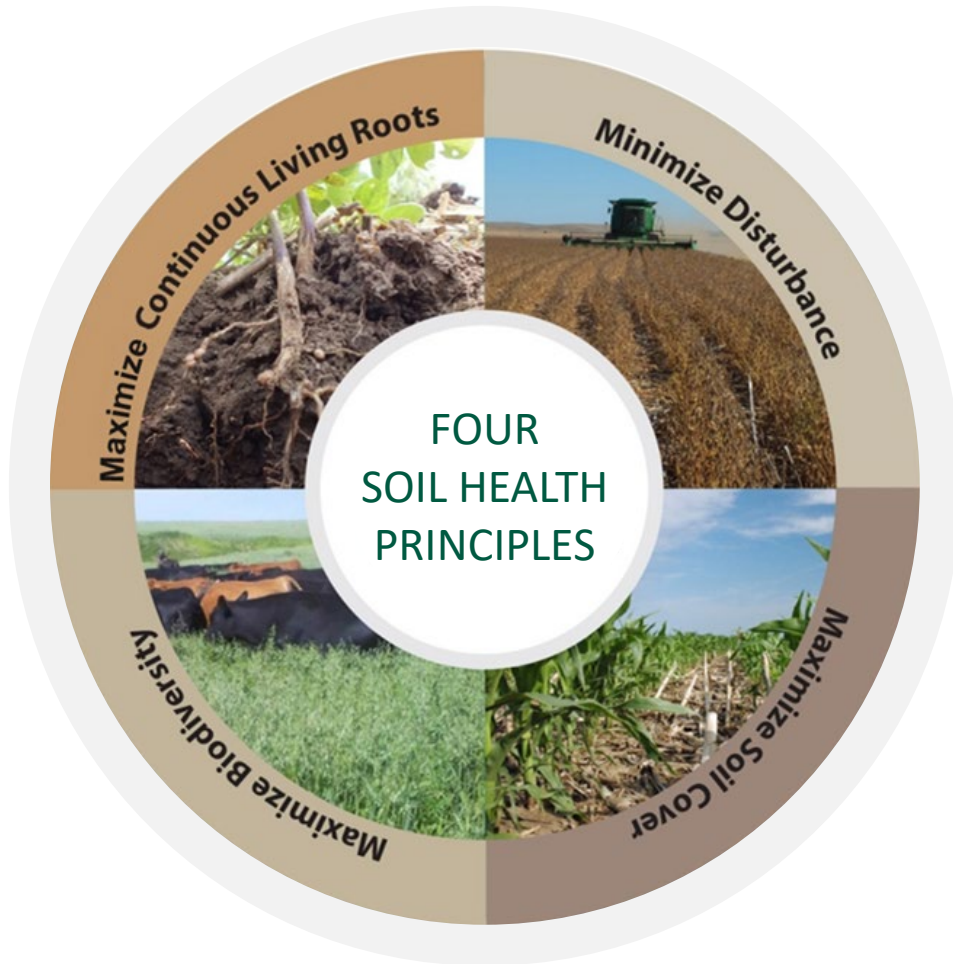
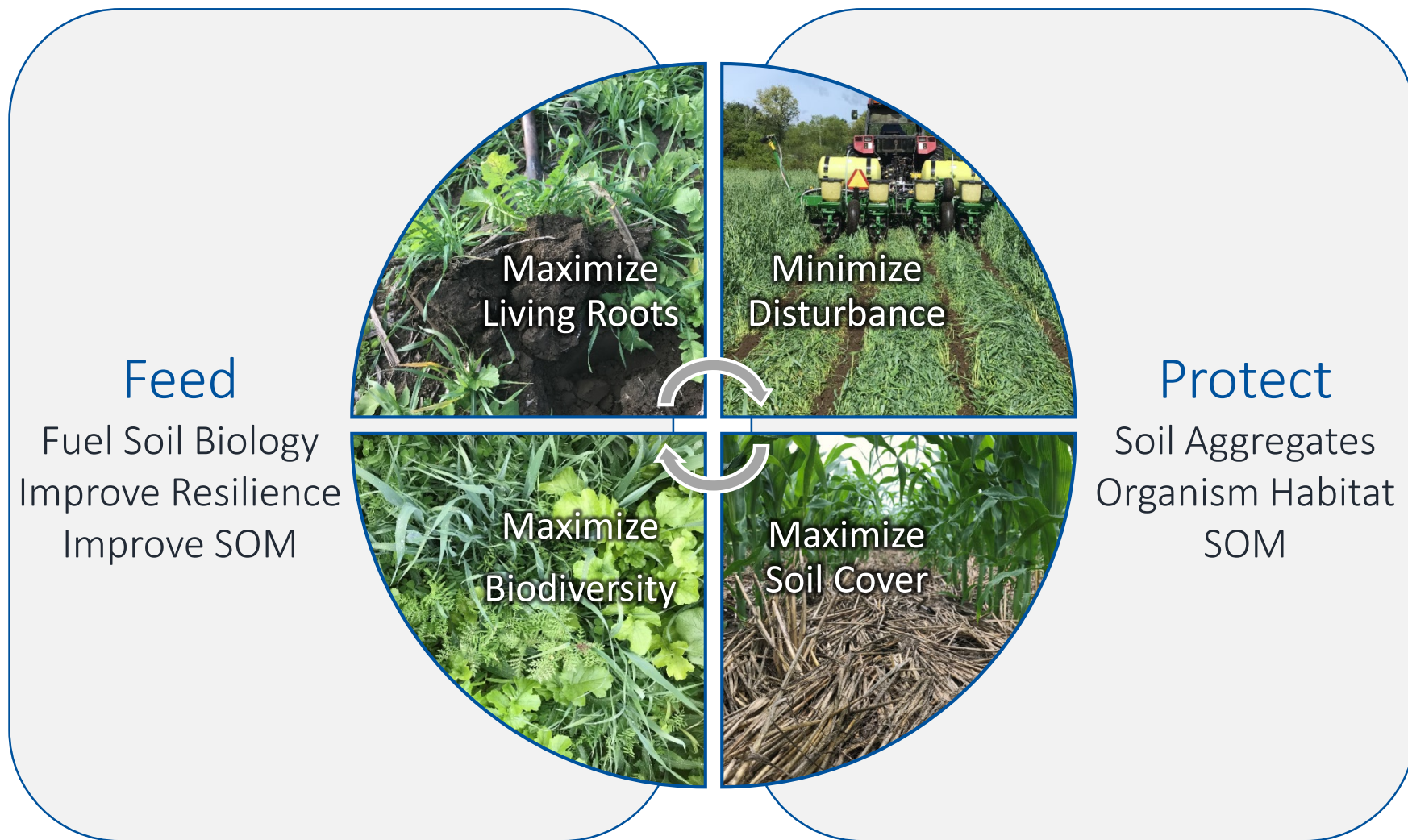


