

Gardening in Iowa Zones

Zone maps are a gardener's best tool for selecting plants that will do well in local gardens.

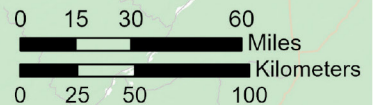
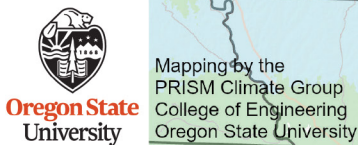
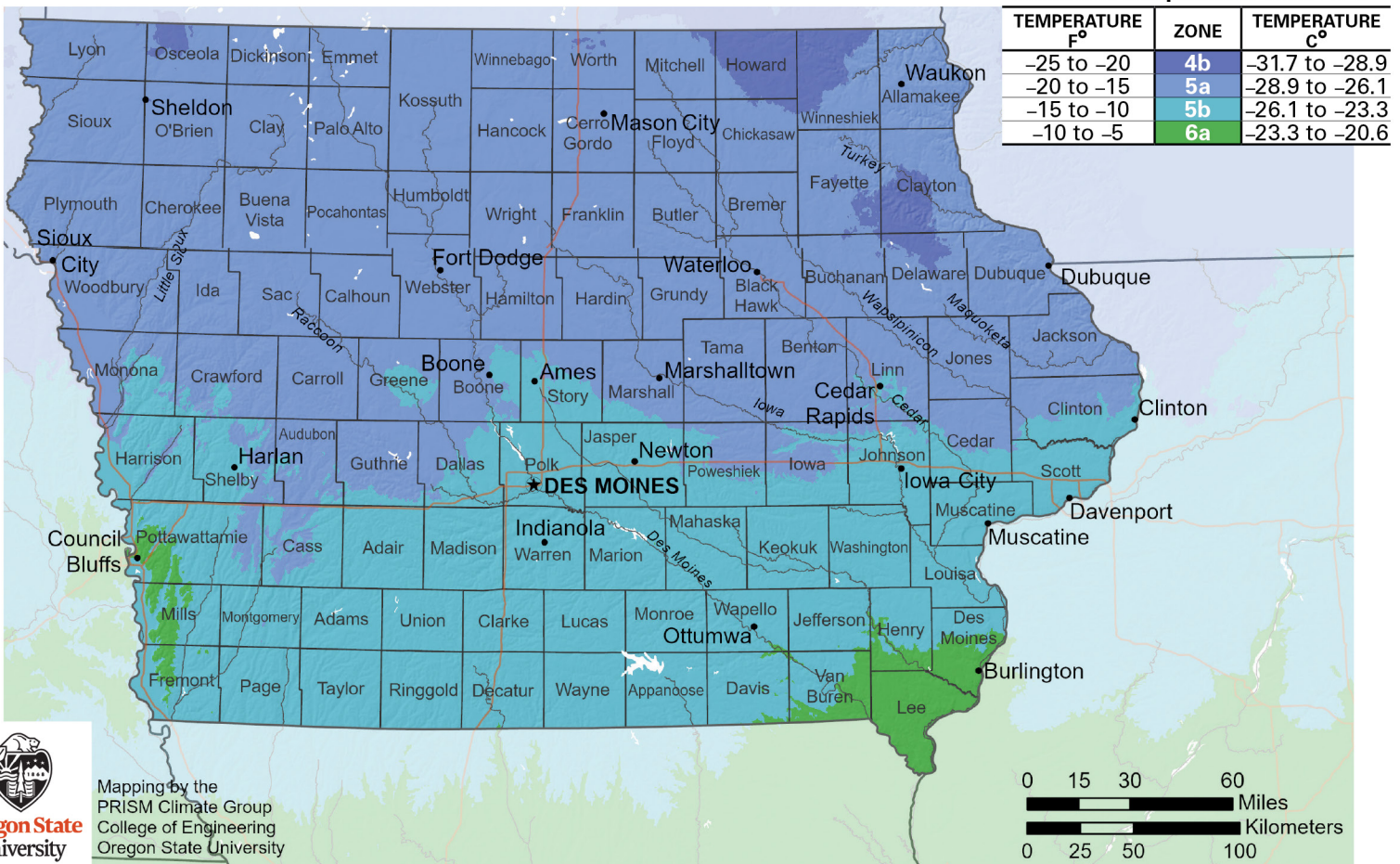
2023 USDA Plant Hardiness Zone Map

The United States Department of Agriculture's (USDA) Plant Hardiness Zone Map serves as a standard guide to a plant's cold tolerance. It has been an important tool when selecting trees, shrubs, and perennials for the landscape for over 50 years. The data on which the 2023 map is based was gathered from 1991 to 2020. Most American reference books, nursery catalogs, and gardening magazines describe a plant's ability to survive cold temperatures using USDA plant hardiness zones.

