



Spicy BBQ beef short ribs



Technological process

Initial Brief

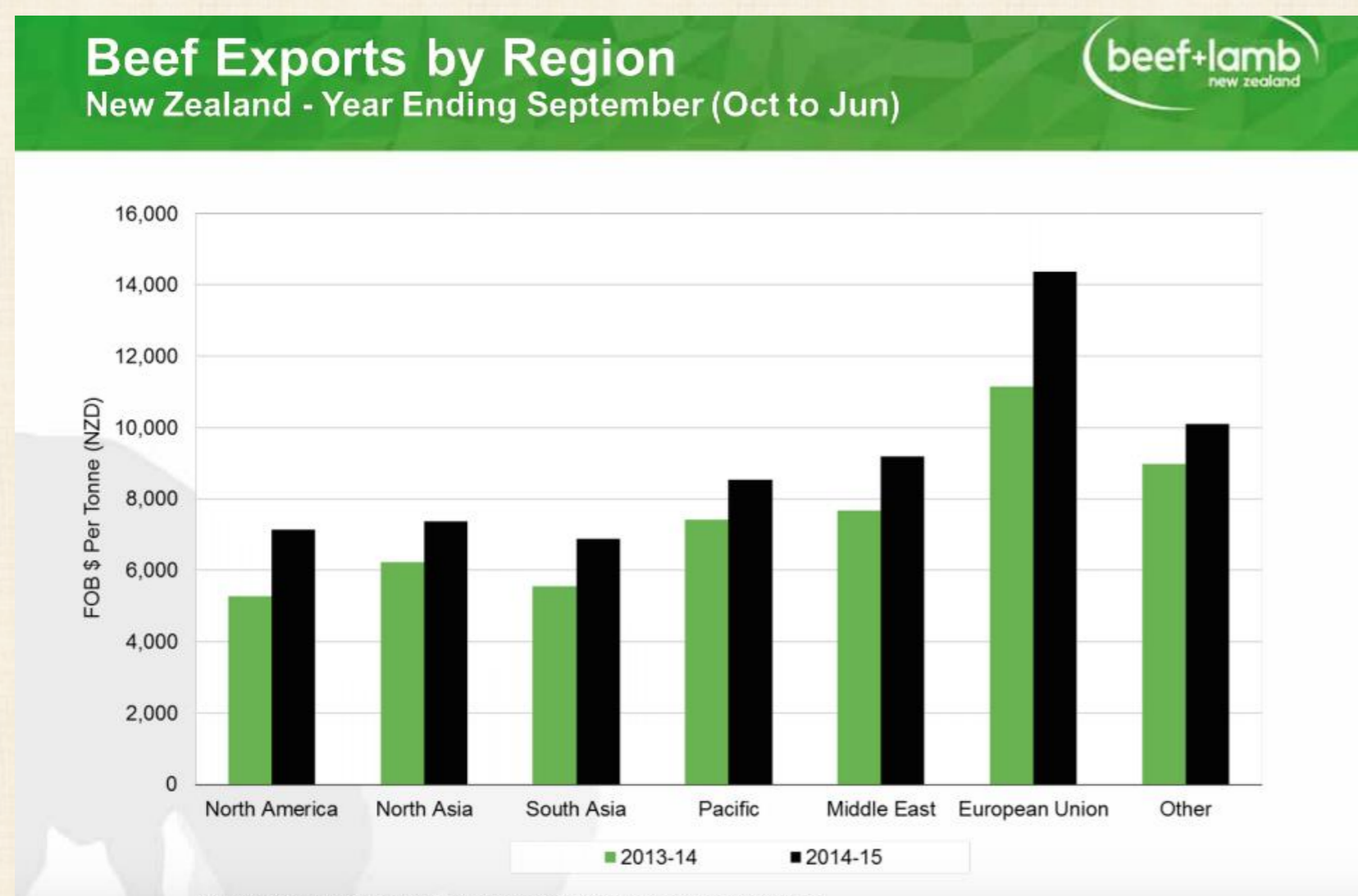
Brief provided by the Food Technologists from the Ministry of Primary Industries, required the development of an export food product. It had to be a product that mainly contains iconic ingredients of New Zealand, that are not costly, have nutritional value and are suitable for the export market.

