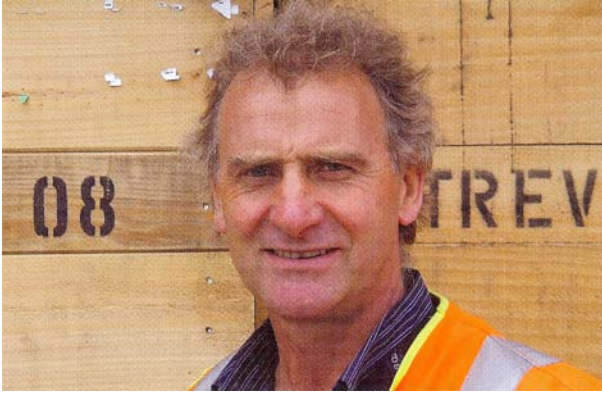




## Postharvest Facility Adopts and Wins with Lean Thinking Concept



Alister Hawkey, CEO of Trevelyan's Pack and Cool Limited and Chairman of the G6 Group.

Late in 2007 when ZESPRI Project Manager Rob Carter introduced six postharvest facilities to a concept called "Lean Thinking", two - Trevelyan's Pack and Cool Limited and Te Awanui Huka Pak Limited decided to implement the concept.

Lean Thinking was created by Toyota and focuses on identifying and eliminating waste. It is a whole systems approach of continuously improving quality, cost, delivery, safety and service through a team-based method of systemically eliminating all waste wherever it occurs. Waste is defined as any activity which adds time or cost and does not create value for the customer.

Alister Hawkey, CEO of Trevelyan's and Chairman of the G6 Group talked to the Kiwifruit Journal about his journey to date with Lean Thinking.

**KJ:** *What attracted you to the concept of Lean Thinking?*

**Alister Hawkey:** The lower fruit returns of the last two years have threatened the viability of our industry. Lean principles offered us a vehicle to remove "waste" or inefficiency and improve grower returns. The concept was attractive and we began implementation almost immediately. Without realising it, we were already applying

a number of lean concepts and viewed lean as a framework to further improve.

**KJ:** *The programme was introduced to your postharvest facility this season. What have been the most noticeable changes since you started to implement the programme?*

**Alister Hawkey:** The most significant changes have been improvements in the "ordering" of the workplace, cleanliness, communication, visual management and the Kanban ordering system.

Possibly the most dramatic change has been in "ordering" of the workplace. The new "order" runs through the whole facility from picking to load-out.



Floor marking laying out the new "order" of the workplace.

At Trevelyan's, we have spent a significant amount of money on signage and floor marking, laying out the new "order" of the workplace. Shadow boards have been created for all equipment so that there is a place for everything and everything is in its place. No one has to spend time looking for equipment. Staff know exactly where it belongs and whether it is in place. As a manager, I can quickly see if the workplace is "ordered" and in control.

There has been a big improvement in cleanliness. Staff clean their work area at the end of each day and we have found that if they have to clean their work area, they keep it tidy all day. A clean and ordered workplace sends a message to anyone who enters the facility that quality is important.

Better communication and empowerment of staff. Everyday supervisors have a stand-up

“haka” meeting with their manager to identify any issues that may affect the workday. These include absenteeism, equipment problems and supply problems. Production and quality results from the previous day are also reviewed. Supervisors record notes in their “haka” book and hold a daily “haka” meeting with their own staff to communicate the important issues.



Stand-up “haka” meetings are held each day.

This meeting process gains the involvement of all staff in the lean process and the oratory skills of many of our staff are outstanding! We have also created improvement boards in each area of the facility to capture good ideas from our staff. Many of these ideas have already been implemented.

One of the lean concepts is making performance visible to everyone in the workplace. This also includes making potential problems visible to everyone. Trevelyan’s continually update the results of our quality control samples known as “Rolling 600” on a huge whiteboard in the packing shed.



Visual management – quality control (rolling 600) boards are located on each packing line.

Each packing line can then see whether they are in or out of grade and how well the team is performing. All of our key productivity and quality measures are displayed for all staff to see. We have implemented display boards showing packing schedules for client growers, the expected volumes to be packed, expected end-time and actual end-time. Everyone on the packing line is able to check the information on these boards. Making measures visible also allows managers to see at a glance how well the packhouse is performing.

We have implemented the Kanban system for ordering consumables such as packaging. Each consumable has its own Kanban tag that identifies the trigger level at which additional stock needs to be ordered, the order quantity and the supplier of that consumable. When the quantity in stock reaches the trigger level, the Kanban tag is placed on an orders rack to be collected each day. By placing the Kanban tag on the orders rack, the relevant staff member knows that the right quantity of stock has been ordered and that it will be delivered. The Kanban system ensures that only the required volume of consumable stock is ordered and held in stock at any point in time.



