In a field experiment in 1985/86 at the Kabele Field Station (alt. 1940 m a.s.l) *B. oleracea* var. *acephala* cultivars Thousand Headed (kale) and Georgia (collard) received 0, 47, 94 or 188 kg N/ha. Petiole and, more particularly, lamina thiocyanate concentrations decreased as N application rate increased. Petiole and lamina thiocyanate concentrations were 120 and 127% greater, respectively, in the kale than in the collard.