

## Five Benefits in Klamath Basin Gardening

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Cold summer nights, frost any time, long summer droughts- gardening in the Klamath Basin entails a unique set of challenges that often catch transplanted gardeners off guard. Helping gardeners understand those challenges and how to work around them with research based, sustainable practices is what the OSU Extension's home horticulture work is largely about.

Just as every climate and gardening region has a unique pallet of plant disease and insect challenges related to the plants found in that area, each gardening region has elements to celebrate. This week we will examine some of the sometimes unacknowledged benefits of gardening in a region like the Klamath Basin.

**Fewer disease issues.** Whether standing water on a leaf or high relative humidity, available moisture is a key component for a plant pathogen (i.e., fungus or bacteria) to gain traction within a plant and cause disease. Dry air, frequent wind, and lack of precipitation during the active growing season all serve to reduce disease pressure in our Klamath gardens and farms. In recent years, spring 2019 stands out as having increased challenges with disease, most notable *Verticillium* wilt and powdery mildew. These outbreaks occurred when significant rain coincided with temperature ranges conducive to *Verticillium* and powdery mildew pathogens. Summer disease issues are rare here, when compared to areas with more summer moisture. Plant disease is often difficult to treat once symptoms are apparent, and some diseases can persist in the soil for years: reduced pressure from disease is a blessing.

**True, noticeable seasons.** Recently, the mountains surrounding Klamath Falls seemingly went from green to brown overnight, signaling the end of spring wildflowers and the onset of long, dry summer days. Those will be followed by "rabbitbrush season", also known as fall. In warmer climates, seasonal changes are less noticeable: for example, trees don't have good fall color in years there aren't enough cool nights to support color development in the leaves. Other places don't get to enjoy the beauty of snow, or the breath of relief when the first spring flowers start to emerge and renew the landscape. Those long, cold winters kill off a significant amount of disease residue as well as overwintering insects and insect eggs.

**Fall re-bloom.** Pansies, snapdragons, and sweet Williams are all examples of flowers that bloom best in classic spring and fall weather with warm, sunny days and cool nights. These plants will go almost "dormant" during the hottest part of the summer here, but can be cut back to re-grow- and re-bloom when the days shorten in fall. In many climates, these cool season plants burn to a crisp over the summer, leaving no energy for a second show of fall bloom.

**Fewer insect generations per growing season.** Most insect development happens when temperatures are warmer than about 50F, varying with the particular species. Entomologists can predict a particular insects development using calculations built on "degree days", the amount of time temperatures are above this threshold in a given season. An insect species may have multiple generations per season in areas with abundant warm weather, while places with short growing seasons like the Klamath Basin have fewer "degree days" and therefore less time favorable for insect development. For instance the Brown Marmorated stink bug, a newly emerging pest in Oregon, takes 40-60 days for development. The

twenty day variation is dependent on temperature and day length. In most parts of Oregon, this pest will have one or two generations per year, while in the extreme Southern US, three or possibly four generations per year may occur. Although exceptions do occur, lack of abundant degree days in our area means many insects don't have enough warm weather to build up severely damaging populations.

**Comfortable gardening weather.** In the coastal Southern US, it is not unheard of for temperatures to start hitting triple digits in May- and to not drop below 80F for months at a time. While such warm temperatures are appropriate for a wide range of interesting tropical plants, the same is not true for Southern gardeners, who are often forced to rise at ridiculously early hours in vain attempts to "beat the heat" and conduct productive gardening. Klamath gardeners are fortunate to have cool mornings and evenings to enjoy gardening activities sans "glistening".

Possibly, Klamath gardeners enjoy fewer insect and disease problems as a tradeoff for the other challenges associated with gardening here. An integrated pest management program calls for gardeners and farmers to walk their gardens regularly, scouting for pests in order to catch problems as early as possible. Here in the Klamath Basin, scouting is still important- but perhaps entails fewer walks looking for pests and more frequent checks of the weather to prepare for temperature dips.