GROWTH RESPONSE AND RESULTS OF EDAMAME SOYBEAN PLANTS (Glycine max (L.) ON THE APPLICATION OF STRAW MULCH AND PGPR (PLANT GROWTH PROMOTING RHIZOBACTERIA)

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ABSTRACT

Activity microorganisms land hindered on moment season drought especially on land dry. Mulching will be wrong an effort for guard moisture land and activity microorganisms. Research This aiming For to study response growth edamame plants against use mulch straw And PGPR (Plant Growth Promoting Rhizobacteria) application was implemented on month July to September 2024 in village Kaliurang, Jember with height 146 meters above sea level. Experiment This was designed using factorial RAK consisting of two factor and three replication. Factor first that is PGPR concentration consisting of 0 ml/l (control), 12.5 ml/l and 25 ml/l while factor second is thickness mulch straw consisting of 2.5 cm, 4.5 cm and 6.5 cm. Results study This show existence interaction of PGPR and mulch straw on treatment mulch 6.5 cm +12.5 ml/l with height 17.30 cm 24 HST. On treatment (4.5 cm + PGPR 12.5 ml/l) gave influence on high plant age 32 HST (23.00 cm), number of pods per sample 20.13 pods and dry biomass 18.53 g, while amount of branches per sample on treatment (0 ml/l + 6.5 cm) 1.93 branches. However, on heavy pods per sample and heavy pods per plot no interaction happened. Weight pods per sample on concentration 25 ml/l (55.02 g), at thickness mulch 4.5 cm (54.31 g). Weight of pods per plot 1255.89 g (25 ml/l) and 1253.22 (4.5 cm). Use mulch straw allegedly able to guard moisture land so that existing microorganisms in PGPR is able to develop with good and activity microorganisms in a way that can directly affect the growth and results edamame plant.

Key words : PGPR, Mulch Straw, Edamame