

**2008 APS CENTENNIAL MEETING
MINNEAPOLIS CONVENTION CENTER, MINNEAPOLIS, MN
JULY 26-30, 2008**

<http://www.apsnet.org/meetings/abstracts.asp>

Shishkoff, N. 2008. Sporulation on plant roots by *Phytophthora ramorum*. *Phytopathology* 98:S145.

Phytophthora ramorum has been shown to infect the roots of many of its foliar hosts. Methods of detecting inoculum in runoff and of quantifying root colonization were tested using *Viburnum tinus*, *Camellia oleifera*, *Quercus prinus*, *Umbellularia californica*, and *Epilobium ciliatum*. Plants grown from seed or cutting in Turface monmorillonite clay granules were inoculated with a sporangial suspension (15 mL per pot at 500 sporangia/mL) and after 24 hours, uprooted, washed, and transplanted to fresh Turface (100 mL volume). Runoff was collected periodically and aliquots plated on selective media to quantify inoculum of *P. ramorum*; at the end of the assay, roots were plated on selective media to determine colonization. In some trials, plant roots were examined at the end of the experiment, and in *Viburnum*, it was easy to see sporulation on root tips. Dissection of *Viburnum* roots revealed embedded chlamydospores. Other host roots, could be heavily pigmented or extremely fine, and signs of the pathogen were not often seen, even in heavily infected material. *P. ramorum* was commonly detected from runoff of all tested plants. In 32 *Viburnum* trials over the course of a year, an average of 41 propagules per pot (4 propagules per mL of runoff) were recovered from runoff from plants seven days after inoculation, with a high of 358 propagules/pot (24 propagules/mL runoff). The significance of such sporulation in the epidemiology of the pathogen needs further study.