

P-115 (62)**EFFECT OF COWDUNG MANURE ON PLANT AND LEAF TRAITS AS WELL AS YIELD OF ALOE VERA**

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Aloe vera L. (Aloe Vera) that belonged to Liliaceae family is broadly used as a fundamental element in the preparation of cosmetics, medicine, and food supplements. One of the techniques for increasing the yield of *Aloe vera* is managing fertilizers. Since *Aloe vera* as a succulent plant has a high responsivity to nutrient, the high doses of the chemical nutrient can exert a negative influence on its quality. Thus, Organic manures such as cowdung manure is more useful, applicable, and efficient in growing *Aloe vera* in comparison with chemical fertilizers. The present study aimed to investigate the effect of several amounts of manures on the plant and leaf traits, growth indices as well as yield of *Aloe vera*. For this purpose, a pot experiment was carried out with 8 different treatments including 100% soil (control), 5% cowdung plus 95% soil, 15% cowdung plus 85% soil, 25% cowdung plus 75% soil, 35% cowdung plus 65% soil, 45% cowdung plus 55% soil, 55% cowdung plus 45% soil, and 65% cowdung plus 35% soil. Our results showed that the 55% cowdung plus 45% soil produced the highest number, weight and width of leaves, width and length of largest leaf, and total leaf area. Other traits such as stem and root weights as well as the length of roots were also high in 55% cowdung plus 45% soil treatment. Furthermore, some growth indices including absolute growth rate (AGR), leaf area ratio (LAR), leaf weight ratio (LWR), and harvesting index (HI) were increased in the 55% cowdung plus 45% soil in comparison with other treatments. Finally, the leaves growth rate also significantly influenced by different treatments where the highest influence was observed at early stages in all treatments.

Keywords: pot culture, plant characteristics, leaf characteristics, organic manure, growth indices, medicinal plant