Many residents along the upper Texas Gulf coast have been waiting patiently to begin a variety of post-Ike landscape renovation projects. Since fall is the most favorable season for planting, NOW is the time to get out and start gardening.

Given the time, effort and money required for most landscape projects, it's important to get off to the best start possible. That begins with proper soil preparation. This certainly isn't the most exciting or glamorous aspect of a landscape project - but it may be the most crucial for ensuring long-term success.

Proper soil preparation begins with an assessment of the current physical and chemical characteristics of the soil(s) you'll be working with. More often than not - gardeners usually think about the chemical aspects first. Things like fertilizers, root stimulators, soil additives and alike. Sure, these are important - but it's the physical properties of a soil that can make or break a landscape planting. For optimum growth, plant roots need a good balance of air and water. These characteristics are determined by the soils drainage and water holding properties.

Why is this important?
Landscape soils that hold too much water typically have problems with root diseases. A significant lack of oxygen in the soil can also result in damage to the root system and ultimately plant death – anyone that has driven down Broadway understands the problem.

Landscape soils that do not hold adequate amounts of water require frequent irrigation, are subject to drought stress and are more likely to suffer from salt damage. Again – something we have experienced first-hand in the wake of hurricane Ike.

One of the best ways to determine a soils aeration, drainage and water holding capacity is to conduct a “hole test.” Here are the basic steps:

1. Using a post-hole digger, sharp shooter or similar instrument, dig a hole 6” – 8” in diameter and 2’ deep.
2. Fill the hole approximately ½ full with water. Note the time.
3. Determine how long it takes for the water to drain from the hole

Use the following guidelines to interpret results from the hole test:
< 15 min = Excessive drainage. Consider adding organic matter to increase water holding capacity.
15 – 30 min = Adequate drainage and water holding properties. Modifications not required
>30 min = Poor drainage. Consider raised beds or incorporating coarse textured materials to increase aeration and drainage.
Here are some additional thoughts and reminders regarding landscape soil preparation.

Be sure to use organic matter that is thoroughly decomposed. Raw materials require nitrogen (N) to break down and often out-complete plants for available N in the soil. This can result in weak, stunted growth. The best organic matter for use in landscape soils has a good distribution of coarse and fine particles. The finer the organic matter, the greater the water holding characteristics.

When constructing raised beds, do not incorporate the bed mix (landscape soil) in to the native soil. Build the bed directly on top of the existing soil. Incorporation tends to create a “bathtub” effect and does not provide optimum drainage. Be sure the bed mix has a good distribution of coarse and fine particles – providing desired aeration, drainage and water holding characteristics.

Soil preparation can be the most time consuming and costly part of a landscape project. When you’re done, few people will appreciate the effort spent on this part of the project. HOWEVER – the results are typically worth the investment in terms of overall landscape performance, water conservation and long-term success.

For more information visit our web site:  http://aggie-horticulture.tamu.edu/galveston