

## **Intisari**

Kegiatan peternakan ayam telah memberikan produk samping yang melimpah berupa kotoran ayam yang belum dimanfaatkan secara optimal. Penggunaan arang sebagai pembenah tanah dengan memanfaatkan kotoran ayam merupakan salah satu alternatif dalam upaya memperbaiki sifat tanah sehingga pertumbuhan tanaman dapat ditingkatkan. Penelitian ini bertujuan: mengetahui pengaruh pemberian arang berbasis kotoran ayam terhadap sifat kimia tanah dan pertumbuhan terong pada Inceptisol. Penelitian ini dilakukan di PIAT UGM dengan rancangan penelitian adalah Rancangan Acak Lengkap (RAL) dengan 6 perlakuan dan 4 ulangan. Perlakuan terdiri dari P1 (tanpa pemupukan), P2 (pemupukan NPK), P3 (Pemupukan kompos), P4 (pemupukan arang 1%+NPK), P5 (pemupukan arang 2%+NPK), dan P6 (pemupukan arang 3%+NPK). Variabel sifat kimia tanah yang diamati adalah kandungan lengas, pH tanah, C-organik, bahan organik, nitrogen total, kalium tersedia, KPK, dan DHL tanah. Variabel pertumbuhantanaman yang diamati adalah tinggi tanaman, dan berat akar. Data hasil analisis tanah dan pengamatan parameter tanaman dianalisis sidik ragam (*analisis of variance*) dan perlakuan yang menunjukkan beda nyata dianalisis dengan menggunakan *TUKEY* dengan tingkat signifikan 5%. Hasil penelitian menunjukkan pemberian arang berbasis kotoran ayam antar perlakuan menunjukkan beda nyata terhadap pertumbuhan tanaman terong. Pemberian arang berbasis kotoran ayam berpengaruh nyata terhadap parameter sifat kimia tanah. Perlakuan yang paling mempengaruhi pertumbuhan terong adalah P6 (pemupukan arang 3%+NPK)

Kata kunci : arang kotoran ayam, pemupukan, terong, inceptisol

### **Abstract**

Poultry farming activities result in abundant by product faces of chickens that is not used optimally yet. Use of charcoal and soil conditioner by utilize feces of chicken is an alternative for improving soil characteristic that in turn can improve plant growth. This research was intended to know the influence charcoal based feces of chicken to chemical properties of the soil and eggplant growth in Inceptisol. This research was conducted in PIAT UGM with completely randomized design, with 6 treatment and 4 replications. The treatment consist of P1 (without fertilizing), P2 (NPK fertilizing), P3 (compous fertilizing) P4 (charcoal 1%+NPK fertilizing), P5 (charcoal 2%+NPK fertilizing), dan P6 (charcoal 3%+NPK fertilizing). The variable of chemical properties of soil observed were moisture content, soil pH, C-organic, organic matter, totalnitrogen, totalphosphor, available potassium, cation exchange capacity,and electrical conductivity of soil .The variable of plant growth observed were plant height, and root weight. The data analysis of soil and plant growth parameters was analyzed by multiformity investigation (analysis of variance) and the result showed significant differences using *Duncan Multiple Range Test* (DMRT) at significant levels of 5%. The result showed charcoal based feces of chicken between treatmens showed significantly different on the growth of eggplant.Providing charcoal based on feces of chicken has significant impact on soil chemical characteristic. The treatment that most favorably affect on the eggplant was P6 (charcoal 3%+NPK fertilizing).

Keywords : feces of chicken charcoal, fertilization, eggplant, inceptisol