

International Conference on
AGRICULTURE & HORTICULTURE
&
International Conference On
PLANT AND SOIL SCIENCES

December 05-06, 2018
Osaka, Japan

Utilization of PGPR plant roots mimosa flower (*Mimosa Sp*) in an effort to reduce NO_x gas emisiss soils of rice fields

Sani Kamil Baldan
Sebelas Maret University, Indonesia

Global warming is one of the environmental issues that can not be considered trivial. Agricultural cultivation system is inappropriate can be the cause of any such emissions GRK. Rice agroecosystem is one of the ways to support the attainment of food security, but on the other hand also as a contributor to emissions of GRK. Nitrogen as protein-forming elements given in excess in the form of organic fertilizers such as Urea and ZA with the goal of improving agricultural productivity but not all fertilizer is given can be effectively absorbed by the plant. It is due to the hydrolysis of the N fertilizer is greater than the speed of plant root to absorb these elements. So most of the element N can not be absorbed will be leached, some will experience folatilisasi, and denitrification. Folatilisasi and denitrification is the change in N that was originally available for plants (NO₃⁻) into a form N-free aerial (NO_x). In addition to harmful to respiratory, NO_x contributor to greenhouse gas emissions. Based on those problems

required the existence of a technological innovation that can increase agricultural productivity while remaining environmentally friendly. The granting of plant nutrients through PGPR (Plant Grow Promoting Rhizobacteria) is one of the solutions of the problem. The use of PGPR is able to provide a relatively slow N elements are available that can synchronize with the plant root interception capabilities, so it can reduce emissions GRK. In addition, PGPR can also produce substances such as hormones that can trigger the growth of plants. Plant a Mimosa flower (*Mimosa sp.*) are often considered as weeds by the farmers, can serve as one of the ingredients to make a PGPR. Content of bacterial genera Rhizobacteria on rhizobia of these plants can serve as isolates to make PGPR. PGPR application of plants expected to be shy daughter supports the realization of a sustainable agriculture.

sanibaldan@gmail.com

Notes: