

# 0106. For Healthy Plants, Test Your Garden's Soil 为了健康的植物，测试你花园的土壤

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## 1. For Healthy Plants, Test Your Garden's Soil 为了健康的植物，测试你花园的土壤

Healthy plants are the most important part of a growing garden. And one of the best ways to keep plants healthy is to make sure the soil's chemical pH level is correct.

Every plant grows (v.) best in a specific pH level. The right pH level lets the plant take in 吸收 the nutrients 营养素；营养物 it needs to stay healthy and grow. Because the preferred 更合意的，更好的 levels are different for every plant, gardeners should learn the pH requirements for each one.

For example, carnations 康乃馨 require pH levels between 6.7-6.9; many grasses need a pH of 6.3-6.8; tomatoes need 6.2-6.8; azaleas 映山红, 4.5-6.0; and blueberries 蓝莓 need a pH of between 4.5 and 5.5.

### Example 1. 案例

*carnation*



*azalea*



*blueberry*



健康的植物是生长花园中最重要的部分。保持植物健康的最佳方法之一是确保土壤的化学 pH 值正确。

每种植物在特定的 pH 水平下生长得最好。合适的 pH 值可以让植物吸收保持健康和生长所需的营养。由于每种植物的首选 pH 值不同，园丁应了解每种植物的 pH 要求。

例如，康乃馨需要pH值在6.7-6.9之间；许多草需要 6.3-6.8 的 pH 值；西红柿需要 6.2-6.8；杜鹃花，4.5-6.0；蓝莓的 pH 值需要在 4.5 到 5.5 之间。

What is pH? 什么是pH值？

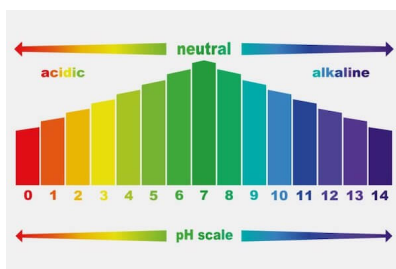
Soil pH is the level of **acidity 酸味；酸性 or alkalinity 碱度；碱性** of the soil, as measured on a 14-point number system. A pH of seven is neutral 中性的；非酸性又非碱性的. Values below seven are acidic 酸性的,很酸的, and those above are alkaline 碱性的,含碱的. Each unit on the number system **is 10 times the next value** on the scale. So, a pH reading of 7.0 **is 10 times higher than** a reading of 6.0. That means 主 a small 1-unit difference 系 is a lot.

If the pH does not fit a plant's needs, it will not be able to take in (v.) enough nutrients. That is the case 实情；事实 **whether** the nutrients are found naturally 天然地；自然而然地 in the soil **or** added as fertilizer 肥料. A lack of nutrients **will result in (v.) a lack of** growth, discoloration 变色；退色, and even death.

The wrong pH can also poison your plants. That is because, just as it can block needed nutrients, the wrong pH can also **increase the uptake (n.)**吸收；吸收速度 **of** other nutrients **to the point** 后定 they become poisonous (a.) 引起中毒的；有毒的.

### Example 2. 案例

#### acidity or alkalinity



土壤 pH 值是土壤的酸度或碱度水平，采用 14 点数字系统测量。pH 值为 7 时为中性。低于七的值为酸性，高于七的值为碱性。数字系统上的每个单位, 都是刻度上下一个值的 10 倍。因此，pH 值读数 7.0 比读数 6.0 高 10 倍。这意味着 1 个单位的微小差异就意味着很大。

如果 pH 值不符合植物的需要，它将无法吸收足够的养分。无论养分是在土壤中天然存在还是作为肥料添加，情况都是如此。缺乏营养会导致生长不足、变色，甚至死亡。

错误的 pH 值也会毒害你的植物。这是因为，正如它会阻碍所需的营养物质一样，错误的 pH 值也会增加其他营养物质的吸收，直至它们变得有毒。

To learn the pH of your soil, use products like pH testing devices or an electronic meter (用于测量电、煤气、水等，以及时间和距离的) 计量器，计量表. They can be found at stores that sell plants, called nurseries 育儿室,托儿所, 幼儿园,苗圃, or online.

Kits 成套工具；成套设备 usually contain a chemical colorant 着色剂 that is put on a **small amount of soil**. Users **wait up to a minute** or so, then **compare (v.)** any color changes **to** examples provided in the kit.

**Test strips** change (v.) color when placed (小心或有意) 放置, 安放 into a mixture of soil and water. And electronic meters provide a reading after they are placed into the soil, sometimes with water.

**General guidelines** often ask you to dig up 60 milliliters 毫升 of soil from three separate areas 10 centimeters deep within the same garden bed 底层; 基; 基座. Then **mix** (v.) the soil samples **to create an average**. It is best to **call** ahead **for** directions.

### *Example 3. 案例*

要了解土壤的 pH 值, 请使用 pH 测试设备或电子计等产品。它们可以在出售植物的商店 (称为苗圃) 或网上找到。

套件通常含有化学着色剂, 可涂在少量土壤上。用户等待一分钟左右, 然后将任何颜色变化与套件中提供的示例进行比较。

当放入土壤和水的混合物中时, 测试条会变色。电子仪表在放入土壤 (有时与水一起) 后会提供读数。

一般准则通常要求您从同一个花园床内 10 厘米深的三个不同区域挖出 60 毫升土壤。然后混合土壤样本以得出平均值。最好提前打电话询问路线。

You do not have to do anything if your soil's pH falls within your plant's required levels. However, if the result is outside the required levels, **your next step should be** to amend 修正, 修订 (法律文件、声明等) the soil. Use the gardening product **elemental sulfur** 硫, 硫磺 to lower (v.) pH. Use (v.) ground 磨细的; 磨碎的 limestone 石灰岩 to raise 增加, 提高 (数量、水平等) it.

Be sure to test each area or bed in your garden separately. **It is not unusual** for differences to exist, even within a small area. **It is also best** to carry out a pH test every two or three years because soil conditions change, and amendments (土壤结构或肥力的) 改善; (对文件或计划的) 修改 get **used up** 耗尽,用完.

### *Example 4. 案例*

如果土壤的 pH 值落在植物所需的水平内，您无需执行任何操作。然而，如果结果超出了要求的水平，下一步应该是改良土壤。使用园艺产品元素硫来降低 pH 值。使用磨碎的石灰石来培养它。

请务必分别测试花园中的每个区域或床。即使在很小的区域内，存在差异也并不罕见。最好每两三年进行一次 pH 值测试，因为土壤条件会发生变化，并且改良剂会用完。