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## The Relevance of Performance Indicators Used for Non-Agribusinesses to Kiwifruit Orchards

### Introduction

This study was conducted to investigate to what extent the information collected to assess the success or performance of non-agribusinesses applies to kiwifruit orchards in New Zealand. Business information is collected for many different reasons. For example, it helps monitoring a business' ongoing performance and to plan business activities. It also helps policy makers to understand the key aspects of business activities within a sector, and provide strategies and tools that help businesses to develop.

There are many different models of business success capturing a wide range of business performance indicators, such as business planning, employee relations, and innovation. One model that has been used in New Zealand is the Business Practices and Performance (BPP) model which focuses on the business practices used and relate these to business performance. The Ministry of Economic Development used the BPP model to assess a large number of New Zealand businesses to identify the factors that are important to focus on to be a successful business. These factors have been used extensively to establish policies and indicators to measure and enhance the performance of New Zealand businesses.

However, the government has questioned the relevance of these performance indicators to the agricultural industry in New Zealand. The agricultural industry is somewhat different from the non-

agribusiness community and there are two key differences that may affect the relevance of performance indicators. The first difference is the influence and dependence on the natural environment, such as climatic and weather influences, seasonal production patterns, and biological risks. The second difference is the size of firms in agriculture. Agribusinesses tend to use family labour and often do not have as many employees as many non-agribusinesses.

The purpose of this study was to investigate the extent to which the performance indicators used to assess the success of non-agribusinesses are relevant to kiwifruit orchards. It was also investigated if orchards growing the Green, Organic or Gold kiwifruit differ in performance indicator measures.

### Survey

A review of models of business success was undertaken to identify business performance indicators. The indicators considered relevant for kiwifruit orchards were measured by conducting a face-to-face survey with ARGOS orchardists and by extracting some environmental and quality information gathered in previous ARGOS studies. Table 1 shows the indicators that were investigated and the measurements used.

The indicator measures were then compared with financial figures collected from the ARGOS orchards, with the aim to

determine whether the indicator measures have any relation to the financial success of the orchards. Gross revenue and cash surplus per effective hectare were used as measures of financial performance.

**Table 1:** Performance indicators investigated and measurements used.

<b>Performance Indicator</b>	<b>Measure</b>
<i>Structure of the firm</i> -Firm size	<ul style="list-style-type: none"> <li>• Number of paid staff</li> <li>• Total number of staff</li> </ul>
<i>Business strategy</i> -Business management plan	<ul style="list-style-type: none"> <li>• Have a management plan</li> <li>• Number of times refer to management plan</li> <li>• Value of management plan</li> </ul>
<i>Customer focus</i> -Contact with and feedback from customers	<ul style="list-style-type: none"> <li>• Frequency of customer information</li> <li>• Influenced by customer information</li> <li>• Percentage sales directly to customers/end-users</li> </ul>
<i>Quality</i> - Quality grades of fruit	<ul style="list-style-type: none"> <li>• Level of dry matter</li> </ul>
<i>Employee relations</i> -Employee turnover -Absentee rates/sick leave -Performance based pay -Training provisions	<ul style="list-style-type: none"> <li>• Percentage staff turn over</li> <li>• Work days lost due to sickness and injury</li> <li>• Number of staff on performance based pay</li> <li>• Value of performance based pay</li> <li>• Number of staff participated in training</li> <li>• Number of training days</li> </ul>
<i>Innovation</i> - Use of ICT - Investment in capital.	<ul style="list-style-type: none"> <li>• Importance of ICT usage</li> <li>• State of current plant and machinery</li> <li>• Planned investments in technology</li> <li>• Changes to management system</li> </ul>
<i>Social/ environmental factors</i> -% of employees from the locality -% of suppliers locally based -Participation in local/ public policy making -Contributions / participation in local groups -Environment	<ul style="list-style-type: none"> <li>• Number of staff members living locally or on-orchard</li> <li>• % of key supplies obtained locally</li> <li>• Participation in local and national election</li> <li>• Participation in community groups</li> <li>• Donations to community activities</li> <li>• Value of donation</li> <li>• Average number of earth-worms</li> </ul>

## Key Findings

For most parts, the performance indicators did not appear to be related to the orchards' financial performance, and indicators that are useful to assess the success of non-agribusinesses may therefore not be as relevant to agribusinesses. However, the firm size and customer focus performance indicators showed a relationship to the orchards' financial performance. Orchards with more staff (paid and unpaid) tend to have higher gross revenues and cash surplus per effective hectare than orchards with less staff, and orchardists that are more likely to adjust their operation to customer requirements tend to have higher gross revenue per effective hectare than those who are less likely to adjust their operation.

The results also showed that 33 percent of ARGOS orchards have paid staff, the average number of paid staff per orchard is one, and 93 percent of farmers use contractors for labour requirements. It is also interesting to note that 87 percent of orchard staff lives locally or on the orchard.

There did not appear to be any considerable differences in indicator measures between Green, Organic or Gold kiwifruit orchards. The only differences detected were for firm size and quality indicators. Orchards growing the Gold variety have more paid staff and their fruit has a higher level of dry matter than Green and Organic kiwifruit orchards. In addition, Gold orchards tend to have significantly higher gross farm revenue per effective hectare than orchards growing the other two varieties.

## Conclusion

This study suggests that many of the indicators of success relevant to non-agribusinesses may not be relevant to kiwifruit orchards. Consequently, there is a need to identify alternative indicators that are more relevant to kiwifruit operations and other types of agribusinesses.

Interviews with a range of agribusinesses were also conducted as part of this research. The interviews revealed that agribusiness firms are mainly concerned about macroeconomic issues and

compliance. In contrast to non-agribusiness firms, agribusinesses do not necessarily want government support and may even prefer less government intervention. If aid was available from the government, this should be targeted towards compliance helping with information provision and costs, especially for market assurance schemes.

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