SUMMARY

ARIYA TRI SEKTIWI. 0810480014.The Study of Planting Model and Planting Time in Intercropping System to Growth and Production of Corn Seed. Supervised by Dr.Ir. Nurul Aini, MS. and Prof. Dr.Ir. Husni Thamrin S., MS.

Maize (*Zea mays* L.) is an important food commodity after rice which always increases in level of needed. Maize production in 2010 was 18.33 million tons and into 2011 fell to 17.93 million tons (BPS, 2011). The chance to increase maize production is still widely open, either through the expansion of planting area or increasing productivity. The most commonly method used by farmers to increase the land's productivity by intercropping system, which maize is planted with maize is planted along with peanuts, because the system can utilize the land optimally. This system is not only obtain the maize crop, but also the other commodities. The purpose of this study is to learn the effect of maize planting model and peanut planting time to the growth and production of corn seed in intercropping system. The hypotheses are planting model of maize with planting time of peanut will give effect to the yield in intercropping system, planting model will give effect on the growth and seed production of maize in intercropping system, planting time will give effect on the growth and seed production of maize in intercropping system.

The research was conducted at experimental farm of Agriculture Faculty of Brawijaya University, Jatikerto, Kromengan subdistrict, Malang. The research started from Mei to September 2012. This research used Split Plot Design (RPT) with 2 treatment factor,(1) planting model of maize as main plot consists of P_1 : single row planting model of single row (75 x 25 cm), P_2 : double row planting model (190 x 40/25 cm), and (2) planting time of peanut as sub plot consists of W_1 : Peanut planted 10 days before maize, W_2 : Peanut plant with maize, W_3 : Peanut planted 10 days aft er maize and P_0 : monoculture maize dan W_0 : monoculture peanut. The observations include the height of maize and peanut plant, the number of leaves, leaf area and total dry weight of plants. The observations of maize crop include the diameter, length, fresh weight, and dry weight of corn cobs, weight of 100 seeds, shelled weight per plant and yield per hectare. The observations of peanut crop include the number of pods and filled pods, fresh weight and dry weight of pods, seed weight per plant, weight of 100 seed and yield per hectare. Data supporting are dry weight of weed and *Land Equivalent Rasio* (LER). The data has been analyzed with Analysis of Variant at 5 % level. Then, the significant difference was continued by LSD Test at 5 % level

The results showed that there is interaction not significant between the planting model of maize and planting time of peanut in intercropping system treatment. At the planting model treatment, there are no significant differences for all variables on growth and yield of maize and peanut. At planting time treatment, there is no significant differences for all variables on growth and yield of maize and peanut, too the comparison results of monoculture and intercropping on maize showed the observation parameters (fresh weight, and dry weight of corn cobs, length of corn cobs, shelled weight per plant and weight of 100 seeds of maize) in monoculture have a higher point than those in intercropping system by planting model of maize and planting time of peanut treatment. While the comparison of monoculture and intercropping on peanut showed that the observation parameter (number of pods, and filled pods, fresh weight,

and dry weight of pods, seed weight per plant and weight of 100 seeds) in monoculture system have higher point than those in intercropping system.