



Product Development Opportunity

Robotic harvesting of greenhouse cucumbers and bell peppers

- Designed for robotic harvesting of long English cucumbers and bell peppers
- Patent-pending* closed-loop cucumber harvesting tool with embedded sensors delivers:
 - Zero risk of cutting main stem
 - Detection of stems obscured by leaves
- Demonstrated integrated system on mobile platform with robotic arm control algorithms for positioning end-effectors
- Vision system using low-cost cameras for fruit detection, tracking and ripeness determination
- Yield prediction model and harvest mapping of bell peppers
- On-board, real-time computing (no Cloud storage or computing required)



<https://forms.office.com/r/DEsRMTrcn7>

Interested in developing, manufacturing and selling this technology? Complete an inquiry form to connect with Vineland



Figure 1 - Proof-of-concept vegetable harvesting robot and value proposition.

Align below bottom tip

Follow contour

Close when nearing neck

Find stem

Stop when closed on stem

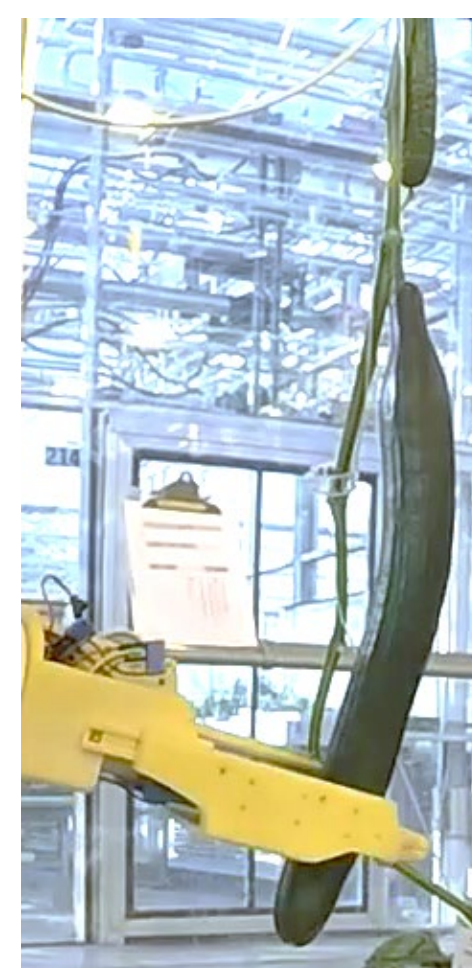
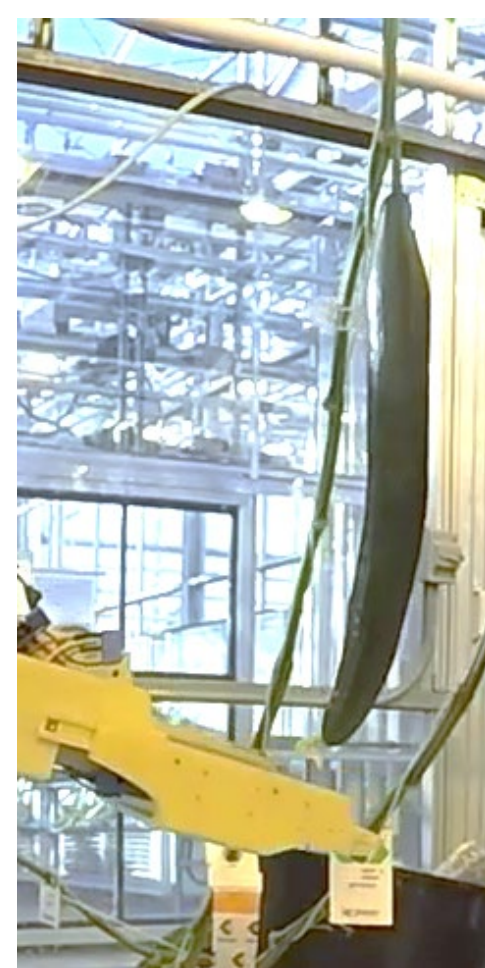


Figure 2 - Custom end-effector performing risk-free harvesting.

*U.S. Provisional Patent No. 63/327,508

