Potential of Lactic Acid Bacteria from Sala Lauak as an Organic Fertilizer Made from Cow Manure and Its Benefit to The Environment

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Abstract:

This research aims to obtain lactic acid bacteria (LAB) species from Sala lauak originating from the city of Pariaman molecularly and to determine the effect of adding LAB on the increase of N, P, and K content in organic fertilizer, as well as to conduct a business feasibility analysis. LAB in sala lauak was identified using the 16S rRNA method. Organic fertilizer was made by adding 3% LAB starter. The parameters observed in this study were the values of N, P, and K. The feasibility analysis was conducted by calculating the B/C ratio. The LAB isolated from Sala lauak from Pariman was Weissella cibaria. This LAB has the potential to be a starter in the production of organic fertilizer. The organic fertilizer with the addition of 3% Weissella cibaria provided the best N, P, and K values with respective values of 2.25%, 1.26%, and 0.56%. In the business feasibility analysis, a B/C ratio of 1.65 was obtained. Those results show that organic fertilizers have good N, P, K values and can replace the use of environmentally unfriendly chemical fertilizers. this research shows that the project to be undertaken is feasible

Keywords:

lactic acid bacteria, weissella cibaria, organic fertilizer, cow manure.