MODULE

INNOVATIVE SUSTAINABILITY COMPETENCE

Unit 2 | Activity 1 **Farm Walk and Environmental Audit**

60-120min

- Pen and blank paper

DESCRIPTION

This activity will help you understand the environmental dimension of sustainable agriculture and identify opportunities for improvement on your own farm.

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THE ACTIVITY

1. Gather a group of farmers or friends who understand farming and organize a farm walk on your property.
2. Divide the group into teams of 2-3 people.
3. Provide each team with an environmental audit checklist
4. Teams should walk through your farm, observing and noting information on the checklist, which should include items such as soil health, water management, biodiversity, and energy use.
5. After the farm walk, teams should meet to discuss their observations and identify potential opportunities for improvement on your farm.
6. The group should then come together for a debriefing and discuss the findings of the audit, and share ideas and strategies for addressing any identified areas for improvement.

Benefits: This activity will help you understand the environmental dimension of sustainable agriculture and how it relates to your own farm. It will also provide you with an opportunity to identify opportunities for improvement and to learn from the experiences and strategies of other farmers. By conducting regular farm walks and environmental audits, you will be able to track your progress and adjust as needed to improve the sustainability of your operations over time.

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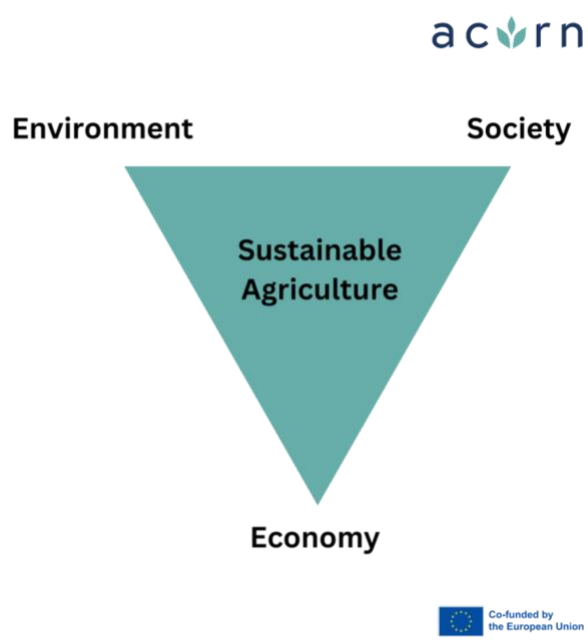
THE THEORY

ENVIRONMENTAL DIMENSION OF SUSTAINABLE AGRICULTURE



One dimension of sustainable agriculture is the **environmental impact of farming practices**. This includes the use of renewable and non-toxic inputs, such as compost, mulch, and natural pest controls, rather than synthetic fertilizers, pesticides, and herbicides. It also involves conserving natural resources, such as water, soil, and biodiversity, and minimizing waste and pollution.

The environmental dimension of sustainable agriculture refers to the impact of farming practices on the natural environment, including soil health, water quality, and biodiversity.

Soil health is a critical aspect of the environmental dimension of sustainable agriculture. Soil provides the foundation for plant growth and supports a diverse community of microorganisms that help to maintain soil fertility. Sustainable farming practices that support soil health include cover cropping, crop rotation, and reduced tillage. These practices help to prevent erosion, maintain soil structure, and increase the organic matter content of the soil.

Water management is another important aspect of the environmental dimension of sustainable agriculture. Irrigation is often necessary to support crop growth, especially in dry regions. However, water is a limited resource, and it is important to use it efficiently and responsibly. Sustainable agriculture practices that can help to conserve water include using drip irrigation systems, mulching to reduce evaporation, and collecting and storing rainwater. It is also important to minimise irrigation runoff, which can lead to water pollution and depletion of water resources.

Agriculture can also have impacts on **biodiversity**. The use of pesticides and other chemicals can harm non-target species, such as pollinators and beneficial insects, which can have cascading impacts on the broader ecosystem. Monoculture, which is the practice of growing a single crop species, can also lead to declines in biodiversity, as it reduces the variety of plant and animal species present.

Climate change is another major environmental impact of agriculture. The sector is a significant contributor to greenhouse gas emissions, primarily through the production of methane and nitrous oxide from livestock and the use of synthetic fertilisers.

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