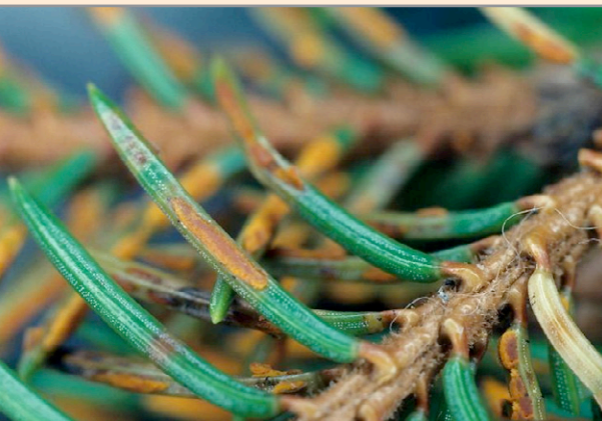


# Chrysomyxa abietis



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Chrysomyxa – spruce needle rust (Engl.), Fichtennadelrost (Deut.), Rouille annulaire des aiguilles de l'épicéa (Franc.), ? (Ital.), Smrekova rja (Sloven.)

## Host species

Spruces, several species.

## Symptoms

Current shoots needles show several yellow bands. During the summer dark, orange-red bulging spore-bearing structures appear in the bands, releasing no spore dust when touched.

## Causal agent

This rust species, capable of attacking spruces everywhere, does not depend on two different host plants, contrary to the Alpine Needle Rust of Spruce (*Chrysomyxa rhododendri*) which requires Rhododendron species in the vicinity of spruces. *Chrysomyxa abietis* prefers low altitudes and humid stands. The disease spreads in rainy springs.

## Possibilities of errors

Green spruce aphid, other *Chrysomyxa* species, nutrient insufficiency (manganese, iron).

## Effects

Needle discoloration, loss of needles, reduction of increment. Young plants may die after several heavy infestations.

## Control

Thin dense forests to lower humidity; In Christmas tree cultures systemic fungicides before bud burst, non systemic fungicides in spring (several applications).