

A photograph of the Houston Botanic Garden building, a large, light-colored stone wall with the name "HOUSTON BOTANIC GARDEN" in black, raised letters. In the foreground, there is a concrete walkway and a garden bed with various plants, including pink and red flowers, green foliage, and tall, feathery grasses. The background shows a line of trees under a clear blue sky.

# HOUSTON BOTANIC GARDEN

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# Soil - Five Components

- Air
- Water
- Minerals
- Organic Matter
- Organic Mass

# A park or a botanic garden?

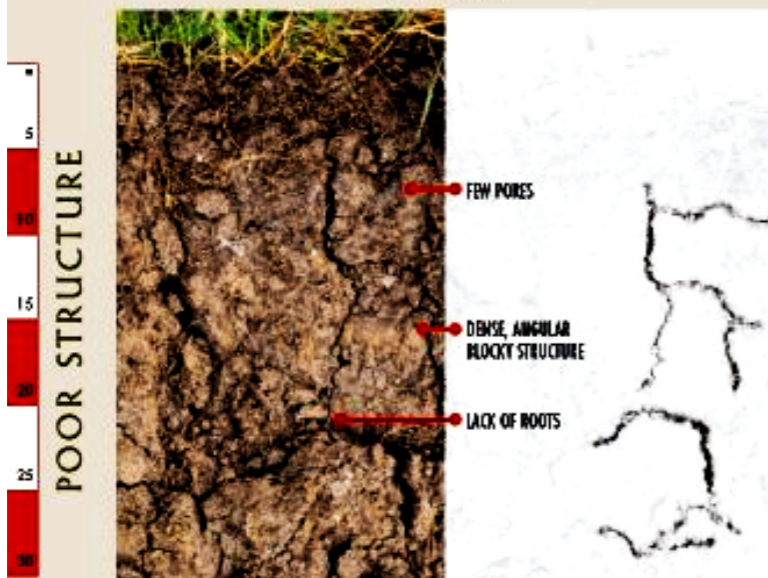
A botanic garden is a museum of plant collections grown for the purpose of education, conservation, science, and display.

Botanic gardens: facts about each plant matter.  
*Collections Policy*

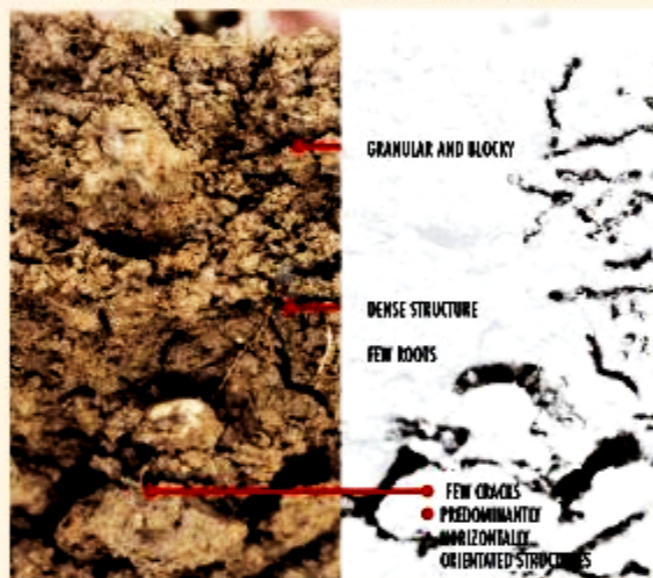
Parks: just management of the green space.

Plant Records Manager position: soon to be posted.

