

What is a Sustainable Agriculture?

It is a system of agriculture that will last—
that maintains its productivity over the long run.

72 WAYS TO MAKE AGRICULTURE SUSTAINABLE

Every farm can make a difference by adopting
common sense, sustainable farming practices.

How many boxes can you check?

Conserve and Create Healthy Soil

- Stop soil erosion by terracing, strip cropping, repairing gullies
- Add organic matter to soil (with "green manure" cover crops, compost, manures, crop residues, organic fertilizers)
- Conservation tillage
- Plant wind breaks
- Rotate cash crops with hay, pasture, or cover crops



- Store litter piles out of the rain and snow
- Raise pastured or free-range poultry
- Raise hogs in hoop houses or free-range

Farm chemicals and trash:

- Look for alternatives to chemicals
- Use the least amount necessary
- Buy the least toxic chemical
- Recycle
- Dispose according to label instructions

Conserve Water and Protect Its Quality

- Stop soil erosion in field and pasture
- Reduce use of chemicals
- Establish conservation buffer areas
- Grow crops adapted to rainfall received
- Use efficient irrigation methods

Manage Organic Wastes and Farm Chemicals so They Don't Pollute

Organic wastes:

- Test soil and applying manures and litters only when needed
- Compost dead birds and litters

Manage Pests with Minimal Environmental Impact

Weed Management

Mechanical Approaches

- Mowing
- Flaming
- Flooding
- Tillage
- Controlled burns

Cultural Approaches

- Crop Rotation



- Smother crops
- Cover crops
- Allelopathic plants
- Close spacing of plants

Biological Approaches

- Multispecies grazing
- Rotational grazing

Chemical Approaches

- Integrated Pest Management
- Use of narrow spectrum, least-toxic herbicides
- Properly calibrated sprayers
- Application methods that minimize amount used, drift, and farmer contact

Insect and Disease Management

- Introduce or enhance existing populations of natural predators, pathogens, sterile insects, and other biological control agents.
- Traps
- Maintain wild areas or areas planted with species attractive to beneficial insects
- Selective insecticides or botanical insecticides which are less toxic
- Trap crops
- Crop rotation (avoid monoculture)
- Intercropping, strip cropping
- Maintain healthy soil (prevents soil-based diseases)
- Keep plants from becoming stressed



Select Plants and Animals Adapted to the Environment

- Grow crops and crop varieties well-suited to Oklahoma's climate
- Match crops to the soil
- Experiment with older, open pollinated varieties that do well without chemical inputs
- Raise hardy breeds of livestock adapted to climate
- Raise livestock that gain well on grass and native forages



Encourage Biodiversity

(of domesticated animals, crops, wildlife and native plants, microbial and aquatic life)

- Diversify crops and livestock raised
- Leave habitat (field margins, unmowed strips, pond and stream borders, etc.) for wildlife
- Maintain the health of streams and ponds
- Provide wildlife corridors
- Rotate row crops with hay crops

Conserve Energy Resources

- Reduce number of tillage operations
- Cut use of chemicals and fertilizers
- Develop production methods that reduce horsepower needs
- Recycle used oil
- Use solar-powered fences and machines
- Use renewable, farm-produced fuels: ethanol, methanol, fuel oils from oil seed crops, methane from manures and crop wastes

Increase Profitability and Reduce Risk

- Diversify crops and livestock
- Substitute management for off-farm inputs
- Maximize the use of on-farm resources
- Work with, not against, natural cycles
- Keep machinery, equipment and building costs down
- Add value to crops and livestock
- Try direct marketing (subscription farming (CSA), farmers' markets, farm stores, mail order)

For More Information Contact:

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The Kerr Center is a private, non-profit 501 (c)(3) foundation established in 1985. The Center offers progressive leadership and educational programs to all those interested in making farming and ranching economically viable, environmentally friendly, and socially equitable over the long term.

72 Ways to Make Agriculture Sustainable: (a Kerr Center Fact Sheet)
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