

5 THINGS

EVERY SOIL GARDENER SHOULD KNOW

1. AN APPLE A DAY KEEPS THE DOCTOR AWAY...

Ok, so maybe not an apple, but a healthy plant can defend itself against pests, disease, drought, and rain. Healthy plants have natural defense mechanisms that make them more resistant to disease, less likely to be attacked by insects, and able to withstand less than ideal conditions. Insects and disease attack the weakest plants first. Then, after they build up their colonies of bugs or bacteria, these insects and diseases are strong enough to attack healthy plants. If all of your plants are healthy, the bugs will seek out weaker plants somewhere else and leave your garden alone.

2. PH, PH, PH!!

Soil pH is crucial to nutrient uptake in the plant. Most plants prefer a pH in soil of 6.0-7.0. When the pH is outside of this range, nutrients become unavailable for uptake. In other words, if the pH is out of balance, all of the nutrient in the world will not help your plants thrive. Soil pH is best tested by the North Carolina Department of Agriculture, who does these tests for free (see us or call the Orange County NC Cooperative Extension Office at 919-245-2050). For most North Carolina soil, the pH will need to be raised with lime.

3. AS A MATTER OF FACT...

Organic matter is one of the best amendments to clay soils. By increasing the organic matter in the soil, microorganisms will return, earthworms will reproduce and eat, and water retention will increase. By adding organic matter every year to a clay garden, productivity will improve and within 3-5 years the garden will no longer look like clay, but will have a nice black loamy appearance and feel. Black, loamy soil allows for deeper roots, increased oxygen in the root zone, and improved nutrient retention. The results will be vigorous growth, increased tolerance to adverse conditions, and jealous neighbors!

4. TO AMEND OR NOT TO AMEND, THAT IS NO QUESTION!

Amending the soil is something that should be done every year. No question. If you are lucky enough to have an organic garden that has black loamy soil, then the only amendment would be organic matter (mushroom compost, organic manure, leaf mold, household compost, etc.). Each year organic matter should be added to every garden to replace the humus and nutrient taken by the previous year's plants. If you have clay soils, adding organic matter is particularly crucial. Greensand is another great addition for clay soils, as it helps break down the clay while adding potassium and 32 trace minerals. A soil test through the NC Department of Agriculture will tell you if other amendments for phosphorus (bone meal, rock phosphate) and nitrogen (blood meal, fish meal, manure, worm castings) should be added. The more that is added to the soil before the growing season, the less that will have to be added by hand later!

Pro tip: ADD KELP- Kelp contains natural plant vitamins and hormones, along with potassium. It helps transplants thrive, and increases overall plant vitality. Add it every year!

5. GIVE ME HEAT OR GIVE ME DEATH...

Seedlings need heat or they will die, or never really live. Most seeds germinate at temperatures from 70-90 degrees. A lot of peppers like it closer to 90 degrees. When starting seeds for your spring garden, be sure to use a seedling heat mat to germinate your seeds. After that, for plants that like it hot (basil and pepper, among others), make sure to keep the soil temperature high, and don't set plants out in the garden too early (Late May or early June for the peppers, especially hot ones!)



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