P35. Turnip tops derived by-products: a promising source of bioactive compounds

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*Brassica rapa* crops are consumed by using the leaves (turnip greens) and the young sprouting shoots (turnip tops) in different culinary preparations. Many by-products of the agri-food industry may be useful as sources of nutrients and potentially functional compounds, giving the opportunity to obtain added-value products. In this work we are interested in adding value to turnip tops by-products (old and damaged leaves and stems) that represent a real problem in the production sites because no intended use for this material has been envisaged. Therefore, the aim of this study was to add value to the turnip tops-derived by-products, since recycling all this agro-waste to obtain bioactive compounds for industry can boost profits and reduce costs and environmental problems. The content on the bioactive compounds (glucosinolates, phenolic compounds), nutrients (vitamin C and minerals) and the antioxidant capacity was analyzed and simultaneously determined. In addition, the level of retention of each individual compound after industrial steaming was evaluated in the edible organs and also in the cooking water, in order to compare their composition to a fresh uncooked control. The bioactive compounds and nutrient contents varied according to the organ analyzed (leaves or by-products), growth seasons and sites. The content of phytochemicals and nutrients of the by-products of turnip tops fell within the range of health-promoting levels of edible commercial parts (leaves and shoots). High retention of health-promoting compounds in the cooking water should be considered for increasing the intake properties of *B. rapa*. Therefore, adding value to turnip tops agro-waste by obtaining bioactive compounds and nutrients could benefit economically the agro-food industry.