



Tropentag, September 14-16, 2010, Zurich

“World Food System —
A Contribution from Europe”

Petrobio as an Alternative Organics Compound Regenerates Soil Fertility on Maize Crops Production (cv. Bisma) in East Java Indonesia

AGUS SURYANTO¹, CICIK UDAYANA²

¹*Brawijaya University, Department of Agronomy,*

²*Brawijaya University, Department of Agronomy, Indonesia*

Abstract

The nutritional status in soil is important during plant growth as well as particularly in reproductive phase. Accordingly, the additional fertiliser, such as chemical fertiliser treatments in the current dosage is being considerable between plants starvation and soil fertility. The recent problem in East Java was increased the chemical fertiliser consuming, in unbalance proportion, had effects in which reduce of functional organics matters within mineral absorption by plant. Enhancing the soil fertility by using artificial organics was treated in this experiment and will to be considerable practices to long period in an agricultural activity. The experiments to obtain the optimal dosage of biofertiliser ‘petrobio’ hence maintain the Maize crops productivity meanwhile its expected to sustain the soil fertility. The maize plant (cv Bisma) were grown in the field trial by randomised design which were control (no treatment), standard fertiliser dosage, standard fertiliser (dosage 100 %) + petrobio (1, 1.5, 2 1/ha), standard fertiliser (dosage 75 %) + Petrobio (1, 1.5, 2 1/ha), standard fertiliser (dosage 50 %) + Petrobio (1, 1.5, 2 1/ha). The result presents that interestingly, biological fertiliser petrobio dosage 1, 1.5 and 2 1/ha with a standard fertiliser dosage of 100 % and 75 % was increased the vegetative components such as plant height, number of leaf , and leaf area, as well as maize yield components like cob dry weight per plant, seed dry weight per plant and harvest index. These results are better than the control. In contrast, The yield components was not affected by bio-fertilisers ‘petrobio’ on standard dosage which was at 50 %.

Keywords: Biofertiliser, maize, soil fertility