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THE SIGNIFICANCE OF AMARANTHUS IN ORGANIC AGRICULTURE I ITS PHYTOPHARMACOLOGICAL BENEFITS

Aleksandar Stevanović⁷⁴; Jelena Bošković⁷⁵; Vera Popović⁷⁶; Marko Jauković⁷⁷;
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Abstract

Extracts derived from these plants' medicinal and bioactive constituents are utilized in the production of dietary supplements, health-safe food, medicinal products, and cosmetics. Among the pseudocereals widely cultivated in organic agriculture, amaranth, buckwheat, and quinoa play pivotal roles. These pseudocereals are characterized by their substantial content of starch, protein, β -carotene, dietary fiber, minerals, vitamins, and other bioactive constituents. Of particular interest is *Amaranthus caudatus* L. (Amaranthaceae), which has garnered increasing scientific and industrial attention owing to its remarkable bioactive properties, diverse phytochemical composition, and extensive range of pharmacological actions. In contrast to wheat, rice, and oats, amaranth seeds are gluten-free and contain 30% more proteins with a well-balanced amino acid profile. Beyond its nutritional value, numerous studies have highlighted the significance of *A. caudatus* as a potential source of biologically active compounds, exhibiting anti-diabetic, anti-hyperlipidemic, anti-inflammatory, and anti-hypercholesterolemic effects, as well as antioxidant and antimicrobial activities. By incorporating amaranth into our diets, we can harness the manifold benefits of this remarkable pseudocereal, ultimately fostering health promotion and disease prevention. This work serves as a catalyst for further scientific investigations in this field, paving the way for innovative technological advancements within the realms of food, pharmaceuticals, and cosmetics that harness the potential of this extraordinary plant.

Key words: *Amaranth, organic agriculture, biological activity, phytopharmacological properties, health benefits.*

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