Ontario Tree Fruit Innovation and Technology Roadmap

COVID-19 Risk Mitigation Technologies

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
PPE	low-medium	easy	NA	easy	easy	high
Air Filtering and Monitoring	low	easy	NA	easy	easy	high
Sanitization	low-medium	easy	NA	easy-medium	easy	high
Wearable Contact Tracing Technology	medium	medium	NA	easy-medium	easy	high

The list below provides Covid-19 guidelines and resources for growers. The information has been disseminated through government websites and by many grower organizations including the Ontario Fruit and Vegetable Growers Association (OFVGA), Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), the Ontario Apple Growers (OAG), and the Ontario Tender Fruit Growers (OTFG).

- [OFVGA COVID-19 Resource Library for International Agricultural Workers and Employers](#)
- [OMAFRA Prevention, Control and Outbreak Support Strategy for COVID-19 in Ontario's Farm Workers](#)
- [OAG Covid-19 Grower Resource and Worker Safety](#)
- [OTFG Covid-19 Grower Resource and Worker Safety](#)

Personal Protective Equipment (PPE)

Current Status - Growers organized crews into cohorts to operate in their own "bubbles" last season for those who lived within the same household.

Feasibility of Implementing – Implementation is relatively easy, the cost PPE can be very expensive depending on the size of operation. Keeping PPE inventories stocked is an added operational requirement.

Impact on Labour – Barriers, Masks, Shields might reduce labour productivity during hot days.

COVID-19 Mitigation Risk – Barriers, Masks, Shields are a very effective method to reducing the transmission of COVID-19.

Need for Change, Research and Training –Barriers, Masks, Shields – Minimal changes to operations are needed, some training may be required

Air Filtering and Monitoring Systems

Current Status – Filtering systems are designed to reduce the amount of virus in the air. Air monitoring systems can detect the amount of virus in the air and set off an alarm similar to a smoke detector.

Feasibility of Implementing – Easy to install in houses and other common places, the cost to implement can be expensive depending on the size and location of the install.

Impact on Labour – Minimal Impact on labour productivity and labour supply.

COVID-19 Mitigation Risk – Medium to high effectiveness in reducing transmission of COVID-19.

Need for Change, Research and Training – Minimal operational changes are needed, some operator training would be required

Sanitization

Current Status - Service providers are available for cleaning equipment in place and can including installing automated cleaning equipment. This can be installed in the packing house and housing units. They also provide stainless steel equipment that can be used which is easier to clean and sanitize; automatic cleaning of equipment for bacteria and general sanitizing equipment; mask cleaning and sanitizing using ultraviolet light and hydrogen peroxide.

Feasibility of Implementing – Sanitizing equipment can be installed in the packing house and worker housing to automatically clean packing equipment and other common areas. The cost of sanitizing equipment and services can be expensive.

Impact on Labour – Minimal Impact on labour productivity and labour supply.

COVID-19 Mitigation Risk – Improving sanitation reduces the risk of transmission and exposure.

Need for Change, Research and Training – Minimal operational change is required, and limited training is needed once equipment is installed.

Wearable Contact Tracing Technology

Current Status - Wearable suits or technology are available that would add a layer of exposure defence and alerts when workers are within six feet. If someone in the workplace has reported a COVID-19 positive, safety officials would receive an exposure notification and could log on to the reporting dashboard to see with whom they have been in contact.

Feasibility of Implementing - This technology would need to be tested for indoor and outdoor farm tasks for practicality at different temperatures. Employees may decline to wear or use the technology. The cost of wearable contract tracing technology can be expensive.

Impact on Labour - This would need to be tested for labour productivity and worker comfort under different temperatures both indoor and outdoor.

COVID-19 Mitigation Risk - Wearable technology use for indoor and outdoor farm tasks under different temperatures, it would reduce exposure risks and provide information for contract tracing.

Need for Change, Research & Training Needs - Some processes would have to be put in place under the different farm environments.