

SUMMARY

This research was conducted in the experimental garden of the faculty of agriculture, north sumatra islamic university, jalan karya wisata, kelurahan gedung johor, medan johor district, medan city with a height of ± 25 meters above sea level with a flat topography. This research was conducted in september to december 2018 under the guidance of mrs. Ir. Murni sari rahayu, m.p. As chairman and mrs. Ir. Fenty maimunah simbolon, m.p. co-promotor

This study aims to determine the response of the provision of coconut fiber organic fertilizer fertilizer and vermicompost fertilizer to the growth and production of peanut (*arachis hipogaeae*) plants.

The design used in this study was a factorial randomized block design with two factors examined, namely the factor of liquid organic fertilizer coconut fibers and vermicompost fertilizer. Factor poc coconut fibers (s) consists of 4 levels, namely s0 (0 ml / l water / plot), s1 (15ml / l water / plot), s2 (30ml / l water / plot) and s3 (45ml / l water / plot). The vermicompost fertilizer factor (k) consists of 4 levels, namely k0 (0 kg / plot), k1 (1,130 kg / plot), k2 (1.69kg / plot) and k3 (2.25kg / plot). The parameters observed were plant height (cm), number of productive branches (branches), number of pods per plant (pods), pod weight per plant (g), pod weight per plot (g), weight of 100 seeds (g).

The results showed that the coconut fiber poc treatment significantly affected plant height, number of pods per plant, pod weight per plant, pod weight per plot weight and 100 seeds but did not significantly affect the number of productive branches. The vermicompost fertilizer treatment significantly affected plant height, number of pods per plant, pod weight per plant, pod weight per plot but did not significantly affect the number of productive branches and weight of 100 seeds. The interaction between the two treatments did not significantly affect all observed parameters.