

Looking for winners in your

Casper demonstration gardens invaluable resource to identify plants suited for our climate

By Donna Cuin

University of Wyoming Cooperative Extension Service (UW CES) educators in Natrona County faced a dilemma for many years when asked to recommend plants for home landscapes.

Many plants are recommended for this USDA growing zone (4b); however, year after year, educators were seeing the same disease, pest, and environmental problems in these traditionally recommended landscape plants due to our challenging climate.



Grasses can provide a natural feel and multi-season interest to the landscape.



These drought-tolerant adapted species thrive in the hottest and driest part of the garden.

Clearly, better-adapted plant choices were needed.

A testing ground was needed to find those plants. In 2000, space around the Agricultural Resource and Learning Center, 2011 Fairgrounds Road, was chosen as a trial and display area. This location not only has easy access, it is open to the public year-round. The plants chosen for the garden are either native plants or plants with landscaping potential from regions of the world with similar climatic conditions to central Wyoming.

Garden Mimics Wyoming Conditions

The garden has a variety of plant groupings. One area of the garden mimics the transition area between ponderosa forests and local mountains. Another represents grasslands sprinkled with wildflowers. Some of the most successful parts of the garden are those of near-desert conditions with full western sun and southwestern wind exposure. Only the most drought- and heat-tolerant plants survive in these areas.

The gardens were created to minimize watering and fertilizing. The majority of the plants are watered a maximum of six times per growing season. A few plants receive more water. These are grouped together to increase watering efficiency.

landscapes?



Choosing plants with a variety of heights and shapes can add interest to your landscape.

Water, Fertilizer Requirements Considered

The native and adapted landscape plants in the demonstration garden usually survive and even thrive in our roughest weather conditions. They usually don't require the large amounts of water (often costing hundreds of dollars) and the fertilizer applications needed for more traditional landscapes in our climate.

Choosing plants that require little or no fertilizer is important in our region due to our abundance of poor soils (often low in organic matter and nitrogen). The soils are relatively new geologically speaking. Our mountainous rock formations are breaking down over time, and they become distributed across the plains by various transport methods. Unlike many Midwestern and eastern soils, Wyoming soils have very little organic matter because of the relatively small amount of plant material that has grown and then decayed over and within them over time.

Whether soils are clay-textured or sandy, these soils are often low in nutrient content. The plants in the garden are adapted to these poor soil conditions. This is also an important characteristic as excessive fertilizing in traditional landscapes has contributed to water table pollution in many communities across the West. Homeowners can see



The white blossoms of the mock orange have an orange scent.

that landscapes planted with native and adapted plants will thrive in poor soils without fertilization.

Here Are Some Wyoming Stars

Plants at the garden range from groundcovers and flowering perennials to shrubs and trees. Here are a few examples of plants that thrive in the garden.

Mock orange is a native shrub identified on the Lewis and Clark Expedition across the West. The variety Cheyenne (*Philadelphus lewisii*) developed at the Cheyenne Horticulture Research Station (presently the USDA's High Plains Grasslands Research Station) near Cheyenne survived more than 20 years without supplemental irrigation. This shrub has a wonderful vase shape and broad pear-shaped leaves that are slightly hairy and bright to dark green in color. Its most striking characteristic is its large, 1½-inch stark white blossoms, which have a lovely orange blossom scent. The plant is also beautiful in winter when the snow collects on the bare reddish brown branches. Mock orange is a win-win for any Wyoming gardener looking for a white-blossomed shrub with fragrance and multi-season interest.

Characteristics: Hardy to 8,000 feet. Mature height 6 to 8 feet. Mature width 6 to 8 feet.



The pinion pine is a drought-resistant and self-reliant tree.

Pinion pine (*Pinus edulis*) is a tree native to the southwestern corner of Wyoming and much of the southwestern United States. This tree epitomizes drought-resistant, self-reliant trees. The needles are a bright-green color and have a thick waxy coating that helps them hold onto water in droughty conditions. They can grow somewhat faster when given supplemental water. However, these plants do not do well if planted too close together or when overwatered. Trees should be planted the mature diameter apart from each other. For example, the trees should be planted at least 30 feet apart if they will measure 15 feet from center to the end of branches. They are not usually susceptible to many garden diseases unless overwatered or fertilized. An additional benefit of adding one of these trees to your landscape is the fruit or seeds. Pine nuts from the pinion are a delicacy for snacking and for recipes such as pesto sauce for pasta or sandwich spread. This pine tree has a globe shape instead of the conical shape expected from pine trees. The needles are quite dense, and the branches of green needles are a nice seasonal addition for the winter holidays.

Characteristics: Hardy from 4,000 to 8,000 feet. Mature height 12 to 20 feet. Mature width 12 to 15 feet.

Russian Hawthorn (*Crataegus ambigua*) is a relative of several native trees. This variety is an import from an area of the world very much like ours – the Russian steppe region. Hawthorns have a characteristic that makes them a plant well-suited to some landscapes. For those who do not like landscape plants that drop messy fruit on their sidewalks and decks, Hawthorn is a good choice. The fruit is persistent on the tree, meaning it does not fall and make a mess. The shiny, cranberry red fruit is very attractive in the winter months, which makes a wonderful contrast to the snow caught on the branches of this tree. One aspect to keep in mind is that it does have thorns about $\frac{1}{2}$ -inch long. This tree will often grow into a gnarly or bonsai type shape and adds an additional point of interest to the garden.

Characteristics: Hardy to 9,000 feet. Mature height 15 to 25 feet. Mature width 15 to 30 feet.

Stop by the gardens to discover hardy plants that will suit your landscape. Basic information and pictures about a wide array of plants in the ARLC gardens are available in a new UW CES guide at barnyardsandbackyards.com *WyoScape Xeric Demonstration Garden Guide* on the Resources-Landscaping page.



Red fruit provides a dramatic contrast to snow on this Russian Hawthorn.

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