

CI-600 / CI-602

Minirhizotron Systems

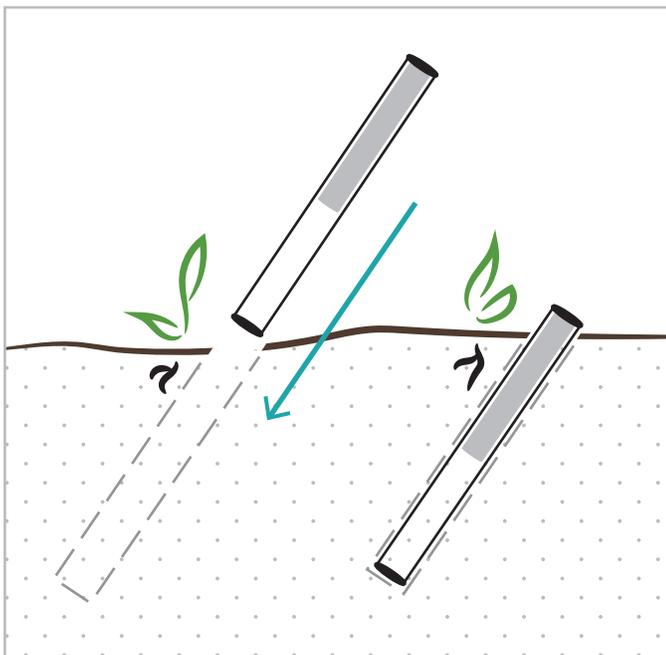
HOW IT WORKS

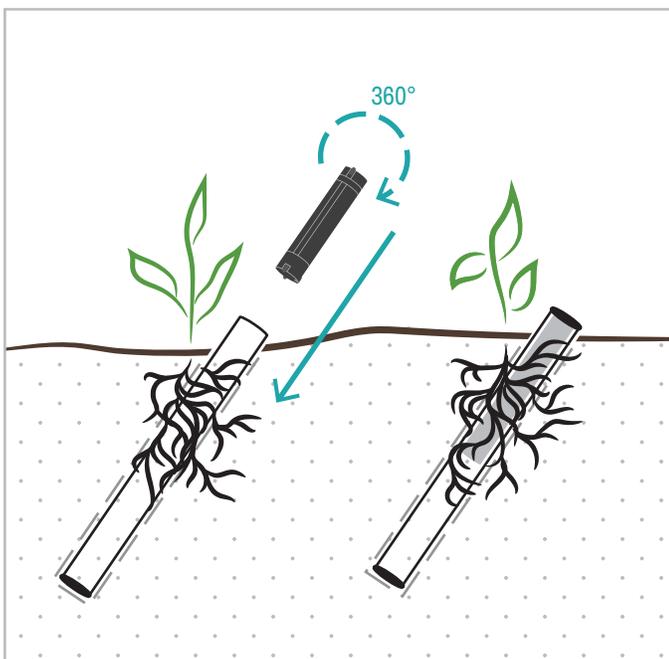
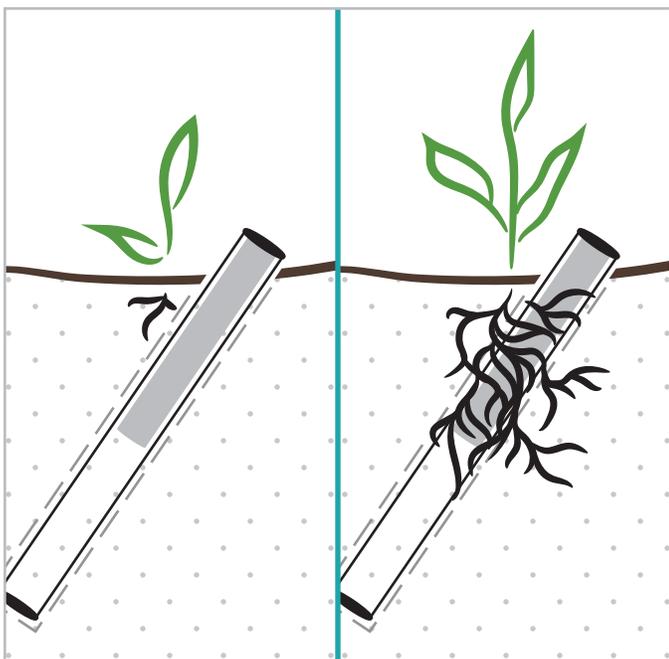
The CI-600 In-Situ Root Imager and the CI-602 Narrow Gauge Root Imager are portable, durable minirhizotron systems. A minirhizotron is a transparent underground tube used to observe plant roots while they are alive.



How to use our minirhizotron systems:

1. Select a test site where you plan to evaluate plant roots using the minirhizotron and tube installation. The minirhizotron system will work with established plantings for longterm studies or can be installed before annual crops go into the soil. **Tubes are very durable and can last up to 10 years in certain environments, allowing for analysis of roots over multiple growing seasons.**
2. Determine number of tubes to be installed per treatment—6 tubes are included with purchase of the CI-600 or CI-602! **A single imager can be used at sites with many different tubes—upwards of 100!**
3. Dig holes for tubes using gas-powered auger or a hand-tool at the desired angle and depth—tubes are generally 1-meter-long, though 2 meter tubes are available.
4. Install transparent tubes with water tight bottom plug and insulated top cap into holes. Allow soil and any established plant roots to settle around the tubes over the course of a few days to a few months.





5. The plant roots will grow around and next to the transparent tube. Any roots and soil touching the exterior of the tube will be imaged by the minirhizotron.
6. Once you are ready to begin scanning with the minirhizotron system, lower the imager down into the transparent tube using the indexing handle, making sure to line up the imager with the “home” position marked on the tube.
7. Using the included tablet computer, determine the desired image resolution and begin taking scans at various depths. The scan window on the imager will rotate to capture a nearly 360-degree image.
8. Watch as images live-update on the screen to verify successful scan.
9. Once you have taken desired images, use our free RootSnap! Analysis Software on the included tablet or a separate PC to begin calculating parameters including root length, area, volume, diameter, and branching angle.