Cherry leaf roll virus in birch – an old problem or an emerging virus in Finland?

von Bargen S, Arndt N, Grubits E, Büttner C

Humboldt-Universität zu Berlin, Faculty of Agriculture and Horticulture, Section Phytomedicine, Lentzeallee 55/57, D-14195 Berlin, Germany

Email: susanne.von.bargen@agrar.hu-berlin.de

Jalkanen R

Finnish Forest Research Institute, Rovaniemi Research Unit, P.O. Box 16, FI-96301 Rovaniemi, Finland

ABSTRACT

Cherry leaf roll virus (CLRV) was first mentioned to occur in Finland in 1980 by Cooper and Edwards who described an isolate from red elderberry (Sambucus racemosa). CLRV affecting birch species in the country have also been confirmed sporadically from single silver birch (Betula pendula) trees. Since 2002 the situation changed as virus-like symptoms in birch species native to Fennoscandia started to accumulate. Leaf roll, vein banding and chlorotic patterns with subsequent necrosis of birch leaves were increasingly observed. Disease symptoms affecting B. pubescens ssp. pubescens (downy birch), B. pendula, B. pendula var. carelica (curly birch), B. pubescens ssp. czerepanovii (mountain birch), B. nana (dwarf birch) and the local variety B. pendula var. appressa (Kiilopää birch) could be associated with an infection of CLRV. Since the incidence in 2002, virus-associated symptoms are spreading in Betula species and are distributed all over the country at present. As causes of the sudden appearance of the disease are still unknown, possible ways of transmission and viral dissemination as well as unique features of the CLRV population occurring in Finland are discussed.