

***Phytophthora ramorum* Disease Transmission from Infested Potting Media**

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Phytophthora ramorum causes ramorum shoot dieback and leaf blight on many nursery species in Europe and N. America. Although it has been detected in soil and commercial potting media, neither is known to be a source of inoculum for new infections.

Rhododendron ‘Nova Zembla’ plants grown from rooted cuttings were inoculated in one of three ways: with a zoospore suspension applied to the potting media surface, or with infested vermiculite or chopped infested leaves incorporated into potting media at transplant. Oregon nursery isolate 03-74-N11-A (European genotype, A1 mating type) was used for all experiments. A zoospore dose-response experiment was also conducted using two isolates: 03-74-N11-A, and 4143 (N. American genotype, A2). Leaves never touched the potting media, and plants were watered from the bottom only.

Leaves wilted and collapsed within 3-6 weeks and upwardly-expanding stem lesions became apparent within 4-6 weeks. *P. ramorum* was isolated from roots, stems, and petioles of symptomatic and asymptomatic tissue from plants inoculated with 03-74-N11-A and from symptomatic stems inoculated with 4143. Control plants not inoculated with *P. ramorum* remained healthy and did not yield *P. ramorum*. Disease incidence was greater among plants inoculated with 03-74-N11-A as compared to plants inoculated with 4143, and plant response reflected zoospore inoculum dose.

To determine if disease transmission from potting media could occur in seed-grown plants, three-year-old native Pacific rhododendron (*Rhododendron macrophyllum*) plants were inoculated with *P. ramorum* isolate 03-74-N11-A using infested vermiculite, chopped infested leaves, or zoospores. All three inoculation methods resulted in mortality and recovery from asymptomatic roots, root collars, and stems.

Recovery of *P. ramorum* from symptomless tissue and transmission from infested potting media to above-ground plant parts demonstrates the need to monitor belowground sources of inoculum.