

Impact of on-pack visual cues on household premeditated food waste

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Background. In developed countries, consumers households are responsible for 25-40% of the food waste within the supply chain. Knowledge is scarce about the relationship between visual information on food packaging and household food waste behaviour.

Methods. An online survey with 1500 Dutch participants was conducted over consecutive days during one week. This week mimics the period between the purchase of selected perishable food products and their discard, given a pre-set remaining shelf life (use-by date within 6 days of purchase) until one day past the expiry date. Basic and luxury varieties of fresh-cut lettuce, fresh meat, bread and yoghurt products were selected for the study. Visual cues on packaged food products including volume discounts, short shelf life price discount and smart sensors rated on various days before and one day after expiration. The participants rated per food product the amount of expected waste (premediated food waste or PW) on the expiry date at a 7-point scale (anchors: discard nothing – discard everything). Mean PW-values were calculated.

Results. As expected, PW increased near or past the expiry date. Also, PW increased with larger discount volumes and discounted prices relative to their regular variants, and PW increased when the smart sensors signal reduced quality, even though the use-by date was not passed yet. Furthermore, comparing a discount priced with a regular product both with the same remaining shelf life, the PW of the discount product is significantly lower. This indicates that households seem to be more focused to use the more recently purchased discount food product in time compared to the regular product.

Conclusions. Although based on self-reporting, it can be concluded that visual food packaging cues have impact on the anticipated amount of household food waste.