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Quality and dietary characteristics of cowpea fresh pods from accessions cultivated in southern Europe

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Although cowpea dry seeds are widely consumed especially in Africa, cowpea fresh pods have insignificant economic importance. As a result, there is currently little knowledge on the quality and physicochemical characteristics of cowpea pods. We assessed several morphological, quality and dietary characteristics of cowpea fresh pods from 37 accessions of *Vigna unguiculata* ssp. *unguiculata* (common cowpea) and ssp. *sesquipedalis* (asparagus bean or yard long bean) originated from southern Europe, to provide information on quality and chemical properties of cowpea fresh pods and to evaluate those accessions in terms of quality traits. Accessions of the subspecies *sesquipedalis* produced heavier and larger pods than those of the *unguiculata* subspecies, and were harvested 2 days later. There were large differences among the accessions in each quality and dietary characteristic. Overall, fresh pods of most of the accessions had high quality and nutritional value, as they were rich in proteins, chlorophylls, carotenoids and phenolics, had high antioxidant activity and showed low content in nitrates and raffinose-family oligosaccharides (RFOs) which are considered as anti-dietary factors. Based on the assessed quality, dietary or anti-nutritional characteristics, no grouping of accessions was possible, as all those characteristics were independent of accession origin and subspecies. Cowpea cultivation for the production of fresh pods may pose as a competent crop, producing vegetables of high dietary value, adding variety to the diet and exploiting local populations which are widespread in southern Europe and constitute a valuable genetic material.

Biography

Ioannis Karapanos is an Assistant Professor of Vegetable Production at the Agricultural University of Athens. He specializes in the production, quality and postharvest physiology, technology of vegetable crops grown in the field and under cover, on vegetable seed production and the physiology of fruit-set of vegetable species. He has 36 publications in international scientific journals with referees and more than 50 papers in proceedings of international (mainly Acta Hort.) and national scientific conferences. He is a Reviewer in 12 scientific journals and during the last 5 years he has participated in 2 European research projects, a COST action and several national research programs.

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