Research

Global food trends were investigated to point out food ingredients suitable for use in product development. An initial idea of using manuka honey was brought to a halt when it was pointed out that using honey in a formula could be difficult as the viscosity of honey is never consistent.

Further research was done on world wide nutritional needs and the need for better protein in Asian diets especially Singapore came to attention. The Singaporean diet which once consisted of high protein and high fibre has turned into a high carbohydrate and high sugar diet.

NZ beef is highly valued on the Asian market as is seen in the following graph from New Zealand Meat Board.



This shows that for a small country New Zealand has a strong and rapidly growing primary industry of beef and other meat. The National Business Review reported in October 2014 that beef exports were soaring. Atkins and Co. wanted a nutritional and inexpensive product and so researched cuts, cooking methods and cost.

Research pointed out the popularity of beef short ribs in Singapore. Beef short rib is cheap, tasty, easy to cook in rich in protein, and minerals including iron and zinc.

Concepts Ideas

- Manuka honey coffee syrup
- Beef Short rib
- Beef Short rib with manuka honey and kawakawa rub
- Marinated Beef short rib
- Beef Short rib packaged with Spicy BBQ rub

Final brief specifications

Atkins and Co. has the opportunity to develop spicy BBQ beef short ribs for the Singaporean market.

Specifications for the product include

- Product development must follow a HACCP plan.
- Secure Cold Chain .
- Use New Zealand primary beef short ribs cut to specifications provided by Atkins and Co (frozen cut 1 cm thin slices).
- Packaged in lots of 420 grams
- Packaging includes vacuumed sealed special BBQ rub.
- Labelling must follow Legal requirements for export products to Singapore.

Concept Development and Consumer Testing

Specified cut for beef short rib product was not available on supermarket shelves in New Zealand.

Focus groups and current market testing



Asian students at Wellington High school discussing preference of current market products.



Beef blade steak- too tough and not enough flavour.



Marinated BBQ beef steak- students proffered the spices and taste. (hence the reason for the development of a spicy rub)

Finding the right cut

Butchers were able to supply short rib LA cut. But this was too thick and did not meet the specification.

Negotiation with the local butcher, resulted in a frozen cut beef short ribs that meet the specification of .5cm thin slices.



Design development Optimised formula -flavour

A standard spicy rub recipe was adapted and trialled in the process of finding the best solution.

For the first formula the manuka honey was trailed to try and improve the taste but with sensory testing it failed, showing it to be too sweet.

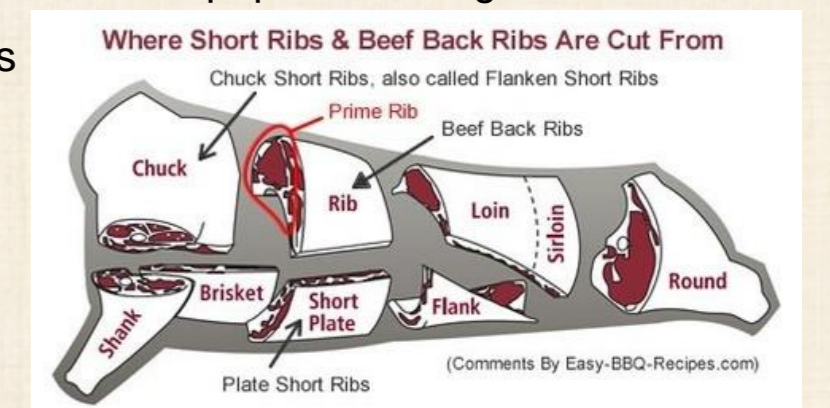
In the next trial horopito was used to add more spice and flavour but the horopito also did not go down on the Asian pallet.

Kawakawa was trailed to give the product a spicy/peppery taste but the inclusion of kawakawa discontinued as it was not pleasing to the Asian students.

