SUMMARY

Melda Yuartaria S. 105040207111024. The Effect of Rabbit Urine Fertilizer Dosage to Growth and Yield of Some Tomato Varieties. Under guidance of Prof. Dr. Ir. Yogi Sugito as the main supervisor and Ir. Lilik Setyobudi, MS., Ph.D. as the secondary supervisor.

Tomato is a multipurpose commodity which is consumed by many people in Indonesia and used as vegetables, spices, fruit table, food coloring agents and many more. Based on data from Badan Pusat Statistik, tomato productivity on 2010 until 2014 was rise, it’s amounted 891.616 tons to 895.163 tons. Market demand for tomato is increasing but the productivity was not able to meet market demand yet. Tomato productivity should be improved by adding organic fertilizer into soil and using a high yield varieties. Rabbit urine can be used as an organic liquid fertilizer which beneficial for tomato plants. The use of rabbit urine as organic liquid fertilizer is to improve soil fertility and also to reduce farming costs, even it can increase farmer’s income (Priyatna, 2011). Organic liquid fertilizer which is derived from rabbit urine, contain high nutrient such as 4% N; P2O5 2.8% and 1.2% K2O, it is relatively higher than in cow’s nutrient content (N 1.21%; 0.65% P2O5; K2O 1.6%) and in goat’s (N 1.47%; 0.05% P2O5; K2O 1.96%) (Balittanah, 2006). Tomato production by urine fertilizer used, is still lack of information. Therefore, this experiment was conducted by cultivate some of tomato varieties which planted widely by farmer. The varieties used are Ranti, Tymoti (F1) and Fortuna 23.

The purpose of this experiment are to determine the interaction between doses of rabbit urine fertilizer with wide varieties of tomatoes and to learn the use of rabbit urine fertilizer on some tomato varieties, its impact to the production quality and quantity. The hypothesis are there was an interaction between dosage of rabbit urine fertilizer with tomato variety and there were several kinds of tomato variety response to the dosage of different rabbit urine fertilizer. The experiment was conducted on land owned by STPP (School of Agriculture Extension Technology) at Tanjung Street, Malang on June until September 2014. The tools which is used are tomato seed nursery equipment, hoes, rope, hand sprayer, measuring cups, calipers, rulers and gauges, name plate, camera and stationery. Materials which is used are 3 varieties of tomato variety of Ranti, Tymoti (F1) and Fortuna 23, goat manure, liquid rabbit urine fertilizer and organic pesticides. This experiment was using a factorial randomized block design (FRBD) consisting 2 factors and repeated 4 times. The first treatment was dosage of rabbit urine fertilizer consist of P0=Without fertilizer, P1=15 ml/plant, P2=30 ml/plant and P3=45ml/plant. The second treatment was some tomato variety are, V1=Ranti (Local), V2=TymotiF1 (Hybrid) and V3=Fortuna 23 (Hybrids). This experiment used non-destructive observation with interval of 14 days, 14 dap, 28 dap, 42 dap and harvest. Parameters was include growth variable and harvest observation. The growth variable observation were plant height, number of leaves, stem diameter, crown diameter and leaf area index. Harvest observation was include total weight of harvested fruit and total number of harvested fruit. If there is a significant difference, then the analysis was continued to HSD test in 5% level.
The result showed that there was no interaction between the dosage of rabbit urine fertilizer with wide varieties of tomato the parameters of growth and yield. Dosage of rabbit urine significantly affected leaf area index at 28 dap. Some kinds of varieties significantly affected growth and yield parameters. The growth parameters significantly affected plant height, leaf number at age 28 and 42 dap, crown diameter 28 and 42 dap, while the outcome parameters significantly affected total weight of fruit and total number of fruit. The average weight of fruit and number of fruits per plant showed the highest result on first harvest at dosage of 0 ml plant$^{-1}$ and Fortuna 23 variety in second harvest.