

## Eco-efficiency: Application in the university restaurants on Brazil

Strasburg, V.J.<sup>1</sup> and Jahno, V.D.<sup>2</sup>

<sup>1</sup>Federal University of Rio Grande do Sul, Brazil

<sup>2</sup>Jahno, V.D., Universidade Feevale, Brazil

Meal production for communities is an important activity in the service segment. The concept of eco-efficiency (EE) prioritizes the more efficient use of materials and energy, combining economic and environmental performance. In this context, the objective of this study was to propose and apply a procedure for evaluating environmental performance from the perspective of EE, for the foodservice segment. The procedure developed was applied to measure the EE relationship of supplies used in food service in five university restaurants (URs) at a Brazilian federal public university with secondary data from 2012. The calculations for assessing the EE included the selection of foods of animal and plant origin according to ABC analysis. Considering that one of the purposes of providing meals is to give energy support to their users, the

approach used for calculating EE included the provision of energy in kilocalories and financial values in relation to the Environmental impacts upon which the variables of the water footprint and amount of wastes generated from the foods used were selected. The five URs served 1,532,588 meals in 2012, and the average served varied from 481 to 3141 meals per day, according to the size of each restaurant. The EE in the relationship between kilocalories and kilograms regarding the environmental impacts of the foods used exhibited values that varied from 0.283 to 1.071. When calculating the EE that considered the provision of kilocalories and financial values regarding the environmental impacts, the values varied from 0.091 to 0.322. In both measurements, the best results were obtained by UR 5 and UR 3, that respectively which had the lowest and highest annual average of meals served. The procedure developed and proposed proved to be adequate for evaluating the environmental performance in terms of EE among restaurants with the same type of service.

vjs.nut@terra.com.br & vjs.nut@hotmail.com