



Cultivation of Tomato under Natural Farming Principles

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Natural farming, rooted in harmony with nature, avoids synthetic chemicals and focuses on sustainable, eco-friendly practices. Tomatoes, a widely consumed crop, can thrive under natural farming conditions when cultivated using regenerative techniques that enhance soil health, promote biodiversity, and ensure quality produce. Below is a step-by-step guide to growing tomatoes exclusively under natural farming systems.

1. Seed Selection and Treatment

➤ Seed Selection:

- ✓ Select for indigenous or heirloom tomato varieties suited to the local climate and soil.
- ✓ Use seeds saved from previous organic or natural farming cycles for better adaptation.

➤ Seed Treatment:

- ✓ Soak seeds in Beejamrit, a natural seed treatment made with cow dung, cow urine, lime, and soil, to protect against diseases and enhance germination.

2. Soil Preparation

- **Healthy Soil:** Ensure soil is rich in organic matter and teeming with beneficial microorganisms.

- **Natural Soil Amendments:**

- ✓ Apply Jeevamrit (a mixture of cow dung, cow urine, jaggery, pulse flour, and water) to enrich soil fertility and activate microbial activity.
- ✓ Use green manures or plant cover crops like legumes before planting to fix nitrogen naturally.
- Avoid tillage as much as possible to maintain the natural soil structure and microbial ecosystem.

3. Planting

- **Nursery Preparation:**

- ✓ Prepare nursery beds with a mixture of compost and soil.
- ✓ Mulch the nursery beds with dried leaves or straw to retain moisture.

- **Transplanting:**

- ✓ Transplant seedlings 4-6 weeks after germination, spacing them adequately to prevent overcrowding.
- ✓ Follow natural planting spacing: 2-3 feet between plants and 3-4 feet between rows.

4. Water Management

- **Efficient Irrigation:** Use rainwater or harvested water wherever possible, ensuring minimal wastage.

- **Mulching:** Apply organic mulch (e.g., straw, dried grass) around plants to



reduce evaporation and retain soil moisture.

- Water only as needed, and avoid waterlogging to prevent root diseases.

5. Weed Management

- Cover the soil with natural mulch like dried leaves, straw, or grass to suppress weed growth and improve soil fertility.
- Remove weeds manually to maintain a clean field and minimize competition for nutrients.

6. Nutrient Management

- Rely exclusively on natural fertilizers and soil amendments:
 - ✓ Jeevamrit: Apply every 15-20 days for a continuous supply of nutrients and to maintain microbial health.
 - ✓ Mulching and Composting: Mulched plant material decomposes into the soil, acting as a slow-release fertilizer.
 - ✓ Crop Rotation: Rotate tomatoes with nitrogen-fixing crops like beans or peas to maintain soil fertility naturally.

7. Pest and Disease Control

Natural farming encourages biodiversity, which inherently controls pests and diseases without synthetic pesticides.

➤ **Companion Planting:**

- ✓ Grow marigold, basil, or garlic near tomato plants to repel pests like aphids and nematodes.

➤ **Natural Pest Repellents:**

- ✓ Neem Oil Spray: Effective against aphids and whiteflies.
- ✓ Fermented Buttermilk Spray: Protects plants from fungal diseases.
- ✓ Chili-Garlic Extract: A deterrent for chewing pests.

➤ **Encourage Beneficial Insects:**

- ✓ Plant flowers like sunflowers and coriander to attract pollinators and predatory insects like ladybugs and lacewings.

8. Supporting Plant Growth

- ✓ Use natural trellising materials like bamboo or wood stakes to support tomato plants and keep fruits off the ground, reducing the risk of rot and pest infestations.

9. Harvesting

- ✓ Harvest tomatoes when they are firm and have fully ripened on the vine for optimal flavor and nutrition.
- ✓ Avoid using mechanical tools; handpicking minimizes damage to the fruits and plants.



BENEFITS OF NATURAL FARMING IN TOMATO CULTIVATION

1. **Soil Health:** Maintains and enhances soil fertility through organic inputs and microbial activity.
2. **Cost-Effective:** Eliminates dependency on synthetic fertilizers and pesticides, reducing costs.
3. **Nutrient-Rich Produce:** Tomatoes grown naturally have superior flavor, texture, and nutrient content.
4. **Environmental Sustainability:** Reduces environmental degradation and preserves biodiversity.
5. **Resilient Crops:** Strengthens plants' natural resistance to pests, diseases, and climate stress.

