SUMMARY

Fajarany Ratih Wardani. 0710410040-41. THE EFFECT OF THE KINDS OF FERTILIZER AND WEED CONTROL TIME ON GROWTH AND YIELD OF SWEET CORN.Under the guidance of Prof. Dr. Ir. Husni Thamrin S.,MS as the main supervisor, Dr. Ir. Titiek Islami,MS as supervising comapnion and Prof. Dr. Ir. Sudiarso, MS as faculty discussant.

Plant sweet corn (Zea mays saccharata Sturt) or sweet corn is one of the crops that have an important prospect in Indonesia. This is due to sweet corn has a sweeter taste than regular corn, so sweet corn consumed by many people. In addition, a shorter lifespan of sweet corn that is more profitable when cultivated. Sweet corn national needs for food is 17.3 million tons per year. In Indonesia, sweet corn yields are still relatively low at 10.7 million tons, while the potential of sweet corn production may reach 19.83 million tons (Anonymous a, 2006). One of several factors that account for the low domestic production of sweet corn is weeds. The presence of weeds in sweet corn crop can not be avoided, resulting in competition between the two. Because it takes an effort to increase the production of sweet corn through weed control effectively and efficiently as well as the intensification of efforts improvements in cultivation techniques. Fertilization is the way of intensification to improve yields. There are two kinds of fertilizer used, namely inorganic fertilizers and organic fertilizers. Manure and green manure including organic fertilizer. Manure is fertilizer in the form of solids and liquid produced by cattle, one of which is the cow feces (Syarif, 1989). While the use of green manure crop forage that has not been decomposed into the soil which aims to increase the production capacity of the plant (Sutanto, 2002). The purpose of this study was undertaken to determine the effect of the type of fertilizer and weeding time on the growth and yield of sweet corn with the hypothesis proposed in this study are (1) the provision of fertilizer and weeding different intervals gives effect on sweet corn plants, (2) treatment of inorganic fertilizer application by weeding three times (15, 30, 45 dap) provide the best growth.

The research was conducted in August - November 2014 in the village of Ngijo, District Karangploso, Malang with a height of 600 m above sea level. The average temperature ranges between 21 ° C - 28 ° C and monthly rainfall average of 100 mm / bulan. This research is done by using a Randomized Block Design (RBD) with 12 treatment was repeated three times for a total of experimental plots numbered 36 plot. Treatments consisted of (P0) Phonska inorganic fertilizer 300 kg/ha, Urea 200 kg/ha and without weeding, (P1) cow feces manure 20 ton/ha and without weeding, (P2) green manure 20 ton/ha and without weeding, (P3) Phonska inorganic fertilizer 300 kg/ha, Urea 200 kg/ha and weeding 15 dap, (P4) cow feces manure 20 ton/ha and weeding 15 dap, (P5) green manure 20 ton/ha and weeding 15 dap, (P6) Phonska inorganic fertilizer 300 kg/ha, Urea 200 kg/ha and weeding 15 dap, 30 dap, (P7) cow faces manure 20 ton/ha and weeding 15 dap, 30 dap, (P8) green manure 20 ton/ha and weeding 15 dap, 30 dap, (P9) Phonska inorganic fertilizer 300 kg/ha, Urea 200 kg/ha and weeding 15 dap, 30 dap 30, 45 dap, (P10) cow feces manure 20 ton/ha and weeding 15 dap, 30 dap, 45 dap, (P11) green manure 20 ton/ha and weeding 15 dap, 30 dap, 45 dap. Observations are destructive and non-destructive every two weeks that the plant

age 14 dap, 28 dap, 42 dap and 56 dap. Non-destructive observation include: plant length and number of leave. Destructive observation include: crop leaf area and total dry weight of the plant. Observations components yields include: fresh weight corn husk, fresh weight without husks, corn without husks diameter, length corn without husks, sugar content and yield of sweet cor per hectare. Observations vegetation analysis was done by observing the growth of weeds, made with squares method and calculate the value of the SDR. Quadrants are used measuring 50 cm x 50 cm. The data obtained were analyzed by analysis of variance (F test) with a significance level of 5% . If there is a significant difference between the treatment, there will be a test of least significant difference (LSD) at 5% error level.

The results showed that treatment Phonska inorganic fertilizer application of 300 kg/ha, Urea 200 kg/ha and weeding 3 times, delivering value growth and the highest yield and significantly different from the others. Phonska inorganic fertilizer application of 300 kg/ha, Urea 200 kg/ha yield the highest corn with a value of 13.90 ton/ha. The dominant weeds grow before tillage is *Portulaca oleraceae, Cyperus rotundus, Amaranthus spinosus* the SDR value respectively 18.04%, 7.77% and 20.23% Treatment of giving some kind of fertilizer and without weeding provide the highest weed dry weight when compared with good weeding treatment 1 time, 2 times or 3 times.