

Yard and Garden – 04-18-09 – Ted Griess / Extension Horticulture Assistant

When it comes to gardening, I often make reference to *windows of opportunity*. One such window is about to open.

Last year, throughout mid-to-late summer, I received numerous telephone calls from people asking what was wrong with their pine trees. Although an assortment of maladies can affect pine trees, this disease attacks mostly Austrian and Ponderosa pines which have reached 20 to 30 years of age. Homeowners were noticing that the tips of their pine trees were turning brown. The condition became obvious as the brown tips contrasted with the



remaining dark green needles. Interestingly, the initial damage was created in the early spring; however, it wasn't until mid-to-late summer when the symptoms became apparent. At that time, property owners not only wanted to know what was causing the problem but also its control. After informing them as to its identity, my final response was, "Wait until next spring for control." Spring has now arrived; it's the opportune time to treat the disease.

The disease is called Sphaeropsis, more commonly known as tip blight. Ironically, although spring is the opportune time to take corrective action, it is also the time for favorable environmental conditions to return and cause new outbreaks of the disease. Sphaeropsis is a fungal disease caused by the fungus *Sphaeropsis sapinea*. Keep in mind, treatment for most fungal problems is not a cure; rather it's a preventive measure. Spores of this fungal disease are dispersed primarily by rain splash. Infection requires moist conditions and high relative humidity, all of which appropriately describes spring weather in Nebraska. Infection of current-year shoots occurs from April to mid-June. New shoots are most vulnerable during the first portion of new growth, a time often referred to as candling. This growth usually takes place near the third to fourth week in April. When new shoots become infected, they stop growing and are stunted in length. As weather warms, the tissue dies, and the entire new tip turns brown.

Interestingly, infection of new shoots occurs in the absence of wounds, but older shoots and branches may become infected when tissues are injured by insects, hail or pruning. Disease severity can vary considerably among branches of the tree. Occasionally, after two or three successive years of infection, extensive damage can result in death to the tree.

Removing infected branches and tips through pruning will improve the aesthetic quality of trees but will do little to reduce disease spread.

Infection of new shoots can be reduced significantly with fungicidal treatment applied twice during the period when current-year growth is most susceptible. This period begins with the opening of shoot buds and extends for about two weeks. To provide optimum disease control, the first application of fungicide is typically made during the third week in April, (or when new growth begins) and repeated the first week in May. Fungicides applied after mid-May are usually ineffective.

Although a number of fungicides are labeled for this disease, only a few are made available for the homeowner. Commercial applicators, those licensed to apply restricted products, have a greater selection. In all cases, always read and follow label directions.

The following fungicides are available to the homeowner:

<i>Fungicide Active Ingredient.....</i>	<i>Trade Name</i>
Copper	Bordeaux mixture
	Liquid Copper Fungicide (Bonide)
Propiconazole	Ferti-lome Systemic Fungicide
	Spectator (by Lesco)

In addition to having limited fungicides available to the homeowner, having the proper equipment to apply the fungicide creates another problem. Keep in mind, when treating, all the needles of the tree must be thoroughly sprayed, and the fungicide must reach the top of the trees, often to heights of 40 to 50 feet.

To protect one's high-value pine trees from this disease, I urge people to seek the help of a professional applicator. Unfortunately, I've discovered there are few arborists in the Kearney area that treat trees. Most area arborists are great at pruning, cutting, removing and planting, but few offer treatments. If any reader knows of an arborist in the area who treats pine trees, please call or email me, so I can share this information with others.

If treating Sphaeropsis is your goal, be prepared to address that *window of opportunity*. Remember, it only remains open for a short time.