

Ontario Tree Fruit Innovation and Technology Roadmap

Dual-use tractors

Evaluating New Technologies

	Feasibility and cost	Implement	Labour Reduced	Changes in production	Training for staff	Impact on risk of COVID-19 Transmission
Identified Technology	low, medium, high	easy, medium, challenging	% estimate	easy, medium, hard	none, medium, high	none, low, medium, high
Dual-use tractors	high	challenging	50	medium	high	high

Current Status - Mowing and spraying capabilities are combined in one dual-use PTO tractor technology which would be driven through the orchard with controlled power takeoff (PTO) that drives the mower in the front, or the sprayer at the rear of the tractor implements. These tasks occur regularly throughout the year and can be combined to reduce the number of trips throughout the year providing good cross-utilization of the equipment.

Feasibility of Implementation - The cost of this equipment would be high and it would require some skill training to implement initially but once employed it would be easy to operate and offer efficiencies and cost savings.

Impact on Labour - Dual-use technologies would reduce the need for multiple pieces of equipment requiring maintenance and multiple trips out in the orchard providing for both savings on repair, fuel and labour costs.

COVID-19 Mitigation Risk - This technology can help to reduce overall labour requirements for orchard operations therefore implementation can lower the overall risk of COVID-19 exposure and transmission.

Need for Change, Research and Training - There would be some training needed for implementing dual-use tractors for the operator.