The Ministry for Primary Industries (MPI) commissioned Colmar Brunton to carry out research on the ability of New Zealand consumers to use the Australian Health Star Rating System, and variants of it.

The main aim of this research was to test whether Front of Pack Labels (FOPLs) have a positive effect on consumers’ ability to correctly identify healthier food products. The three systems tested were:

1. Australian Health Star Rating System
   - The proposed Australian FOPL, with a Health Star Rating and accompanying nutrition information

2. Star Rating only
   - A FOPL with a Health Star Rating only

3. Star Rating and Daily Intake Guide
   - A FOPL with Health Star Rating and an accompanying Daily Intake Guide

To test the effectiveness of these systems we carried out a controlled experiment. Participants were randomly assigned to one of four independent conditions: a control condition or one of three test conditions.

The experiment was carried out online between 15 November and 27 November 2013 among three groups of participants: a General population group (n=1,022) recruited to be representative of the adult New Zealand population, a Māori group (n=696) and a Pacific group (n=567). The latter two groups were defined by MPI as priority groups for the purpose of testing the FOPLs.

In each condition participants were shown two pairs of products, and they were asked to select which was healthier. Participants could enlarge the products, and could click ‘flip’ to see the rear of a product. The only difference between each condition was the nutrition information provided on the products.

Which (if any) of the FOPL systems has the most positive effect on consumers’ ability to correctly identify a healthier food product?

All of the FOPLs tested had positive effects on the ability of consumers to correctly identify healthier food products. Each FOPL variant was tested six times - on both snack foods and frozen meal products and across the three participant groups. The chart on the right summarises the results across the experiment as a whole.

The Australian Health Star Rating System and the Star Rating and Daily Intake Guide performed equally.

*This is the average of all percentage increases observed over the control conditions for each group of participants.*
well, both in terms of the number of times these FOPLs had a positive effect on the ability of consumers to select the healthier product, and the average increases in the percentage of participants who correctly selected the product with the healthier nutrient profile.

Other findings relevant to the effect of the FOPLs include:

- Ingredients displayed pictorially or in text on the front of packages for promotional purposes, or listed on the rear of products, have an influence on the consumers’ decisions and can lead them to incorrecty select less healthy products. FOPLs can help to mitigate this to some extent. Overall, consideration of product ingredients when making healthy food choices tended to decrease slightly when FOPLs were displayed on products.

- When the Health Star Rating was shown on products as part of the FOPLs, between 12% and 27% of respondents said, without any prompting, that the Health Star Rating influenced their decision. Use of the Health Star Rating was greater when there was a full-star as opposed to half-star difference in the five-star rating.

- FOPLs helped participants understand that there was not a substantial difference in the nutritional value for some of the products displayed. In the experimental trials where there was only a half-star difference in the interpretive Health Star Ratings, participants were more likely to recognise that there was ‘hardly any difference’ between the products if FOPLs were displayed on them.

Which (if any) of the FOPL systems has the most positive effect on the ability of priority groups (Māori and Pacific people) to correctly identify a healthier food product?

**Māori group**

The chart on the right summarises the results for Māori participants. Again, all of the FOPLs had a positive effect on consumers’ ability to select healthier food products.

The **Australian Health Star Rating System** and the **Star Rating and Daily Intake Guide** produced higher average increases (than the **Star Rating only** in the percentage of participants who correctly selected the product with healthier nutrient profile.

The **Australian Health Star Rating System** and **Star Rating only** FOPL had a significant effect in only one of the two test trials. However, in the test trial where the effects did not reach statistical significance (the snack foods trial), the difference in the overall nutritional value of each product was smaller, making the decision between products more challenging in this trial.
Pacific group

The chart in the right summarises the results for Pacific participants. All of the FOPLs had a positive effect on consumers’ ability to select healthier food products, in all test trials and experiments conditions.

The Star Rating and Daily Intake Guide produced highest average increases in the percentage of participants who correctly selected the product with healthier nutrient profile.

Was there any potential for confusion or misuse of the Health Star Rating system (or elements of) apparent from the research?

We did not find any direct evidence that the FOPLs were misleading or confusing. However the following points may be worth considering when developing an FOPL system for use in New Zealand.

- When the FOPLs display a Health Star Rating along with a breakdown of a product’s nutrient content, we speculate that participants tended to view the Health Star Rating as being inherently linked to the nutrient values displayed on the FOPL, and that this made these FOPLs more persuasive. When a breakdown of a product’s nutrient content is not displayed with the Health Star Rating (ie, in the Star Rating only condition), it is possible that consumers will place less weight on the rating when making health-based decisions. Further research would be needed to confirm this.

- Those who incorrectly selected a product with a less healthy nutrient profile tended not to use the Health Star Rating when making health-based product decisions. This may be because a) they did not see the rating, b) they did not know how to interpret it, or c) they did not believe the rating to be correct. Further research would be needed to gain a diagnostic understanding of the labels, and whether design and/or content changes can be made to maximise their effectiveness.

*This is the average of all percentage increases observed over the control conditions for Pacific group participants.*