**Preparing Soil for Planting**

When it comes to a healthy garden, **soil preparation** matters.

All vegetables need soil that's rich in nutrients. Some soil needs a helping hand. Here are tips on building healthy soil:

**Know Your N-P-K**

Plants’ primary nutrients are nitrogen (N), phosphorus (P), and potassium (K). These are available in chemical/synthetic (nonorganic) fertilizers (on the package, the numbers of each nutrient indicate the percentage of net weight contained) or as organic additives suggested here.

* Nitrogen (N) promotes strong leaf and stem growth and dark green color, such as desired in broccoli, cabbage, greens and lettuce, and herbs. Add aged manure to the soil and apply alfalfa meal or fish or blood meal to increase available nitrogen.
* Phosphorus (P) promotes root and early plant growth, including setting blossoms and developing fruit, and seed formation; it’s important for cucumbers, peppers, squash, tomatoes—any edible that develops after a flower has been pollinated. Add (fast-acting) bonemeal or (slow-release) rock phosphate to increase phosphorus.
* Potassium (K) promotes plant root vigor and disease and stress resistance and enhances flavor; it’s vital for carrots, radishes, turnips, and onions and garlic. Add green sand, wood ashes, gypsum, or kelp to increase potassium.

Avoid applying excess chemical/synthetic fertilizer. It can damage roots and/or reduce the availability of other elements. It is virtually impossible to overdo organic fertilizers. Plants can not distinguish between synthetic and organic fertilizers. [

**Soil Fixes**

* If you have clay soil, add coarse sand (not beach sand), compost, and peat moss.
* If you have sandy soil, add humus or aged manure, peat moss, or sawdust with some extra nitrogen. Heavy, clay-rich soil can also be added to improve the soil.
* If you have silt soil, add coarse sand (not beach sand) or gravel and compost, or well-rotted horse manure mixed with fresh straw.

**Soil Amendments**

* Bark, ground: made from various tree barks. Improves soil structure.
* Compost: excellent conditioner.
* Leaf mold: decomposed leaves that add nutrients and structure to soil.
* Lime: raises the pH of acid soil and helps loosen clay soil.
* Manure: best if composted. Good conditioner.
* Peat moss: conditioner that helps soil retain water.
* Sand: improves drainage in clay soil.
* Topsoil: usually used with another amendment. Replaces existing soil.