

**THE EFFECT OF EGGSHELLS
AS A GROWING MEDIUM TREATMENT ON PLANT
GROWTH PERFORMANCE OF RED SPINACH
(*Amaranthus dubius*)**

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ABSTRACT

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Poultry waste, like eggshell has been piling up on earth through the years. On the other hand, home-gardening has been a world trend as everyone urge to stay at home during this pandemic. The aim of this study is to observe the influence of different percent of eggshells in a growing medium for the growth performance of red spinach (*Amaranthus dubius*). The eggshell fertilizer used in this study was collected, dried, crushed, and sieved before being used in the experiment. Three different treatments were conducted: 100% cocopeat (blank), 50% cocopeat with 50% eggshells, and 80% cocopeat with 20% eggshells. The experiment was carried out over a period of 35 days, with measurements of the plant's height and number of leaves were taken every 5 days. The chemical analyses of ICP-OES and FTIR on eggshells and cocopeat were performed to determine the nutrient content. Result from ICP-OES shows that Calcium (Ca) showed the highest minerals in the eggshell. Blank medium shows the highest growth yield with mean height, number of leaves and fresh weight of 29.49 cm, 17.38 and 16.5g, respectively. While the result of high percentage of eggshells shows 50% eggshells forbid the growth of plants. The data were analyzed using One-Way ANOVA to determine the percentage regression and p-value. The results of this study could lead to further investigation of the suitable amount of eggshell in the soilless medium growth.

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