

## Ontario Tree Fruit Innovation and Technology Roadmap

### Battery Operated Pruners

#### 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
Battery-operated Pruners	low	low	20-40	easy	low	medium

**Current Status** - The battery-operated pruners are light, easy to handle and can be used with 4-foot poles or longer to reach the top of the tree from the platforms. Typically, the wood from high-density apple plantings is not large and can be easily cut with these powerful tools.

**Feasibility of Implementation** – Growers are changing to the new light-weight battery pruners replacing bulky and noisy pneumatic pruners. The cost is high compared to a manual pruner, but the speed of pruning and less worker fatigue outweigh the costs. The payback should be one or two seasons.

**Impact on Labour** - This type of pruner can significantly increase worker efficiency as they move through the orchard. These pruners are growing in popularity as workers report less fatigue and injury compared to long-term use of manual pruners. The use of battery-operated hand and pole pruners reduces the number of workers needed to prune orchards versus older pruner technologies.

**COVID-19 Mitigation Risk** - Using battery-operated pruners may increase labour productivity but would not significantly reduce overall labour requirements and would not have a significant impact on lowering the risk of exposure or transmission among workers.

**Need for Change, Research and Training** - Implementation would require limited training for the operator of this equipment. These pruners are easy to use and some manufacturers sell a unique glove to prevent accidents when pruning with the shears.