



Editorial: Re-valorization of Food Losses and Food Co-products

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Keywords: food loss and food waste, agriculture, nutraceuticals, functional foods, food recovery hierarchy

Editorial on the Research Topic

Re-valorization of Food Losses and Food Co-products

According to the report on the World State of Food and Agriculture 2019, progress in the fight against food loss and waste, and the reduction of food loss, help to improve the sustainability of the environment, while the reduction of waste benefits food security. According to the FAO, the Food and Agriculture Organization of the United Nations, global food waste represents a third of total food produced for consumption, ~1.6 billion tons per year, which represents a cost of € 730 million/year. The food groups that stand out for their highest percentages of losses are fruits and vegetables, and roots and tubers, both with a 45% loss. It is followed by fish and marine products with 35%, and cereals with 30%. Both food losses and its co-products are very rich sources of nutrients and other bioactive substances that, once extracted, represent very valuable ingredients for the elaboration of functional and nutraceutical foods (among other products). The extraction and isolation of these compounds allow for their use in other sectors (yogurts and dairy products, juices and beverages, energy bars, etc.), as ingredients that favor certain functions when ingesting them.

The European Parliament's Waste Framework Directive applies a standard prioritization scheme for the recovery of food by-products. In it, the first option is the prevention and reduction of the generation of by-products, and the second is human consumption. Finally, there is the shipment of the by-products to landfill, a solution that cannot be considered as recovery. The continuous development of re-valorization solutions will accelerate the sustainability of the food production and consumption system. This Research Topic highlights the role of integrated teams of research scientists for this purpose. Following the United States Environmental Protection Agency (US-EPA) food recovery hierarchy (**Figure 1**), we invited manuscripts that focus on solutions for re-valorization of food losses and food coproducts, including but not limited to: Prevention and reduction; Human consumption; Bioproducts; Animal feeds; Industrial uses; Energy production; Agronomic uses; and Other ways of disposal.

In total, 5 articles were reviewed and published from authors mainly from America, Asia and Europe. Their topics were mainly about plant foods, but also seafood. In this way, they were centered in the production of food allergy modulators (Bessa et al.), nutraceuticals (Cortés-Ferré et al.), and animal feeds (Kithama et al.), together with approaches on green and sustainable methods (Doria et al.) and also bioconversion and bio-refinery (Venugopal).

OPEN ACCESS

Edited and reviewed by:

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University of Minho, Portugal

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Specialty section:

This article was submitted to
Sustainable Food Processing,
a section of the journal
Frontiers in Sustainable Food Systems

Received: 19 September 2021

Accepted: 30 September 2021

Published: 25 October 2021

Citation:

Simal-Gandara J, Agarwal T, Esteki M,
Gomez-Zavaglia A and Xiao J (2021)
Editorial: Re-valorization of Food
Losses and Food Co-products.
Front. Sustain. Food Syst. 5:779734.
doi: 10.3389/fsufs.2021.779734

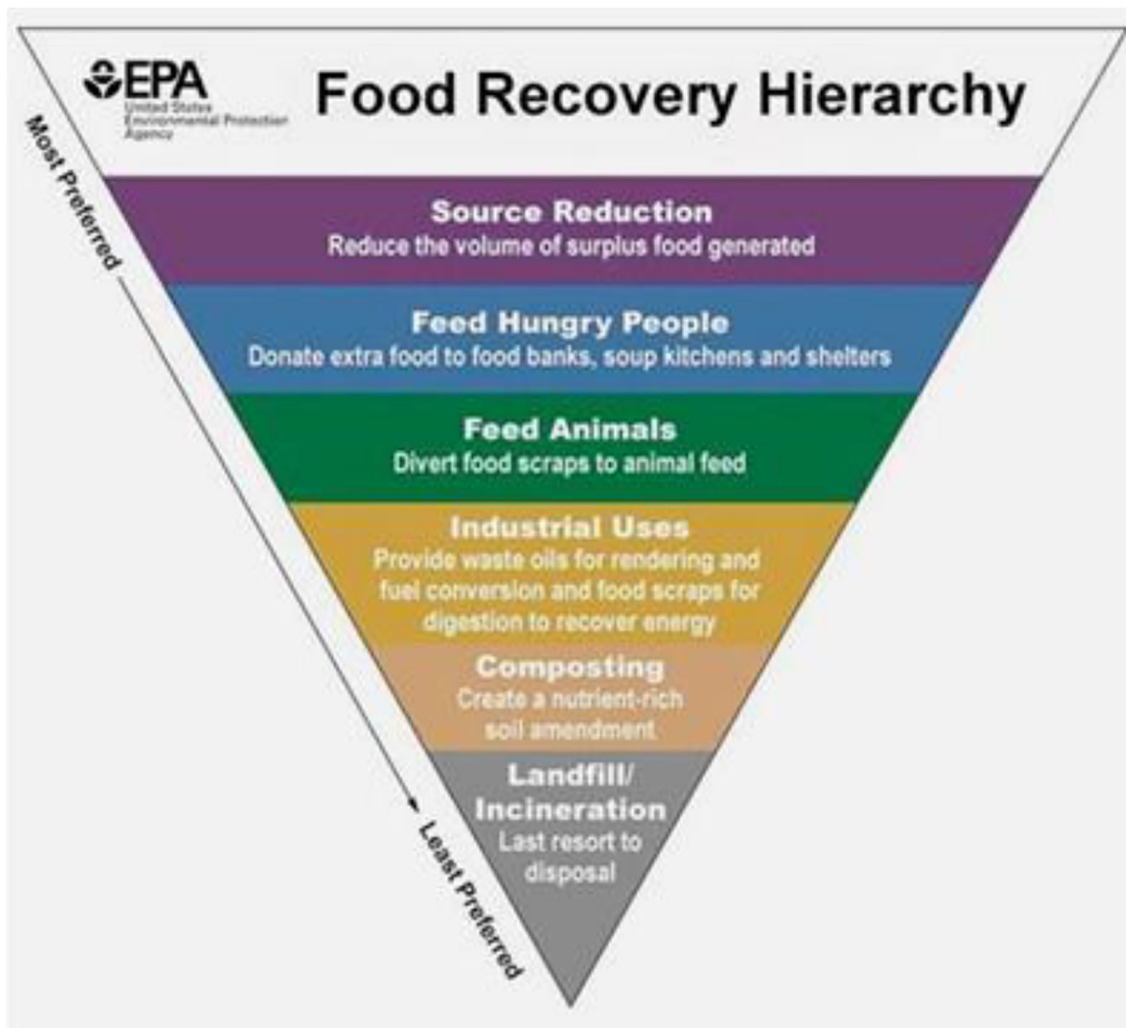


FIGURE 1 | United States Environmental Protection Agency (US-EPA) food recovery hierarchy.

AUTHOR CONTRIBUTIONS

JS-G wrote the first draft. TA, ME, AG-Z, and JX edited it. All authors approved the final version of the manuscript.

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