

North American Envirothon

2014 Learning Objectives - Sustainable Agriculture/Locally Grown

Key topics

1. Understanding the three pillars of sustainable agriculture and the indicators of sustainable farming.
2. Understanding how ecosystems function and the services they provide. Good soil health is the foundation of a healthy ecosystem.
3. How sustainable farming practices enhance and protect soil health, water quality and water quantity, biodiversity, manage insect pests, disease, and weeds.
4. The importance of local and regional foods systems to sustainable agriculture.

Learning Objectives

1. Define sustainable agriculture. Understand the importance of moving toward these farming systems to conserve natural resources, mitigate climate change, reduce erosion and protect water quality and quantity and promote pollination.
2. Basic knowledge of soil science including its physical, chemical and biological processes and its vital role in sustainable farming.
3. Comprehension of farming practices that build soil organic matter such as composting, crop rotations, cover crops, conservation tillage, and management intensive grazing systems.
4. Understand irrigation best management practices that reduce water use such as conservation tillage, cover crops, plant selection, precision agriculture, water re-use, and sub-surface drip irrigation.
5. Knowledge of the role pollinators play in farming and ways to attract them.
6. Understand integrated pest management and biological pest control techniques used to prevent insect pest, disease, and weed problems.
7. Define organic agriculture as an example of a sustainable agriculture system. Give specifics on why it is sustainable and how it might not be. Describe the growth in organic production since the late 1990's.
8. Enumerate ways farmers can reduce their reliance on fossil fuels by increasing farm efficiency and using alternative fuels.

9. Describe the economic, social, and environmental benefits of sustainable agriculture to local communities.

10. Learn the ways farmers market their food locally and regionally. Understand the meaning of CSAs, food hubs, farmers markets and farm to school.

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