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Antioxidant Capacity of Different Broccoli Cultivars at Various Harvesting Dates

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Abstract : Broccoli is considered as being a rich source of AOX like flavonoids, polyphenols, anthocyanins etc. and of major interest especially in the organic sector. However, AOX is environment dependent and often varies between cultivars. Aim of the study was to investigate the impact of cultivar and harvest date on AOX in broccoli. Activity of the AOX was determined using a Photochem®-Analyzer and a kit of reagent solutions for analysis. Results of the study showed that the lipid (ACL) and water-soluble antioxidant potential (AWC) of broccoli heads varied significantly between the four harvesting dates, but not among the different cultivars. The highest concentration of ACL was measured in broccoli heads harvested in September 2011, followed by heads harvested at the beginning of July in 2012. ACW was highest in heads harvested in October 2011. Lowest concentrations of ACW were measured in heads harvested in June 2012. Overall, the study indicated that the harvest date and thus growing conditions seem to be of high importance for final antioxidant capacity of broccoli.

Keywords : broccoli, open-pollinating, harvest date, epidemiological studies
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