



## Strengthening Soil Fertility

Successful, productive gardens begin with a vision, but successful results require plans followed by well-timed action steps. A good first step is to look at your soil with consideration to your soil's fertility! Fertility is a soil's ability to provide essential nutrients for plant growth, and it depends on three basic properties: physical, chemical, and biological.

### **Chemical: Test your soil to determine and correct for nutrient deficiencies**

Even if you add nutrients to correct for soil deficiencies, a pH that is too high (basic) or too low (acidic) can ultimately prevent the uptake of these essential nutrients. The most reliable and economical source for testing soils or obtaining recommendations is your regional [Cooperative Extension Office](#).

### **Physical: Create oxygen-rich soils by incorporating compost**

Soil oxygen is as essential for plants as it is for us. Without it, critical physiological functions, including nutrient uptake by roots are inhibited. One of the most effective ways to add oxygen to a soil is to incorporate compost. Compost will help break up soil and add space where oxygen can flow freely.

### **Biological: Compost, compost, compost!**

In addition to helping aerate soil, compost is one of the best ways to promote soil biota. It does this in two primary ways: introducing a variety beneficial microorganisms and promoting the growth of those microorganisms already present in the soil. In turn, beneficial microorganisms can work to add nutrients and improve soil structure.

---

**Source URL:** <https://www.usbg.gov/strengthening-soil-fertility>