Title Effect of organic production on shelf life and fruit juice quality of tomato

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Abstract

Organic production owing to its environmentally friendly disposition currently emerges to be the likely alternative of chemical intensive agriculture. The present investigation was carried out with the view to study the effect of organic production on shelf life and juice quality of Tomato. Organic tomatoes had significantly better firmness than inorganic tomatoes with maximum juice recovery (85.45% and minimum pomace percentage (9.41%). The difference in the biochemical constituents of fresh fruits viz. sugar, titratable acidity, sugar to acid ratio, TSS, ascorbic acid, β- carotene and lycopene were statistically significant. From the finding of the current investigations, it is vivid that organic production had better shelf life in both kharif (9.50 days) and rabi (8.25 days) seasons. The maximum physiological loss in weight (17.71 %) after ten days storage was recorded in inorganic production. It is apparent that inorganic treatments suffered the maximum physiological loss in weight and high rotting percentage as compared to all organic treatments. Biochemical changes in fresh fruits during storage were quite significant in particular sugars, ascorbic acid and titratable acidity on 8th and 10th day of storage, however, there were no appreciable changes in TSS, β- carotene and lycopene content of fruits. Fruits from inorganic treatments were faster to lose their organoleptic quality and this might be due to the high loss in sugar and significantly more PWL. With regard to the biochemical qualities of freshly prepared tomato juice, there was no significant difference in respect of ascorbic acid, sugar, acidity and sugar to acid ratio, however, significant differences were observed in terms of TSS, lycopene and β-carotene content.