MANAGING NEMATODES IN NURSERY STOCK WITH HOT WATER AND OZONE.

B. B. Westerdahl*[1], D.D. Giraud[2], L.J. Riddle [3], C.E. Anderson[1], and A. Pryor [4]
[1]Department of Nematology, University of California (UC), Davis, CA, [2]UC Cooperative Extension, Eureka, CA 95503, [3]Easter Lily Research Foundation, Brookings, OR 97415, and [4]SoilZone, Inc., Davis, CA 95616.

Easter lily bulbs for greenhouse forcing are produced in Del Norte County, CA and Curry County, OR. Lesion nematode, P. penetrans, infestation of soil and roots is a serious detriment to production. In 3 years of field trials, hot water(HW) and ozone(O3) treatments of bulblet planting stock were tested alone, and in combination with commercial chemical standards and compared to untreated controls. Each trial consisted of 3 replicates of 40 treatments. Several treatments performed better than untreated, but not as well as commercial standards in all evaluation criteria. For example, HW treatment at 49 degrees centigrade(C) for 35 minutes(M) or 46 C for 90 M, consistently reduced nematode populations within roots but did not substantially improve growth of bulbs. In contrast, O3 that was produced by a conventional electrical discharge generator did not reduce nematode numbers but improved bulb growth in some treatments.