

Title Selection for color in pepper (*Capsicum annuum* L.) breeding
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Abstract

Color of peppers in 45 lines was measured in whole fresh fruit, lyophilized powder, and heat dried powder. In order to develop a convenient method for measuring color to speed up the selection process in breeding, various techniques were used and compared with American spice Trade Association (ASTA) method, including visual grading, lightness (L^*), chroma (C^*), hue angle (h°) and total carotenoids, red pigments, and yellow pigments using a spectrophotometer. Total carotenoid content and the ratio of red to yellow pigments in heat dried powder showed high correlations with ASTA values. The correlation with ASTA values of lightness of whole fresh fruit and hue angle of oven dried powder were -0.71^{**} and -0.76^{**} respectively. Visual grading showed a low correlation of -0.23^{**} with ASTA even though it the most convenient.