



## Poinsettias and Root Disease: A Case Study

***RootShield*<sup>®</sup> proves to be an easy, effective, money-saving solution to *Pythium* on Poinsettias, for Jim Crouch, Head Grower at Milgro**

Growing poinsettias can be tough. The crop is infamous for being prone to root diseases, such as *Pythium*. Jim Crouch, Head Grower at Milgro in Newcastle, UT is no stranger to the challenges. Operating 950,000 sq. ft. of growing space in Utah, Milgro is one of the largest nurseries in the United States, and produces approximately 450,000 poinsettias each year.

For years, Crouch used various chemical fungicide drenches but was never completely satisfied with the results he was seeing. Then Milgro's new Production Manager, Neil Watson, suggested he try RootShield<sup>®</sup> Biological Fungicide. Watson had used RootShield at a previous operation and had always been pleased with the results. It didn't disappoint. Crouch started earlier in the growing cycle with a RootShield WP drench. The results were excellent. The roots were noticeably healthier – whiter, bigger root masses, plenty of healthy root hairs – overall the plants just looked stronger.

RootShield, from BioWorks, Inc., is a preventative biofungicide (*Trichoderma harzianum*, strain T-22) that grows on the roots and colonizes root hairs, shielding them against root damaging fungi for up to 12 weeks. Not only does it protect against *Pythium*, but also *Fusarium*, *Rhizoctonia*, *Thielaviopsis*, and *Cylindrocladium*. The result is a healthier root system and stronger plant.

Prior to using RootShield, Crouch was drenching with a chemical fungicide about 3 to 4 weeks after planting the stock plants, reapplying 3 more times during the life of the stock, and another 4 times during final spacing. With the new method, he drenches right away with RootShield to give the stock plants protection early on. Since RootShield protects the plant's roots longer than the chemical drenches, he was able to eliminate one rotation in each growing phase. This has saved time and money – less money by avoiding an additional application, and less in labor costs.

"It has been suggested that I re-treat with a second application of RootShield after 12 weeks at half the rate, but I haven't seen the need to do so," commented Crouch. "Now and then I'll see the start of *Pythium*, but it's on a very small percentage of plants, and nothing severe."

*Pythium* root and stem rot is spread easily by water and can occur any time during the propagation and production of poinsettias, but commonly occurs early on when the plant is young and vulnerable. Treating the poinsettias early with RootShield to give the plant protection while it develops in the pot, and improving their watering strategy has proved to be a successful system for Milgro. Not only has it been effective in protecting the plant, but it has saved them money by reducing the number of drenches.

