ABSTRACT

EFFECT OF COMPOST LEUCAENA AND SOLUTIONS LOCAL MICROORGANISMS ON GROWTH AND YIELD OF TOMATO (*Lycopersicum esculentum* Mill)

by

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The study aimst to, (1) Compare the effect to composting and compost without leucaena in the growth and productions of tomato plants, (2) Compare and determine the MOL solutions exact solutions of the five tested MOL to improve the growth and yield of tomato, (3) Determine the interaction between compost leucaena with five MOL solutions tested and MOL as the best solutions to improve yield of tomato.

Research has been conducted in the village Sukamarga Rajabasa parent, Lampung port subdistricts Rajabasa in January to June 2011. Research using a split plot design 2 x 6 are arranged in a randomized complete block design with three replications. The first factor is without compost leucaena with doses of 0 tonnes/ha (M0) and compost leucaena with a dose of 20 tonnes/ha (M1).

The second factor is the MOL solution with five treatments consisting of MOL shoots (*Bamboo* sp) (E1), MOL fruit rot (E2), MOL urine (E3), MOL banana weevil (E4), MOL cebreng (*Gliricida sepium*) (E5) with each dose - each 5 ml/liter, and without giving MOL as control (E0).

The results showed that (1) Compost leucaena not increase uptake of N, P, K in leaves, stover weight, photosynthate distribution, fruit production and sugar content in tomatoes. But leucaena compost improves tomato plant height, (2) MOL solution gives a good response on the growth of tomato plants. MOL solution of banana weevil deliver the highest rates in the rate of plant growth, cebreng MOL solution gives the highest rates in N uptake and uptake K_2O, MOL solution of urine while giving the highest rate on plant height, (3) Interaction compost leucaena and MOL solutions increases the rate growth of tomato and tomato plants height.

Keywords : Compost leucaena, MOL solution, Tomato.