**Brassicas in the Mediterranean Basin: more opportunities than problems**

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**Abstract**

Beside the approximately 40 million hectares of rapeseed for oil production, the cultivation of other Brassicaceae for agri-food and industrial applications is not very widespread [1]. In fact, the plants belonging to this family grown in the Mediterranean environment are mainly horticultural that derive from an ancient heritage and productions are relatively limited. Interestingly, though, the huge botanical biodiversity of this plant family, made of almost 4000 species and more than 300 genera, opens possibilities to many research and innovations, in particular considering the wide spectrum of plants potentially suitable for the Mediterranean climate area. This biological variety also translates into an incredible diversity of active compounds that can be exploited for the creation of innovative value chains [2]. Some products are already on the market, such as the ones exploiting Brassicaceae in the so-called biofumigation technique for plant protection in agriculture [3]. More recent research focuses on applications of products derived from their defatted seed meals, such as the protein hydrolysates with potential biostimulant properties on plants growth [4] or extracts with nutraceutical properties for human health and honeybee protection [5;6]. Another interesting example of applications in a Mediterranean environment concerned the cultivation, rainfed and with minimal agronomic inputs, of *Eruca sativa* and *Camelina sativa* for the production of biomasses enriched in bioactive molecules, in particular glucosinolates [7, 8]. Certainly, compared to rapeseed, agronomic yields remain low, but these plants fit better in Mediterranean climate and the work of varietal selection, breeding, and the study of the best cultivation techniques are still in their infancy. For these reasons, in the next future the opportunities given by these plants may overcome the problems related to their cultivation.

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