Title Changes in capsaicin, flavonid, free phenolics and enzyme activity during development of pepper fruit

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Abstract

The experiment studied the changes in capsaicin, flavonoid and free phenolic content, and PAL and POD activities during development of pepper (*Capsicum frutescens* L. syn. *C. annuum* L.) fruit as were the relationships between capsaicin, flavonoid and free phenolic content. During fruit development, capsaicin content increased and reached a maximum 50 days after flowering, but decreased after that. Maximal levels of free phenolics and flavonoid occurred during the early stage of development, but content decreased with fruit ripening. From 22 to 60 days after flowering, the correlation coefficients for capsaicin with flavonid and free phenolic content in the placenta was -0.968 and -0.959 respectively While in the pericarp the correlation coefficients for capsaicin with flavonid and free phenolic content was -0.893 and -0.921 respectively. PAL activity increased rapidly during 29-36 days after flowering and with a peak at 36 days after which activity decreased. The POD activity decreased with fruit development, but the activity increased during 50-60 days after flowering.