Effect of sowing time on growth, yield and nutritional properties of cabbage Microgreens grown in soilless culture

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ABSTRACT

An experiment was conducted to assess the impact of sowing time (January, March, May, July, September and October) on different parameters of cabbage microgreens grown under artificial light and soilless media. The cabbage seeds were sown in HDPE tray consist of a combination of cocopeat, perlite and vermiculite in 3:1:1 ratio. Significant variation was noted for growth (seedling height, hypocotyl length, root length, cotyledon area, fresh weight and dry weight), yield and biochemical (moisture, chlorophyll a, chlorophyll b, total chlorophyll, total phenol, ascorbic acid, beta carotene, flavonoid, antioxidant capacity, acidity, total sugar and reducing sugar) parameters. Peak growth was noted during May and March. However, the highest yield (1325.899 g/m^2) was observed during January. Seed sown during November, September and January observed the maximum total chlorophyll content i.e. 0.955, 0.884 and 0.851 mg/g microgreen FW respectively. Biochemical parameters such as total phenol, ascorbic acid, DPPH Assay were recorded highest in May followed by March. Total sugar content was seen in greater amount during September, March and May than the rest months. The results revealed that growing of cabbage microgreens during summer months (March and May) performed better with respect to nutrition. But to achieve good production January is the best time for sowing.

Key words: Ascorbic acid, cabbage, DPPH, Microgreens, phenol, soilless, yield,