

TABLE 1.1
Ascorbic Acid (mg/100 g)

| Genotype | Outermost | Outer Middle | Inner Middle | Innermost |
|----------|-----------|--------------|--------------|-----------|
| C1 | 58.33 | 41.66 | 28.50 | 19.33 |
| C3 | 70.73 | 52.50 | 32.50 | 30.00 |
| C5 | 75.83 | 71.66 | 52.50 | 45.33 |
| C7 | 75.00 | 51.24 | 50.00 | 45.00 |
| SEL 1 | 66.42 | 57.14 | 46.66 | 42.85 |
| SEL 7 | 39.93 | 41.89 | 45.70 | 50.09 |
| DARL 851 | 46.18 | 36.18 | 31.42 | 30.47 |
| DARL 852 | 27.50 | 35.00 | 35.83 | 40.00 |
| DARL SEL | 51.66 | 37.33 | 35.83 | 25.00 |
| SEM | 2.695 | 2.159 | 1.857 | 2.656 |
| CD at 1% | 11.13* | 8.92* | 7.67* | 10.97* |
| CD at 5% | 8.08* | 6.47* | 5.57* | 7.96* |
| SD | 4.56 | 3.21 | 3.74 | 4.66 |

*Significant at P = 0.01.

showed the similar trend of a decrease in the ascorbic acid content, with an increased internal positioning of leaves. The content of vitamin C varies significantly within cultivars of *Brassica* vegetables (Podsedeck 2007). The effects of ascorbic acid on white cabbage was also studied (Singh et al. 2007).

β -Carotene is the dominant carotene in Brassicas. It is the precursor of vitamin A. It ranged from 52.30 to 192.95 mg/100 g in the outermost leaves, 17.42 to 189.77 mg/100 g in the outer middle leaves, 13.85 to 126.97 mg/100 g in the inner middle leaves and 9.76 to 79.00 mg/100 g in the innermost leaves of different cultivars. Genotype C7 exhibited maximum amounts of β -carotene. However, β -carotene decreased with the increased internal positioning of leaves in the cabbage head viz. 192.95 mg/100 g in the outermost leaves, 189.77 mg/100 g in the outer middle leaves, 126.97 mg/100 g in the inner middle leaves and 79.00 mg/100 g in the innermost leaves. All genotypes showed the similar trend of decreasing of β -carotene from the outer side to the inner side (Table 1.2). Singh et al. (2006) also studied β -carotene for white cabbage.

The total amount of chlorophyll also decreased from the outermost leaves to the innermost leaves in all genotypes. In the outermost leaves, it ranged from 1.50 to 14.60 mg/100 g. In the outer middle leaves, its range was 0.76 to 6.49 mg/100 g. In the inner middle leaves it ranged from 0.75 to 1.82 mg/100 g. The range of total chlorophyll was from 0.55 to 1.27 mg/100 g in the innermost leaves. Genotype C1 exhibited maximum contents of total chlorophyll (14.60 mg/100 g) in the outermost leaves, (6.49 mg/100 g) in the outer middle leaves, (1.82 mg/100 g) in the inner middle leaves and (1.27 mg/100 g) in the innermost leaves (Table 1.3).

The chlorophyll and β -carotene contents were highest in the outermost leaves of the cabbages. The reason behind it may be that the outermost leaves are more exposed to sunlight during photosynthesis aiding the formation of chlorophyll.