



# BORDER CONSULTANTS (FORESTRY) LTD

FOREST VALUERS, MANAGERS & CONSULTANTS

Woodland Place, Belford, Northumberland, NE70 7QA.

Tel: 01668 213 693 Fax: 01668 213 555

Email: [info@borderconsultants.co.uk](mailto:info@borderconsultants.co.uk)

[www.borderconsultants.co.uk](http://www.borderconsultants.co.uk)

Company Registration No: 4699849

FSC Resource and Group managers

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## **Red band needle blight (RBNB) and its impact on forestry.**

Since the 1960s, the fungal disease red band needle blight, which causes defoliation, reduced yield and in severe cases, tree death, has been affecting commercial crops of both Radiata pine and Corsican pine in New Zealand, East Africa, Australia and Chile. Large scale aerial spraying proves to be an effective control measure and copper fungicides are applied when the tree is most susceptible, up to 15 years of age. This is currently not allowed in the UK.

In the northern hemisphere, evidence of its occurrence was increasing and it has had a devastating impact on extensive native lodgepole pine forests in British Columbia and black pine forests in Europe.

### **UK**

Although the disease is primarily known to affect pine species, it also occurs on a range of conifers, such as, Douglas fir, European larch, Sitka and Norway spruce. The disease spreads rapidly where it is close to heavily infected stands of highly susceptible species, for example Corsican pine and lodgepole pine. In the last 10 years, the most severe outbreaks of RBNB have been in East Anglia and Morayshire where there are large stands of Corsican pine and lodgepole pine. Until recently, Scots pine was thought to have low susceptibility, however recent evidence suggests it may be highly susceptible.

The warm, moist, misty conditions found in Britain suits RBNB and its lifecycle. Spores are wind and water-dispersed and it is predicted to continue thriving in our damp climate. Where infection occurs, it has the potential to be very damaging.

Forestry Commission England currently will consider EWGS applications to plant Corsican pine on a case-by-case basis, making plain that any approvals are at the owner's risk. Other pine species are accepted. Forestry Commission Scotland's policy at present is not to fund Corsican pine in planting proposals.

### **Signs of the disease**

Trees are generally infected in the lower crown, from the base up, with older needles showing discolouration and later, shortening of needles. In October, a yellow band can be visible on the needle and in May, brown and red banding occurs with black spores showing underneath.

### **Solutions**

Stand manipulation, such as regular and heavy thinning, helps to improve airflow and can reduce the spread, however it can be expensive, especially in lodgepole pine crops and heavy thinning can compromise timber quality. There is a tree-breeding programme to produce resistant strains. In the short-term, species selection can play an important role. There is a strong recommendation not to plant Corsican pine and lodgepole pine; Scots pine needs to be considered with caution. Planting alternative species such as conifers that show low susceptibility and favouring mixed crops where possible is advisable.

### **Further information can be found on the Forest Research website**

<http://www.forestresearch.gov.uk/website/forestresearch.nsf/byunique/infcd-6zckae>

and FC Information Note Red band needle blight of pine FRIN 49 and a new FC Research Note Red band needle blight in Britain FCRN 002.

Netty Horne BSc(Hon)