

The first export of kiwifruit from New Zealand was in 1952 by Hayward Wright who started Zespri in 1928. He used the volcanic soils of Bay of Plenty with the ideal mild climate. Hayward developed a new variety of kiwifruit and ever since, the Hayward variety has been grown and exported all over the world. In the following years, many other growers jumped on the bandwagon, with kiwifruit orchard spread across the Bay of Plenty and a few other regions., all competing against each other for markets. The official launch of Zespri Group Ltd was in April 2000. All growers at this time became shareholders in Zespri. Today, Zespri is the world's largest marketer of kiwifruit, selling kiwifruit to over 60 countries and managing 30% of the global volume.

A supply chain shows steps between different processing areas to develop the product and how information and materials flow between these links. The more detailed the supply chain the more complex and web-like the network becomes. A value chain is the process or activities by which a company adds value to an article, including production, marketing, and the provision of after-sales service. This chain is pushed by the customers' wants and needs of the product. For example, if the customer would like a sourer apple the company would take this into consideration and if there was a real demand, they would put it into development for sale purposes.

The overall reason that we want to add value is to make more revenue. Zespri have now introduced European growers from Italy and France. They are now able to grow kiwifruit for exporting by Zespri. This change happened because customers, especially restaurants with kiwifruit on the menu, need to be able to rely on Zespri to provide them with kiwifruit all year round rather than just three months of the NZ growing season.

Research and development are a key part of the value chain process. Suppliers need to establish an appropriate area to plant kiwifruit and start the long process ahead of them. They need to find the best soils for the vines and some cover from the harsh environments that the area/farm could encounter. This could be as simple as previous knowledge of the area or simply asking the locals or weather experts. This can determine how well kiwifruit plants will grow.

We then move to the orchard where the kiwifruit is grown. They are grown in pure environments with organic matter helping them through their life in the vine. This is a key point for value to be added to the product as the fruit can be affected by the weather or poor upkeep of vines.

The next stage in the supply chain is harvesting the kiwifruit. It sounds simple to pick the fruit off the plant and throw into bins, however with hundreds of square meters of orchards picking needs to be quick and efficient in order to keep the fruit pure, whole and unbruised. Growers employ foreign workers, mainly from Vanuatu, for this part. They are experienced with fruit picking and usually have the best knowledge for the upkeep of the product. Accommodation and three meals a day are provided for the foreign workers.

A sample of the fruit gets sent away to the Zespri factory for the grading process. There the fruit is tested to ensure that it is up to standard and within the right size and weight. The grower then gets their results back and this determines when they can pick their fruit and whether they need more growth or not. If farmers don't get their fruit graded and they go ahead with picking, the fruit can be packed and sent to the factory and potentially be destroyed as the goods are not up to the standard for Zespri to export.

Zespri have introduced many different varieties of kiwifruit to sell. Although they just look like different colours, they all have a different taste to them, ranging from sour to sweet. Their idea for doing this is mainly for more profit. The value chain is driven by the customer, meaning that most of Zespri's products and ideas were thought of by customers. Therefore, the kiwifruit company has thought of ways to add more value and please the customer. Zespri needs to supply the consumer with more variety otherwise they would get bored of the same old kiwifruit and not demand as much. If they started with the classic Kiwifruit and loved it, then they would maybe experience more alternative kiwifruit like sungold or gold. Or if the customer wasn't a fan of the classic, they may try the organic kiwifruit then progress to the sungold organic or sweet green. There must always be an alternative to suit the consumer and their needs. This links back up with the value chain, always driven by the consumer. It's all about them and what they want.

The Vanuatu workers also help with packing in the factory too. They process and divide the numbers up into even boxes ready to be sent out. The fruit needs to be handled with care. This rules out the use of machines as they are too rough. Employees handle and box the fruit in cardboard boxes lined with a plastic bag.

The storage of the fruit is also a very cautious stage too. O₂ below 1% can cause off-flavours. CO₂ greater than 7% for longer than four weeks may cause internal flesh breakdown of the product. The fruit shouldn't be left in storage for too long as the customers rely on the freshness of the product. The fruit needs to be cooled otherwise the skin will start to deform and change their colour.

