

PLANT-SOIL CHARACTERIZATION OF *CYCLAMEN MIRABILE* DISTRIBUTED IN THE VICINITY OF MUGLA PROVINCE, TURKEY

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Plants that have an underground storage organ are called geophytes in the Raunkiaer plant life-form classification system. In common parlance, underground storage organs may be generically called roots, tubers, or bulbs. Storage organs often, but not always, act as perennating organs which enable plants to survive adverse conditions such as cold, excessive heat, lack of light or drought. Geophytes cover approximately 6.5–7% of the whole earth flora. The present study focused on the relationship plant and soil characters of endemic *Cyclamen mirabile* species (*Myrsinaceae*) naturally found at C1, C2 (Muğla) plots around Turkey.

In vegetative period the amounts of N element in above-ground parts of the plant is 1.112–2.041%. At the same time this amount changes from 0.683–1.623% in below-ground parts so that this is the normal indication. On the other hand in generative period N changes in above-ground parts from 1.092 to 1.514% and in below-ground parts from 0.719 to 2.014%. This changing is a normal one too. The amount of P changes from 0.193% to 0.405% in above-ground parts and from 0.083 to 0.382% in below-ground parts at vegetative growth period. On the other hand at generative growth period these indications changes between 0.165 and 0.543% in above-ground parts and 0.113 and 1.415% in below-ground parts. The amount of P changes like the other elements.

It is considered from the analysis of sample soils that *C. mirabile* Hildebr spread a wider area which has soil with neutral pH (pH 6.71–7.35) and a little amount of alkaline (pH 7.43–7.7). This species is very rarely found at soil with high acidic conditions (pH 4.54–4.48) and medium alcaic soil (pH 7.9<). The rich calciferuos soil (5.21–8.26%) and very rich calciferuos soil (11.1–19.6%) provide a suitable environment for *C. mirabile*.

When we evaluate salt in sample soils we see *C. mirabile* species grow unsalty (0.018–601 micro/cm) soils. Rich calcium proportion (5.21–8.26%) and very rich calcium proportion (11.1–19.6%) provide a suitable environment for *C. mirabile*. The sample soils that we analyse are suitable on the point of organic elements. *C. mirabile* species spread at very humus soil proportion (3.52–9.47%). You can also see this species at medium humus soil proportion (2.24–2.93%). The structure of these soil is formed by clay (tm, kil-tm) layers.

As we think about N and useful elements proportion, large amount of N (0.176–0.913%) and very small amount of P (0.05–0.63 ppm) in soil are more suitable in vegetative period. This plant does not need much P element. On the contrary it spreads more in soils with large amount of K (318.00–428.00 ppm). With rich N (0.214–1.263%), poor P (0.214–1.263 ppm) and rich K (385.00–634.00 ppm) proportion soils are suitable in generative period. The Na amount (6.34–18.04 ppm) of the useful element was found as very low, Ca amount (5220–12000 ppm) was rich and Mg amount (146–302 ppm) was normal. Soils where *C. mirabile* species grow have necessary amounts of Fe (6.24–8.98 ppm) and Cu (1.16–1.65 ppm), medium amount of Zn (0.57–0.94 ppm) and very low amount of Mn (4.42–24.20 ppm).