

Soil Technologies Corp.
Research and Development Department



Research Report

Title: Microp on Rice in Bali

Location: Bali, Indonesia

Principal Investigators: Members of the Agricultural Faculty of Udayana University

Crop: Rice

Date: 2015

Abstract:

The purpose of this trial was to compare the effect of Microp¹ on rice plants in comparison to rice plants treated with conventional nitrogen-phosphate-potassium² (NPK) fertilizers. Two experimental plots were established side by side with one plot being treated with only Microp and the other treated with a NPK fertilizer. Rice plants were evaluated for yield, grain weight, plant height and prevalence of lodging, the bending over of stems that reduces yield and makes harvesting difficult. Results from this trial demonstrate that Microp treated fields produced both a quality and quantity of rice in this field trial equal to the conventional chemical fertilizer treated plot. Moreover, rice plants in the chemical fertilizer treated plot demonstrated issues with lodging while the Microp treated plot did not.

Methods:

Two experimental plots were established side by side with one plot being treated with only Microp and the other treated with conventional NPK 15-15-15 fertilizer. One plot was treated with 100 grams of Microp per hectare (1 g/100m²) on February 5 and, 26, March 19, and April 9, 2015. The control plot received a treatment of 100 Kg/ha (1.0Kg /100 m²) of NPK fertilizer on February 5 followed by 200Kg/ha (2.0Kg/100 m²) of NPK on February 23, 2015.

Results:

Results from this trial demonstrate that Microp treated fields produced both a quality and quantity of rice in this field trial equal to the treated plot. Moreover, rice plants in the chemical fertilizer treated plot demonstrated issues with lodging while the Microp treated plot did not. The results are shown below in Table 1.

¹Microp is a biofertilizer manufactured by Soil Technologies Corporation in Fairfield, IA, USA

²Nitrogen-Phosphate-Potassium (NPK) is a chemical fertilizer CAS # 66455-26-3

Plot	Average Height of Plant (cm)	Average Width of Leaf (cm)	Rice Grain Weight (per 1000 grains)	Yield (per Hectare)
NPK	127	2.0	0.03 Kg	7520 Kg
Treated	121	2.0	0.03 Kg	7520 Kg

Table 1: Results



Figure 1: Lodging in NPK Plot



Figure 2: No Signs of Lodging in Treated Plot

Conclusions:

This trial demonstrated that rice plants treated with Microp can produce a similar quality and quantity of rice while preventing lodging in the crop. Microp demonstrated to induce more vigor and strength to the plants preventing lodging that can dramatically reduce the quality of rice, slow down harvest time and affect drying costs, this trial demonstrates a superior agronomic value of Microp to chemical fertilizers.