

What are conifers?

The name "conifer" comes from Latin and means "to bear cones." Although cones are a common feature of most conifers, junipers and yews are two exceptions that produce berry-like fruit.

The best method of identifying a conifer is to look at the leaves. Conifers are usually evergreen trees or shrubs with linear, needle-like or scale-like leaves, though some such as larch and cypress drop their leaves in autumn.

Among the conifers are some of the smallest, largest and oldest living woody plants known. The more than 500 conifer species are distributed worldwide and are invaluable for their timber as well as their adaptability as garden plants for year-round interest.

Conifers in the landscape

The diversity of available conifers for the landscape is tremendous. Nurseries and plantspeople around the world are devoted to the discovery and introduction of new selections that vary in size, form, color and texture. There has been special interest in the group of conifers classified as "dwarf conifers." One definition of a dwarf conifer is one that fails to attain the size and stature of the parent plant.

Conifer sizes

From massive forest giants to miniscule mounds of elegant foliage, the appropriate size will depend on the landscape situation. The typical landscape today is limited in space, making size an important issue when choosing plants. The American Conifer Society has adopted, as a relative guide, the following four size categories for conifers:*

<u>Category</u>	<u>Abbreviation</u>	<u>Growth per year</u> ¹	<u>Approx. size at 10 years</u> ²
Miniature	M	< 1" <2.5 cm	< 1' <30 cm
Dwarf	D	>1" to 6" >2.5 cm to 15 cm	>1' to 6' >30 cm to 1.8 m
Intermediate	I	>6" to 12" > 15 cm to 30 cm	>6' to 15' >1.8 m to 4.5 m
Large	L	>12" >30 cm	>15' >4.5 m

¹ Size may vary due to cultural, climatic and geographical region

² Refers to growth in any direction

Conifer forms

The form most commonly associated with conifers is the familiar conical shape of Christmas trees; yet, for the landscape, the range varies from the vertical form of tall columnar plants to the horizontal form of flat ground covers.

1. Globose: globe-like or rounded in general outline.
2. Pendulous: upright or mounding with varying degrees of weeping branches.
3. Narrow upright: much taller than broad; includes plants referred to as fastigiate, columnar, narrowly pyramidal or narrowly conical.
4. Broad upright: includes all other upright plants with do not fit into categories 1-3.
5. Prostrate: ground-hugging, carpeting plants without an inclination to grow upward.
6. Spreading: wider than tall.
7. Irregular: erratic growth pattern.
8. Culturally altered: pruned or trained into formal or imaginative shapes, such as high grafts or standards.

Conifer colors

Garden conifers come in a rainbow of year-round colors that can be used effectively with companion plants. Many are shades of green, yellow, orange, blue, lavender or purple, while others are bicolor and have variegated foliage with patterns of stripes, spots and patches.

Many go through seasonal color changes and provide interest in the winter landscape. In the spring, lighter shades of new growth contrast against the darker older foliage. In some cases, new growth emerges not just as a lighter shade but as a bright yellow or red, rivaling any floral display. Some even display two colors of needles. On other conifers, the cones and seed-bearing fruits are brightly colored and decorative during certain seasons of the year.

How to use garden conifers

The landscape uses are limited only by the imagination. The strong silhouettes of many compact, slow-growing conifers can accent a corner of a garden bed, frame a doorway or add winter interest to perennial and annual flower beds.

Use conifers in foundation plantings, borders or island beds with other shrubs. Plant a mixture of different conifers, blending the various textures, shapes and colors, for a unique low-maintenance landscape.

Use large specimens amid expansive lawns and miniature specimens to view up close in containers, troughs or rock gardens. Don't forget that conifers are also stalwart hedging and windbreak plants.

Pruning conifers

The natural growth pattern of a normal or dwarf evergreen is a large part of its charm. When the wrong plant is selected or the right plant is not maintained properly, this charm may be lost as the conifer grows too large for its assigned space. At this point, you must choose between pruning, moving or removing; often removing and replacing the plant is easier. Some evergreens can be severely pruned while others cannot. In most cases, severe pruning will destroy the conifer's natural charm, although some plants may recover over time.

Yews and hemlocks are the easiest to control. Both have abundant buds on old and new wood; these develop into twigs when the wood above is cut. Since they can be sheared heavily without permanent harm, they can be used as hedges. The leaves tolerate some shade, so they grow well on the inside of the plant and allow for shearing or pruning.

Pruning in the spring just before the new growth begins allows the pruning cuts to be covered with new growth very rapidly, preventing the "just sheared" look.

Firs, cedars, spruce and Douglas firs are also easy to manage. These have visible buds along the current season's growth; some also have buds along the stems of the previous year's growth. Control size at any time by pruning back to a bud. For a formal shape, prune or shear when the current season's growth is soft. These plants' leaves tolerate some shade, so pruning and shearing can potentially produce a dense plant.

Take more care with pines. When pruning pines, be aware that pines lack buds along the stem. Buds are only present at the tip of the current season's growth, so the time to prune pines is in the spring. Soft new growth, called a "candle," can be cut or pinched before the needles are fully elongated, and buds will develop from needle fascicles below the cut. This type of spring pruning or "candling" will produce a compact plant. During the rest of the year, prune carefully or you may damage the plant's shape.

Junipers, arborvitaes and falsecypress (Chamaecyparis) are the most difficult to maintain at a particular size. This group's buds are present only where there are green leaves; a branch cut back to a non-leafy region will not produce new foliage. If you shear one of these plants, do so carefully while it is actively growing in the spring. The naked brown interior indicates that the leaves are intolerant of shade. Each plant in this group forms a thin shell of green growth surrounding a zone of leafless twigs and limbs. Take care not to open this shell during pruning, since the unsightly scar may not be covered for many years.

Pruning Pines Best in Late Spring

MANHATTAN, Kan. – Healthy pines in landscapes may be pruned to control their shape and size and late spring is a good time to get the job done, a Kansas State University horticulturist said.

"Pines grow by putting out a thick shoot from the terminal end of each branch in the spring," said Ward Upham, K-State Research and Extension Horticulture Response Center director. "This new growth is called a candle."

Recognized by the arrangement of their needles, pines enclose needles in bundles rather than each being attached individually to the branch. The most common pines have bundles of two, such as Austrian, mugo and Scotch; three such as ponderosa; and five such as white. As the candle matures, new needles pull away from the candle and start to elongate. Kansas pines normally are pruned in late spring when the candles have made full elongation and new needles are starting to pull away.

"By cutting these candles back one- half to two-thirds, we can help control the height and width of the trees," Upham said. "This also encourages denser growth."

The central leader at the top of the tree can be cut back to 12 inches and side laterals cut to maintain a pyramidal shape, he said. Hand clippers rather than hedge shears are recommended because they are less likely to damage new, expanding needles, he said.

"Pines do not react well to severe pruning because they normally do not produce new buds on old wood," Upham said. "Therefore, cutting back pines past the candles can leave a

deformed tree that will not fill in."

Since removal of needles and branches will slow the trees' growth, do not take too many branches at any one time. To maintain adequate growth, leave two-thirds of the trees' height with branches. Pruning of dead branches can help ventilation. It also improves the aesthetics of the plant. Careful pruning of pine limbs helps reduce damage from blister rust and pests. With proper pruning, trees grow fuller and height increases at a slower rate.

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