Tart Cherry Yield Monitor

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Abstract

The Tart Cherry Yield Monitor makes yield monitoring affordable for shake and catch harvesting processes and allows growers access to the economies of precision agriculture.

Problem

There are currently no affordable options for orchard growers to monitor yield geographically. This lack of technology for generating yield maps has limited the ability of the industry to optimize orchard management and yield accuracy.

Solution

This technology provides the equipment, data processing, and calibration to map the variability of crop yield for shake and catch harvesters in orchards. It increases management and sustainability.

Value Proposition

The technology allows for improved precision, efficiency, financial benefit, and orchard management for crop farmers. It offers an affordable solution to provide growers with insights about yield variability.

Benefit

Mechanical harvesting of tart cherries has been a standard practice since the 1950’s, but the lack of cost-effective technology for generating yield maps during harvesting has limited the ability of the industry to optimize orchard management. Currently, harvest yield monitoring is done during processing, resulting in less accurate data about yield in given areas, as well as ignoring data on harvester operator efficiency.

Yield mapping is important for precision agriculture, which has become increasingly important for environmental impact and financial viability in farming. This technology provides the equipment, data processing, and calibration to map the spatial variation of crop yield for shake-and-catch harvesters in orchard crops. With a total cost of under $400 USD, this device supports implementing precision agriculture strategies in tart cherries, leading to improved orchard management and sustainability.In testing, the yield monitor system mapped the spatial variation of yield in the orchards at a total cost of parts under $400. It offers an affordable solution to provide growers with insights about yield variability and plays a significant role in implementing precision agriculture strategies in tart cherries. Commercializing this technology would allow for increased precision, efficiency, financial benefits, and improved orchard management for growers and producers.

Market Application

Potential industries and market sectors include those involved in the harvesting of tart cherries and other orchard crops, as well as those supplying harvesting equipment.

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Intellectual Property

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