

# **PENGARUH PEMBERIAN CAMPURAN PUPUK KANDANG DOMBA DAN ZEOLIT ALAM TERHADAP PELINDIAN NITROGEN PADA TANAH REGOSOL PASIR PANTAI**

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## **ABSTRAK**

Tanah pasir pantai mempunyai kendala dalam menahan air dan rendahnya unsur hara tanah. Nitrogen dari tanah mengalami pelindian, sehingga kehilangannya tinggi. Pengaplikasian bahan pembenah tanah dapat mengurangi pelindian nitrogen. Penelitian ini bertujuan untuk mengetahui pengaruh pupuk kandang domba, zeolit, dan campuran pupuk kandang domba dan zeolit terhadap pelindian nitrogen pada Regosol pasir pantai. Penelitian dilaksanakan di Rumah Kaca dan Laboratorium Nutrisi Tanaman dan Teknologi Pupuk UPN “Veteran” Yogyakarta, serta Laboratorium BPTP Yogyakarta pada Januari hingga April 2022. Percobaan menggunakan metode Rancangan Acak Lengkap (RAL) faktorial, perlakuan terdiri dari tanpa pembenah tanah (P0), pupuk kandang domba 20 ton/ha (P1), zeolit 5 ton/ha (P2), pupuk kandang domba 10 ton/ha + zeolit 2,5 ton/ha (P3), dan pupuk kandang domba 20 ton/ha + zeolit 5 ton/ha (P4). Analisis data menggunakan ANOVA dan DMRT 5%. Pemberian pupuk kandang domba, zeolit, dan campuran pupuk kandang domba dan zeolit berpengaruh nyata terhadap pH, C-organik, KPK, dan N-tersedia tanah, namun tidak berpengaruh nyata terhadap N-terlindi, volume air lindian dan waktu pelindian. Pemberian pupuk kadang domba 20 ton/ha (P1) dapat meningkatkan KPK dan N-tersedia tanah, serta mampu menurunkan pelindian nitrogen pada Regosol pasir pantai.

**Kata kunci:** *bahan organik, pelindian nitrogen, pembenah tanah, Regosol, zeolit*

# **EFFECT OF APPLICATION MIXED SHEEP MANURE AND NATURAL ZEOLITE ON NITROGEN LEACHING AT REGOSOL COAST SAND SOIL**

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## **ABSTRACT**

Coast sand soil has constraint on water holding and low nutrient. Nitrogen at soil run into leaching, with the result that highly losses. Application of soil amendment can reduce nitrogen leaching. This research aimed to determine the effect of sheep manure, zeolite, and mixed sheep manure and zeolite toward nitrogen leaching at Regosol coast sand soil. Research held at greenhouse, Laboratorium Nutrisi Tanaman dan Teknologi Pupuk UPN “Veteran” Yogyakarta, and Laboratorium BPTP Yogyakarta from January until April 2022. This research used complete random design (CRD) method, treatments consist of without soil amendment (P0), sheep manure 20 ton/ha (P1), zeolite 5 ton/ha (P2), sheep manure 10 ton/ha + zeolite 2,5 ton/ha (P3), and sheep manure 20 ton/ha + zeolite 5 ton/ha (P4). Data analysis using ANOVA and DMRT 5%. Administration of sheep manure, zeolite, and mixed sheep manure and zeolite was significant in pH, C-organic, CEC, and available N in soil, moreover not significant in leaching N, volume leachate and time of leaching. Administration sheep manure 20 ton/ha (P1) can improving CEC and N-available, and reduce nitrogen leaching from Regosol coast sand soil.

**Keyword:** *organic matter, nitrogen leaching, soil amendment, Regosol, zeolite*