

RED BELT/WINTER KILL

DISTRIBUTION

Throughout the province, mainly along the middle to upper portions of south to southwest slopes, and occasionally in valley bottoms.



Figure 267. Typical bands of reddish-brown trees caused by red belt.

HOST SUSCEPTIBILITY:

All conifer species of all ages are susceptible, particularly lodgepole pine.

SIGNS & SYMPTOMS:

Symptoms usually appear in spring as reddish-brown discolouration of foliage, usually over large areas. When viewed from a distance, the damage often appears in well-defined horizontal bands. Red belt is the result of a combination of climatic conditions. The unseasonable occurrence of warm, dry winds by day, followed by cold air drainage at night, leads to dessication injury. Frozen soils do not allow lost moisture to be replaced quickly enough, and affected needles discolour and are eventually shed. Symptoms are often more pronounced in the upper crown and on the sides of trees facing the prevailing wind. Unopened buds are usually not harmed. Winter kill is a similar phenomenon that occurs on flat terrain. Symptoms on individual trees are most obvious above an often abrupt line that matches the snow level at the time of injury.



Figure 268. Leader exhibiting symptoms.

DAMAGE:

Foliage and occasionally buds are killed. Trees often recover from extensive defoliation but mortality may result from repeated red belt damage or destruction

NR

of all buds. Affected trees have a reduction in growth rate. Trees weakened by red belt are more susceptible to insect attack or disease. Large areas of red belt greatly increase the fire hazard for the summer following the event.

SIMILAR DAMAGE:

May be confused with other abiotic disorders such as drought. A distinguishing feature of red belt when it occurs on slopes is the distinct elevational banding. Consider the climatic conditions preceding the damage, and the time of year that it becomes noticeable. At the upper portion of the band often only the bottom portion of the trees are affected and at the lower band only the tops of the trees are affected.

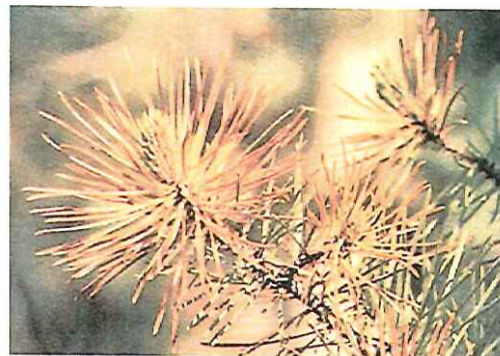


Figure 269. Affected foliage is discoloured but remains undistorted.