



The colour-changing labels display different discounts based on the date of expiration | Photo source Dyson Award

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A FOOD LABEL THAT CHANGES COLOUR AND PRICE AS EXPIRATION DATE NEARS

 FOOD & DRINK

Three students have developed a way to change discounts based on food expiration dates, without needing to apply new labels

Spotted: As groceries reach their expiration date, supermarkets often relabel them with discount stickers – 20 per cent off, 40 per cent off, etc. The closer to the expiration date, generally, the greater the discount. But this relabelling can be time-consuming for staff and often leads to mistakes. To prevent this, three grad students at the National Taipei University of Technology have designed a better system.

The Taipei Tech students were awarded national runner-up in this year’s Dyson Awards for their idea, Barcodiscount. The concept consists of colour-changing stickers, which display different discounts based on the timing of the expiration date. For example, when a packet of meat is 48 hours from expiration, the words 20 per cent off appear on the label, and when the meat is 24 hours from expiration, this is automatically replaced with the words 40 per cent off.

The students used existing technology, which forces a colour change after a set period of time has elapsed. Normally, this is applied during the process of printing the labels, and the designated colour-change is set at a precise time — from 30 seconds to 30 days. However, the team devised a way for the timer to start when the label is applied at the shop, rather than printed.

In addition to the Dyson Award, the concept won “Best of the Year” at the 2020 iF Design Talent Awards (the “Oscars” of design). The IF jury found that Barcodiscount, “is an interesting proposal with great application potential. It solves two key problems of the food retail; it reduces waste by

encouraging consumers to buy products that will soon perish, and streamlines logistics and data management.”

Supermarkets and food producers have been increasing their attempts to curb food waste in recent years and to resolve the costs from this, not only in lost revenue but in terms of the environment. This awareness has led to new innovations in detecting food spoilage, such as a [micro-needle sensor](#) that can detect spoilage and an app that finds a nearby home for [unwanted food](#).

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Takeaway:

The problem of labelling food may seem minor but, in reality, a huge amount of food goes to waste each year. It is estimated that in the UK alone, around 10.2 million tonnes of food and drink are wasted annually after leaving the farm gate, worth almost €22 billion. This also represents a huge cost in carbon emissions, and water and fertiliser use, for food that is never eaten. The colour change Barcodiscount stickers could help to reduce this mountain of waste, ultimately curbing emissions and waste in other areas.