THE EFFECTIVENESS OF ADDITIONAL EFFECTIVE MICROORGANISM (EM) ON GROWTH OF AEROBIC RICE CV. MRIA 1

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Your sincerely,

HAIDA IDAYU BINTI HAMIDIN

TABLE OF CONTENTS

ABSTRACT

THE EFFECTIVENESS OF ADDITIONAL EFFECTIVEMICROORGANISM (EM) ON GROWTH OF AEROBIC RICE CV. MRIA 1

This study was conducted to evaluate the effectiveness of additional EM on growth of aerobic rice cv. MRIA 1. The objective of this study was to investigate the effect of additional EM on growth and yield component of aerobic rice cv. MRIA 1. This experiment was carried out by using CRD experimental design consisted of three treatments with two replications. MRIA 1 was obtained from MARDI for used as planting materials and has been applied by three different concentration of EM at different growth stage. The first treatment (T1) as a control, applied with recommended chemical fertilizer (normal practices) with 1.8g NPK + 0.9g Urea with no additional of EM , 2nd treatment (T2) with 0.9g NPK + 0.9g Urea + 100ml EM-4 at and 3rd treatment (T3) with 0.9g NPK + 0.9g Urea + 200ml EM-4. There were five series of harvesting (40, 60, 74, 88, 102 DAS) whereas data of panicles, tillers, SPAD value, dry biomass (shoot and root) and fresh seed weight (at last harvest) were recorded. Result shown that there was a significant difference between treatments for all parameters studies. The growth pattern was more rapid in additional of 100ml of EM (T2), also the highest number of tiller (28 per pot), number of panicles (23.5 per pot), with root and shoot dry mass respectively obtained (4.164g) and (4.527g), filled seed was (19.84g per pot) only at 5th harvest. However, the lowest data recorded of all parameter is application of additional 200ml of EM (T3). As a conclusion, application of additional EM of 0.9g NPK + 0.9g Urea + 100ml EM improved plant growth and yield component of aerobic rice cv. MRIA 1.

Keywords: effective microorganism (EM), additional EM, aerobic paddy, fertilizer uptake, day after sowing (DAS).