**What are Spruce Spider Mites?**

Spruce spider mites, *Oligonychus ununguis*, are among the most devastating pests of common varieties of spruce trees and other conifers. This pest is most active in the cool spring and fall when it feeds on the needles of conifers, causing a bronze or rust coloration to the needles and potential leaf drop. Their populations build up quickly, and by the time damage is visible in the summer, it may be too late for a treatment.

**Biology**

Spruce spider mites have several generations per year. Eggs hatch in early spring and young mites begin feeding on old foliage. Spruce spider mites will not feed on the current year’s growth until after it hardens off in summer. Spruce spider mites are active in the cool seasons of the spring and fall when the daytime temperatures are 60-70 degrees Fahrenheit. Activity eases in summer with the arrival of 90 degrees and resumes with cooler weather in fall. Female adults lay eggs on the bark of small branches until a hard frost occurs. The eggs overwinter on the bark and needles.

**Susceptible Trees**

Colorado spruce, Norway spruce, white spruce, white pine, arborvitae, cedars, Douglas fir, hemlock, junipers, and larch.

**Signs and Symptoms**

- Spider mites will often cause stippling damage on leaves as they feed.
- Heavy infestations can often cause a bronzing or rust coloration on conifers.
- Damaged needles may drop prematurely and twig and branch dieback may occur.
- Fine webbing is often seen between joints, twigs, and petioles.
- Spruce spider mites are green when crushed.
  - Shake a branch over white paper to test for mites.
Treatment Strategy

Spider mites are attracted to trees that are stressed, so the most effective treatment strategy is to support tree health through cultural practices and help the tree with its defense system using targeted miticides.

Watering

Adequate water is a key factor in maintaining healthy trees. A slow, deep watering once every few weeks during dry conditions will help maintain soil moisture levels and minimize the stress that invites spider mites.

Mulching

Mulch is very beneficial for all trees because it reduces competition with turf and moderates soil temperature and moisture levels. The addition of 3 inches of wood chips or shredded bark under the drip line can have a very beneficial effect by holding in moisture and promoting healthy fibrous roots.

Insecticides/Miticides

With the introduction of soil applied systemic insecticides, the treatment of spider mites has become much easier. Historically, a spray application of a miticide, such as Lucid®, was required to get an infestation under control. Lucid® applications can still be made just after bud break in the spring and again once temperatures cool in the late summer; however, treating large trees can be a challenge. Spray drift and contact with non-target insects has convinced many professionals to move on to soil applied systemic insecticides, such as Lepitect™. Lepitect™ works very quickly, often in as little as three days and will last for 30 days in the tree. Applications should begin as buds are swelling in the spring. A follow up treatment in the late summer or early fall may be required as these mites resume feeding when temperatures dip below 80 in the fall.

DIY Shopping List

Option 1:

Application Type – Foliar spray

DIY Product/Equipment Needed

- Lucid®
- Hand pump sprayer with wand
- Gloves/Safety glasses

Timing Apply just after bud break or as activity is visible.

Option 2:

Application Type – Soil injection

DIY Product/Equipment Needed

- Lepitect™
- Measuring tape or diameter tape
- HTI Soil Injection Kit
- Gloves/safety glasses

Timing Begin applying just before bud break. A second application is often required 30 days later to maintain control.