

FRASER FIR IPM 2020 – PEST FACTS AT A GLANCE

SPRUCE SPIDER MITE

Oligonychus ununguis

Where from: Native to US

Host plants: Firs, spruces, hemlocks, other conifers

SYMPTOMS

- Yellow spots on otherwise green needle
- Damage starts at needle base and moves upward towards tip with continued feeding



LIFE CYCLE

How overwinters: Eggs on shoots that hatch in spring when weather warms

generations/year: Multiple generations per year.

Eggs hatch to 6-legged larva followed by two 8-legged nymphal stages and adults (male or female). As it molts, the mite goes into a resting stage which doesn't move and may appear dead.



Adult female with eggs in background

Weather considerations: The spruce spider mite is considered a cool season mite and is well suited to conditions in western North Carolina. Spider

mites are more active in dry weather and low humidity because of effects on spider mites hatching and on the predatory mites.

Important cultural practices:

- Site selection – spider mites are worse on windy ridges, fields with southern and western exposure, and elevations lower than 3,000 ft.
- Dust from gravel roads that drift onto needles create more problems with spider mites
- Maintain flowering groundcovers. Allow weeds with stems such as briars or stick weeds in field borders as these are habitat for predatory mites.

Scouting: In trees nearing harvest, scout for spider mites in the spring and during periods of dry weather. Look for mites and eggs on small shoots of most current growth – lower ½ of tree. Beating foliage will dislodge mites if they are at high numbers. Keep an eye out for predatory mites.

Biological control:

- Predatory mites are smaller, lighter color, & move faster than spider mites



Predator mite feeding on spider mite

Control considerations:

- Don't be too quick to treat for spider mites – allow predators a chance to do their job.
- Some miticides control mite eggs – others don't. Check the label or info on-line.
- Rotate chemicals from year to year – mites can develop resistance!
- Some insecticides make spider mites worse if they are already present in the field – including imidacloprid (Merit), carbaryl (Sevin), and esfenvalerate (Asana)