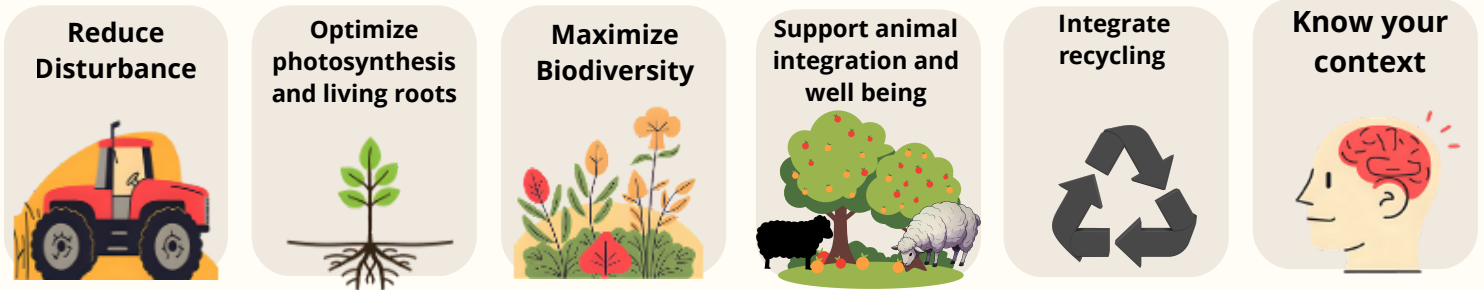


Ecological Principles Guiding Regenerative Agriculture

Regenerative agriculture is a holistic land management approach that aims to improve soil health, biodiversity, water conservation, and overall ecosystem resilience, while also supporting agronomic and economic goals. This integrated approach to farming is rooted in principles of ecology and soil health. Principles govern land management and practice considerations: Reduce disturbance, optimize photosynthesis and maintain soil coverage, maximize biodiversity, support animal integration, integrate recycling, and know your context.



Minimize Soil Disturbance: Practices like no-till or reduced-till farming help maintain soil structure, reduce erosion, and preserve the soil's natural microbial communities.

Keep the Soil Covered: Maintaining a cover of vegetation or crop residue on the soil surface helps protect it from erosion, conserves moisture, and protects the soil biology from extreme temperatures.

Maintain Living Roots in the Soil: Having living roots in the soil year-round promotes soil life, stabilizes the soil, and supports nutrient cycling and carbon cycling.

Maximize Diversity: Planting a variety of crops, cover crops, and companion plants fosters biodiversity and strengthens the resilience of the farm ecosystem. Diversity can be spatial or temporal, includes succession habitat, species diversity, as well as soil flora and fauna diversity

Support Animal Integration: Animals hold an important ecological niche in our environments, from beneficial insects and predators to the diversity of microbial populations in the soil. Well-managed grazing systems and the integration of livestock can improve soil health, increase carbon sequestration, and enhance biodiversity.

Integrate Recycling: Recycling organic amendments and other farm waste products aims to minimize waste, reduce dependence on external inputs, and increase resource-use efficiency by mimicking natural ecosystems.

Know Your Context: This principle emphasizes the importance of site-specific approaches, recognizing that each farm or region has unique characteristics and needs.