



**TERRA VERDE**  
LANDSCAPE SOLUTIONS

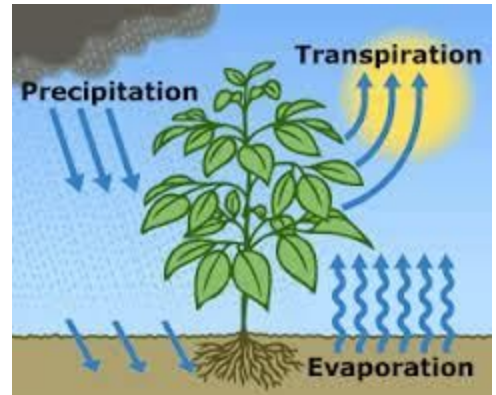
# Rx for Heat Stressed Plants

Help your plants stay healthy during times of intense heat by understanding a few pointers.

- What is plant heat stress?
- How do you know your plant is stressed?
- What do you do when your plants have been affected?

Plants are just like people when it comes to heat stress; they need a certain amount of water to keep the system operating. During times of intense heat, evapotranspiration is accelerated.

**Evapotranspiration** is the amount of water a plant takes up through the roots and releases through the underside of the leaf along with oxygen. Plants in distress show wilt, the leaves may look brownish and crisp around the edges, the plant may begin dropping leaves to shut down the evapotranspiration, branches will begin to die back, blooming stops and they pre-maturely drop the blossoms.



There are several steps you can take to keep your plants healthy during our intense summer heat: deep watering, soil acidification, mulching, and use of stress relief amendments like 'Great Big Plants' or Superthrive. The object is to keep the plant healthy, watered and the root zone as cool as possible.

Deep watering and maintaining soil that water can penetrate is key to a plant's survival during extreme temperatures. Even desert plants can show stress when temperatures are high and rainfall is low. Make sure that the soil is loose enough for the water to penetrate and soak the root zone of your plants. Test your soil compaction using a long screwdriver to penetrate the soil. If the screwdriver goes in easy you have good water penetration, if it doesn't press in easily, acidification is necessary and probably a longer duration of watering. Acidify the soil with a sulfur based granular soil acidifier or if you have a real severe case of soil compaction you can also use a liquid soil acidifier.

Adjust your watering schedule during times of intense heat. We find that operating your drip system 3 times per week for an hour and a half each time keeps the soil profile moist enough for the survival of most plants on a drip system. Plants that start turning yellow is a sign of over-watering. Then you should back the duration of the watering down to perhaps an hour and a quarter 3 times per week. Also, if the soil is still moist *and the plant is wilted* you are likely over watering! Yes, wilt is a symptom of *over and under* watering so check the soil. If, on the other hand, the outer edges of the leaf start turning brown and crisp it's a sign of under watering and high alkalinity in the soil that causes salt burn on the leaf margins. Soils will vary with their ability to accept water. If too much water is standing around an hour after you stop running your drip system, reduce the watering duration by 15 minutes. If the plants show signs of stress before the next watering time, then increase the watering duration.

**NOTE: Even in high heat, don't change your watering schedule to every day,** keep a 2 or 3-day/week schedule and water more deeply. See the chart below; adjust to a 3x/week schedule for trees and shrubs when temperatures are above 110 degrees for any duration. The best way to determine if your plants are

getting enough water is to inspect them daily for wilt and dry soil. If the soil dries out (not at the surface but deep by the roots) before the next scheduled watering *and the plant is wilted* - it needs more water. Give it some interim water and adjust your watering duration for the next scheduled time. When you have questions, call us!

Duration & Frequency of Watering	Veggies & Flowers T-Tape	Vines & Shrubs 1 GPH	Shrubs & Trees 4'-5' 2, 1GPH	Shrubs & Trees 5'-10' 3, 1GPH	Trees 10'-20'+ 4, 1GPH	Potted Plants on Drip	Lawns Sprinkler
Time (Hours)	2-3	2	2	2	4	30 min	10-20 min.
Days per Week	2	2	2	2	2	3	3

Leaf wilt can also be a result of hot winds. If you're watering seems to be on track, i.e. no standing water, good deep soaks that mostly dry out between watering, and you're still experiencing leaf wilt or even some drop off, then the culprit is likely our summer winds. Generally, plants will come back from this in time but may look a little pitiful in the meantime. When summer's past, trim the plants lightly, fertilize and you'll see them bounce back.

Organic mulch laid on the surface of the soil also helps to insulate the soil and lower the soil temperature around the root zone. An inch and a half layer of mulch should be sufficient. For new plantings in rock areas, move granite away from the small plants to lower the temperature around the plant stem and increase its chances of survival.



The soil amendment that has shown useful in treating heat stressed plants is a product called 'Great Big Plants'. Also, Superthrive has shown effectiveness in helping stressed plants. Locally, Great Big Plants is used extensively for ball fields after heavy use because of its ability to rejuvenate the cellular structure of the grass after heavy pounding by the players. It will also rejuvenate the cell structure of heat stressed plants like shrubs and flowers. 'Great Big Plants' is a liquid culture of beneficial microbes, hormones and nutrients for plants. This product increases the microbial action in the soil around the roots allowing the plant to take up nutrients and moisture at a faster rate. It is extremely effective and is also great

for houseplants.

Fortunately, summer will end and the temperatures will drop. Until then, keep an eye on your plants and an eye towards a cool fall!