

# ASSESS & IMPROVE YOUR SOIL TYPE

Checking the type of soil in your garden is a crucial step in understanding its characteristics and determining how well it can support plant growth. Here's a step-by-step guide on how to check the type of soil in your garden:

## **Materials**

**Mason Jar or Glass Jar with Lid:** A clear jar with a tight-fitting lid will work best.

**Water:** Distilled or rainwater is preferable, but tap water will work if distilled or rainwater is not available.

**Soil Sample:** Collect soil samples from different areas of your garden, especially where you plan to grow plants.

## **Steps**

- Use a trowel or shovel to collect soil samples from various spots in your garden. Take samples from the surface down to about 6 inches deep.
- Remove any rocks, roots, or large pieces of organic matter from the soil samples. You want to work with the soil itself.
- Break up clumps of soil to ensure the sample is homogenous and doesn't have large air pockets.

- Fill the jar about one-third to one-half full with your soil sample.
- Add water to the jar, leaving some space at the top. Use enough water to fully saturate the soil in the jar.
- Put the lid on the jar tightly and shake it vigorously for several minutes to ensure the soil is well mixed with water.
- Allow the jar to sit undisturbed for at least 24 hours. This allows the soil particles to settle, separating into distinct layers.

### **Observe Layers**

After 24 hours, you should see different layers in the jar. The larger particles (sand) will settle at the bottom, followed by silt, and then clay at the top.

Sand: The largest particles, usually found at the bottom.

Silt: Intermediate-sized particles, forming a layer above the sand.

Clay: The smallest particles, forming a layer at the top.

### **Measure the layers**

Measure the thickness of each layer. This will give you a rough estimate of the percentage of each soil type in your sample.

### **Soil Type Identification:**

Sandy Soil: If the sand layer is the thickest, you have sandy soil.

Loamy Soil: If there are roughly equal layers of sand, silt, and clay, you have loamy soil (considered ideal for gardening).

Clayey Soil: If the clay layer is the thickest, you have clayey soil.

## **Improving Sandy Soil:**

### 1. Organic Matter Addition

Incorporate organic matter such as well-rotted compost or aged manure into sandy soil. This helps improve water retention and nutrient levels.

### 2. Mulching

Apply a layer of organic mulch, like straw or wood chips, to the soil surface. Mulching helps reduce water evaporation, control temperature, and prevent erosion.

### 3. Use Drought-Tolerant Plants

Choose plants adapted to sandy soil conditions. Many native plants and succulents thrive in well-draining sandy soils.

## **Improving Clay Soil:**

### 1. Organic Matter Incorporation

Work in organic amendments, such as compost or well-rotted manure, to enhance clay soil structure. This improves drainage and aeration.

### 2. Avoid Compaction

Minimise foot traffic and heavy machinery on clay soil when it's wet to prevent compaction, which can lead to poor drainage.

### 3. Raised Beds

Consider raised beds to improve drainage and provide a loose, well-aerated growing environment for plants.

### 4. Use Deep-Rooted Plants

Select plants with deep root systems that can penetrate through compacted clay. Deep roots also contribute to better soil structure.

## **Improving Loamy Soil:**

### 1. Mulching:

Apply organic mulch to maintain soil moisture, regulate temperature, and prevent erosion. Mulching also adds to the organic content of the soil.

### 2. Regular Aeration

Use a garden fork or aerator to gently aerate the soil, promoting better root growth and nutrient absorption.

### 3. Compost Application

Regularly add compost to further enrich the soil with organic matter, supporting microbial activity and enhancing nutrient availability.