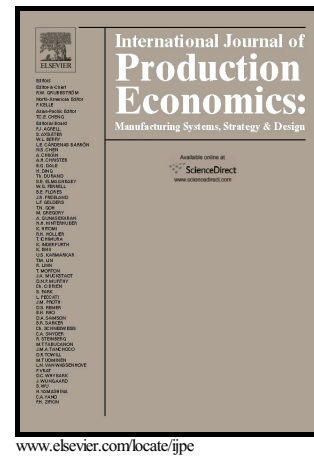


A systematic approach to preventing chilled-food waste at the retail outlet

Seth-Oscar Tromp, René Haijema, Hajo Rijgersberg, Jack G.A.J. van der Vorst



PII: S0925-5273(16)30279-1
DOI: <http://dx.doi.org/10.1016/j.ijpe.2016.10.003>
Reference: PROECO6546

To appear in: *Intern. Journal of Production Economics*

Received date: 18 December 2015
Revised date: 27 May 2016
Accepted date: 3 October 2016

Cite this article as: Seth-Oscar Tromp, René Haijema, Hajo Rijgersberg and Jack G.A.J. van der Vorst, A systematic approach to preventing chilled-food waste at the retail outlet, *Intern. Journal of Production Economics* <http://dx.doi.org/10.1016/j.ijpe.2016.10.003>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

A systematic approach to preventing chilled-food waste at the retail outlet

Seth-Oscar Tromp^{1,2*}, René Haijema^{1,3}, Hajo Rijgersberg^{1,2}, Jack G.A.J. van der Vorst³

¹Top Institute Food and Nutrition, P.O. Box 557, 6700 AN Wageningen, The Netherlands

²Food and Biobased Research, Wageningen University and Research Centre, P.O. Box 17, 6700 AA Wageningen, The Netherlands

³Operations Research and Logistics Group, Wageningen University and Research Centre, P.O. Box 8130, 6700 EW Wageningen, The Netherlands

*Corresponding author: phone: +31 (0)317 480204. seth.tromp@wur.nl

Abstract

The objective of this paper is to develop a systematic overview of interventions for preventing chilled-food waste at retail outlets, and to assess the impact of these interventions for a particular case of fresh-cut iceberg lettuce at a Dutch retail outlet. The structure of the simulation model as presented in this paper is generic, hence suitable for other retailers and other chilled-food products as well. The generated systematic overview focusses on interventions that do not require a system change. A distinction is made into technical, logistical and marketing interventions. Model simulations show the effectiveness of these interventions. It is concluded that a number of 'waste drivers' exists, such as a low and varying consumer demand, high selection behaviour, the order lead time, a fixed order unit, and a short use-by date. The retailer can fine-tune the replenishment level of his order policy and the way of rounding to the given order unit, but by doing so he is at best able to exchange waste for out-of-stock or the other way around. The systematic overview of interventions is valuable input to future research on defining and estimating the effectiveness of combining interventions, and interventions that do require a system change.

Keywords: use-by date; shelf life; food waste; retail outlet; quality decay; simulation

1. Introduction

Food is wasted throughout the entire food supply chain, from the initial stage of agriculture to the final consumption stage (Parfitt et al., 2010). In this paper we focus on chilled-food waste prevention at retailers. The FAO reports that the distribution phase is responsible for about 12% of the total food wastage along the food supply chain (HLPE, 2014). Retail losses represented 10% of the available

Download English Version:

<https://daneshyari.com/en/article/5079237>

Download Persian Version:

<https://daneshyari.com/article/5079237>

[Daneshyari.com](https://daneshyari.com)