**High Altitude Gardening Insights**

People who live in the high country enjoy being closer to nature, star gazing and embracing many of the convenient outdoor activities that symbolize Colorado living. They plant gardens too. There are challenges at high altitudes including soil conditions, strong sunlight, cool nights, low humidity, drying winds, wildfires, and wildlife. With purpose and planning, the plant possibilities come to life.

For this article elevations over 7,500’ will be considered high altitude. Anyone living below this elevation can follow along, just allow for more frost-free days. Generally, over 7,500’ there are 90 frost-free days from mid-June to mid-September.

Annual ornamental plants and edibles, which include vegetables, herbs and small fruit are ready for harvest in one short three-month outdoor growing window. Many perennial plants, including trees and shrubs, thrive from year to year at high altitudes. Native plants are smart choices because they are already adapted to the tougher high altitude growing conditions, many are fire-wise, pest and disease resistant.

**Plant Hardiness Matters in the Mountains**

Learn the plant hardiness or growing zone of plants you wish to grow. Zones are based on the average annual extreme minimum temperatures. Garden Centers of Colorado helpful staff can assist you with this information, or type in your zip code from the USDA Hardiness Map—<https://planthardiness.ars.usda.gov/PHZMWeb/>. The lower the zone number designation such as Crested Butte at 9,000’ (3b), the more cold-hardy perennial plants need to be for the area. Choose perennial plants that are hardy in zones 2, 3 and 4 based on your growing zone.

Unlike perennials, annual plants which includes ornamental flowering plants and most edible vegetables need to be re-planted every year.

**Sun, Location, Wildlife**

Plants vary in their sunlight needs even at high altitudes. Annual coleus and perennial hosta grow fine in mostly shade. Plants like pansies and edible leafy greens need a minimum of three to four hours of sun a day, while marigolds and green beans need six or more. Choose plants based on their sunlight needs which is indicated on the plant tag, or ask for assistance matching plants to your sun exposure and location. The sunniest and warmest areas of landscapes are south and west facing. Low spots and valleys will be the coldest since cool air sinks.

Finding a warm spot in your landscape, also known as a microclimate, near a wall structure or rock formations can be warmer for plants and offer protection from winds. Containers on a patio, deck or entryway might be the best site for annual plants (both ornamental and edible).

Raised beds are another option. They solve the problem of poor soil structure at high altitudes, which range from heavy clay to sandy decomposed granite. Plants growing in southern exposed raised beds will warm up the quickest in the spring and can get damaged by late spring frosts unless protection is provided. Keep covers, cloches and frost blankets close at hand for cold nights.

Use wise judgement and avoid planting too early in the season when nights are consistently in the 30s and low 40s unless covering.

Plant protection from critters is an ongoing challenge for many gardeners at high altitudes. Plan accordingly with proper fencing to keep them out or plan on using hardware cloth or cages for plantings including annual vegetables.

**A Short List of Plant Suggestions**

Annual ornamental flowering common name plants—zinnia, sunflower, marigolds, snapdragon, pansies, petunias and verbena, sweet peas, anagallis and many more.

Perennial ornamental common name plants, including native plants—bell flower, blanket flower, bleeding heart, coneflower, corn flower, columbine, delphinium, hardy geranium, fringed sage, yarrow, iris, coral bells, lupine, hosta, bee balm, catmint, peony, poppy, pasque flower, sedum, wallflower, prairie smoke, blue flax, wood’s rose, pussy toes, kinnikinnick, and many more.

Annual Leafy Greens—lettuce, arugula, spinach, kale, mâché, Swiss chard, endive, collards, cabbage, radicchio, turnip greens, water cress, beet greens.

Annual Root Crops—radishes, carrots, beets, turnips, rutabaga, kohlrabi, potatoes, leeks; Other—broccoli, cauliflower, peas, Brussels sprouts, suggest starting by seed indoors or purchase starts from your Garden Center of Colorado.

Tomatoes will need additional warmth and protection—look for short season varieties bred for cold areas, and grow in a tall cold frame or tunnel, greenhouse or Wall o’Water™.

Annual Herbs—dill, parsley, calendula, chervil, fennel, borage, nasturtium, and more. Basil, scented geranium, and cilantro need more warmth, grow in containers in the sunniest location and bring indoors or cover at night.

Plant garlic cloves (planting stock) in early September in the sunniest area, amended soil, harvest the following summer.

Perennial Herbs—horseradish, French tarragon, chives, look for the hardiest mint varieties. For less hardy herbs try growing in containers for the summer—rosemary, lavender, hyssop, sage, thyme, oregano, bay laurel.

Small Fruit Shrubs—Northern delight honeyberry, goji berry, dwarf cherry, Nanking cherry, currant, gooseberry, jostaberry, serviceberry, elderberry, buffaloberry, chokecherry and chokeberry grow well at high altitudes. Look for short season adapted varieties of raspberries, strawberries, and grapes.

Find additional information and all your plant and accessory needs at your local Garden Center of Colorado.

Betty Cahill is a freelance writer and garden instructor. She’s written the popular garden "Punch List" column for the Denver Post for eight years. Betty has been teaching gardening classes around the metro area since the early 2000s. For additional gardening tips, information, and garden stories, follow her on her blog at <http://gardenpunchlist.blogspot.com/>.

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