



الْأَنْبِيَاءُ رُسُلُهُمْ
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MARA

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TITLE:

**THE GROWTH TRIAL OF SPINACH USING TEA
CHARCOAL PREPARED AT THE BEST
CARBONIZATION TIME**

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AUTHOR'S DECLARATION

I hereby declare that this report is my own work, except for the citations and several references contained in this report.

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ABSTRACT

Good plant growth requires quality soil that is able to remove toxic substances that cause stunted plant growth and result in crops death. Among them are lead, heavy metals, antibiotics and many more that can damage plant quality. Soil containing toxins will cause tree roots to be unable to absorb nutrients and phosphorus. The objective in this research is to use the tea charcoal prepared at the best carbonization time. Other than that is to study the different types of composition of tea charcoal and soil on the spinach growth trial. Elemental Analysis was carried out to identify the composition of nitrogen, hydrogen and carbon contained in the burned sample. Before planting, sample selection was carried out based on the composition involved in the sample. This method use in this research is cultivation. The cultivation are divided into three parameters, which are 100% soil, 100% tea charcoal, 50% soil mix with 50% charcoal. For this cultivation, spinach was used as an experimental plant. This planting was done for 3 weeks. Every week, the height of the plants were measured to find out whether the spinach was fertile or not. It was found that there was a difference in tree height after three weeks. Plant height measurement data has been included in the results and discussion section. Before planting, sample selection was done based on the composition involved in the sample. Based on the Elemental Analysis from the previous team research, it was found that the sample with the highest percentage of nitrogen was 20 minutes. High nitrogen levels allow for improved soil quality and subsequently improved plant growth quality.

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