

TITLE:

THE GROWTH TRIAL OF SPINACH USING COFFEE-CHAR PREPARED AT THE BEST CARBONIZATION TEMPERATURE

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AUTHOR'S DECLARATION

" I hereby declare that this report is my own work except for quotations and summaries which have been duly acknowledged."

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ABSTRACT

The use of fertiliser in agricultural industry has pose threats toward the increase in the nutrients content in the waterbodies as an effect of the washing and leaching of the fertiliser used. This problem will cause eutrophication at the waterbodies. Drylands and low-quality soil are a concern to. So, in this study it aims to use coffee-char at the best carbonization temperature as soil amendment, to find ways to improve soil fertility through the use of coffee-char and to see the effects of coffee-char on soil by measuring the plant growth. The method in producing the coffee-char is by utilizing the pyrolyzing technique to turn the coffee ground into coffee-char. The produced coffee-char will then be tested its effectiveness by planting it in three different environment which are pure soil, pure char and the mixture of soil and char at 1:1 ratio. The result of coffee-char yields a positive result from the use of coffee-char on soil. The result is reflected on the plant ability to grow healthily and quick. The agricultural industries can benefit a lot from this project because of the coffee-char ability such as water retention and adsorption of nutrients is improved which can in return decrease the use of fertiliser because it adsorbs the nutrients and stores it instead of the fertiliser leached off and having surface runoff.

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