

Diverse

- + Multiple crops within rotations
- + Intercropping, relay cropping, living mulches
- + Grass-legume pastures

As few as two **wisely selected crop species** can provide benefits like improving animal diets, increasing forage yields, and buffering seasonal forage availability.

Perennial

- + Plants that live for more than two years
- + Multiple harvests of the same crop over years
- + Living roots in the ground and continuous cover all year

Diverse Perennial Circular Systems for **Agricultural Resilience**

Diverse cropping systems that include perennial crops and forages help protect water resources year round and also prevent soil erosion, protect soil moisture, sequester carbon, help retain soil nutrients, reduce the need for fertilizer, and provide habitat for wildlife like beneficial insects. Diverse perennial circular systems can be profitable while reducing risks due to weather extremes and market instability.

Perennial crops root systems help reduce erosion, protect soil moisture, sequester carbon, and reduce the need for fertilizer.

Forages

- + Plants grown to be eaten by livestock
- + Pasture, range, hay, silage, & crop residue
- + Integration of crop and livestock systems

Cycling nutrients within agroecosystems reduces water and air pollution, improves soil quality, and reduces production costs.

Circular

- + Cycling resources within agroecosystems
- + Nutrients are not lost as waste
- + Legumes fix nitrogen in the soil