The Kanban ordering system.

We are now beginning to focus on improving the “pull” through the packhouse. One area is the pack erecting machine. We have created a small buffer area where erected packs are stored and once the buffer area is filled, no more packs can be made unless they are immediately required for packing. We gradually hope to reduce this buffer area so that packs are erected as they are “pulled” by the actual packing process.

**KJ:** *What does the Lean program mean to Trevelyan's?*

**Alister Hawkey:** Lean provides a framework for our business to be world class and to continue to expand in volume without compromising quality. It has entrenched a culture of doing it once and doing it right first time. The foundation stages of Lean have been implemented. However, the removal of inefficiency and continuous improvement are ongoing fundamentals and will continue to be monitored in future years.

Now that we have implemented the foundation of Lean, we will implement the more difficult concepts such as creating "pull" through the entire facility. Toyota regards Lean as a state of mind where you continue to improve and are never finished implementing.

**KJ:** *Outline the first season benefits of Lean at Trevelyan's.*

**Alister Hawkey:** We have packed 2 million extra trays this season, more trays per bin and more bins per hour. The packing season has felt easier as a result of better ordering of the workplace and better engagement of staff. Our daily "haka" meetings allow staff to raise issues and better understand their work. The continuous improvement programme allows all staff to raise their ideas for improvement and be involved with the implementation of good ideas. We are confident that we have more than recovered the cost of implementing Lean in our first season.



Signage showing the new "order" of the workplace.

**KJ:** *What feedback have you received from your customers and staff since you implemented the Lean program?*

**Alister Hawkey:** Staff embraced the Lean

Source: The New Zealand Kiwifruit Journal

programme when it was rolled out in February and continue to be enthusiastic with its implementation. It has empowered them to take responsibility and provide a quality product. It is necessary for management to walk the talk and get down on the packhouse floor during harvest. Staff and management enjoy the interaction and support during the intense harvest period. We plan to introduce our growers to Lean later in the year. We will explain what we are doing with Lean and how they can benefit with this high quality, low waste system.

**KJ:** *As CEO of Trevelyan's and Chairman of the G6 Group, do you see this programme being beneficial to the industry overall?*

**Alister Hawkey:** Lean principals applied to grower, postharvest and ZESPRI will help restore wealth to the industry. At a Trevelyan's level, we are expecting our relative returns to growers to continue to improve, which is in part due to Lean. The G6 Group is seriously looking at implementing Lean and one of the other G6 members, Te Awanui Huka Pak, commenced implementation at the same time we did. The Lean production philosophy will encourage growers to provide fruit that is good size, good taste, good keeping and well thinned. I regard low-vigour pruning as the right vehicle for growers to achieve this and we have a main season GREEN grower who achieved \$1.30/TE above the industry average OGR in 2007 at 10,000 TE per hectare through essentially applying Lean techniques.

**KJ:** *Did Trevelyan's receive any financial support for implementing Lean thinking?*

**Alister Hawkey:** New Zealand Trade and Enterprise provided funding for 40 percent of the expected consulting cost of implementing lean thinking. This funding was organised for us by ZESPRI.

**KJ:** *Who did Trevelyan's use to help implement Lean and what approach did they take?*

**Alister Hawkey:** We used a company called Simply Lean which focuses solely on helping businesses implement lean thinking. Simply Lean spent an intensive week with us in February where they gained an understanding of how we work.

During that week, they helped set-up the “ordering” of the workplace, established daily meetings for all staff and helped establish our key measures. Simply Lean now visit on a monthly basis to check progress and to challenge us to make future improvement.

### **Fundamental Lean Thinking Principles:**

#### **Philosophy:**

- Base your management decisions on a long-term philosophy, even at the expense of short-term financial goals.

#### **Process:**

- Create continuous process flow to bring problems to the surface
- Use ‘pull’ systems to avoid overproduction
- Level out the workload
- Build a culture of stopping to fix problems, to get the quality right the first time
- Standardised tasks are the foundation of continuous improvement and employee empowerment
- Use visual controls so no problems are hidden
- Use only reliable, thoroughly tested technology that serves your people and processes.

#### **People and Partners:**

- Grow leaders who thoroughly understand the work, live the philosophy, and teach it to others
- Develop exceptional people and teams who follow your company’s philosophy
- Respect your extended network of partners and suppliers by challenging them and helping them to improve.

#### **Problem Solving:**

- Go and see for yourself to thoroughly understand the situation
- Make decisions slowly by consensus, thoroughly considering all options; implement decisions rapidly
- Become a learning organization through relentless reflection and continuous improvements.