

19 October 2018

Dr Deborah Russell, MP
Chairperson
Environment Select Committee
Parliament House
Wellington

Email: Natalie.Moore@parliament.govt.nz

Dear Dr Russell, MP

Thank you for the invitation to provide a written briefing on food waste in New Zealand. We note that this is a 'learning phase' for the Committee but that recommendations are likely to be an outcome. We would therefore be pleased to continue a dialogue in 2019 if the Committee decides to formalise its interests. Such timing would work well for NZFGC because this year we established a small working group to examine current practices and recommend a course of action for NZFGC on the issue of food waste but it will not be reporting until later next year.

You will appreciate that my response is therefore limited at this time. In terms of the questions you are interested in and that NZFGC is responding to, it is important to put this into context.

Context

NZFGC represents the food and beverage manufacturing sector (not supermarkets or retail which are represented by RetailNZ). NZFGC does represent some primary processors (some dairy and meat processors) but in the main the manufacturing sector NZFGC covers is focussed on the value-add secondary processing sector. Data on the size and value of the sector resides in statistical documents commissioned by the Ministry for Business, Innovation and Employment and compiled by Coriolis.

The industry is tightly regulated under legislation administered, in the main, by the Ministry of Primary Industries (MPI) under the *Food Act 2014* and the *Animal Products Act 1999*. This legislation regulates the disposition of downgraded or rejected food and beverage products on food safety grounds. It also covers other food safety considerations (such as allergens), contamination (in the raw material or during processing), labelling and packaging matters. As a result, the sector's response to food waste is somewhat limited by food safety requirements and other legislative constraints. Nonetheless, dealing with waste products to reduce operational costs or convert them to saleable alternatives is very attractive to any business looking for efficiencies, revenue raisers and cost savings. Food and beverage manufacturers are financially motivated to reduce waste because none want to lose paid for inputs such as ingredients, energy and labour.

The food waste problem

How much food is lost or wasted in New Zealand?

NZFGC does not collect data on food waste in the processing sector but individual manufacturing businesses might do so as they endeavour to increase efficiencies. An

estimate might be available from companies possibly from a Statistics New Zealand survey, from MPI based on the number of recalls conducted for which products were directed to landfill or from business operation verification reports that might indicate the extent of product downgraded. The responses below indicate the efforts made to divert potential waste.

If packaging is damaged, this may compromise food safety and the food would require disposal to landfill, other destruction means or conversion to an alternate product.

What is the environmental impact of food waste?

Packaging waste is an area covered by the Packaging Council and the Packaging Forum but is part of the food waste dynamic as manufacturers with recalls or withdrawals have packaging to dispose of as well as food. Processing waste may be directed to landfill or wastewater systems unless converted to a useable by product such as animal feed or soil conditioner.

Food waste from processing may have beneficial environmental impacts depending on composition, compostibility or conversion. It is important to appreciate that food safety and liability concerns are paramount in the food waste equation. Alternatives to donation and human consumption reduce or eliminate the very high risk of liability and brand damage that can occur once product is out of the manufacturers' control. In such situations, all the good work and best intentions to reduce waste are lost in the headline about the suffering of the consumer.

In terms of following requirements to dispose of condemned food, the options are generally limited to burial or other complete destruction to prevent it re-entering the food supply either in error or fraudulently. MPI would have more information on this disposition. Similarly if a food is downgraded, reprocessing is constrained by legislative provisions to ensure food safety is not compromised and consumer food quality expectations are achieved.

What is the economic and social impact of food loss or waste?

As noted at the outset, food and beverage manufacturers are financially motivated to reduce waste during manufacture because it improves financial returns. In many cases the issue faced by food manufacturers is one of quality such that damaged product would not be sold because of brand issues.

If the outer packaging was damaged, product is harder to use and food safety or food quality may be compromised. The outcome would depend on the product category eg if a product was mislabelled and its use would not present a food safety issue then it could be donated. As well, some manufacturers might have bins in their factory shops, if they have such outlets, for dented or damaged labelling so long as this did not affect matters such as allergens. They might also offer these direct to employees.

Preventing food waste

What are effective methods to prevent food loss or waste in manufacturing?

What are the challenges for putting these methods in place?

Effectiveness of methods to prevent food waste depends on the nature of the potential food loss and options available. Some food loss scenarios, methods to prevent loss and challenges include:

- Close to or out of date – consumer education on best before and use by date marking
- Short shelf life – packaging technology and research into shelf life extension

- Incorrect labelling – relabelling (not feasible if too costly), donation (limited to non-food safety products and branding concerns), reduced sale pricing (could be brand issues), repurposing (depending on labour/reprocessing costs)
- Damaged packaging – repackaging (not feasible if too costly or there are physical constraints such as quantity to be repackaged, technical barriers to repackaging or food safety is compromised)
- Contamination – dependent on the extent and type of contamination could be downgraded to animal or pet food or garden/soil conditioner
- Redirected from export – dependent on where redirection takes place, reason for redirection and impact on the integrity of the New Zealand reputation for repurposing
- Withdrawn from sale due to low volume sales – donation
- Transport or other spillage – dependent on quantity, subsequent contamination, location of spill etc
- Plant and equipment failure – as above, dependent on quantity, subsequent contamination, location of failure in the processing chain etc

Redistributing food waste

What are effective methods for redistributing food waste to people?

What are the challenges for putting these methods in place?

As noted above, accepting there are no food safety and other constraints at play in the manufacturing sector, donation is a favoured option. Issues such as collection and redistribution need to be resolved. Other options include:

- Discounted sale is possible depending on the quantity and the outlet in order to not detract from sales of non-discount stock.
- Re-labelling may not be an effective method since production lines often do not accommodate re-introduction points (adding cans to the labelling line) and there is the risk for further errors and high cost in terms of materials and labour.
- Conversion to an alternate product for use by people such as garden conditioner or into an entirely different product such as organic packaging, low grade fuel, etc.
- Watties (now Kraft Heinz) started as a means of reducing fruit and vegetable waste in the Hawkes Bay. Damaged or surplus fruit and vegetables can be repurposed to salsa, sauce, puree, concentrates or powders.
- NIWA has worked with Ngāi Tahu Seafood to develop natural skincare products from waste products of the seafood industry.
- Extracting useable substances from waste or by-products is also undertaken such as gelatin from animal carcasses, and protein from dairy production.
- Research, biotechnology, production technology, and supply chain innovation (for waste minimisation, capture and conversion) all have a contribution to make.
- DB's sustainability report 2017 describes the challenges and activity for its alcohol products production such as yeast slurry to biofuel, and its zero waste achievement <https://www.dbsustainability.co.nz/reports/DBSustainabilityReport2017.pdf>
- Similarly, Lion has set priorities at <http://lionco.com/sustainability/environmental-performance/our-priorities>.

What are effective methods for converting food waste to animal feed?

What are the challenges for putting these methods in place?

A number of manufacturing companies already undertake conversion of foods to animal or pet food. Sealord's sustainability policy commits to reduce, recycle and reuse where possible (<https://www.sealord.com/media/2391/sustainability-policy-final-for-web.pdf>) and it has a number of conversion programs for feed.

There are programmes for collecting vegetable and fruit waste for pig feed but food waste for pigs is tightly managed to avoid creating biosecurity risks or events.

As noted at the outset, NZFGC has commenced a work programme around manufacturing food waste and may well have more to contribute to the work of the Committee over time. We would be pleased to remain on your contact list for this purpose.

Yours sincerely

Katherine Rich
Chief Executive