

INTISARI

Penelitian bertujuan untuk a) mengkaji pengaruh pemupukan NPK formula tebu pada aktivitas metabolik, pertumbuhan dan hasil tebu raton keenam saat fase pemasakan dan b) menentukan pupuk NPK formula tebu terbaik untuk memaksimalkan kapasitas metabolik, pertumbuhan dan hasilnya tebu raton keenam saat fase pemasakan. Penelitian lapangan dilaksanakan di Dusun Planden, Desa Margokaton, Kecamatan Seyegan, Kabupaten Sleman, DIY. Percobaan lapangan disusun menggunakan rancangan lingkungan acak kelompok lengkap (RAKL) faktor tunggal dengan empat blok sebagai ulangan. Perlakuan yang diuji yaitu macam pupuk dalam sistem produksi tebu yaitu a) pupuk majemuk formula NPKSZn 15:15:15:19:0,2, 2) pupuk majemuk formula NPKS 14:9:18:4 dan c) pupuk majemuk formula NPK 23:7:14. Pengamatan dilakukan pada beberapa variabel sifat kimia tanah, kapasitas biokimia dan fisiologis tebu, pertumbuhan tebu, komponen hasil dan hasil, rendemen dan keuntungan usaha tani. Data yang diperoleh selanjutnya dianalisis varian (ANOVA) α 5%, dan dilanjutkan dengan Uji Beda Nyata Terkecil (BNT) α 5% jika terdapat perbedaan nyata antar perlakuan. Uji lintas juga dilakukan untuk menentukan pola keterkaitan antar variabel dan menentukan macam variabel yang menentukan hasil tebu giling. Hasil penelitian memberikan informasi bahwa pupuk majemuk NPKS formula tebu 14:9:18:4 memiliki total kandungan hara esensial yang lebih rendah namun menyebabkan tanaman tebu memiliki kapasitas serapan hara, fisiologis, biokimia, pertumbuhan, komponen hasil, hasil tebu giling dan rendemen pada fase pemasakan yang setara dengan tanaman tebu yang dipupuk eksisting dan NPK 23:7:14. Pupuk majemuk NPKS formula tebu 14:9:18:4 dapat direkomendasikan untuk diimplementasikan dalam sistem produksi tebu raton di Inceptisol Seyegan, Sleman karena dengan total kandungan hara esensial yang lebih rendah mampu menyebabkan tanaman tebu memiliki kapasitas serapan hara, fisiologis, biokimia, pertumbuhan, komponen hasil, hasil tebu giling dan rendemen pada fase pemasakan setara dan keuntungan usaha tani lebih tinggi jika dibandingkan dengan tanaman tebu yang dipupuk eksisting dan NPK 23:7:14.

Kata kunci: Tebu Raton, Bululawang, Formula Pupuk, Hasil, Rendemen

ABSTRACT

The study aims to a) examine the effect of NPK sugarcane formula fertilization on metabolic activity, growth and yield of the sixth ratoon sugarcane during the ripening phase and b) determine the best NPK sugarcane formula fertilizer to maximize metabolic capacity, growth and yield of the sixth ratoon sugarcane during the ripening phase. Field research was conducted in Planden Hamlet, Margokaton Village, Seyegan District, Sleman Regency, Special Region of Yogyakarta, Indonesia. Field experiments were arranged using a single-factor randomized complete block design (CRBD) with four blocks as replications. The treatments tested were types of fertilizers in the sugarcane production system, namely a) compound fertilizer formula NPKSzn 15:15:19:0.2, 2) compound fertilizer formula NPKS 14:9:18:4 and c) compound fertilizer formula NPK 23:7:14. Observations were made on several variables of soil chemical properties, biochemical and physiological capacity of sugarcane, sugarcane growth, yield components and yields and farming profit. The data obtained were then analyzed for variance (ANOVA) a 5%, and continued with the Least Significant Difference Test (LSD) a 5% if there were significant differences between treatments. Cross tests were also conducted to determine the patterns of relationships between variables that determine the results of milled sugarcane. The results of the study provide information that the NPKS compound fertilizer with a sugarcane formula of 14:9:18:4 has a lower total essential nutrient content but causes sugarcane plants to have a nutrient absorption capacity, physiological, biochemical, growth, yield components, milled sugarcane yield and yield at the ripening phase equivalent to sugarcane plants fertilized with existing and NPK 23:7:14. Compound fertilizer NPKS sugarcane formula 14:9:18:4 can be recommended for implementation in the ratoon sugarcane production system in Inceptisol Seyegan, Sleman because with a lower total essential nutrient content, it can cause sugarcane plants to have capacity for nutrient absorption, physiological, biochemical, growth, yield components, milled sugarcane yields and yields at the ripening phase equivalent and higher farming profits when compared to sugarcane plants fertilized with existing and NPK 23:7:14.

Keywords: Ratoon Cane, Bululawang, Fertilizer Formula, Yield, Yield (rendement).