

## RINGKASAN

Tanah Ultisol merupakan tanah marginal yang berpotensi tinggi untuk pengembangan pertanian di Indonesia, namun memerlukan perlakuan khusus seperti pengapuran dan penambahan bahan organik untuk meningkatkan produktivitasnya. Tujuan penelitian ini adalah untuk mengetahui dan mempelajari 1) pengaruh pengapuran terhadap pertumbuhan dan hasil kubis bunga di tanah Ultisol Banyumas, 2) pengaruh penambahan pupuk organik terhadap pertumbuhan dan hasil kubis bunga di tanah Ultisol Banyumas, dan 3) pengaruh pengapuran dan penambahan bahan organik beserta interaksinya terhadap pertumbuhan dan hasil kubis bunga di tanah Ultisol Banyumas.

Penelitian dilakukan di *screen house* dan Laboratorium Ilmu Tanah dan Sumber Daya Lahan Fakultas Pertanian, Universitas Jenderal Soedirman, Purwokerto. Penelitian dilaksanakan dari bulan Februari 2018 hingga bulan Juni 2018. Metode penelitian yang digunakan adalah Rancangan Acak Kelompok Lengkap dengan rancangan perlakuan faktorial 3x3 dengan 3 ulangan. Faktor pertama adalah dosis kapur (0 g; 10,2 g dan 20,4 g). Faktor kedua adalah dosis pupuk petroganik (0 kg; 3,795 kg dan 7,950 kg). Variabel pertumbuhan yang diamati adalah tinggi tanaman, diameter batang, jumlah daun, luas daun, volume akar dan berat akar kering. Variabel hasil yang diamati adalah umur berbunga, umur panen, diameter bunga dan berat bunga segar.

Hasil penelitian menunjukkan bahwa penambahan pupuk petroganik dengan dosis 3,795 kg/*polybag* meningkatkan tinggi tanaman, diameter batang, jumlah daun, luas daun, diameter bunga dan berat bunga segar. Penambahan pupuk petroganik dengan dosis 3,795 kg/*polybag* juga mempercepat umur berbunga dan umur panen dibandingkan tanpa penambahan pupuk petroganik.

Kata kunci: Ultisol, pengapuran, pupuk organik, kubis bunga, hasil dan pertumbuhan

## SUMMARY

*Ultisol is a marginal soil that have many potential to developing agricultural section in Indonesia, but it needs special treatment such as liming and adding organic matter to increase its productivity. The aim of this research were to study 1) the effect of liming on the growth and yield of cauliflower on Ultisol from Banyumas Regency, 2) the effect of adding organic fertilizer on the growth and yield of cauliflower on Ultisol from Banyumas Regency, and 3) the effect of liming and adding organic fertilizer along with its interaction on the growth and yield of cauliflower on Ultisol from Banyumas Regency.*

*This research was conduct in screen house and The Laboratory of Soil Science and Land Resources, Faculty of Agriculture, University of General Soedirman, Purwokerto. This research was done from February 2018 to June 2018. The research methods used was Randomised Complete Block Design (RCBD) with factorial treatment 3x3 with 3 replications. The first factor was lime dosage (0 g; 10.2 g and 20.4 g). The second factor was petroganic fertilizer dosage (0 kg; 3.975 kg and 7.950 kg). The growth variable observed were plant height, stem diameter, total leaf per plant, leaf area per plant, root volume and dry root weight. Yield variable observed were flowering age, harvest age, curd diameter and fresh curd weight.*

*The result of this research showed that adding organic fertilizer with dosage 3.975 kg/polybag can increase plant height, stem diameter, total leaf per plant, leaf area per plant, curd diameter and fresh curd weight. Adding organic fertilizer with dosage 3.975 kg/polybag also made the flowering age and harvest age become faster than without adding organic.*

*Keywords: Ultisol, liming, organic fertilizer, cauliflower, growth and yield*