Free radicals are highly reactive and have deleterious effects on the body's organs. Vegetables, being a rich source of antioxidants, are responsible for many health benefits. Total antioxidant activity (IC_{50}) was ranged from 2.02 to 2.60 in the outermost leaves, 2.02 to 2.69 in the outer middle leaves, 2.20 to 3.47 in the inner middle leaves and 2.20 to 3.33 in the innermost leaves. Genotype C1 exhibited maximum antioxidant activity (IC_{50}) in the outermost leaves (2.03) (Table 1.4). IC_{50} value decreased with increasing external positioning of the leaves. Its value was highest in the innermost leaves (2.20). A low IC_{50} value is the sign of strong antioxidant activity. Hence, the outermost leaves showed the highest amount of antioxidant activity. Kim et al. (2004) studied the antioxidant potential often varieties of green cabbage and observed a significantly higher level of total phenolics and antioxidants in the 'Fresco' and 'Bobcat' varieties. Podsedek et al. (2006) measured the antioxidant potential of different crops of *Brassica oleracea*, including red, white and Savoy cabbage and Brussels sprouts. It was found that red cabbage and Brussels sprouts had higher antioxidant potential than white and Savoy cabbages. Cabbages from Belgium displayed the highest antioxidant potential, while the lowest ones were from Poland. Singh et al. (2007) studied the variability of carotenes, vitamin C, vitamin E and phenolics in *Brassica* vegetables. Results indicated that the cruciferous vegetables are a relatively good source of abundant antioxidants and there was a substantial and significant variation, both within and between the subspecies for the antioxidant phytochemicals. Eighteen different cultivars were analysed for the antioxidant phytochemicals in cabbage. The vitamin C content ranged from 5.70 to 23.50 mg/100 g. Cultivar Sprint Ball recorded maximum vitamin C content (23.5 mg/100 g) followed by Gungaless (12.9 mg/100 g). The β-carotene content in cabbage ranged from 0.01 to 0.12 mg/100 g. The maximum β-carotene was recorded in the cultivar Quisto.

TABLE 1.4
Antioxidant Activity (IC_{50} Value)

Genotype	Outermost	Outer Middle	Inner Middle	Innermost
C1	2.06	2.07	2.32	2.39
C3	2.60	2.81	2.96	3.27
C5	2.19	3.22	3.29	3.33
C7	2.27	3.02	3.47	2.80
SEL 1	2.03	2.03	2.20	2.20
SEL 7	2.03	2.44	2.45	2.45
DARL 851	1.99	2.44	2.44	2.49
DARL 852	2.02	2.18	2.21	2.40
DARL SEL	2.22	2.69	2.79	3.14
SEM	0.57	0.023	0.19	0.06
CD at 1%	0.23*	0.98*	0.79*	0.26*
CD at 5%	0.17*	0.77*	0.57*	0.19*
SD	0.112	0.334	0.041	0.019

*Significant at P = 0.01.