

ABSTRACT

Febryan Shandika Nugraha. 2020. Anatomical Analysis of Babadotan (*Ageratum conyzoides* L) Leaf Anatomy Based on Altitude Differences. Supervised by Dr. Cartonno, M.Pd., M.T. and Drs. Suhara, M.Pd.

*In Indonesia, babadotan is a wild plant and is better known as a weed in gardens and fields. This plant can also be found in yards, roadsides, embankments, and around waterways at an altitude of 1-2100 m above sea level. This plant is a cosmopolitan, growing easily in the shade to the open, on the banks of rivers, forests, roadsides, and grassy fields, causing anatomical differences in the leaves of the babadotan plant. These anatomical differences are caused by adaptations to the environment as well as the microclimate at each different place. This research was carried out in several places that have different heights, namely Sawahkulon Village, Pasawahan District, Purwakarta (200 masl), Jl. Kapten Halim, Taringgul Tengah, Wanayasa, Purwakarta (400 masl), Rancamanyar, Baleendah, Baleendah District, Bandung (600 masl), Jl. Bukit Dago, Dago, Coblong District, Bandung City (800 masl), and Jl. Punclut, Ciumbuleuit, Kec. Cidadap, Bandung City (1000 masl). This study aims to determine the adaptability of babadotan (*Ageratum conyzoides* L) by knowing the anatomical changes of babadotan leaves (*Ageratum conyzoides* L) at each height, and comparing them. This study used a descriptive method with purposive sampling research technique carried out at each different height. The parameters measured in this study were only the length and width of cells in each of the constituent tissues in the leaves such as the epidermis, palisade parenchyma, spongy parenchyma, phloem, and xilem. The results of the study showed that the length and width of the leaf anatomical cells of babadotan in the epidermis, palisade parenchyma, sponge parenchyma, phloem, and xilem had differences at each height which were fluctuating and varied. A significant difference is also shown by the results of statistical analysis, the data show that the height can affect the length and width of the leaf anatomy of the babadotan plant.*

Keywords: Anatomy, Babadotan (*Ageratum conyzoides* L), Altitude