

Ontario Tree Fruit Innovation and Technology Roadmap

Mechanical Leaf Removal

Evaluating New Technologies

	Feasibility and cost	Implement	Labour Reduced	Changes in production	Training for staff	Impact on risk of COVID-19 Transmission
	low, medium, high	easy, medium, challenging	% estimate	easy, medium, hard	none, medium, high	none, low, medium, high
Mechanical leaf removal	medium-high	medium	50+	easy	low	high

Current Status - Removing leaves is a new practice for high-density apple trees to allow additional light into the canopy to ensure good fruit colour. This task might not be done normally by hand because it is labour intensive. Pulsating high pressure air shatters the leaves and allows light into the canopy. A second pass through the orchard is usually needed a few weeks later. This is used in conjunction with a hedger to maximize light interception.

Feasibility of Implementation – The cost is similar to the multi-shear hedger. It would take a few years to perfect the timing and the number of trips for each cultivar.

Impact on Labour - Mechanical leaf removal would reduce labour for those growers who traditionally remove leaves by hand.

COVID-19 Mitigation Risk - The benefit of mechanical leaf removal technology is to help to reduce labour for pruning, as such this technology helps lower the risk of COVID-19 exposure and transmission for growing operations.

Need for Change, Research and Training - Implementation would require training and a specialized set of skills for the operator of this equipment. The operator needs some level of skill, but once the pattern is set, it would be easy for the single operator.