



Are Your Plants Zoned for Success?

By Dawn Pettinelli, UConn Home & Garden Education Center

The U.S. Department of Agriculture recently released an updated Plant Hardiness Zone Map. Probably most gardeners are familiar with zone numbers listed on plant information tags or in catalogs when purchasing or looking to purchase perennial or woody plants. They might say ‘Hardy to Zone 4’ or ‘Zones 5-9’. These plant hardiness zones are based on the average annual minimum temperature over a 30-year period.

2023 USDA Plant Hardiness Zone Map

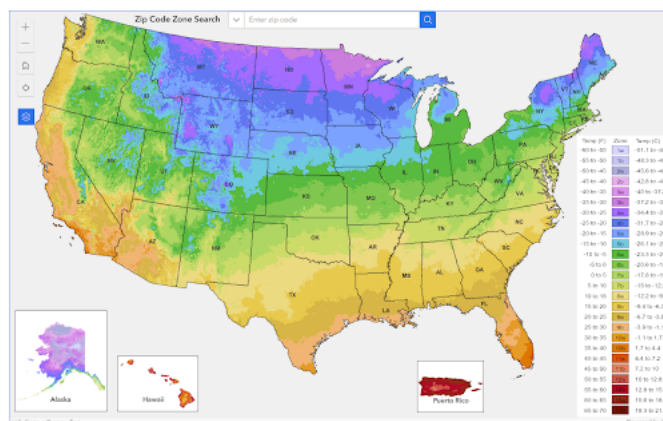


Photo by USDA

The new 2023 map covers the 30 years from 1991 to 2020. Its predecessor, released in 2012, covered the period from 1976 to 2005. The earlier 1990 Plant Hardiness Zone map only covered the 12 years from 1974 to 1986. The new 2023 map is much more detailed and accurate thanks to both more sophisticated mapping techniques as well as an increased number of weather stations able to record critical data. The present map used 13,412 weather stations throughout the U.S. and Puerto Rico and was developed by Oregon State University’s PRISM Climate Group and USDA’s Agricultural Research Service.

The last 2 maps were divided into 13 (older ones had 11) hardiness zones. Each zone represents a 10 degrees F range of temperatures. The two additional zones are found in Hawaii and Puerto Rico but would be useful if one were growing tropical or subtropical plants. These 13 zones are broken further down into a and b, with each letter representing a 5 degrees F temperature range.

Not surprisingly in the wake of climate change, the 2023 Plant Hardiness Zone map shows that about half the country shifted to a warmer 5 degrees F temperature zone. The majority of the warming was seen in the Midwest and Central Plains regions.

In Connecticut, we can say goodbye to Zone 5b. This plant hardiness zone ranged from the Storrs area to the northwest corner and was characterized by an average annual minimum temperature of between -15 F to -10 F. Storrs was a 5b on the 1990 map, a 6a on the 2012 map and is now a 6b (-5 F to 0 F). Coastal areas have been upgraded from a zone 7a (0-5 F) to a 7b (5 – 10 F). Other areas in Connecticut have been progressively shifted upwards. To see changes in your areas go to <https://planthardiness.ars.usda.gov/> and type in your zip code.

Plant Hardiness Zone maps are an important tool for gardeners, just as mulch, soil testing, and occasionally, sawzalls are. Keep in mind that they are not necessarily reflective of climate change in all locations as our most extreme temperatures each year are highly variable. Think about that arctic blast we had early February when some of us experienced -40 F wind chill factors. That event did many plants or parts of plants in. I lost primroses and most of an oak leaf hydrangea that had been growing happily for more than two decades.

These maps give us a good indication about where certain plants are likely to become established and survive. Knowing the lower limits on winter temperatures is crucial when selecting plants for a specific area. Keep in mind that the minimum temperature ranges in the various zones are just averages. Some years might be warmer; others colder. Oftentimes, during warmer winter semi-hardy annuals like snapdragons, calendula and kale will overwinter and sprout new growth in the spring.

Many other factors, some of which a gardener can control, factor into winter hardiness. Is your soil well-draining? Many hardy perennials perish due to wet feet. Where is the plant located? In a sheltered spot back by a foundation or out in the open? In a sunny or shady area? How much snow cover, which acts as an insulating blanket, is present?

Refer to these Plant Hardiness Zones as guidelines when selecting plants for your particular site. Don't be afraid to do a little experimenting with plants listed a half zone less hardy. You might just have the perfect microclimate for them. If anything, you'll have an excuse for buying another plant.

For questions on Plant Hardiness Zone maps or if you have any other gardening questions, contact the UConn Home & Garden Education at (877) 486-6271 or www.homegarden.cahnr.uconn.edu or your local Cooperative Extension Center.