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Implementing Lean in a seasonal horticultural sector: Theoretical and practical suitability in the NZ pipfruit industry.

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Abstract

The New Zealand (NZ) pipfruit industry has recently set an ambitious target of more than doubling its export by 2022. However the industry has not performed very well in the past ten years with many growers averaging substantial losses. One key government action has been to deploy Lean thinking to improve production performance. The New Zealand pipfruit industry has not taken up this opportunity for unknown reasons. One reason may be that it is not known if the Lean paradigm will suit this seasonal industry which has a large manual labour component but pushes product into market, contrary to Lean principles.

Although Lean has been successfully implemented in a number of industries, there is little information about implementation in a horticultural context. Lean was not designed for pipfruit. The aim of this study is to research the concept of Lean and its theoretical 'fit' and practical applicability in a horticultural setting, specifically the New Zealand pipfruit industry.

A complex of methodologies integrates to find the answer. The literature review discusses transferability of common theoretical Lean themes to other industries. Consultants are interviewed to assess their views on the suitability of Lean for the pipfruit industry, while an industry-wide survey determines the current state of knowledge and Lean deployment within the industry, using a unique 'single-question-per-day' approach. Several case studies and action research studies then obtain rich data from organisations that have started with Lean implementation in recent times.

The inquiry demonstrates that Lean has many transferable elements and that the industry as a whole is not currently considered Lean. Data from action research and case studies demonstrate that Lean is largely applicable—leading to a measurable increase of Lean—supported by some positive financial indicators. The inquiry culminates in the development of a model and framework that can be applied in the future. In addition, orchards delivered some original interpretations of waste and developed a Lean assessment tool.

The inquiry edified that Lean substantially fits the different elements of the NZ pipfruit industry. This paper contributes to fill the gap in knowledge about Lean in a horticultural environment.

Acknowledgements

This project was something that was on my mind; it had to be done by somebody. I ended up doing it— but only after considerable thought about the commitment required and the sacrifices to be made by family and friends. I took this step as ‘mature student’ out of curiosity and with an intent to make a difference, knowing that I had a lot of support. This support came from many corners and this page serves to acknowledge that support, never truly being able to do justice to it.

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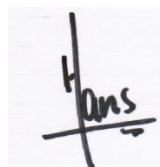


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