

## ABSTRACT

### THE ROLE OF COMPOST TEAS ON THE GROWTH AND YIELD OF *Capsicum annum* L.

**(Study on Response of *Capsicum* Toward The Treatment of Compost Teas Material, Application Method and It Concentration)**

A compost teas is liquid organic plant nutrient that would increase the growth and yield of *Capsicum*. The objective of this study was to know the effect of compost teas on the growth and yield of *Capsicum*. The study designed in two experiments, which *Capsicum* planted in polybag and on field. Experiment I arranged in three-factor completely random design. The first factor was material of compost (T), there were T1: garden garbage compost and T2: vegetable garbage compost. The second factor was application method (P), consist of P1: foliage application, P2: soil application and P3: foliage and soil application. And the third factor was concentration of compost teas (K), there were K1: 1.0 mS/cm; K2: 1.5 mS/cm; K3: 2.0 mS/cm. Experiment II was conducted on field in randomized block design with three replications. The eight best combinations treatment result of experiment were compared with treatment with inorganic fertilizer (control) and treatment with another liquid complement nutrient (PPC).

The result experiment I showed treatment of T2P2K2 and T1P2K2 each gained the most number of foliage (779.6) and the most number of productive branches (245.2). There was significant interaction on T2P2K2 combination treatment. It gained the most number of flower (236.60), also total number of fruit per plant (120.40) and total weight of fruit per plant (574.73 g). The T2P1K1 combination treatment gained the highest percentage of fruit set (57.75%).

The result experiment II showed treatment of T2P2K2 was able to increase highest plant, number of foliage, productive branches, length of root each 11,39%; 17,94%; 20,94%; 35,13% compared with control treatment and 5,06%; 9,04%; 14,23% 31,78% compared with PPC. It gave increase number of flowers, number of fruit, fruit weight per plant, harvesting index each 14,59%; 20,63%; 35,45%; 14,46% compared with control treatment and 8,73%; 23,66%; 43,00%; 10,75% compared with PPC.

Compost teas made from vegetables garbage gave to soil in 1,5 mS/cm concentration (T2P2K2) was able to increase the growth and production of *Capsicum*, because of its content of auxin, macro and micro nutrient and a several bacteri and fungi.

**Key words:** compost teas, liquid nutrient, PPC