

# Getting to Know Your Garden Soil



Before you spend money and time on buying and planting plants in your garden, take a moment to get to know your soils first. Soil is responsible for providing nutrients, oxygen and water to your plants—if the soil isn't right, you won't get healthy, vigorous plants.

Soils are all different—they look different, they feel different and they behave differently. Understanding these differences is key to a healthy soil and therefore a healthy garden. Some soil properties you can check at home are outlined below.

## Soil colour

The colour of the soil is usually the first thing people notice. The topsoil (surface soil) is usually darker than lower layers because this is where organic matter accumulates. Colour can be a useful indicator of some of the general properties of a soil, as well as some of the chemical processes that are occurring beneath the surface.



Soil colour is usually due to three main pigments:

- black—from organic matter
- red—from iron and aluminium oxides
- white—from silicates and salt.

Soil Colour	Soil Type/characteristics	Typical Properties
Black/dark	These soils are often associated with high levels of organic matter	Often slow drainage High levels of organic matter Low leaching of nutrients Medium waterlogging potential
White/pale	These soils are often referred to as bleached or 'washed out'. The iron and manganese particles have been leached out due to high amounts of rainfall or drainage	Well drained Low levels of organic matter High leaching of nutrients Low waterlogging potential Low plant available water
Red	This colour indicates good drainage. Iron found within the soil is oxidised more readily due to the higher oxygen content. This causes the soil to develop a 'rusty' colour. The colour can be darker due to organic matter.	Well drained Medium to high levels of organic matter Medium leaching of nutrients Low waterlogging potential High phosphorus fixation
Yellow	These soils often have poorer drainage than red soils. The iron compounds in these soils are in a hydrated form and therefore do not produce the 'rusty' colour.	Less well drained Medium to high levels of organic matter Medium leaching of nutrients Low to medium waterlogging potential Moderate phosphorus fixation
Brown	Soils associated with moderate organic matter level and iron oxides.	Well drained Medium to high levels of organic matter Medium leaching of nutrients Low waterlogging potential
Grey/blue grey/green	These soils are associated with very poor drainage or waterlogging. The lack of air in these soils provides conditions for iron and manganese to form compounds that give these soils their colour.	Poorly drained Low levels of organic matter Low leaching of nutrients High waterlogging potential