

## HORTICULTURE IN CENTRAL OREGON

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Deschutes, Crook and Jefferson County Extension offices receive numerous requests from individuals moving to the area who are unfamiliar with our climatic conditions. A majority of these requests ask for information with regard to adaptability of trees, shrubs, vegetables and other horticultural plants. This outline is meant to supplement other publications in more specific subject matter areas as they apply to Central Oregon.

The other publications covering this subject are, "Trees for Central Oregon", published in 1973, revised in 1976; "Shrubs for Central Oregon", 1974, revised in 1976; "Home Garden Vegetable Production", 1973; "Perennial Flowering Plants 1959. In addition to these publications a mimeograph describing the climatic conditions in Central Oregon is also available.

Trees and shrubs selected for the Central Oregon area should be those that are sufficiently hardy to withstand one of the most severe climatic conditions in the United States. The Central Oregon climate, for the most part, is relatively dry and temperature extremes are not uncommon. Natural precipitation varies from about 8.5 inches per year at Redmond to between 15 and 18 inches as you go toward the Columbia River or south, approaching the influence of the mountains. Most of this precipitation falls during the wintertime season. Many of our days, even through the wintertime season, are open and sunny, which gives an erroneous impression to newcomers to the area that our climate is more mild than it actually is. Minimum temperatures have, on a number of occasions, fallen to as much as 35° below zero during cold snaps in the winter season. The maximum low during the winter is not the major concern with plant production. Our spring months and fall months do not warm and cool gradually. Seventy years of weather records indicate that we can expect frost in Central Oregon any day of the year. The temperature fluctuation oftentimes will cause plants to bud and begin growth early in the spring only to be damaged by the frost occurring later on. For the most part, we enjoy approximately 90 days of growing season which occurs from June 1 until September 1. Central Oregonians have come to learn that frequency of frost occurs through the month of May at a high enough level that lawns and gardens are normally planted in the last week of May to the first week in June.

A further limitation on warm weather crops is our summertime nighttime temperatures. While nighttime averages may hold in the 40's, there are a significant number of nights that will drop into the 30's during our growing season. These cool nights place limitations on warm night-loving crops such as squash, lima beans, egg plant, peppers, etc.

In general, conditons can be expected to be slightly more severe on the east, south and west sides of Bend, as you move out into the high desert or close to the mountains. Climatic conditions can be expected to moderate slightly as you move into the lower areas of Culver and Madras.

Root vegetables such as carrots, beets, turnips, potatoes, rutabagas are generally more successful. Corn may fail to make a crop one out of three years in the more severe parts of Central Oregon. Tomatoes usually require some artificial protection for overall success.

Fruit trees, in general, are not successful in Central Oregon. The tree as a plant will grow satisfactorily but most fruit trees blossom too early in the spring for successful fruit production. Usually frosty nights damage the one out of five years when we are fortunate enough to miss the spring frost. However, sour cherries are more dependable bringing fairly regular yields. Peaches, sweet cherries, and apricots are highly unlikely producers. Pears may produce on an average of one out of every six or seven years. There is reasonably good success with both raspberries and strawberries.

Areas south of Bend, towards Fall River, Pringle Falls, and La Pine experience even more drastic contrasts in weather patterns. In general, the growing season is slightly shorter and nights are cooler in spite of comfortable warm days.

Much of the soil in Central Oregon is of a sandy loam or course texture. Some soils are of pumis type. All of these have relatively low water holding capacities which means that frequent, light irrigations are good. The soil test will show relatively low nutrient levels which means most nutrients must be added either through manure or chemical fertilizers. Again, frequent, light applications of fertilizers will give best utilization. These soils will vary from slightly acid to slightly alkaline. Most of the soils fall into a acidity range that is quite acceptable for vegetable production and most trees and shrubs. Acid-loving plants would need soil modification in order to do well.

Close observation of plant materials growing natively should give growers some indication of plant material adaptability. Most native plants grow in soil of slight acid to slightly alkaline range. Most have deep tap roots to take advantage of moisture contained throughout the soil horizon. Most are somewhat drought resistant or have a very short life cycle which allows them to grow with limited amount of natural moisture contained in our soils.

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Revised, 1976.