

ABSTRACT

Risna Nuraeni. 2020. Root Anatomy Analysis of Babadotan (*Ageratum conyzoides* L) Based on Altitude Differences. Supervised by Dr. H. Yusuf Ibrahim, M.Pd., M.P. and Drs. Suhara, M.Pd.

*Babadotan (*Ageratum conyzoides* L) is a plant that has a wide distribution and is able to grow at an altitude of 1-2,100 masl. Every altitude is different, has different environmental factors. So that it requires babadotan plants to adjust to the place where they grow, which is called adaptation. Adaptations to plants can occur structurally or functionally. This study aims to determine changes in the length and width of cells in the tissues that compose the root anatomy of babadotan at different altitudes. The sampling location was carried out at an altitude of 200 masl in Sawahkulon, Purwakarta Regency, an altitude of 400 masl in Central Taringgul, Purwakarta Regency, an altitude of 600 masl in Baleendah, Bandung Regency, an altitude of 800 masl in Dago, Bandung City and an altitude of 1000 masl in Puncut Bandung City. The research method used is descriptive method with purposive sampling technique. The parameters measured were the length and width of the cells that make up the epidermal tissue, cortex tissue, endodermis tissue, xylem tissue and phloem tissue in the roots of babadotan plants. The results showed that the average calculation of the length and width of cells in the tissues that compose the anatomy of babadotan plant roots at different altitudes starting from 200 masl, 400 masl, 600 masl, 800 masl and 1000 masl have varying size differences even though it shows the results are fluctuating, meaning that the length and width of the cell are not directly proportional to the increase in height. This is because there are influences from other factors that are more dominant, namely environmental factors that exist at each different height. Based on the results of statistical analysis, it shows that altitude has a significant effect on the length and width of cells in the tissues that make up the roots of babadotan plants.*

Keywords: Anatomy, Babadotan Plant Roots, Altitude