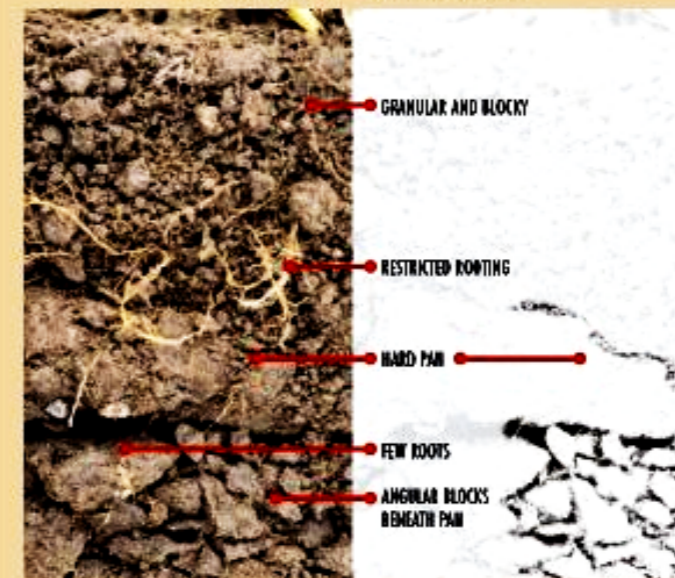
## CLAY



## SANDY CLAY LOAM



## SANDY LOAM



### CREWE SERIES

stoneless clay - slowly permeable - prominently mottled



### SALWICK SERIES

slightly stony sandy clay loam - moderately permeable - more clayey with depth



### ARROW SERIES

very slightly stony sandy loam - deep permeable - loamy sand at 80cm depth

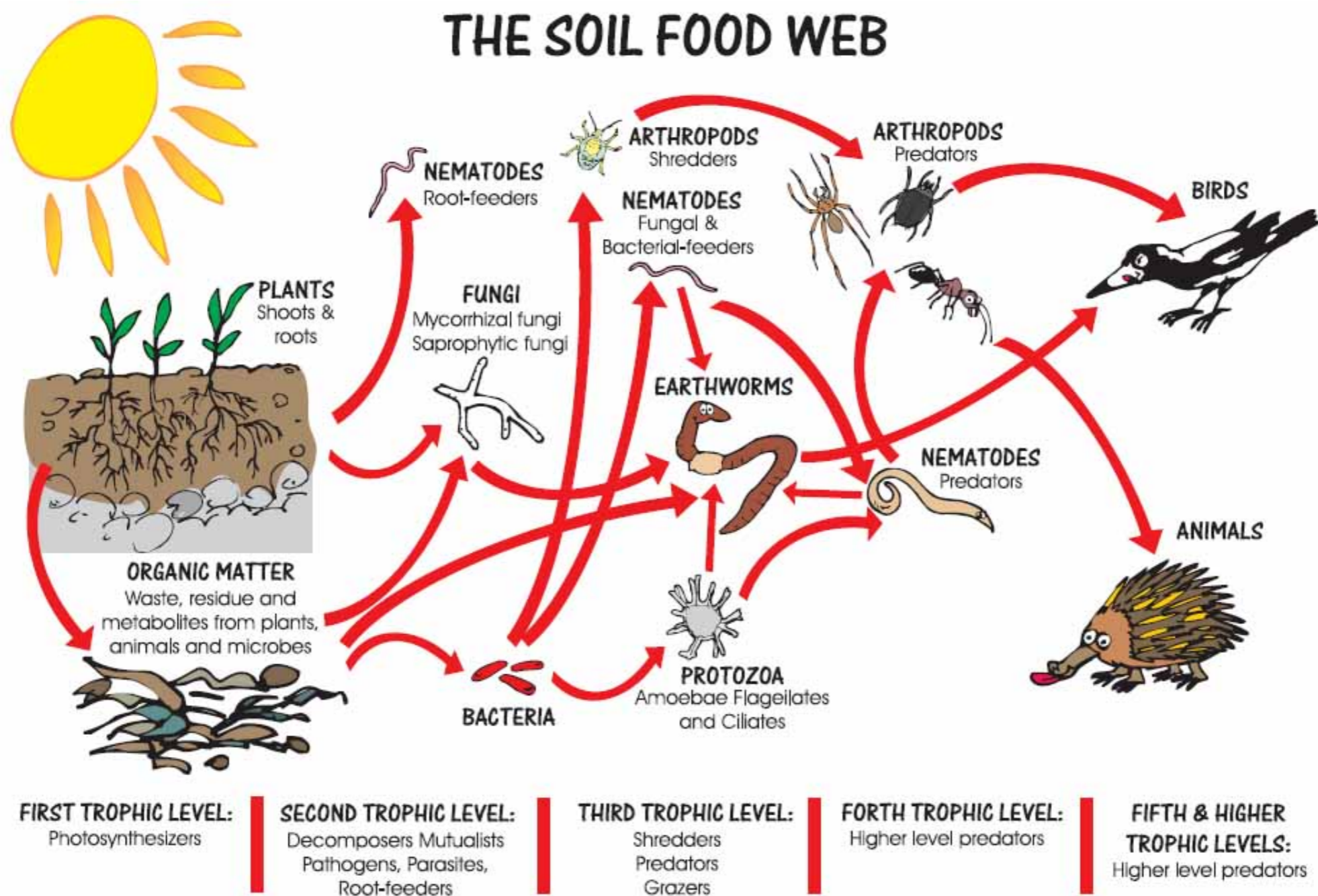
# Organic Matter - Compost & Mulch



# Benefits of Compost

- Loosens and tills compacted soil
- 300 lbs of humic acid per yard
- Bacterial life makes it nitrogen rich
- Improves soils ability to store water
- Encourages root growth
- Builds plants natural immunity
- Lovely dark brown color
- Build soil diversity, out competing bad elements

# Organic Mass



# Grow your own -

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## Picking A Spot - Light

- Veggies need more than 6 hours of light per day.
- Morning Light is best
- Southern Exposure, or no winter garden
- Direct in Winter, Filtered in Summer

# GardenDesign - Access

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- Visual Access is key
- Physical Access is a must
- Emotional Access is the most difficult
- Clear the space - Design



# Plants

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- In Houston, every few weeks a window for one crop or another is opening and another closing.
- Seeds you can plant in three weeks: carrots, lettuces, multiplying onion, kale, snow/snap peas, collards, arugula, cilantro, garlic chives, among others.
- Plants to plant right now: Bush beans, potato peel, Malabar, fall tomatoes (almost too late)

