

Gardening Climates of Bannock County

Most Bannock County residents live between 4400' and 4800' elevation. However, within this small elevation range there is greater variation in climate than might be expected.

Mountains, canyons, hills and slope direction all influence temperature to a far greater extent than does actual elevation.

In addition, microclimates dot each location and each yard and garden. A south slope or the south side of a house may be much warmer than a north slope or north side of a house that may only be a few feet away.

Important numbers to know from climate data:

From Pocatello Airport Weather station

- **Average frost-free days** 127
- **Average date of last spring frost** **May 16**
- **Average date of first fall frost** **Sept. 20**

The average number of frost-free days within the city of Pocatello itself is greater than the airport weather station and varies from 130 to 161 days.

Other areas of Bannock County, such as Marsh Valley, will have variable frost-free seasons, but usually they are shorter than Pocatello. Mountain areas can have much shorter growing seasons but vary greatly from one area to another.

When to plant vegetables

The frost-free season is important for warm weather vegetables such as tomatoes, corn and beans, but gardening can occur in this area through a far longer period than just the frost free period. Many vegetables can be planted in March as early as the ground thaws.

Others can be planted in late summer to be harvested in fall well into November. A handful of less common vegetables, mostly salad greens, can even be harvested all winter given the right conditions and the right planting site.

Soil temperature is critical

One of the most important factors when considering when to plant a particular vegetable is soil temperature. Vegetables each have a certain minimum temperature for germination. Below it, they will not sprout. In addition, planting vegetables in soil that is too cool for good growth can stunt the plant for much of the rest of the season. Soil temperature can vary greatly within one yard. Raised beds and south facing walls or slopes warm up the fastest and remain warmer all through the season.

Data on average soil temperatures is difficult to find but the following are some average numbers for the Pocatello area.

Average soil temperature at a 4-inch depth:

- **Mid-March**—38° to 41°
- **Mid-April**—46° to 48°
- **Mid-May**—58° to 59°
- **Mid-June**—68° to 71°
- **Mid-July**—77° to 79°
- **Mid-August**—75° to 77°
- **Mid-September**—65° to 67°
- **Mid-October**—52° to 55°

Examples of seed germination at certain soil temperatures—number of days from planting to seedling emergence

	41°	59°	66°	77°
Beans	**	16	11	8
Beets	42	10	6	5
Carrots	51	10	6	6
Corn	**	12	7	4

In general, warm weather vegetables such as beans, corn, squash and tomatoes will not germinate at all with cold or cool soil temperatures. In addition most are intolerant of frost.

Artificially warm soil for cool weather vegetables

Cool weather vegetables—such as beets, carrots, lettuce and peas—will germinate at cooler soil temperatures, but the germination will be slow. Cool weather vegetables will grow in cool temperatures and cool soils so a key is to artificially warm the soil so germination will occur earlier. The soil can be warmed up with plastic mulches (clear is better), panes of glass and other methods. Cool season vegetables planted in late summer or early fall will germinate rapidly and grow and be harvestable into November.

Problems with cold hardiness zones—Pocatello is Zone 5

The most commonly used method for measuring the cold hardiness of trees and shrubs is the USDA Cold Hardiness Map. This map divides the country up into zones with similar winter temperatures and attempts to match plants with the coldest zone in which they will grow well. Unfortunately this system of zones and map is not understood or used correctly by the vast majority of persons who attempt to use it.

Pocatello is clearly in Zone 5 based both on the map and on the average annual low temperature. The weather station at the Pocatello airport averages right in the middle of Zone 5 while most of the area of Pocatello itself is warmer and on the warm end of Zone 5. Other areas of Bannock County may not be mapped accurately because no weather station data from Bannock County was used when the map was made. The mapping of much of Bannock County into Zone 4 was mere guesswork because of this lack of weather data.

By far the single greatest problem with the hardiness zones and map is that there is no official or correct zone rating for any plant. Anyone can assign any zone rating to any plant they want. As a result a given plant may be found with several different zone ratings. When a plant is rated as hardy for a particular zone but it doesn't survive cold winters, it probably means the plant wasn't rated accurately.