

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

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

Colburn, G.C. and Jeffers, S.N. 2008. Toxicity of commercial algaecides to *Phytophthora ramorum*. *Phytopathology* 98:S40.

Oomycetes like species of *Phytophthora* are more closely related to brown algae than they are to fungi. Therefore, commercial algaecides (with copper compounds as active ingredients) used to manage algae in natural and commercial waterways might be useful in managing *P. ramorum* in similar settings. Chlamydo-spores of A1 and A2 isolates of *P. ramorum* were produced on mycelia grown in clarified V8 broth; cultures were sonicated to kill hyphae and free chlamydo-spores. Sporangia were produced by growing isolates on V8 agar and placing agar plugs in a sterile soil-extract solution, and zoospore were released after a cold temperature shock. Chlamydo-spores (5×10^3 spores/ml), sporangia (2.5×10^3 sporangia/ml), and zoospores (1×10^5 spores/ml) were exposed to commercial rates of two algaecides (0.8 ppm of copper carbonate and 1.0 ppm of copper-triethanolamine + copper hydroxide) for 0, 0.5, 2, 4, 8, and 24 hr. For each treatment, propagules were washed to remove algaecides and were collected on membrane filters. Filters were inverted on PAR-V8 selective medium, and plates were placed at 20C. For both isolates, zoospores were not viable after 30 min of exposure to either algaecide. Compared to the control, viabilities of chlamydo-spores and sporangia of both isolates were reduced significantly at 2 and 4 hr of exposure to the algaecides; no chlamydo-spores or sporangia remained viable at 8 or 24 hr of exposure. Consequently, algaecides have potential to manage *P. ramorum* in natural and commercial waterways