

## Week 6: What is sustainable farming? Closing the Loop at Tuba Farm

At Tuba Farm we believe “Sustainable” farming is an agricultural practice that aims to meet the needs of the present without compromising the ability of future generations to meet their own needs. It emphasizes environmental health, economic profitability, and social and economic equity. Key principles include:

1. **Resource Efficiency:** Using water, energy, and other resources more efficiently to reduce waste and environmental impact.
2. **Soil Health:** Maintaining and improving soil quality through crop rotation, cover cropping, reduced tillage, and organic amendments.
3. **Biodiversity:** Encouraging a diverse range of plant and animal species to create a more resilient ecosystem.
4. **Reduced Chemical Use:** Minimizing the use of synthetic fertilizers, pesticides, and herbicides to reduce pollution and health risks.
5. **Animal Welfare:** Ensuring humane treatment of livestock with adequate space, proper nutrition, and veterinary care.
6. **Economic Viability:** Providing farmers with a stable income and ensuring fair labor practices.

This program aims to teach you how to close the loop as part of sustainable farming.

**Closing the Loop** in sustainable farming refers to creating a closed-loop system where waste products are recycled back into the farming process, minimizing waste and making the system more self-sustaining. This can include:

- **Composting:** Converting organic waste (e.g., crop residues, manure) into nutrient-rich compost to enhance soil fertility. At Tuba

Farm you will learn how to compost using worms and chopped green waste.

- **Nutrient Recycling:** Using crop residues and animal manure to return nutrients to the soil. At Tuba farm you are learning to make fertilizers from scratch with water products from the farm.
- **Water Management:** Capturing and reusing rainwater or greywater for irrigation. At Tuba farm you are learning to install and maintain drip irrigation and ollas.
- **Integrated Pest Management (IPM):** Combining biological, physical, and chemical tools to manage pests in an environmentally friendly way. At Tuba you are learning to use organic methods to help control pests, including using nematodes, bacteria and fungus, insecticidal soap , etc.
- **Agroforestry:** Integrating trees and shrubs into farming systems to provide shade, improve soil quality, and offer additional products like fruits and nuts. At Tuba you are helping us plant and care for the Food Forest in addition to adding fruiting trees and plants to the market garden.

By closing the loop, sustainable farming systems reduce dependence on external inputs, enhance resource use efficiency, and create a more resilient agricultural ecosystem.

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