

## **Abstract**

This study analysed the potential economic benefits of the adoption of the technologies that have been developed under a recently funded project. These technologies are the application of an plant defence elicitor as a pre-harvest spray, and the postharvest dipping of fruit in hot water.

The analysis employed in this study could be applied in similar situations where holistic assessments at the grower, supply chain and industry levels are desired. In preliminary trials of the project technologies, it was found that there was a 12% improvement in marketable fruit through the application of the immune response promoter. The hot water treatment was also efficacious in extending the postharvest performance of fruit.

The potential benefits of these technologies were analysed from three levels: firm or grower level, supply chain level and industry level. In analysing returns to growers, three levels of benefits were identified: reduction in average growing costs, improvement in marketable fruit and premium prices paid for improved quality. At the supply chain level, financial benefits that could accrue depend on the performance of individual supply chains, the volumes that the chain partners handle, and retailers' pricing strategies.

At the industry level, three sources of benefits were highlighted: extra revenue due to increased quantity in marketable fruit, improvement in quality and savings by sending export fruit by sea rather than air freight. Indicative monetary figures were included to facilitate stakeholders in gauging the benefits under their specific situations.