

EVERGREEN NEEDLE LOSS HEAVY

Unusually heavy needle loss is being seen on narrow-leaf evergreens throughout the midwest.

Evergreens are so named because of their habit of keeping leaves (needles) through the winter. However, according to James A. Fizzell, University of Illinois Horticulturist in Cook County, evergreens shed their needles on a regular schedule, sloughing off old ones as new ones sprout. Under normal conditions, the needles are produced in the spring and live two or three years. When sufficient new growth has taken place on the tips of the branches, these older needles in the center drop off, having served their purpose of photosynthesizing carbohydrates for the trees.

Arborvitae and white pine, for example, drop needles when the needles are two years old. They have a "needle life" of two years. Other trees have longer needle lives. That of the bristlecone pine is eight or fifteen years.

Normal needle drop occurs during late spring and summer and is usually not noticed because of the density of new growth hiding it.

During the last few weeks, University of Illinois Extension offices throughout northern Illinois have received a tremendous number of calls from distressed plant owners reporting browning and dropping of needles from all types of evergreens. Inspection of these plants reveals no diseases or insects but early senescence of one and two year old needles. In some cases even current years' growth is affected.

Fizzell says the plants have been exposed to tremendous stress since these needles were formed.

The summer of 1981 was very wet causing plant roots to suffer. The winter of '81-'82 was one of the most severe on record damaging exposed foliage. The winter of '82-'83 was so mild some plants had difficulty going dormant. The cold wet spring of 83 and the hot dry summer will go down in the record books.

It is no wonder the plants are unhappy, says Fizzell.

Although the trees have a large amount of browning, where the new needles are unaffected there is no cause for alarm. The buds at shoot tips will grow next spring improving the looks of the somewhat sparse trees.

Where shoot tips have turned brown and lost needles, the buds are most likely dead too, but don't prune out these limbs until next spring when you know for sure whether they will grow. If branches next to the dead limbs are healthy, they will grow into the voids left by pruning.

Plants under severe stress need special attention. They should be watered well if fall continues dry. If they are in poorly drained soil, some means of draining off excess water needs to be devised.

Make every attempt to avoid root injury.


Trees in exposed locations may benefit from treatment with an antidesiccant to reduce moisture loss from leaves.

Or, construct some sort of screen to protect exposed plants from winter sun and wind.

While plants under stress normally recover when conditions improve, spruce and pine are susceptible to attack by disease organisms under such conditions. Cytospora canker is the most damaging of these and can ultimately kill the trees. There is no cure for cytospora canker so it is important that the plants receive the necessary care to let them recover rapidly before the disease attacks.

**James A. Fizzell, Sr. Ext. Adviser
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