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Corn-in-chip: Mesofluidic Device for Corn Root KEVIN KREIS, SANGJIN RYU, University of Nebraska-Lincoln — Plants have a collection of beneficial microorganisms in a region surrounding their roots called the rhizosphere. Although rhizosphere management could increase crop yield, little is known about the interaction between plant roots and their associated microorganisms. Thus we aim to simulate the rhizosphere and monitor root-microbe interactions in the lab environment, and have chosen corn as a model plant because of its economic significance. Here we present our preliminary study to develop a transparent mesofluidic device accommodating the root of corn seedlings into its channel and allowing further growth of the root.

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