## Fall Gardening, what the weeds tell us.

Tap Roots, like dandelion	Nitrogen Fixers, like clover	Water Lovers, like virginia buttonweed	Low Sucession, like dallisgrass	Like minded weeds, like horse herb
Compacted soil	Lack of nutrients, especially nitrogen	Too much water in lawn soils	Total lack of soil health	A good sign
Nutrient deficient	Sign of poor fertilizer	Compacted soil	Compacted soil, no liife	Setting is safe
Adding minerals, and humic acid	Focusing on soil food web	Stop over watering	Compost topdress a couple of times	Handpull or leave alone
Others: hawkweed, wild onion	Others: bluebonnets, other clovers	Others: dollarweed	Others: Velcro weed, annual poa	Others: depends on lawn type

# Roots – the real powerhouse

- Hold the soil in place
- Add organic matter to the soil
- Feed the soil food web
- Mine nutrients
- Return the nitrogen to the soil
- Store and harvest water



# Water less

The screenshot shows a web browser window with the URL <https://texaset.tamu.edu/DataSummary/Daily/150>. The browser tabs include 'finca tres rc', 'Plant It For', 'Hope Farm', 'The Hands', 'OHBA | Org', 'Montrose M', 'perfect law', 'YOUR', and 'TexasE1'. The main content area is titled 'Home Owner Calculator' and is divided into several sections:

- Select Turf Growth Conditions**
  - 1.) Sunlight Exposure: Full Sun
  - 2.) Turf Type: St. Augustine
  - Water requirement for the selected turf type based on the previous 7 days of weather data: 0.29
- Precipitation Parameters**
  - 3.) Effective Rainfall: 1.05
  - Water requirement less effective rainfall: 0
- Sprinkler Precipitation Rate**
  - 4.) Sprinkler Precipitation Rate: 0.5
- Calculate Watering Run Time**
  - Total Run Time: 0

The Windows taskbar at the bottom shows the search bar with the text 'Type here to search', several application icons (Edge, File Explorer, Outlook, PowerPoint, Excel), and system tray icons including network, volume, and the date/time '11:10 AM 2/28/2020'.

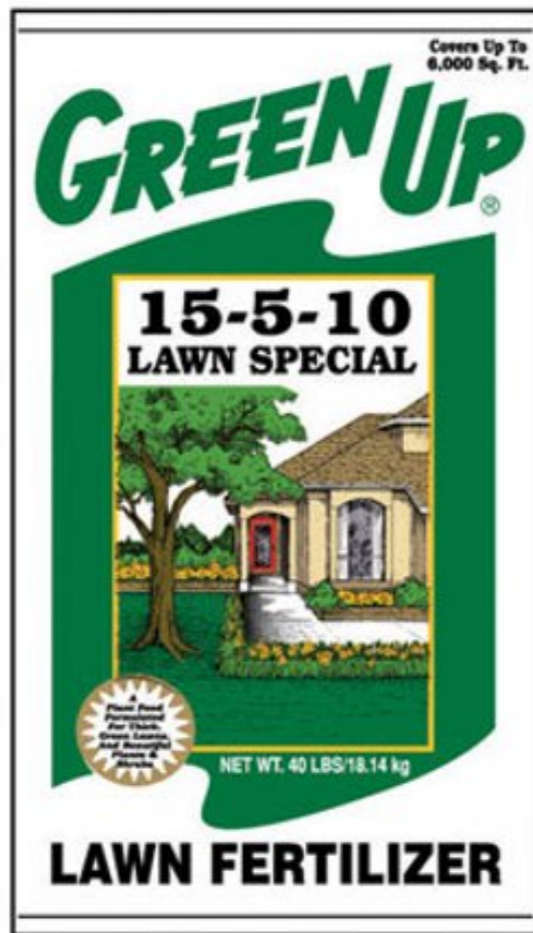
# solutions

Compaction	Compost Topdressing Humates Plus Cutting correct height Correct Water use
Water Smart	Cutting correct height Improving Compaction Water only when needed Improve Root Depth
Healthy Feeding	Humates Plus NO SALTS Microlife fertilizers Liquids: Fish, Seaweed, Molasses, Many others

# Fertilizer? One that makes fertile.

- Salt - Water Soluble Compound
- Drives Away Living Organisms(or worse)
- Requires Pesticide, Herbicide, Fungicide, pre-Emergent, and more Fertilizer

# Good for your soil or bad for your soil... why?



# Soil Care

- Compost, Compost, Compost, and Mulch
- Micro-Life products
- Alfalfa Meal
- Horticultural Molasses
- Bio-innoculant
- Fish Meal
- Humic Acid

# Please contact me

- Website: [HomeShowGardensPros.com](http://HomeShowGardensPros.com)
- Email: dany@hbg.org
- Thank you!

THANK YOU!

