

COLD HARDINESS ZONES & HEAT ZONES AS THEY AFFECT YOUR LANDSCAPE

Plants react to both heat and cold so these are two things to consider when selecting plants. This can be confusing to the consumer and this article was researched to help you understand the Heat Zones and Cold Hardiness Zones.

PARKER COUNTY IS IN COLD HARDINESS ZONE 7b AND HEAT ZONE 9.

USDA Cold Hardiness Zones

There are many characters to consider when selecting a landscape plant, but cold hardiness is a primary consideration. Hardiness refers to the ability of a plant to survive winters in a particular area. Great genetic variation exists among species in this regard, thus plants are generally classified according to the lowest temperature they can withstand without being damaged. Similarly, geographic regions are classified according to the average minimum temperature experienced by that area. The USDA has separated the United States into 11 distinct zones (USDA Hardiness Zones). Always select plants rated hardy for your zone. **Parker County is in Cold Hardy Zone 7b.**

While the USDA cold hardiness of a plant is a good general guideline for proper selection, there are often other factors to consider. Other variables such as soil moisture, plant age, proximity to buildings, bodies of water, excessive vigor and microclimates (sites that are against a heat-retaining surface, sheltered from winter winds, in "cold pockets", etc.) can affect the performance of a plant, even if it is rated hardy for your zone. Check with local authorities if you are concerned about the survival of a particular plant in your area.

Heat Zones

Cold is not the only factor determining whether our plants will survive and thrive. Particularly during a drought, we are all aware of the impact that heat has on our plants. The effects of heat damage are more subtle than those of extreme cold, which will kill a plant instantly. Heat damage can first appear in many different parts of the plant: Flower buds may wither, leaves may droop or become more attractive to insects, chlorophyll may disappear so that leaves appear white or brown, or roots may cease growing. Plant death from heat may be slow and lingering. The plant may survive in a stunted or chlorotic state for several years.

Parker County is in Heat Zone 9. This means we have an average of 120-150 heat days each year that the temperature reaches over 86-degrees (30-degrees Celsius). That is the point at which plants begin suffering physiological damage from heat. The zones range

from Zone 1 (less than one heat day) to Zone 12 (more than 210 heat days). The heat zone designations and hardiness zone designations in garden centers, references books, and catalogs will aid in choosing plants.

It will take several years for a majority of our garden plants to be coded. Plants vary in their ability to withstand heat, not only from species to species but even among individual plants of the same species. Seasons with fewer or more hot days than normal will affect results in your garden. Gardeners may find that many plants will survive outside their designated heat zone this is because so many other factors complicate a plant's reaction to heat.

Water

The AHS Plant Heat Zone ratings assume that adequate water is supplied to the roots of the plant. The accuracy of the zone coding can be substantially distorted by a lack of water, even for a brief period in the life of the plant. Some plants are naturally more drought tolerant than others

Watering directly at the roots of a plant, through drip irrigation for instance, conserves water that would be lost to evaporation or runoff during overhead watering. In addition, plants take in water more efficiently when it is applied to their roots rather than their leaves. Mulching will also help conserve water.

There are other factors that can cause stress to plants and skew the heat zone rating. Some of them are more controllable than others.

Light. Light affects plants in two ways. First, it is essential for photosynthesis. Light also creates heat. The energy absorbed affects the temperature of the plant.

Air movement. While a gentle breeze can "cool" a plant through transpiration, fast moving air on a hot day can have a negative effect, rapidly dehydrating it. Air movement in a garden is affected by natural features such as proximity to bodies of water and the presence of surrounding vegetation, as well as structures such as buildings and roads. You can reduce air circulation by erecting fences and planting hedges.

Surrounding structures. If the environment is wooded, transpiration from trees and shrubs will cool the air. Structures of brick, stone, glass, concrete, plastic, or wood will emit heat and raise the air temperature.

Soil pH. The ability of plant roots to take up water and nutrients depends on the relative alkalinity or acidity of the soil. Most plants prefer a soil close to neutral (pH 7). While it is possible to manipulate the pH of soil with amendments, it is easier to choose plants appropriate to your soil type. You can find your soil pH with a soil test. These kits can be found at your local Extension Office.