

## Nutrient Uptake, Chlorophyll Content, and Yield of Rice (*Oryza sativa* L.) Under the Application of PGPR Consortium

<b>Title</b>	Nutrient Uptake, Chlorophyll Content, and Yield of Rice ( <i>Oryza sativa</i> L.) Under the Application of PGPR Consortium
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<b>Abstract</b>	<p>Indigenous paddy soil rhizobacteria are one alternative to restore biological fertility and soil health. Plant Growth Promotion Rhizobacteria (PGPR) that act as biofertilizer will help to increase the availability of nutrients and promote the plant growth. The objective of this research was to study the effect of the PGPR consortium indigenous paddy soil to nutrient uptake, chlorophyll content, and yield of rice. This research was arranged by Randomized Block Design with the treatment was the combination of plant Growth Promotion Rhizobacteria isolates originated from paddy soil. The treatments consisted of control, Rhizobium sp. LM-5, R08 isolate, R011 isolate, Rhizobium sp. LM-5 + R08 isolate, Rhizobium sp. LM-5 + R011 isolate, R08 + R011 isolates, Rhizobium sp. LM-5 + R08 + R011 isolates. The result showed that the application of the PGPR consortium was able to increase the root growth of rice plants thereby increasing nutrient uptake, leaf chlorophyll content, and plant biomass. Application of single strain R11 isolate and the consortium of Rhizobium sp. LM-5 + R11 isolate were capable of giving the highest grain yield of 64.99 and 62.80 g plant<sup>-1</sup> respectively. These finding were PGPR consortium between IAA-producing bacteria combined with Rhizobium sp. LM-5 as N<sub>2</sub> fixing bacteria in increasing nutrient uptake, chlorophyll contents and crop yields, it can be recommended that PGPR consortium as a biofertilizer formula in rice cultivation</p>
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