Aleppo Pines growing in southern Nevada are susceptible to Aleppo Pine Blight. Some years the occurrence of the disease is widespread, other years it may be difficult to find the disease. Fortunately, it is not found on other pines commonly growing in the area.

**Cause:**

No known organisms cause the disease. It is associated with dry soils and cold, drying winds.

Not all plant diseases are caused by organisms. Disease may occur because moisture is not available to tissues; consequently, they malfunction or die as a result. Excessive evapotranspiration, the loss of water from needles, is very high for pines growing in Nevada. Water loss is caused by:

- high light
- increased temperatures
- wind
- low relative humidity.

Whenever the amount of water lost through evapotranspiration is greater than the amount of water taken up by the roots, then plant water stress occurs. If excessive or prolonged, disease occurs and tissues die.

Poor management of the root environment leads to root death or at least to root dieback which reduces the plant’s ability to meet the demand for water even under mild climatic conditions. Avoid:

- soil compaction
- over, under, irregular or no irrigation
- poor drainage
- ponding of water at the tree's base
- excessive soil heating and drying
- over fertilization.

These factors reduce the capacity of the roots to supply water to the rest of the tree and greater stress occurs within the tree encouraging disease. Physiologically the tree responds with needle discoloration, drying and needle cast. Eventually limb dieback occurs. Invading insects and diseases readily attack weakened trees and finally the trees succumb.

**Symptoms:**

- Chlorotic or yellow-green needles turn tan or straw-colored, dehydrate and die on one or more branches or the entire tree in November-December or March through May.
- Affected needles remain on the tree for several months.
- Growing tips may or may not die back. In severe cases, the entire branch dies.
Control:
Maintain a uniform water supply to Aleppo Pines all year. Adjust the amount of water supplied to meet seasonal conditions and plant water use. Do not allow water stress to occur.

Eliminate caliche, hardpans or other causes of poor drainage with deep ripping (18 to 24 inches) prior to planting. Trees in poorly drained soils are very susceptible to this disease.

If drainage is poor under existing trees, vertical mulch the area and regulate the quantity of water applied to prevent ponding (Fact Sheet 93-87, Vertical Mulch for Healthier Trees and Shrubs).

Water Aleppo Pines deeply, wet the soil at least three feet deep. Irrigate infrequently, every few weeks, in winter and weekly or twice weekly in summer, depending upon the soil and climatic conditions. Clays or very organic soils hold more available moisture than sandy soils which dry out quickly. Hot and dry winds create great tree water stress.

Maintain a moderate nitrogen levels to the trees. Do not over fertilize Aleppo Pines. Apply ¼ cup of a low-analysis, quick-release, nitrogen fertilizer (<20% nitrogen) for each inch of trunk diameter measured 4½ feet above the ground. Apply one-half the fertilizer, usually in March, two weeks before new shoots grow. Apply the second half in May. Do the same to any tree with a history of shoot growth in the fall, but do not apply the second half of the fertilizer. Trees should not enter winter growing rapidly.

Distribute the fertilizer over a large area of ground beginning three feet from the trunk and extending several feet beyond the ends of the branches. Water the fertilizer into the ground with a good soaking. Do not fertilize if water is not available; doing so causes additional stress to the tree.

If the tree is growing in a lawn, supplement the regular application of fertilizer for the grass with the recommendation above. It may be necessary to make the application with a soil injection applicator or liquid fertilizer injector. Otherwise the turfgrass will use the nitrogen before the tree roots can take it up.

In new plantings, dig the planting hole 3 to 5 times as wide as the nursery container or root ball and as deep as the tree’s root ball. Always plant the top of the root ball at grade or slightly higher, one inch or less, to prevent water from accumulating around the base or crown of the tree. Provide for drainage of excess water where soils do not drain by installing a professionally designed drainage system in the landscape. Do not put gravel in the bottom of the planting hole as this does not improve drainage. A gravel layer prevents water from draining out of the planting hole creating saturated soil in the root zone. Waterlogged soil deprives roots of oxygen. Carbon dioxide builds up, roots die back, and root rot organisms invade the weakened roots.

Mulching roots with 2 to 3 inches of coarse organic matter prevents root damage from high and low temperatures and excessive drying conditions. Keep the mulch 8 to 12 inches away from the trunk to prevent disease problems at the crown.