

## Ontario Tree Fruit Innovation and Technology Roadmap

### Multi-row Spraying Equipment

#### 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
Multi-row spraying equipment	high	medium	10-20	low	medium	high

Current Status - Sprayer and output technology continues to improve for more spraying efficiency. Typically, one single-row sprayer is needed for 50 acres. Multi-row sprayers are needed at times early in the season when fungicide sprays, chemical thinning sprays and plant growth regulator sprays need to be applied at the same time during a very short window under variable weather conditions.

Feasibility of Implementing – Multi-row sprayers are very expensive, sloping topography could inhibit the use, so it may not fit for every farm.

Impact on Labour – Spraying multi-rows at once could reduce the time by half or more for spraying. Growers are also using less water for applications therefore increasing the length of time a tank of sprays last, in turn reducing some labour.

COVID-19 Mitigation Risk – There is low risk to the applicator since the operator spraying in a sealed cab with air filtration. The operator has protective gear and air filtration masks when not using the spray cab. This technology helps to reduce overall labour requirements for orchard operations therefore implementation can lower the overall risk of COVID-19 exposure and transmission for orchard operations.

Need for Change, Research and Training – There is some training needed for the new technology that sprayers offer.