



# MATHERS ENVIRONMENTAL SCIENCE SERVICES, LLC.

## **Abstract #1: Phytotoxicity and Efficacy Evaluations of Marengo SC Compared to Eight Other Market Contender Herbicides Applied to Dormant Nursery Fields**

**Abstract.** Phytotoxicity and efficacy were evaluated on three fields per each of three nursery locations in Ohio with over the top applications on dormant growth. The locations included Studebaker Nurseries, Inc., New Carlisle, OH, 45344; *Wm A Natorp Co., Mason, OH, 45040* and *Herman Losely and Son, Inc., Perry, OH, 44081*. The species at Studebaker Nurseries included boxwood (*Buxus* 'Green Velvet' - 1yr and 5yr fields) and yew (*Taxus Xmedia* 'Runyan' – 3yr) with one application made April 1, 2015. The species at Natorp Co., included boxwood (*Buxus* 'Green Gem'- 3yr), (*Buxus* 'Green Velvet' - 1yr) and yew (*Taxus X media* 'Densiformis' - 1 yr.) with two applications made on similar adjacent beds (but not twice on the same beds), December 11, 2014 and March 12, 2015. The species at Losely's included yew (*Taxus Xmedia* 'Tauntonii' – 3yr and *Taxus cuspidata* 'Green Wave' - 1yr) and boxwood (*Buxus sempervirens* 'Green Mountain' – 3yr) with one application made April 8, 2015. The fields chosen had expected extreme weed pressures, except at Losely's where limited weed growth occurred. Thus, Losely efficacy is not presented in this report. The Losely, *Taxus Xmedia* 'Tauntonii' – 3yr, however, was the only species at the three nurseries to exhibit any long term phytotoxicity, weeks after treatment (WAT), with three treatments: Certainty, Echelon and Lontrel. Only Certainty provided non-acceptable phytotoxicity at 14 WAT. At Studebaker, where the predominant weed was Canada thistle, Lontrel was by far the most efficacious treatment providing commercially significant weed control to 12 WAT and 10 WAT, depending on crop. Lontrel was followed by Casoron 4G providing commercially significant weed control to 10 WAT and 7 WAT, again dependent on crop, at Studebaker's. At Natorp's, Casoron CS performed the best in the December 11, 2014 applications providing commercial control 28 and 26 WAT, depending on the crop. Casoron CS was followed by Marengo SC with commercial control at 26 and 21 WAT, depending on crop. With the March 12, 2015 applications at Natorp's, Marengo SC was the most efficacious treatment providing 15 and 13 WAT commercial control depending on crop and followed by V10233 with commercial weed control 13 WAT in two of three crops. The Gallery SC + Dimension 2EW treatments performed best at Natorp's in the December 11, 2014 applications providing commercial control 16 WAT.