The 4 Principles that Conserve the Soil Ecosystem



1. Minimize Disturbance
2. Maximize Living Cover
3. Maximize Biodiversity
4. Maximize Continuous Living Roots

Soil Health Principles to Support High Functioning Soils



How Soil Health Principles Support Soil function – PROTECT



- Maintain stable aggregates
- Manage erosion
- Buffer temperature
- Reduce evaporation
- Maintain soil organic matter

How Soil Health Principles Support Soil Function – FEED



- Stimulate below-ground diversity
- Increase SOM
- Improve nutrient cycling
- Enhance plant growth
- Break pest cycles
- Increase predator & pollinator populations

Minimize Disturbance

Disturbance can:

- ↓Habitat for soil organisms
- Destroy soil structure

What Types of Disturbance are Common in Agriculture? _____

- Physical (excess tillage)
- Chemical (over use of fertilizer, pesticides)
- Biological (overgrazing, fallow systems)

Dr. Don Reicosky



Why Maximize Soil Cover?

- ↓ Erosion
- ↑ Infiltration
- ↓ Evaporation
- Moderate Soil Temp
- Habitat for Soil Organisms ↑
- Food for Biota ↑
- Mitigate Compaction from Machines & Livestock



How Do We Maximize Living Roots?


- Grow crops in the off-season
- Avoid fallow & ↓ re-cropping interval
- ↑ time in perennial crops
- Manage rotations & forage height



How Do We Maximize Biodiversity?

- Grow diverse cover crops & legumes
- ↑ diversity of crop rotations
- Integrate livestock & graze cover crops
- ↑ time in diverse perennial crops





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