The USDA Plant Hardiness Zone Map divides the country into 13 zones based on average annual minimum temperatures. Zone 1 is the coldest area where minimum temperatures, on average, will go down to minus 60°F (-50°C). At the other extreme, Zone 13 is the warmest zone in tropical locations where average lows don't drop below 60°F (16°C). The zones are divided by 10-degree increments and further divided into half zones by 5-degree increments. According to the 2023 version of the map, nearly all of Iowa is in Zone 5, with the northern half in 5a and the southern half in 5b. Small areas in northeast Iowa are in Zone 4b, and small areas in southeast and southwest Iowa are in Zone 6a.



2023 USDA Plant Hardiness Zone Map-IOWA



AHS Plant Heat Zone Map

Cold isn't the only factor that determines whether plants will survive and thrive in an area. Heat also affects plants. The effects of heat stress are less obvious than the damage caused by extreme cold, which will either kill a plant instantly or slowly over the winter.

In 1997, the American Horticulture Society (AHS) developed the AHS Plant Heat Zone Map to help gardeners choose plants suited to summer temperatures in their region. This zone map is used to select annuals, perennials, vegetables, aquatic plants, and turfgrass species.

It divides the United States into 12 zones based on the average number of days in the year that daily high temperatures reach or exceed 86°F (30°C). This temperature was chosen because it is the point at which plants begin to suffer physiological damage from heat. This map can be accessed from the [AHS website](http://ahsgardening.org/gardening-resources/gardening-maps), ahsgardening.org/gardening-resources/gardening-maps.

Using the Zone Maps

The USDA Plant Hardiness Zone Map and AHS Plant Heat Zone Map are guides to help gardeners select plants suitable for their location. These maps are based on average temperatures, either average minimum temperatures or average number of days at 86°F (30°C) or higher. Longtime Iowa residents realize the weather in our state is rarely normal or average. Periodically, these averages will be exceeded, sometimes by a wide margin. Plants may be damaged or destroyed during extreme weather events.

For example, a tree or shrub hardy in USDA Hardiness Zone 5a (average annual minimum temperature of -15 to -20°F (-26 to -29°C)) may grow well for several years as long as winter temperatures are average or warmer than normal. However, a bitterly cold winter (when temperatures drop to -25 to -30°F (-32 to -35°C)) may result in serious plant damage or possibly death.

Despite this limitation, the USDA Plant Hardiness Zone Map and AHS Heat Zone Map are helpful guides. Gardeners who utilize the maps and select plants based on their cold and heat tolerances should see high plant success rates.

Gardening in Microclimates

Microclimates are areas in the garden that may be unusually warmer or cooler. These areas are influenced by many factors, including soil type, exposure to light and prevailing winds, elevation, and structures like buildings, walls, fences, and driveways, among other things. It takes careful observation to identify these areas in your garden.

Warmer microclimates often are areas protected from prevailing west and northwest winter winds. Many have eastern or southern exposure to winter sunlight and frequently are buffered by buildings that can absorb and radiate heat. Cooler microclimates tend to be shadier, with a predominately northern or eastern exposure. These microclimates sometimes are found in low areas where cool air is more likely to collect.

“Zone pushing” is a fun way to experiment in the garden. Utilizing microclimates to grow plants outside their typical plant hardiness zone or heat zone can be a good way to try something new. While the chance of losing the plant may be higher, especially during extreme weather events, the reward of a different or unique plant in your garden can be worth the risk.

For More Information

Additional information is available from the following websites:

[Iowa State University Extension Store](http://store.extension.iastate.edu)
store.extension.iastate.edu

[Horticulture and Home Pest News](http://hortnews.extension.iastate.edu)
hortnews.extension.iastate.edu

[Reiman Gardens](http://reimangardens.com)
reimangardens.com

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