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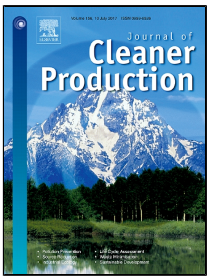

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Application of eco-efficiency in the assessment of raw materials consumed by university restaurants in Brazil: a case study

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ABSTRACT

The production of meals for collectivity is an important activity of the services segment. The concept of eco-efficiency prioritizes more efficient use of materials and energy, thus combining economic and environmental performance. The objective of this study was to propose and apply a procedure to measure and evaluate environmental performance under the eco-efficiency approach for the food production segment. The procedure was applied in five university restaurants of a Brazilian federal public university that served more than 1.5 million meals in 2012. Calculations for assessing eco-efficiency contemplated the inputs used considering the supply of energy in kilocalories and the financial figures for the environmental impacts in which the variables were selected from the water footprint and the amount of waste generated from food used. So far the concept of eco-efficiency was not applied to the food production segment to collectivities. Thus, this study is to contribute and fill that gap.

Keywords: *eco-efficiency; water footprint; meals; waste; restaurants.*

Highlights

Absence of studies applying eco-efficiency to community food services.

This study proposes and applies a procedure to evaluate eco-efficiency in food services.

The evaluation of eco-efficiency considered raw materials used by five university restaurants.

1 INTRODUCTION

Meal production for communities is an important activity in the service industry. The term *food service* designates the provision of services outside of the home (Rodgers, 2011). In the United States, the most recent data provided by the