

**BREAKING OF SEED DORMANCY USING SULFURIC ACID (H<sub>2</sub>SO<sub>4</sub>)  
AND GIBBERELIN (GA<sub>3</sub>) SOLUTIONS ON GROWTH OF ROBUSTA  
COFFEE SEEDS (*Coffea canephora*)**

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**ABSTRACT**

Coffee seeds are orthodox seeds that have physical dormancy due to the hard seed coat, resulting in a fairly long dormancy period. Breaking the dormancy of coffee seeds can be done using sulfuric acid (H<sub>2</sub>SO<sub>4</sub>), then stimulating germination and seedling growth using gibberellin (GA<sub>3</sub>). This research used a completely randomized design (CRD), which consisted of two factors. The first factor is the concentration of sulfuric acid, consisting of 3 levels, namely, A1 = 10%, A2 = 20%, and A3 = 30%. The second factor is the gibberellin concentration, consisting of 3 levels, namely, G1 = 100 ppm, G2 = 200 ppm, and G3 = 300 ppm. The treatment comparison factor is X0. Each treatment was repeated three times. Observational data were analyzed using analysis of variance (ANOVA) at the 5% level, and differences in control and treatment were analyzed using the orthogonal contrast test at the 5% level. Differences between treatment levels were tested using Duncan's Multiple Range Test (DMRT) with a level of 5%. The observation results showed that the combination treatment of sulfuric acid and gibberellin was significantly better than the control. Breaking dormancy using 20% H<sub>2</sub>SO<sub>4</sub> and 200 ppm GA<sub>3</sub> was as good as the combination of A2G3, A3G3, and A1G1 treatments for germination, while 10% H<sub>2</sub>SO<sub>4</sub> and 200 ppm GA<sub>3</sub> were as good as A2G2, A2G3, and A3G3 for coffee seedling growth.

**Keywords: Robusta Coffee Seed, Dormancy, Sulfuric Acid, Gibberellins**