NATURE'S WAY RESOURCES
an organically based service company

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# JOHN'S CORNER

## GARDENING Q & A: *A Question From One Our Readers*

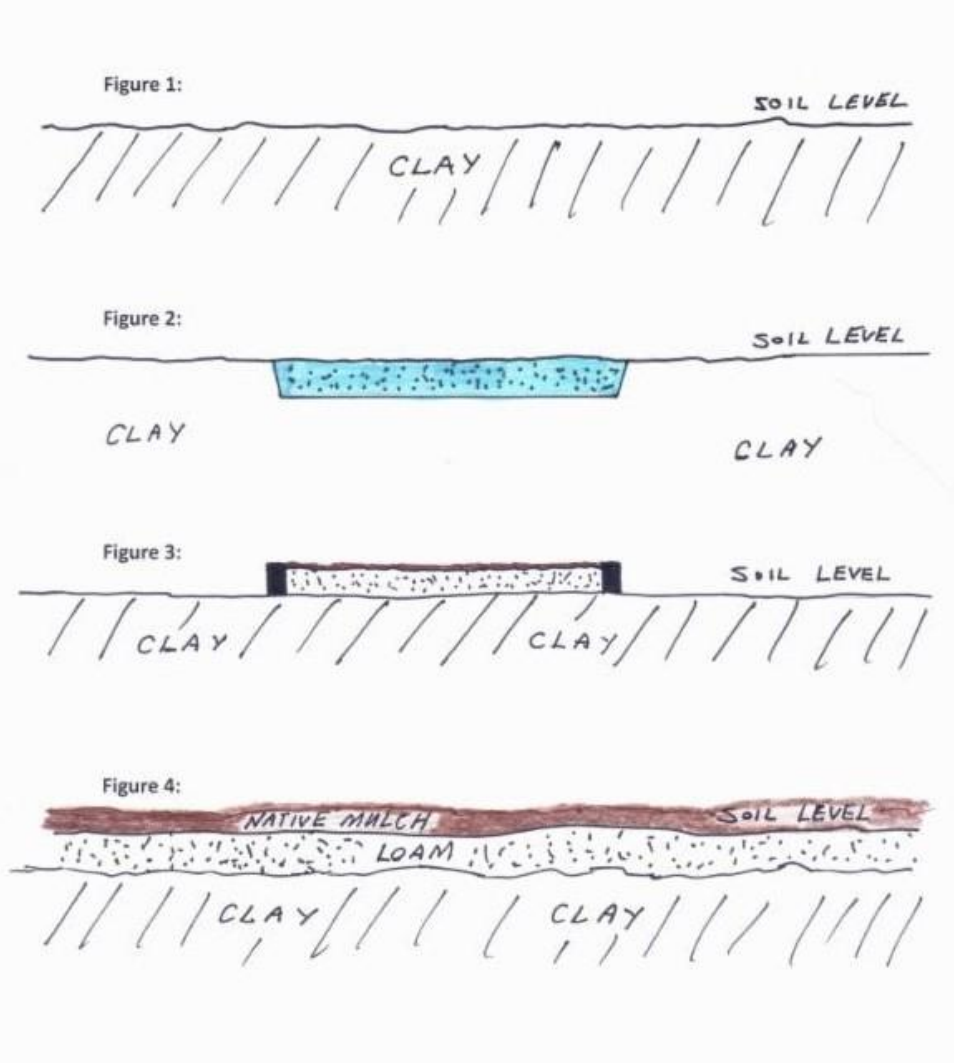
***By John Ferguson***

"All of the soil in my yard is under laid with a large amount of clay which definitely doesn't drain well. When we get the heavy rains as we have lately, many of my plants just give up! I have dug up the soil down about 6 inches and either amended with 50% compost or with landscapers' soil from Nature's Resources. It doesn't seem to be enough to give a bed good drainage. What else can I do or what else should I do to help the beds drain better? I can't really grow cactus or many of the drought tolerant plants because of the amount of water the clay holds."

**ANSWER:**

What you have described is shown in Figure 2 below and Figure 1 is what you started with. By digging a hole in the clay for the good soil you have essentially created a big flower pot with no drainage holes. Water easily moves through the improved soil till it reaches the clay. Water moves into and through clay very slowly hence the water stacks up and is trapped as shown in blue. This forces the air (oxygen) out of the soil and the plant roots suffocate and it creates conditions for pathogens to grow.

There are several methods to attack this problem which is common for many of the clay soils along much of the Gulf Coast.




1) The most common method is to build raised beds on top of the clay soil (Figure 3). This allows a plant's feeder roots to grow in the improved soil that was brought in and the anchor roots (shrubs, vines, trees, etc.) to be in the clay. Many species of plants grow best in this type of planting (e.g. roses).

The following book has a very good description on how to build raised beds and options for doing so.

"**Year Round Vegetables, Fruits and Flowers for Metro Houston**," by Bob Randall, PhD., Retired Executive Director Urban Harvest. A resource guide on how to grow plants in the Houston area organically and where to get the supplies you may need. It is sold at many area gardening centers. One of the very best resources for Houston and Gulf Coast. ***Highly Recommended***

2) The second method works very well but takes much longer, and that is to break down the clay into loam so that it drains well (Figure 4). This is done by placing a thick layer (5-6 inches) of Native Mulch on top of the clay (shown in brown). As the microbes break down (eat) the native mulch they also break down the clay into soil. So, after year one, you may have 1-2 inches of good soil (broken down clay) under what is left of the mulch layer. One just repeats this process each year and in a few years the clay has broken down many inches deep and it will drain better.

I have the black gumbo clay in my yard and over the years it has easily broken down over 18 inches deep and a lot more in spots. With all the organic matter and the life in my soil from microbes to earthworms and more, I can receive a 3-inch rainfall and in less than an hour it has all been absorbed into the soil and stored until plants need it. I can grow cactus, aloes, etc. without any problems and at the same time species like rain lilies thrive.