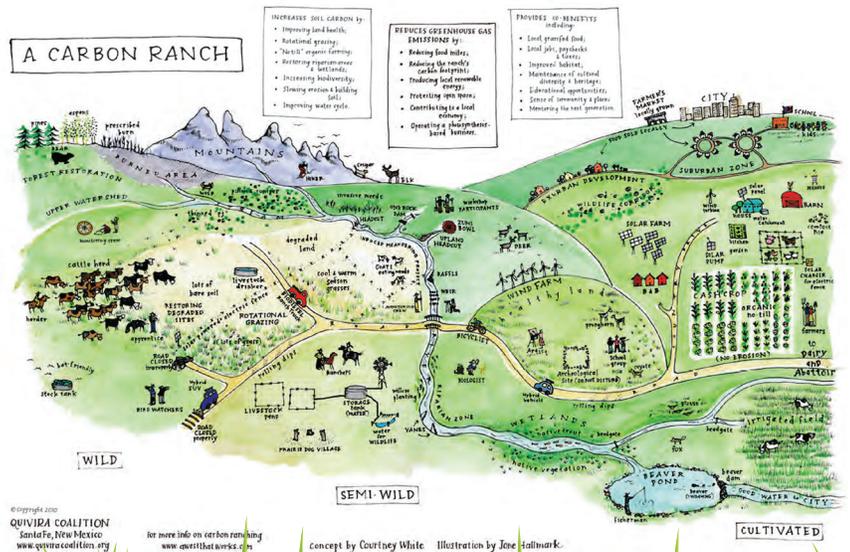
Restoring Perennial Grasslands

managingwholes.com/grass-restore.htm

Climate change is a pressing issue confronting humanity. It is also a tremendous opportunity. Right now, the only possibility of large-scale removal of greenhouse gases from the atmosphere is through plant photosynthesis and other land-based carbon sequestration activities. Strategies include: enriching soil carbon, farming with perennials, employing climate-friendly livestock practices, conserving natural habitat, restoring degraded watersheds and rangelands, and producing local food. Over the past decade, many of these strategies have been demonstrated to be both practical and profitable. A carbon ranch bundles them into an economic whole with the aim of creating climate-friendly landscapes that are both healthy ecologically and the source of healthy food.

Courtney White, Quivira Coalition
In The Carbon Ranch: Fighting Climate Change through Food and Stewardship

www.awestthatworks.com/carbonranch.html



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