

SUMMARY

Oktavian Kartikasari. 0910480258. RESPONSES OF THREE VARIETY CUCUMBER (*Cucumis sativus* L.) OF APPLICATION PLANT GROWTH REGULATOR GIBBERELLIN (GA₃). Under the guidance of Ir. Koesriharti, MS as a main supervisor and Dr. Ir. Nurul Aini, MS as a supervising companion.

Cucumber is a one of horticultural commodities preferred by consumers and have high economic value but, production of cucumber in indonesia still relatively low due cucumber farming is still regarded as a sideline. Increasing population in indonesia and world wide are affected to rissing consumption of vegetables. In indonesia, recomendation consumption of vegetables to sufficiency a healthy nutrition amounted 65,5 kg/capita/year. Nowadays, the current consumption is only just 80% fulfilled. An effort to increase the supplay of vegetables are increasing production of cucumber. Increasing can be done by giving a growth regulators with the right dose of concentration, which is Gibberellins (GA₃). The purpose of this result to evaluate the response of the three varieties of cucumber (F1 Roberto varieties, Vanesa varieties and varieties Mercy F1) on application of growth regrowth regulators giberelin at different concentrations. The hypothesis are (1) three varieties of cucumber showed a different responses to the application of growth regulators gibberellin (GA₃). (2) Three varieties of cucumber are showing the different of growth and yields. (3) The application of growth regulators gibberellin (GA₃) at certain concentrations may increase the yield of cucumber plants.

The research conducted at Makam Beji Village, District Junrejo, Batu. Altitude research sites ranging from 1,000-1,500 m asl. The experiment was conducted in November 2013 - February 2014. The tools were are a shovel, a hoe, a ruler, digital scales, hype, hand sprayer, caliper, scissors, cameras and stationery. The Materials were are the seed of a cucumber varieties Roberto F1, Vanesa varieties, and varieties Mercy F1, manure, urea, NPK Phonska, GA₃ 20%, distilled water, insecticides, fungicides, Furadan, plastic polybag size 15 kg, bamboo stakes and raffia rope. The method used in this research is Spilt Polt Design (SPD) with the main plot is a cucumber varieties which consists of three kinds of varieties is Roberto F1, Vanesa and Mercy F1, while the subplot is the application of growth regulators GA₃ concentration which consists of 4 levels of concentration are 0 ppm (control), 25 ppm, 50 ppm and 75 ppm. Application of GA₃ are giving at begining of flowering. The number of plants in each treatment of a replication consist of 10 plants. Data analysed by using the F test at 5% level, if significantly different followed by LSD test at 5% level.

The results showed that there was no interaction between varieties with GA₃ application on all variables of observation. The variety treatment showed fruit of diameter and number seed of fruit had higher compared with Roberto F1 but number of male flower and lenght of fruit had higher with harvest time had slower. The application GA₃ showed that 75 ppm concentration decreased fruit of diameter.