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## Culinary alternatives for common beans (*Phaseolus vulgaris* L.): sensory characteristics of immature seeds

## Abstract

BACKGROUND: Immature bean seeds feature in several dishes in southern Europe; however, they are not used in all traditional areas of dry beans cultivation. To determine whether differences in the use of immature seeds are due to cultural reasons or intrinsic properties of the seeds, the prestigious varieties of beans cultivated in three areas of Spain with different traditions regarding the use of immature seeds in bean dishes were studied.

RESULTS: We found differences in the culinary and sensory traits between beans harvested when mature and those harvested when immature in the three areas. However, the degree and direction of these differences varied according to the area. Moreover, the different varieties tested within each area responded differently. The sum of the genetic, environmental and interaction effects results in complex alternatives to the mature beans; the gastronomic tradition has taken advantage of only some of these alternatives.

CONCLUSIONS: A lack of traditional dishes using immature beans does not mean that the local beans harvested when immature lack suitable sensory traits. Specific trials in each area of cultivation can reveal alternative textures and bean flavour intensities in immature seeds.

KEYWORDS: sensory analysis, gastronomic alternatives, cuisine, bean seeds.

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