

Root Barrier using RootTrapper®

A Patented New Root Barrier even Stops Bamboo
Carl E. Whitcomb PhD, Lacebark Inc. Stillwater, OK



been severely girdled by the stitching so they easily broke off. The most aggressive tree species was Lacebark elm, *Ulmus parvifolia*, which had far less than one percent of the roots escape, whereas the oaks, crapemyrtle, catalpa and Chinese pistache had no root escape. As a result of this and now many other studies using this material above ground, RootMaker® products is offering a root barrier product that performs well in many landscape situations.

Root-Tip-Trapping

About 1975 I observed that when a root tip became trapped in the gusseted bottom fold of a poly bag container the tip would stop growing and the root would branch. This observation led to the Stair-Step container that briefly worked well and stimulated root branching and stopped root circling. However, when trapping locations were filled with roots, the next root was deflected and continued to circle. Back to the drawing board!

RootTrapper® Laminated Fabric (USA Patent # 7,810,275)

When the original RootTrapper® laminated fabric was created and made into above ground containers, the effectiveness was distinct and amazing. Studies showed that as many as 100 root tips could be trapped in one square inch of surface area. One square foot of this unique laminated fabric could trap roughly 14,000 root tips.

RootTrapper® material works by trapping a root tip when it contacts the fibers. The root cannot grow through the fibers because of the secure poly coating on the opposite side. A root tip enters the fibers and extends a short distance, typically no more than ½ inch before becoming totally captured. When the tip of a root cannot extend it loses hormonal control, just as if it had been cut. The result is that about four inches back from the root tip, new secondary roots are produced. These roots also grow out and are trapped at the tip and branch. The end result is a mass of small fibrous roots captured in the fabric, but there are no large roots.

Early studies consisted of installing 5, 15 and 30 gallon containers made of this material in the ground. Assortments of trees were grown in these containers for two years. When the trees were harvested, zero roots had penetrated the fabric. A very few roots had managed to grow into the vertical sewn seam or the bottom seam and escape. However, these roots were very small and had

Bamboo.

In 2008 a study was initiated to study how black bamboo in a fertile soil would react to the RootTrapper® Root Barrier material. The trench was installed as described below and located about two feet from the nearest bamboo plants. In all likelihood, bamboo shoots contacted the newly installed barrier sometime in 2008. To date (Dec, 2020), no bamboo has penetrated the RootTrapper® Root Barrier during the 12 years since installation. When installed properly in the soil, roots and rhizomes have been contained for an indefinite period. Additional time and studies are needed to determine long term effects of bamboo on RootTrapper® material but results to date are nothing short of amazing. .

When properly installed, the brown poly coated side of the RootTrapper® Root Barrier is firmly pressed against undisturbed soil on the side to be protected. The loosened soil is all on the side nearest the tree and will encourage new root growth from the cut ends of old roots. The fabric face of the barrier extends down one sidewall and across the bottom of the trench in the shape of an L. By having the RootTrapper® Root Barrier across the bottom, the likelihood of roots growing down the wall and under the barrier is highly remote. If the fabric extends down the side, across the bottom and back up the opposite side or folds back on itself, that is not a problem.