
Missoula County

Integrated Plant Management

FACT SHEET NO. 4

Choosing Appropriate Plants for Missoula

As most gardeners know, Missoula County is not an easy place to grow plants. Not only do they face cold, dry conditions but they also must tolerate temperature extremes and winters that entice them with periods of warm weather --- just before blasting them with a frigid spell!

Missoula County's average annual minimum temperature ranges from !10EF. to !30E F., and some parts of the county experience the lower range more frequently than others! Our average annual precipitation is 12 inches to 15 inches. Again, some parts of the county rarely experience more than 12 inches. Plants that are genetically adapted to these cold, dry conditions are less likely to display the stress symptoms that are often mistaken for disease. Adapted plants require fewer cultural inputs such as irrigation, fertilization, and the use of certain pesticides.

What kinds of plants are adapted to Missoula County=s conditions?

First, they are hardy to the coldest temperatures we are likely to experience (Zone 4).

Second, they are tolerant of dry periods, especially during July and August, unless supplemental irrigation is given.

Third, they will have some tolerance to high-light conditions (unless shade is provided), desiccating winds (unless protection is provided), and light frosts. We have a very short growing season. Some years there are only 90 days between spring and fall frosts, and if it is extremely hot in July, plants may shut down at that time, decreasing the seasonal span of active growth even more.

Plants not adapted to these conditions usually require higher maintenance and greater input of resources such as water. There are many terms for low-water use and low-input landscaping. They include **Xeriscape, Water-wise, Native, and Wild.**

Xeriscape usually refers to the conservation of water through creative landscaping, and the choice of plants tolerant of Axic@, or dry conditions.

Water-wise landscaping means just about the same as xeriscaping, both using soil amendments, mulches, and designs to con-serve water. They also utilize plants that are adapted, but not necessarily Anative@, to a particular area.

Native landscaping refers to the use of plants that have evolved or are found naturally in a particular region or micro-site. Not all native plants are tolerant of dry conditions. Some may be adapted to the cool, shaded, moist areas along the stream- banks. Some

plants (often referred to as (*Wild*) are native to an area of the U.S. but not necessarily to western Montana.

Wild landscaping utilizes plants that have not been selected by plant breeders and horticulturists for particular traits, and thus may have retained many of the genes that allow them to tolerate difficult growing conditions. Wildflower gardens are a popular example of this kind of landscaping.

Not surprising, it's sometimes difficult to fit a plant strictly into one of the foregoing categories. For example, a plant that is native to Colorado may be better adapted to certain landscape situations in Missoula County than a native Montana plant. On the other hand, some plants that are wild and native to other areas of the west may be invasive and weedy in Missoula.

Some plants, such as garden vegetables and many types of fruit, are not well adapted to our cold, dry, short-season conditions. However, there is significant variation among vegetable and fruit cultivars. It is possible to choose cultivars that are better adapted to our conditions. Unless you plan to extend the growing season with row covers and/or plastic mulch, it is a good idea to choose cultivars that will mature as early as possible. Also, choose cultivars that are adapted to our cooler night temperatures.

Since fruits trees and berries are perennials, it's important to choose fruit cultivars hardy to Zone 4 or if you have a protected area, Zone 5. Cultivars that will ripen before the middle of October are the best choice because we experience temperatures in early October cold enough to severely injure or freeze fruits crops that are not ready for picking. For example, the apple cultivars *Rome* and *Granny Smith* ripen too late to dependably produce a crop here.

Another thing to keep in mind when choosing fruit and vegetable cultivars is their resistance to pests. Many disease-resistant cultivars of the most popular fruits and vegetables are available. Some apple and crabapple cultivars are resistant to Fireblight, a disease that causes both sunken and dark cankers on branches, and wilted terminal shoots that blacken and die. Some cultivars are tolerant of particular insect pests and some are not. For example, most of the white barked birches, such as Paper, are susceptible to bronze birch borer, the insect that girdles trunks and eventually causes the trees' death. But River birch appears to be tolerant of this borer. Some cultivars with vigor and/or root development allow them to more successfully compete with weeds. So, consider pest resistance, as well as hardiness and water requirement, when choosing landscape plants.