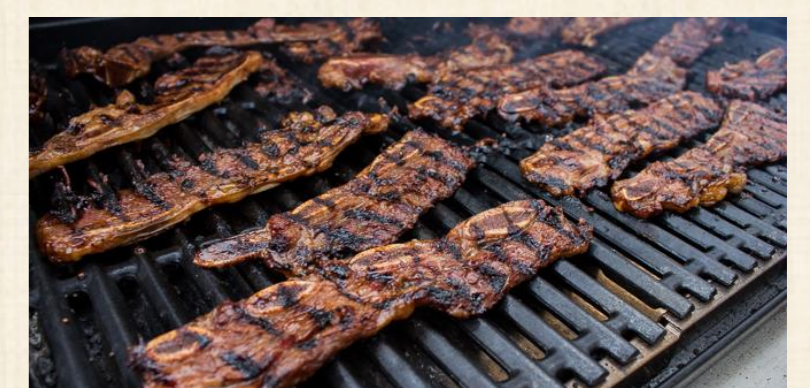
Finally the option of a BBQ flavour seemed to be the most popular amongst the Asian students as it was indicated that Asian nations

Beef cut and cooking method

We decided to use a very thin cut of beef rib that would be typical of Asian cuisine and quick to cook. All meat cuts from the front quarter of the beef tend to be tough and therefore cheaper.



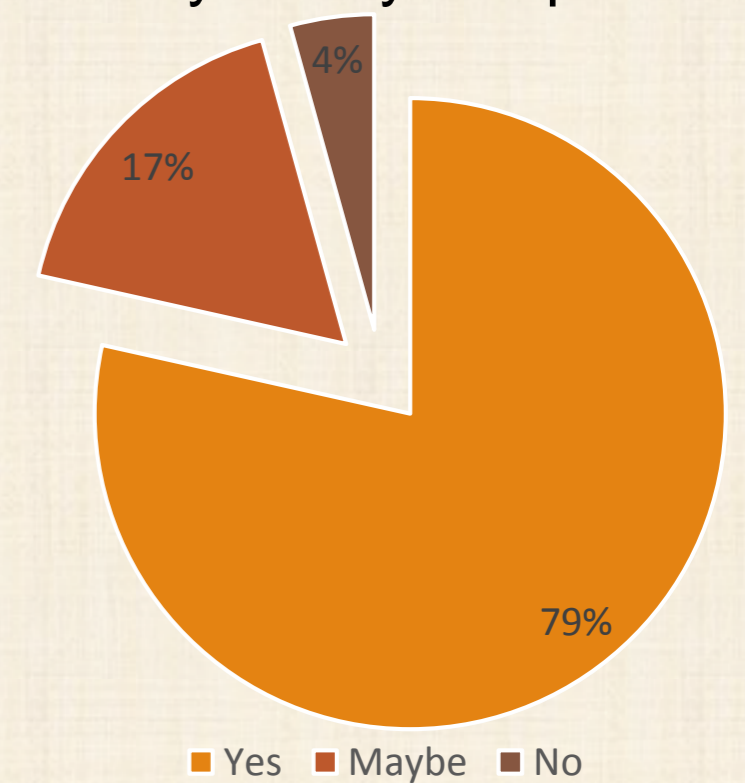
As short ribs have the tendency to be tough and Only suitable for moist cooking methods "Spicy BBQ Beef Short Ribs" are sliced 1 cm thick and Quickly Grilled for optimum texture and flavor.



Sensory testing

For sensory testing data was taken from 93 people on WHS open day participating in a sensory exercise. Nearly 80% was in favor of the product. Justifying the viability of spicy BBQ beef short ribs as an export product to Singapore.

Would you buy this product?



Packaging

Research showed that a box was the most suitable form of packaging for optimum safety appearance and hygiene. The box has a window on the front to display the quality meat contents. The meat is vacuum packed to ensure freshness. On the back there are icons and symbols to indicate this is a New Zealand product therefore high quality in consumer's minds. In meeting standards for Singapore import contact details for manufacturer are provided.

Cooking instructions are provided showing how easy the product is to use. The website link is there for serving suggestions.

Pre-NIP values	
Nutrient	Qty per 100g
Energy (kJ)	334.68
Protein (g)	12.94
Fat, Total (g)	11.44
Fat, Saturated	1.31
Carbohydrate (g)	40.93
Sugars (g)	21.27
Sodium (mg)	3105.76



The team at Atkins and Co : Alexia Atkins, Taiesha Scymkowiak and Julian Wood would like to thank for their expertise and encouragement;

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