

Caring for The Land

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How to take care of the land so it can keep growing crops (conservation).

2- Crop Rotation:

Changing the crops you plant to keep the soil healthy.

3- Pests and Weeds:

Basic ways to control pests and weeds without harming the environment.



01

Healthy Farming (Soil Conservation)

How to take care of the land so it can keep growing crops

A. Add Organic Matter (Composting & Green Manure)

Adding **organic matter** improves soil structure, fertility, and moisture retention.

-Use compost: Decomposed plant and animal waste enriches the soil.

-Apply manure: Cow, chicken, or goat manure adds nitrogen and phosphorus.

-Grow cover crops (green manure): Leguminous plants fix nitrogen into the soil.





B. Reduced or No-Till Farming

- **Reduced tillage:** Soil is disturbed **less frequently and less deeply** compared to traditional plowing.
- **No-till:** **No plowing at all** — seeds are planted **directly into the residue** of previous crops without turning the soil.

A close-up photograph of a person's open palm holding a cluster of small, golden-brown wheat seeds. The hand is positioned over a dark, rich, and moist soil. In the background, some green plant leaves are visible but out of focus. A dark green circular graphic with a white outline is partially visible at the top center of the frame.

02

Crop Rotation

Crop rotation is the practice of growing different types of crops in the same area in a planned sequence across seasons or years.

Instead of planting the same crop repeatedly (monoculture), the farmer **rotates crops** to improve soil health and reduce pests.



How It's Done

- Rotate crops **by family** (plant types), **nutrient needs**, and **root depth**.
- Typical sequence:
 - ✓ **Year 1:** Heavy feeder (e.g., **corn**)
 - ✓ **Year 2:** Nitrogen fixer (e.g., **soybean**)
 - ✓ **Year 3:** Light feeder (e.g., **wheat**)
 - ✓ **Year 4:** Cover crop (e.g., **clover**)





- ✓ **Year 1:** Heavy nitrogen users (e.g., Leafy greens (lettuce, spinach))
- ✓ **Year 2:** Need moderate nutrients (e.g., tomatoes, peppers)
- ✓ **Year 3:** Lower nutrient needs (e.g., Root crops (carrots, beets))
- ✓ **Year 4:** Fix nitrogen back into soil (e.g., Legumes (peas, beans))





Why It Matters



03

Eco-Friendly Pest & Weed Control

I. Biological Control



Using **natural predators** or **parasites** to control pests.

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2. Companion Planting

It is the practice of growing certain plants together to **boost growth, deter pests, and improve yields**—all without chemicals.



A close-up photograph of a person's hand, with light purple nail polish, holding a small pile of light brown, oval-shaped seeds. The hand is positioned over a black seed tray filled with dark brown soil. Several seeds are shown falling from the hand into the soil. In the bottom left corner, there is a decorative green semi-circle with a white outline.

EXAMPLES

- **Basil** planted near peppers repels aphids and mosquitoes.
- **Carrots** planted near Rosmary masks scent from carrots

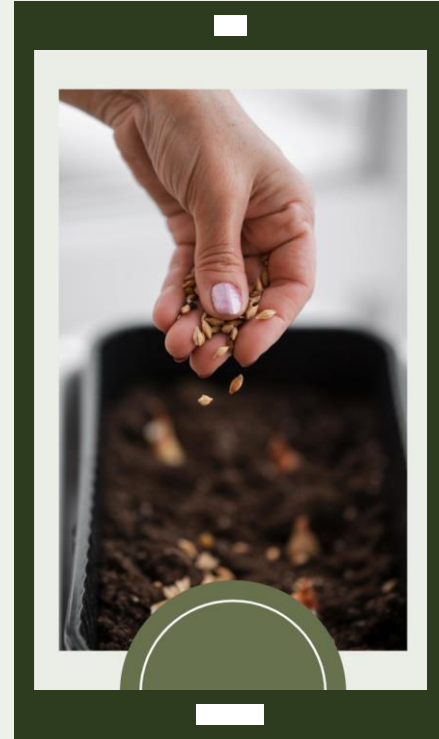


EXAMPLES

- **Marigolds** planted near tomatoes deter nematodes and whiteflies.

3. Mechanical and Physical Methods

Physically removing pests or blocking them from plants.





A-Handpicking

Manually removing pests from plants.

- **Check plants daily** (especially undersides of leaves).
- Drop pests into **soapy water** or crush them.



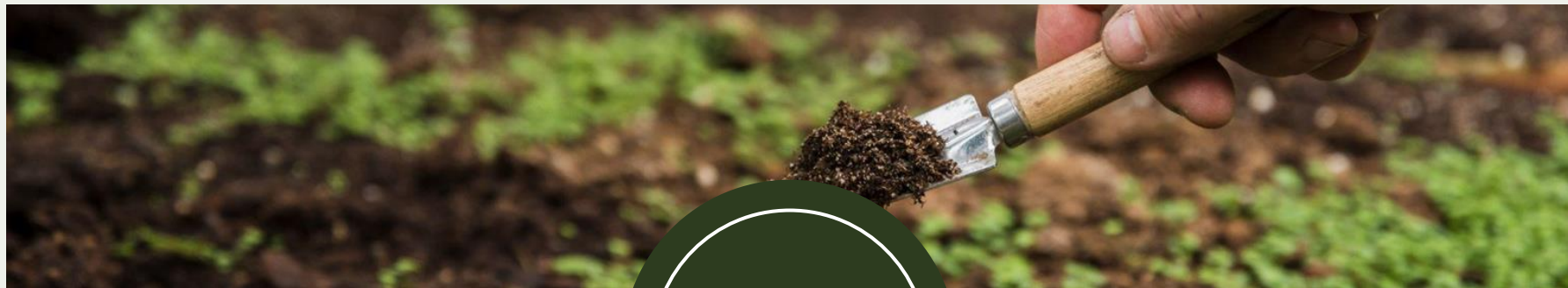
B- Sticky traps

Yellow cards coated with glue to trap Whiteflies, aphids



C- Barriers

Using row covers (light fabric) to keep insects away from crops.



Handpicking



Removing **tomato hornworms** by hand.



Picking **Colorado potato beetles** off potato plants.



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Sticky traps



Row covers



D- Organic Sprays

Using natural substances safe for humans and soil life.



Garlic or chili sprays to repel many insect pests.



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Using natural substances safe for humans and soil life.



Soap and water solution for soft-bodied insects like aphids.

