Table 13 Content of chlorophyll-a in swamp cabbage cultivars at different days after transplanting (DAT)

Cultivar	Chlorophyll-a mg/100 g			
	14 DAT	28 DAT	42 DAT	56 DAT
V1	0.41 a	0.44 a	0.34 a	0.75 a
V2	0.61 a	0.26 c	0.20 c	0.52 c
V3	0.34 c	0.39 b	0.32 b	0.60 b
LSD (0.05)	0.03	0.02	0.01	0.07
CV (%)	2.76	2.75	2.01	4.74

Note: V1 = BARI swamp cabbage-1; V2 = La procesa swamp cabbage-1; V3 = Nice green swamp cabbage; NS = Non-significant. Means in the same column with different letter(s) are significant at the 0.05 level of probability

3.13 Content of chlorophyll-b

V2 exceeded V1 and V3 with the largest chlorophyll B concentration at 42 DAT (0.19 mg/100 g) .With the values of 0.17 to 0.21 mg/100 g, the variety differences at 56 DAT were no longer significant (Table 14). The amount of chlorophyll-B varied between the varieties, but the changes were not as large as the chlorophyll-A. V2 continuously showed more chlorophyll-B levels in earlier stadiums, which indicates that it could withstand more low levels in early growth.

Table 14 Content of chlorophyll-b in swamp cabbage cultivars at different days after transplanting (DAT)

Cultivar	Chlorophyll-b mg/100 g			
	14 DAT	28 DAT	42 DAT	56 DAT
V1	0.11 b	0.15 NS	0.12 b	0.21 NS
V2	0.23 a	0.17	0.19 a	0.20
V3	0.11 b	0.17	0.11 b	0.17
LSD (0.05)	0.08	0.04	0.02	0.04
CV (%)	7.22	11.70	8.02	10.77

Note: V1 = BARI swamp cabbage-1; V2 = La procesa swamp cabbage-1; V3 = Nice green swamp cabbage; NS = Non-significant. Means in the same column with different letter(s) are significant at the 0.05 level of probability

Chlorophyll-b is an auxiliary pigment that increases the spectrum of light absorption. V2's higher chlorophyll-b content at 42 DAT suggests that it may be tolerant of low light conditions. This trend may be supported by the findings of Khan et al. (2020), who emphasized the role of chlorophyll-b in light gathering and plant resilience.

3.14 Content of β-carotene

At every stage but 42 DAT, there were notable variations in the cultivars' β-carotene concentration .The greatest β-carotene content (0.22 mg/100 g) was reported by V2 at 14 DAT, however, this advantage was lost by 56 DAT, when V1 and V3 overtook it with values of 0.24 mg/100 g and 0.23 mg/100 g, respectively. While V1 showed a dramatic increase at 56 DAT, which indicates its potential for an increased nutritional value when the harvest subsequently, V3 contributed comparatively constant levels in the growth stages (Table 15).

Table 15 Content of β-carotene swamp cabbage cultivars at different days after transplanting (DAT)

Cultivar	β-carotene mg/100 g			
	14 DAT	28 DAT	42 DAT	56 DAT
V1	0.17 b	0.11 b	0.11 ab	0.24 a
V2	0.22 a	0.15 a	0.12 a	0.16 b
V3	0.14 c	0.11 b	0.09 b	0.23 a
LSD (0.05)	9.42	0.01	0.02	0.02
CV (%)	2.67	5.88	9.18	4.97

Note: V1 = BARI swamp cabbage-1; V2 = La procesa swamp cabbage-1; V3 = Nice green swamp cabbage; NS = Non-significant. Means in the same column with different letter(s) are significant at the 0.05 level of probability