

Title Qualities test of autumn cultivated Chinese cabbage for Kimchi product
Author Yong-Ku Kang, Moo-Kyoung Yoo, and Chang-Hoo Chun
Citation Abstracts of 27th International Horticultural Congress & Exhibition (IHC 2006), August 13-19, 2006, COEX (Convention & Exhibition), Seoul, Korea. 494 pages.
Keywords Chinese cabbage; Kimchi; antioxidant activity; growth; quality

Abstract

Six major cultivars of yellow-pith Chinese cabbage (*Brassica campestris* var. *pekinensis*) were evaluated for their quality and suitability for production of “Kimchi”. Seedlings were transplanted at 9.5 day intervals from August 27 to September 14 in 2004; samples were harvested on 10 November. Weight and leaf number of the Chinese cabbages were 2,210 to 3,018 g/plant and 63 to 69 depending on harvesting stage. Yellowness-values of bulbs ranged 19 to 31 and the value of inner, middle and outer part of bulbs were 33, 25, and 22, respectively. The width of midrib was about 50mm, and thickness of the middle part of midrib was between 85 to 97 mm. The concentrations of ascorbic acid of the Chinese cabbages were 20 to 28 mg 100g⁻¹ FW. DPPH scavenger activity as a index of antioxidant activities ranged from 30 to 71%. Concentrations of calcium and potassium were 0.6 to 0.8 and 4.2 to 4.5% (w/w, DW), respectively. For making “Kimchi” Chinese cabbage with well formed bulbs were selected. The pH of mellow “Kimchi” and titration acidity were 4.5 to 4.6 and 0.8 to 0.9%, respectively. “Kimchi” made from a cultivar was less preferred than others on sensory test. There was no difference of chewing texture among cultivars. The scavenger activity of DPPH and concentrations of ascorbic acid of raw cabbage showed a negative correlation ($r=0.84^*$) while there was a positive correlation ($r=0.92^*$) between the width of midrib of the raw cabbage and the acidity of “Kimchi” produced.