PENGARUH PEMBERIAN MACAM BAHAN ORGANIK DAN PUPUK NITROGEN TERHADAP KETERSEDIAAN N REGOSOL DAN PERTUMBUHAN CABAI MERAH (*capsicum annuum L.)*

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ABSTRAK

Regosol merupakan salah satu jenis tanah yang berpotensi sebagai media tumbuh tanaman cabai merah, namun tanah ini memiliki kendala yang cukup serius baik segi fisik maupun kimia khususnya ketersediaan N. Pemberian bahan organik dan pupuk nitrogen diharapkan dapat mengatasi kendala tanah Regosol dan menambah hara N pada tanah Regosol dan pertumbuhan cabai merah. Penelitian bertujuan untuk mengetahui pengaruh pemberian macam bahan organik dan pupuk urea terhadap ketersediaan N Regosol dan pertumbuhan cabai merah. Penelitian ini menggunakan metode Rancangan Acak Lengkap (RAL) dengan 2 faktor. Faktor pertama yaitu macam bahan organik dengan dosis 20 ton/ha. B0= Tanpa bahan organik, B1=Pupuk kandang sapi, B2= Kirinyu, B3= Jerami padi, B4= kotoran sapi 10 ton/ha+jerami 10 ton/ha, B5= kotoran sapi 10 ton/ha+ kirinyu 10 ton/ha. Faktor kedua yaitu pupuk nitrogen: N0= Tanpa pupuk urea, N1= Pupuk Urea 200 kg/ha. Parameter yang digunakan pada penelitian yaitu: C-organik, pH (H_2O), KPK, N-tersedia, tinggi tanaman, berat basah tanaman, dan berat kering tanaman. Data dianalisis menggunakan sidik ragam ANOVA, untuk menguji perbedaan antar rerata pelakuan digunakan uji *Ducan Multiple Range Test* (DMRT) dengan jenjang nyata 5%. Hasil penelitian menunjukan bahwa pemberian macam bahan organik berpengaruh nyata meningkatkan pH (H_2O), tetapi tidak berpengaruh nyata terhadap peningkatan C-organik, N-tersedia, KPK, tinggi tanaman, berat basah tanaman, dan berat kering tanaman. Sedangkan pemberian pupuk urea berpengaruh nyata dalam peningkatan pH (H_2O), N-tersedia, tinggi tanaman, berat basah tanaman, dan berat kering tanaman, tetapi tidak berpengaruh nyata dalam peningkatan C-organik dan KPK. Pemberian pupuk urea 200kg/ha (N1) mendapatkan hasil yang terbaik. Kombinasi macam bahan organik dan pupuk urea berpengaruh nyata meningkatan pH (H_2O), tinggi tanaman, dan berat kering tanaman, tetapi tidak berpengaruh nyata terhadap C-organik, N-tersedia, KPK, dan berat basah tanaman. Kombinasi pupuk kandang sapi 20 ton/ha (B1) dan pupuk urea 200 kg/ha (N1) mendapatkan hasil yang terbaik.

Kata kunci : Regosol, bahan organik, pupuk urea, dan cabai merah.

THE EFFECT OF VARIOUS TYPES OF ORGANIC MATTER AND NITROGEN FERTILIZER ON N-AVAILABILITY AND RED CHILI GROWTH IN REGOSOL (*Capsicum annuum L.*)

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ABSTRACT

Regosol is a type of soil that has the potential as a medium for growing red chili plants, but this land has quite serious constraints both physically and chimically, especially the availability of N. Application of organic matter and nitrogen fertilizer is expected to overcome the constraints of regosol and increase nutrient N in Regosol soil and the growth of red chili. The research was aimed to know the effect of giving organic matter and nitrogen fertilizer on N-Availability and Red chilli growth in Regosol soil. The research method that was used in this research was complete Randomized Design with 2 factors, the first factor was organic matter dosage consist of 10 ton/ha and 20 ton/ha. The second factors were nitrogen fertilizer dosage 200 kg/ha. Parameters that were analyzed is C-organic, pH (H_2O), CEC, Available N, crop height, fresh weight, and dry weight. To analyze the treatment effect, ANOVA was used followed by advanced test using Duncan Multiple Range Test (DMRT) on 5% level. The result of the research showed that by giving type of organic matter could improve pH (H_2O), but non-significantly give effect to improve C-organic, Available N, CEC, crop height, fresh weight, and dry weight. Therefore by giving of Nitrogen fertilizer could improve pH (H_2O), Available N, crop height, fresh weight, and dry weight, but non-significantly give effect to improve C-organic, and CEC. By giving of organic cow fertilizer (N1) get the best result. By giving of type organic matter and nitrogen fertilizer significantly improve pH (H_2O), crop height, and dry weight, but non-significantly on C-organic, Available-N, CEC, and fresh weight. The combination of organic cow fertilizer, 20 ton/ha (B1) and nitrogen fertilizer 200 kg/ha (N1) get the best result.

Keyword: Regosol soil, organic matter, nitrogen fertilizer, and red chili