

Abstract:

Eleven cultivars of strawberries (*Fragaria x ananassa* Duch.) were investigated in 1999 and compared with cv. Elsanta. Yield and fruit size were controlled over the whole harvesting period. Sensory and chemical analyses were done twice during maturity. The sensory characterization was made by the method of descriptive analysis. Soluble solids content, titratable acidity, ascorbic acid, antioxidative capacity, total phenols and anthocyan (HPLC) were investigated. Three cultivars (Andana, Pavana and 88009/o2v2) yielded more than 500 g/plant, while cv. Arena and Lambada produced less than 300 g/plant. The fruit size averaged between 13.2 g (Cirano) and 24.6 g (Kimberly). Sensory popularity of most cultivars increased to the second harvest with the highest rating for 88009/o2v2, Pavana, Kimberly and Lambada. The popularity correlated with fruity odour and aromatic, sweet taste. Lambada, Kimberly, Pavana and 88009/o2v2 showed the highest soluble solids concentration (SSC) of 109-117 g/l. Total acidity of cv. 88009/o2v2, Cijosee, Cirano, Pavana, Honeoye, Kimberly and Lambada exceeded 9 g/l. Ascorbic acid averaged for most varieties between 400 and 700 mg/l. The antioxidative capacity was analysed with a mean value of 12 mmol/l Trolox, which was comparable with that of red wine. The highest TEAC was found in cv. Andana, Cirano and Elsanta. The anthocyan finger print were typical for each cultivar and did not change during maturity.