Shipping is responsible for the greatest contribution to the total carbon output in the Zespri supply chain. This also means that shipping provides the greatest opportunity for reductions in emissions. Transporting of the fruit is a very quick process considering the distance that it needs to go. Zespri use direct routes with larger and more efficient vessels, this also helps reduce second handling of the fruit. Zespri is also targeting to use low sulphur fuel in all their ships by 2020. This shows that they are trying to not only reduce fuel cost but also their carbon footprint.

Once the kiwifruit is in the country to be sold, Zespri likes to sell not only the product but the story behind it. Quite often they have the journey of the fruit displayed so that people can see where and how this fruit is grown in New Zealand. The fruit doesn't really need to be advertised as much as other products as it is already so sought after. They're usually advertising the new and improved varieties in kiwifruit and the different flavours. This links to the traceability of the product. A lot of New Zealand produce business now use traceability. For Zespri it is the ability to be able to track the kiwifruit from an orchard to the consumer. This includes what sprays have been used, where and when it was packed. Traceability is a vital for entry into export markets. Each tray has an EAN (European Article Number) barcode which links to a system where every details of a batch of kiwifruit can be viewed. This is used to prevent fruit being shipped to markets where it doesn't meet their requirements e.g. a pest has been found on an orchard, so its fruit is banned from a country. Food safety programmes require high levels of traceability. This is like a story for the consumer, explaining where the product has come from and how it has progressed from the seed of the vine.

The kiwifruit is put on sale in different stores and supermarkets and used in restaurants around the world. With all the advertising of the pure New Zealand product people are after our products. Zespri is a fast-growing company and is always looking into new markets and where they can expand into new markets. A new market for Zespri is in North America. Zespri looked at where the majority of kiwifruit were exported to and saw there was potential to export to North America. 'Returns there are set to nearly double from last season in the next two years to hit more than \$100 million in 2018-19, with new variety sungold accounting for nearly three-quarters of revenue.' [Source cited.] Global revenue for Zespri is \$1.9b. This is again driven by the customer and there is a demand for the fruit in this country, with Zespri managing 30% of the world kiwifruit distribution they would be the only company suitable for the task. Zespri's wish is to increase their revenue to \$4.5b by 2025 and with innovations like these it won't be hard for them to achieve. The main reason that there is such a demand for Kiwifruit in North America is mainly because it has never been there before. People always enjoy trying new products and especially if it has such a strong impact and presence in the rest of the world.

Zespri is constantly trying to research and improve their product for the consumers. A way for them to do this is develop a new variety of kiwifruit to keep people interested and get them trying new and hopefully better products. Zespri has just renewed their partnership with Ministry of Business, Innovation and Employment to develop new kiwifruit and breeding technology. MBIE will contribute \$6.7m to Zespri's \$15.7m over the next seven years. They hope to develop at least one new variety by 2030 and increase their revenue to \$200m by 2045. 'Zespri General Manager for Innovation Carol Ward says the partnership builds on an incredible track record of value creation with MBIE and Plant & Food Research. This includes the development of the sungold cultivar which in 2016/17 alone returned an export value of \$686 million.' [Source cited.] Not only is this more value for Zespri and its customers but also growers will notice the increase in profit while producing these products.

Zespri and MBIE have been in partnership for two decades now and have developed several new kiwifruit varieties over the time. One they are developing is the red kiwifruit. The colour of the fruit represents good luck and wards off evil in China. Zespri is predicting that the new variety will be popular there because of the link between red and good fortune and because of the convenience of the new kiwifruit which will be cut and prepared, ready to eat and go on the go. It is a tradition in China to send fruit as a gift to friends and family, so a red fruit could sell very well as gifts. In Asia the number of middle-classed citizens is increasing meaning that people are more likely to pay more for a product such as red kiwifruit. Zespri has over 100,000 red kiwifruit seedlings growing. This is one of the largest investments in New Zealand's primary industry. A variety that Zespri is also pushing now is a sweeter green kiwifruit that is convenient and ready to go for the customer. The business hopes to commercialise this soon.

In conclusion I have explained the value chain for Zespri, how this is driven by consumers and most importantly how it applies to Zespri. By investigating Zespri's innovations I have discovered that they are making the most out of their company and add value at every point possible. It's great to see such progress being made by a small country far away from the rest of the world. Zespri have some great innovations planned and are well on track for their \$4.5b target revenue by 2025.