Growing Zones and Microclimates

By Micki Stauffer

What's the big deal about plant zones? What the heck is a microclimate? Well, if you have ever wandered around the country, you may have been surprised at how different gardening is in other regions. Sometimes you can see differences in areas of same state. One of the reasons is that the sun's intensity is greater the closer you are to the equator. When you add to that climatic factors such as wind, rain, clouds, etc., you quickly realize that many things go into determining the type of exposure plants can tolerate.

The U.S. Department of Agriculture (USDA) has determined plant hardiness zones. It breaks the U.S. into 11 different climatic zones, providing the minimum temperatures in different regions of the country. By knowing what zone you are in, you will know if a certain plant can take the lowest average temperatures for that specific zone. Most nursery tags will give you the temperatures that the plant can withstand. It is important to note that the USDA map is based on data gathered over a period of 60 years.

Most plant hardiness zones tell us only that one thing. If a plant is rated as hardy to zone 8, we know how low a temperature plunge that plant can tolerate. And not just survive, but actually grow well. So why do some plants rated for a higher zone than the one you are in not survive? The answer is that while they may be rated to survive at a very low temperature, the heat does them in. The zone rating says nothing about how high a temperate the plant can tolerate.

There are several other well-known plant zones. The American Horticulture Society also has divided the U.S. They developed a heat zone system based on the average number of days above 86 degrees Fahrenheit (or 30 degrees Celsius) – which is the temperature at which cellular protein is damaged in many plants.

Another method was determined by Sunset Magazine, which has divided the U.S. into 24 climate zones. "A plant climate zone is an area in which a common set of temperature ranges, humidity patterns, and other geographic and seasonal characteristics allow certain plants to succeed and others to fail." The Sunset method of zoning considers a broad range of factors, including minimum winter temperatures, summer highs, elevation, rainfall, humidity, aridity, and proximity to mountains or coast.

You will find that most nursery tags will give the USDA plant hardiness zone, as it is more widely used. You can get more information on the USDA zones if you go to The United States National Arboretum.

You can often "push" the zone by taking advantage of microclimates. Many things can create a microclimate. A southern exposure will ensure that a plant gets as much heat as possible. The protection of a house can provide extra warmth during cold winter nights. Hilltops, swales and canyons can further create slightly milder or slightly more severe climates than a flat environment. A stone wall can provide reflected heat, and a water feature can provide humidity. In areas where the nights are often clear and dry, plants located under eaves, trees, or other overhangs are not as likely to suffer from cold damage as those located out in the open. Often the warmest areas in a garden are those beside paved surfaces such as sidewalks, driveways, patios, and sunny south and west

walls. Not only do these surfaces reflect some of the sun's heat, light and glare, but they also store heat during daylight hours and radiate it back to the atmosphere at night.

If you really want to try to grow a plant that is rated one zone warmer than you are, give it a try. Just don't invest in a rare and expensive plant for your test – but a small, moderately priced one, well planted and tended may be worth the risk

References

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