

The effects of N (0, 75, 150 or 225 mg/2.7 litre pot) on the essential oil content and composition of the flowers of 2 *Matricaria chamomilla* [*Chamomilla recutita*] cultivars were investigated. N (up to 150 mg/pot) significantly increased the essential oil yield/unit flower DW in both cultivars (up to approx. 1.18 and 1.4% in cultivars Bohemia and Tisane, respectively). N application significantly increased α -bisabolol and chamazulene contents but it significantly decreased α -bisabololoxide A and B contents in the essential oils. The essential oil yield of cv. Bohemia was lower than that of cv. Tisane, but the essential oil quality was higher in cv. Bohemia than in cv. Tisane. The quantity of essential oil in the flowers was inversely related to its quality in terms of α -bisabolol and chamazulene content.