

RootTracker: a novel sensor to characterize in vivo root growth.

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Hi Fidelity Genetics is developing sensors to detect roots in the field. The state-of-the-art alternative relies on excavating plants, which is time consuming, laborious, and destructive. HFG's method, in contrast, can monitor root growth throughout the season, and hence gather novel information about roots' response to management or environmental factors, like seed treatments or drought. HFG's technology will enable new insights into the relationship between root system architecture, the rhizosphere, and the environment and will lead to improved research methods for chemical treatments, microbial treatments, and plant breeding. Roots' important role in nutrient acquisition and carbon sequestration means that the system can be used to improve bioenergy crops and their management practices, as well as optimize root system architecture for greenhouse gas sequestration.